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PUBLIC TRANSPORTATION THROUGH THE CLUSTERING ANALYSIS OF BUS STOPS. CASE STUDY MANIZALES, COLOMBIA

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Abstract: The objective of this research is to identify the main characteristics and geographical distribution of bus stops, associated with collective public transport systems, through data analysis techniques that can identify clustering patterns based on various characteristics of the stops, such as geographical location, passenger flow, service demand, land use, etc. number of routes available, slope of the road, signage, among other relevant factors. The main result of this study is that the current layout of the stops is distributed according to the main characteristics of their environment, allowing us to conclude that the grouping of transport stops facilitates the interpretation of the location and operability of the stops, thus allowing to improve decision-making in the implementation of stops, guaranteeing an adequate operation of the service without compromising coverage and travel time of users.

Keywords: clustering, public transportation, bus stops, coverage

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INTRODUCTION

The operation of transport systems is closely linked to the layout and operation of bus stops, which serve as modal interchange points and access points to the system for users; Whereas, an adequate location of bus stops allows an operational balance between the distance that a user must travel on foot and the cost in time for the vehicle to perform boarding and disembarking maneuvers of passengers in very close segments. In this sense, understanding the operation and characteristics of each bus stop allows for an adequate structuring of the location and area of influence of the stop, ensuring that users who use the stop have an adequate infrastructure and maximize the use of the transport system.

Not only do these stops serve the basic function of being embarkation and disembarkation points, but they also play a crucial role in creating an accessible, safe and comfortable environment for public transport users. Therefore, well-designed bus stops are critical to optimizing urban mobility and improving the user experience; From the strategic choice of location to the physical infrastructure and information provided, the academic literature has extensively explored the importance of bus stops and their impact on urban mobility. Previous research has examined topics such as inclusive design for people with disabilities (Burton and Mitchell, 2006), the influence of the location of Transit Hubs on an intermodal network (Yuan and Yu, (2018)); however, there are no significant valuations related to coverage, focusing only on the area of action, which is based on radial structures of between 250 and 400 meters (Furth and Rahbee, 2000; Ibeas, 2010), leaving aside the surrounding dynamics and behaviors of the vehicular flow, thus generating some problems related to the variation of costs, behavior and perception of users, among others (Gibson et al., 1989; Giannopoulos, 1990; Ibeas et al., 2010).

On the other hand, with respect to data analysis, there are some evaluations related to clustering and analysis in transport issues; These approaches have facilitated a deeper understanding of mobility patterns (Cats, 2023; Strömblad, 2024), enabling the optimisation of efficiency in services and improving decision-making in the field of public transport. Some of these analyses focus on urban mobility, in order to identify behavior patterns in public transport users, using clustering algorithms to segment users into categories according to their route and schedule preferences, thus contributing to more effective transport planning (de Oña et al., 2014); Another type of analysis involved the evaluation of data in real time to improve the operation, combining data analysis with clustering techniques to improve resource allocation and operational management in public transport systems (Lin et al., 2013). Likewise, route and frequency optimization

* Corresponding author

assessments have been developed, using clustering models to segment public transport demands and design more efficient routes and schedules Shima et al. (2021). This background illustrates how the application of clustering models and data analysis has been fundamental to advance in the understanding and optimization of public transport, however, no analyses related to bus stops are identified, thus leaving a significant gap to be addressed, with great impact today.

For this reason, the present study proposes to carry out an analysis of the grouping of bus stops in urban collective public transport systems, based on clustering statistical models, using the set of stops in Manizales, Colombia, as a basis.

Manizales, the capital of the department of Caldas in Colombia, is strategically located in the central Andes mountain range, at an altitude of around 2,150 meters above sea level. Its mountainous landscape, surrounded by valleys and mountains, distinguishes it as one of the highest and most picturesque cities in the country. Nicknamed the "City of Open Doors," Manizales is characterized by its colonial charm, steep streets, and a lively cultural scene. In addition to being a prominent educational center with various university institutions, the city is famous for its connection to the coffee industry and its contribution to Colombia's coffee cultural heritage. It has an urban collective public transport system consisting of 901 buses and minibuses, 2 overhead cable lines and a total of 1,214 stops (Alcaldía de Manziales, 2017) to serve a population of 434,006 inhabitants (DANE, 2023) in its urban area (Figure 1). The operation of the system focuses on three main corridors: Santander Aveneu, Paralela Aveneu and Kevin Ángel Aveneu, which support more than 90% of the available routes (62 in total). This means that traffic flow issues in any of these corridors have a significant impact on the overall functioning of the system; On average, the routes in operation cover distances ranging from 25 to 27 kilometers per trip.

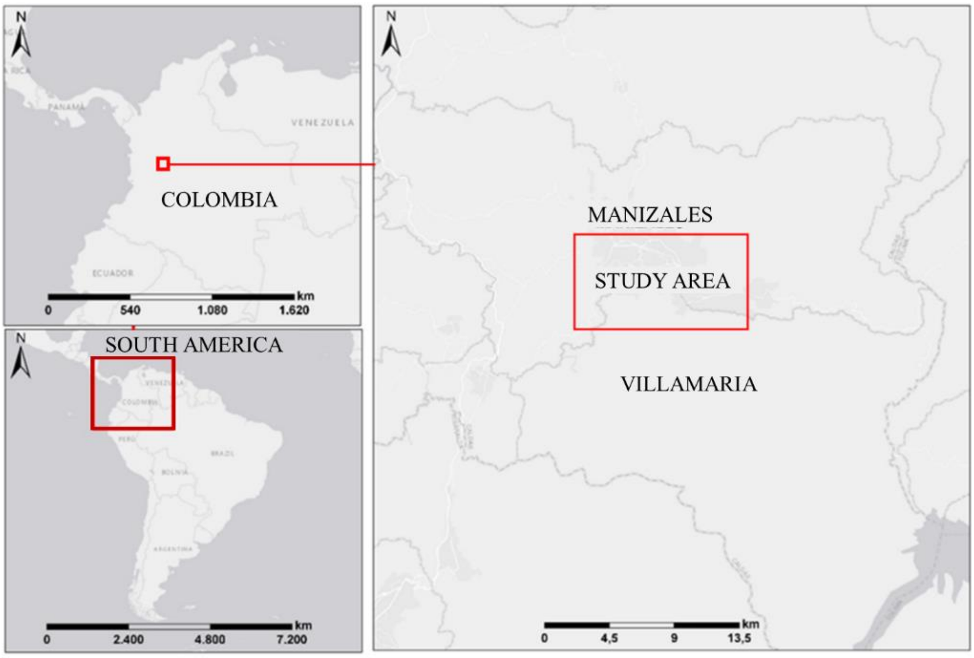

Figure 1. Geographical location of the study area (Source: authors)

METHODOLOGY

The methodological structure used consists of 5 consecutive steps, which are described below.

Phase 1. Collection of Information. As a first methodological phase, we proceed to collect the basic information associated with the set of bus stops of the collective public transport system of Manizales. Within this information base, 1214 stops are contemplated, on which data are collected from 53 variables, product of field inventory and desktop assessment, including characteristics related to the urban collective public transport system (TPCU), the direct functionality of the stop, population covered, road safety, network, land uses and urban facilities. Figure 2 shows the variables considered in the collection of information.

Phase 2. Validation of information and structuring of data for modeling. Once the information on all the stops in the city has been collected, the existence of the stops is validated, as well as the information collected, in order to identify possible inconsistencies and non-representative parameters for the classification. In this order of ideas, a total of 1061 bus stops are obtained, existing in the city, and a total of 49 variables, with non-redundant information, which can be used within the model. Next, the data associated with the continuous variables are normalized, thus allowing the original values to be adjusted to a specific range 0-1, which allows the elimination of different rating scales, improving the convergence of the algorithm, as well as improving the interpretation and analysis of the results.

Phase 3. Quantification of groups. After validating the information, as well as normalizing the data, we proceed to evaluate and estimate the number of groups for the execution of the clustering algorithm; For the process, 2 verification mechanisms are used, as a first assessment we have the elbow method used to identify the optimal number of groups in a data set. The idea behind this method is to observe how the sum of intra-cluster squares varies as a function of the number of clusters (Shi, 2021). The sum of intra-cluster squares measures the dispersion of points within each cluster. The second method of verification is the silhouette method, considered as a measure of how similar an object is to its own cluster (cohesion) compared to other clusters (separation) (Rousseeuw, 1987). Figures 3 and 4 show the evaluations obtained for the dataset using the 2 methods, identifying that the optimal number of groups for classification is 4.

	DIRECT FUNCTIONS OF BUS STOP											
EXISTENCE OF THE STOP	INFORMATION ON URBAN COLLECTIVE PUBLIC TRANSPORT ROUTES	BAY	AVAILABILITY OF BENCH FOR SERVICE WAITING ACTIONS	EXISTENCE OF COVER FOR PROTECTION AGAINST RAIN OR SUN	ON-STOP BENCH FUNCTIONALITY	FUNCIONALIDAD DE LA CUBIERTA EN LA PARADA	AVAILABILITY OF EMERGENCY COMMUNICATION DEVICE	AVAILABILITY OF ITEM FOR GARBAGE COLLECTION	AVAILABILITY OF MAP FOR LOCATION IN THE CITY	EMERGENCY COMMUNICATION DEVICE FUNCTIONALITY	AVERAGE GRADIENT OF THE ROADS SURROUNDING THE STOP	AVAILABILITY OF ACCESS FOR USERS WITH REDUCED MOBILITY
V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13

POPULATION COVERED			URBAN FACILITIES								
POPULATION COVERED WITHIN A RADIUS OF 100 METERS	POPULATION COVERED WITHIN A RADIUS OF 200 METERS	POPULATION COVERED WITHIN A RADIUS OF 300 METERS	EDUCATIONAL FACILITIES WITHIN A RADIUS OF 100 METERS	EDUCATIONAL FACILITIES WITHIN A RADIUS OF 200 METERS	EDUCATIONAL FACILITIES WITHIN A RADIUS OF 300 METRES	HEALTH FACILITIES WITHIN A RADIUS OF 100 METERS	HEALTH FACILITIES WITHIN A RADIUS OF 200 METERS	HEALTH FACILITIES WITHIN A RADIUS OF 300 METERS	RECREATIONAL FACILITIES WITHIN A RADIUS OF 100 METERS	RECREATIONAL FACILITIES WITHIN A RADIUS OF 200 METERS	RECREATIONAL FACILITIES WITHIN A RADIUS OF 300 METERS
V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25

LAND USE						URBAN COLLECTIVE PUBLIC TRANSPORT SYSTEM (TPCU)				
RESIDENTIAL LAND USE	RECREATIONAL LAND USE	EDUCATIONAL LAND USE	INSTITUTIONAL LAND USE	LAND USE COMMERCE	LAND USE SERVICES	NUMBER OF URBAN COLLECTIVE PUBLIC TRANSPORT ROUTES AVAILABLE	OPERATIONAL SPEED OF URBAN COLLECTIVE PUBLIC TRANSPORT ON THE ROADS THAT CONVERGE AT THE BUS STOP	OPERATIONAL SPEED OF URBAN COLLECTIVE PUBLIC TRANSPORT ON THE ROADS THAT CONVERGE AT THE BUS STOP	PERCENTAGE OF TRIPS GENERATED IN TPCU, IN THE ZAT WHERE THE WHEREABOUTS ARE LOCATED	PERCENTAGE OF TRIPS ATTRACTED AT TPCU, IN THE ZAT WHERE THE WHEREABOUTS ARE LOCATED
V26	V27	V28	V29	V30	V31	V32	V33	V34	V35	V36

ROAD SAFETY						
VERTICAL SIGNAGE IS AVAILABLE?	STATUS OF VERTICAL SIGNAGE	THERE IS A ZEBRA CROSSING?	ZEBRA CROSSING STATUS	THERE IS A DEMARCATION OF BUS STOP	STATUS OF THE BUS STOP DEMARCATION	GENERAL CONDITIONS OF VISIBILITY OF THE BUS STOP OF USERS
V37	V38	V39	V40	V41	V42	V43

NETWORK								
OPERATING SPEED OF THE SYSTEM ON THE TRACKS CONVERGING ON THE BUS STOP	TYPOLOGY	VEHICULAR VOLUME OF THE ROADS THAT CONVERGE AT THE BUS STOP	PERCENTAGE OF LIGHT VEHICLES OF THE TOTAL VOLUME ON ROADS CONVERGING AT THE BUS STOP	AVERAGE VOLUME/CAPACITY RATIO OF ROADS CONVERGING AT THE BUS STOP	NUMBER OF OFF-STREET PARKING SPACES WITHIN A RADIUS OF 100 METRES	NUMBER OF LEGAL ON-ROAD PARKING SPACES WITHIN A RADIUS OF 100 METERS	NUMBER OF ILLEGAL PARKING ON THE ROAD WITHIN A RADIUS OF 100 METERS	NUMBER OF LANES ON ROADS CONVERGING AT THE BUS STOP
V44	V45	V46	V47	V48	V49	V50	V51	V52

Figure 2. Variables used (Source: authors)

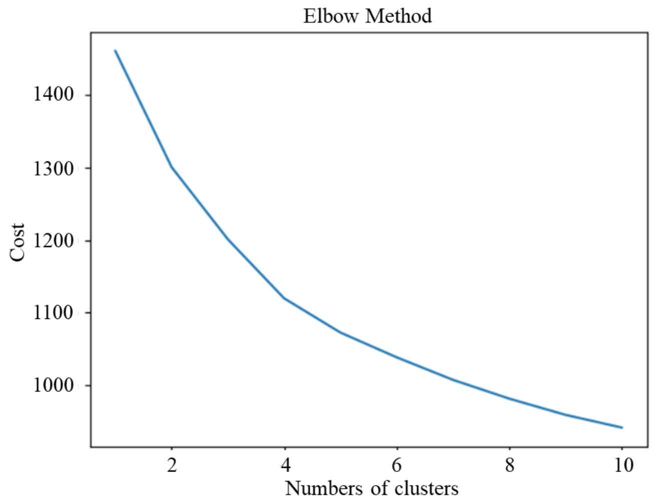

Figure 3. Elbow method (Source: authors)

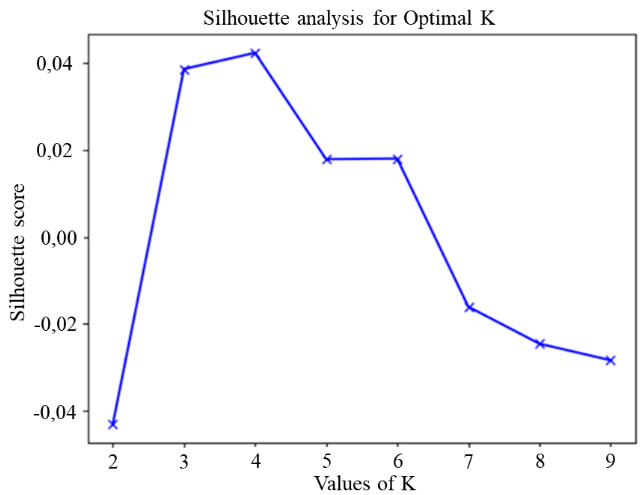

Figure 4. Silhouette method (Source: authors)

Phase 4. Clustering. Once the normalization, characterization and definition of the optimal number of groups for classification have been carried out, the k-prototypes algorithm is used as a grouping mechanism. The K-Prototypes clustering method, an extension of the K-Means algorithm, is used to group data with numerical and categorical variables; By combining numerical centroids and categorical examples, this method, proposed by Z. Huang in 1997, Used in various types of analysis (Szepannek et al., 2024; Wei, 2024), facilitates grouping into mixed data sets, assigning prototypes that represent the diversity of features, allowing a more complete analysis of heterogeneous data (Huang, 1997).

Phase 5. Cluster spatialization. As a final methodological phase, we proceed to specialize the Bus Stop classified by means of geographic information systems, in order to identify and analyze spatial patterns in the current arrangement of the stops. EsRi's ArcMap software is used as a digitization tool.

```
from sklearn.preprocessing import MinMaxScaler

# Calculate the cost for a given number of clusters
def calculate_cost(kproto, X):
    cost = kproto.cost_
    return cost

# Elbow algorithm with data normalization
def elbow_algorithm(X, categorical_features_idx, max_clusters):
    cost = []

    for num_clusters in range(1, max_clusters+1):

        kproto = KPrototypes(n_clusters=num_clusters, verbose=2, max_iter=20)
        kproto.fit(X, categorical=categorical_features_idx)
        cost.append(calculate_cost(kproto, X))

    # Plot the cost against the number of clusters
    plt.plot(range(1, max_clusters+1), cost)
    plt.xlabel('Number of Clusters')
    plt.ylabel('Cost')
    plt.title('Elbow Method')
    plt.show()
```

Figure 5. Base algorithm used (Source: authors)

	V12	V14	V15	V16	V17	V18	V19	Cluster
mean	0.231405	0.246551	0.286915	0.086451	0.041284	0.096636	0.134217	0
	0.224088	0.230951	0.299514	0.227852	0.145238	0.201905	0.258201	1
	0.292706	0.392029	0.461567	0.340723	0.110577	0.194231	0.231303	2
	0.274956	0.444617	0.505788	0.350127	0.292722	0.358861	0.368143	3
	V20	V21	V22	V23	V24	V25		Cluster
mean	0.014526	0.025994	0.042813	0.033202	0.094801	0.169864		0
	0.047619	0.090476	0.134199	0.062585	0.161376	0.260606		1
	0.018029	0.022236	0.041521	0.034341	0.096154	0.17701		2
	0.041139	0.063687	0.094649	0.038879	0.123769	0.217491		3
	V32	V33	V34	V35	V36	V44	V46	Cluster
mean	0.093068	0.663424	0.051308	0.399025	0.381935	0.426997	0.183868	0
	0.204683	0.695506	0.045876	0.373514	0.372679	0.480505	0.246712	1
	0.062099	0.639805	0.888558	0.406692	0.449604	0.287486	0.116181	2
	0.091561	0.659027	0.081699	0.396147	0.440916	0.299219	0.154735	3
	V47	V48	V49	V50	V51	V52		Cluster
mean	0.474175	0.2013	0.0421	0.012997	0.039755	0.365225		0
	0.516802	0.342718	0.041746	0.006667	0.020952	0.454422		1
	0.127232	0.01446	0.007372	0.001923	0.068029	0.317995		2
	0.47254	0.129771	0.015928	0.010918	0.062342	0.322333		3

Figure 6. Mean values in variables evaluated by classification group (Source: authors)

V3	V4	V5	V6	V7	V8	V9	V11	Cluster
NO	NO	NO	VACIO	VACIO	NO	NO	VACIO	0
NO	SI	SI	BUENO	BUENO	NO	NO	VACIO	1
NO	NO	NO	VACIO	VACIO	NO	NO	VACIO	2
NO	NO	NO	VACIO	VACIO	NO	NO	VACIO	3
V13	V26	V27	V28	V29	V30	V31	V37	Cluster
NO	SI	NO	NO	NO	NO	NO	NO	0
NO	SI	NO	NO	NO	NO	NO	SI	1
NO	SI	NO	NO	NO	NO	NO	NO	2
NO	SI	NO	NO	NO	NO	NO	SI	3
V38	V39	V40	V41	V42	V43	V45		Cluster
VACIO	NO	VACIO	NO	VACIO	VISIBLE	Colectora		0
BUENO	SI	BUENO	NO	VACIO	VISIBLE	Principal		1
VACIO	NO	VACIO	NO	VACIO	VISIBLE	Secundaria		2
BUENO	NO	VACIO	SI	VACIO	VISIBLE	Colectora		3

Figure 7. Mode of Categorical Variables Assessed by Classification Group (Source: authors)

RESULTS AND DISCUSSION

As a result of the grouping of the stops using the Kprototypes method, a total of 4 classes are obtained, from the inventoried information, with a general balance of 208 stops associated with cluster 0, 210 associated with cluster 1, 328 stops in cluster 2 and 315 for cluster 3. As a general estimate, there is a significant balance between clusters, with a difference of up to 110 stops in the identified maximum and minimum groupings. Regarding the characteristics identified, we have Figures 6 and 7, in which the mean ratings obtained for the numerical variables and the modes identified in the categorical variables are appreciated. With this information, it is possible to identify that the stops associated with cluster number 1 mainly relate those stops with the existence of physical infrastructure and signaling in their vicinity, which in turn, have a greater availability of equipment in their immediate environment, as well as greater operational characteristics of the road network in which they are located. such as speed, vehicle volume and availability of transport routes, this being a characteristic of stops located in main corridors of the city. In this order of ideas, this grouping refers to stops of great importance and of greater use within the system.

Regarding cluster 0, it is possible to identify that it corresponds to the group of stops with less availability of physical infrastructure, as well as fewer facilities and users covered in the surrounding area, this behavior could refer to stops distributed in an environment of lower demand, such as peripheral areas or access to the city. as well as interurban corridors that connect population centers or areas of greater activity. On the part of cluster 2, some characteristics related to the greater amount of population covered in the nearby area and the lower availability of facilities are identified; Likewise, a lack of physical infrastructure is identified, and less vehicular volume in the operational areas, these assessments could refer to types of stops in residential areas of the city, in which there is a greater population served, but preserving the characteristics of a collector or local road, in which the volumes are low and the proportion of public transport can be higher.

Finally, cluster number 3 relates a high population coverage, as well as an adequate provision of educational facilities in the surrounding area, and moderate existence of other types of facilities; Likewise, it refers to the existence and good condition of physical infrastructure, in addition to a high attraction of trips for a low operational speed; This could be inferred from a group of operational stops in educational and residential environments within the city. Finally, Figure 8 is presented, in which the spatial distribution of the stops is appreciated, according to the group to which they belong, it is possible to identify that the valuations referred to by the model show great agreement with the current urban structure of the city, in which case the stops of cluster 1 are located on main corridors. cluster 0 is located in external areas and inter-neighbourhood corridors; The bus stops associated with type 2 are mainly located in residential areas and finally the bus stops associated with type 3 are located in areas of residential concentration, with some strips of particular interest within the city.

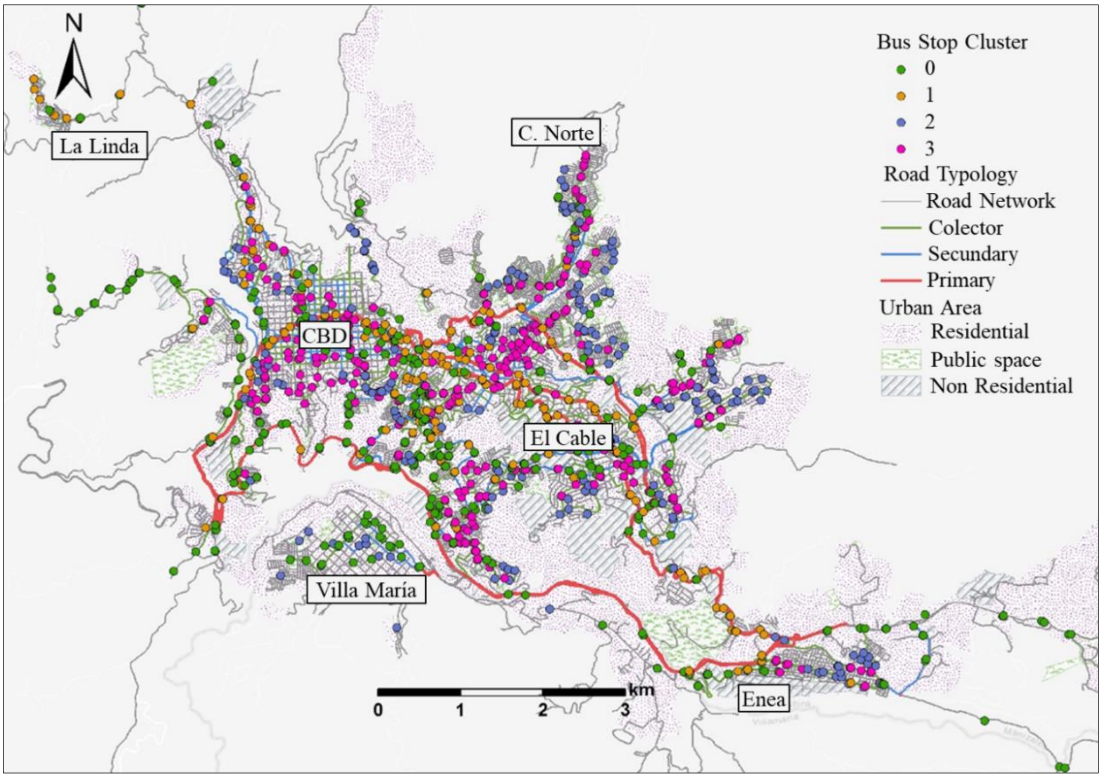

Figure 8. Spatial Distribution of Stops by Classification Group (Source: authors)

CONCLUSION

As conclusions of the evaluation carried out, we can say that the current layout of the collective public transport stops of the city of Manizales has a grouping of characteristics of the existing infrastructure, as well as the conditions of population coverage and surrounding equipment, which allows to identify the basic patterns for the implementation and characterization of new bus stops. On the other hand, the identified evaluations show that, despite having a large number of variables for the grouping of stops, it is not representative to use all of them since it is possible to analyze and group from some variables with the greatest impact on the process.

Finally, it is possible to appreciate how the valuation by classification allows to expand the knowledge related to the analysis of public transport stops, which have not been explored in recent years.

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ANALYSIS OF THE TURNOVER OF HUNGARIAN SPAS

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Abstract: In Hungary, spas have rich traditions and are one of the country's major tourist attractions. The research aims to analyze the turnover of one of the key supply elements of health tourism in Hungary, the baths, which, in addition to the impact of COVID, will also present factors that positively influence turnover data. In the study, in addition to presenting the importance of Hungarian spas, we also deal with the spa's guest turnover and income. Over time, we compare how turnover in the sector has evolved over the past decade. We conducted a regression analysis on the trends in revenue and the number of guests at Hungarian spas. The turnover data of spas are correlated with capacity data and economic indicators, which are quantified. This allows us to identify which factors are more or less important in the development of turnover and revenue.

Keywords: health tourism, spa services, sales revenue, number of guests, time series, correlation

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INTRODUCTION

Health tourism is an important part of the tourism industry in Hungary. Spas, thermal baths and wellness centres not only offer opportunities for recreation and relaxation, but also play an important role in health promotion and recovery (Czeglédi et al., 2020a; Csobán et al., 2022).

Nowadays, more and more people feel the importance of following a health-conscious lifestyle, or at least striving to do so, which has also generated a growing demand for health tourism, making this topic particularly actual. The concepts of health and wellness are associated with well-being and lifestyle, stress reduction, physical and mental balance and leisure activities for foreign tourists (Chen and Petrick, 2013). Accordingly, the range of health tourism services on offer extends from medical treatments and the use of medicinal waters to spa and wellness services. In this offer, the weight of each service is not independent from the traditions and the ideas that local people have about health and health promotion. In Central and Eastern Europe, there is a long tradition of medicine, while in Western and Southern Europe different concepts of wellness prevail.

In Hungary, spas have a rich tradition and are a major tourist attraction (Hojcska and Szabó, 2021). Czeglédi et al., (2020b) confirm that the availability of wet and spa services has a significant impact on tourists' choice of destination. Given that the diverse mineral composition and high temperature of the thermal waters in Hungary can satisfy the widest range of needs, and that the infrastructure and human resources of spa towns and cities offer European-standard services in many places, there is overall potential for further development of health tourism. As a result, health tourism is one of the most dynamically developing tourism products of our time, and Hungary has excellent natural resources in this market, even by international standards (Puczkó and Smith, 2010).

The performance and contribution of health tourism to the national economy depends on several factors, such as infrastructure development, tourist demand and government subsidies, but their effects can be reliably analysed, inter alia, based on tourism data. Number of visitors to spas have increased steadily in recent years and have remained attractive despite the crises. Although the pandemic period has seen a decline in visitor numbers and, with it, in revenues, the statistics show a return of hope and confidence. The future of spas and wellness centres points towards quality services and sustainable operation, thus contributing to the growth of Hungary's tourist attractiveness.

LITERATURE REVIEW

The importance of spas

There is no single sector that represents tourism, but only as part of several relevant sectors. According to the current international methodology (IRTS, 2008), the following activities are included in the tourism industry: accommodation and food service activities, passenger transport by rail, road, water and air, car rental, travel agencies, tour operators, cultural services, and sports and recreation activities and spa services (Tóth, 2018).

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Spa services are widely understood to include spa and well-being treatments, various methods of stress relief, and beauty and cosmetic surgery, but in Central and Eastern Europe the word health is more closely associated with physical and medical treatments. In Western Europe, thalassotherapy, or healing cures based on the beneficial effects of the sea, is well known. In southern Europe, there is a strong emphasis on beach wellness and afternoon siestas. In Scandinavia, Nordic walking and swimming, as well as saunas, are part of everyday life. Recently, there has been a growing emphasis on balanced living, selfness and mindness, which are the physical, emotional and psychological aspects of our lives (Lengyel, 2022). It can be seen that the concepts of health and wellness mean different things in different countries and cultures.

Cross-cultural differences in wellness tourism (Bočkus et al., 2023) was the focus of a study that focused on the differences in service preferences of wellness tourists. Based on the responses of wellness tourists (N=1562) from Finland, Russia and Lithuania, it was found that swimming pool, sauna, massage and body care were important services for all nationality groups, while services related to Eastern traditions were less important during wellness holidays. However, there were significant differences in the importance of services such as beauty care, spa wellness services, spa and wellness packages. The research highlighted that wellness tourists from different markets may have different motivations for choosing the same services. Datta (2022) studied wellness tourists visiting India, found that basic wellness services, i.e. yoga, Ayurveda, spirituality, meditation (Lengyel, 2016; 2019) have a stronger impact on the satisfaction level of wellness tourists. The baths (or the remains of old ones) that can still be visited in the 21st century bear witness to the fact that the territory of present-day Hungary was a flourishing bathing area in the Roman Empire, during the Turkish occupation and in the Austro-Hungarian Empire (Farkas et al., 1962). The Austro-Hungarian Monarchy, including the Hungarian Kingdom abounded in well-built spas offering advanced services (Törzsök et al., 2017). Nowadays many cases, the spa towns have become the region's number one tourist destination, as the spas and spa hotels built in their area meet international standards in every respect (Tóth and Dávid, 2010).

Thanks to the first Széchenyi Plan (2001-2006) and the subsequent EU funding opportunities, our thermal and spa baths have undoubtedly become the main players in the field of health tourism in Hungary. The health tourism product of our country is functioning well in most of the spa towns with a significant number of visitors, i.e. it is satisfactory in terms of both infrastructure (spa, hotels, restaurants, shops, other services, transport) and human resources, and in many places, it is of a particularly European standard (Ruszinkó et al., 2024). For example, if travellers to a tourist destination choose a higher category of accommodation, they also spend more on products and services of tourism sectors" (Tóth and Tóth, 2020).

The economic importance of spas is shown by the fact that nationally, almost 20 000 people work in spas, and the number of employees who provide related services in spas but do not work under the management of the spa (e.g. catering units of spas, outsourced jobs) is even higher. "Bathing is gradually becoming an integral part of everyday life, as it offers the opportunity to exercise regularly, to combine body care with relaxation and recreation. Spas are no longer just a regular annual holiday, but also a place for general well-being and for maintaining good physical and mental health (Müller et al., 2009). "The range of popular sporting activities should be extended, and popular programmes should be organised more frequently or a new series of events with a similar programme should be initiated. The satisfaction of sporting visitors could be increased, for example, by the creation of outdoor fitness parks" (Tóth and Müller, 2019). At the same time, other international research mentions that seasonality still characterizes the turnover of spas, which poses a challenge for the operation. The seasonal turnover of spas in Romania is similar to the seasonality of the country's tourism (Stupariu and Morar, 2018).

MATERIALS AND METHODS

The use of the term "recognised spa" is regulated by Decree 74/1999 (XII.25.) of the Ministry of Health (on natural medicinal factors). According to the Decree, establishments are those which carry out therapeutic or rehabilitation activities mainly using natural therapeutic factors.

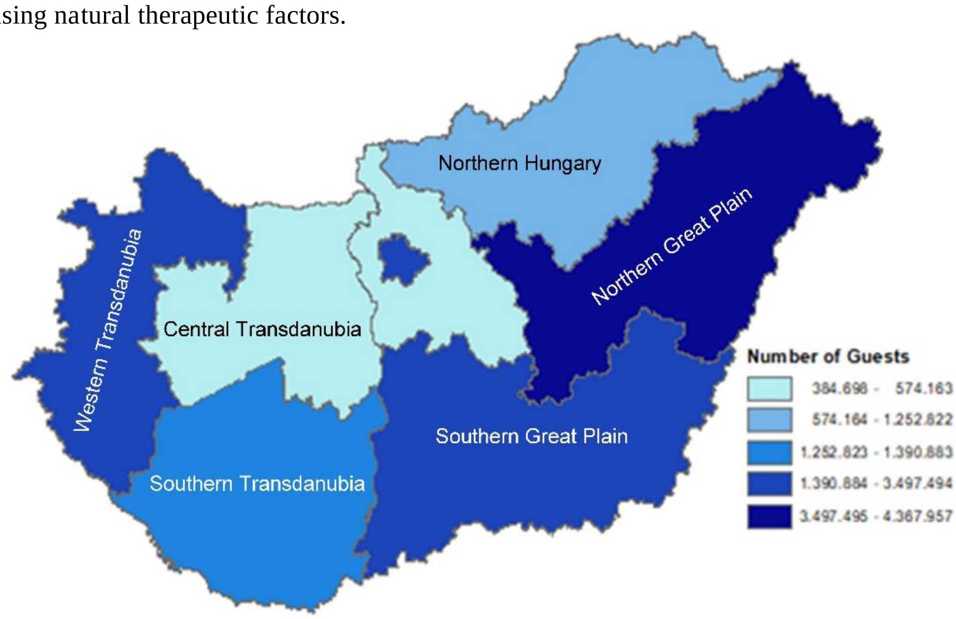

Figure 1. Number of guests of spas in Hungary by regions (NUTS2), 2022 (Source: Data of Hungarian Central Statistical Office, 2024)

They may be operated under the name "spa", which refers to the therapeutic character of the establishment, if, in addition to the official authorisations required by other legislation, the use of this name is authorised by the operator or the owner on request. In 2022, 104 spas were registered in the list of the Government Office of Budapest. The Hungarian Central Statistical Office collects data on the most important characteristics of these spas, their turnover of guests, the revenue or the services they provide, through the electronic questionnaire "Report on the turnover of spas" (questionnaire 1054), which is part of the national statistical data collection programme. This data is used to prepare the analyses presented below, focusing on guest turnover data (Figure 1).

The region with the highest number of visitors (4.4 million) in 2022 is the Northern Great Plain region. This includes major spa towns such as Hajdúszoboszló, Debrecen and Nyíregyháza. Southern Great Plain and Western Transdanubia will also attract a large number of guests, with 3.5 million arrivals each in the reference year.

In the Southern Great Plain, the most visited spas were Gyula and Szeged, while in Western Transdanubia the most visited spas were Hévíz, Bük, Sárvár and Zalakaros. The capital, Budapest, also attracted a large number of tourists (3.4 million), the most popular destinations being Széchenyi Spa and Gellért Spa.

The aim of the analysis is to examine the relationships that may influence the attendance of bathing facilities. As data collection is compulsory for all spa operators, the available data refer to the full reporting population and therefore descriptive statistical methods can be used. As the data collection has been carried out annually for quite a long time, the number of guests and the revenue of the baths can be analysed. A correlation analysis of the data for the indicators included in the data collection will show which factors interact and these effects can be quantified. The present study is based on the data for 2022 of the spas that are classified as spas according to the above-mentioned EüM Regulation.

RESULTS AND DISCUSSION

The turnover of spas

The Hungarian spa towns play a prominent role in the country's domestic and international visitor flows, not only in terms of their historical past, but also in terms of their current performance and their expected future positions based on trends (Michalkó and Rátz, 2011).

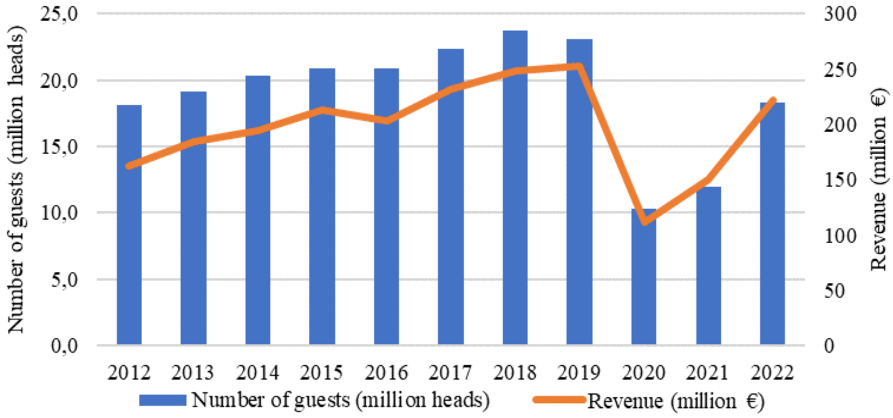

Figure 2. Time series of the number of guests and revenue of Hungarian spas
(Source: Data of Hungarian Central Statistical Office, 2024)

The last decade has seen a steady increase in the number of visitors to spas, which, after a temporary, slight decline in 2016, returned to the trend of previous years in the following year, reaching 23 million visitors by 2019 (Figure 2). The crisis had a significant impact on spa turnover, with guest numbers halving to around 10 million. With the end of the pandemic, hope and confidence began to return, and by 2022 the country's annual number of visitors to spas had reached 18 million, only a fifth less than the 2019 base figure. Spa revenues will grow steadily in line with visitor numbers until the end of the decade. In 2012, it was only 162 million EUR, but then grew steadily to reach 253 million EUR in 2019. However, the pandemic of 2020 halved the revenue due to a shortfall in visitors, bringing it down to 111 million EUR. With the return of spa visitors, the increase in turnover was also noticeable, reaching a high 221 million EUR in 2022. This picture is somewhat nuanced by the fact that the general price level increased significantly after the outbreak of the Russian-Ukrainian war, which also contributed to the rise in revenues. Figure 2 also suggests that the number of guests followed a very precise linear trend and there is no reason to believe that this would have changed significantly (at least until 2020) in the absence of the pandemic. However, in 2022 the Russian-Ukrainian conflict has created a new situation, so that year is not completely longer comparable to the previous one.

Figure 3 shows together the actual and estimated number of guests. Assuming that, in the absence of the COVID outbreak, the trend in guest numbers would have been the same as in 2012-2019, it can be calculated that the spas under study lost roughly 35 million guests over the three years. This is likely to be an upper estimate due to the uncertainty of 2022. In that year there was no pandemic, but inflation increased for other reasons. Of these, the Russian-Ukrainian war is only one reason, and it is likely that price levels would have risen faster even if no armed conflict had broken out. It is therefore likely that the number of visitors would have been lower, so the 35 million mentioned is more of an upper estimate. Nevertheless, it can be assumed that the number of bathers will return to close to the original trend by 2023.

A similar observation can be made for revenue, where there is also linear growth until 2019. Figure 4 shows the observed and estimated turnover together. On this basis, it can be calculated that the spas under study will lose about EUR 267 million in 2020, 2021 and '22 in total. Revenue is also expected to reach or exceed the trend in 2023.

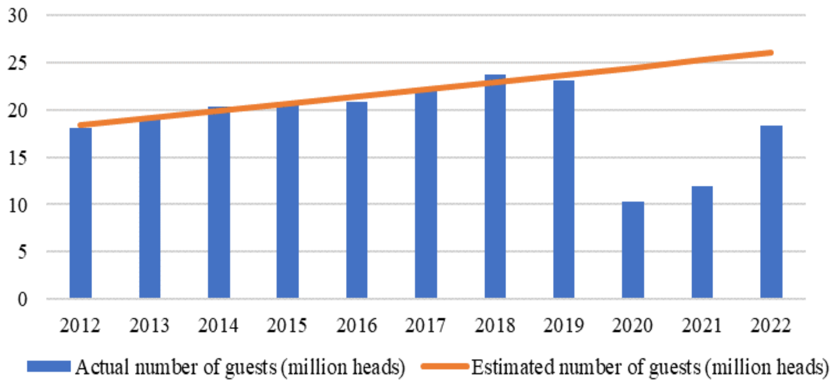

Figure 3. Time series of actual and estimated number of guests of Hungarian spas
(Source: Data of Hungarian Central Statistical Office, 2024)

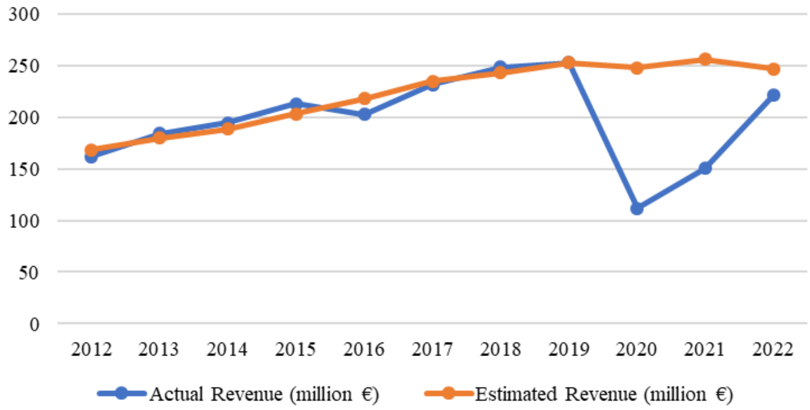

Figure 4. Time series of actual and estimated revenue of Hungarian spas
(Source: Data of Hungarian Central Statistical Office, 2024)

Similar trends were observed in Romania, where at peak time summer tourist numbers have normalized since 2021, there does not appear to have been a significant increase at a later stage. This indicates that the effects of the outbreak are still present (Cehan and Iațu, 2024). A decline in demand for spas in Slovakia has also been observed (Šenková et al., 2021). Other studies have reported that after Covid-19, spas attracted back guests with services to help them recover from coronavirus illnesses (Maccarone et al., 2021; Kardeş, 2021; Masiero et al., 2020; Moure and Saz-Peiro, 2021).

Further calculations have been made on several indicators of spas in the national data for 2022, looking at the relationship between them. Correlation shows whether there is a linear relationship between each indicator, indicating the strength and direction of a linear relationship between two variables. The values can take figures between -1 and 1.

Table 1. The value of the correlation coefficient according to the relationship between the annual number of guests and the characteristics of spas (Source: The authors, own compilation)

Main characteristics of the spa	**Pearson correlation coefficient (number of guests, Hungarian spas, pcs)**
Revenue of the public bath, in HUF	0.905
Payment with a SZEP card*, in HUF	0.800
How many services are available in the spa area, pieces	0.750
Number of operating days, in days (average)	0.658
Bathing (non-bathing) services, in pieces	0.563
Total installed water-use capacity of the spa, in m^3/h (average)	0.550
Revenue from the sale of accommodation, in HUF	0.480
Water temperature, in degrees Celsius (average)	0.457
Maximum permitted simultaneous occupancy of the spa, persons	0.436
Turnover from medical and health care services, in HUF	0.334
Volume of the pool, m^3 (average)	0.242
Area of the spa, 1000 m^2, (average)	0.163
Water surface area, m^2 (average)	0.131
Green area, 1000 m^2 (average)	0.106

* Széchenyi Recreation Card (also known as Szép Card) - employers can give it to employees for EUR 1,125 per year, free of tax and with favourable tax treatment. The cardholder can use it for accommodation, catering and leisure activities.

The data in Table 1 show that there is a strong relationship (0.8<) between the evolution of the number of guests in spas and the number of SZÉP card payments, which is not surprising. There is also a strong correlation between spa services and guest turnover (0.55-0.75) and the number of days open (0.65).

The temperature of the water and the accommodation facilities are also important factors in the number of visitors (0.45-0.48). The turnover from spa and health services shows a weak correlation. The other technical factors (pool volume, water surface, green area) do not play a role in the evolution of the number of visitors.

Table 2. The value of the correlation coefficient according to the relationship between the annual number of visitors and the socio-economic indicators (Source: The authors, own compilation)

National socio-economic indicators by county	Pearson correlation coefficient (number of guests, Hungarian spas, pcs)
Percentage of urban population, %	0.713
Population density, head/km²	0.630
Output value of investments by business organizations, in HUF	0.593
Direct investment in Hungary, net debt stock, in HUF	0.590
Number of vacancies, 2022, in pieces	0.560
GDP per capita at purchasing power parity, in PPS	0.519
Economic activity of the population aged 15-74, thousand persons	0.481
Number of guests per thousand inhabitants in commercial accommodation, in persons	0.345
Average gross earnings of full-time employees by place of employment, in HUF	0.247
Employment rate of the population aged 15-64, %	0.091
Number of retail outlets, 30 June 2022, in pieces	0.003

External economic and social factors also influence the development of visitor numbers, so it is worth examining what other indicators may also play a role in the visitor numbers of a spa. There is a strong relationship (0.63-0.71) with the population indicators of the county (urban population rate, population density). Economic indicators such as GDP, investment, investment in the area, vacancies and the activity of the population in the spa sector have a medium-strong relationship (0.48-0.59) with the number of visitors to the spa. Compared to average earnings and employment indicators, the number of bathers is weakly correlated and there is almost no dependence with the number of retail stores. Finally, a regression analysis was performed on the two main indicators with the highest correlation (turnover, guest turnover). The coefficient of determination: r^2, can be between 0 and 1, including the bounds. It shows the proportion of the total variance of the independent variables that is explained by the sum of the squares of the total variance of the dependent variable.

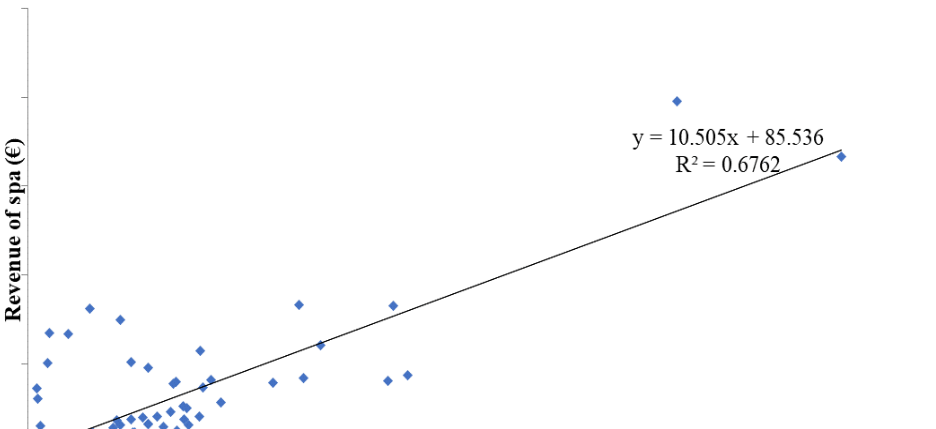

Figure 5. Regression analysis of number of guests and revenue of Hungarian spas (n=101)
(Source: the authors based on data of Hungarian Central Statistical Office, 2024)

If we compare the two main indicators (guest turnover, turnover) in a regression function (Figure 5), we expect a positive relationship between the two indicators. The apparent correlation does not imply a causal relationship but quantifies the strength of the relationship between the two indicators. Assuming a linear relationship, at a 95% confidence level the R squared value (0.67) and R value (0.82) suggests a close relationship despite the fact that quite a few outliers were detected. The outliers denote a real value, as does the set of scattered points along the centre line.

CONCLUSION

Based on the general presentation and analysis of health tourism and spas in Hungary, it is clear that these institutions and services play a prominent role in the development of tourism and the local economy. Spas not only offer medical and wellness services, but also provide a wide range of recreational and leisure facilities for their guests. An international research on the success factors of wellness destinations highlighted that the destination environment, the culture of wellness tourism, the spa culture and the health services are important elements (Phuthong et al., 2023).

Hungary's spas are good in these competitiveness elements and are well positioned not only in the domestic but also in the international health tourism market (Kiss, 2013; Jónás-Berki et al., 2015)

From the analysis it can be seen that the turnover of visitors to spas is highly dependent on their own and external ancillary services. A detailed list of spa services is included in their operating regulations, but the most popular ones include sauna, massage, fitness and swimming lessons. Operating hours and infrastructure are also important elements of attendance. In terms of territorial factors, urban character is also an attractive factor, and in terms of market-economic factors, the performance of economic organisations is a determining factor in the evolution of visitor numbers.

Despite the challenges posed by the Covid-19 pandemic, Hungarian spas and health tourism establishments have been able to adapt and rebound. The resilience of the sector and government support have helped to make spas attractive destinations again for both domestic and international tourists. Data show that bathing attendance and revenues have been steadily increasing, reaching high levels in 2022. This is partly due to investments and improvements in the sector, which make spas even more attractive to visitors. Overall, health tourism and spas in Hungary will continue to be important players in the tourism and economy, and their further development can be helped by a focus on sustainable tourism, innovation and continuous improvement of the guest experience.

Limitations of research

The data analysis is limited to a certain time period, i.e. 2012-2022, so the time limitation means that the analysis cannot reflect the latest developments or changes in the industry. This is particularly true in a fast-changing environment such as tourism. Individual spas and health tourism establishments operate in different cultural and regional contexts, which may affect the results and conclusions. Therefore, it is important to take into account the specificities of the local context and their impact on the results, which is limited to the Hungarian market characteristics. A distorting effect on the analyses may be that the spending of guests using some kind of social support (e.g. medical referral) cannot be compared with that of tourists seeking relaxation or regeneration and these two groups cannot be precisely distinguished on the basis of the available data. Thus, it is difficult to compare domestic and foreign guests with the "social" guests, in most cases there is no separation between public and tourism functions" (Magyar Turisztikai Ügynökség, 2021).

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TOWARDS SUSTAINABLE VOLCANO TOURISM: UNDERSTANDING VISIT INTENTIONS AT MOUNT ANAK KRAKATAU THROUGH DESTINATION CREDIBILITY AND ENVIRONMENTAL MOTIVATION

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Abstract: This study aims to analyse the elements that affect people's intention to visit Mount Anak Krakatauthrough focusing on the influence of destination publicity, destination credibility, and environmental motivation in the context of volcano tourism. This study involves 225 tourists who were selected using a convenient sample procedure. The data underwent rigorous examination by exploratory factor analysis, confirmatory factor analysis, and structural equation modelling. The research results are as follows: The initial hypothesis demonstrated that a destination's sustainability significantly impacts its credibility. Whilst the second hypothesis confirmed that the sustainability of a destination substantially affects environmental motivation. The third hypothesis supported the notion that the credibility of a destination has a significant influence on environmental motivation. The fourth hypothesis established that the credibility of a destination has a considerable effect on visit intention. Lastly, the fifth hypothesis affirmed that environmental motivation significantly impacts visit intention. Taken together, these findings enhance the comprehension of volcano tourism, destination marketing, and consumer behaviour.

Keywords: sustainable tourism, destination marketing, consumer behaviour, Anak Krakatau, volcano tourism, environmental motivation

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INTRODUCTION

Volcano tourism, a distinctive and educational tourism type, entails visiting locations with active or dormant volcanoes and immersing oneself in outstanding natural phenomena. This form of tourism entices learners to destinations such as the Ijen Crater in Indonesia, famous for its remarkable blue fire and the world's largest acidic lake. These unique features serve as significant points of interest (Berutu et al., 2023). Researchers examine volcano tourism in Central and South America, emphasised as a considerable tourist attraction. Managing volcano tourism is essential to shaping visitors' experiences (Gavilanes Montoya et al., 2021). This specialised segment of the tourism industry is a component of the wider ecotourism or geotourism industry found in both developing and developed nations around the globe. As people who visit Mount Semeru have shown, it involves tourists actively climbing and experiencing high elevations (Putra et al., 2023). Volcano tourism refers to visiting locations with active volcanoes or geothermal activity for physical and spiritual activities. Local communities and regional governments consider it an achievable way to yield revenue (Suhud and Allan, 2022). Volcano tourism involves more than just visiting active volcanoes. It also includes studying and observing the ongoing volcanic and hydrothermal processes. In addition, it incorporates excursions to locations of extinct volcanoes, attracting people interested in the geological history of these areas (Erfurt, 2022). The various facets of volcanic tourism exemplify its allure to a broad spectrum of people searching for distinctive and captivating natural encounters.

The extensive research on tourist behaviour related to volcano tourism has yielded significant findings, which delve into various factors influencing tourists' decisions to visit and revisit volcanic sites, are of utmost importance to academic researchers, destination management organisations, and tourism marketing professionals. This research can include these

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main themes: destination image, perceived value, tourist satisfaction, motivation and restrictions, and external effects such as media and government response. The portrayal of a specific location, such as the majestic view of Mount Ijen or the unique cultural experience at Tangkuban Perahu National Park, has a crucial role in influencing how tourists perceive and lend to visit this place. Research has shown that a favourable perception of a travel place, such as the perception of a destination as a safe and adventurous place, has a notable effect on tourists' likelihood to visit again (Suhud et al., 2021; Suhud and Allan, 2024). Research conducted on such locations has demonstrated that the perception of a destination has a favourable impact on tourists' self-congruity, sensation-seeking behaviours, and perceived value. It, in turn, influences their propensity to visit the location (Suhud et al., 2021; Suhud and Allan, 2024). In addition, perceived value, which refers to the total evaluation of the benefits gained compared to the costs incurred, is a pivotal factor in determining tourists' likelihood to return. The image that these destinations project significantly impacts how valuable people perceive Kawah Putih and Mount Anak Krakatau to be. It, in turn, can substantially impact tourists' emotional connection to the location and their likelihood of returning henceforth (Suhud et al., 2023; Suhud and Allan, 2022).

Furthermore, tourist satisfaction, determined by their experiences and the extent to which their expectations are satisfied, is significant in predicting whether they will re-visit. Tourist satisfaction, destination image, and perceived value are important factors that influence the intention to revisit Tangkuban Perahu National Park for volcanic tourism (Suhud et al., 2021).

Motivational elements such as the need for novelty and adventure and limitations like perceived risks and accessibility concerns significantly influence tourists' decisions to visit volcanic sites. In their study, Suhud and Allan, 2019 found a positive correlation between motivation and the willingness to journey a volcano and a negative impact of limitations on this willingness. These findings underscore the potential of effective marketing tactics to highlight motivational factors and alleviate limitations, thereby boosting tourist visits. Media coverage and government response are crucial external variables that affect travellers' intentions. Studies conducted on Taal Volcano in the Philippines and Mount Semeru in Indonesia have shown that the media significantly impacts people's likelihood of revisiting these areas, especially following volcanic eruptions. Effective government responses, particularly in disaster management and communication, can pivotally restore tourists' trust and encourage them to adopt safe tourism practices. It underscores the responsibility and urgency for government and media professionals to ensure accurate and timely information dissemination.

Gaining insight into how tourists perceive safety and manage risks is vital, particularly for areas susceptible to natural disasters. In line with research on Mount Aso in Japan, knowledge of past damage and on-site information significantly impact tourists' safety-seeking behaviours. It highlights the importance of effective risk communication and disaster preparedness measures in creating a safe and attractive tourism environment (Sasaki et al., 2022).

Research on tourist behaviour in the context of volcano tourism has made significant progress. However, tourists need more research on destination sustainability, credibility, and environmental motivation. Berutu et al. (2023), Gavilanes Montoya et al. (2021), Putra et al. (2023), Suhud and Allan (2022), and Erfurt (2022) have conducted studies but they rarely address this gap. There are various important reasons for considering these three criteria as indicators of the intention to revisit sites like Mount Anak Krakatau. Destination sustainability is critical for the long-term sustainability of tourism at sites such as Mount Anak Krakatau (Berutu et al., 2023). Managers and stakeholders can ensure the preservation of unique natural resources for future generations by considering environmental, social, and economic sustainability. Furthermore, the credibility of a location has a pivotal role in shaping tourists' judgements regarding safety, dependability, and the overall quality of their trip at places such as Mount Anak Krakatau (Gavilanes Montoya et al., 2021). Tourists are more inclined to feel at ease and motivated to return when they have confidence in the reliability of the information, they have received about the destination. Furthermore, environmental motivation has significance as many tourists express heightened awareness regarding matters of the environment and aspire to actively contribute to preserving nature throughout their travels (Putra et al., 2023). Destination managers can establish programmes that en environmental awareness and contribute to nature conservation efforts by assessing the influence of environmental motivation on the revisit intention.

Mount Anak Krakatau, situated in the Sunda Strait between the islands of Java and Sumatra, Indonesia, is a notable geological landmark and popular tourist attraction. This island was formed after the destructive eruption of Mount Krakatoa in 1883 and continues to display volcanic activity. It is therefore an intriguing destination for scientific research and adventure tourism (Ningtyas et al., 2022; Sari and Samsuri, 2020; Syamsidik et al., 2020). tourism activities at Mount Anak Krakatau provide exceptional opportunities for visitors fascinated by the allure of natural aesthetics and geological features. Commonly pursued activities include hiking, snorkelling, scuba diving, and camping. The island offers breathtaking vistas of the volcanic crater and nearby coastlines, drawing in individuals who crave thrilling experiences and awe-inspiring natural phenomena (Suhud and Allan, 2022). Mount Anak Krakatau is an outstanding destination where natural history, adventure tourism, and continuous geological processes converge, providing visitors with a dynamic and instructive experience. The island's distinct attributes and endless volcanic activity make it an ideal field for geologists to conduct research and an attractive destination for nature fans (Inayah et al., 2024; Mahbub et al., 2023; Riskianingrum and Yogaswara, 2022).

LITERATURE REVIEW

Destination Sustainability

The notion of destination sustainability involves a range of ideas and techniques. We can see this in the varied scholarly positions offered in the referenced publications. For instance, for example, Artal-Tur et al. (2020) extensively study ecological, social, cultural, and economic resource management in various tourism destinations, and their study highlights the need for long-term sustainability and improvement. Their primary objective is to foster sustainable tourism development that yields economic advantages and reviews social, cultural, and environmental repercussions for tourism operations. In addition, Hu et al. (2022) advocate for promoting voluntary pro-environmental actions among local citizens. Their perspective further highlights reducing adverse environmental effects and persuading eco-friendly behaviours among residents, thereby facilitating the sustainable growth of tourism. Gong et al. (2019) stress the importance of implementing the triple-bottom-line sustainability framework at the destination or regional level, and highlight the need for comprehensive planning, management, and regulation to achieve sustainable development.

Jørgensen (2023) offers valuable insights into measuring and improving the sustainability of tourist destinations, and advocates the operation of indicators, certifications, and indexes. These will assess and evaluate the sustainability performance of these destinations. This strategy aims to promote sustainable operations in tourism destinations, considering their environmental, social, and economic implications, thereby fostering a more sustainable tourism industry. Finally, Moliner-tena et al. (2021) stress the achievement of 'equilibrium in destination sustainability endeavours, and these refer to a balanced approach that considers economic, socio-cultural, and environmental aspects. Their viewpoint promotes enduring and environmentally friendly strategies in managing destinations, such as sustainable use of natural resources, fostering local economic growth, and considering local populations' social and cultural dimensions. The researchers contend that the sustainability of a site is crucial in providing visitors with memorable tourism experiences.

Destination Sustainability and Destination Credibility

Despite its vastness, the academic literature has not extensively delved into the engaging relationship between destination sustainability and destination credibility. This is due in part to the lack of research on this unique topic. However, the diverse perspectives of different scholars offer valuable insights into the potential influence of sustainability activities on credibility in several scenarios. Kapitan et al. (2019) underscore the crucial link between sustainability and credibility, particularly in sustainability certification and compliance with environmental standards. Their research highlights the vital role of sustainability credibility, encompassing factors such as accreditation by esteemed organisations like ISO, participation in sustainable business networks, and adherence to government regulations. Elsewhere, Braam and Peeters (2018) stress the influence of sustainability on the reliability of business performance information disclosed in sustainability reports. Advocates argue that organisations demonstrating robust sustainability performance are more likely to have their sustainability reports verified by external entities, thereby enhancing stakeholders' trust in the reliability of the disclosed data and ultimately bolstering corporate reputation. Mao et al. (2018) explore the impact of sustainability on credibility by developing a Food Trading System with Consortium Blockchain (FTSCON) in a unique context. This system studies to influence blockchain technology to establish a transparent and trustworthy food trade environment, thereby enhancing confidence and credibility in food transactions. Furthermore, Farooq and De Villiers (2019) study the influence of sustainability assurance on enhancing the credibility of sustainability reporting. Their research reveals that third-party sustainability assurance positively affects how consumers perceive the authenticity of sustainability reports. It underscores the importance of independent verification in building trust in sustainability disclosures.

Finally, Sander et al., 2021 study the impact of sustainability advertising on credibility, particularly about environmental and social sustainability, and suggest that environmental sustainability has a more pronounced effect on advertising credibility than social sustainability. Moreover, sustainability advertising plays a role in shaping consumer perceptions of brand and advertising credibility, highlighting the practical implications of these findings for businesses.

Destination Sustainability and Environmental Motivation

The current literature on the influence of destination sustainability on environmental motivation is inadequate due to the lack of research in this area. This deficit is mainly due to the lack of comprehensive studies investigating different dimensions of destination sustainability and their impact on environmental motivation. Insights from different scholarly perspectives can help fill this gap and clarify the possible connections between sustainability initiatives and environment motivation. Enqvist et al. (2018) emphasise the correlation between sustainability and motivation, specifically in the context of stewardship, and show that people or groups' inclination to participate in sustainable behaviours might be affected by their values, interests, or attitudes towards the environment and sustainability. These values, interests, or attitudes could include a sense of responsibility towards the environment, a desire for a healthier lifestyle, or a belief in the importance of sustainable development. Furthermore, other factors, including economic, social, and psychological aspects, frequently influence individuals' motivation to engage in sustainable behaviours. In addition, Rezvani et al. (2018) explore the influence of sustainability on customer motivation, specifically concerning sustainable products. Although corporations have been producing and promoting sustainable products, public acceptance of these products continues to be slow. Understanding the fundamental motives influencing customer acceptance or resistance towards sustainable products, such as price, perceived quality, or social norms, is essential for advancing sustainable consumption activities. Dodds et al. (2022) delve into the transformative potential of sustainable practices on festival motivation, and suggest that internal and external influences significantly shape festivals' adoption of sustainable practices. Values, charity, rules, and social pressure are important factors because these drive to carry out sustainable measures by festivals. Moreover, it can further increase festivals' incentive to implement sustainable measures due to their recognition of the internal advantages associated with sustainability, such as cost reduction. It underscores the inspiring potential of sustainability to reshape even the most traditional events.

Furthermore, Haldar (2019) examines the pivotal role of sustainable entrepreneurship in fostering a positive environmental impact. Sustainable-oriented entrepreneurs strive to create novel products and services. These positively influence the environment, improve quality of life, and seek to achieve social benefits and maximise profit. It highlights the hopeful prospect of sustainable entrepreneurship as a catalyst for positive change. Finally, Oka and Darmayanti (2020) examine the substantial influence of sustainable tourism development on the inclination of residents to endorse the advancement of tourism villages. Implementing sustainable tourism practices, such as ecotourism and community-based tourism, helps fully utilise tourism villages' growth opportunities. It emphasises the importance of raising awareness about environmental sustainability to encourage local communities to back tourism development efforts.

The following theories, derived from prior research, are proposed for inquiry.

H1 – Destination sustainability will have a significant impact on destination credibility.

H2 – Destination sustainability will have a significant impact on environmental motivation.

Destination Credibility

Jiménez-Barreto et al., 2020 defines destination credibility as the level of online trust a destination brand possesses. More specifically, this trust, influenced by user experiences on the destination platform, is crucial in shaping customers' perceptions, attachments, and satisfaction with that destination. As a relational construct evaluated through internal subjective experiences, destination credibility can pivotally play in the tourism industry.

According to Rather et al. (2020), destination credibility refers to the trust and confidence that customers have in the reliability and capability of a tourism destination to fulfil its promises consistently. This trust can significantly influence brand identification by customers and strengthen their emotional connection with the destination.

Molinillo et al. (2022) provide a different perspective on destination credibility as they define it as the perceived level of trust that tourists have in the reliability of a destination brand after visiting it. This belief evaluates tourists' prior information compared to their perceptions after direct experience. Perceived trust is critical as it can influence the future behaviour of individuals, such as their decision to make repeat visits or recommend the destination. This perspective adds another layer to our understanding of destination credibility, highlighting its multi-faceted nature and practical implications for destination branding and marketing strategies. Pelet and Ettis (2022) shed light on another aspect of destination credibility, they therefore define it as the level of consumer trust in the final destination of an advertisement, whether it directs consumers to a brand's Facebook page or the brand's main website. This trust is not arbitrary but relies on consumers' assessment of the relationship between the advertisement and their experiences. It also depends on the degree to which they believe in the message and the advertising media. This perspective underscores the role of consumer trust in shaping destination credibility, thereby providing a clearer understanding of the concept and introducing a fresh angle to the ongoing discourse on this topic. Japutra and Keni (2020) define destination credibility as the belief that destination management is willing and capable of fulfilling its promises regarding a specific destination. In other words, destination credibility reflects how much tourists trust a destination to deliver the promised experience.

Destination Credibility and Environmental Motivation

While there is a dearth of extensive research on the influence of a destination's credibility on environmental protection motivation, a few studies have provided significant insights from various perspectives. For instance, Kamel (2020) delves into the impact of celebrities' reputations in green advertising on the motivation of Egyptian Millennials to adopt environmentally friendly behaviour. This study underscores the importance of trust and credibility in celebrities' communication of environmental messages to Millennials, potentially inspiring them to adopt more eco-friendly behaviours, particularly in tourist destinations. The endorsement of celebrities in advertising can profoundly shape consumers' perceptions and intentions to purchase, even in the field of environmentally friendly behaviour. Therefore, celebrities' credibility can wield a substantial influence on the motivation of Millennials to adopt more favourable environmental behaviours, particularly when disseminating these messages through green commercials featuring celebrities.

Insch's (2011) examines the influence of credibility on motivation among various stakeholders, including travellers, tourism operators, local communities, and destination promoters, towards green destination brands. Stakeholders are more likely to support and implement environmental commitments when they trust the reputation of green destination brands. Conversely, a lack of trust or failure to meet commitments associated with environmentally friendly destination brands can dampen stakeholder motivation and potentially harm the destination's reputation. It underscores the practical implications of our research because it highlights the importance of credibility in motivating stakeholders to support and engage in environmentally friendly practices in the tourism sector. Moreover, Khalid et al. (2020) brings out the role of educational institutions' credibility in Malaysia as a determinant of international students' motivation to choose Malaysia as a study destination. The credibility of educational institutions in Malaysia is a crucial factor in shaping students' decision to select Malaysia as a study destination, instilling confidence in the quality of education they will receive. Froment et al. (2022) delve into the direct correlation between trustworthy teaching faculty (credibility *docente*) and students' academic motivation. The research findings suggest that students who perceive university teachers as trustworthy, evidenced by their professional profiles, are more academically driven. It implies that the trustworthiness of teachers can influence students' academic motivation. Froment et al. (2021) also found that the credibility of teachers positively impacts students' academic motivation. Furthermore, the academic drive of students has a significant impact on ratings of teaching effectiveness. Hence, this study can infer that the trustworthiness of the teacher influences student motivation, which in turn affects their teaching ratings.

Destination Credibility and Visit Intention

While numerous studies have explored the link between destination credibility and travel intention, our research stands out for its unique perspective and comprehensive approach, filling a gap in the existing body of knowledge. Yılmazdoğan et al., 2021 stress the substantial role of Instagram influencers' legitimacy in shaping travel decisions, and highlight the importance of trustworthiness, an essential aspect of credibility, in influencing travel intentions, particularly among social media users. Alsheikh et al. (2021) unearthed a crucial insight that the reliability of a source has a considerable impact on tourists' behavioural intentions. This finding directly has implications for the tourism industry, as it underscores the importance of credible information sources and the quality of e-WOM, such as user comments, experiences, and opinions on social media, in shaping tourists' intentions to visit destinations. Moreover, the quality of arguments and the legitimacy of the information source significantly influence the connection between e-WOM and plans to visit. Shang and Luo, 2021 examine the positive impact of endorser credibility on tourists' intentions to visit, and provides a deeper understanding of the factors influencing tourists' attitudes towards a destination and highlights the potential benefits of trustworthy endorsers.

Their findings suggest that such endorsers can enhance the probability of prospective tourists developing parasocial ties with them, thereby influencing tourists' emotional connection to the place. This insight can inspire tourism professionals to leverage the power of credible endorsers to enhance tourists' emotional connection to a destination. Substantially, the research by Kumail et al. (2022) stress the pivotal role of credibility in shaping the authenticity of a destination brand. This finding has significant implications for tourism marketing and management because it highlights the need to build and maintain trust among potential tourists. Therefore, it influences their decision to visit various tourist places.

In this study, Chen et al. (2014) establish the influence of the legitimacy of travel blog content on travellers' behavioural intentions to visit particular tourist sites. Their research suggests that the perceived reliability of material presented in travel blogs has a beneficial impact on travellers' inclination to follow the recommendations provided in those blogs. Hence, the degree of reliance on travel blog information can impact travellers' inclination to visit the tourist sites mentioned in the blogs. In addition, Qiu et al. (2023) demonstrate that the reliability of information sources from destinations impacts intention. Their research suggests that the level of trust in information sources from destinations can impact tourists' attitudes and behavioural intentions towards the destination, particularly concerning responsible environmental behaviour. The level of trust in the information tourists receive can influence their views of the destination, their sense of relationship with the destination and their emotional bond. As a result, this can affect their responsible environmental behaviour.

The following theories, derived from prior investigations, are offered for examination.

H3 – Destination credibility will have a significant impact on environmental motivation.

H4 – Destination credibility will have a significant impact on visit intention.

Environmental Motivation

Understanding of individuals' engagement in pro-environmental behaviours across different contexts is significantly enhanced by the concept of environmental motivation, as evidenced by prior research. Environmental motivation, as defined by Legault (2023), refers to an inherent inclination that compels individuals to participate in ecologically responsible actions motivated by personal objectives to safeguard and maintain the natural environment. This innate motivation is vital, as it is unaffected by external incentives but driven by internal principles and convictions. Similarly, Flores and Jansson (2022) emphasise that environmental motivation incorporates various variables, such as the consciousness of the environment, the aspiration to minimise adverse environmental effects, and favourable assessments of environmentally friendly items. These findings indicate that persons strongly inclined towards issues of the environment are more inclined to encompass environmentally-friendly inventions and endorse sustainable behaviours, driven by their profound and inherent concern for the environment. Further examination of environmental motivation uncovers its complex and diverse characteristics. Ojo (2023) classifies environmental motivation into autonomous and controlled motivations. Personal interests and values fuel autonomous motivation. In contrast, external factors like social approbation or the need to avoid fines influence controlled motivation. This differentiation emphasises the significance of cultivating self-driven motivation for sustained involvement in pro-environmental behaviours. On the other hand, a study by Moulay and Ujang (2021) extends this idea when applied to the use of public parks. They observe that environmental motivation encompasses not only the aspiration for natural aesthetics, clean air, and a sense of being connected to nature but also influences the activities of park visitors. In addition, Sharpe et al. (2022) highlight the presence of environmental motivation in the workplace. Their views and internal norms drive employees to engage in pro-environmental actions without requiring external rewards intrinsically. These studies collectively demonstrate the various uses of environmental motivation and its essential role in encouraging sustainable behaviours in different contexts.

Environmental Motivation and Visit Intention

Researchers have not yet thoroughly examined the influence of environmental motivation on the desire to visit, specifically in specialised areas like volcano tourism. Suhud et al. (2021) emphasise the substantial impact of motivation on intention and highlight how motivation influences the perception of a location, subsequently affecting the desire to visit. This relationship emphasises the significance of comprehending the several types of incentives that influence visitor behaviour. Prior research conducted by Gkargkavouzi et al. (2019) and Wang et al. (2020) highlights the substantial influence of both internal and external motivations on individuals' inclination to undertake environmentally friendly actions, such as green consumption and waste reduction. These findings indicate that comparable motivational factors may influence people's intentions to visit environmental tourism sites. Furthermore, the precise influence of environmental motivation on the intention to visit is crtical since it corresponds to broader patterns identified in consumer behaviour studies. Choi and Johnson (2019) show that environmental and hedonic motives significantly impact the desire to buy environmentally friendly products, and indicate that consumers are increasingly inclined towards sustainability. Similarly, the studies conducted by Fan et al. (2019) and Suhud (2013) suggest that incentives linked to environmental protection and personal values have a strong influence on behavioural intention. These insights are crucial for volcano tourism because the distinctive environmental setting can enhance tourists' knowledge and commitment to sustainability. Therefore, investigating environmental motivation affecting the intention to visit in this context can provide valuable insights for destination marketing strategies and the advancement of sustainable tourism practices, as indicated by previous research (Flores and Jansson, 2022; Ojo, 2023; Moulay and Ujang, 2021; Sharpe et al., 2022). The subsequent theories, derived from prior investigations, are suggested for examination.

H5 – Environmental motivation will have a significant impact on visit intention.

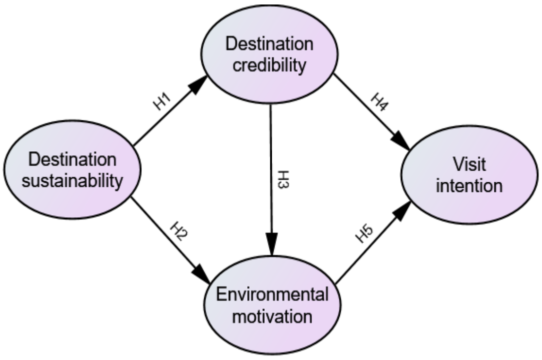

Figure 1. The theoretical framework

Figure 1 presents a theoretical framework showcasing the complex connections among destination sustainability, credibility, environmental motivation, and visit intention. This model suggests the substantial impact of destination sustainability on environmental motivation and destination credibility. These findings indicate that sustainable practices and characteristics of a resort improve its perceived trustworthiness and inspire tourists to be more environmentally aware. Furthermore, the research results closely connect the credibility of a place to the incentive for environmental conservation.

It means that destinations that are considered credible are more likely to encourage tourists to have a stronger awareness sense of the environment and engage in responsible behaviours. Alsoe, the credibility of the location and the drive to protect the environment closely link the intention to come. It highlights the significance of these characteristics in influencing tourists' choices to visit environmentally sensitive and sustainably managed places, such as volcano tourism sites. This paradigm emphasises the interrelatedness of sustainability, credibility, motivation, and behavioural aims within the context of tourism.

METHODS

Measures

The factors in this study were measured using indicators modified from previous research. Destination sustainability was evaluated by indicators adapted from Martín-Miguel et al. (2020). Furthermore, the study's framework was significantly influenced by destination credibility, as determined by the metrics described in Chen et al. (2013). The evaluation of environmental motivation, a crucial factor in comprehending individuals' ecologically conscious behaviours, was conducted using the insights presented by Bruyere and Rappe (2007) and Suhud, 2015.

The study also evaluated the intention of visits by using indicators derived from the research of Kim et al. (2009) and Su et al. (2022) to understand visitors' predisposition towards visiting particular sites. They assessed the indicators using a 6-point Likert-type scale, with one (1) representing "strongly disagree" and six (6) representing "strongly agree".

Data Analysis Methods

The quantitative data in this study underwent four critical steps of analysis. Firstly, the validity of the data was assessed through exploratory factor analysis (EFA) using SPSS version 29. It deems an indicator valid if it exhibits a factor loading of 0.4 or higher, indicating a strong relationship with its underlying construct. Secondly, the reliability of the data was evaluated by examining Cronbach's alpha coefficient, conducted using SPSS version 29. It considers a construct reliable if it achieves a Cronbach's alpha score of 0.7 or above. It signifies internal consistency among its constituent items. The third step involved testing the average variance extracted (AVE) to assess the convergent validity of the measurement model, and it deems a minimum AVE score of 0.5 or higher acceptable, indicating that the variance captured by the construct's indicators exceeded the measurement error. Fourthly, the authors conducted a second validity assessment using confirmatory factor analysis (CFA) implemented in AMOS version 29. Although this article did not explicitly present the results of CFA, it served as an additional validation step to confirm the structure and relationships proposed in the theoretical model. Finally, this study implemented hypothesis testing using structural equation modelling (SEM) in AMOS version 29. It considers a hypothesis supported if it achieves a critical ratio (CR) value of 1.96 or greater, indicating a significant relationship between the variables. Table 1 presents criteria for a fitted model.

Table 1. Criteria for a fitted model

Fit measure	Good fit indices	Sources
Probability	$0.05 < p \leq 1.00$	Schermelleh-Engel et al. (2003)
X^2/DF	$0 \leq X^2/DF \leq 2.00$	Tabachnick et al. (2007)
CFI	$0.95 \leq CFI \leq 1.00$	Hu and Bentler (1995)
RMSEA	$0 \leq RMSEA \leq 0.05$	Browne and Cudeck (1992)

RESULTS

Participants

The profile of participants in this study, as seen in Table 2, reflects a predominantly female composition, constituting 90.7% of the total sample, while males accounted for 9.3%. Regarding age distribution, the majority fell within the 21-25 age group, comprising 67.6% of the participants, followed by those aged 17-20 years old, accounting for 28.9%. A small proportion represented older age categories, with only 2.2% aged 26-29 and 0.4% each for 30-34, 35-39, and 50 years and above. In terms of education, the highest percentage held a high school qualification (60.0%), followed by undergraduate degrees (31.6%), while postgraduate and diploma holders represented smaller proportions at 0.9% and 3.1%, respectively.

Table 2. Profile of participants

Profile		Frequency	Percent
Sex	Male	21	9.3
	Female	204	90.7
	Total	225	100.0
Group of Age	17-20	65	28.9
	21-25	152	67.6
	26-29	5	2.2
	30-34	1	0.4
	35-39	1	0.4
	50 and older	1	0.4
Level of Education Has Been	Less than high school	10	4.4
	Diploma	7	3.1
	Postgraduate	2	0.9
	Undergraduate	71	31.6
	High school	135	60.0
Occupational Status	Employed	47	20.9
	Unemployed	166	73.8
	Self-employed	12	5.3
Marital Status	Unmarried	220	97.8
	Married	5	2.2
Experience Visiting Mount Bromo	No	184	81.8
	Yes	41	18.2

Table 3. Results of data validity and reliability tests

	Variables and Indicators	Factor loadings	Average varia -nce extracted	Cronbach 's Alpha
	Destination Credibility		0.836	0.951
Dc4	Mount Krakatau reminds me of someone who delivered what he promised.	0.898		
Dc2	Mount Krakatau reminds me of someone who can deliver what he promises.	0.895		
Dc1	Mount Krakatau reminds me of someone who is competent and knows what he is doing.	0.847		
Dc3	Mount Krakatau reminds me of someone who can provide clear, organized and experienced information.	0.842		
Dc5	Mount Krakatau reminds me of someone with a name I can trust.	0.841		
	Destination Sustainability		0.789	0.909
Ds3	Management of Mount Krakatau will pay attention to the interests of visitors.	0.880		
Ds2	Management of Mount Krakatau will support the goal of preserving Mount Krakatau.	0.831		
Ds4	Management of Mount Krakatau will support the sustainability of Mount Krakatau tourism.	0.801		
Ds1	Management of Mount Krakatau will provide good services to the community.	0.716		
	Destination Publicity		0.684	0.844
Dp3	I often find news about Mount Krakatau on social media.	0.884		
Dp5	I often hear people talking about Mount Krakatau.	0.854		
Dp1	I often find news about Mount Krakatau on news portals.	0.836		
Dp6	News about Mount Krakatau that people talk about is positive and beneficial for Mount Krakatau.	0.456		
	Environmental Motivation		0.677	0.840
Em2	Visiting Mount Krakatau will allow me to help the environment there.	0.841		
Em1	Visiting Mount Krakatau will allow me to do something essential for the environment there.	0.790		
Em4	Visiting Mount Krakatau will allow me to develop something sustainable there.	0.719		
Em3	I have concern for the environment.	0.647		
	Visit Intention		0.781	0.906
Vi3	I plan to travel to Mount Krakatau if everything is as I hope.	0.894		
Vi5	I want to visit Mount Krakatau.	0.858		
Vi1	I hope to visit Mount Krakatau in the future.	0.826		
Vi4	In the next 12 months, I hope to visit Mount Krakatau.	0.794		

Furthermore, the occupational status of the participants varied, with the majority being unemployed (73.8%), followed by those employed (20.9%) and self-employed individuals (5.3%). Additionally, the marital status of the respondents indicated that the majority were unmarried (97.8%), while only a minor percentage were married (2.2%). Lastly, concerning experience visiting Mount Bromo, the data revealed that a significant portion of the participants (81.8%) had not visited Mount Bromo, while 18.2% reported having prior experience visiting the destination. Overall, this demographic profile provides insights into the characteristics of the participants involved in the study, which may have implications for the interpretation and generalization of the research findings.

Data Validity, AVE, and Reliability Tests

Table 3 presents the results of data validity and reliability tests for various constructs related to Mount Krakatau tourism. The authors conducted these tests to ensure the robustness and accuracy of the measurement model used in the study. For the construct of Destination Credibility, all indicators exhibited strong factor loadings ranging from 0.836 to 0.898, surpassing the recommended threshold of 0.4. Additionally, the construct achieved a high Average Variance Extracted (AVE) score of 0.951, indicating convergent validity. The Cronbach’s Alpha coefficient for Destination Credibility was also satisfactory at 0.951, demonstrating high internal consistency among the indicators.

Similarly, the construct of Destination Sustainability demonstrated strong factor loadings ranging from 0.716 to 0.880, meeting the validity criterion. The AVE score for this construct was 0.909, signifying adequate convergent validity. The Cronbach’s Alpha coefficient for Destination Sustainability was 0.909, indicating high reliability.

For the construct of Destination Publicity, three out of four indicators displayed substantial factor loadings ranging from 0.836 to 0.884, meeting the validity criterion. However, one indicator fell below the threshold, with a factor loading of 0.456, which may warrant further investigation. Nonetheless, the AVE score for Destination Publicity was 0.844, indicating acceptable convergent validity. The Cronbach’s Alpha coefficient for this construct was 0.844, demonstrating satisfactory reliability. The construct of Environmental Motivation exhibited strong factor loadings ranging from 0.647 to 0.841, meeting the validity criterion. The AVE score for this construct was 0.840, indicating adequate convergent validity. The Cronbach’s Alpha coefficient for Environmental Motivation was 0.840, suggesting high internal consistency. Lastly, the construct of Visit Intention demonstrated strong factor loadings ranging from 0.794 to 0.894, surpassing the validity threshold. The AVE score for Visit Intention was 0.906, indicating acceptable convergent validity. The Cronbach’s Alpha coefficient for this construct was quite high at 0.906.

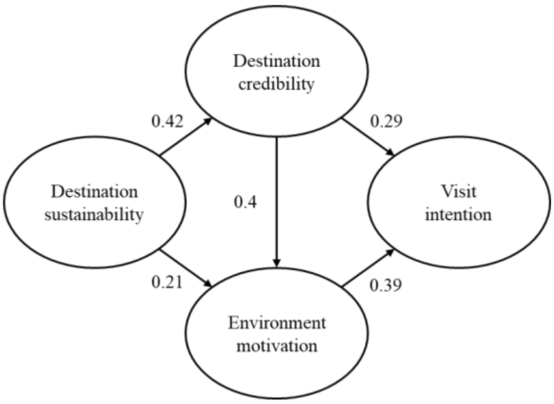

Figure 2. Structural model of the hypotheses testing

Hypotheses Testing

Figure 2 presents the structural model illustrating the relationships between variables examined in the hypotheses. The model's fit indices are as follows: the probability score is 0.240, indicating a reasonable fit within the acceptable range of $0.05 < p \leq 1.00$; the CMIN/DF score is 1.170, falling within the recommended range of $0 \leq$ CMIN/DF ≤ 2.00, indicating a satisfactory fit between the model and the data; the CFI score is 0.997, surpassing the threshold of 0.95, indicating an excellent fit of the model to the data; and the RMSEA score is 0.028, which falls within the acceptable range of $0 \leq$ RMSEA ≤ 0.05, suggesting a good fit of the model to the data with minimal error.

The outcomes of the hypotheses testing, as summarized in Table 4, shed light on the relationships between various constructs within the context of destination perception and environmental motivation. Hypothesis 1 investigated the relationship between destination sustainability and destination credibility. The substantial Critical Ratio (C.R.) value of 5.832 attests to a significant association between these constructs, leading to the acceptance of this hypothesis, and it further implies that a destination's sustainability efforts positively contribute to its perceived credibility among visitors. Similarly, Hypothesis 2 explored the impact of destination sustainability on environmental motivation.

Table 4. Results of hypotheses tests

Hypotheses	Paths	C.R.	P	Results
H1	Destination sustainability > Destination credibility	5.832	***	Accepted
H2	Destination sustainability > Environmental motivation	2.787	0.005	Accepted
H3	Destination credibility > Environmental motivation	5.343	***	Accepted
H4	Destination credibility > Visit intention	3.762	***	Accepted
H5	Environmental motivation > Visit intention	4.717	***	Accepted

With a C.R. value of 2.787 and a p-value of 0.005, this study accepts this hypothesis. It suggests that destinations with solid sustainability practices foster greater environmental motivation among tourists. Moving to Hypothesis 3, which examined the relationship between destination credibility and environmental motivation, a noteworthy C.R. value of 5.343 indicates a significant positive association between these variables, leading to the acceptance of this hypothesis. It implies that destinations perceived as credible are more likely to inspire environmental motivation among visitors. Hypothesis 4 focused on the relationship between destination credibility and visit intention. The substantial C.R. value of 3.762 supports a significant positive relationship between these constructs, leading to the acceptance of this hypothesis. It suggests that destinations perceived as credible are more likely to attract visit intentions from tourists.

Finally, Hypothesis 5 investigated the impact of environmental motivation on visit intention. The notable C.R. value of 4.717 indicates a significant positive relationship between these constructs, leading to the acceptance of this hypothesis. It implies that tourists with higher environmental motivation are likelier to express visit intentions towards a destination.

DISCUSSION

The results of this study demonstrate a notable influence of destination sustainability on destination credibility, aligning with prior studies undertaken by Kapitan et al.(2019), Braam and Peeters (2018), and Mao et al. (2018), which emphasise the significance of implementing sustainable measures. It will improve the perceived credibility of tourist attractions, specifically in the context of volcanic tourism. Many factors can attach to the correlation between destination sustainability and destination credibility. Most notably, tourists increasingly champion sustainability and environmentally beneficial practices in their holiday destination choice. Their preference for destinations demonstrates a commitment to environmental protection, conservation initiatives, and responsible tourism and is a significant driver of destination credibility.

Furthermore, destination sustainability programmes frequently encompass open and apparent communication and active involvement with many stakeholders, such as tourists, local communities, and environmental organisations. Transparent communication promotes trust and confidence among tourists, resulting in high perceived trustworthiness of the place. In addition, sustainable destinations are not just about environmental protection but also about community empowerment. They allocate resources to enhancing infrastructure, implementing environmental protection initiatives, and promoting community empowerment programmes. These collective efforts not only increase the desirability and allure of the destination but also foster a sense of trust and esteem among tourists, thereby enhancing their legitimacy.

The results of this study demonstrate a clear influence of destination sustainability on environmental motivation. These are consistent with prior studies conducted by Enqvist et al. (2018), Rezvani et al. (2018), and Dodds et al. (2022), which highlight the significant impact of sustainable practices on tourists' inclination to participate in environmentally conscious actions in volcano tourism environments. Perceived authenticity can be attached to the favourable correlation between destination sustainability and environmental motivation. Sustainable destinations frequently advocate for genuine and engaging experiences that connect tourists, the natural environment, and local culture. Consequently, tourists may cultivate a more profound admiration for the environment and an increased obligation towards its conservation.

Alsi, destination sustainability projects frequently incorporate educational programmes, eco-friendly activities, and conservation endeavours to promote awareness about environmental concerns. These programmes can probably motivate tourists to embrace more ecologically conscious behaviours while visiting and in their day-to-day activities. For instance, travellers are likely to show greater interest in undertaking eco-tours, adopting waste reduction measures, or backing local conservation initiatives when visiting sustainable places such as Mount Krakatau. Moreover, visitors are progressively searching for significant and satisfying travel experiences that correspond with their values and convictions. Sustainable places allow tourists to contribute to environmental protection and sustainability initiatives actively, increasing their sense of purpose and satisfaction. The feeling of personal fulfilment can be a powerful incentive for tourists to embrace environmentally conscious behaviours and endorse sustainable tourism practices.

The research results of this study demonstrate a substantial influence of destination credibility on environmental motivation. These support prior investigations of Kamel (2020), Insch (2011), and Khalid et al. (2020). It implies that what tourists perceive as a place's trustworthiness is crucial in influencing their desire to participate in ecologically friendly actions while visiting volcano tourism sites like Mount Krakatau. The influence of trust and reliability can be attached to the positive correlation between destination credibility and environmental motivation.

Tourists who view a destination as credible are more inclined to trust the facts and messages the destination communicates regarding its environmental initiatives and sustainability efforts. This trust cultivates a feeling of certainty and conviction among tourists. Moreover, it leads to an expanded drive to engage in environmentally conscientious activities and endorse conservation initiatives while visiting.

Furthermore, involving in honest communication and showcasing a sincere dedication to environmental care can strengthen credibility. Destinations that effectively convey their sustainability objectives, substantiate their environmental accomplishments and actively communicate transparently with tourists are more likely to be seen as credible. Tourists are more likely to have confidence in destinations that exhibit accountability, honesty, and integrity in their sustainability efforts, enhancing their willingness to participate in environmental conservation.

The research results of this study reveal that the credibility of the destination strongly influences the intention of visitors to visit Mount Krakatau. This conclusion supports previous research conducted by Yılmazdoğan et al., 2021, Alsheikh et al. (2021) and Shang and Luo, 2021. This statement highlights the importance of perceived trustworthiness in influencing tourists' willingness to visit volcanic tourism areas such as Mount Krakatau. It may attribute the observed correlation between destination credibility and visit intention to the impact of trust and confidence. Tourists who view a destination as credible are more inclined to trust the information, advice, and assurances supplied by the destination about elements such as safety, quality of experience, and authenticity of attractions. Establishing this trust fosters a feeling of certainty and assurance among tourists, resulting in an increased inclination to visit the area.

Moreover, the place's legitimacy can enhance travellers' impressions of the overall appeal and allure of Mount Krakatau as a tourist destination. A reputable venue is regarded as dependable, genuine, and trustworthy, which increases its attractiveness and charm to prospective tourists. Tourists are more likely to choose reputable venues because they believe their expectations will be satisfied and they will have a satisfactory and rewarding experience during their visit.

The confirmation of the fifth hypothesis shows the substantial influence of environmental motivation on the intention to visit Mount Anak Krakatau and is consistent with the previous research conducted by Suhud et al. (2021), Gkargkavouzi et al. (2019), and Wang et al. (2022). This finding highlights the significance of environmental factors in shaping tourists' decisions to visit volcano tourism locations. According to this study's research findings, environmental motivation influences the views and intentions of individuals towards sustainable tourism practices significantly. It includes their readiness to participate in ecologically responsible behaviours. The validation of this hypothesis emphasises the need for tourism stakeholders to incorporate sustainable practices and environmental education initiatives into volcano tourism destinations. It will promote a stronger sense of environmentally friendly responsibility among visitors and support the conservation efforts of ecologically delicate areas such as Mount Anak Krakatau.

CONCLUSION

This study is unique in its focus on Mount Krakatau and examines the determinants influencing tourists' intentions to visit this specific volcano. The research fills a gap in the scholarly literature, which has a limited focus on studying visitor intentions in the context of volcano tourism. It uses destination sustainability, destination credibility, and environmental motivation as factors. The confirmed idea that destination sustainability has a major impact on destination credibility is a significant finding. These results suggest that tourists perceive sites implementing sustainable practices as more trustworthy, likely due to the positive reputation associated with sustainability initiatives. In addition, the study revealed that destination sustainability significantly influences the level of environmental enthusiasm among tourists, indicating that tourists are more likely to engage in eco-friendly actions when visiting areas prioritising sustainability projects.

Furthermore, the influence of destination credibility on environmental motivation was substantial. These findings suggest that tourists' views on the trustworthiness of a place impact their willingness to participate in environmentally conscious actions while visiting. Moreover, the study revealed that a destination's trustworthiness considerably impacts travellers' intentions to attend. It highlights the significance of creating and upholding a trustworthy reputation for locations to attract and retain travellers. Finally, it discovered that environmental motivation significantly impacts tourists' inclination to visit. These findings indicate that tourists with a stronger inclination to the environment are more inclined to plan a visit to Mount Krakatau. This study enhances the current body of research by conducting a practical investigation into the connections among destination sustainability, destination credibility, environmental motivation, and tourists' plans to visit in the context of volcanic tourism, with an essential emphasis on Mount Krakatau. The findings affirm the substantial influence of destination sustainability on destination credibility. These findings indicate that tourists view places with sustainable practices as more trustworthy. These support the theoretical viewpoint that sustainable activities improve the reputation and credibility of destinations (Kapitan et al., 2019).

The study also highlights the substantial impact of destination sustainability on the level of environmental motivation among tourists. This discovery contributes to the theoretical comprehension of how sustainable destination management might promote environmentally conscientious behaviour among tourists, as proposed by Enqvist et al. (2018). The statement highlights the significance of incorporating sustainability concepts into destination planning and management to motivate tourists to participate in environmentally friendly activities while visiting.

Furthermore, the study demonstrates the substantial influence of destination credibility on environmental motivation. This discovery is consistent with theoretical frameworks that highlight the significance of location credibility in influencing tourists' perceptions and behaviours (Insch, 2011). The statement highlights the implication of developing and upholding a trustworthy reputation for locations because it encourages tourists to embrace environmentally sustainable behaviours. In addition, the study affirms the substantial impacts of destination credibility and environmental motivation on tourists' plans to visit. This study reinforces the significance of credibility and incentive elements in shaping visitors' behavioural intentions, therefore adding to the existing theoretical knowledge (Yılmazdoğan et al., 2021; Kamel, 2020). This statement highlights the interdependence of destination characteristics, visitor desires, and travel intentions in volcano tourism.

This study's research results provide vital knowledge for destination managers and stakeholders obligated to manage volcanic tourism at Mount Krakatau and other similar sites. First and foremost, recognising destination sustainability as a crucial factor in establishing destination credibility highlights the significance of incorporating sustainable practices into destination management plans. To strengthen the legitimacy of a destination and attract environmentally concerned tourists, destination administrators should put first sustainability initiatives, including conservation efforts, waste management programmes, and community engagement projects.

Furthermore, acknowledging the substantial impact of destination credibility on environmental motivation implies that destination administrators should highlight to establish and upkeep a favourable reputation for the destination. It can be fulfilled by employing transparent communication, actively involving stakeholders, and consistently following sustainable practices. Managers can effectively encourage tourists to behave in an environmentally responsible way during their trips by improving the credibility of the place. In addition, recognising the influence of environmental motivation on travel intentions emphasises the significance of advocating for sustainable tourist experiences and activities at Mount Krakatau. Destination managers can create and market sustainable tours. These tours' activities centred around nature and educational programmes to attract tourists who seek meaningful and environmentally responsible travel experiences.

Although this study has made crucial discoveries and contributions, it is important to recognise certain limits. Initially, the research exclusively concentrated on the context of Mount Krakatau and volcanic tourism, perhaps restricting the applicability of the results to other tourist locations or environments. Subsequent research endeavours may investigate diverse categories of tourist locations to attain a more all-encompassing comprehension of the interconnections among destination sustainability, credibility, environmental motivation, and visit intentions. Furthermore, the study included self-reported data from tourists. Otherwise, response bias and social desirability effects can influence the data. Using objective metrics or observational data in future research could validate the findings and mitigate frequent method bias.

Furthermore, the study utilised a cross-sectional research methodology, constraining the capacity to demonstrate causal correlations between variables. In future studies, it would be beneficial to employ longitudinal or experimental designs to evaluate the causal impact of destination sustainability, credibility, and environmental incentive more accurately on visit intentions over a while. Furthermore, assessing factors such as a location's sustainability, reputation, and motivation for environmentally friendly practices may not fully encompass the intricate nature of these concepts. Future research should utilise more extensive and verified measuring scales to improve the reliability and validity of the findings.

In order to overcome the limitations described earlier and build upon the findings obtained in this study, the authors accommodate various recommendations for future research. Researchers could undertake comparative studies across various volcano tourism sites to analyse the differences in the connections between destination sustainability, credibility, environmental motivation, and visit intentions. It could offer significant perspectives on the contextual elements that impact tourist behaviour and techniques for managing destinations. Moreover, future research endeavours could utilise mixed-methods methodologies, integrating quantitative surveys with qualitative interviews or observations, to better comprehend tourists' perspectives, motives, and behaviours in volcano tourism environments. It could assist in identifying subtle aspects and mechanisms that influence tourists' decision-making and destination preferences.

Finally, it suggests that researchers should perform longitudinal studies to examine the enduring impacts of destination sustainability initiatives, credibility-building endeavours, and environmental education programmes on tourist behaviour and destination performance. It has the potential to offer beneficial perspectives on the long-term sustainability and resilience of volcano tourism locations. Finally, researchers could investigate the impact of destination governance, stakeholder engagement, and policy interventions on promoting sustainable tourism development and improving tourist experiences in volcano tourism destinations. We could use this information to develop efficient plans and activities to reduce environmental effects, conserve natural resources, and promote socio-economic advantages for local populations.

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WETLAND AND BIOCULTURAL HERITAGE REGENERATION THROUGH THEMATIC ECOLOGICAL TOURISM PRACTICE: THE CASE OF PATAN SUB-DISTRICT, KHUN TAN DISTRICT, CHIANG RAI, THAILAND

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Abstract: The tourism managed and operated by local communities has evidently been a significant phenomenon in the 21st century, and therefore it is one of the challenging units in the tourism value chain. This study investigates the initiative of community ecological tourism and proposes a framework of ecological tourism development. The inductive approach utilizes field survey, in-depth interviews, participatory observation, focus group discussion with key tourism partners. The concept of public private partnership (PPP) was applied. The analytic hierarchy process (AHP) was employed to rank the criteria for ecological tourism development. The structural equation modelling (SEM), as a quantitative approach, was used to foster the factors collected from the focus group. There are six criteria identified for sustainable ecological tourism development including: environmental, economic, sociocultural, visitor experiences, infrastructure and logistics, and sustainability. Other six factors enhance ecological tourism development namely: budget, knowledge, technological system, participation, community factors, and social factors. Stakeholders highlight environment and community participation for sustainable development. Still, the local residents lack knowledge on tourism management. Based on the findings, the sustainable ecological tourism development framework for Patan was constructed. Future success factors that should be essentially developed involve inventory of local data that will be useful for establishing identity and meaning making, local individuals' learning and understanding of their local knowledge, training and tourism interpretation and narratives for story-telling of its cultural landscape.

Keywords: wetland, cultural landscape, ecological tourism, bio-cultural heritage, rural tourism

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INTRODUCTION

There has been a realization of the importance of industries emerging in the post-industrial economy, that is the service (Bordoloi et al., 2023) and tourism industry and creativity being evidently one of the main economic drivers (Zhou and Sotiriadis, 2021; Tolkach et al., 2016) in many countries. In a problematic context, tourism development is used as a solution responding to the problems in situ; in many developed and developing countries, it has been used in a proactive and holistic way to integrate tourism in the town development plan as the management for socio-cultural well-being and economic development (Hacia, 2019; Wanitchakorn and Muangasame, 2021; Oktadiana et al., 2022).

The use of tourism and recreation as a regenerative approach in communities has been significant in the post-pandemic discourse (Surawattananon et al., 2021; Afifi, 2021; Skryl and Gregoric, 2022). In Thailand, its national policy has aimed for the country to leverage social and economic capabilities of rural communities in order that the local residents can maintain their self-reliance as the catalyst for community sustainable development.

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The critical aspects of community capability development encompass transfers or contribution of technological and innovation body of knowledge built by the academic and research institutions, and commercial body of knowledge from the private sector, to be adopted in strengthening communities' local business, economic, social and education development and environmental protection and rehabilitation (Surawattananon et al., 2021), for instance.

This paper is about a rural community, Patan Sub-District Municipality in Khun Tan District, Chiang Rai Province, Thailand. Its geophysical characteristics include 33 acres of "Pa Som Saeng" or Som Saeng Forest, which is roughly 300 years old along the Ing River. Som Saeng is a tree that can tolerate flooding during the monsoon season. It is the site of a large migratory fish population that lays its eggs, creating the ecology that supports the natural abundance of the Ing River basin. During the summer season, the forest is serene and full of various flora and fauna. It has been described as Thailand's and Southeast Asia's unique wetland forest. That is in the process of being proposed to UNESCO as a Ramsar Site (Ministry of Culture and National Electronics and Computer Technology Center, 2011). Nonetheless, Patan's scenery remains wilderness because the local government and people, which have ties to Buddhism, orchestrated a blessing tree ritual to avoid devastation. The activity harmonizes with the community ways of life while also allowing local inhabitants to benefit from the natural resources. The wilderness was emphasized by (Thomsen et al., 2023) the intricacy of its description in terms of biophysical, symbolic ideals, and experiential differences from other terrestrial settings. It is the natural system's unhindered state due to human interference, the positive experiences and recreation that come from within each individual, the ecological and geological significance for scientific, educational, scenic, and historical purposes. For these reasons, controlling tourist usage through conservation is essential to maintaining the natural resources.

Based on Patan's natural and cultural landscape narratives that is still under study (Csurgó and Smith, 2021) specifically the wetland in developing countries (Khoshkam et al., 2016), this study suggests a regeneration approach for the community's heritage assets in the rural ecological tourism context in responding to urbanization and a post-pandemic resiliency, and to promote social strength at the local level. Patan, therefore, has been selected to carry out the ecological-cultural tourism development project. Its aim to increase the number of tourists which stimulating the grassroots economy, creating jobs, and distributing income within the area. However, tourism development in the past years has been linear resulting in a less sustainable practice. A more sustainable and inclusive tourism development in tune with the issues of environmental and socio-cultural resources is needed to shift to a more circular development; as a result, it conduces to a regenerative tourism system. Therefore, this study aims to propose a model of innovative community ecological tourism development and its operation by (1) investigating criteria of wetland and biocultural tourism in Patan; and (2) examining the factor enhancing tourism development initiative.

LITERATURE REVIEW

Biocultural heritage and cultural landscape

Cultural landscape originated from social and ecological processes that co-integrated overtime creating a significant value system (Schmitz and Herrero-Jauregui, 2021). Historically, the cultural landscape was constructed by a group of people representing different cultures depending on the diversity of climate and landscape (García-Ruiz et al., 2020). Though, cultural authenticity correlates how people engage with their landscapes (Stephenson, 2007). Consequently, the landscape is acknowledged and valued as a symbol of culture. It is the combination of natural and human efforts, as well as the dissemination of human society's evolution and settlement across time. The cultural landscape represents a living organism of people physically, socially, culturally (Assandri et al., 2018), spiritually and economically (Gordon, 2018). Addedly, cultural landscapes represent the intricate and dynamic interaction of culture, environment, and society. It is, where, the inseparable correlational of society and nature tied. That bridged the cultural tangible and intangible heritage with the biological sphere (Aktürk and Dastgerdi, 2021). Remarkably, Fenitra et al., 2022 highlighted the biospheric value that inherited in individuals influencing the environmental concern. Inasmuch as the key elements are also including its symbolic values and society (Csurgó and Smith, 2021). Yet, the notion of biocultural heritage (Ekblom et al., 2019) originated from the confluence of local resource management with conventional ecological wisdom. The ecosystem that spans human culture and the natural environment intersects with knowledge, innovation, and habits.

The framework has been developed by (Ekblom et al., 2019) aiming for natural preservation, landscape planning and development etc. It comprises five elements, namely: ecosystem memories, landscape memories, place-based memories, integrated landscape analysis and stewardship and change. Even if the descriptions of biocultural heritage and cultural landscape overlap, both notably serve the economic output through tourism, from individual level to national level.

The cultural heritage and tourism development are necessary for sustainability, since social and economic growth are acknowledged as unfolding beneath the built environment or heritage (Cai et al., 2021). However (Ekblom et al., 2019), it is critical to foster equality and the inclusive creation of regional traditions with the goal to support biodiversity innovation and continuity in local community sustainably, and cooperation in landscape management and preservation. Hence, the concept of ecological tourism or slow tourism was proposed (Kropinova et al., 2023) specifically in protected areas. The scholars (Kropinova et al., 2023) found significant resources as such historical and cultural landscapes, and natural resources generating tourism products raising awareness and educate on environmental issues, while the slow tourism is about knowing one tiny landscape well in the true pace of life. Highlighting the cultural ecosystem services (Assandri et al., 2018), the value of cultural heritage (Chaigasem and Kumboon, 2024) and aesthetics were quantified and assessed. Other major concerns include landscapes that provide a feeling of place for recreation and development of tourism (Csurgo and Smith, 2021), as (Schulp et al., 2019) underlined that landscape features and cultural heritage are valuable qualities of cultural landscapes inherently. On the other hand, the new holistic concept as creative tourism for sustainability was proposed (Singtuen and Galka, 2024) by the well-prepared combination of natural, cultural, and lifestyle tourist attractions.

At the same time, local communities shall recognize the value of their culture along with the effort to conserve environment. Hence, the planning and development of the untapped site or protected area shall consider the resources mentioned, since tourism has become recognized as a source of environmental problems (Fenitra et al., 2022).

The aim of community ecological tourism development project is to promote an increased number of tourists, which contributes to the local economic benefits by job creation and income distribution within the area, and promotes social strength at the local level (Khoshkam et al., 2016). To achieve these goals, there is still much debate of how to operate tourism sustainably especially in the community level in Thailand.

Wetland

Wetlands can be permanent or seasonal floating locations (Let and Pal, 2023), such as lakes, reservoirs, ponds, and rice fields. The wetland or Ramsar is considered as crucial resources to the country's economic, cultural and aesthetic values, environmental biodiversity (Ye and Sun, 2021) and social development (Zhang et al., 2024). Similarly, the IUCN (2008) reported that the Siphandone Ramsar in Lao PDR has a substantial impact on local economies, fisheries, areas of high biodiversity, and vital ecotourism destination. Regarding tourism, wetlands has markedly endowed opportunities results to socio-economic for both government and local residents (Aazami and Shanazi, 2020).

Despite this, little attention is drawn to the importance of tourism for local people and communities in developing countries' wetland sites. Conversely, the growth of tourism in developing countries may have detrimental effects on the environment, sociocultural aspects, and economy (Khoshkam et al., 2016). As a consequence, the review of Let and Pal (2023) pointed out the wetland loss 4.81 percent yearly specifically in developing countries. While, tourism is one of the primary key drivers of the loss. On the other hand, Xu and He (2022) revealed that overdevelopment of infrastructure and large numbers of visitors could diminish wetlands' ecological and recreational value. On top of that, the pristine wetlands sites become more demanding among tourists for recreation. In the meantime, they are the highest endangered habitats on the globe. For this reason, the wise use of wetlands is recommended i.e. provide habitats, (Stojanović et al., 2018) water purification (Milanović-Pešić et al., 2023). Because the damp habitat is crucial for diverse ecosystems (Trišić et al., 2024), and fresh water is an essential component of life (Milanović-Pešić et al., 2023). As an example (Perdana et al., 2020) Bali, Indonesia is confronted with water utilization disproportionately and wastewater that destroys the environment.

Researchers (Khoshkam et al., 2016) recommended creating the attitude of local residents perceiving tourism impact by underlining the economic, social and cultural aspects in wetland tourism development. Thence, the local residents partaken in the development process through the strategical planning and implementation. Aside from that, the empowerment (Aghazamani et al., 2020) that allows participants decide and make choices would elevate the pride in local traditions and increase willingness to be educated in the tourism development process. This related to the study of Let and Pal (2023) found socio-ecological well-being alike human development, economic status has a positive impact in wetlands preservation. Besides, the natural resources should be logically developed along with socio-cultural in recognition of social value (Ye and Sun, 2021).

Not only that, but also the government entities must establish criteria and verify compliance (Mahar et al., 2023). At the same time, tour operators must ensure that information is distributed and the tourism operations have a minimal detrimental impact on wildlife (Marasinghe et al., 2021). Addedly, Stojanovic et al (2018) highlighted the conformity of nature protection and tourism development. Thereby, the recognition of both ecological and social values, as well as the formation of the roles of all issues of tourism development, has been recognized (Trisic et al., 2024). To this end (Aazami and Shanazi, 2020) specified the management implications that require robust public private partnership (PPP) as well as the involvement from local residents in Patan's wetland. There should also exist sufficient funds striving to conversation success.

Public Private Partnership – PPP

Public-private partnership (PPP) is the agreement on cooperation between public organizations and private enterprises for services typically provided by the government. It aims to synergistically attain results by integrating people and resources, sharing goals, risks, and financial capacities between public and private enterprises. It is generally an accepted tool for rural development especially in developing countries because of the lack of managerial expertise in public organizations (Xiao and Lam, 2019; Osei-Kyei and Chan, 2017). PPP assisted efficiently in issue solutions and is considered legitimate in terms of involvement and accountability in rural governance. PPP contributed to the sustainable development practices, and was applied in various policies as such education, environment, healthcare, energy, and infrastructure (Bjärstig and Sandström, 2017; Wang et al., 2017; Tamošaitienė et al., 2021). As Dupont et al. (2015) stated in their study on PPP supporting smart city, it anticipated to create holistic values in the local area, including economic, knowledge, ecological, and social aspects. Currently, PPP has gained higher attention in academic sphere due to its effectiveness in achieving sustainable development goals. Furthermore, UNWTO underlined PPP in its manual on accessibility tourism for all that allow underprivileged individuals enjoy the design for all of tourism services.

It is also ensuring the preservation of culture, environment, and social resources availability to provide for the tourist especially in protected area (Matteis et al., 2021). Howbeit, PPP in tourism is still a limited number of studies in the tourism sector (Azazz et al., 2021). To implement PPP, researchers spotlight on uniform goals between parties (Thorpe, 2018), since the aims of public and private entities driven by different economies (Asplund et al., 2021). The continuous monitoring and exploring the previous success factors (Osei-Kyei and Chan, 2017) as a lesson learned is critical. Yet, in the tourism sector (Matteis et al., 2021) the proper attention to governance issues, mutual trust and commitment, and leadership are recommended. The interest of stakeholders both internal and external must be emplaced in the early stage of the planning to engage and decrease resistance which may occur (Azazz et al., 2021). The tourism industry, in Thailand (Potjanajaruwit et al., 2024) relies heavily on partners' agreements.

As well as, the unskilled human resources in the industry standards. Hence, the collaboration among stakeholders is essential for the tourism planning and sustainabe development. Thence, in this study, we applied PPP to public, private, and people partnership in co-operating to the development of tourism on the planet sustainably.

Ecological Tourism in Rural Condition

The term ecological tourism or ecotourism has been found relating to other terms such as natural tourism, rural tourism, wilderness tourism, alternative tourism, cultural tourism, green tourism, soft-adventure tourism, low-impact tourism and even the term bio-tourism. A bunch of these terms concern with responsible, honest and respectful tourism activity in outer rural area (Quintana, 2020; Cucari et al., 2019). Rural tourism is not a new concept in tourism development but it represents one of the alternative ways of local community development and community wellbeing (Li et al., 2020; Campón-Cerro et al., 2017). Rural tourism associates with rural landscape (An and Alarcon, 2021) and local communities with distinct ways of life and culture (Chen et al., 2022). Creating rural tourism value design successfully utilizes both the values of rural content or culture and rural context or place, aiming to valuing, create unique experiences, and safeguarding rural villages along with their associated landscapes, knowledge systems, biological and cultural diversity, local values and agriculture-related activities, and gastronomy (UNWTO, 2020; Chen et al., 2022; Su et al., 2019).

The well-planned and development of rural tourism is greatly important, since tourism posits on both positive and negative results, i.e. the economic improvement and the derailment of local ecosystem (Cucari et al., 2019; Li et al., 2020; Dinis et al., 2019). Besides, the tourism trend is changing to be more attached to nature, green, clean, fresh air landscape (Skryl and Gregoric, 2022), uniqueness, personalized experiences, and looking for opportunity to learn new cultures and places (Cucari et al., 2019). Then, we can infer that rural settings and tourism entrepreneurial businesses require aid in formulating management strategies together with technical assistance (Campón-Cerro et a., 2017).

In parallel to the strategy, Su et al. (2019) cited the adoption of local knowledge, traditional life skills can engage and deliver tourist experience favorably. Yet, the remembrance of the past or nostalgia (Christou et al., 2018) is another tourism trend that captivates tourists travelling to the rural settings, savoring the retro and returning to historical memories, in spite of the fact that each rural settings are different in socio-economic, resources, needs, and characteristics. Such that the process of suitability analysis for tourism development is prominent within its environmental sphere (Ayhan et al., 2020).

Other researchers (Gao and Cheng, 2020) spotlight the role of government agencies in the sustainable development of rural settings by progressively applying managerial tools and engaging with the stakeholders. More importantly in rural landscape for tourism, the local life span scenery (Wu et al., 2022) and a broad interaction between local residents and visitors play a critical role in tourism quality (An and Alarcon, 2021). Regarding the ecological system, the extensive public relations on environmental protection, greater investment in environmental preservation and solid mechanism especially on wetland protection should be implemented (Zhang et al., 2023). Certainly, the rural tourism and ecotourism enhances the biodiversity conservation and well-being of local people (Agius et al., 2021; Mileti et al., 2022). Somehow, the implementation of the protected area for ecological tourism in rural areas must take into account the influence on local residents' livelihoods, notably economic activities (Agius et al., 2021). Mileti et al. (2022) proposed the EcoSmarTour, which motivates community stakeholders such as farmers, tourism entrepreneurs, and the general public to implement sustainable policies.

For the reason that (Raina et al., 2024) the negative impact of tourism on natural resources are including water scarcity, strain on local resources, land degradation, and pollution particularly in sensitive rural areas. Mahar et al (2024), then, suggested another type of tourism namely community managed nature-based tourism. The strategies accented on fostering and establishing community-based local institutions, implementing mechanism to minimize benefit leakage, raising awareness among local people and engage them in tourism and tourists, using media promoting nature-based tourism, rigorous on rules and regulations enforcement for wildlife habitats, evaluate carrying capacity, and limited zone for tourism activity.

MATERIALS AND METHODS

This research uses an interpretative approach as in the qualitative methodology for contextual understanding and gaining insights about the case. The analytic hierarchy process (AHP) was employed to weight the factor value (Wang et al., 2021). AHP facilitates decision-making and judgement on both qualitative and quantitative aspects (Fang et al., 2021) which are widely used in various businesses (Ren et al., 2016). The AHP is composed of four steps including: assessing the issue and creating hierarchical structures, establishing the multidimensional choice links by pairwise comparisons of the factors, and providing the decision values of the options in regard to each criterion, using the multiplicative preference relations to determine the criteria's priorities, and ranking all alternatives after aggregating their comprehensive values (Ren et al., 2016). Besides, the structural equation modelling (SEM) was administered to assess the identified-factors in rural tourism initiative from the focus group.

The public private partnership – PPP has been adopted along with people (local residents) and planet (environment). In consequence, the primary data was collected by utilizing field survey, in-depth interview, participatory observation, focus group discussion and participatory rural appraisal (PRA) with all key tourism partners including representatives from the governmental and private sectors, local academic experts, and local communities. The secondary data retrieval was based on academic literature such as related research papers, including official documents provided by the related governmental and private agencies from both online and offline sources. The sample groups were selected for the primary data collection, categorized into the following 4 groups of 12 person including: (1) 2 people from Provincial Office of Tourism and Sport, and Tourism Authority of Thailand representing the governmental sector; (2) 4 people from local tourism and service businesses such as tour and transport companies and accommodation representing the private sector; (3) 2 people from local government organization and (4) 4 people from local communities.

The 400 questionnaires were exploited for quantitative data collection among villagers, tourism entrepreneurial businesses, and public entity. Conceptualizing, Figure 1 explains that the qualitative approach employs the PRA, in-depth interview and focus group based on the notion of PPP. This stage generates the concerned-criteria for wetland and biocultural tourism in Patan and factors enhancing tourism development. The AHP approach, then, was applied to compare and rank the importance of criteria consensually in the tourism development initiative. Concurrently, the quantitative approach uses SEM to examine the factor enriching ecological tourism development in Patan.

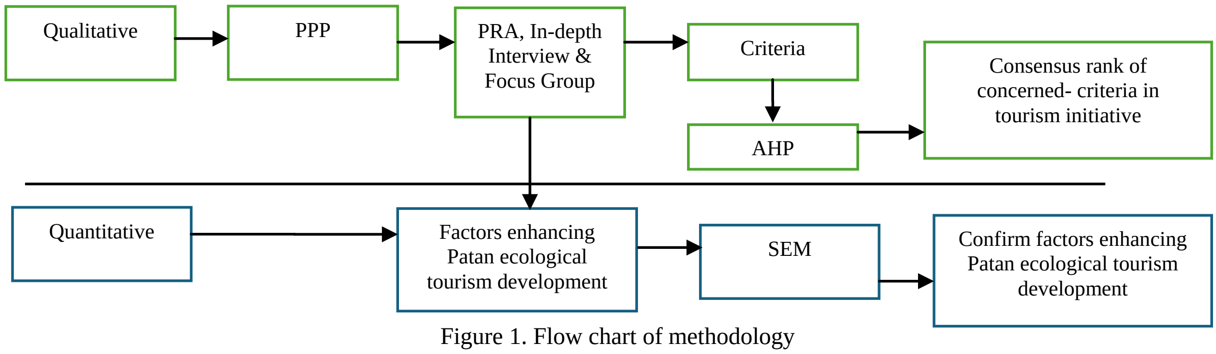

Figure 1. Flow chart of methodology

RESULTS AND DISCUSSION

Cultural Landscape and Heritage Values

Geographically, the community is rich in the natural resources as it is a plain with mountain and river landscape. The area includes villages, rice fields, plantations, reservoirs, rivers, brooks, community forests and others, while most part of the land is for rice farming. The local residents have lived on the primary sector mainly working in farms especially in rice fields. The community heritage is embedded in the social, agricultural, spiritual and aesthetic values. The legendary belief, community forest, temple heritage and living culture here are the main ingredients for the regeneration of the community's cultural landscape ecosystem. These present the historical value and foster the community's collective and communal spiritual value, which plays a significant role in the daily life of local people here, and that has been transformed in the alternative form of eco-cultural activities to offer to visitors. The spiritual value is supported by the beautiful natural landscapes; this enhances the attractiveness of the site environment and creates tourism value. With this holistic ecosystem, the regenerative sustainability of its social and ecological systems can be enabled to continuously regenerate and evolve.

The final output of a regenerative heritage approach should be the creation of a space that is able to revitalize the surroundings and the context where it is placed. The genius loci of the ecological community places on natural and physical environmental of the community. Mostly, the attractions or important places of the community such as temples and man-made attractions for tourism purposes are ready for visitors, with facilities such as toilet and parking area, art, culture and living heritage resource showcasing local handicrafts (i.e., bamboo basket, weaving, products from coconut shells and wood carving), folk songs, music and dance, and religious festivals. Spiritual rituals are still practiced in the community, and the locals have strong beliefs in the wisdoms of folk philosophers connected with traditional and alternative practices of physical and spiritual wellness and protection. Also, the community offers a variety of preventive health programs with food, herbs and medicine. From the focus group, we came up with 6 criteria for tourism development initiative to consider in the area, comprising: (1) environmental; (2) economic benefits; (3) sociocultural; (4) visitor experiences; (5) infrastructure and logistic; (6) sustainability as shown in Table 1.

Table 1. Criteria for Wetland and Biocultural Tourism in Patan

Criteria	Sub-criteria
1. Environmental (Env.)	- pollution (water); - Flora and Fauna; - waste generation and management
2. Economic (Econ)	- job creation and income of individuals; - revenue generation to local businesses; - contribution to general economic
3. Sociocultural (Socio)	- local customs and traditions; - promotion of cultural heritage; - community participation and empowerment
4. Visitor Experiences (Visit Exp.)	- educational value; - level of satisfaction; - authenticity of experience
5. Infrastructure and Logistics (Infra.)	- Accessibility (easy to access the site); - visitor facilities (adequate restrooms, information signage); - Carrying capacity management (ticket system, designated routes)
6. Sustainability (Sust.)	- resource management (water, energy, local materials); - community participation and engagement; - adaptability of tourism practices according to environmental conditions

For appropriate planning, the AHP process was implemented for consensus agreement on the criteria importance. Firstly, the pair-wise comparison was conducted as shown in Table 2. The results exposed that the environmental impact is most important with high values comparing to other elements. It is five times more important not only than economic, but also the infrastructure and logistics. Over and above, it is six times important than visitor experience.

Whereas, the sustainability, sociocultural, and environment were seen equally important. One interesting finding in these results illustrated sociocultural was less than economic factors. At the same time, it was five times more important than visitor experience, and four times more important than infrastructure and logistic. It is notably that infrastructure and logistic was likely less important compared to other factors.

Table 2. Pair-wise Comparison Matrix

Criteria	1Env.	2 Econ	3 Socio	4 Visit Exp	5 Infra	6 Sust.
1 Env.	1	5	1	6	5	1
2 Econ	0.20	1	4	4	3	1
3 Socio	1.00	0.25	1	5	4	1
4 Visit Exp	0.17	0.25	0.20	1	4	4
5 Infra	0.20	0.33	0.25	0.25	1	4
6 Sust.	1.00	1.00	1.00	0.25	0.25	1
Total score	3.57	7.83	7.45	16.50	17.25	12.00

The normalized pair wise comparison was conducted, as well as the criteria weight was assessed as in Table 3. It is observable that the environment is paramount factor with 30 percent weighted. The second element emerged is the economic with 20 percent. It is followed by sociocultural, 18 percent, visitor experience, 12 percent, sustainability, 11 percent, and infrastructure and logistic 9 percent. It is astonishingly that the initiative development scenario of tourism shall prioritize the environment, while considering the weighing of social, economic, and tourism-related aspects strategically.

Table 3. Normalized Pair-wise Comparison Matrix

Criteria	1Env.	2 Econ	3 Socio	4 Visit Exp	5 Infra	6 Sust.	Criteria weight
1 Env.	0.28	0.64	0.13	0.36	0.29	0.08	0.30
2 Econ	0.06	0.13	0.54	0.24	0.17	0.08	0.20
3 Socio	0.28	0.03	0.13	0.30	0.23	0.08	0.18
4 Visit Exp	0.05	0.03	0.03	0.06	0.23	0.33	0.12
5 Infra	0.06	0.04	0.03	0.02	0.06	0.33	0.09
6 Sust.	0.28	0.13	0.13	0.02	0.01	0.08	0.11

Over and above, the six factors enhancing tourism development were identified in the focus group. It is composed of the (1) financial support or budget (BG) from government, private sector, local government and cash flow within community; (2) the knowledge (KL) of local residents in tourism management; (3) the application of technological (TN) system in tourism including internet access and social media; (4) community participation (PT) in developing tourism; (5) community factors (CF) (i.e. leadership, creativity, awareness of local value), and (6) social factor relates to the network in tourism, market, funding access etc.,. Thereafter, the simple mean statistic was adopted to rank these factors contributing to tourism development in Patan (FACCBT). The results paint on participation with mean score 3.30, community value 3.25, social factor and budget relatively equal at mean score 3.21 and 3.20. The knowledge of local people in tourism management and technology mean score are 3.18 and 315 respectively as shown in Figure 2 below.

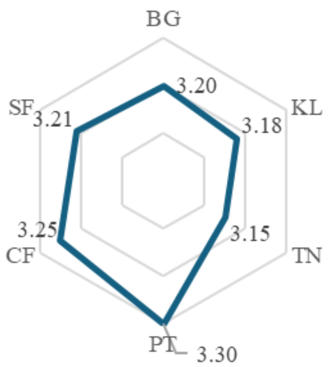

Figure 2. Factor enhancing
tourism development initiative in Patan

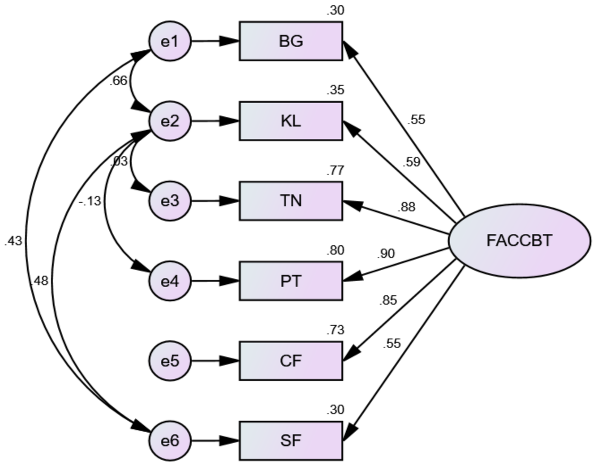

Figure 3. SEM results of factors enhancing Patan rural Tourism development

Further, the SEM was conducted to pinpoint the factors flourishing tourism development in Patan district. The fitness indices were tested consisting of Chi-squares = 3.378, df = 4, p=.497, Chi-square/df= .844, CFI = 1.00, GFI= .997, AGFI= .985, RMSEA=.000. As Figure 3 shows, the highest factor loading enhancing ecological tourism development is local participation at 0.90. The technological, community factor, and knowledge in tourism management are the second, third, and fourth with loading factor 0.88, 0.85, and 0.59. The last two factors are budget and social, having the same loading weight at 0.55. According to these data, we can infer that the development of ecological tourism requires participation from all stakeholders, specifically local residents. In general, therefore, it seems that the technological along with leadership, creativity and the awareness of local value as community factors are crucial. The initial results are also suggestive of a link between six factors in Patan tourism development.

CONCLUSION

This project was undertaken to determine the criteria for wetland and biocultural regeneration for ecological tourism development and assess the factor flourishing tourism development in Patan. Overall, this study strengthens the idea by far that people are aware of the environment. Refering to the AHP results, it mirrors a strong commitment to ecological responsibility and sustainability. Henceforth, any development of tourism should primarily be environmentally concerned with both protection and conservation. In the second place, the economic benefit shall equally partake among stakeholders, especially local residents and environmental protection fund. Another high ranking is sociocultural, underlines the prominence of community's cultural value preservation. This recommends that the tourism development project should adhere to social and promote cultural heritage. In a holistic view, the visitor experience, infrastructure and logistic, and sustainability are not weighted in high score. Logically, as respondents cited the preservation and maintaining of environment and cultural heritage are delivering the traveler's unique experience and tie with sustainable practices itself. The simple existing infrastructure and logistic accessing to the site is rather fine.

The following conclusions can be drawn from the SEM assessment that the factors interconnected to the ecological tourism development. It disseminates that participation from stakeholders is highest vital, especially the local residents. In consonance with (Bjärstig and Sandström, 2017; Wang et al., 2018; Tamošaitienė et al., 2021), participation leads to sustainable development practices and safeguarding the culture, environment, and social resources (Matteis et al., 2021).

It is undeniable, in the post-modern world, the importance of technology that infuses in our daily life. The technology comes second important on the use of social media promoting the site as well as the internet access. It is followed by the community factors as the mutual goals among stakeholders (Thorpe, 2018), continuous monitoring and investigating of lesson learned (Osei-Kyei and Chan, 2017), trust, commitment and leadership are critical (Matteis et al., 2021). The data conjointly suggest that the tourism development can be achieved through the local community knowledge on tourism management. The current data also highlights the importance of tourism networking, market, and the accessibility to funding as social factors and budget.

Implication of this is the possibility that, the holistic approach utilizing natural and living heritage of communities to diversify the socio-cultural and economic benefits is suggested in this study. The key findings highlight strategic practices that act as success catalyst driving innovation for community ecological tourism development for the case study area. The identified sets of indicators encompass five criteria and six dimensions, where participation interplays in both criteria and dimension as shown in Figure 4.

The participation focuses on formation of community co-operation with village members who co-operate in order to create and promote tourism and local products of the community. This establishment facilitates and mobilizes works across different groups of community members who have different duties and abilities. This study is set out to understand better PPP in tourism development. That includes public, private, and people partnership. The missions of the community co-operation cover: (1) planning for linking tourist attractions into routes which are eco-tourism route, agrotourism route, health tourism route and cultural tourism route; (2) building partnership and networking with governmental, private and civil sectors; and (3) developing product models from local resources, especially food product.

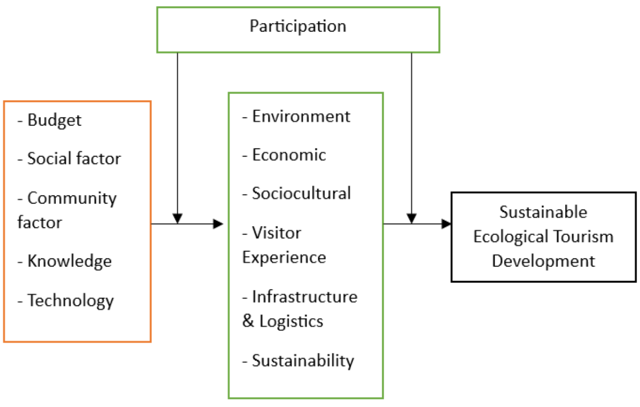

Figure 4. Sustainable Ecological Tourism Development Framework in Patan

Future success factors that should be essentially developed involves inventory of local data that will be useful for concreting identity and meaning making, local individuals' learning and understanding of their local knowledge, training and tourism interpretation and narratives for story-telling of its cultural landscape, which should incorporate interpretation of local material culture from process to products. Moreover, a limitation of the community co-operative is that the community lacks knowledge and skills in business operation aspect, thereafter capacity building on this shall be enhanced. Thus, educational institutes should hand in to cooperate and assist the community in trainings. The tourism run by local communities today has been felt to be a necessary approach for local development. Also, as a consequence of more communities getting started their community tourism and the fact that tourists seek for more diverse, innovative and meaningful experience from tourism activities run by local communities, to an extent it implies the question of how to create differentiation and outstanding tourism activities to attract first-time and repeated tourists. Local communities should think how to integrate cultural, natural or environmental properties, and even local technology or wisdoms into social and economic capital for long-term sustainable development amongst unexpected threats to come. Also, it is necessary today that a community aiming to mobilize local resources and its people with tourism initiatives needs business networking in order to build its marketing and communication and to increase its market accessibility through networking with and acquiring the facilitation of private sector; this can also include groups of tourism social entrepreneurs recently emerging.

Limitations of the study

This study highlights specifically on Patan Sub-District, Chiang Rai, Thailand. That might limit the generalizability of findings to other regions with different ecological, cultural, and socio-economic background.

The degree of engagement and cooperation from stakeholders in other geographical aspects can vary, which could potentially lead to incomplete insights. The existing policies and practices may not support the ecological tourism regeneration, since the ecosystem and biodiversity are rather complex and vulnerable.

Thence, in future research the awareness of these issues would enhance smooth study.

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BLEISURE AND INFORMAL BUSINESS TOURISM IN HARARE, ZIMBABWE

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Abstract: Extant research on the concept of bleisure is mainly in the context of the Global North or relates to travellers from the Global North. This investigation is the first in the environment of the Global South to examine the bleisure activities among informal business tourists. Using a survey of 700 informal business tourists in Harare, Zimbabwe, the results show that the accommodation choices and the bleisure activities undertaken by these informal business tourists in Zimbabwe's capital city are markedly different to those reported in studies of business travellers from the Global North. Bleisure activities identified as significant are visits to friends/relatives, participation in religious activities, personal shopping and the enjoyment of sports, musical events and Harare's night-time economy.

Keywords: bleisure, business tourism, informal business tourism, informality, Global South

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INTRODUCTION

Bleisure and informal business tourism in Harare, Zimbabwe

Business tourism is a critical dimension of tourism development and in Africa focused mainly on large urban destinations (Rogerson and Rogerson, 2021a). Davidson (2019) maintains that after many years of under-representation and neglect in tourism scholarship there is an observed upturn in the volume of international literature which is devoted to business tourism. Unsurprisingly, the majority of academic writings on business tourism relate to urban tourism destinations in the Global North. The Global South business tourism literature is relatively new, despite its growing importance and the evolving nature of this sector. Matiza (2020: 115) avers that "within the context of emerging African business tourism destinations, there is a discernible dearth of research into business tourism in general and, more pertinently, the decision-making process of business tourists, when considering visiting African destinations".

In recent years, however, there has appeared a burst of scholarship on aspects of business tourism in Africa (Donaldson, 2013; Mahlangu, 2022; Makoni and Rogerson, 2023; Matiza, 2020; Rogerson, 2015a, 2015b; 2019; Tichaawa, 2017; Welthagen et al., 2023; Zhou, 2021). Beyond issues relating to various aspects of formal business tourism there is an emergent literature concerning the phenomenon of *informal business tourism* which is acknowledged as a distinctive aspect of business tourism in the environment of the urban Global South (Rogerson and Letsie, 2013; Rogerson, 2015a, 2018; Rogerson and Rogerson, 2021b; Tichaawa, 2021).

The concept of informal business tourism moves beyond Eurocentric viewpoints in tourism studies building upon the mobilities approach to tourism from so-termed 'emerging world regions' (Cohen and Cohen, 2015a, 2015b). In urban sub-Saharan Africa the need to transcend Eurocentric perspectives on tourism is highlighted by the dominant presence of 'informality'. Across much of contemporary Africa informality is the permanent condition for the majority of its urbanites and more broadly a defining feature of the landscape, politics and economy of urban Africa. The urban geographer Richard Grant (2024) points out that informality looms large in sub-Saharan Africa. Although the precise definition of the term 'informality' is contested it usually is applied to "a range of behaviours and practices that are not regulated or controlled by the state or formal institutions, including those related to income generation, service provision and settlements" (Chen et al., 2016: 336).

Within sub-Saharan Africa the majority of urban dwellers work outside of the formal economy, live in informal housing, pursue business and the making of livelihoods without the use of banks (Carmody et al., 2024; Grant, 2015). In African cities the informal economy therefore assumes a vital role in the everyday lives and livelihoods of residents (Grant, 2024). On current estimates the informal economy accounts for as much as 80.8 percent of all employment in urban Africa and it constitutes "a critical, vital source of livelihoods, consumer goods and services in Africa's cities" (Carmody et al., 2024: 93). It must be understood that the term 'informal' is conventionally understood as work or labour which is conducted outside of formal state regulations and tax systems. This said, it does not mean that such work is illegal or beyond the reach of the state "given that much of the urban informal economy operates in plain sight of the state and is by-and-large accepted as an essential provisioner of goods and services to consumers" (Carmody et al., 2024: 92). Arguably,

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because of its size and significance in urban Africa the informal economy must be an essential element of the sustainable development agenda for sub-Saharan Africa (Ibidunni et al., 2024).

Informality is one of the most distinctive traits of urban tourism in sub-Saharan Africa (Rogerson, 2015a). This is especially the case with business tourism in Africa, which is overwhelmingly dominated by *informal* rather than formal business travellers. In tourism scholarship Timothy and Teye (2005) were the first to highlight the mobilities of such traders and vendors in research on borderland spaces in West Africa. Their work sought to investigate these informal traders as a "form of business traveller that is unique to the developing world" (Timothy and Teye, 2005: 83) and to extend from a developing world perspective "the traditional views of business travel in tourism". The phenomenon of informal business tourism includes a segment of international informal business travellers - cross-border traders - which are observed widely across much of urban sub-Saharan Africa, as well as an often little acknowledged component of *domestic* informal business tourists. Several studies recently have been conducted to shed fresh light on the importance and workings of informal business travellers in sub-Saharan Africa and especially of their operations in its largest urban centres (Makoni et al., 2023a, 2023b; Rogerson, 2015b; Tichaawa, 2017).

The aim in this paper is to examine one unexplored facet of the informal business tourism economy of an African city. The case study is Harare, Zimbabwe's capital city, where there is an extensive economy of informal business tourism comprised of both communities of international cross-border shopper-traders as well as of domestic informal business tourists .In previous studies the nature of Harare as an African business city, its competitiveness as a destination for cross-border trading, the drivers and economic contours of these informal business tourists have been detailed (Makoni and Rogerson, 2023; Makoni et al., 2023a, 2023b). Building upon this research the objective in this paper is to unpack what is termed the 'bleisure' economy of informal business tourists.

In the Global North 'bleisure' is defined as activities undertaken when individuals combine leisure with professional business obligations whilst travelling as formal business tourists (Ezeuduji, 2024). In business tourism destinations Pinho and Marques (2021) identified that business trips often were combined with leisure activities and that the length of stay at a destination is extended beyond the business event or professional requirements so that visitors can know the locality and its attractions. The bleisure economy is the blurring of the borders between leisure and formal business travel, an issue attracting considerable interest in Northern tourism scholarship (Park, 2023). This study is a pioneer in the Global South environment in terms of examining the bleisure activities among *informal* business tourists – certainly the first such investigation in urban Africa. Two further sections of material are presented. The next section contextualises the research within a review of existing literature on bleisure. Attention then turns to urban Zimbabwe and to examine the findings which are extracted from 700 interviews conducted with cohorts of international and domestic informal business tourists in Harare.

LITERATURE REVIEW

The origin of the term 'bleisure' is attributed by most researchers to The Future Laboratory, one of Europe's leading trend, brand and future consultancies (Tala et al., 2011). In 2009 this consultancy proposed the concept to capture the blurred boundaries between business and leisure travel (Tsaur and Tsai, 2023). The term reflects the nexus between work and tourism and is indicative of the changing nature of contemporary work practices and of shifts in the traditional work-life balance (Batala and Slevitch, 2024; Dragomir et al., 2021; Travis, 2023). The concept of bleisure involves the blending of the two forms of travel as travellers either extend a professional business trip, bring friends and family with them to enjoy the facilities at the destination of their business travel, or pursue leisure travel activities during the period of the business trip (Ezeuduji, 2024; Lichy and McLeay, 2018; Park, 2023; Tsaur and Tsai, 2023; Walia et al., 2023).

Although the concept of bleisure has emerged in the scholarly literature only relatively recently it is not a new phenomenon. Dragomir et al. (2021: 36) affirm that what they style as 'bizcations' "has been popular for several decades". Ozdemir and Celebi (2023) reveal that people combining leisure activities with business travel has been documented for many years. Likewise, Tala et al. (2011: 236) observe that whilst the term bleisure appeared recently "the trend of incorporating leisure activities into business trips was noticed in the early 2000s, even late 1990s". In a prescient study Davidson (2002) undertook an analysis of the type of business visitor most likely to extend a business trip for leisure purposes. According to Lichy and McLeay (2022: 307) some observers "would argue that we have always consumed bleisure in some shape or form but lacked the terminology – or were reluctant to admit taking time out for ourselves during a business trip". Harris and Pressey (2021) challenge, however, the common assumption that business tourists are fundamentally different from leisure tourists. It is pointed out that business travellers routinely undertake leisure activities and commonly "piggy-back leisure activities with business" (Harris and Pressey, 2021: 2).

These authors consider that viewing business travellers as a distinct sub-group is problematic and that it is more useful to view them through the lens of 'hybrid mobilities' within which business travellers are positioned more accurately as 'hybrid tourists'. Similarly, Bassyiouny and Wilkesmann (2023) maintain that in a digitalized world the artificially created distinction between business and leisure travel appears increasingly outdated. Nevertheless, Lubbe (2022: 398) re-asserts the distinction between leisure and business travel and points to the complexity of defining business travel as "it often includes a touristic and leisure component which has given rise to the term 'bleisure'".

The segment of 'bleisure' is identified as one of the important trends for future tourism development in many destinations and for assisting recovery in a post-COVID-19 environment (López et al., 2023; Mercan and Sandika, 2024). Ünal and Özgürel (2021: 1) describe it as "an innovative tourism type". According to Tsaur and Tsai (2023: 24) given its characteristics bleisure travellers have spatial and temporal freedom when they undertake work and leisure activities and as such it can be viewed as a kind of 'transformational tourism'. It is suggested that bleisure can increase work efficiency as individuals who are on business travel without family and friends can experience "social deformation" (Mercan and Sandika, 2024). By combining leisure activities and relaxation bleisure tourism can reduce the stresses often associated with business travel and more readily achieve a healthy work-life balance (Tsaur and Tsai, 2023). Leisure components can play an important role in business travel in terms of work-life balance and subjective well-being (Park, 2023; Park et al., 2024). Chung et al. (2020) pursued an investigation of the bleisure tourism experience chain and of how marketing practices are created to encourage business travellers to have better experiences and spend more funds beyond business events.

In one of the pioneer studies on bleisure it was observed that the existing literature largely overlooks travelers whose tourism motivations are initiated by business travel but incorporate non-business activities (Lichy and McLeay, 2018). Mercan and Sandika (2024) argue the concept of bleisure tourism requires much greater academic attention because of its positive impacts for business travellers, tourism and hospitality businesses, and service providers. Yet Tsaur and Tsai (2023: 22) contend that "empirical research on bleisure travel remains scant". Batal and Slevitch (2024) assert in particular there is a paucity of research into the business travel experience. Lichy and McLeay (2022: 307) correctly identify that "debate in the academic literature is just starting to emerge". In addition, these authors aver that whilst "scholars have mainly focused on international bleisure, bleisure can also involve combining domestic travel and leisure tourism" (Lichy and McLeay, 2022: 306). One systematic literature review of bleisure tourist motivations to visit leisure attractions published in 2022 sourced only ten articles (Sohaili et al., 2022). Extant research on the bleisure travel 'experience' conducted on travellers from the Global North suggests this segment "has received a strong boost, especially from Millennials" (Pinho and Marques, 2021: 346). Batala and Slevitch (2024) differentiate two subgroups of bleisure travellers. The first devotes a portion of the day to business and the remainder to leisure, often late afternoon and evening time. The second group opts to extend their stays before or after the business period in order to undertake leisure activities. Tala et al. (2011) and Travis (2023) note that business travel by Global North travellers is associated with such leisure activities as visiting spa resorts, skiing, golf and sightseeing excursions to local places of interest. Harris and Pressey (2021) add night-clubbing to the list of other hedonic activities pursued by many business travellers.

The rich research of Batala and Slevitch (2024) suggests that bleisure travellers tend to avoid one-time events such as concerts, sports events or festivals with fixed schedules as they might miss such events if business activities take longer than anticipated. Accordingly, bleisure travellers largely sought out "leisure activities that could be postponed and done at a later time if necessary" (Batala and Slevitch, 2024: 3). One recent Turkish study identified cultural exploration, personal planning and factors such as discovering local cuisine as well as visiting architectural attractions as motivators for participation in bleisure activities (Çulfaci et al., 2024). At trade fairs hosted in Greece a significant share of visitors were reported to be participating in bleisure activities for 'fun-entertainment' (Kourkourides et al., 2024). Extant findings point to a conclusion that bleisure travellers mainly embrace 'short-time leisure activities' because their geographic and time constraints did not permit them to devote a full day to other leisure activities (Ezeuduji, 2024).

The short-term activities included visits to local museums, parks and markets. Many bleisure travellers also were reported to search for 'educational-based experiences' that they might participate, such as learning about the destination, its people, city and culture (Batala and Slevitch, 2024: 4). Overall, the limited international literature primarily concentrates on formal business tourists, Northern bleisure travellers and their experiences. Minimal attention has been given to bleisure in what Rogerson and Rogerson (2021b) style as 'the other half of urban tourism', namely cities in the Global South. In one of the few bleisure studies conducted in a Global South environment Caicedo-Barreth et al. (2020) consider the potential of Guayaquil in Ecuador to benefit as a competitive destination for business travellers. These authors concluded there is a lack of competitiveness in Ecuador because of the limited supply of products directed to this market segment as well as lack of capacity of the local tourism sector to satisfy this market. Of note is that this Ecuador investigation centred on issues surrounding bleisure and the formal business tourist.

METHODS

The analysis draws from a recently completed large-scale investigation which involved semi-structured interviews with 300 international informal business tourists and 400 domestic informal business tourists in Harare for the purpose of either buying or selling goods in the city (Makoni, 2024). The interview research was undertaken during the period 2020-2022 and mainly conducted at the major bus terminals servicing the entry and departure points of international and domestic visitors to Harare. A convenience sampling approach was used to target respondents. In addition, during the initial data collection period, it became clear that a snowballing technique also could be used to add to the final data set that was collected. The choice of sampling approach was informed by the inability to extract a statistically representative population of informal business tourists and of their businesses in the city. Key issues researched in the survey included variously the reasons for engaging in informal business tourism, the socio-demographic profiles of the respondents, motivations for choosing Harare to conduct informal business, and challenges of their business operations. One sub-section of the survey sought to collect information on the accommodation choices of respondents and of the non-business activities which they undertook during their stay in Harare. It is the findings from this material which now are under scrutiny.

The Harare study findings

The informal business tourism economy of Harare must be understood as an integral part of the broader expansion of informality in Zimbabwe's capital city (Bandauko et al., 2021: Moyo and Gumbo, 2021; Rogerson, 2016). As is typical of many (if not most) large cities in sub-Saharan Africa informality is a distinguishing trait of daily economic life and the informal economy plays a predominant role in the production and consumption regimes of the city (Carmody et al., 2024:

92). Indeed, the informal economy has become the mainstay of the national economy and of the urban economy of Harare both in terms of its contributions to household income as well for poverty reduction (Chirisa et al., 2021). The groups of informal business tourists – both domestic and international – play a critical role in making available to consumers a supply of basic commodities which are either often unavailable or too costly in the city's formal retail outlets (Makoni, 2024).

Within Harare's economy of international informal business tourism the research disclosed two distinct sub-groups. First, are Zimbabwean cross-border traders who travel to Harare either to buy goods for resale in other countries in the region of Southern Africa or to sell in Harare goods that are purchased in neighbouring countries, mainly from South Africa. The strong historical linkages that exist between Zimbabwean cross-border traders and South Africa are documented in studies by Bamu (2017), Tawodzera and Chikanda (2017) and by Dzawanda and Matsa (2021). Second, are a cohort of cross-border traders from other African countries who travel to Harare as part of the activity of international informal business tourism. The study captured participants from 14 different countries in sub-Saharan Africa, including travellers as far as from Ghana, Nigeria and Gabon. The largest share (two-thirds) of the non-Zimbabwean cross-border traders were, however, drawn from surrounding countries, most importantly South Africa, Botswana.Namibia, Mozambique, and Zambia. The phenomenon of domestic informal business tourism is a vital aspect of the informal economy of Harare with business travellers in the city either bringing in goods for sale or purchasing goods (for resale outside Harare) at the informal and flea markets that have burgeoned across the city in recent years. In many cases the participants in domestic business tourism engage in a circular flow of movement bringing into city goods (often food) from small towns and the countryside for sale in the city and returning to the home area with a range of goods for sale which were purchased in Harare markets (Makoni, 2024).

Accommodating Informal Bleisure Travellers

For the overwhelming majority of Northern bleisure travellers an upmarket hotel, convention centre or resort represent the typical forms of accommodation that are used. Arguably, these would be the most common accommodation options irrespective of whether business travel is undertaken to a destination in the Global North or Global South. As a context for reviewing the bleisure activities of informal business tourists in the Global South it is instructive to examine the accommodation that is used in Harare by these travellers in order to appreciate the marked differences between them and the Northern formal business travellers. The responses obtained from the 700 informal business tourists interviewed in Harare reveal a different nature of accommodation choices to those of Northern business travellers. Multiple responses were given by the surveyed participants as to the type of accommodation they used when visiting Harare. All, however, stressed the need for securing budget low-cost (or minimal cost) forms of accommodation.

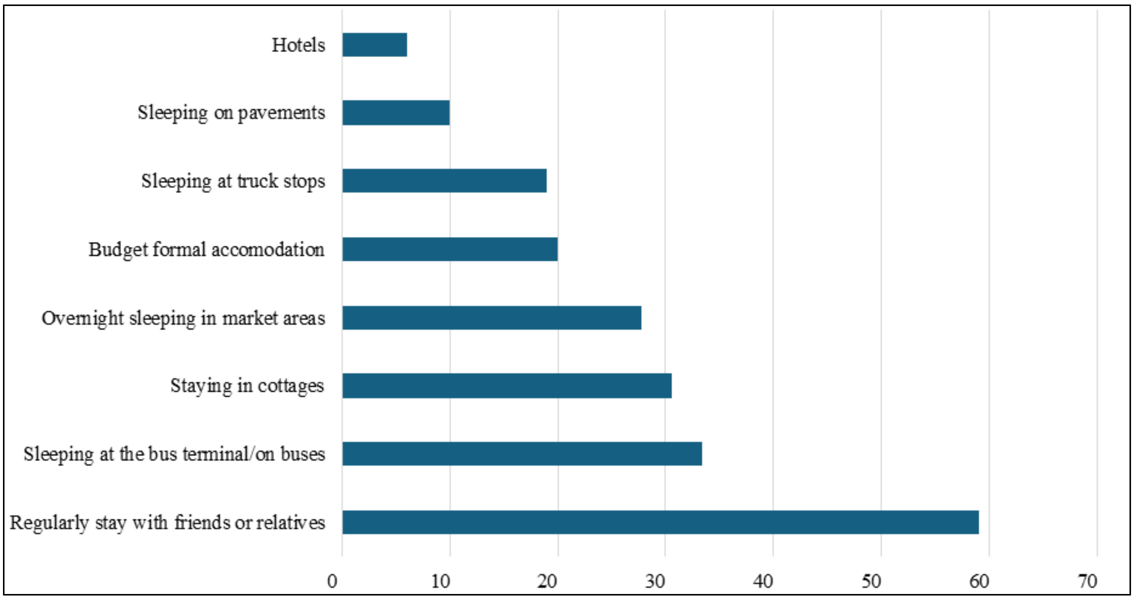

Figure 1. Accommodation Usage by Informal Business Tourists in Harare (Source: Authors)

Figure 1 shows that the most common situation was that on their visits to the city informal business tourists were hosted in the homes of friends and relatives. Sleeping at the bus terminal or on buses that were parked overnight in the terminal was the next most common arrangement used by one-third of travellers. Stays in cottages was preferred by 30 percent of respondents and followed by overnight sleeping in market areas – in particular at the flea markets. Cheap motels or guest houses – budget formal accommodation – was the choice for 20 percent of the survey participants.

The informality of sleeping at truck stops or night refuge on Harare's street pavements also were options that were used by some travellers. In addition to the foregoing, smaller numbers (less than 10 percent) found accommodation either in hostels or stayed over with prostitutes whilst on visits to Harare. The overwhelming emphasis on securing low budget or minimal cost options for accommodation is evidenced by the finding that only 6 percent of the 700 survey interviewees regularly stayed in one of Harare's formal hotels.

This broad picture of accommodation choices can be unacked for the different groups of informal business tourists in Harare, namely the Zimbabwean cross-border traders, the domestic business tourists and the non-Zimbabwean cohort of international traders from various countries in sub-Saharan Africa. Not surprisingly, over two-thirds of the Zimbabwean business tourists – the domestic cohort as well as those engaged in international cross-border trade - were staying with friends and relatives on their regular visits to the capital city. Beyond hosting by local friends or relatives the Zimbabwean informal business tourists chose either budget motels or the minimal cost options of sleeping on buses or in bus terminals. Among the non-Zimbabwean cohort the share who were accommodated by Harare friends or relatives was only around 20 percent. For non-Zimbabweans the more common forms of accommodation were payment for cottages, guest houses, hostels or hotels. Of note is that it was among the group of international informal business tourists that several were sharing accommodation with local prostitutes in Harare. Further insight into the accommodation choices made by survey respondents is revealed by the detailed responses obtained in the research interviews. The importance of stays with local friends or relatives was a recurrent theme among Zimbabweans:

I have a relative in Harare who gives me accommodation during my time in Harare (Female fashion designer [Muzarabani] 32yrs). When I visit Harare, my boyfriend who stays there accommodates me. He has been supportive since I started this business and he is always fetching me from the bus station when I have a lot of stock, and he drops me off again when I am leaving Harare (Female fisherwoman [Norton] 32yrs).

A friend of mine offers me a place to sleep at her pharmacy. I have to get up very early before the business of the day starts so I can prepare and leave before my friends starts work (Female fashion designer [Muzarabani] 32yrs).

My friends accommodate me because I want to save money. The good thing is that Zimbabweans are very friendly people and very accommodating, but you just have to also help with buying food items or small groceries to appreciate them (Zimbabwean [Kwekwe] female CBT 23yrs).

For those not staying with friends or relatives in the city the imperative to secure low budget or no cost forms of accommodation in Harare was striking among Zimbabweans and especially for the group of non-Zimbabwean cross-border traders. Typical responses were as follows.

I am always looking for cheap places to stay because I am coming to work not for holiday. I want to save money as much as I can (Angolan [Benguela] female CBT 28yrs).

There are lot of cheap places to rent in Harare, even there is Airbnb. I always try to get the cheap ones, the problem is the transport in Harare. Where there is cheap accommodation is far from the city centre and it's not easy to get transport early and also when you have luggage it becomes a big problem, So sometimes I just end up sleeping at the flea markets (Malawian [Mangochi] female CBT 33yrs).

I rent in a cheap place with other traders. It's very cheap that way (Mozambican [Maputo] male CBT 36yrs).

The reasons for sleeping in bus terminals or at the market places where traders do business were elaborated by several respondents.

The best option is sleeping at the bus rank when we arrive here. Most of the times the bus arrives here in the evening and everything is closed. So the bus drivers allow as to sleep in the buses with our luggage, then in the morning we start our business. In the evening if the business is not done, we either sleep in the flea markets of we come back to the bus stations and ask our drivers to let us sleep in the buses again (Zambian [Kitwe] female CBT 32yrs).

Accommodation is out of question to me, I just come here for business and to make money. I stay in the buses because now I know many drivers so I just go to the rank to see which bus will be ranking for the night and I ask them to let me sleep in there (Malawian [Lilongwe] female CBT 30yrs).

In this business, there is not time to think about where you are going to sleep, we just sleep here in the bus and when we wake up we just do face wash and go to hustle. We will sleep properly when we get back home (Tanzanian [Mwanza] male CBT 40yrs). I always sleep at the bus terminus because I cannot afford to rent, I need every cent I can get and I don't want to waste money on hotels (Male cobbler [Kadoma] 40yrs).

We spend the day in the city going around selling our products, then in the evening we ask the bus drivers of the parked buses to let us sleep in the buses. We normally buy them food or pay then small money for them to allow us to stay there. It is a very cheap way to get accommodation (Female vendor [Gweru] 31yrs).

Safety considerations were highlighted as important for several participants in choosing where and how to overnight in Harare whilst conducting their informal business activities.

I sleep at truck stops because it is safer for me and my goods there. I am not very concerned about accommodation, for as long as I get a safer place to sleep, even at garages, and get somewhere to freshen up in the morning, even in public toilets [Translated from Ndebele language] (Male herbalist [Gwanda] 30yrs).

I do not worry about accommodation, just a place to sleep during my days here. In most times I sleep here at the open spaces because it is the only place safe and available and where everyone can see (Male craftsman [Gweru] 35yrs).

I sleep at the flea market because it's accessible to everything. My customers come to me, and my goods are safe because I am close to the bus station and it is easier to carry my products when I am here when the police come (Male vendor [Gweru] 33yrs). There are many people who sleep here at the market place, it is safer also for me to stay here because I feel safe and protected. We protect each other here because we have same situations. We even have cross-borders that stay here with us (Male carpenter [Plumtree] 37yrs).

I organise with other people coming here to find where we can sleep, accommodation is not a problem. We just want a place where we can sleep, sometimes we sleep with our goods at the flea markets. It is not allowed because we can be arrested by the police if they see us, so we are always prepared to run away or to bribe (Female vendor [Mutare] 34yrs).

The above sets of qualitative responses highlight the relationships which exist between bus drivers and the communities of informal business travellers in Harare. In addition, they point to important relationships and bonds that develop between the traders themselves for their collective protection and for their businesses. Finally, in terms of accommodating informal business tourists in Harare the nexus of accommodation and prostitution was raised in a small number interviews. The choice to be accommodated by prostitutes in Harare is disclosed in the following responses.

Many times I come here I sleep over at a prostitute's place. So how they charge, it's between US $ 10-15 for a short time, and if you want to sleep over you pay about 30 dollars or more. It's all about how you negotiate with them. But you have to be clever because they charge you based on how you look. If you show her you have money they charge high. But whatever you do you must make sure you pay because they will sort you out…

And the thing is most men are buying prostitutes and they are even regulars of some prostitutes who even act as their wives when they go sleep over there. They cook for you and wash your clothes, it all depends on how you pay them. I am a regular also here. My prostitute loves me very much and she does everything for me when I am here. When I have enough money we even go to the club together (Zambian [Lusaka] male CBT 43yrs).

I like to sleep at prostitutes' houses because I know my money comes with more benefits than just going to sleep alone in the guest house. They even cook for us and wash our clothes. The prostitutes here are different from the ones in my country. Here they know their business and I am not ashamed with walking around with them because they have dignity sometimes you never know that it's a prostitute (South African [Polokwane] male CBT 41yrs). In addition, some women engage in prostitution as a 'second hustle' book in rooms at a brothel during their stay in Harare.

Accommodation is not a problem when I am here. You know I am a prostitute, so I stay in the brothel where I work here in Harare. I have to call them when I am coming so they prepare my room. I stay for at least two weeks here doing this business, and we pay rent per week this business is good here than in Kwekwe. I use the money I get to buy things I will go and sell in Kwekwe [Translated from Shona Language] (Female prostitute [Kwekwe] 29yrs).

Taken as a whole the above findings concerning the accommodation preferences and options of informal business tourists in Harare are clearly radically different to those of the usually well-resourced (formal) business traveller from the Global North. Informality and business travel are associated with the imperative for securing accommodation at minimal cost and with due regard to safety considerations. The significant role of VFR hosts for informal business travellers is evident from the record of Harare.

The bleisure activities of Harare's informal business travellers

In view of the marked differences in f accommodation between formal business travellers in the Global North and our case study of Harare informal business tourists, it is not surprising that major differences exist also in 'bleisure' activities. The Harare findings emerge from the responses given by 700 informal business tourists of their 'non-business' activities undertaken whilst visiting the city. Multiple responses were offered by survey participants on the 'bleisure' activities they pursued alongside doing business in Zimbabwe's capital city.

The results overall point overwhelmingly to visits to friends and relatives as the most widely undertaken activity. In total 72 percent of the informal business tourists undertook such visits, a finding that parallels the role of Harare residents as hosts for accommodating informal business travellers. The next most significant 'bleisure' pursuits - each accounting for almost 50 percent of the sample - were doing personal shopping, enjoying nightlife entertainment activities (such as clubbing) and participation in an array of different religious activities which included attending various churches and visiting prophets and pastors. Religion plays a crucial role in many African communities, shaping social and cultural structures (Stambach, 2020). Different churches across the continent not only provide spiritual guidance but also serve as crucial centers for education, health services, and social support (Öhlmann et al, 2020). Another popular activity for 29 percent of the sample was attendance at sports events in Harare, especially of football matches. Other activities that engaged between 10 and 20 percent of the informal business tourists were sightseeing to places of interest (16 percent), music events and festivals (13 percent), visiting traditional healers (12 percent) and enjoying the sexual services on offer from local prostitutes (10 percent).

Some variations were observed between the three different sub-groups of informal business travellers. The largest group of domestic informal business tourists were heavily committed to religious activities, visits to friends and relatives, shopping, enjoying Harare's nighttime economy and visiting sports events. For Zimbabwean cross-border traders VFR activities were overwhelmingly dominant followed by personal shopping, clubbing and supporting musical events. Similar findings were observed for the non-Zimbabwean traders – as many as two-thirds visited friends or relatives in Harare – 51 percent participated in the night-time economy and 38 percent in personal shopping. This international cohort of informal business tourists is distinctive for recording the highest participation (one-third of the sample) in local sightseeing and visiting local places of interest in the city. Of all the different forms of bleisure pursued by Harare's informal business tourists the visits to local places of interest is the only close alignment with findings reported on the bleisure activities by the more well-resourced travellers from the Global North.

Further details relating into the nature of the bleisure economy of informal business tourism in Harare emerged from the interview responses that were collected. Notable were the findings in relation to religion. Outside of business operations going to a local church or visits to prophets or pastors was widespread especially amongst domestic business travellers. A growing interest was observed of people travelling for spiritual deliverance, a trend that has resulted in religious figures such as pastors, evangelists, prophets as well as African apostolic churches becoming very popular in Zimbabwe. This aspect of religious visits was also found to be tied to the fact that many informal sector domestic tourists as participants indicated that they engage in some form of spiritual consultation before undertaking their journeys to Harare. But the importance of religious activities was not confined only to local business travellers as signalled by responses from South African cross-border traders.

I am always coming here around the weekends so that I can go to church. In Harare there are so many apostolic churches and prophets who can help you with your issues. So you can go to any of the apostolic churches, but you need someone from Zimbabwe to just help you find the right one, when you get there, a prophet may just point at you and tell you what is happening in your life and tell you all the problems that you are facing. They also tell you what to do and they can help you with water that they pray for and ask you to bath with it. I love this because we are living in a spiritual world and fighting with the spirits we don't know, but these Prophets help a lot that why I always visit them every time I come to Harare (South African [Gqeberha] female CBT 29yrs). The Zimbabwean pastors are very good and their churches have English translations, and they make everything interesting in their churches with their worship songs and dances. It's good to attend their churches (South African [Cape Town] female CBT 33yrs).

Since I heard of the Vapostori [African Apostolic prophets] in Harare I always make sure that I visit them before I go back. They really help and they don't ask for any money (South African [Gqeberha] female CBT 29yrs).

Several respondents asserted the significance of personal shopping as a non-business activity and made clear the differentiation made between shopping for purposes of business and shopping for pleasure.

My business is when I am buying things I want to sell at home. I do that and finish. Then I start window shopping or shopping for my personal things when I have free time before I leave Harare (Nigerian [Lagos] female CBT 38yrs).

What I mean is that when I am shopping I am just like any customer around here looking around for just anything to pick, which is different from the things I buy for my business (South African [Johannesburg] female CBT 30yrs).

When I go to the flea market, I am buying medicines and tools that I want to go and sell in Malawi. That is part of business and I have a budgeted money for buying those. Even sometimes I use a list of the things I must buy for business. Then when I am shopping I am using the personal money not of the business to buy my personal stuff. So I can go to Joina City [referring to one of the popular malls in Harare] to buy shoes or shades [referring to sunglasses] for me (Malawian [Lilongwe] female CBT 26yrs). Harare's vibrant nightlife, music concerts and sports events were highlighted also as an enjoyable non-business activity whilst in the city. International cross-border traders – especially from South Africa – indicated the cheaper cost of such activities as compared to home.

I go clubbing when I am in Harare. There is a good vibe and the people are fun loving, also its cheaper here (South African [Durban] female CBT 24yrs).

I love the music concerts in Zimbabwe, they are the best and the musicians are big entertainers. I heard that in two days there is a concert at Rainbow Towers and I think its Winky D performing, I will attend the concert because I love Winky D's songs and I want to see him live (Zimbabwean [Gweru] female CBT 27yrs).

Yes, of course it's interesting to go around and enjoy doing other things, and Harare is very cheap and you can do a lot of things. Yesterday I went to the stadium to watch one of the league games and I think I will go again if I am still here next week (South African [Johannesburg] male CBT 30yrs).

CONCLUSION

Research conducted on informal business tourism in African cities contributes a new dimension to what Rogerson and Rogerson (2021b) style as the 'other half of urban tourism', namely that of destinations in the urban Global South. This investigation is the first in the environment of the Global South to examine the bleisure activities among *informal* business tourists. It has been demonstrated that both the accommodation choices and the bleisure activities undertaken by these informal business tourists in Zimbabwe's capital city are markedly different to those reported in studies of business travellers from the Global North. In Harare the groups of informal business tourists economize on accommodation costs and opt for low-budget or minimal cost forms of accommodation in the city, most importantly staying with friends and relatives, or sleeping at bus terminals, on buses or at market places. Bleisure activities identified as significant are visits to friends/relatives, participation in religious activities, undertaking personal shopping and enjoying sports, musical events and Harare's night-time economy. Further research is merited on other cities in the Global South in order provide a broader base of material on the bleisure activities of informal business travellers.

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ANALYSIS OF TOURISTS' RISK PERCEPTIONS IN TOUR DESTINATION SELECTION: BANGLADESH ECOTOURISM PERSPECTIVE

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Abstract: Ecotourism is the sustainable choice of natural resources with the potential for low-cost funding approaches. As ecologically and socially responsible tourism, it promotes biodiversity while conserving the environment and society. To encourage the development of ecotourism and the advancement of indigenous communities and their resources, it is essential to examine the factors tourists consider when selecting a destination. Therefore, this study explores the critical factors of potential risk in selecting ecotourism destinations in the narrow and specific sphere. As a quantitative study, it used a sample of 377 tourists to investigate the relationship between different constructs. In this regard, SPSS-AMOS was used for data analysis. The findings highlight the importance of factors that influence tourists' decisions, which are greatly affected by risk factors; thus, it is also imperative for the Bangladesh government, policymakers, and tourism management to address this, leading to an upsurge of tourists in ecotourism destinations. These are also crucial for assisting stakeholders in understanding how tourists perceive and guide ecotourism potential and reducing the impact of confrontations.

Keywords: ecotourism, risk components, sustainable choice, environment and society, biodiversity

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INTRODUCTION

The ecotourism progress trend is an enticing factor that plays a part in tourists' determining where to go on vacation. Because of the complexity of the industry and competing interests among stakeholders, ecotourism expansion can be challenging at times (Ghimire and Dhakal, 2021). It is particularly critical in developing countries, leading to a dearth of strategy, planning, and operational capabilities (Neger, 2021). It is, however, firmly accredited that an appropriate planning process is imperative to achieve the goals of ecotourism development (Diamantis, 2018). Numerous academics have emphasised the importance of ecotourism planning; nevertheless, the available literature seldom thoroughly explains the planning process for Bangladesh's overall ecotourism destinations (Ahsan, 2008; Jaafar and Maideen, 2012; Khondkar and Anis, 2016; Salman et al., 2021). Bangladesh has various ecotourism attractions, including beaches, forests, waterfalls, wildlife refuges, rivers, and lakes (Afroz and Mahmud, 2017). It also offers tourists a broad scope to watch strange wildlife and indigenous occupants (Boley and Green, 2016; Roy and Chowdhury, 2021). Ecotourism boosts the socio-economic status of local people by fostering the biological system, providing income opportunities, and protecting natural resources (Coria and Calfucura, 2012; Zheng et al., 2021). Despite all the possibilities, it is not practised widely as it is still considered a "new concept" in Bangladesh (Haque et al., 2016; Alauddin et al., 2021).

Regardless of incredible growth, the ecotourism industry faces several snags. Travel risks may endanger tourists' safety, which is one of the primary considerations when choosing a location for relaxation. Murthy (2008) contends that travel risks play crucial and substantial roles in expanding the tourism industry. Moreover, the effect of COVID-19 also generated global instability, curtailing transportation and reducing local and international travel to some extent. Since risk awareness has been a vital issue, the inconsistent relationship between risk and tourism must be shortened. Therefore, the present study is essential for long-term sustainable ecotourism business in Bangladesh, whereby risk assessment completely embraces tourists' satisfaction and destination selection. For such reasons, choosing a destination is often aroused by risk factors. Since minimal research has examined risk elements in Bangladesh, especially after the COVID-19 pandemic, this study investigates the extent to which the relationship between the notion and destination choice. Depending on the context and situation, the study's findings on the correlations between ecotourism destination selection and risk factors would provide a set of attributes and guidelines through quantitative assessment for the authorities. This study is organised in the following manner. The literature review briefly evaluates ecotourism, potential risk factors, and hypotheses associated with the tour destination selection and proposes a conceptual framework. It also comprises the gap and corpus of knowledge as a

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whole. The research methodology describes the suggested approach, its rationale, and the description of the procedures. The data analysis section describes the outputs of the obtained data, the hypotheses results, and the general discussion. The conclusion section covers implications, limitations, and future research.

LITERATURE REVIEW

Enduring development cannot be achieved without sustainable tourism, which has significant potential to advance a country's progress. Expanding the eco-balanced tourism industry regarding the economy, community, and culture has clear benefits and drawbacks. Researchers have divergent opinions on ecotourism as it promotes local communities' environment, society, culture, and economy (Yan et al., 2017). It is the most effective long-term advancement solution and enhances natural and cultural variety (Osman et al., 2018). In contrast, many ecotourism developments fail due to a lack of thorough evaluation (Lonn et al., 2018). The International Ecotourism Society (TIES, 2015, p-7) specifies a distinct definition: "Ecotourism is responsible travel to natural regions that conserves the environment, sustains the well-being of the local people, and incorporates interpretation and education". Ecotourism concentrates on environmental and social concerns. It is an alternative to conventional tourism resulting from understanding the global business. The importance and understanding of the principle of ecotourism are essential for tourists and stakeholders. Sustainable development and biodiversity preservation are also potential applications of ecotourism (Hassan and Burns, 2014). The expansion of ecotourism helps develop local people's socio-economic status. It advocates the biological system, provides financial opportunities, and protects natural assets. The researchers believed that ecotourism, with remarkable natural resources, is now a substantial tourism business to make a robust economic system of a country (Jaafar and Maideen, 2012). Fennel (2020) argued that ecotourism involves deliberate travel to natural regions that understand the environment's social and cultural history. Therefore, the government–should focus on infrastructure development, protection of natural resources, community welfare development, and conserving cultural values and traditions, utilising an appropriate tourism strategy.

Bangladesh has various natural and cultural acnes, such as wide river lands, extensive sun-washed sea beaches, the Cox's Bazar beach region, the Kuakata beach area, and the world's most extensive mangrove forest (Khondkar and Anis, 2016). It is also the home country for the Royal Bengal Tiger, Gibbons, Monkeys, Leopards, Elephants, and wild animals. In this circumstance, Alauddin et al. (2021) reported that more than 600 species of animals, including paradise flycatchers and kingfishers, live in this natural environment. Therefore, much-needed attention is required to develop ecotourism destinations in Bangladesh. An early study by Ahmed and Mollah (2014) classified Bangladesh's ecotourism destination into four distinct groups: oceanic, mountain and forest, lake river and waterfalls and parks and historical, as identified in Table 1.

According to World Travel and Tourism Corporations (WTTC, 2019), travel and tourism was the second-fastest-growing sector in 2018, with a marginal increase of 4.0% behind the manufacturing sector. This industry employed over 319 million people, the fastest-growing GDP contributor in 2018. Moreover, in terms of GDP contribution, tourism contributed 10.4% to the global GDP in 2018 (WTTC, 2019). Similarly, it created employment opportunities and reduced reliance on other specific sectors worldwide. People have recently been concerned about travel safety and paying attention to avoid travel risks. Destination risk sensitivity directly affects the tourist's selection of a tour destination (Cui et al., 2016). Williams and Baláž's (2013) study added that destination-related risks had gained much attention to increasing the safety and security of a destination. Thus, the degree to which tourists feel safe is necessary. Numerous researchers discussed the types of perceived risk in tourism studies (Fuchs and Reichel, 2011; Williams and Baláž, 2013; Adam, 2015). Cui et al. (2016) employed six dimensions to support their finding and mentioned that visitors perceive risk ranging from five to seven dimensions. Therefore, it is vital to measure the relationship between perceived risk and selection of tour destination, especially in an ecotourism setting, which is a popular choice for spending an individual's leisure time.

Table 1. Different Types of Ecotourism Destinations in Bangladesh (Source: Ahmed and Mollah, 2014)

Destination Types	Ecotourism Destinations
Oceanic	Cox's Bazar Sea-Beach Area, Pattenga Sea-Beach Area, St. Martin Island Area, Chera Dwip of St. Martin Island
Mountain and Forest	Rangamati, Khagrachari and Bandarban Hills Area, Tahjindong, Mowdok Mural, and Keokradong Area, Sundarban Mangrove Forest Area
Lake River and Waterfalls	Kaptai Lake Area, Madhabkudda Waterfall, Boga Lake Area
Parks and Historical	Lawa-Chara Park, Alutila Cave, Himchari National Park, Sitakunda Botanical Garden, Shopnopuri at Dinajpur

On a separate note, destination selections are undesirably influenced by perceived risk and are sometimes not judged by specific information sources (Artuger, 2015). There have been a few attempts to determine tourists' perceived travel risks beyond health and safety concerns. Destination risks can occasionally include terrorism, crime, natural catastrophes, and the spread of diseases (Chen et al., 2009; Fuchs and Reichel, 2011; Abdullah et al., 2020). Therefore, it is essential to comprehend how tourists' perceived risk influences their selection of tour destinations.

On the overhead view, further research is needed to investigate the relationship between destination selection and perceived risk. On this note, Kani et al. (2018) argued that the need for perceived risk analysis is essential given the significant destination of ecotourism calamities that afflict the image of a country. As a result, safety has emerged as a critical factor affecting the travel plans for tourists who visit Bangladeshi ecotourism destinations. Tourists deem that if they do not feel safe, they will not travel and visit safer places than they think. Therefore, ensuring safety in diverse ecotourism destinations is essential to sustain tourism interest and acceptability. Although Bangladesh offers numerous ecotourism opportunities, it faces various obstacles that negatively impact its image, discourage visitors, and raise security concerns; consequently, the options for travelling to these areas have decreased (Abtahee et al., 2023; Rahman et al., 2023).

The theory of cause and effect

Braun and Le Chatelier introduced the cause-and-effect theory during the 18th century, also known as the feedback loop (Norwich, 2010). Their pioneering research focused on how systems consistently establish a steadiness in reaction to external stimuli. Feedback loops are causal mechanisms operating within individuals or systems that maintain equilibrium through negative feedback or promote change through positive feedback (Bangert-Drowns et al., 1991). As per the theoretical framework, feedback loops facilitate individuals and procedures to uphold control or modify crucial processes by indicating whether an input should be amplified or ceased (Watson, 2003). At its most basic level, a feedback loop entails a causal sequence wherein an action elicits a response, thereby instigating a transformation and facilitating novel behaviour.

This study aims to comprehend the risk factors associated with ecotourism and investigate the "theory of cause and effect" determinants that impact decision-making when choosing ecotourism destinations. Here, in the sense of tourism, understanding patterns of tourism risk provides a basis for understanding the role and impact that feedback plays in giving and receiving input in selecting a tourism destination (Zvaigzne et al., 2022). Tourism risk pertains to the potential negative outcomes that tourists may perceive concerning their travel behaviour (Chen et al., 2009). When selecting a travel destination, tourists must consider the destination's security. However, it should be noted that quantifying security is not a straightforward task (Suddle, 2009). The cause-and-effect theory in tourism risk involves psychology and many other disciplines. This model has no fixed form, and the relevant questionnaire is designed according to different tourism scenarios. Under the content of the view, tourism risk perception is divided into two categories: input and result (Cui et al., 2016). In this study of risk perception, the feedback loop refers to using a system's outputs as inputs to determine cause-and-effect relationships between tourist and destination selection. Some systems (such as the environment) have numerous feedback cycles, and it can take decades for human actions to manifest (Zmyslony and Pawlusiński, 2019). In complex systems, feedback loops may build fundamental relationships towards ecotourism destination selection.

Hypothesis development

As time advanced, the dimensions of perceived risk have been studied and predominantly focused on tourism research (Pizam et al., 1997; Reisinger and Mavondo, 2005; Lepp and Gibson, 2008; Tarlow, 2014; Caber et al., 2020). Earlier, it has been exhibited that perception of safety and security issues strongly influences tourists' present and future tour destination selections (Mitchell and Vasso, 1997; Mawby, 2000; Irvine and Anderson, 2006). Meanwhile, risk has been a significant concern for tourists to visit any destination. The prior knowledge of selecting a destination has been suggested in tourism literature because of experience and credence attributes of perceived risk (Decrop, 2006; Adam, 2015). Under the same approach, this fundamental decision-making knowledge gains added significance. Therefore, risk must be assessed, processed and transformed minimally (Boksberger et al., 2007; Garg, 2013). Irrespective of such ways, perceived risk has been evaluated regarding the destination selection process in this study.

The research investigates that the financial risk dimension within tourism studies represents tourists' value of money and whether it is worth visiting a destination (Stone and Grønhaug, 1993). Financial risk is also depicted as the possibility of not returning money spent on the ecotourism destination. A similar perspective that Mitchell and Greatorex (1993) stated that it is the risk that the desired outcome may not fulfil the demand and satisfaction. For example, money spent is not successful due to bad weather, service experienced and a reason for similar factors (Fuchs and Reichel, 2011). Visiting a nature-based area certainly involves financial risk as the tourists may find it perilous in some aspects. However, it cannot be measured before the tourist visits a destination. Contrarily, tourists who are disappointed with their visit cannot exchange it for money. All these factors raise the level of financial risk for ecotourism. Due to its significance in other risk-related areas, the financial risk dimension is included in the present study as a sub-category of perceived risk. There is still a need to explore the link between financial risk and selecting ecotourism destinations in Bangladesh. Accordingly, this study hypothesised the following relationships between financial risk and ecotourism destination selection:

H1: Financial risk significantly affects the selection of ecotourism destinations.

Time risk is the probability of a trip being wasted or taking too much time (Hasan et al., 2017). Time-based risk measures time lost related to a service failure, and additional time is required to fix the problem, and it may have natural calamities, i.e., earthquakes and strikes that cause more time (Chen et al., 2009). For example, hotel registration causes time loss, travel schedule delays, and other inconveniences (Cui et al., 2016). However, the researcher also argued that time risk might involve the probability of spending unnecessary time while visiting a destination (Huang et al., 2008). Thus, the time risk factor is included in this study as a sub-category of perceived risk components. Most prior research on the perceived risk in tourism has concentrated on identifying distinct forms of security, many of which also identified risk-related characteristics (Lepp and Gibson, 2003; Garg, 2013; Williams and Baláž, 2013; Adam, 2015). Therefore, the following hypothesis is proposed:

H2: Time risk significantly affects the selection of ecotourism destinations.

Performance risk is sometimes associated with nature-based tourism covered by land and waters, natural landscape, astronomers and climatic scenery (Hasan et al., 2017). Under the approach, Liu and Gao (2008) stated that performance risk is involved when the service or tourism product does not meet tourists' expectations. On the other hand, when a tourist faces obstruction due to poor service from a destination management company, it is likely to be called a performance risk (Cui et al., 2016). In supporting this view, Zhang's (2012) study revealed that tourists experience uncertainty when tourism product standard cannot meet their expectations. However, this uncertainty regarding the destination is also considered a performance risk, which is common in tourism destinations nowadays. Therefore, the present study targets performance risk to facilitate a deeper understanding of the destination risk facets and their consequences from a tourist experience point of view. That said, in the context of ecotourism destination selection in Bangladesh, the following hypothesis is proposed:

H3: Performance risk significantly affects the selection of ecotourism destinations.

The potential contact between the service provider and tourists within a tour destination may increase the chance of sensitivity, which embraces the situation and causes social risk (Quintal et al., 2010). An early study by Murray and Schlacter (1990) found that a certain level of human participation has been attained in most service situations and thought that visiting specific destinations would damage the self-image of tourists. On the other hand, Hu (2011) discussed that social risk is present when visitors experience social instability due to political unrest, terrorism, and crime while enjoying tourism products. Carter's (1998) study noted that social risk influences severe travel threats. Thus, this dimension measures tourism perceived risk within this study. Despite its significance, the distinction between social risk and destination choice is rarely studied in Bangladesh's ecotourism context. In light of the above empirical support, the following hypothesis is proposed:

H4: Social risk significantly affects the selection of ecotourism destinations.

Psychological risk means a tourist buys a tour package, deliberately or unconsciously creating internal tension, leading to psychological discomfort (Stone and Grønhaug, 1993). It is characterised as the possibility that a visit to a tourist destination could harm one's identity or reflect negatively on the personality of a tourist. The psychological aspect of risk is perhaps the least known of the six typical dimensions used in consumer behaviour analysis (Liu and Gao, 2008). An early study showed that psychological risk includes the likelihood that the trip would not be consistent with the tourist's self-image and not offer personal pleasure (Roehl and Fesenmaier, 1992). Despite the specific treatment of the psychological risk aspect being addressed, the component is used as a sub-category of perceived risk in the current study. Much effort has been devoted to identifying that the least number of studies on psychological risk relating to ecotourism destination selection has been undertaken in Bangladesh's setting. Based on the above-discussed relationship between psychological risk and choice of ecotourism destination, the below hypothesis has suggested:

H5: Psychological risk significantly affects the selection of ecotourism destinations.

Physical risk is mainly related to physical elements, such as service failure due to lack of oxygen, humidity, and natural disasters, which might harm tourists and cause injury (Fuchs and Reichel, 2011). It is likely to be exposed to an individual's sickness because of conditions such as weather, hygiene, and any dangers arising from malfunctioning equipment, for example, insufficient telecommunication facilities, unsafe transportation, and breakdown of vehicles (Mitchel, 1999). Moreover, it also encompasses food safety, outbreaks, natural hazards, auto fatalities, terrorism, extremism, and civil instability (Sonmez and Graefe, 1998). Under such an approach, a study found that natural touristic or scenic areas have the most physical risk (Roehl and Fesenmaier, 1992; Reisinger and Mavondo, 2005; Cui et al., 2016). However, the physical risk dimension in the sense of ecotourism involves several aspects that visitors may face while visiting a destination. Based on the discussion above, the physical risk as a sub-dimension of perceived risk is included in this study as it implies an individual's preference for the risk of touring an ecotourism destination. Therefore, the hypothesis proposed is as follows:

H6: Physical risk significantly affects the selection of ecotourism destinations.

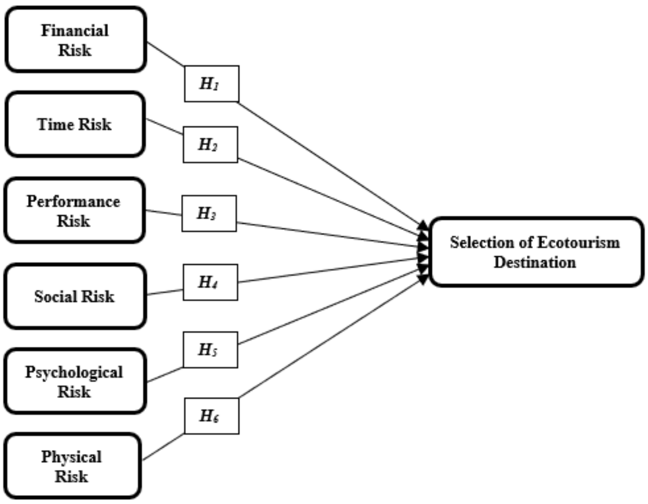

Figure 1. The Conceptual Model for the Study

METHODOLOGY

Research design

The current study investigated the impact of selecting ecotourism destinations. Thus, it became mandatory to develop the study by collecting data from patronising tourists from Bangladesh's ecotourism destinations, and a total of 18 ecotourism destinations were selected. The association between the variables in this study was examined using a quantitative research methodology. This method was chosen following the post-positivism paradigm, which underscored the need to identify and assess the factors that influenced the study outcomes and condensed the concepts to a specific subset (Samdin et al., 2021).

Study population and sampling method

A conceptual framework was developed using the deductive approach, and the hypotheses were then empirically evaluated. However, two approaches, i.e., inductive and deductive, are used primarily based on their nature and objective (Saunders et al., 2012). The critical distinction between approaches is that a deductive approach focuses on research theories. An inductive approach involves forming a new data-based theory (Bryman and Bell, 2015). However, a deductive approach generally starts with a hypothesis. However, this study followed the non-probability purposive sampling technique with a deductive approach. This approach measures specific assumptions, expectations and experiences to determine sample size, as it is often selective and subjective (Zikmund, 2003; Hair et al., 2019). This approach also depends on the researcher's judgement and personal flexibility (Bryman and Bell, 2015). This study's sampling frame includes male and female and local and foreign tourists. The survey was conducted between January 2022 and April 2022. Data were obtained from several ecotourism destinations by approaching tourists. The target population included tourists who visited various ecotourism destinations in Bangladesh or are currently in a visiting mode.

Scales used in the study

The conceptual framework included seven constructs. Forty-one items were utilised under perceived risk-related constructs. In contrast, there were seven items for ecotourism destinations. The researcher deployed a self-administered questionnaire with a 5-point Likert -Scale. Overall, the first section is asked to rate respondents' level of agreement on a 5-point Likert scale (1=Strongly disagree to 5=Strongly agree). The risk-related questionnaire items were adapted from previous studies (Stone and Grønhaug, 1993; Laroche et al., 2004; Fuchs and Reichel, 2011). On the other hand, the selection of tour destination (STD) scale items was adapted from the study of Chen and Tsai (2007).

Data analysis method

The quantitative data from the questionnaire survey were analysed using the SSPS (Version 25). Structural equation modelling (SEM) was used to test the causal relationships among the constructs. Numerous research, including those in psychology, sociology, the environment, tourism, and other fields, frequently employ the SEM approach (Kenny, 1996; Creswell, 2017). Consequently, CFA was done in Structural Equation Modelling (SEM) after the completion of EFA. Each latent variable's validity and reliability are determined using CFA. In addition, it is also utilised to assess discriminant validity, convergent validity, composite reliability, and extracted average variance (AVE).

RESULTS AND DISCUSSIONS

Profile of the respondents

The descriptive analysis identifies the target respondents' demographic features. After identifying invalid and incomplete responses, 377 of 455 survey responses were chosen for further investigation. Before statistical analysis, data cleaning processes are completed to guarantee that no data manipulation happens. The handling of inconsistent and illogical data within this study dealt with utmost concern. Table 2 summarises the demographic characteristics of these respondents. While nearly three-quarters of the sample was male (n= 278, 73.74%), only (n= 99, 26.26%) were female.

Regarding tourists' age, approximately half of the sample (n=137, 36.33%) was aged 26–35. Most tourists (n=335, 88.86%) were local because of the global pandemic issues. Income ability also impacts, as many tourists were service holders (n=147, 39%), and the middle-ranged income tourists were at the top of the segment. Finally, many tourists visit the destination yearly in the frequency facet (n=198, 52.51%).

Table 2. Demographic Analysis

Items	Category	f	%
Gender	Male	278	73.74
	Female	99	26.26
Age	18-25	96	25.45
	26-35	137	36.33
	36-45	106	28.11
	46-55	23	6.13
	56 and above	15	3.98
Nationality	Local	335	88.86
	Foreigner	42	11.14
Occupation	Service	147	39
	Business	68	18.03
	Student	107	28.38
	Housewife	24	6.36
	Others	31	8.23
Monthly Income	Less than US$ 300	72	19.10
	US$ 301 - 600	77	20.42
	US$ 601-1200	72	19.10
	Above US$ 1200	61	16.18
	Others	95	25.20
Frequency of Travel	Monthly	30	7.97
	Quarterly	97	25.73
	Yearly	198	52.51
	Others	52	13.79

Table 3. Exploratory Factor Analysis

CODE	Component							CODE	Component						
	1	2	3	4	5	6	7		1	2	3	4	5	6	7
FNR1	.653							SOR6				.816			
FNR2	.753							SOR7				.943			
FNR3	.788							PSY3					.831		
FNR4	.692							PSY4					.537		
FNR5	.749							PSY5					.873		
FNR6	.772							PSY6					.537		
TMR1		.685						PSY7					.762		
TMR2		.768						PHY1						.800	
TMR3		.748						PHY2						.868	
TMR4		.749						PHY3						.794	
TMR5		.804						PHY4						.776	
TMR6		.823						STD1							.554
TMR7		.837						STD2							.685
PER1			.687					STD3							.632
PER2			.752					STD4							.721
PER3			.791					STD5							.623
SOR3				.669				STD6							.774
SOR4				.811				STD7							.769
SOR5				.721											

Exploratory factor analysis

The fundamental concept associated with factor analysis is that there must be a solid theoretical justification for assuming the mechanism inside the analysed items (Hair et al., 2015). Other important considerations include significant correlations between the variables being used and a measure of sampling adequacy exceeding 0.50 (Hair et al., 2019). In this study, factors that loadings with 0.50> were included for further interpretation of the data. Moreover, principal component extraction was also performed to determine the convergent validity and reliability of items used to measure model constructs. Table 3 indicates that seven (07) components were extracted with an initial eigenvalue exceeding 1.0 and explained 73.07% of the total variance. However, depending on the nature of the studies, the threshold for the total variance diverges.

Reliability and validity of the measurement model

SPSS-SEM validated the research model, which exceeds predictive and exploratory research (Hair et al., 2015). Table 4 demonstrates the reliability and validity of all constructs in the conceptual model. The factor loadings, average variance extracted from the constructs (AVE), composite reliability (CR) values, and Cronbach's alpha (0.05 level) values were all more than the cut-off values, indicating good validity and reliability (Fornell and Larcker, 1981; Hair et al., 2019). The Heterotrait-Monotrait (HTMT) ratio of correlations and the discriminant validity of the criteria assessed by Fornell and Larcker (1981) were determined. As shown in Table 4, the square root of the AVE for each construct was more significant than the inter-correlations for each construct, confirming discriminant validity. In addition, all HTMT values are smaller than the required value of 0.85 (Kline, 2011), demonstrating discriminant validity. Tables 4 and 5 reveal discriminant validity (0.05 level) established for all components examined in this study.

Table 4. Confirmatory Factor Analysis Results

Construct	Number of Items	Range of Factor Loadings	Cronbach's Alpha	AVE	CR
Financial Risk (FNR)	7	0.653 - 0.753	0.766	0.849	0.561
Time Risk (TMR)	7	0.685 - 0.837	0.877	0.913	0.701
Performance Risk (PER)	6	0.687 - 0.791	0.806	0.890	0.626
Social Risk (SOR)	7	0.669 - 0.943	0.738	0.925	0.889
Psychological Risk (PSY)	7	0.537 - 0.831	0.919	0.759	0.581
Physical Risk (PHY)	7	0.794 - 0.868	0.785	0.861	0.630
Selection of Ecotourism Destination (STD)	7	0.554 - 0.774	0.807	0.827	0.594

Table 5. Discriminant Validity

Research Constructs	Correlations						
	FNR	TMR	PER	SOR	PSY	PHY	STD
FNR	0.861						
TMR	0.574	0.813					
PER	0.453	0.414	0.874				
SOR	0.231	0.298	0.311	0.882			
PSY	0.337	0.476	0.461	0.631	0.862		
PHY	0.416	0.291	0.375	0.519	0.523	0.718	
STD	0.375	0.613	0.256	0.216	0.213	0.323	0.713

Table 6. Goodness of Fit Evaluation of the Measurement Model

Category	Required value	Achieved Value	Remarks
Absolute Fit	RMSEA ≤ 0.080	.048	Achieved
Incremental Fit	CFI ≥ 0.90	.942	Achieved
Parsimonious Fit	Chisq/df ≤ 3	2.207	Achieved

Table 7. Heterotrait-Monotrait (HTMT) Ratio

Research Constructs	Correlations						
	FNR	TMR	PER	SOR	PSY	PHY	STD
FNR							
TMR	0.553						
PER	0.316	0.331					
SOR	0.213	0.123	0.113				
PSY	0.370	0.179	0.217	0.219			
PHY	0.279	0.273	0.198	0.178	0.163		
STD	0.390	0.214	0.171	0.120	0.219	0.178	

Assessment of structural model

SEM-AMOS was utilised to evaluate the hypotheses on the causal relationship between the constructs. The study model with the particular fit indices showed that the structural model fits the data (Figure 2). The structural model had acceptable fit in terms of absolute fit index (CMIN/DF) = 486.130(264), RMSEA = 0.048, GFI = 0.874, AGFI = 0.793 and an incremental fit index CFI = 0.942, NFI = 0.836. As a predictor of the accuracy of the structural framework, the R_2 of variance was determined (Hair et al., 2019). For behavioural science studies, the R_2 values of 0.02, 0.13, and 0.26 are suggested as weak, medium, and strong (Cohen, 1988). From the structural model (Figure 2), it can be said that 42.7% (R_2 = 0.427) of the variance in selecting ecotourism destinations is explained by the exogenous variables such as financial risk (FNR), time risk (TMR), performance risk (PER), social risk (SOR), psychological risk (PSY) and physical risk (PHY).

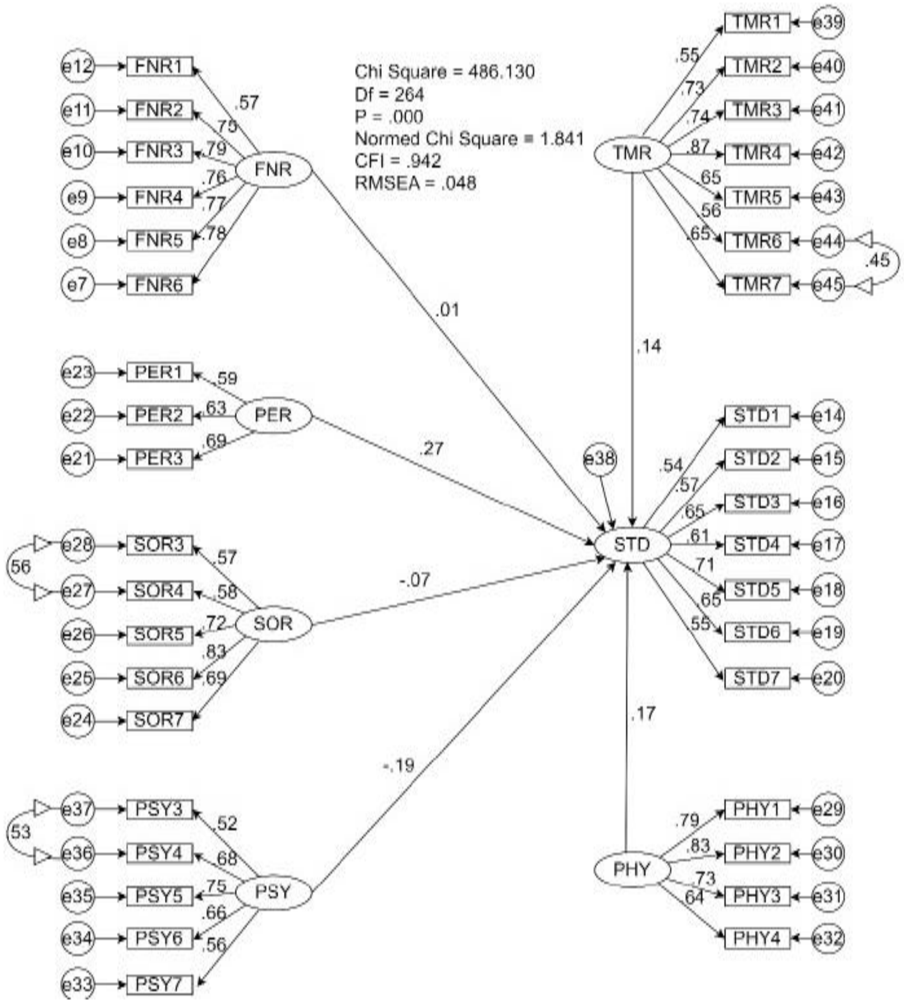

Figure 2. Structure Model

Hypothesis Testing

It has been a long time since tourism researchers paid significant attention to how tourists perceive the risk connected with travel. However, the COVID-19 pandemic and the tourism boom have shown the scholarly relevance and practical significance of tourists' perceived risk concerning their reactions to tourists and tourism.

This study evaluated the correlations between tourists' perceived risks for tourism during the post-pandemic to address a significant yet neglected gap in tourism research. The direct paths between each construct were investigated in this study. However, prior research has yet to examine perceived risk dimensions independently of other variables that differ between tourists and ecotourism destinations. In the unprecedented COVID-19 pandemic, it is believed that the risk perception of visitors impacts their trip-planning decisions.

Table 8. Results of the Hypothesised Relationships

H_0	Path	Coefficient (β)	S.E.	t-value	p-value	Result
H_1	STD←FNR	.003	.054	.052	.958	Not Supported
H_2	STD←TMR	.088	.044	1.978	.048	Supported
H_3	STD←PER	.177	.061	2.908	.004	Supported
H_4	STD←SOR	-.026	.045	-.593	.553	Not Supported
H_5	STD←PSY	-.161	.044	3.621	.000	Supported
H_6	STD←PHY	.185	.045	4.102	.000	Supported

H_1 posited that financial risk from tourists' perspective would not be related to selecting an ecotourism destination. The path between the two constructs was not supported (β=0.003 t=.052 p= 0.958), indicating that financial risk is not a strong predictor of destination selection. Interestingly, there was no difference in perceived risk associated with travel to a particular ecotourism destination in Bangladesh. It should be emphasised that financial risk is frequently conflated with travel risk assessment, although the results of this study concur with those of earlier research (Boksberger et al., 2007; Fuchs and Reichel, 2011; Zhang, 2012).

The effects of time risk on ecotourism destination selection were also examined. As seen in Table 7, there was a significant relationship between time risk and ecotourism destination selection. The empirical results of **H_2** showed (β=0.088 t=1.978 p= 0.048), which was a potent combination of destination selection tools in the context of Bangladesh, where prior research suggested the same (Li, 2010; Hu, 2011). It is hypothesised that travellers' perceptions of time risk affect overall travel decision-making, especially during the exceptional COVID-19 pandemic. Therefore, this study strengthens the need to emphasise time-related concerns to connect with tourists for desired ecotourism vacation outcomes.

Hypothesis **H_3** reflected the relationship between performance risk and ecotourism destination selection. This direct relationship revealed that performance risk perception is a significant dimension of perceived risk and influences tourist intention to travel (β =0.177, t =2.908, p= 0.004). Based on the result, this study postulates the impact of performance-related issues on destinations that affect tourists' visitation to the ecotourism destination. It demonstrates that tourists will be more conscious of potential risks during travel if they have greater knowledge about performance risk and safety. According to the researchers, tourists' perceptions of a destination's performance risk play a crucial part in the decision-making process, as this finding is also supported by past discoveries (Fuchs and Reichel, 2011; Cui et al., 2016; Kani et al., 2018).

Meanwhile, no relationship was found between hypothesis **H_4** relating to social risk and ecotourism destination selection. Standardised path coefficients from social risk to ecotourism destination selection (β = -0.026, t = -.593, p= 0.553) were insignificant. In other words, the more social risk tourists experience, the fewer choices they have for ecotourism destinations. Therefore, tourists' social concern about visiting an ecotourism destination did not have any impact; this results in hypothesis **H_4** being rejected. This relationship may be re-examined in future studies.

Psychological risk is a part of the multidimensional construct of perceived risk; therefore, the relationship between psychological risk and ecotourism destination is also examined. As discussed earlier, it involves the psychology-related risk influencing tourists' visitation to ecotourism destinations. While Fuchs and Reichel (2011) revealed that perceived risk is involved in destination selection, it was essential to test this further since other factors induce underlying conflict and psychological discomfort. According to the result of this hypothesis (table 7), a significant relationship was found between the variables. This finding (β = -0.161, t = 3.621, p= 0.001) suggested that psychological risk **H_5** significantly affects the selection of ecotourism destinations. By synthesising and assessing the pertinent relationship, this significant risk factor affecting tourism and finding is also supported by past discoveries (Liu and Gao, 2008; Hu, 2011; Fuchs and Reichel, 2011; Cui et al., 2016; Kani et al., 2018).

Finally, this study examined the relationship between physical risk and ecotourism destination selection. Health and safety concerns are the main determinants of risk perception. Therefore, this demonstrates that if visitors have more knowledge of health and safety, they will be more cognizant of the possible threats they may encounter while travelling. After weighing health and safety concerns, Chien et al. (2017) and Huang et al. (2020) found that tourists are also concerned about their perceptions of health risks. Scholars alleged that tourists' insights into health threats toward a destination influence their decision and affect vacation quality through health-preventative aspects. However, as shown in Table 7 for this hypothesis, the p-value is 0.000 with β = 0.018 and t= 6.693, and the regression weight is at 0.05. This hypothesis was supported and aligned with previous studies (Liu and Gao, 2008; Assaker, 2014; Molinillo et al., 2018).

IMPLICATIONS

Throughout the world, ecotourism is becoming increasingly popular among tourists. The increasing demand for tourists travelling to ecotourism destinations must be carefully verified. Therefore, understating tourists' well-being is vital for successful destination management and planning. Tourists feel that health issues at different times have heightened their fear of travel-related risks and impacted their holiday inclination to certain places.

The study also represents theoretical contributions. It provides valuable insight into the risk perceptions of the tourists in all aspects and a helpful note that tourists may consider while visiting destinations. However, no previous study has used six risk dimensions employing SPSS-SEM in Bangladesh's ecotourism setting.

This study also provides managerial insights into tourist safety and security facets for destinations. It highlights the necessity for destination marketers to adhere strictly to visitors' safety requirements. The study results also found direct relationships between perceived risk constructs and the tour destination selection. It indicates the importance of examining the personal safety of the tourists associated with ecotourism. Overall, it is anticipated that the findings would significantly benefit marketing and management companies in broader fields.

LIMITATIONS AND FUTURE DIRECTION

Despite its strengths, this study has limitations. The survey for this study could not include all of Bangladesh's ecotourism sites because of the inconsistency of travel behaviour in the country and the limits that were put in place. Thus, it is advised that future research include all the destinations that may have more significant results.

In line with previous research (Roselius, 1971; Jacoby and Kaplan, 1972; Kaplan et al., 1974), the present study identified six components of perceived risk linked to the choice of tourist destinations. More pertinent dimensions, like health concerns, political unrest, and terrorism (Howard, 2009; Rittichainuwat and Chakraborty, 2009; Samdin et al., 2021), may also be incorporated into future research.

CONCLUSION

This study identifies specific travel risk elements that may impact travellers' perceptions of risk while selecting destinations. The notion of tourist risk perception evolved due to the convergence of economics, tourism, psychology, and other fields. However, the researchers discovered that travellers' perceptions of risks used to have a considerable influence on their choice to go at this time. Also, this inquiry and exploration have contributed to the current discussion of primary factors and flaws by reviewing voluminous literature.

From a practical standpoint, in nations like Bangladesh, where ecotourism is a crucial element of overall tourism, destination management and tourist organisations must practice a tourism risk management plan to walk on the path of tourists' benefits. Overall, risk prevention and mitigation measures are essential for visitors' decision-making, the sustainable use of tourism resources, and the growth of the tourism sector.

To increase safety and preventative measures, government authorities must collaborate to provide pertinent and timely information to the public to avoid possible adverse incidents. They must also work with regional tour operators. These initiatives would reduce visitors' perception of travel hazards and unjustified concerns.

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ANALYSIS OF THE SOCIAL NORM OF RECREATIONAL CAPACITY AND TOURIST SATISFACTION ON THE SOUTH-WESTERN SHORE OF LAKE ALAKOL

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Abstract: The study is aimed at determining the social norm of the density of people on the beach and identifying the weaknesses of the organisation of beach-bathing tourism for the rational use of recreational resources and the development of sustainable tourism. Aerial photography of the coast and conducting a sociological survey of vacationers, statistical approaches and Importance-Performance Analysis were used. The total threshold density on the beaches is estimated at 14 627 vacationers (3 m2/person), acceptable density at 5 683 vacationers (8 m2/person). Safety issues in the water area, pollution of the coast and lack of awareness among tourists are recommended for priority solutions. The results will improve the quality and safety of tourists' recreation and generally lay the foundation for the rational use of recreational resources and development of sustainable tourism on Lake Alakol.

Keywords: Lake Alakol, survey, social norm, importance-performance analysis, sustainable tourism

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INTRODUCTION

Lake Alakol is a large developing tourist center of beach-bathing tourism in the summer period. Over the last 10 years the transportation, hotel and recreational infrastructure on the lake shore has significantly improved. In the summer season daily flights and trains from major cities are launched. Construction of a new highway Almaty-Oskemen, allows comfortable access to the lake by buses and cars. The measures taken have contributed to a significant increase in tourist arrivals at the lake. According to local government estimates for 2022, the total number of tourists on the southwest coast reached more than 1.5 million people per season (Serikbayeva, 2023).

Given the significant recreational potential of Lake Alakol, the flow of tourists will increase every year (Aktymbayeva and Taukebayeva, 2015). Over the past years, anthropogenic (tourist) impacts on coastal areas have been increasing (Medeu et al., 2023). Recreational resources of the coast, beaches bring significant sources of income (Zacarias et al., 2011). The World Tourism Organization recommends a balance between environmental, economic and socio-cultural aspects of tourism development for long-term sustainability (UNEP and WTO, 2005). The main value of beach-bathing recreation is the natural resources that need to be preserved. The identification and application of sustainable ways to utilize recreational resources and develop sustainable tourism is in line with the global agenda (World Tourism Organization, 2015).

One of the tools for rational use is to examine the social norm of recreational capacity and the analysis of existing beach management conditions based on the tourists' opinions. Determining recreationist satisfaction with current conditions in Hawaii's coastal areas using the IPA approach was performed by (Needham et al., 2008). Assessing socio-cultural recreational capacity to support beach management at Praia de Faro, Portugal (Zacarias et al., 2011). Based on the attitude of tourists, studied the factors of competitiveness of tourist destinations in Jablanica district, Serbia (Djeri et al., 2018).

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This research method has also been applied in the following studies, which address the topics of competitiveness of the top six island destinations in Southeast Asia (Mustafa et al., 2020), performance and customer evaluation of green hotel attributes (Quan et al., 2022), local people's view of sustainable tourism principles (Akinci and Ökzüz, 2022) and for proposing appropriate measures to improve competitiveness based on optimizing resource allocation for Lisbon Metropolitan Area, Portugal (Rosário et al., 2024). The work (Adam et al., 2024) gives various attributes of tourism that influence and cause satisfaction and dissatisfaction of tourists, which can be found in the experience of sea tourism. Additionally, this study discusses how IPA can be used to influence future visitor research and management in marine parks.

The government's handling of transfer issues has opened up wide access for tourists to various recreational facilities in the country. Destination sites often have high tourist densities, with existing facilities and amenities unable to satisfy the needs of all tourists. Tourist destinations have limitations in their ability to accommodate only a certain number of people. At the same time, scholars recommend following not the physical but the real and effective recreational capacity, taking into account various limiting factors (Arias et al., 1999). The importance of investigating both the recreational potential and the infrastructural conditions capable of satisfying the natural needs of tourists has been noted (Zacarias et al., 2011).

The shores of Lake Alakol suitable for tourism are located on the south-western and eastern shores of the lake. Beach and bathing tourism are the basis for the development of local hotel business, tax revenues and seasonal jobs. The recreational attractiveness of landscapes and tourism and recreational potential of the Alakol Lake basin has been previously assessed (Mukayev and Gumilyev, 2020; Aktymbayeva and Taukebayeva, 2015). Most of the works are devoted to assessing the potential for tourism development, but now in the conditions of developed beach-bathing tourism, new ways of solving the needs of tourists and rational nature management are needed. The aim is to determine the social norm of the density of people on the beach and identify the weaknesses of the organisation of beach-bathing tourism for the rational use of recreational resources and the development of sustainable tourism on Lake Alakol.

MATERIALS AND METHODS

The study used field methods: aerial photography (UAV), survey of vacationers. Statistical approaches for numerical data analysis and Importance-Performance Analysis. The field study was conducted from 1 to 30 July 2023. At the initial stage, recreational beaches, south-west coast near the village of Koktuma were surveyed by foot route. According to the observations, tourists are engaged in a section of the beach width of no more than 10 metres from the water's edge. In general, there are 3 categories of beaches actively used for beach-bathing tourism in the study area. These are the beach of Koktuma village, the beach of Onagash spit and the beach of the forest plantation area Figure 1.

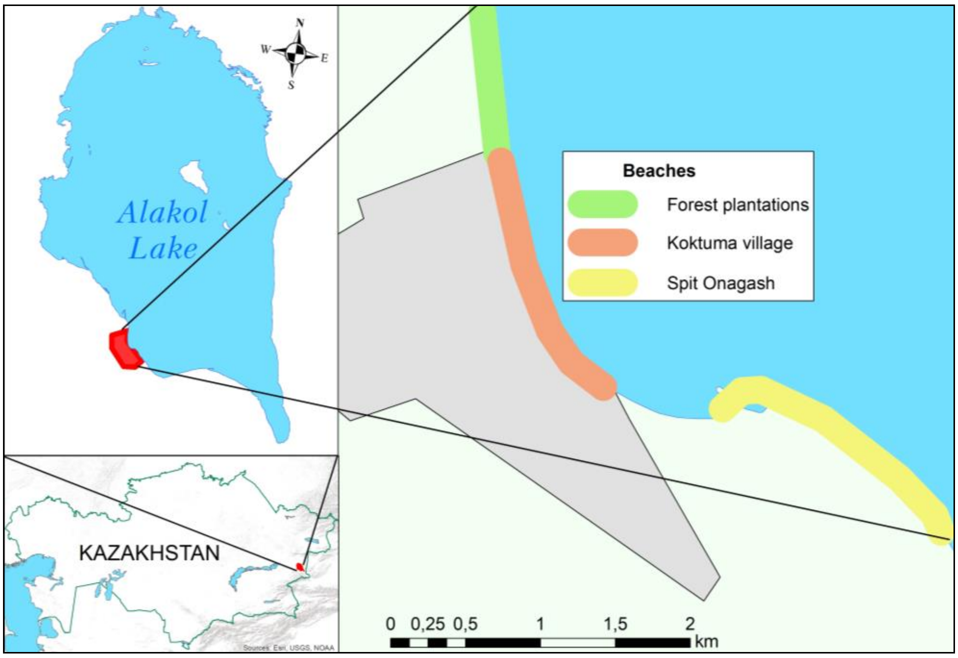

Figure 1. South-west shore of Lake Alakol

Aerial photography (UAV)

Aerial photography using an Autel EVO II UAV was used to determine the actual recreational load. Due to the lack of reliable data on the exact number of tourists visiting or staying on the beaches of Lake Alakol. During the aerial survey, the manual method of surveying along the shoreline was determined to be the optimal method to solve the current issue. The drone was operated at a relative altitude of at least 100 m from the beach, which is in accordance with the Drone Flying Regulations. The resolution of the aerial images in this case, allow to determine the silhouette of a person, without identification. Counting vacationers on the beach from aerial photographs made it possible to determine the actual recreational load (Moiseychuk, 2019) and the beach area per vacationer.

$$R = Ni \div Si,$$

where R – recreational load (people/ha), Ni – number of visitors to recreational facilities, Si – area of recreational territory.

Sociological survey of vacationers

The study adapted the questions of the questionnaire developed by (Needham et al., 2008) to suit local conditions. The questions are aimed at collecting data on the experiences and preferences of vacationers in the recreational area, on the beaches of the village of Koktuma. The questionnaire includes several blocks: socio-demographic characteristics, determination of the social norm for the density of people, level of satisfaction with natural conditions and amenities. The questionnaire was prepared in Kazakh and Russian. A site was identified to collect the preferences of vacationers on the central beach of the village of Koktuma, with a high density of tourists on the beach.

The survey was conducted by two interviewers daily from 9.00 to 12.00 and from 15.00 to 19.00. Respondents were asked to fill out a questionnaire, previously the interviewer informed them about the goals of sociological research. The principles of wide coverage of respondents' gender and age structure were observed, as well as participation of both tourists from different cities and regions and local population. During the study period, 200 respondents completed the questionnaires, representing an average of 10% of the total number of vacationers, which is in line with standard procedures in the recommendation (Needham et al., 2008). The average time to complete the questionnaire varies from 20 to 40 minutes. The refusal rate to participate in the study ranged from 10% to 30% of respondents.

Determining the norm of tourist density based on tourists' opinions

The structural-normative approach was used to determine the socio-cultural aspect of the perception of the acceptable value of population density on the beaches of Koktuma village. It involves identifying the value of a norm-standard based on the average opinion of people, regarding a condition or behaviour. Norms are described by means of a graph of the social norm curve, which reflects the value of change in the indicator according to the vertical axis. The minimum acceptable condition is the point at which the norm curve crosses the neutral line and the indicator conditions become unacceptable (Needham et al., 2008). In our study, this point represents the quality standard or acceptable threshold value of tourist density on the beach of Koktuma village. The questionnaire used 6 photographs of the central beach of Koktuma village Figure 2. The question asked respondents to rate the acceptability of the density of people in each photograph on the beaches of Koktuma village from 1 to 5 points, where 1 is very unacceptable and 5 is very acceptable.

The photographs were captured using UAVs from the same angle at different times. Images without vacationers were recorded at 6 a.m., then, as the number of vacationers increased, 5 more photos were taken with the peak of the visit in the afternoon. The visible, covered area of the beach was pre-measured to be 10*100 metres. Thus, the number of vacationers in the photos were: A – empty, B – 42, C – 79, D – 122, E – 250 and F – 353 people. After entering the questionnaire data into Excel, the response values from 1 to 5 were converted from -2 to 2, according to the Likert scale (Zacarias et al., 2011). Based on the average scores, a graph of the social norm curve was created.

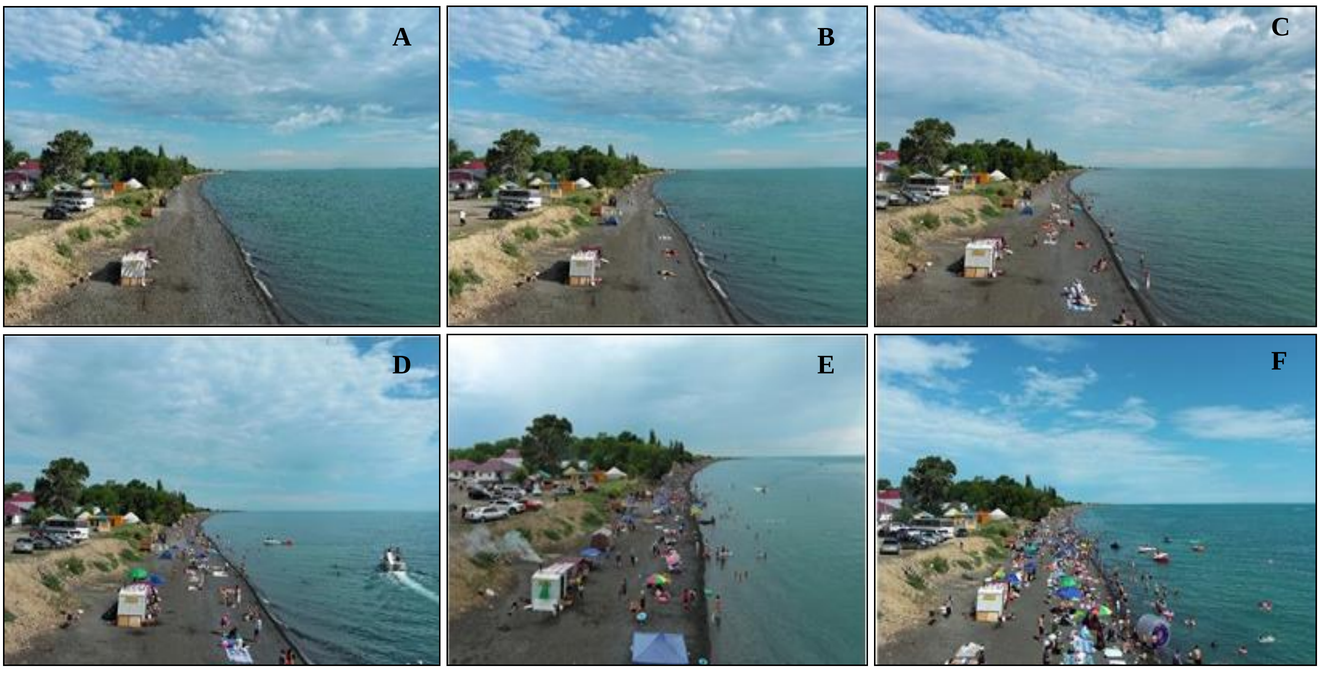

Figure 2. Photographs of the shore of Lake Alakol for measuring utilisation rates (A – empty, B – 42, C – 79, D – 122, E – 250 and F – 353 people)

Importance-performance (IP) analysis

IPA is a statistical approach to determine the relative importance of attributes and their performance (efficiency, effectiveness) based on the opinions of respondents. This approach is based on data obtained through a survey, questionnaire of respondents. IPA allows to identify the strengths and weaknesses of the object under study, and to justify in practical terms ways to solve them (Martilla and James, 1977). Importance-performance (IP) analysis is a useful tool for measuring the relationship between users' satisfaction with specific attributes and the importance they place on those attributes (Needham et al., 2008). IPA allows the values of performance and importance attributes to be correlated into a two-dimensional graph to simplify the interpretation of the resulting data. This graph classifies the attributes into four categories or quadrants to prioritise the allocation of limited resources. These four quadrants are commonly labelled as "Concentrate Here" (Q1), "Keep up the good work" (Q2), "Low priority" (Q3), and "Possible overkill" (Q4) (Martilla and James, 1977; Chu and Choi, 2000). The Importance-Effectiveness table is analysed by examining each attribute in order of relative importance, moving from the top of the table to the bottom (Martilla and James, 1977).

Using a single set of attributes to estimate importance and effectiveness, allows direct comparison of these dimensions using an IPA graph (Dwyer et al., 2012). Empirically, customer satisfaction has been found to be influenced by both expectations related to certain important attributes and judgements of attribute effectiveness (Martilla and James, 1977). IPA clearly shows the strengths and weaknesses of the studied characteristics from the point of view of customers, allowing to identify existing problems, as well as to develop individual marketing strategies (Chu and Choi, 2000).

For respondents to rate attributes, it is most effective to use a five- or seven-point rating scale, with the middle position providing a useful basis for dividing the table (Martilla and James, 1977). For proper interpretation of the results, it is important to choose the appropriate location of thresholds for the vertical and horizontal lines separating the quadrants (Sever, 2015). To construct the graph coordinates, studies mainly use mean values (Sampson and Showalter, 1999; Dwyer et al., 2012; Needham et al., 2008), actual values of the original attribute scale (Oh, 2001; Simpson et al., 2020); and median values (Martilla and James, 1977). Regardless of the statistical approaches used to utilise the data, it is common for mean values to act as thresholds. Performance and importance values are used as coordinates to plot individual attributes as a two-dimensional matrix (Sampson and Showalter, 1999).

RESULTS AND DISCUSSION

Actual recreational load

The actual recreational load was determined on the basis of geo-information analysis and processing of aerial photographs Table 1. Aerial photographs for two different survey periods of 7 July (35 images) and 21 July (35 images) 2023 were used. Using Paint graphic editor, the number of recreationists on the beaches was calculated visually. The width of the beach ranges from 5 to 20 m or more. However, tourists are mostly located within 10 m of the beach from the water's edge. The distribution of vacationers on the beaches is uneven. The most popular places for tourists are observed in places of organized descent from the coastal ledge and access roads. Therefore, the smallest free beach area per person is on the beach of Koktuma village (11.4 m^2), and the largest on the beaches of forest plantation (41.5 m^2).

Table 1. Numerical calculations of actual recreational load

Beaches	Average number of tourists per day	Length of shoreline, m	Beach area, m^2	Man / ha	Are / Person, m^2	Length of shoreline per 1 tourist, m
Forest plantations	201	834	8 340	241	41.5	4.2
Koktuma village	2 191	1 570	15 700	1 396	11.4	1.1
Onagash Spit	1 074	2 254	22 540	477	20.1	2.1
Total	3 466	4 658	46 580			

Survey respondents

A total of 36% of respondents were male and 64% were female (72 males, 128 females). The average age of the respondents was 45 years. Respondents under 30 years old were 18%, between 30 and 39 years old were 27%, between 40 and 49 years old were 15%, between 50 and 59 years old were 14% and 26% were over 60 years old. Among the respondents, 62% came from Almaty, 31% from the regions of Kazakhstan, 4% local and 3% from the Russian Federation. More than 82% prefer to spend time swimming in the lake, the remaining 18% prefer sunbathing and just passive recreation on the beach.

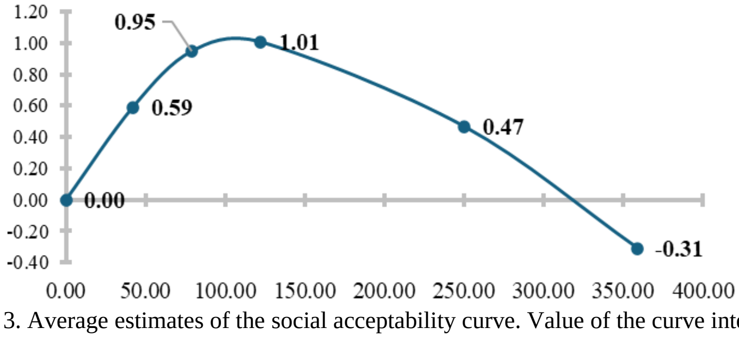

Figure 3. Average estimates of the social acceptability curve. Value of the curve intersection with the axis at the level – 314 people (Y - respondent preferences, X - number of people in the photo)

Social norm (acceptability) of the density of people on the beach

The social norm/acceptability curve shows that on average respondents rated positively the density of people in photos B (0.59), C (0.95), D (1.01) and E (0.47) Figure 3. The density of people in photo F (-0.31) and the empty beach in photo A (0.0) were considered unacceptable by most respondents. Photos C and D received the most attention from respondents.

The maximum acceptable density of vacationers was 314 people in an area of 10*100 metres. This is the value of the point where the social norm curve crosses the neutral line. This value is the threshold level of acceptable density (social norm) of people on the beach. The graph shows that social acceptability decreases as the number of visitors increases. Values above the social norm, will contribute to worsening conditions. The majority of respondents considered the most favourable acceptable density of people on the beaches of Koktuma village 122 people, the image D (1.01), is located at the peak of the graph. Since the value received the maximum average score we interpreted it as the most favourable acceptable tourist density.

To determine the overall quality standard for tourist density of the entire study area, the social norm (threshold) values are extrapolated to the landscape level and aggregated to the entire site (Needham et al., 2008). The total length of the study area beaches is 4658 metres and the results of the extrapolation of the social norm threshold values are shown in Table 2. The total maximum allowable number of people on all beaches according to the sociological survey was 14 627 people. The size of the beach surface per bather is 3 m^2. Provided the values of acceptable tourist density (122 people per 10*100m), the recreational capacity of the beaches will be 5 683 people. The surface area of the beach per bather will be 8 m^2.

Table 2. Social norm of recreational capacity

Beaches	Threshold tourist density, persons (10*100) m	Total number of tourists, people	Area/ Person, m^2	Acceptable tourist density, persons (10*100) m	Total number of tourists	Area/ Person, m^2
Forest plantations	314	2619	3	122	1018	8
Koktuma village		4930			1915	
Onagash Spit		7078			2750	
Total		14627			5683	

The results obtained are applied data for recreational coastal resource management, coastal management and organisation. The socio-cultural assessment can reflect the real desire of people when using the beach and leisure activities (Zacarias et al., 2011). The application of the assessment results will ensure the quality of leisure activities on the beaches of Koktuma village, as well as the principles of rational use of recreational resources.

Zoning of the recreational area of Koktuma village

Active types of recreation include boat trips on the lake water area. Unfortunately, on the coast there is no definite place for watercraft for landing, disembarkation of people. They can quietly cruise in the coastal shallow part between the buoys and the shore, creating inconvenience and sometimes posing a danger to vacationers. Every year cases of tourists' injuries from the activities of watercraft in the coastal water area are registered. In this regard, the respondents were asked the question “Should the beaches of Koktuma village be zoned so that different types of recreation (activities) do not overlap in the same areas?” More than 83% of respondents believe it is necessary to zone the beaches to organize safe recreation, noting the increased noise and air pollution from watercrafts. At the same time, 12% of respondents consider it unnecessary to zone the territory and 5% answered that they do not know.

Availability of beach infrastructure

To analyze the availability of coastal recreational infrastructure, 2 blocks of closed questions were used, the first “How many objects have you seen” and the second “How many objects do you think there should be?”. The list of subjects was developed based on field observations and the results of similar studies. The number of amenities necessary to meet the needs of tourists on the beach area (10*100 m). Table 3 shows the average values of the respondents' responses. The respondents noted the presence of one garbage can, although there are 3 garbage cans at the exit from the central beach, the remaining points correspond to our observations. The response interval ranges from 1 to 20 pieces of objects.

Table 3. Mean values of responses of the number of items on the central beach of Koktuma village

Question How much:	Toilets are paid	Toilets are free	Garbage cans	Picnic tables	Benches	Info/signs
you have seen	1	0	1	0	0	0
should be	6	10	15	13	15	13

Importance-performance (IP) analysis

A total of 14 attributes are proposed for tourists' evaluation - importance and satisfaction with the natural conditions and facilities at the beaches of Koktuma village. Generally, respondents indicate high importance of providing beaches of Koktuma village with each of the proposed attributes Figure 4A. More than 90 % of respondents consider it important to have pebble beaches, information signs about rules, rubbish bins and urns, no entrance fees, cleanliness of the area, and to have clean lake water. The presence of benches is considered neutral and not important by 17.8 % of respondents, and picnic tables by 28 % respectively. The characteristic of avoiding crowds of people was considered important by only 62.2% of vacationers, which is the lowest level among the proposed components’.

The general indicators of respondents' satisfaction with the existing natural conditions and available facilities for vacationers on the beach are shown in Figure 4B. More than 60% of respondents are satisfied with the condition of the pebble beaches, the purity of the lake water and the absence of fees for visiting the beaches. These are the only attributes that more than half of the respondents are satisfied with. More than 80% of vacationers are extremely dissatisfied with the facilities for tourists, including: picnic tables, benches, showers or rinsing stations, beach locker rooms, information signs about the rules, garbage cans. This also includes the indicator of the absence of garbage, which is left by the tourists themselves. Basically, the garbage consists of various packaging, leftover food and beverage bottles.

There are 2 reasons for tourists leaving garbage behind, this is low education about the culture of respect for the environment, as well as the lack of urns and garbage cans within walking distance. 89.5% of respondents are extremely dissatisfied with ensuring safety on the water – the presence of rescuers. Moreover, tourists have repeatedly noted the absence of a lifeguard observation tower on the beaches of the village of Koktuma and a stationary rescue and medical center on the coast. 68.4% of respondents are dissatisfied with the availability of parking, while many tourists get to the lake by public transport (trains and buses), so about 17% of respondents are neutral about this attribute.

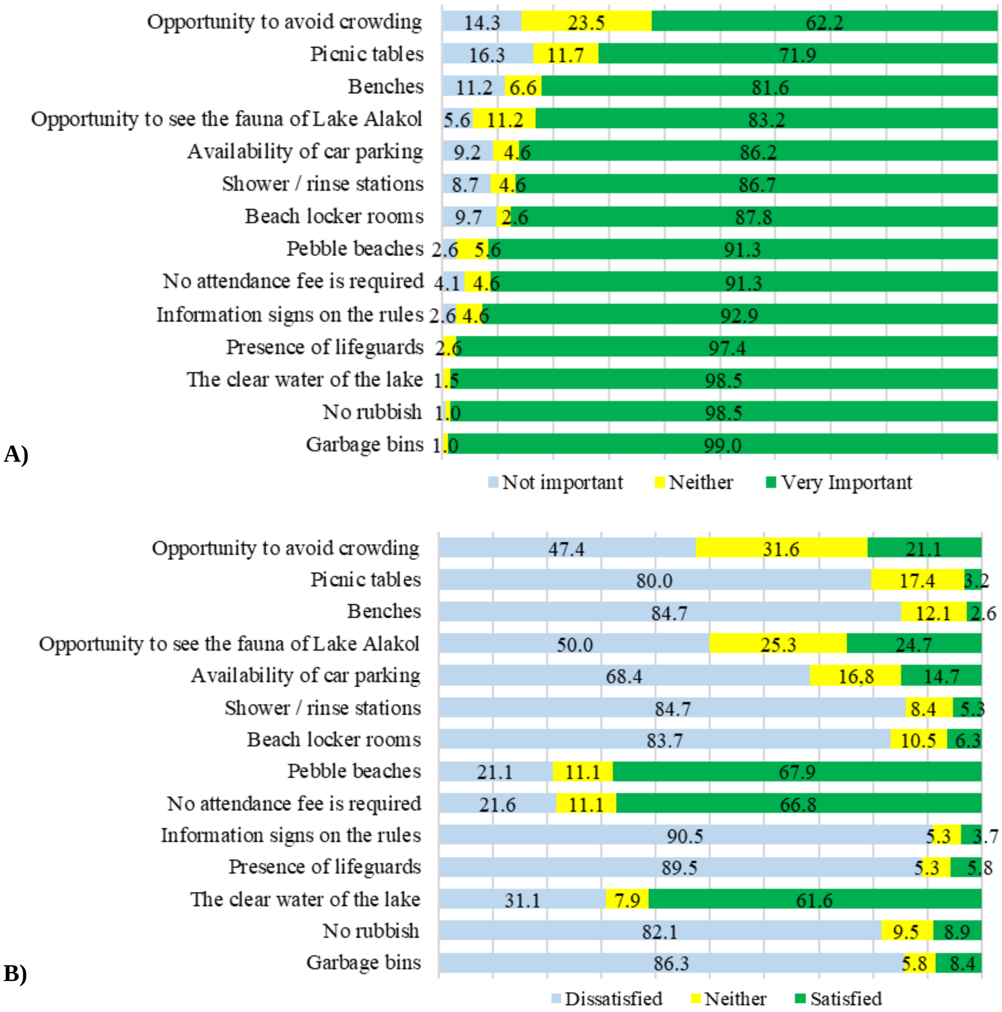

Figure 4. Relative importance A (Importance) and satisfaction B (Satisfaction) of natural and infrastructural conditions at the beach of Koktuma village, based on respondents' opinion in per cent of each category (Source: personal original data)

Half of the surveyed tourists are satisfied with the opportunity to see the fauna of Lake Alakol or treat the component neutrally. Similarly, respondents rated satisfaction with the characteristic – the ability to avoid crowds, more than 31% of tourists are neutral and more than 21% are satisfied. However, more than 47% of respondents are dissatisfied with the large crowd of people on the beaches. Considering that about 15% of respondents consider this indicator not important Figure 4A and more than 52% are neutral or satisfied with Figure 4B, it suggests that for a certain part of society, avoiding crowds is not a problem compared to other attributes of the beach. It is also worth considering the cultural aspect, according to steppe traditions, crowding and tolerance are considered a common and favorable phenomenon. This also includes the opportunity to see the fauna and partially picnic tables and benches. Statistical analysis of the results of the respondents' answers on 14 components of relative importance and satisfaction with natural conditions and facilities are shown in Figure 5.

The average value of importance attributes is 4.56. Most of the values of attribute scores by the respondents are classified as very important. However, the values of the components – “opportunity to avoid crowding” and "opportunity to see fauna" are close to neutral. The average value of satisfaction with all attributes is only 2.16 points. This indicates low satisfaction of tourists with the existing conditions, except for "the condition of pebble beaches", "no fee for visiting", as well as "clean water of the lake". In general, the investigated attributes on the beaches of Koktuma village do not correspond to the level of stated importance or expectation of tourists.

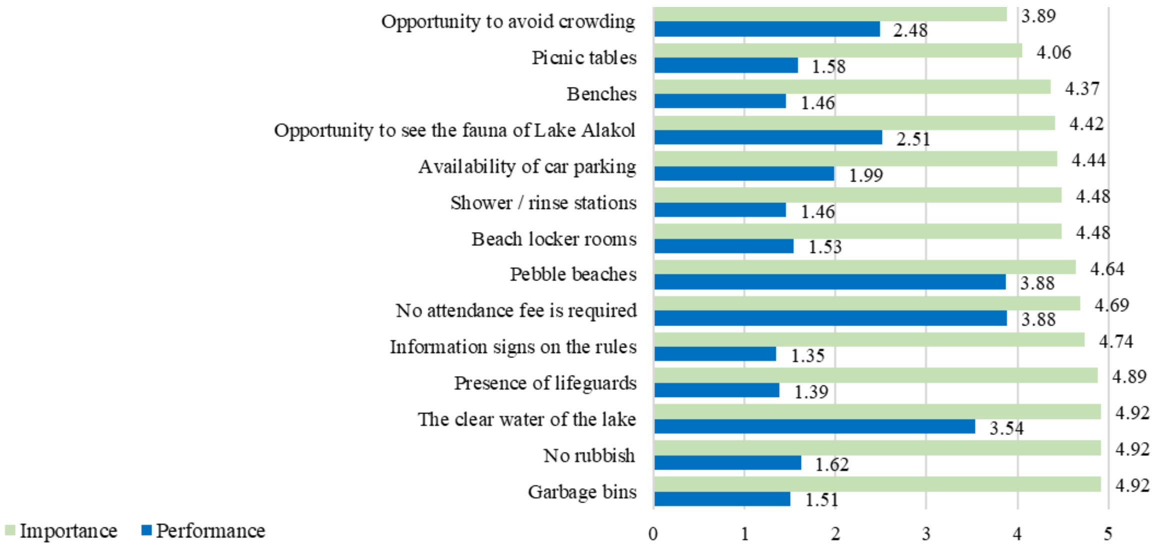

Figure 5. Mean value of Importance and Performance attributes (Source: personal original data)

To simplify the interpretation and classification of attributes, the results of the questionnaire (importance and performance) are presented in a two-dimensional IPA graph (Figure 6). The matrix is constructed by the average values of relative importance (ordinate axis) and satisfaction (abscissa axis). The intersection of the two axes formed 4 quadrants of the IPA matrix, on which the average values of the 14 attributes under consideration are plotted.

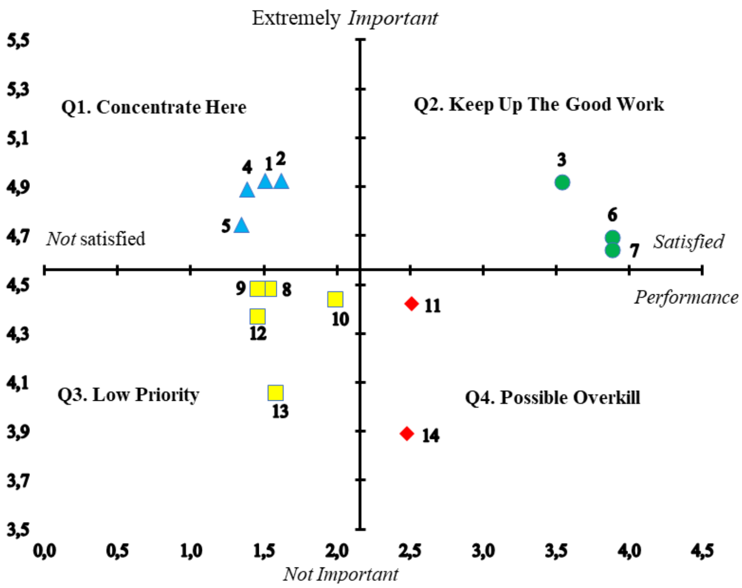

Figure 6. Importance-performance matrix of Koktuma village beach
1 - Garbage cans; 2 - No garbage; 3 - The clear water of the lake; 4 - lifeguards; 5 - Information signs about the rules;
6 - No attendance fee is required; 7 - Pebble beaches; 8 - Beach locker rooms; 9 - Showers/Rinse Stations; 10 - Availability of parking;
11 - Opportunity see the fauna of Lake Alakol; 12 - Benches; 13 - Picnic tables; 14 - Possibility to avoid crowding

In the first quadrant (Q1) "Concentrate Here", there are 4 attributes: "presence of garbage cans", "absence of garbage", "presence of rescuers" and "information signs about the rules". These parameters directly indicate the existence of issues related to safety in the water area, pollution of the coast with solid waste and lack of awareness among tourists about the rules of conduct and organisation of the coast. The second quadrant, "Keep up the good work" (Q2), includes 3 parameters: "clean lake water", "no fee is required for visiting" and "condition of pebble beaches". The respondents rated the high importance and satisfaction of these attributes. These attributes are one of the main factors in attracting tourists and increasing their number. The "Low priority" quadrant (Q3) includes 5 characteristics: "beach locker rooms", "showers/rinsing stations", "parking availability", "benches" and "picnic tables".

The values of the attributes “beach locker rooms” and “rinsing showers” are located close to the abscissa axis, to the boundary of the importance of the components, therefore, these amenities should also be improved. The component picnic tables on the beach is of least importance according to the respondents. The fourth quadrant “Possible overkill” (Q4) included the attributes “the opportunity to see the fauna of Lake Alakol” and "the opportunity to avoid crowds of people”, while this attribute was marked by respondents as the least important. For most respondents, the congestion of people does not cause inconveniences, given that the survey takes place on the central beach, where there was a high density of tourists.

The survey of respondents shows the need to focus on solving issues related to the availability of garbage cans, keeping the coast clean (including cleaning the territory, information support, the presence of bins), the presence of lifeguards on the shore and in the water area, as well as information signs about the rules (containing information about the rules of conduct in the coastal zone, location schemes and emergency contacts services, respect for nature, zoning map). In fact, we determined the presence of 3 large garbage cans at the exit from the central beach, where the survey was conducted, there are only 18 garbage cans on the entire coast, but there are no average bins on the beach. The pollution of the beach is observed everywhere with solid household waste. There was no radio room, medical posts, and a lifeguard observation tower on the central beach. During the study, a rescue boat was seen once, as well as a detour of the local beach. Not a single information sign about the rules was found on the beach.

CONCLUSION

Application of questionnaire methods allowed to determine the social norm of tourist density on the beach of the village of Koktuma and to identify the actual problems of the organisation of beach tourism. Quantitative parameters of capacity are defined, the problems of the organisation of beach tourism are scientifically substantiated.

The results of norms of recreational loads or capacity allow to plan and develop sustainable beach tourism, rationally use coastal resources. Therefore, for the infrastructural organisation of the territory in the short term it is recommended to use socially acceptable density of tourists (8 m^2 per 1 person) 5 683 people, and for the medium term to use the values of threshold density of capacity (3 m^2 per 1 person) 14 627 people.

As the number of holiday homes and holidaymakers increases, expand the necessary facilities on the beach. The existing infrastructural living conditions provide up to 4,000 people per day, while the facilities on the beach do not cover the needs of tourists. The opinions of vacationers regarding the organisation of the beach are of high practical importance for local administrative authorities and businessmen.

The work covers the main basic characteristics of the organisation of beach and bathing tourism, these are safety, basic necessities, zoning of the coast, ecology. They are the identified weaknesses of the organisation of beach and bathing tourism. The solution of which will significantly improve the quality and safety of tourists' recreation and, in general, lay the foundations for the rational use of recreational resources and the development of sustainable tourism on Lake Alakol.

In general, the recommendations of the IPA analysis quadrants have a scientifically sound practical application for the development of sustainable tourism. In an emerging market economy, it is important to comply with international sustainable development agendas, especially when involving natural sites in tourism activities.

This will allow the rational use of coastal recreational resources, develop sustainable tourism and, in general, preserve the natural wealth for future generations. In addition to its contributions, the current study also has some limitations. Data were collected over a short period of time and in a specific part of Lake Alakol.

Therefore, the results obtained cannot always be generalized to the entire coastal area of the lake. Future studies should consider the remaining beaches of Lake Alakol using explanatory factor analysis, IPA and/or other methods in the context of developing sustainable tourism in the study area by incorporating the principles of sustainable tourism developed by the World Tourism Organization.

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EXPLORING THE HIDDEN DEPTHS: IDENTIFYING AND MAPPING CAVES IN SOUTH MALANG'S KARST AREA FOR SPECIAL INTEREST TOURIST ATTRACTIONS

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Abstract: The aim of this research is exploring through identifying the cave landscape and mapping around the Coban Perawan Cave for special interest tourism object. The method used in this research was field survey by plotting the entrance area which was used to determine the location and coordinate control during cave mapping. The results of the cave mapping were then processed using survex software and geographic information systems. The cave passage landscape was portrayed in the form of a cave map and presented with a geographic information system to show the connection between the cave passages. Mathematical calculations of the cave passage were also used to determine the size of the cave passage, these include cave passage's lenght, depth, width and volume. Cave dimensions were used as a comparison of the width and height of the cave passage to see the spatial conditions and shape of the cave passage. Furthermore, the results of the analysis on special interest tourism objects by looking at the condition of the cave surface, cave passages, the accessibility, the level of difficulty of the cave and the facilities are presented in a descriptive table. The results of the research show that there is a single passage that is not connected to other caves, except the Pramuka Cave which is possible to connect with other caves. The mapping results showed that there are vertical passages in the study area and also single horizontal passages. Besides, there is also a combination of vertical and horizontal passages. The dimensions of the caves in the cave passage segment show that the cave passage has a tendency to having circular dimensions or forming a chamber, but there are also narrow passages. In Pramuka Cave Block, there is tendency of having a connection between the cave passages and the Coban Perawan Cave Block due to the existence of the connection of its hydrological system to other caves.The existence of these caves in the study area certainly has educational value and its uniqueness that can be utilized in special interest tourism attraction.

Keywords: cave passage, cave mapping, cave tourism, specified tourism destination

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INTRODUCTION

The southern part of Malang Regency has a karst landscape with many caves, springs, and other karst morphological features. The landscape is located in the Southern Mountains which were uplifted during the Miocene period, southward with a slop of approximately 10^o (Suyanto et al., 1992). The landscape creates seasonal surface rivers, dry valleys and developing karst hills. There are caves hat also develop passages to the south (Suprianto and Labib, 2019), with varying slopes of passages. The survey results on the existence of caves in southern Malang are in several segments such as Sendang Biru Block (Astina et al., 2021; Salaka, 2018; Suprianto et al., 2017), Donomulyo Block (Impala, 2012; Labib et al., 2019), some parts in Bantur Block (Fauzi et al., 2015) and Gedangan Block (Rosyida et al., 2023; Sahrina et al., 2022). However, the distribution of these caves have not all been traced or mapped, so it is still difficult to identify the potential inside the cave.

The identification of unmapped cave appears to be in Gedangan segment, which has been studied previously. Only Jenggot Cave and Coban Perawan Cave that had been mapped previously, but there are still many caves that have not been

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explored and mapped (Rosyida et al., 2023). The existence of these caves can certainly be carried out in further research and can be seen their utilization in the future. Currently, there are many caves that are exploited for special interest tourism destinations and used as geo-sites in geo-parks such as Pindul Cave, Gong Cave, Cokro Cave, which have become special interest tourism destinations. The appearance of karst formations in South Malang can certainly be objects of geo-tourism (Susilo, 2017), especially caves in Gedangan area. to make it one of geo-tourism objects, it is necessary to observe the condition of the cave by tracing and mapping the cave. Coban Perawan Cave and its surroundings have educational value that can be used as a tourist attraction. he educational aspects of the cave include the diversity of ornaments, the existence of subterranean rivers, karst morphology, and cave biota (Rosyida et al., 2023). The existing caves certainly have different characteristics, such differences in shape conditions in the cave passage segment, the presence of vertical and horizontal passages, the overall shape of the passage, the presence of streams, and the educational value that exists in the cave passage. Due to these reasons, the purpose of this research is to conduct deeper exploration through identifying the appearance and mapping the caves around Coban Perawan Cave for special interest tourism object.

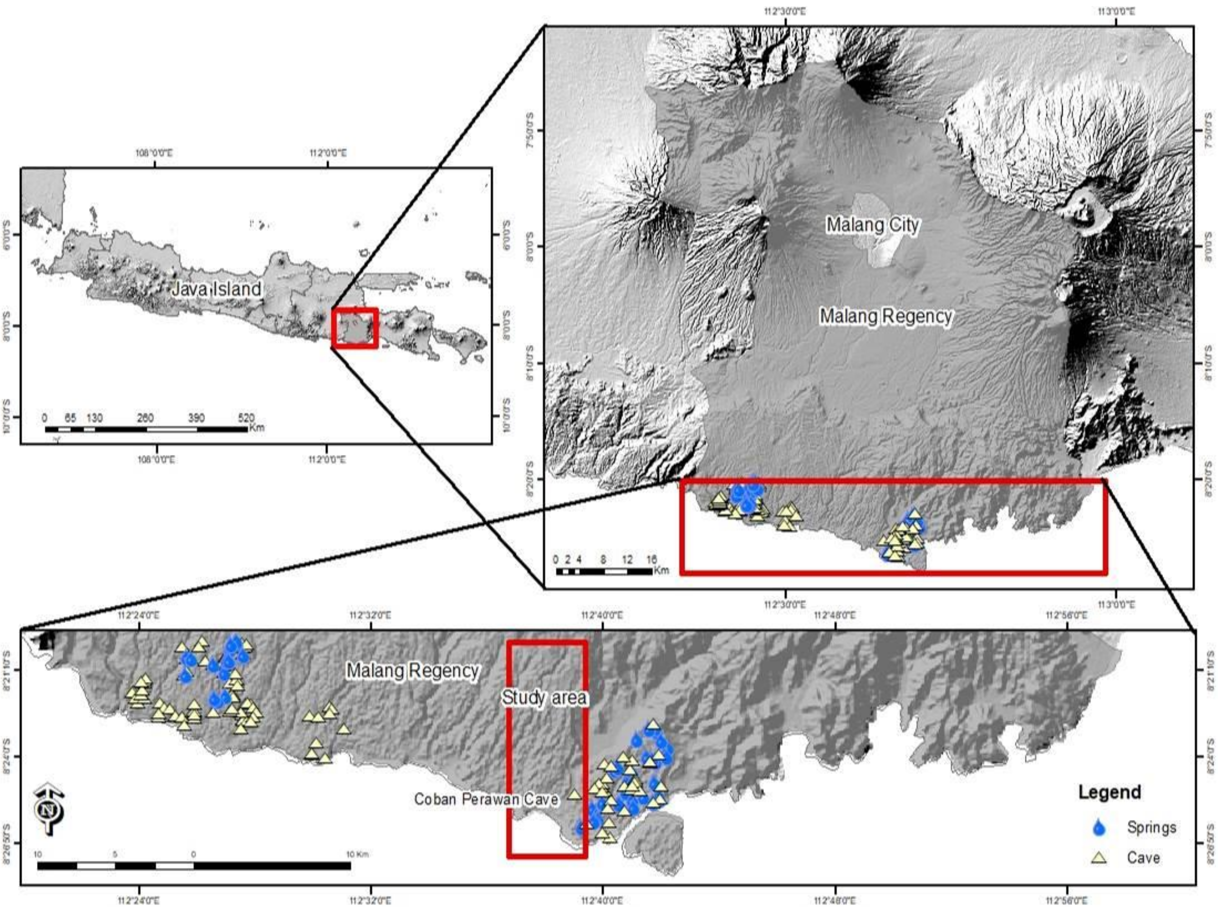


Figure 1. Cave Entrance and Spring Distributions Malang Regency
(Source: Fauzi et al., 2015; Impala, 2012; Labib, 2016; Rosyida et al., 2023; Salaka, 2018; Suprianto et al., 2017)

MATERIALS AND METHODS

This research was conducted in the Southern part of Malang Regency through a field survey. Plotting the entrance area was used to determine the location and coordinate control during cave mapping. The tools used were clinometer, laser meter, worksheet and compass to determine the width height and direction of the cave passage. The results of cave mapping were then processed using Survex Software and Geographic Information Systems (GIS). The appearance of the cave passage formation was portrayed in the form of planview and extended cave map or cave profile. Documentation was used to figure out the landscape of the cave. The shape of the cave passage was presented with a Geographic Information Systems to show the relationship between the cave passages. Mathematical calculations of the cave passage were also used to determine the size of the cave passage, calculations in the form of the overall length and the depth of the cave passage the result of cave mapping (Klimchouk, 2006), the width and the length of the cave passage used the results of processing from survey (Labib et al., 2019), the area of the cave passage the area of the cave passage by multiplying the width and the length of the cave passage area, the volume of the cave passage area by multiplying the depth of the cave passage (Dora et al., 2023; Klimchouk, 2006; Labib et al., 2019), for the cave passage area were using polygon calculations from GIS processing (Labib et al., 2019). Cave dimensions were used as a comparison of the width and height of the cave passage to see the spatial condition and the shape of the cave (Pardo-Iguzquiza et al., 2011). The analysis of special interest tourism attraction was done by observing the condition of the cave surface, the condition of the cave passage, the accessibility, the level of difficulty of the cave, and the facilities were presented in the descriptive table. The research design is presented in Figure 2.

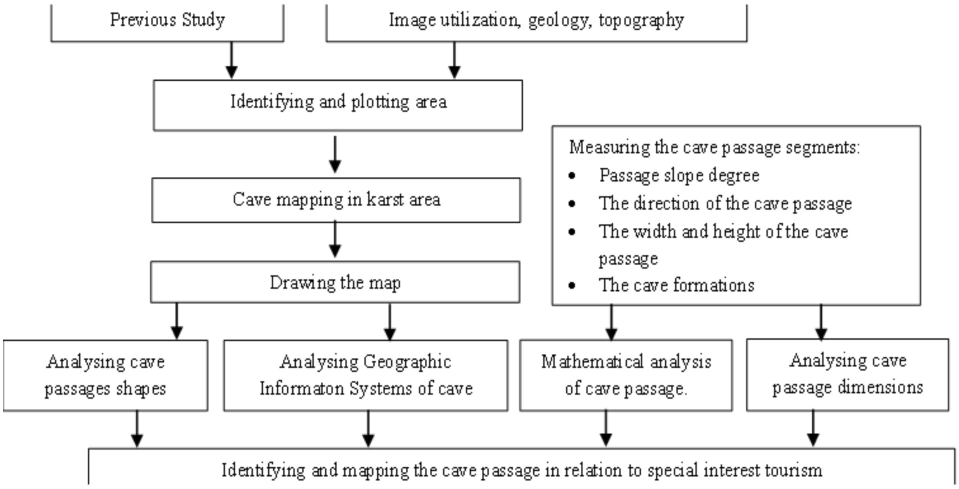
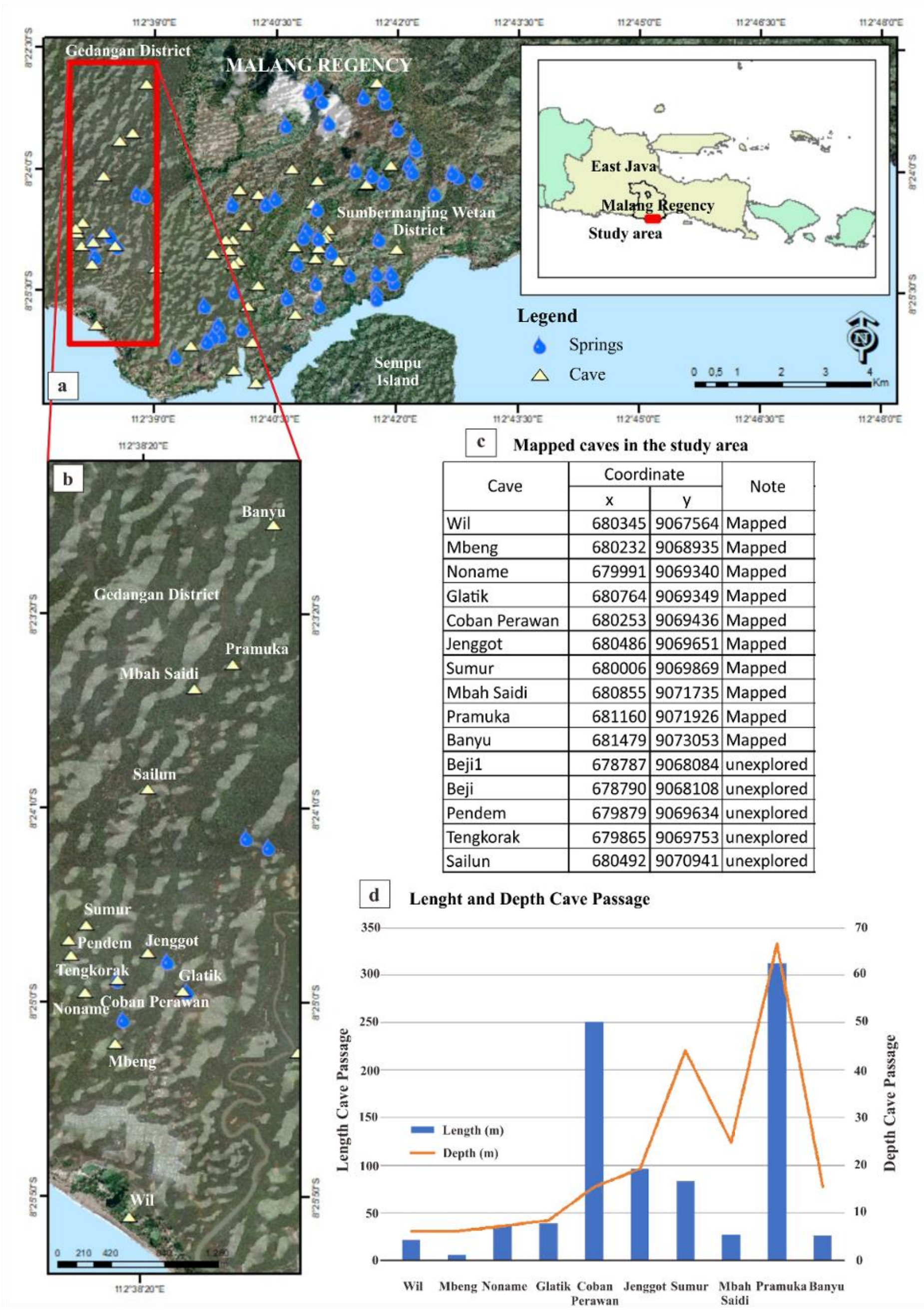


Figure 2. Research Design



Cave	Coordinate x	Coordinate y	Note
Wil	680345	9067564	Mapped
Mbeng	680232	9068935	Mapped
Noname	679991	9069340	Mapped
Glatik	680764	9069349	Mapped
Coban Perawan	680253	9069436	Mapped
Jenggot	680486	9069651	Mapped
Sumur	680006	9069869	Mapped
Mbah Saidi	680855	9071735	Mapped
Pramuka	681160	9071926	Mapped
Banyu	681479	9073053	Mapped
Beji1	678787	9068084	unexplored
Beji	678790	9068108	unexplored
Pendem	679879	9069634	unexplored
Tengkorak	679865	9069753	unexplored
Sailun	680492	9070941	unexplored

Figure 3. Distribution of cave entrances around the study area (a) and distribution in the study area (b), mapped caves (c) length and depth of cave passages (Source: Rosyida et al., 2023; Salaka, 2018, and data collected by author, 2024)

RESULTS AND DISCUSSION

The Distribution and Mapped Cave Areas

The exploration of the cave passages entrance was done to determine the current condition of the mapped caves. Figure 3a shows the distribution of caves that have been identified around the study area in Sumbermanjing Wetan District, while Figure 3b shows the distribution of caves that have been identified in the study area. As the results of identifying and exploring the cave passageway, 10 caves were mapped (Figure 3c). The Pendem Cave and Tengkorak Cave haven't been mapped because the had been blocked by rocks, the Sailun Cave has thin oxygen level, meanwhile Beji 1 and Beji Cave are far from the study area. Morphologically, the landscape in South Malang is characterized by the existence of caves and springs (Impala, 2012; Labib, 2016; Salaka, 2018), this can also be seen in Sumbermanjing Wetan Sub-district where many caves and springs are also found. The exploration of the existing cave and springs required observing and collecting data (Withuda et al., 2023). This area can support the existence of special interest tourism especially in cave exploration. There are caves that have long passages such as Pramuka Cave which can be explored more, because the map hasn't been completed yet. Meanwhile there are also caves which formed into alcoves such as Wi Cave around Ungapan Beach. Pramuka Cave also considered to be the cave that has deep cave passage compared to others, this is due to the accumulation of each segment in the cave passage, while thee deepest vertical passage in the study area are in Sumur Cave and Mbah Saidi Cave. This can be seen in Figure 3d which shows the length and depth of the cave passages, caves with complexity such as Pramuka Cave have high passage lengths and depths.

The Condition and the Distribution of Cave Passages

The cave passage has various shapes, the condition of the cave passageways influenced by various processes occured in the past. The formation of th cave passage can be seen in Figure 4, the narrowing passage generally happened at the end of the passage hat can not be traced, such as in no-named cave (Figure 4a and 4), Banyu Cave also has narrow passage.

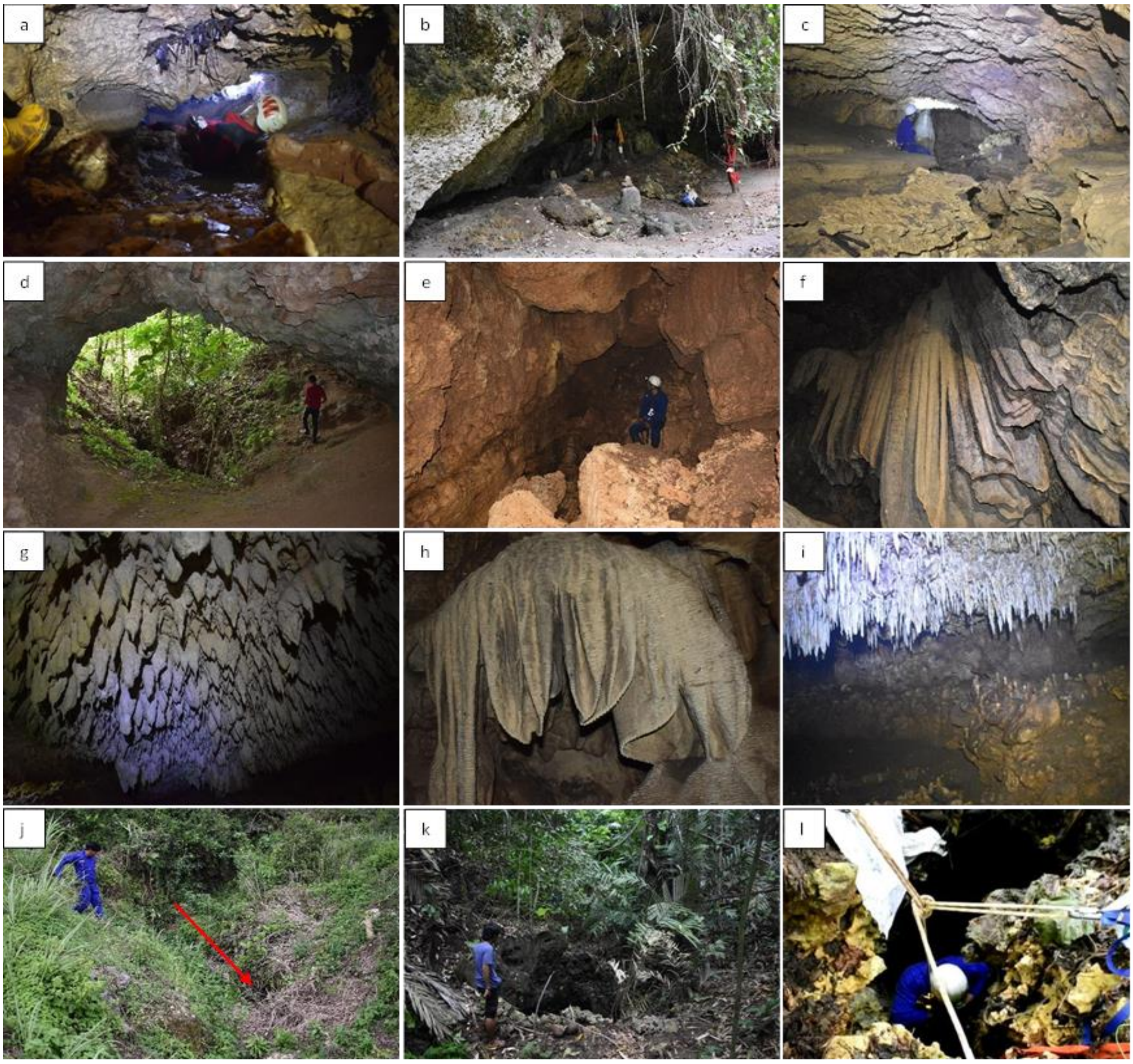


Figure 4. Small passage in No-name Cave (a), entrance in Wil Cave (b), keyhole in Pramuka Cave (c), vertical entrance in Sumur Cave (d), rock breakdown in Sumur Cave (e), flowstone in Sumur Cave (f and h), stalacitte in No-name Cave (g), soda straw in Pramuka Cave (i), Banyu cave entrance (j), vertical entrance in Mbah Saidi Cave (k), and vertical passage at the entrance in Mbeng Cave (j). Photos will be taken in June-July 2023 (Source: Data collected by author, 2024)

The existence of a cave in the form of an alcove is seen in Wil Cave, which is near the coast (Figure 4b). This chamber-type cave passage also exists in several cave segments. Cave passages with circular formations are seen in Pramuka Cave in various passage segments In addition, there are keyhole formations as shown in Figure 4c.here are also many pits in this cave area in Sumur Cave (Figure 4d, 4f and 4h), entrance formations located on valley such as in Figure 4j in Banyu Cave Mbah Saidi Cave which is in te form of a vertical passage with large entrance dimensions (Figure 4k), and Mbeng Cave entrance that has narrow vertical passage shown in Figure 4l. The cave conditions are also dominated by the existence of rocks, these rocks can come from the roof and walls of the caves that are unstable and tumbled. The appearance of these rocks can be seen in Figure 4e in Sumur Cave. The presence of cave ornaments also affects the shape of the cave passage configuration, develops the roof, walls and floor of the cave passages. Various kinds of these cave ornaments develop in study area such as stalagmite, stalactite, flowstone, rhimestone, soda straw and pillar. Cave that has these kind of ornaments found in Jenggot Cave (Rosyida et al., 2023).

The condition of the cave planview (Figure 5) shows that the cave has a single passage that cannot be traced further such as in Mbeng Cave, No-named Cave, Glatik Cave, Jenggot Cave, Banyu Cave, Wellur Cave, Wil Cave, and Coban Perawan Cave. While Pramuka Cave still has an unmapped passage and Mbah Saidi Cave according to information from people who have entered the cave has a long passage, but because it is blocked by sediment, it cannot be traced. Narrow passages are also seen in Banyu Cave and no-named Cave, where this passage becomes a water flow to enter the subterranean river system. The condition of the cave floor contains a lot of sediment in the form of clay in Glatik Cave and Jenggot Cave, while the domination of rock chunks is found in no-named cave, Banyu Cave, Mbah Saidi Cave, and Sumur Cave.

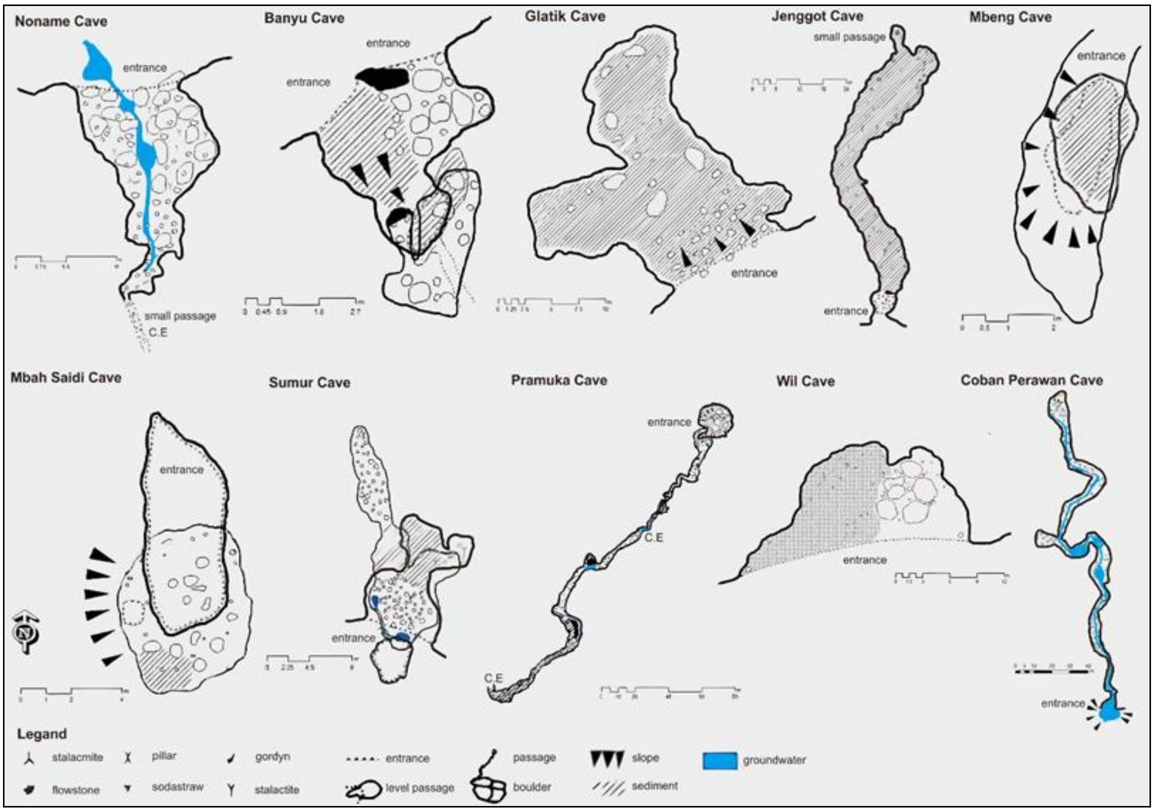


Figure 5. Planview of Coban Cave and its surroundings (Source: data collected by author, 2024)

The mapping results also show the existence of horizontal, vertical, and a combination of vertical and horizontal passages (Figure 6). These vertical, horizontal and combined passages form the morphological appearance of the caves in the study area. Caves that have vertical passages are located in Mbah Saidi Cave, Mbeng Cave, Wellur Cave, Banyu Cave, Pramuka Cave, and Coban Perawan Cave. While horizontal passages are in the caves of Gua Jenggot, Gua Glatik, Gua Wil, and Gua No-named. In addition, there is also a combination of vertical and horizontal passages such as in Pramuka Cave and Coban Perawan Cave. There is a single closed cave passage with varying depths such as wells, namely Mbah Saidi Cave, Sumur Cave, and Mbeng Cave. The appearance of the cave planview map can be used as an indication of the connection between one cave and another. Figure 7 shows the existence of a cave passage with surface conditions and the appearance of another cave entrance. One of them, Pramuka Cave passage leads to Mbah Saidi Cave in a Southwest direction. This is because the Pramuka Cave passage is still long and based on the information from local people that the cave passage is connected. However the current condition shows that Mbah Saidi Cave has been blocked by sediment, so it cannot be traced. Besides that, in Coban Perawan Cave area there are several caves that are close one to another, for example Sumur Cave, Jenggot Cave, Tengkorak Cave, Pendem Cave, No-named Cave, and Glatik Cave. Coban Perawan Cave is not connected to other cave passages because the caves around it are the caves which have got single passage such as shown in mapping results which are in Sumur Cave Jenggot Cave, No-named Cave, and Glatik Cave. Therefore, Tengkorak Cave and Pendem Cave have been blocked by rocks, so it is not possible to trace and find the connections between passages. However, the connection of hydrological systems can appear by looking for other other karst features. Such as the possibility of the connection between subterranean river flow in No-named Cave to Kedung Biru Spring or the connection of the flow system from Tengkorak Cave, Sumur Cave, Pendem Cave to the flo in Coban Perawan Perawan.

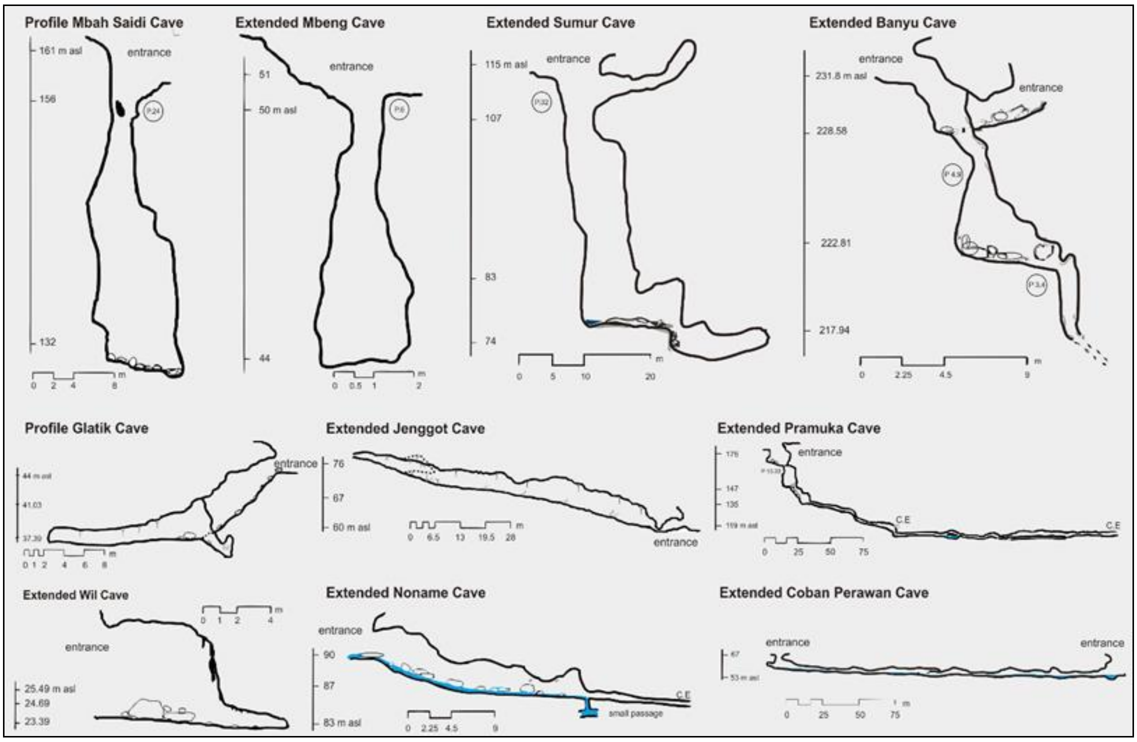


Figure 6. Profile and extended caves located in Coban Perawan area and surroundings (Source: data collected by author, 2024)

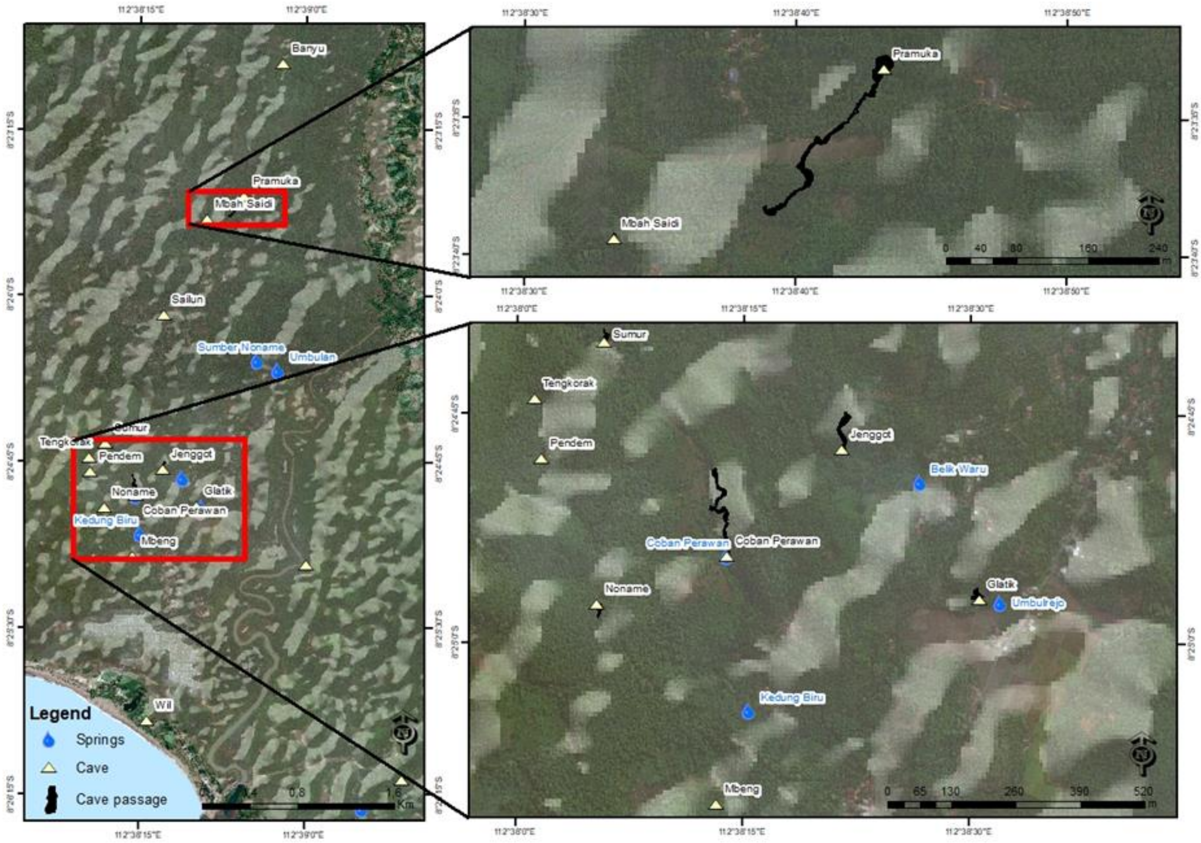


Figure 7. Passage Landscape and Surface Condition around Coban Perawan Cave (Source: data collected by author, 2024)

Cave Passage Dimensions and Sizes

The measurements were taken in the field will provide mathematical values for the measured cave passages. The measurements of the width, height and direction of the cave passage will give an idea of the shape of the passage and show different dimensions. The measurements of the length, depth and width of the cave area were assessed using the survex software, while the area of the cave passage was measured using the ArcGis application. To calculate the overall area of the cave and the volume of the cave area, mathematical calculations were carried out (Table 1).

The results of mathematical carving showed that the highest values were found in caves that have long passages such as Pramuka Cave and Coban Perawan Cave, while caves that have short passages such as Mbeng Cave, Mbah Saidi Cave, and Banyu Cave have small mathematical values.

Table 1. Mathematical Size of Cave Passages in the Study Area (Source: data collected by author, 2024)

Cave	Elevation (m asl)	Length (m)	Depth (m)	length of the cave area (m)	Width of the cave area (m)	Area coverage of the cave (m^2)	Area of the cave passage (m^2)	Volume of cave area (m^3)
Wil	24	22.05	6.21	14.73	25.33	373	199.75	2,317
Mbeng	50	6.54	6.29	5.3	2.7	14	4.28	90
No-named	90	36.66	7.29	29.15	14	408	185.12	2,975
Glatik	44	39.6	8.45	22.25	16.15	359	274.39	3,036
Coban Perawan	53	251.08	15.53	171.46	42.85	7,347	1,277.72	114,100
Jenggot	59	96.44	19.42	76.85	26.23	2,016	640.93	39,146
Sumur	112	84.22	44.19	29.3	12.49	366	126.98	16,172
Mbah Saidi	156	27.48	24.96	11	4.99	55	36.79	1,370
Pramuka	175	312.82	66.54	177.29	145.12	25,728	1,430.13	1,711,963
Banyu	232	26.51	15.58	6.47	5.14	33	14.94	518

Another mathematical aspect also related to the cave passage dimensions. These cave passage dimensions are based on the ratio of passage segments to the width and height of the cave passage. Cave passage dimensions will show caves that tend to have oval, circular or flat dimensions. This can be seen by looking at the comparison when measuring the cave segments. Figure 8 shows the results of the calculation of the ratio of the segment to the height of the cave segment. A comparison value smaller than 1 shows that the passage tends to develop upwards, while a comparison value greater than 1 shows that the passage develops broadly. This is certainly related to the condition of the cave passage that can be occupied by cave explorers. Wil Cave, Jenggot Cave, and Glatik Cave have a dominance of wide passages that can be entered by several people and in other caves there are still variations of narrow, wide, and high cave passages as shown in Figure 8.

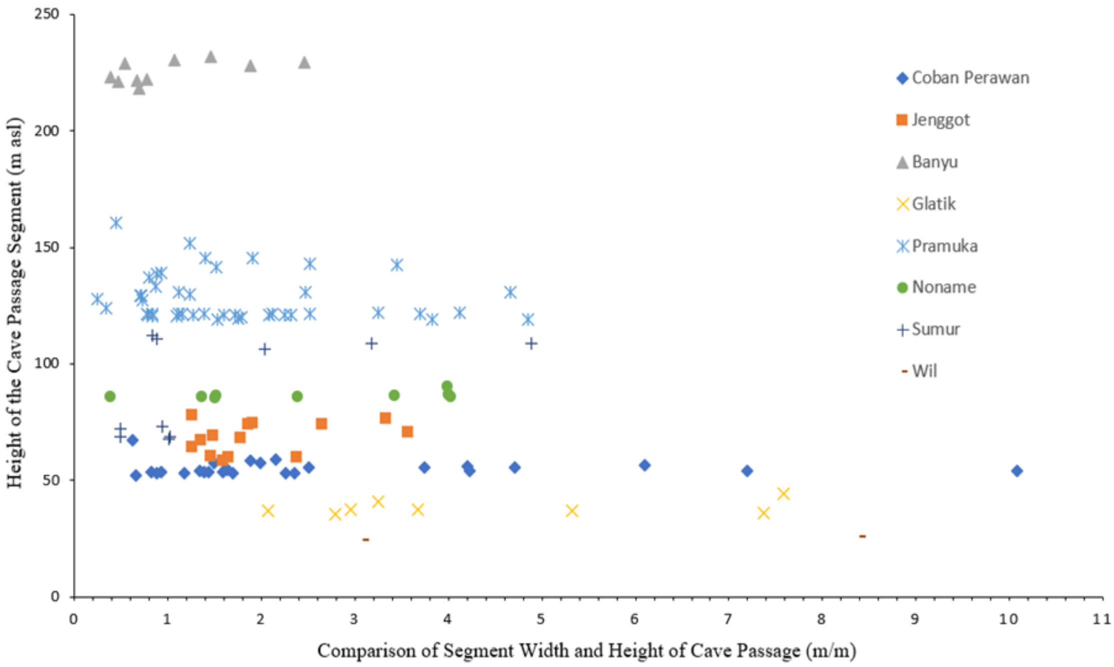


Figure 8. Cave Passage Dimension (Source: data collected by author, 2024)

Tourism Education Aspects of Caves in the Study Area

The appearance of caves in the southern Malang Regency is unique from other landscape. The existence of caves can be used as an educational aspect regarding the development and condition of the cave passage. Coban Perawan Cave, which is a special interest tourism attraction, is used as a cave exploration area that can provide education about cave ornaments, the existence of subterranean rivers, and the appearance of vertical passages at the end of the passage. The educational aspect can provide new knowledge for visitors who come to the Coban Perawan Cave tourism attraction. In addition, the existence of other caves can certainly provide new knowledge about the overall condition of the caves around the Coban Perawan Cave. The condition and educational value of the caves in the study area can be seen in Table 2.

Table 2. Caves conditions in study area (Source: Data collected by author, 2024)

Cave	Surface Condition	Passage characterization			Level of Difficulty	Accessibility	Facility
		Passage Condition	Cave Ornament	Hydrology			
Wil	located in about 20m from Ungapan Beach area, under the cliff	in the form of single chamber sandy passage	stalactite, stalagmite and flowstone	no water flow, only water dripping from cave ornaments	short and horizontal passage	can be reached/passed by motorcycle	campsite in Coban Perawan Cave management
Mbeng	located in rice field area and have sloping topography	approximately 6m deep single muddy vertical passage	none	become the place of water entering the cave in rainy season	short and vertical passage	can be reached/passed by motorcycle	campsite in Coban Perawan Cave management
No-named	located in the valley and has a steep slope, there are many trees around the cave	in the form of chamber and narrowing passage which have got many ornament and rocks	stalactite, micro gourdam, and stalagmite	become the place of water entering the cave in rainy season because it takes place in the valley	horizontal and narrow passage	can be reached/passed by motorcycle and continued walking to the cave entrance	campsite in Coban Perawan Cave management
Glatik	located near the umbulan source The entrance is on hillside	in the form of chambers which have got clay sediment and rocks on its floor	stalactite and flowstone	no water flow, only water dripping from cave ornaments	short and horizontal passage	can be reached/passed by car	campsite in Coban Perawan Cave management
Coban Perawan	The vertical passage entrances on the valley and the common entrance passed by the tourists is in the form of a lake that comes from the water flow of Coban Perawan Cave.	deep static pool, watery and rocky inside the cave, in the form of various passages and chambers	stalactite, micro gourdam, flowstone, pillar, and stalagmite	water goes in the cave and out from the mouth of the cave as river	horizontal and vertical passages and various dimensions	can be reached/passed by car	restroom, prayer room, caving equipment, rest area
Jenggot	The vegetation in the cave area is dense. It is located on a hillside. There is no stream entering the cave.	narrow passage near the entrance, wider and can be entered by several people in the next passage, the floor is dominated by clay sediment	stalactite, micro gourdam, flowstone drape, sodastraw, pillar, and stalagmite ornaments	no water flow, only water dripping from cave ornaments	horizontal and short passages	located near Coban Perawan Cave, can be reached by walking near the area of Coban Perawan Cave	campsite in Coban Perawan Cave management
Sumur	located in a valley, creating water recharge from the surface, steep slope conditions	consists of some levels, many ornaments in the first level, approximately 32m depth of vertical passage, rocks in the second level	stalactite, micro gourdam, flowstone, and drape ornaments	water puddle inside the cave,water dripping from cave ornaments	first level is horizontal, the second is vertical ad short passage	can be reached/passed by motorcycle and continued walking to the cave entrance	campsite in Coban Perawan Cave management
Mbah Saidi	located in a valley, creating water recharge from the surface, steep slope conditions	dominated by 24m depth vertical passage with clay sediment and rocks on the bottom, the passage is blocked by clay sediment and cannot be explored more.	stalactite on cave wall	water entering this cave because it takes place in valley and sunken area, water dripping from the cave ornament	vertical passage tat cannot be further explored, because had been blocked by sediment	can be reached/passed by motorcycle and continued walking to the cave entrance	campsite in Coban Perawan Cave management
Pramuka	located in a valley, the entrances covered by vegetation is in the form of vertical passage, can be reached by walking in cave wall	has various dimension of passages, a 15m depth vertical passage was found after passing the debris of cave entrance, there is clay sediment and rocks inside the cave, can be further explored	stalactite, flowstone, and stalagmite ornament	seepage on the cave passage, lot of static pool in some cave segment, water dripping from cave ornament	horizontal and vertical passages and various dimensions	can be reached/passed by motorcycle/car and continued walking to the cave entrance	campsite in Coban Perawan Cave management
Banyu	located in 232m asl, blocked mouth cave entrance, dominated by sediment and rocks around the entrance	narrow passage can be entered by 1 person only, 4.9m and 3.4m depth vertical passages, chunks of rocks and sediment of the surface	none	no water flow but become the place of water entering the cave in rainy season	vertical and narrow passage	can be reached/passed by motorcycle and continued walking to the cave entrance	campsite in Coban Perawan Cave management

DISCUSSION

Caves in Southern Malang stretch from Sumbermanjing Wetan to Donomulyo. The landscape is an integral part of the southern mountains of Java Island. This can also be seen from the appearance of caves in the southern mountains in the Gunungsewu Karst (Efriyanto, 2022; Rahayu, 2015), Karangbolong Karst (Haryono et al., 2017; Kholid, 2020), Blambangan Peninsula Karst (Suputra et al., 2007). The existence of caves in the karst area can be used as special interest tourism attraction. In Gunungsewu karst area there are Gong Cave, Luweng Jomblang, Kali Suci Cave, Cokro Cave and others which are used as geosites of karst landscapes (Parno, 2018).

In Karangbolong karst there are caves such as Gua Barat, Gua Jatijajar, and Gua Petruk which are the attraction of special interest tourism objects in the area (Ansori, 2018). The karst landscape conditions that exist in various locations can be an attraction for tourists to visit the area. The caves in the study area are not only used for cave tours, but are also used for rituals, as is the case in Wil Cave. There are traces of incense used for rituals at the entrance of the cave. Wil Cave, which is an alcove and located near the beach, is certainly more accessible to visitors.

Cave passages that have various shapes and dimensional variations become the basis for exploring the cave. The existence of caves in Southern Malang can be used as a special interest tourism attraction, as has been developed in other areas (Ansori, 2018; Parno, 2018). The existence of chambers in the cave passage also provides a large space for visitors to enter the cave together, as found in No-named Cave, Jenggot Cave, Coban Perawan Cave, and Glatik Cave. However, at the end of the passage there is a narrow passage, that making it difficult for tourists to enter.

In addition, the caves also have vertical passages with formations such as luwung/ wells, namely in Sumur Cave, Mbah Saidi Cave, and Mbeng Cave. To search for caves that have vertical passages requires special skills and techniques in searching such as installation, rigging, rappelling/descending, ascending, and other techniques in cave searches (Marbach and Tourte, 2002). This is also seen in other caves in Malang Regency that have vertical passages and chambers (Labib et al., 2020). Human resources play an important role in cave management, in addition to other aspects. There are many vertical cave passages in the study area. Thus, it is necessary to have activities that support human resources so that they are able to enter and mitigate if there are problems in the caves, such as a case of lost explorer or case of falling inside the cave and drowning in subterranean river.

The planview passage segment of the cave can also be used as information related to the condition of the cave passage. Maps are the result of scientific studies that can be used as educational media to the public or tourists who will visit the cave. The existence of cave conditions also exists in various cave tourism locations as information media, such as in Cokro Cave (Hamidah et al., 2024). The information aspect in the cave can also be presented in a map that can show the real conditions in the field. The existence of cave ornaments is an attraction that can be seen by cave visitors, as seen in Jenggot Cave, where there are many cave ornaments (Rosyida et al., 2023). Cave passage areas that present the appearance of cave ornaments can be seen in Gong Cave and Tabuhan Cave in Gnungsewu Karst (Fandeli and Adji, 2005). The existence of subterranean rivers that can be used as water tourism can be seen in Coban Perawan Cave.

The existence of water tourism in caves also occurs in other karst landscapes such as Kalisuci Cave in Gunungsewu Karst area and Pindul Cave in the Wonosari Basin. The aspect of interconnection between cave passages and water flow systems in special interest tourism areas is also interesting information for tourists. This is the case at Pindul Cave where there is an underground flow system that leads to Pindul Cave (Agniy et al., 2017).

In addition, at Coban Perawan Cave it is also possible that there is a connection with other flow systems. Furthermore, Pramuka Cave may also be connected to other flow systems. Meanwhile, in Pramuka Cave it is possible to connect the caves due to he proximity of the caves passages to the entrance of Mbah Saidi Cave.

The coverage area and catchment area of the water entering the cave are of concern in looking at the condition of the cave passage. Cave area coverage and catchment area entering the cave will cause changes in water level fluctuations in the cave. These changes in water level can also make tourists trapped in the cave and accidents can occur, especially during floods when surface flow enters the cave passage (Noname, 2013), and other accidents such as getting lost, falling, and drowning (https://caves.or.id/basis-data-kecelakaan). This become a particular concern regarding the catchment area and coverage area of the cave passage. Coban Perawan Cave, No-named Cave and Pramuka Cave have a large coverage area. In addition, the three caves are also located on a slope, so that the flow of water coming from the surface will be collected and enter the cave as input from the surface. Due to these conditions, it is necessary to pay attention to the weather around the cave when visiting and exploring the cave to avoid flooding in the cave.

The existence of caves in the study area has an important educational value in providing information to visitors or tourists who are doing tourism activities, such as geodiversity in the form of karst features and cultural diversity, such as that found in the Gunungsewu karst and the Sangkulirang-Mangkalihat karst (Haryono et al., 2022; Parno, 2018). However, management of cave tourism is not only limited to the educational value, but also involves various aspects. Cigna and Pani (2013) provided index in cave management such as previous studies, access and pathways, visitors, surface, cave environment. These categories are still lacking for caves in the study area.

In the previous study category, of course, access to some caves is difficult to reach, and limited facilities, but there are other tourist attractions. The access and pathways category is still natural and there are no tourist paths, no materials or lighting in the cave. The visitors category still has no supporting material or capacity in entering the cave, only limited to tours for nature activists and visitors who explore the cave passage. The surface category is an ecosystem that is still natural and has not been modified. The cave environment category is in the form of management that is still minimal in the study area and there is no monitoring of the cave environment. By looking at these conditions, of course, improvements are needed to support special interest tourism in cave exploration.

CONCLUSION

Caves become special interest tourism attraction in karst landscapes. The existence of caves in Southern Malang indicates that caves develop with the presence of ornaments and subterranean rivers. Cave tourism objects have various forms of passages and varying dimensions. The existence of cave passages has a size and shape that certainly affects the conditions in the utilization of cave tourism. The condition of the space in the cave is also an education for tourists that can be presented on a map as a medium of information to visitors to cave tourism, with various appearances of ornaments, subterranean rivers, and cave passage conditions. The existence of the cave also has a drainage system or hydrological system which of course becomes an educational value in special interest tourism.

Cave management requires various aspects, and of course the existing conditions in the study area are still limited related to aspects of cave management. Suggestions for future researchers, need to look at the distribution and appearance of cave formations to find out the cave and hydrological systems that exist below the surface. In addition, it is necessary to have human resources who have special skills in conducting cave searches.

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RELIGIOUS TOURISM AND RESILIENCE BUILDING: AN OVERVIEW OF IMPACTS AND RECOVERY IN SOUTH AFRICA

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Abstract: Intending to contribute to the sector's resilience in times of external shocks, this study unpacks the experiences of the religious tourism sector during the COVID-19 pandemic in South Africa. Through an exploratory qualitative approach with in-depth, interviews conducted with key role-players (n=50), the findings reveal significant financial losses suffered by the sector during the pandemic's peak, marked by widespread activity closures. Many organizations faced difficulties in maintaining their customary faith-based activities, travel, and commitments during the COVID-19 pandemic. The study identifies valuable lessons from these challenges, emphasizing the importance of fostering collaborations with other stakeholders and embracing technological innovations. By shedding light on these experiences, the study offers insights for enhancing resilience in religious tourism amidst uncertainty, with implications for strategic planning and long-term resilience efforts within the sector.

Keywords: religious tourism; South Africa; resilience; COVID-19; tourism recovery, sustainability

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INTRODUCTION

Religious or spiritual tourism has emerged as an important sector of the global tourism economy and an equally important field of study and research focus (Bhandari, 2022; Budovich, 2023; Gedecho and Nyikana, 2023; Nyika et al., 2022; Sharma, 2013; Timothy, 2012; Timothy and Olsen, 2006). Mzobe (2024) as well as the World Tourism Organisation [UNWTO] (2011) estimated that 300-330 million people visit religious places on an annual basis, with the Alliance of Religions and Conservation [ARC] (2011) further projecting that 140 million people travel annually to 32 different religious destinations around the globe. As a result, religious tourism stands out as a significant typology within the tourism sector, actively contributing to the growth and development of the global economy. Reports suggest its economic value to in the region of 18 billion US Dollars (Griffin and Raj, 2018; Jha et al., 2024). In recent years, there has been a growing body of literature exploring the role of religious tourism as a socio-economic activity for destinations, focusing on the community benefits derived from religious activities (Bhandari, 2022; Gedecho and Nyikana, 2023; Nyikana, 2017; Nyika et al., 2022; Timothy and Olsen, 2021; Sadeghi et al., 2022; Shinde, 2018; Tabash et al., 2023; Thomas and Barbato, 2020). Accordingly, such literature outlines the benefits to include employment-creation opportunities, upgrades in infrastructure, increased revenue, and strengthened religious faith, amongst others.

Most of the benefits mentioned above occur in built environments within urban settings. As such, urban infrastructure becomes crucial for facilitating religious activities, events, gatherings and festivals, ultimately leading to the recognition of destinations as religious spaces (Burchardt and Becci, 2013; Kealotswe, 2004). For example, many historic churches and religious sites have hosted religious events and festivals annually over the years and as such, have attracted millions of religious tourists to local areas. This has contributed to the increase in revenues, granting these churches access to funds to support their projects and initiatives and to cover other expenses (Asthana and Pandey, 2019; Bhandari, 2022; Butler and Suntikul, 2019; Di Giovine and Choe, 2019; Griffin and Raj, 2018; Gulomjonovna and Sobirjonovna, 2019; Nyaupane et al., 2015; Nyika et al., 2022; Nyikana, 2017; Timothy and Olsen, 2021; Shinde, 2018; Timothy and Olsen, 2018; Romanelli et al., 2021; Verma and Sarangi, 2019). Budovich (2023) emphasizes the employment opportunities generated by religious tourism, suggesting that the sector tends to create increased opportunities for income generation for locals, thus fostering economic prosperity. Ultimately, religious tourism has grown to become an important part of the global economy with a significant emphasis on the travel aspect amongst religious tourists (Griffiths, 2011; Gulomjonovna and Sobirjonovna, 2019; Timothy, 2021; Tisdell, 2020; Zamani-Farahani and Henderson, 2010).

The emergence of the COVID-19 pandemic profoundly impacted the broader tourism industry, with religious tourism experiencing no exception to this devastation (Timothy and Olsen, 2021). The onset of the pandemic initially resulted in

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little to no consumption of religious tourism, consequently rendering many of the aforementioned benefits imperceptible (Bama and Nyikana, 2021; Raja et al., 2021). In the African context, this was seen as a major concern given that, prior to the pandemic, the sector had been growing at a rapid rate (Apleni and Henama, 2020; Gedecho and Nyikana, 2023; Nkwatsi, 2019; Nyikana, 2017). This pre-pandemic growth was attributed partly to the emergence of mega-churches and their events which have continued to attract millions of visitors to the continent, including regional and international visitors (Chimbidzikai, 2020; Korstanje, 2020; International Air Transport Association [IATA], 2020; Manhas and Nair, 2020; Nkwatsi, 2019; Raj and Griffin, 2020). The pandemic compromised this growth, restricting gatherings and leading to the cancellation or postponement of major events (Nyika et al., 2022; Nyikana and Bama, 2023). Equally, religious sites and churches were closed, unemployment rates surged, financial losses accrued, and a notable increase in psychological issues ensued (Manhas and Nair, 2020; Mzobe, 2024; Nyika et al., 2022; Vučetić, 2020).

Although the pandemic is no longer a threat, we argue in this paper that its impacts need to be understood and the coping mechanisms that were employed better analysed as this would assist in building up the resilience of the sector in times of uncertainty and future external shocks. Given that recovery strategies within the sector may vary across different geographical contexts, valuable insights can be gleaned from approaches employed within the African context. In terms of arrangement, the next section presents the theoretical grounding of the study as well as a comprehensive literature review on religious tourism. This is followed by a description and justification of the qualitative research design employed in the study. Later, the findings and discussions are presented, followed by the discussion of the implications of the study.

Theoretical grounding and literature review

This study is grounded on the resilience theory to better understand the management of religious tourism in times of uncertainty and external shocks. According to Ledesma (2014), resilience as a concept relates to the capacity to recover from adversity, frustration, and misfortune. Ledesma (2014) further stresses that the ability to adapt to both "normal" or predicted stresses and strains as well as to unanticipated shocks and extraordinary demands is an implication of this term and concept. The concept encompasses both pre-event strategies intended to cope with and minimize disaster impacts, as well as post-event strategies designed to cope with disaster-related damage (Tierney, 2003).

The challenge with understanding resilience in different situations lies in its inherently multifaceted nature (Cochrane, 2010; Southwick et al., 2014; Tierney, 2003). Its significance as a construct can vary among individuals, businesses, cultures, and societies. In essence, the main challenge is that resilience can be experienced at differing levels and may change over time (Cheer and Lew, 2017; Southwick et al., 2014).

Despite the challenges mentioned, resilience has been used to better understand numerous social systems, including sustainable development as the interrelated systems of society, the economy and ultimately the environment (Cochrane, 2010; Southwick et al., 2014; Tierney, 2003). From a tourism perspective therefore, resilience is seen as an important concept, in terms of enabling the sector to bounce back from shocks and adapt to chance such that it can perform better than before the external shock occurred (Von der Weppen and Cochrane, 2012). In the case of the COVID-19 pandemic, it was considered a learning opportunity for the tourism sector, and the religious sub-sector in particular, for future coping mechanisms and strategies which would lead to a resilient sector going forward (Nyikana and Bama, 2023).

Religious tourism has been recognised as one of the drivers for tourism demand with an estimated 300-600 million people travelling domestically, regionally and internationally for religious and spiritual needs - this therefore makes the religious tourism sector the fastest-growing sector in the tourism industry (Gedecho and Nyikana, 2023; Griffin and Raj, 2018; Timothy and Olsen, 2020; Timothy, 2021; UNWTO, 2011). Religious destinations have played a significant role in attracting millions of religious travellers because of their sacred and symbolic nature (Ahmed and Memish, 2020; Apleni et al., 2017; Gedecho and Nyikana, 2023; Griffiths, 2011; Gulomjonovna and Sobirjonovna, 2019; Griffin and Raj, 2015; Huang and Pearce, 2019; Ives and Kidwell, 2019; Nyikana, 2017; Timothy and Olsen, 2020; Timothy, 2021). Some of the most prominent destinations for religious tourism include the Holy Land, Mecca, Jerusalem, Sensoji Temple and Varanasi, amongst others (Gedecho and Nyikana, 2023; Morss, 2015; Romanelli et al., 2021; Safar and Seurat, 2023; Sawant, 2022). According to Gedecho and Nyikana (2023), most research focus on religious tourism has been skewed towards the Global North and Middle East regions, as they have been prominent regions for this kind of tourism. In recent times, however, there has been a marked growth in the sector in Africa (Nyika et al., 2022).

The growth of religious tourism in the African continent has been linked to the creation and development of Independent African Churches [IACs] which formed because of political unrest and economic damage in African countries like Namibia, Ethiopia, Nigeria, Zimbabwe, the Democratic Republic of the Congo, and Malawi (Nyika et al., 2022). Religious tourists, believers and seekers migrated from their countries of origin to countries like South Africa for greater opportunities and greener pastures (Nyika et al., 2022; Settler and Mpofu, 2017). For instance, it was reported that in 2019, there were 4 million people comprised of regional and international migrants in South Africa with a large group of migrants settling in Johannesburg with 2 million of them coming from Zimbabwe (Nyika et al., 2022). Ultimately, this has led to the diversification of religions which has resulted in the development of new religious organizations and the expansion of religious activities, and festivals which has significantly contributed towards the tourism arrivals and receipts in South Africa (Gedecho and Nyikana, 2023; Gyekye et al., 2014; Henama and Sifolo, 2018; Nyika et al., 2022). When the COVID-19 pandemic emerged, the religious tourism sector was unprepared and subsequently suffered great losses (Mzobe, 2024).

Bama and Nyikana (2021) noted that the World Health Organization [WHO] announced COVID-19 as a global health emergency on the 30th of January 2020. According to Nyikana and Bama (2023), South Africa bore a significant brunt of the pandemic, prompting the implementation of stringent lockdown measures and safety protocols to curb the virus spread. Considering the lessons that were learnt from previous outbreaks like MERS and Ebola in West Africa, it became imperative for the government of South Africa to consult with stakeholders about the management of the pandemic in different sectors (Nyikana and Bama, 2023). From a religious tourism environment perspective, the religious leaders and authorities would have also needed to be consulted about the implications of the measures for their activities. For example, some churches were against complying with some government measures as they felt that they were against their belief systems (Mzobe, 2024; Nyika et al., 2022). This led to numerous breaches of regulations, with religious authorities mostly focusing on faith, and what they perceived as the best course of action for their congregants, particularly among church leaders. In this regard, they continued to travel for religious purposes and congregated for prayers or to visit individuals who were unwell in their homes (Henama and Apleni, 2021; Nyika et al., 2022). Nonetheless, in the existing research, several strategies were employed in the religious tourism sector, which ended up contributing to the recovery of the sector as summarized in Table 1 below.

Table 1. Recovery strategies for religious tourism

Strategies	Reviewed literature
Offering psychological support to religious communities	(Henama and Apleni, 2021; Nyika et al., 2022; Timothy and Olsen, 2021)
Utilization of technology in religious tourism activities	(Olsen and Timothy, 2020; Raj and Griffin, 2020; Serra and Leong, 2020)
Reducing the capacity for welcoming tourists in tourism sites	(Irfan and Ali, 2020; Nyika et al., 2022; Olsen and Timothy, 2020; Raj and Griffin, 2020)
Building trust between religious communities, health officials and the government	(Mosier, Elhadary, Elhaty and Safaei, 2020; Olsen and Timothy, 2020; Raj and Griffin, 2020)
Religious authorities stepping in to ensure inclusivity in health care systems	(Korstanje and George, 2021; Moira, Mylonopoulos and Parasxi, 2019; Olsen and Timothy, 2020)
Encouraging the rollout of vaccines by religious organisations	(Nyika et al., 2022; Olsen and Timothy, 2020)
Creating the demand for religious tourism happenings	(Gerber, 2021; Nyika et al., 2022; Romanelli et al., 2021; Olsen and Timothy, 2020)
Prioritizing economic recovery plans	(Nyika et al., 2022; Olsen and Timothy, 2020; Raj and Griffin, 2020)

All of these initiatives and strategies were seen as important initiatives and strategies for informing the recovery of the sector, and ultimately contributed to a more resilient religious tourism sector going forward. The next section explains and justifies the research methods employed in carrying out this study.

Research Methods

This study adopted an interpretive research philosophy, with the view to analyse data from the perspective of the research participants. To this end, qualitative research methods were employed when collecting and analysing data. The qualitative methods enabled the in-depth exploration of the impacts of COVID-19 as well as the recovery strategies employed to build resilience in the domestic tourism sub-sector. The use of this method was considered most appropriate for meeting the study's objectives as it would unearth the perspectives of key stakeholders in the domain regarding the impacts and the subsequent recovery strategies in place, and ultimately the best approach to building resilience based on the lessons learned. This follows the arguments made by scholars such as Teti, Schatz and Liebenberg (2020) that such a method is better suited for explaining, addressing, managing and planning for future external shocks and incidents such as pandemics. Accordingly, researchers can gain in-depth understanding and insights into the evolution of an external shock, whilst also obtaining information about future management plans for similar situations.

The population for this study consisted of key stakeholders responsible for the preparations and arrangements of religious travel and packages in Johannesburg, South Africa. Such stakeholders included church travel offices (CTO), selected transportation companies (TC), religious attraction sites (RAS), religious leaders (RL) and other religious authorities (RA) who were purposively selected and recommended to participate based on their experience, knowledge and involvement in the religious tourism sector (Table 2 below).

Table 2. Overview of study participants

Stakeholder group	Code used	Total number interviewed [N=50]
Religious Leader	RL [RL1 – RL30]	N=30
Transportation Company	TC [TC1 -TC5]	N=5
Religious Tourism Authority	RA [RA1 - RA5]	N=5
Church Travel Office	CTO [CTO1-CTO5]	N=5
Religious Attraction Site	RAS [RAS1-RAS5]	N=5

In the analysis of the findings below, these codes are used to denote the source of key quotations. As far as possible, reference is made to the most suitable quotation for each stakeholder group used in the discussion of the findings. Quotations are taken verbatim from the transcripts generated on the semi-structured interviews conducted. The semi-structured interview schedules were designed with reference to the literature review as well as the research questions of the study. The interview discussions focused on the impacts of COVID-19 on religious tourism and the recovery strategies that the stakeholders implemented to cope with the implications of COVID-19 whilst ensuring a resilient sector going forward. The interviews were conducted between December 2022 and April 2023 either via Zoom, Microsoft Teams or face-to-face based on the availability and convenience of each stakeholder. The meetings that were conducted face-to-face took place in the work environments of the participants during a convenient time based on the appointments that were agreed upon by the researchers and the participants. On average, the interviews lasted approximately one hour long. In total, fifty (n=50) interviews were conducted after the data collection period.

Figure 1. Flowchart of research methodology

The collected data was then transcribed and key quotations were coded using Atlas.Ti which were then grouped into family codes. The steps followed in conducting this research are illustrated in Figure 1. Table 3 below outlines the individual codes found, alongside the group codes, and the research objectives relevant to the codes.

Table 3. Findings of the study

Research objectives	**Group codes**	**Individual codes**
Impacts of COVID-19 on religious tourism	Spread of fake news	• Conspiracy theories
	Cancellation and postponement of worship services, events, conferences, conventions and festivals	• Closure of operations • Closure of churches and public spaces • Cancellation of planned trips • Cost of travelling (reduced numbers)
	Drop in revenue	• Income losses • Affected church offerings (not able to do EFTs and debit orders) • Increase in the church expenses (virtual streaming conference) • Inability to conduct fundraising activities • Readjusted prices (affected profit margins) • Reduce capacity (occupancy in vehicles) • Offer single rooms only • Not able to do maintenance • Ability to sustain the church during COVID-19
	Ban in domestic travel	• Outreach programmes were affected • Permits for the vehicles and confirmation documents from churches • Inability to travel for pilgrimages, conferences and events
	Increase in fear and anxiety	• Increase in death rates • Absenteeism, avoidance and despair • Suffering from anxiety
	Shift from physically services to online	• Staying home and going online • Unable to fellowship together • Meetings moved to online platforms
Recovery strategies for the religious tourism sector	Implementation of technology	• Debit and stop orders (church offerings) • EFTs (Electronic Funds Transfer) • Point of Sale Swiping machines • Utilization of digital platforms • Visual services and live streaming • Response towards the use of technology • Data issues and inability to login • Spreading technological awareness
	Adherence to health and safety protocols	• Adhering to the directives of the government and health officials • Following regulations • Wearing of masks • Social distancing • Disinfecting spaces
	Resumption of projects and religious activities	• Outreach programmes • Fundraising activities • Creating other sources of income

Findings

The findings based on the thematic codes above are presented in this section and a word cloud depicting the keywords that emerged from the data analysis is provided below (Figure 2). The first section of the analysis offers a discussion of the impacts of the COVID-19 pandemic on religious tourism in South Africa. Later, the strategies that were adopted for the recovery of the religious tourism sector in South Africa are discussed in the context of building resilience for the sector. To protect the identities of the participants, codes are used in the discussion of the findings.

Impacts of COVID-19 on the religious tourism sector

It has been documented that the COVID-19 pandemic brought about very crippling effects on tourism, with many consequences of the pandemic having a detrimental impact on the sector (Lekgau and Tichaawa, 2021; Nyikana and Bama, 2023). One of the most significant impacts that were felt from COVID-19 is the decline of income for organizations that are involved in and make up the religious tourism sector. Corresponding with Booyens et al. (2022) who elaborated on how operations slowed down during the pandemic, similar findings emerged in this study as well. In particular, many interviewees stressed the drastic reduction in revenue which presented many financial challenges for the sector.

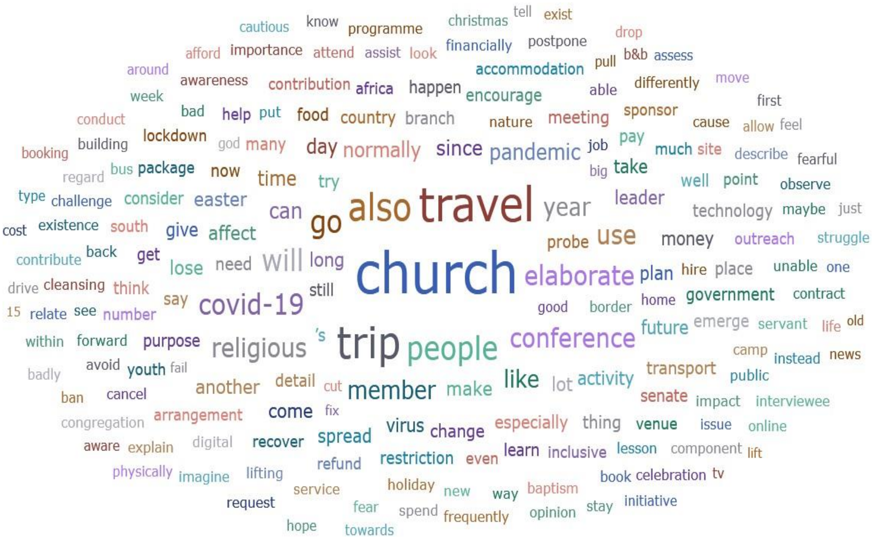

Figure 2. Keywords emerging from the interviews (Source: Author's own compilation from Atlas.Ti)

The participants unanimously highlighted that the lockdown restrictions in particular had a massive impact on their operations, restricting the usual travelling activities of domestic tourists and preventing businesses from offering their services to these travellers. A religious event organizer summed up this sentiment up with the following:

We saw a massive drop in revenue, and this led to the hotels having to reduce their rates to attract more business. However, this did not necessarily work given the restrictions. They also tried strictly offering single rooms instead of sharing rooms, to comply with the isolation regulations and maximise profits. (RA1)

The above statement demonstrates that hotels and other accommodation establishments that hosted religious groups incurred a lot of financial constraints in terms of their revenues and profit margins. Naturally, this had a direct effect on employment, as many such venues had to cut down on their number of employees resulting in job losses. These losses would have been hard felt, as most of the interviewed religious authorities suggested that one of the most important travel activities was conferences. In this regard, they suggested that they normally travelled for conferences regularly around different provinces in the country, and would typically spend a weekend at the destination, making use of hotel accommodation. A leader of a prominent church suggested that "*when we travel for conferences, we spend at least 3 days in the places we go to. We mostly stay in hotels because it's official church business, but we have some free time in between our meetings and services, so we would try to take in [explore] new interesting places* (RL7). They also indicated that "*it was easier when we could share costs by having shared rooms. But the church budget is limited so the number of travellers reduced a lot because we were only supposed to get single rooms now, which were more expensive"* (RL10). From an accommodation point of view, this was a financial setback as targets were not met. For event organizers, they stressed their losses, indicating that for a period of about two years, they could not organize events the way they used to. In this regard, they suggested that "*Religious events are a big thing in South Africa. I estimate that we lost hundreds of thousands of rands because for two years we had no business"* (RA2). The overarching sentiment here was that religious events would typically attract hundreds of visitors to local areas, which in turn generated a hive of activity for accommodation and other local economic activities. The sudden halting of all mass gatherings greatly impacted this, resulting in steep losses in revenue. Interestingly, one of the religious leaders revealed that COVID-19 had little impact on their finances because they had other sources of income to survive on during uncertain times like that of the COVID-19 pandemic. They stating that:

Well, my church in particular is one of those churches that I would say are an exception, you know, because it has been centred in the heart of the so-called elite community. I'll put it that way, I hope you understand. So, the economic implication on the church was not that much because the church was able to sustain itself as well as its programs despite COVID-19. Since the church has about five permanent staff, it was able to cover its monthly expenses. So, this church was well off, as I said earlier on, it's one of the churches that is well established, not well actually. It's just lack of a better word, you know. But it was able to sustain its program even the NGOs that the church has been supporting, didn't suffer because of COVID. So, I would say to my church in a nutshell that this church was not severely affected by the COVID in terms of the economy (RL5).

Although they mentioned not being affected financially, they bemoaned the inability to engage in their usual domestic religious trips and the inability to host their usual events. Nonetheless, many such stakeholders stressed the relief of having been multidimensional in their activities, which offered them a way to survive through other revenue streams. As suggested by an event venue manager, "*we are lucky because our main purpose is to host religious events, we have all the facilities for that. But we also have a primary school which we own, and this brings a different stream of income"* (RL22). They saw the need to diversify their operations in their formation, suggesting that the driver of this was broader community development. So, while the religious events hosting was a key objective, it was part of a much larger plan to have spiritual, educational and general social development and upliftment in their local community. Being grounded on

Christian values, the school was seen as a strategic aspect of the church, making things easier for members. Beyond the finances, a myriad of other impacts was highlighted by the participants. These included psychological issues linked with depression, anxiety, loneliness and worry due to the increased mortality rates during the pandemic. These were seen as being particularly perceptible in a sector that is largely driven by faith in their activities. For example, many people who had contracted the virus and recovered from it were very reluctant to travel with others for fear of judgement and mistreatment. In particular, travelling for funerals, which has become a central part of domestic travel for religious purposes in the country, became a point of apprehension for many. To this end, one of the participants noted that "*we would normally travel to different places for funerals as big groups. But this was impossible because people had a sense of fear for funerals themselves but also travelling with a group of people was a problem"* (RL3).

Ultimately, the pandemic had several impacts on the sector and posed challenges for the recovery of the sector post-pandemic. Given that, unlike other types of tourism, the religious tourism sector is driven by faith motivations, changes in the macro environment were difficult to unpack in the face of the internal belief systems and faith. The next section explores the strategies and coping mechanisms that were put in place to deal with the abovementioned impacts. Such strategies are seen as crucial in the resilience building of the sector for future external shocks.

Strategies adopted for recovery and resilience of the religious tourism sector

Religious tourism organizations had to invest in technology as one of their strategies to recover from the initial setbacks caused by COVID-19. In this study, many organisations argued that, while they are primarily driven by faith in their activities and had no time to trial technology, the onset of the pandemic compelled them to adopt technological solutions. Many interviewees argued that the pandemic helped them learn crucial lessons in terms of adapting to the times, by integrating technology in their operations. They felt that they had been very reactive with the use of technology and suggested that had they foreseen a scenario like the pandemic, they would have proactively prepared in advance. Importantly, they argued that since religious attractions and sites, as well as pilgrimage destinations, were strongly built on the spiritual connections that they invoke, having access through technological systems would bridge the gap that was exposed during the pandemic in times of future challenges. For example, a religious conference organiser from a church travel office argued that, "*we never put much thought in having technology in place. When we got instructions to stop all our operations, we could have gone online, but unfortunately, we did not have facilities, so had to deal with total losses. Whereas, we could have gotten some online attendance and registration for the online conference"* (CTO4). In this regard, they asserted that most of their conferences were organised in-house rather than being held at external venues.

This led to a lack of capacity and the necessary infrastructure, prompting subsequent efforts to establish them. There has been a notable shift in this aspect, with various stakeholders recognizing the necessity "*to move with the times, it's about time we invest in technology across board because we need to also reach out to the youth who are more comfortable in the technological space"* (RA3). Similarly, a religious attraction manager emphasised the need to "*attract more visitors to our site, and people share experiences on social media and having this in place would help us"* (RAS2). A transport provider noted that in their subsector, hard cash was the norm, but the pandemic had forced them to get point-of-sale swiping machines and encourage religious travellers to make use of electronic funds transfers and other digital payment platforms. This has helped them even beyond the religious market although they caution that "*some of the people we transport still want to use cash, saying they have connectivity issues or challenges logging into their banking systems"* (TC3).

In addition to the aforementioned insights into the heightened utilization of technology, there were also recommendations for lessons concerning collaboration and the imperative to enhance such efforts moving forward. As one leader of a mega-church argued "*we need to enhance our cooperation with other stakeholders. For example, the government made decisions without thinking about our unique situation and this did not help us or them"* (RL24). A manager in a travel office echoed this sentiment further suggesting that "*we learned that we need to collaborate with others in the sector. We can't work as an island and going forward we must all sing from the same hymn otherwise we will all be losers"* (CTO4). In the same vein, another travel office manager noted the "*need for complete packages for travellers, which will reduce the strain on one group like accommodation. If they are working better with transport and other role-players, it's easier to create trusted packages, simplifying the booking process"* (CTO2). This sentiment of collaboration also extended to the need for an inclusive sector, as indicated by a religious conference organiser from a mega-church, "*there is a big lesson for us in terms of being inclusive. We need more women and more young people involved in religious activities. We have missed out on the insights and creativity of these groups for too long"* (RA3). This feeling was shared by many participants, with calls for the greater sharing of power, responsibilities, opportunities, and decision-making. They argued that the sector could only grow more if inclusivity became a central pillar of operations going forward, as different approaches were needed to grow the sector and enable it to better cope with future external shocks. Ultimately, it was expressed that a more inclusive, representative sector would result in more flexibility and thus better resilience and adaptability.

CONCLUSION

There has been a strong emphasis on the need to undertake context-specific research as a means of assessing resilience, both from an individual organization basis and an industry point of view (Lekgau and Tichaawa, 2024). This is especially the case for tourism. Based on the findings of this study, there are several key lessons that can be taken from the pandemic and applied to build a more resilient religious tourism sector.

In the context of South Africa, the sector had been growing at a rapid rate before the pandemic. Therefore, to sustain and surpass those achievements, greater emphasis should be placed on implementing strategies aimed at fostering its continued expansion. Essentially, stakeholders in the religious tourism sector should work closer together to build a more resilient sector which can cope with external shocks. This notion finds support in the collaboration that was demonstrated during the pandemic. These lessons are invaluable and should be applied moving forward, as effective collaboration and cooperation among diverse stakeholders will be essential for managing future crises. Purposely, the religious tourism sector stands to gain by establishing a unified body comprising various stakeholders, dedicated to crisis management, recovery, and fostering cohesion within the sector. Notably other tourism sectors benefit from governing bodies and committees equipped with strategic documents. This underscores the need for the religious tourism sector to advance toward developing a draft strategy document outlining its activities and integrating them to ensure resilience and sustainability in the future.

In addition, the sector has historically failed to sufficiently engage the youth in its activities, programs, and structural set-ups. As such, there is a pressing need to reassess these programs, particularly in the context of ensuring the future sustainability of religious tourism. It is crucial for religious stakeholders to embrace innovation and enhance their adaptability to the evolving world. This necessitates the inclusion of diverse groups in decision-making and planning processes to leverage a wide array of perspectives. Furthermore, there is a need to integrate technological advancements which would enable religious tourism to overcome the constraints associated with physical travel. This is especially pertinent when considering the involvement of the youth in religious tourism, as they are highly accustomed to technology and are more inclined towards technological platforms. Appealing to this generation is essential to ensure readiness and preparedness for future crises, thereby enhancing overall resilience.

The contribution of this study stems from the fact that the theory of resilience in religious tourism has been neglected over the years. By investigating the impacts of the COVID-19 pandemic, and the subsequent strategies employed to cope with it, this study advocates for the valuable lessons that can enhance resilience in the sector. The findings from the study present key lessons that should form the basis for the management of future pandemics and external shocks to ultimately safeguard the resilience and sustainability of the religious tourism sector.

Limitations

The study was limited to selected stakeholders within the Johannesburg, South Africa. Given that they were purposefully selected, some other stakeholders may have been excluded from the data collection. Additionally, the interviews were a mix of face-to-face and online platforms, as such, they may have been different in nature, based on the platform used as the face-to-face interviews were more detailed, and in-depth when compared to the online platforms.

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CLUSTER ANALYSIS OF RISK PERCEPTION TO IMPLEMENT TOURIST HEALTH SAFETY IN VIETNAM

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Abstract: Perceived risk refers to tourists' objective assessment of the negative consequences associated with travel. The COVID-19 pandemic has significantly impacted all areas of human activity, influencing personal behavior and organizational practices. In post-COVID-19, travellers' perceptions of disease risk and behaviour have evolved. This study aimed to evaluate tourists' risk perceptions while travelling, categorizing them into distinct groups to identify differences among them. The research uses a mixed-method approach with validated surveys to measure travelers' risk perceptions via Likert scales. Data was collected from representative samples at destinations. K-means clustering identifies distinct segments, with the optimal number of clusters determined using the Elbow Method. Using cluster analysis, tourists were divided into three groups: Cluster 1 (32.18%), Cluster 2 (16.56%), and Cluster 3 (51.26%). The perceived risks were ranked in descending order as safety and hygiene risks, health risks, time risks, and emergency response support concerns. The analysis highlights that tourists prioritize safety, hygiene, health risks, and time risks when considering future travel, emphasizing the need for improved safety measures and effective tourism marketing strategies to restore traveler confidence. This study offers original insights through cluster analysis, showcasing the diverse risk perceptions among different social clusters and customer segmentation.

Keywords: cluster, risk perception, tourism, health safety, travel

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INTRODUCTION

Tourism is one of the main economic sectors of the world. It is the third largest business category (after fuels and chemicals). In 2019, the tourism trade sector accounted for 7% of global trade. For some countries, it can account for more than 10-20% of their gross domestic product (GDP) in terms of overall national income; it is the third largest commercial sector of the global economy (UNWTO, 2020). After the Covid-19 pandemic spread, global infection has seriously affected sectors, and the tourism sector has suffered crises in all tourism trade services. Up to 100 million direct jobs in the tourism sector are at risk; in addition, jobs are at risk in tourism-related sectors, such as the labour-intensive food service and accommodation industries, which provide employment to 144 million workers worldwide. Small businesses (accounting for 80% of tourism) are particularly vulnerable (Behsudi, 2020). Notably, vulnerable groups such as women, who make up 54% of the tourism workforce, youth, and workers in the informal economy are the most at risk (External Sector Report, 2020). The effects of the pandemic will also influence certain aspects of travel for individuals, such as their travel motivation and perception of risks during the trip. This indicates a causal relationship between the factors that are acting together and are based on personal perceptions, attitudes, and beliefs, which is at the core of the Theory of Planned Behaviour (Ajzen, 1985). Furthermore, underlying theories regarding epidemics and personal hygiene needs are also considered, in terms of the Pathogen Stress Theory (Thornhill and Fincher, 2014).

The existing literature on risk perception in tourism after the Covid-19 pandemic reveals a notable gap in terms of conducting cluster analyses. Most publications on the subject focus on factors affecting tourist behaviour (Ahmad et al., 2022). and the relationships affecting travel intention (Wang et al., 2022).

While some studies have explored risk perceptions and their determinants, there are limited works that employ cluster analyses to identify distinct groups or clusters of individuals with similar risk perceptions in the post-pandemic tourism context. This gap is significant because understanding the heterogeneity in risk perceptions and identifying distinct clusters can provide valuable insights for tourism stakeholders and policymakers (Horne et al., 2021). To determine the differences in the number of study samples by categorizing individuals into clusters based on their risk perceptions, researchers can uncover nuanced patterns, differences, and similarities in how individuals perceive risks associated with travel (Rimal and Real, 2003). Such an analysis would enable the development of targeted strategies to address the concerns of specific clusters, customize communication and marketing efforts, and tailor risk management approaches to effectively rebuild trust and promote safe tourism experiences in the aftermath of the Covid-19 pandemic (Aebli et al., 2022).

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This study aims to identify different clusters or groups of people based on their risk perceptions and analyse tourists' issues of interest that they contribute to different perceptions of tourism risk. Several insights can be gained from these clusters, and this study seeks to provide valuable insights for tourism industry stakeholders and policymakers in developing targeted strategies to address concerns, rebuild trust, and promote safe travel experiences in the post-pandemic era (Matthew and Princes, 2024). Research results analysing risk perception clusters in tourism after the COVID-19 pandemic demonstrate originality in several aspects. It addresses a significant research gap by employing a cluster analysis to test risk perception into clusters in the context of post-pandemic tourism. Up to now, reports about Corona's origin and risk perception in society are still mysterious (Harambam, 2020). This innovative methodology allows for a deeper understanding of the heterogeneity in risk perceptions within the tourist population.

In the context of the pandemic response from the government and organisations, there have been restrictions on social activities, particularly tourism trade business activities. This traveller, when hearing the spread of the disease and aware of the risk to themselves, is the anxious thoughts of each individual. From there, travel behaviours are formed during travel by vehicles, behaviour changes depending on the infected area, and the demographics of the locals (Kim et al., 2017).

Therefore, an approach for grouped research on tourist risk perception will help businesses effectively manage customer service and propose tourism strategies (Lestari and Mahir Pradana, 2024). In addition, this will help businesses achieve the following benefits: accurately identify the target customer group through behavioural analysis, characteristics of each customer group related to hygiene perceived, groups of visitors concerned about health risks, groups of guests concerned about time risks, and groups of guests concerned about the risk of the emergency response support channel (Arora et al., 2024).

LITERATURE REVIEW

Risk perception has been of interest to scholars for a long time, and studies dating back to the 1970s mentioned risk perception (Jacoby and Kaplan, 1972). According to the author, there are aspects that need to be taken care of, such as psychological risk, social risk, financial risk, time risk, and material risk. These research results were later carried out by scientists studying risk perception in tourism (Roehl and Festival enmaier, 1992; Stone and Grønhaug, 1993) who expanded and exploited in many aspects travel risk in different subjects and identified three new aspects of risk perception: material and equipment risk, holiday risk, and destination risk. Follow-up studies identified additional risk aspects, including perceived satisfaction risk and political uncertainty risks (Seddighi et al., 2001), and health risks (Richter, 2003).

The pathogen stress theory mentioned personal hygiene and safety (Thornhill and Fincher, 2014). The operational behaviour theory also addressed risk perceptions (Fishbein, 1980). Tourism stakeholders need to consider the issues related to the hygiene and safety of visitors. Issues related to the sanitation of public transport, hotels, and entertainment venues should be considered to improve visitors' safety (Sigala, 2020). The COVID-19 pandemic is an infectious disease that has spread rapidly worldwide. Studies on infection risk perceived while travelling have reported the possibility of infection in places of recurrent infections (Brida et al., 2021).

In light of the news of the pandemic, many travellers intend to avoid or cancel trips, as it has a lot to do with the risk perception of travel in general, especially to destinations with reported cases of infection (Neuburger and Egger, 2021). This is consistent with the results of other studies that show that perceptions of health risks are negatively associated with perceptions of the safety of a destination and may influence travellers' travel intentions (Yoo et al., 2022). After the COVID-19 pandemic, people's safety- and hygiene-related perceived has increased even more.

The COVID-19 pandemic has significantly affected the travel decisions of tourists as well as their safety and health hygiene (Wen et al., 2021). Most travellers are concerned because safety and hygiene can be important factors in assessing travel risk; they are aware of how to manage tourist operations during trips. Since the risks are largely related to safety and hygiene, including health-related issues (Goran Perić, 2021). Potential tourists often prefer factors like safety and hygiene of the destination, cleanliness, infrastructure, and high-quality medical facilities during the COVID-19 pandemic (Sánchez-Cañizares et al., 2021). Travel risk has been described as a factor of concern for many travellers during trips, with studies focusing on infectious disease transmission (Hall, 2006). The movement of international tourists can spread new infectious diseases across the world, as tourists can carry pathogens from one place to another (Richter, 2003). Among the health-related risks previously described in travel are HIV, schistosomiasis, Legionnaires' disease, sexually transmitted diseases, SARS, and COVID-19 (Bauer, 2007; Jonas et al., 2011).

Several empirical studies have explained the impact of cognition on health issues when people make travel decisions (Nazneen et al., 2020). The study results describe the impact of the pandemic on attitudes towards different types of tourism without specifying the nature and relative importance of the various factors affecting travellers' perceptions. Most pre-2020 studies focused on health in tourism, describing travellers' intention to visit in a medical tourism environment (Collins et al., 2019). Travel trip planning, time factor a lot of tourists are concerned about, and time risks, including the possibility that the trip will waste time, limits on vacation time as planned and prepared will also take too much time (Mowen and Minor, 1998). In this study subject, the time risk mentioned when infected with COVID-19 extended the treatment and isolation period by 14 days or even longer (Almaghrabi, 2021).

Throughout the tourism business, managers need to consider setting up support channels to respond to situations that occur (Law et al., 2015). Travel distribution channels are set up to address issues when travellers need assistance regarding travel, accommodation, and visiting attractions (Pearce and Schott, 2005).

A support channel is an online information technology platform (Rahman et al., 2021), which can provide advice to tourists on choosing tours, buying tickets, booking hotels, and emergency response to paying costs during the journey of visitors (Merkert and Hakim, 2022). When there is a support channel, customers can connect and feel secure about exploring tourism (Pearce and Schott, 2005), which has a significant connection with purchasing behaviour, destination selection, experience sharing, and information seeking. Timely information can help tourists easily reduce travel risks and control communication and contact behaviour (Gretzel et al., 2019). Overall, all previous studies have identified risk perceptions in many aspects related to travel intentions. However, the relationship of the risk perception aspects does not define the group of visitors in the perception that synchronises all visitors. In this study, the analysis focused on identifying groups of travellers who had different perceptions of risk during trips.

MATERIALS AND METHODS

Data collection

This study was designed as a survey through questions. The content of questions was determined in two parts, the survey part on demographic characteristics. The second part surveyed the risk perceptions of visitors. A 5-level Likert scale was used, where 1 (strongly disagree) to 5 (strongly agree) (Likert, 1932) and some demographic variables were referenced from the results of social research (European Social Survey, 2014).

A convenient, non-probability sampling method was used for data collection, involving random samples from tourists at various destinations (Manfreda and Vehovar, 2015). A questionnaire was the primary tool, divided into two sections: the first collected demographic information, and the second focused on the main research content.

The survey content was carefully designed to align with the research objectives. With proper permissions and consent from visitors, the author approached visitors at tourist destinations, explained the research and measurement concepts, and provided a link for feedback via drive.google.com to those who agreed to participate (Bauman et al., 1998). This study used a Cronbach's alpha reliability analysis and coefficient values above 0.7 were acceptable for psychological constructs (Paul Kline, 2000). Cortina (1993) found that the magnitude of Cronbach's alpha coefficient depends on the number of item categories in the scale, with more items having higher coefficients (Cortina, 1993). The larger the sample size principle, the lower the complexity of the deep analysis and the lower the risk of Type I errors.

Hinkin et al. (1997) recommended that final scales should be four to six items long. Recent publications have systematically reviewed the sample size, depending on the results of Cronbach's alpha reliability analysis above 0.7 that can use sample sizes of 250 – 300 to ensure a representative sample performs the study (Bujang et al., 2018). We designed a survey of 350 submitted samples and obtained valid responses from 320 samples, with a 91% response rate.

Data analysis

In this study, Cronbach's alpha was used to verify the correlation between variables observed in the same survey group and test results in the dataset obtained. Cronbach's alpha values above 0.7, Corrected item – total correlation coefficients greater than or equal to 0.5, Guaranteed trust requirements for the data obtained (Nunnally, 1978).

Frequency analysis was used to analyse the percentages of demographic factors. The study used descriptive statistical methods to calculate the mean values and standard deviations of survey variables. This study used group analysis methods (Wu, 2012) to determine the optimal number of groups and the relevance of groups and survey data (Duran and Odell, 2013).

Cluster analysis, specifically K-means clustering, identifies distinct segments based on risk perception (Li and Wu, 2012). Optimal cluster numbers are determined using the Elbow Method (Rolison and Shenton, 2020).

RESULTS AND DISCUSSION

Demographic characteristics

Table 1 offers a thorough study of the demographic traits of the survey participants, showing that, in comparison to male respondents (42.2%), a somewhat greater number of female respondents (57.8%). Although the sample has a somewhat equal gender distribution, there is a little tendency toward female individuals. This may suggest that there is gender-specific differences in how risk perception is perceived. The age distribution of the respondents indicates that a substantial proportion belongs to the younger and early middle age categories (Suparman et al., 2024). More precisely, 33.4% of the participants fall within the age range of 18-25, 34.7% fall within the age range of 26-30, and 27.8% fall within the age range of 31-45. According to the age distribution of the study, younger people's and adults in their early middle age viewpoints predominate (Fu et al., 2024). Compared to earlier age groups, these ones could have distinct opinions on health safety and risk perception. Regarding occupation, the sample exhibits a wide range of diversity.

Table 1. Results of sample information analysis (N = 320) (Source: Author analysis from data, 2024)

Character	Content	Frequency	Percent
Gender	Female	185	57.8
	Male	135	42.2
Age	18 - 25	107	33.4
	26 - 30	111	34.7
	31 - 45	89	27.8
	More than 45	13	4.1
Working	Private Companies	72	22.5
	Coporation	101	31.6
	Government	104	32.5
	Other	43	13.4

Specifically, 32.5% of respondents are employed in the government sector, 31.6% work in joint-stock firms, and 22.5% are employed in private enterprises. The diversity of work sectors offers a comprehensive outlook on risk perception, since individuals with diverse professional backgrounds may have variable degrees of exposure to health safety information and distinct experiences that shape their perceptions (Chufan Xiao, 2024). The segment data provides insights about respondents' gambling insights and their effects on visitor wellbeing and security acceptance. The overview includes people of all ages, sexual orientations, and livelihoods to show the Vietnamese indigenous travel industry.

Statistics describing and verifying the scale of measurement variables

From Table 2, the results of the statistical analysis described by the four measurement groups, there are three groups of Perceived safety and hygiene: health risk perceived, time risk perceived, the visitors rated level above 4, level 4 is high perceived. Meanwhile, the issue of concern for the emergency response support channel, 3.77 is at the level from moderately aware to high aware. Cronbach's alpha scale reliability test results reflect the degree of correlation between the observed variables in the same group. The results obtained were all above 0.77, indicating that the variables observed in one group fully supported the content and data obtained (Ayele and Singh, 2024).

Therefore, the data structure was sufficiently reliable for the analysis of the subsequent stages.

Table 2. Descriptive analysis results and inspection results using Cronbach's alpha (Source: Author analysis from data, 2024)

About travel risks	Mean	Standard deviation	Cronbach's alpha
Perceived safety and hygiene risks	4.30	0.66	0.80
Perceived health risks	4.10	0.69	0.77
Time risk perceived	4.09	0.73	0.81
Emergency response support channels	3.77	0.70	0.80

Results of the analysis to select the optimal number of customer groups

In a dataset, the problem arises as to how to obtain the best value for optimal group estimation. Using Elbow's optimal group search methodology, the results of the analysis of the grouping model dataset to find the number of groups needed for the classification of risk-aware travellers are shown in Figure 1.

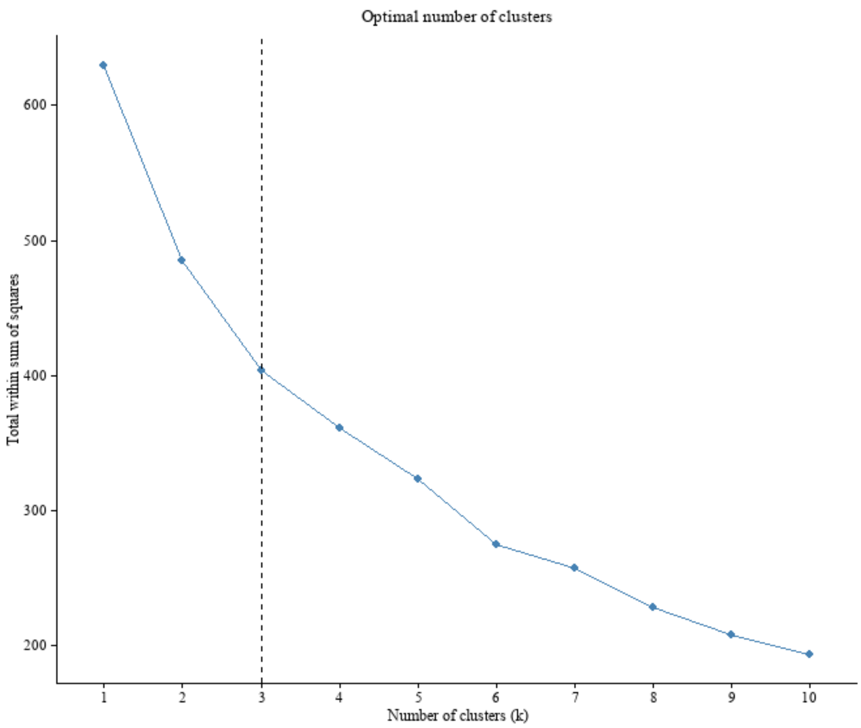

Figure 1. Results of optimal recommendations for three groups of customers on risk perceived (Source: Author analysis from data, 2024)

Figure 1 illustrates the application of group division methods in a theoretical model designed to study risk perceptions in tourism. Conducting the search for the optimal number of groups as recommended by the Elbow method, this is a way to select the number of suitable groups based on a visualization graph at the point of attenuation of the deformation function and select the elbow point, at which point is the optimal number of groups required for cluster analysis (Syakur et al., 2018). In this equation, the initial assumption divides 10 groups, estimating the optimal number of groups recommended by the Elbow model (Nagaraj et al., 2022). The analysis of Figure 1 shows that the optimal number of groups proposed for group classification is three groups of customers with different risk perceptions.

The results of the analysis divided the group of risk-perceived customers

Clustering is a method used to identify smaller groups of observations in a dataset. This helps to perform subheadings based on observations in the same large group with similar patterns. The cluster results identify homogeneous groups and classify directly from the dataset, the study results represented in Figure 2.

As shown in Figure 2, the level of interpretation of the two components in the dataset was 64.6%, which explains the variability in groups with a separation of three clusters (Jardim and Mora, 2022). Of the three clusters, Cluster 1 had a greater difference than Clusters 2 and 3. The proportion of visitors in Cluster 1 who were aware of the risks was 32.18%.

For Cluster 2, the concentration density was low, the elements were widely dispersed, and the interference rate between Clusters 2 and 3 was unclear. Cluster 2 accounted for 16.56% travellers who were aware of travel risks, suggesting that a small proportion of travellers was not homogeneous in their level of risk perceived.

For Cluster 3, the concentration of visitors was high; in Group 3, there was uncertainty about cluster division, as shown in Figure 2, and there was a small percentage of interference between Cluster 3 and Cluster 1 and Cluster 3 with Cluster 2. This issue needs to be researched and clarified to explain the unclear differences in visitor surveys. However, most tourists in Cluster 3 were aware of tourism risks, accounting for 51.26% of the total number of visitors surveyed.

This study as well as previous studies, when identifying differences in context, the results are biased, but the results also have similarities in the grouping, the reports can be referenced in the direction of the study in the risk perception subgroup (Goran Perić, 2021). Notably, in this study, after the COVID–19 tourists had the highest Perceived safety and hygiene risks, other perceived groups were listed, gradually reducing health risk perceived, time risk perceived, and concern about emergency response support channels during the trip.

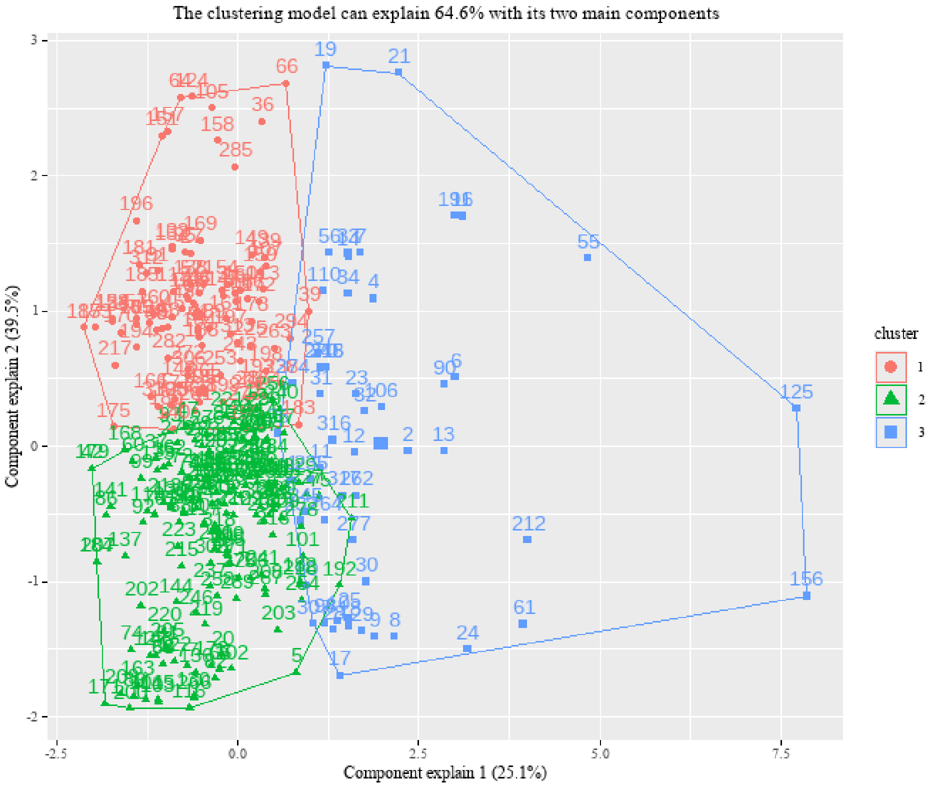

Figure 2. Results describe the grouping of risk perceived customers in tourism (Source: Author analysis from data, 2024)

DISCUSSION

The examination of risk perception among local visitors in Vietnam highlights the substantial influence of health risk knowledge on travel intentions and destination preferences. Crucial aspects that affect this view include the perceived seriousness of health hazards, confidence in health safety measures, and past health-related encounters (Bengthong et al., 2024). It is essential to emphasize the interplay of these components. Media coverage and personal experiences have a significant role in determining how severe hazards are perceived, whereas trust in safety measures is impacted by clear and open communication as well as visible protocols implemented by authorities (Wijayanto et al., 2024). Furthermore, demographic factors such as age, gender, and socioeconomic level, together with the cultural environment, significantly influence the risk perceptions of domestic tourists (Safrizal et al., 2024).

Cluster analysis is employed in the study of risk perception to classify visitors according to their perceptions of different dangers associated with travel. Cluster 1 might comprise health-conscious visitors, Cluster 2 might consist of those prioritizing time and convenience, while Cluster 3 may largely emphasize safety and hygiene.

These findings should be compared with similar studies to ensure objectivity. For example, research by Neuburger and Egger (2021) in Italy identified three distinct clusters with unique characteristics and highlighted a significant increase in COVID-19 risk perception and travel behavior changes over a short period (Neuburger and Egger, 2021). Similarly, a study by Jarumaneerat (2022) in Thailand segmented international tourists based on travel risk perceptions and past travel experiences, examining how each segment employs risk reduction strategies (Jarumaneerat, 2022).

In the current study, Cluster 1, comprising 32.18% of respondents, exhibited high health risk awareness, likely due to the lingering effects of the COVID-19 pandemic and human damage (Golets et al., 2023). Cluster 2, accounting for 16.56% of respondents, showed a lower concentration density with widely dispersed elements, suggesting concerns about time and convenience rather than specific health or safety risks (Brida et al., 2022). The unclear interference rate between Clusters 2 and 3 indicates less sharply defined risk perceptions among these tourists.

Cluster 3, encompassing 51.26% of the surveyed tourists, showed a high concentration of visitors acutely aware of travel risks, primarily focusing on safety and hygiene. This group's size underscores the importance of safety and hygiene measures in rebuilding tourist confidence (Nair and Pratt, 2024). The uncertainty about cluster division within Cluster 3 suggests that while these tourists share common concerns, they prioritize these risks differently.

These findings highlight the need for targeted risk communication and management strategies to address the specific concerns of each tourist segment, enhancing the overall travel experience in the post-pandemic era.

CONCLUSION

This section provides the study's conclusions, which can enable tourism business administrators to take measures to improve the quality of tourism services. A significant proportion of the respondents of this study were female; aged 18-30 years; worked in government agencies, joint stock companies, or private companies. These are characteristics for managers interested in exploiting or implementing tourism marketing strategies (Alonso-Vazquez et al., 2024).

The study identified three clusters; the proportion of clusters identified and focused on Cluster 3 had a rate of 51.26%, the highest safety and hygiene perceptions in the surveyed issues. For places of tourism exploitation, at the destination of tourists, focus on three groups of tourists with different risk perceptions, including group 3 tourism risk perceived, they are groups that care a lot about safety and hygiene from the attraction, means of transportation (Yoo et al., 2022).

This study is similar to many other studies, in that it puts in a different context, meaning that the results may be similar or different. Most of the previously published studies related to clustering have notable differences in focus and results. The methodologies employed in these studies also vary, with some utilizing qualitative approaches such as interviews or surveys, while others adopt quantitative methods, such as cluster analyses (Dolnicar, 2020). Additionally, the number of clusters identified in the studies varies, with some finding two or three distinct clusters, while others uncover more nuanced typologies (Ghuman and Mann, 2018).

Furthermore, existing studies differ in their emphasis on various factors influencing risk perception, such as personal characteristics, travel motivations, destination attributes, and health and safety measures (Bulin, 2014). These differences highlight the diverse perspectives and approaches within the literature, contributing to a more comprehensive understanding of risk perception in tourism after the COVID-19 pandemic.

For administrators, focusing on exploiting three groups of risk perceived about tourism, the groups have differences, but groups have a clear perceived trend from the highest safety and hygiene risk perceived, health risk perceived, time risk perceived and concern about emergency response support channels in tourism (Suhud et al., 2024). This finding can be applied when it comes to tour sales and tourism marketing programs.

IMPLICATIONS

A cluster analysis on risk perception in tourism after the COVID-19 pandemic can provide valuable insights into how different groups of individuals perceive and respond to risks associated with travel and tourism. These insights can help the industry understand the diverse range of perspectives and develop targeted strategies to address concerns and meet the needs of various customer segments. Here are some implications and potential applications that the industry can consider based on the findings of this study:

A cluster analysis of risk perception in tourism after the COVID-19 pandemic can provide valuable insights into how different groups of individuals perceive and respond to risks associated with travel and tourism (Brida et al., 2022). These insights can help the industry understand the diverse range of perspectives and develop targeted strategies to address concerns and meet the needs of various customer segments. Here are some implications and potential applications that the industry can consider based on the findings of this study:

Cluster analysis can identify distinct groups of travellers with similar risk perceptions and behaviours. By understanding these segments, the tourism industry can tailor their marketing strategies, communication efforts, and service offerings to target each segment's specific needs and concerns effectively. Some segments may be more risk-averse and prioritise safety protocols, while others may be more open to travel but require additional reassurance (Tapsall et al., 2022). From there, the tourism industry can design different tours to meet the needs of customers.

Developing targeted to clear communication strategies, the different risk perception clusters may respond differently to communication messages. The tourism industry can use the findings to create targeted communication strategies that address each cluster's specific concerns and risk perceptions. This can involve emphasising safety measures, highlighting flexible booking and cancellation policies, showcasing destinations with low infection rates, and promoting experiences that align with different risk appetites (Dryhurst et al., 2022).

Businesses need to consider improving safety protocols and measures, cluster analysis can shed light on the specific risk factors that different traveller segments consider important. The industry can use this information to prioritise and enhance safety protocols that address the concerns of each cluster (Sawang et al., 2023). This may include implementing stricter cleaning and sanitation procedures, enforcing social distancing measures, providing contactless services, and communicating the measures taken to ensure customer safety (Sannas Salsabila, 2024).

Furthermore, the findings of the cluster analysis can guide the industry in developing travel experiences that align with the risk perceptions and preferences of different segments. Some clusters may prefer outdoor activities or remote destinations with limited crowds, while others may be more interested in immersive cultural experiences or wellness-oriented travel (Alonso-Vazquez et al., 2024). By catering to these preferences, the industry can create customised packages and itineraries that resonate with each cluster.

On the other hand, the policymakers need to pay attention to adapting pricing and refund policies, the different risk perception clusters may have varying sensitivities to pricing and cancellation policies (Brida et al., 2022). Some segments may be willing to pay a premium for added safety measures, while others may be more price sensitive. The tourism industry can use the study's findings to refine pricing strategies and offer flexible refund and rebooking options that address the concerns of different clusters, thereby increasing customer confidence and willingness to travel (Wen et al., 2023). For health authorities, cluster analysis can provide insights into the risk perception profiles of different traveller segments, which can be valuable for public health authorities (Jarumaneerat, 2022). By sharing these findings, the tourism industry can collaborate with health authorities to develop guidelines, recommendations, and policies that align with the needs and expectations of travellers. This collaboration can help create a unified and consistent approach to managing risks in tourism and enhance overall trust in the industry.

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SHARING ECONOMY AND INCLUSIVE TOURISM DEVELOPMENT: A CASE STUDY ON THE WATERBERG DISTRICT IN SOUTH AFRICA

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Abstract: The purpose of the study was to analyse inclusive tourism development in the Global South, using a case study of Airbnb's interventions in the Waterberg District of South Africa. Adopting a qualitative approach, the research was conducted in three phases. The first phase consisted of a focus group held with Airbnb representatives who were involved in the planning and operations of the programme. The second and third phases involved in-depth interviews with Airbnb partners and graduates of the Airbnb Academy, respectively. The findings reveal that previously excluded groups were able to become tourism producers, through the skills development programme, joining the Airbnb app, and the tangible outcomes from the interventions. The programme also widened the scope of opportunities for members who previously did not identify as part of the tourism value chain. Further, there was a notable change in the tourism landscape, now involving experiences that are more authentic and representative of the culture and lifestyle of the community. However, the tourism industry is prevalently white-owned, presenting substantial challenges for graduates of the programme to tap into the tourism market. The findings confirm that inclusive tourism is intrinsically embedded in the local context: politics, economy, and society. In this regard, the study expands and contextualises the literature on inclusive tourism development in the Global South.

Keywords: Inclusive tourism, Airbnb, skills development, South Africa

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INTRODUCTION

Globally, there has been much debate on the attainment of inclusive tourism development and growth (Peterson et al., 2020; Bakker et al., 2023). This is, in part, due to the deeply seated exclusive nature of tourism which has garnered much criticism (Rogerson and Rogerson, 2020). Indeed, several scholars have criticised the long-standing practice of tourism being dominated by large companies, and the subsequent profits from this economic sector accruing to the upper and middle class, while simultaneously marginalizing poor communities (see, for example, Kadi et al., 2022; Scheyvens and Biddulph, 2018). Inclusive tourism, described as a multidimensional concept, refers to a manner in which tourism development is approached in order to provide a range of holistic benefits, resulting in sustainable and equitable outcomes (Kadi et al., 2022; Scheyvens and Biddulph, 2018; Biddulph and Scheyvens, 2018).

Inclusive tourism is understood in this research as a transformative form of tourism where marginalised groups are involved in tourism production, consumption, benefit-sharing, and decision-making (Rogerson and Rogerson, 2020). Established in 2008 to assist local residents at destinations to maximise the use of housing and experience options, Airbnb has become a global force in the global tourism landscape (Ioannides et al., 2019; Negi and Tripathi, 2022).

The proliferation of Airbnb in many destinations has raised several pertinent questions, many of which are related to the impacts of this global platform to communities, destinations, and visitor experiences (Kadi et al., 2022; Cheng et al., 2022). Certainly, while Airbnb routinely underscores how their services and business model benefit all members of the community and can drive inclusivity, several researchers have criticised the associated increased housing prices, higher cost of living, subsequent resident resentment of Airbnb, overuse (and abuse) of the sharing rhetoric (Hall et al., 2022; Cheng et al., 2022; Ioannides et al., 2019). Largely, the research on Airbnb has been centred on urban settings, often popular or growing tourism cities (Adamiak, 2022).

With Airbnb expanding its network to rural, and less developed regions, coupled with their Inclusive Tourism Committee (and subsequently the establishment of the Airbnb Entrepreneurship Academy), there is an opportunity to expand the lens on Airbnb and its role to inclusive tourism development. Through the Airbnb Entrepreneurship Academy, Airbnb partners with local organisations to develop an immersive education programme, introducing participants to the

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potential benefits of becoming a tourism entrepreneur by hosting their products on the Airbnb platform. In doing so, the Academy assists those from diverse backgrounds and historically underrepresented communities learn how they can potentially benefit from tourism development in their locations (Airbnb, 2024). The current study focuses on the case of the Airbnb Entrepreneurship Academy in the Waterberg District of South Africa, an area developed through the mining sector and which has recently begun transitioning to tourism based on its rich natural and cultural landscape.

LITERATURE REVIEW

Inclusive tourism

Inclusive tourism is tourism that promotes local development by being inclusive of low- and middle-income population groups, aiming to reduce income inequality (Butler and Richardson, 2015). The concept of inclusive tourism development is based on the premise that tourism development can, in fact, be inclusive and aid in efforts to reduce poverty if all stakeholders involved in the tourism value chain contribute to the creation of opportunities for all and allow for all to share in the benefits of tourism-related activities. Considering this, Scheyvens and Biddulph (2018) propose that the elements of inclusive tourism are overcoming barriers for disadvantaged groups to access tourism activities either as producers or consumers; facilitating self-representation by marginalised groups so that they are represented; challenging existing power relations; widening the range of people involved in tourism decision making; positioning new places on the tourism map; and encouraging mutual learning and respect between hosts and tourists. Kadi et al. (2022) highlight the central concern being to bind these concepts together to ensure tourism benefits are widely and equitably shared. According to the South African Green Paper on the Development and Promotion of Tourism in South Africa (2023), an inclusive South African tourism sector can be achieved through increased skills development, entrepreneurship, and financial support. To promote tourism inclusivity there is a need for leveraging innovation to create compelling experiences, building partnerships to strengthen the sector’s impact nationally, regionally, and globally, addressing barriers to tourism growth, and aligning with the countries’ social development and cohesion initiatives (South Africa, 2023). Overall, inclusive tourism development is a multi-dimensional concept that involves overcoming barriers to access to the tourism sector, widening the range of people who have tourism decision-making powers, and putting new places on the tourism map, all in a way that allows the benefits of tourism to be shared (Kadi et al., 2022; Biddulph and Scheyvens, 2018). Following the negative impacts of the COVID-19 pandemic on the South African tourism industry, the country’s Tourism Sector Recovery Plan noted that there is now an opportunity to rethink the tourism sector and its contribution to the people of South Africa, building a more inclusive sector that ensures the benefits are enjoyed widely and fairly (South Africa, 2023).

The Airbnb Entrepreneurship Academy and Inclusive Tourism Development

Airbnb is an online platform through which hosts can rent out accommodation spaces or tourism and hospitality experiences to increase their income, engage in tourism entrepreneurship and become a part of the broader tourism industry (Reinhold and Dolnicar, 2017). According to Airbnb, the platform promotes inclusive tourism as it provides a peer-to-peer platform, giving any individual access to the tourism industry (Kadi et al., 2022). Scheyvens and Biddulph (2018) add that as Airbnb provides marginalised individuals with a means through which to share their tourism offerings, it does indeed promote inclusive tourism development. In South Africa, the Airbnb Entrepreneurship Academy has been established to empower new generations of tourism entrepreneurs to promote inclusive and sustainable tourism in the country.

The Academy is a skills development programme that seeks to assist marginalised and previously disadvantaged groups to become succesful tourism entrepreneurs using the Airbnb platform. Since 2017, the Academy has been presented through 24 training workshops across South Africa through partnerships with public and private organisations to break existing barriers to entry into the tourism market and to distribute tourism benefits more equally (Airbnb, 2024). Despite this, the extent to which Airbnb contributes to inclusive tourism development has come into contest as in order to fully understand that, a clear picture is needed of who is engaging with the platform as a tourism entrepreneur in terms of class, race, gender, background and the conditions in which they are operating (Scheyvens and Biddulph, 2018). The current study addresses this gap by engaging with those engaging on the platform within the Waterberg region.

Case study: The Waterberg District

Found in South Africa's Limpopo province, the Waterberg District boasts appealing landscapes, diverse flora and fauna, and vibrant cultures (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2019). Comprising six local municipalities, including Bela-Bela, Lephalale, Modimolle, Mookgophong, Mogalakwena, and Thabazimbi, the district is endowed with abundant natural resources, supporting the three main economic sectors, primarily mining, agriculture, and tourism (Waterberg District Municipality, 2024). The district faces several challenges that require strategic interventions, relating largely to socio-economic disparities, such as high levels of unemployment and poverty which exacerbate the social inequalities brought forth by the apartheid legacy (Waterberg District Municipality, 2024). Indeed, the historical inequalities persist, with marginalised groups, including women and traditional communities, facing many barriers to participation and empowerment in the major economic sectors in the region including tourism. Additionally, many communities in the Waterberg district lack access to essential services such as clean water, healthcare, and education, hindering socio-economic development. Further, much of the Waterberg district is rural, with most of the urban areas dispersed and fragmented, and characterised by limited infrastructure and transportation networks which pose accessibility challenges between the remote areas (Waterberg District Municipality, 2024). These infrastructural and network challenges understandably affect tourism development and broader economic growth. Moreover, the mining sector is the largest economic sector, contributing 57.5 % to the GDP of the district, related land uses pose severe threats to the integrity of the bioregion and ecosystem. While Waterberg's economy is primarily driven by the mining sector, the tourism industry is one of the region's emerging economic sectors, gaining increasing attention owing to its potential for socioeconomic development, environmental conservation, and economic diversification (Waterbeg Tourism, 2023; UNESCO, 2019). As a tourism attraction, the destination is known for its nature and outdoor experiences, such as game drives and bird viewing at the numerous provincial and privately owned game and nature reserves found within the region (Waterberg Tourism, 2023).

Recently the Waterberg District Municipality formulated the District Development Model, which sought to adopt a public-private partnership approach to development in the region. In 2021 Airbnb was invited by the District Municipality to help build inclusive tourism as part of the Model, partnering with several local stakeholders, including the Waterberg Biosphere, Limpopo Women in Tourism, The Relay Institute, The Lapalala Wilderness School, and the Endangered Wildlife Trust. In 2022, Airbnb began to roll out a programme to boost economic opportunities through tourism with three primary objectives which were to drive inclusive tourism through skills development through the Airbnb Entrepreneurship Academy; to enable digital access through the provision of free Wifi; and to engage in partner-led destination promotion to create awareness of the unique offerings of the Waterberg. The Waterberg District thereby forms a valuable case study site to examine the transformative power of inclusive tourism as a driver of socioeconomic development, environmental conservation, and innovative initiatives fostered by Airbnb.

METHODOLOGY

This study adopted a purely qualitative approach to gather a comprehensive insight into the role of Airbnb in inclusive tourism development in the Waterberg. The study was exploratory in nature, owing to the uniqueness of the scope of research, as well as the need to gather in-depth views and opinions of the stakeholders involved in the Airbnb Entrepreneurship Academy. Accordingly, the study had three participant groups: (i) Airbnb representatives who were involved in the operations of the Academy, (ii) Airbnb partners in the Academy, including representatives of the District Municipality, Public-Private Growth Initiative (PPGI), Lapalala Wilderness School (LWS), Women in Tourism – Limpopo chapter, Waterberg Biosphere Reserve, and Limpopo Tourism, and (iii) graduates of the Airbnb Entrepreneurship Academy, located in the five local municipalities in the District (to ensure representation).

A purposive sampling approach was utilised for all of these participant groups. Interviews with Airbnb partners and focus groups with Airbnb representatives were held online, while interviews with Academy graduates were conducted face-to-face as well as via telephone (to accommodate participants residing in further areas). Tables 1 and 2 show the participants' codes assigned to the graduates and partners included in this report.

The interviews and focus groups were recorded and transcribed via Otter.ai. The transcriptions from Otter.ai were reviewed further by the fieldworkers to ensure the accuracy of transcription and that meaning (and translations) were captured. Finally, these transcriptions were uploaded onto Atlas.ti, a qualitative analysis software where the data was coded and grouped into themes, and are presented in the following results section.

Figure 1 below illustrates the methological steps taken in this research.

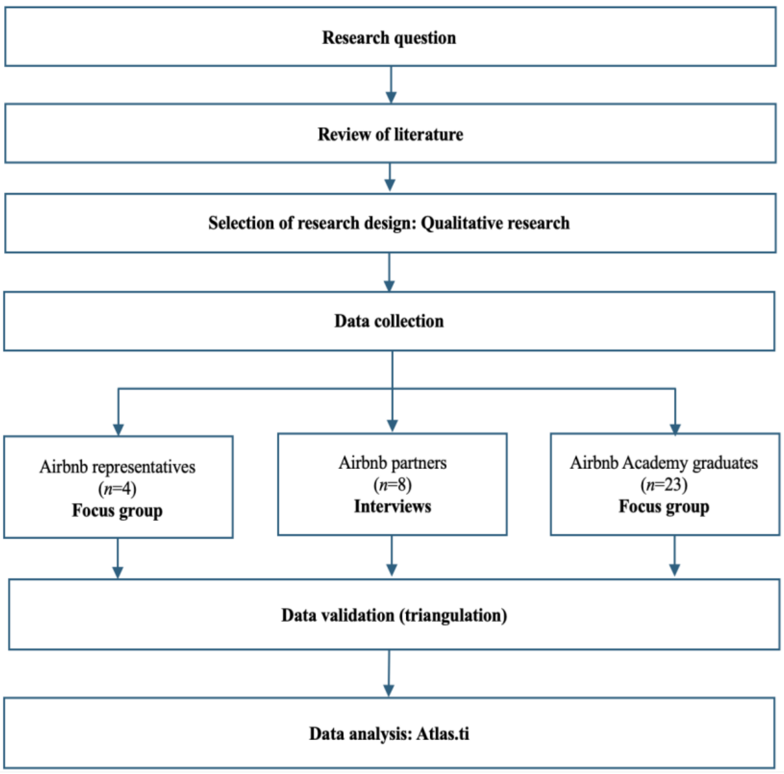

Figure 1. Summary of methodology

Table 1. Profile of Airbnb graduate participants

Participant code	Location	Type of experience	No. of employees	Alternative source of income?	Years in tourism?	Reason for starting business
GI1P1	Makopane	Traditional healer	None	Yes	1 year	Additional income
GI1P2	Makopane	Beautician	5	Yes	1 year	Saw Opportunity
GI1P3	Makopane	Caterer	1	Yes	1 year	Passion
GI2P1	Lapalala Wilderness School	Bee experience	None	No	1 year	Needed income
GI2P2	Lapalala Wilderness School	Nature guide	None	Yes, employed elsewhere	1 year	Saw opportunity
GI2P3	Lapalala Wilderness School	Accommodation	None	Yes, employed elsewhere	1 year	Saw opportunity
GI3P1	Mokopane	Catering	5 part time	None	2 years	To create employment for others. Make money. To follow passion
GI3P2	Mokopane	Cultural tours	1 fulltime, 2 parttime	None	+20years	Need for additional income. To follow passion
GI4P1	Lephalala	Guesthouse	4 permanent and 5 temporary	None	+ 5 years	Saw a need for accommodation
GI4P2	Lepalala	Accommodation	1 part time	None	+ 5 years	Needed money
GI5P1	Vaalwater	Transportation, offering shuttle services and tours	2 permanent, 3 part time	Construction	10 years	Passion
GI5P2	Vaalwater	Freelance tour guiding	Works alone	Safari tours	Since 2017	Passion, people requesting my services and needed the money
GI5P3	Vaalwater	Nature guide	Works alone	Employed somewhere else	Since 2017	Passion, vast knowledge and the need to share that knowledge.
GI5P4	Vaalwater	Traditional healer	Work alone	Construction, agriculture and livestock	2 years	A suggestion made by a friend
GI5P5	Vaalwater	Bird guide	Work alone		Since 2008	Lost employment due to covid-19
IIP1	Lephalale	Accommodation	Works alone	Tender	2 years	Saw opportunity
IIP2	Lephalale	Accommodation	Works alone	Government employee	2 years	Saw opportunity
IIP3	Lephalale	Accommodation/ Entertainment	Group of 3	Cultural centre	2 years	Income opportunity/ passion
IIP4	Thabazimbi	Accommodation	7	Yes, employee	4 years	Saw opportunity
IIP5	Thabazimbi	Tour operator	1 permanent, obtain students need internship when there is a need for extra hands	Tourism grading assessor	From 2019	Covid-19 Saw a gap in the market
IIP6	Modimolle	Experience - church	8 part time	Security company	4 years	Wanted a challenge
IIP7	Modimolle	Beauty therapist	1 permanent and 3 part time	None	8 years	Lost job
IIP8	Bela-Bela	Tour operator	3 part time staff	Social worker	6 years	Saw a gap and the increase in unemployment.

Table 2. Partner Interviews

Participant code	Organisation
PI1	District Municipality
PI2	District Municipality
PI3	District Municipality
PI4	PPGI
PI5	Laphalala Wilderness School
PI6	Women in Tourism
PI7	Waterberg Biosphere
PI8	Limpopo Tourism

RESULTS

Opportunities for entry into the tourism market

The Airbnb skills development program in the Waterberg involved boot camps hosted in 2021 and 2022 with interested and emerging entrepreneurs. These interventions are premised on the simplicity of the Airbnb concept, that is, anyone with available space and passion can create a listing on the app and be open to a vast potential market. Interviews with the Airbnb representatives, as well as their partners in this intervention, revealed a key activity undertaken was to publicise these boot camps to the six local municipalities in the Waterberg District. This involved industry associations sharing information amongst their members, and District representatives along with local tourism stakeholders hosting utilising several means to spread information on the Airbnb skills development programme. A representative of the District Municipality explained:

We have different structures in the district, you will have your tourism associations, and we also have email addresses, like a database of those who are active in the sector. So we email and we send to the associations to distribute them amongst their members. And also, I think, on the website as well [PI1].

In addition to the above, some participants broadened other strategies used to spread the information as widely in the district as possible including roadshows. These roadshows provided information on highlighting tourism, its role in the District economy, opportunities therein, and the Airbnb app. Individuals involved in these roadshows explained the importance of ensuring this information was digestible, resulting in translating these concepts into local languages (Sepedi).

One of the enablers inclusive tourism through Airbnb's skills development programme, was that it raised awareness on the scope of opportunities for local entrepreneurs and subsequently was able to widen the number of people that could be involved in the tourism sector. Table 1 above is a clear indication of this, there the program attracted participants who offer a diverse range of experiences, ranging from accommodations, tour guiding to traditional healers and beauticians. Indeed, both partners and participants alike commended Airbnb for raising awareness of the tourism value chain, as some of the participants had not previously considered themselves as operating in the tourism sector:

So some of those who are doing it, [such as] your beauticians they didn't know that they within the tourism value chain. So that knowledge [creation] part of it as well. And some experiences that they did, there's this guy who takes care of dogs, his love for dogs, he wouldn't have associated with tourism. So that's a new experience to offer [PI1].

Leveraging the availability of natural and cultural assets

Overwhelmingly, the natural and cultural features in the Waterberg have been described as unique features that offer several opportunities for local community members to leverage to generate a sustainable income within the tourism industry. Some participants mentioned the nature reserves and game farms as key attractions that draw people to the district municipality, and the opportunities that exist to tap into the tourist markets drawn by these attractions:

For me, I think it's the bushveld itself, number one. Number 2, it might not be most of the big five, but we have so many lodges around the game areas, some of them do have the big five. So, I find that it is attractive to the outside world because the things that we have most of the people don't have them outside there [GI2P3]

The natural landscape and diversity in the Waterberg District are arguably the primary motives for tourists' arrival to the district, and are one of the reasons for Airbnb's intervention in the Waterberg. While several participants acknowledged the game farms are privately owned and therefore exclusive in nature, Airbnb provided the opportunity to create experiences complementing the existing tourism offerings, with some graduates being listed as bird guides, nature guides, and indigenous game. In this regard, one of the partners (a representative from the District Municipality) recognised the important part Airbnb played in diversifying the tourism experiences offered in the Waterberg District:

But now, Airbnb opened up more opportunities to everyone. Before it was never inclusive because only one or two service providers [would] benefit. But now it can be a chain of people that are going to benefit because they're not only coming to sleep over and seeing the big five, [rather] they're coming over then having cultural experience, going hiking and then come back [to] sleep over, then the process starts again. That automatically then brings in some funds into the area which is what we've been looking for, to say we want the area to bring in more sustainable jobs [and] sustainable money. [PI3]

In terms of cultural assets, other participants made reference to the local culture as well as the township culture as appealing tourism features that could add, and enhance the tourism offerings in the region as such several participants utilised the natural and cultural assets in forming their tourism offerings.

This tied well in with Airbnb's mandate to provide graduates with the skills to harness these assets and thereby turn them into products that could be listed on the platform and offered to a global audience.

Simplicity in the Airbnb model/concept

Airbnb is designed to provide easy access for individuals to enter the market, by simply having a space and or a passion. Several participants applaud the Airbnb model/concept as it provides wide array of opportunities, with relatively few barriers. Participants elaborated that becoming an Airbnb host was much simpler and doable as opposed to starting a business which involves comparatively more time and financial resources. In fact, several partners have added that the Airbnb Academy was to provide the necessary resources to participants, enabling them to form their own venture by the end of the boot camp, therefore fostering sustainable livelihoods:

You have to just tell them that Airbnb is just helping people to make money on themselves that's the first point and the easiest way because you don't demand so much, because it's only to go somewhere and pay money for changing the house to residence to home sharing. So there is no anything that we paid you can just use what you have. That's how simple it is [GI1P1].

Related, some participants were of the view that this program came at the right time, as the country's tourism sector was emerging from COVID-19, and much of the population was battling the economic consequences of the pandemic and required new economic opportunities to rebuild their income, which was not possible through Airbnb. For instance, see the quote from GI2P2.

I think Airbnb came to the Waterberg at the right time. We just came back from COVID-19, people were frustrated, [and] a lot of people lost their jobs. So I believe that when they [Airbnb] came into the Waterberg they came to save a lot of people that did not have hope at that point in time. So the experience broadened the horizon, not just for me, but for other people who are residing within the Waterberg. Because Waterberg is isolated you in your little corner thinking you doing everything right until someone comes in look, there's something better you can do. So I think it was just a candle that we've been waiting for.

Tangibles benefits received from Airbnb

The second objective of Airbnb's intervention in the Waterberg District was to increase digital access for Airbnb participants. Many parts of the Waterberg region are remote, and coupled with load-shedding challenges, many tourism entrepreneurs are facing connectivity issues. An in-depth understanding of these challenges was further revealed in the recruitment process of participants for the Academy. As such, to address these challenges, Airbnb partnered up with Ikeja to increase connectivity in the Waterberg region. Furthermore, Airbnb also provided Wi-Fi routers and UPS devices for graduates of the Academy at the graduation ceremony, which enabled them to stay online even during load shedding. Relatedly, one of the first commendations participants spoke of when discussing the impact of Airbnb in the Waterberg is the provision of wifi routers and the UPS. This is due to the strenuous challenges posed by low connectivity in most parts of the region in addition to load shedding which is a national crisis. The quotes below from the Airbnb graduates showcase the importance of these benefits to business operations:

The support since we listed our experience Airbnb has been holding our hand from day one until today to the extent of getting us the UPS to deal with the loadshedding to the routers, we have WiFi 24/7 And that helps us to be always available because if you're offering a service it can be very frustrating to customers just trying to get a hold of you and you're not there. You can say oh loadshedding, oh network but we are always connected. So yeah, we are given a platform to go meet people from different places [II3].

Participant 2: They made it easier for me to operate because we were given routers and UPS. So that has made it easier for me to start and even run my business effectively as now I am able to work from home since I have 100% Wi-Fi access. In terms of loadshedding, my UPS is on standby [GI3P4].

While many tourism businesses have begun to adapt to the load shedding crises through the use of inverters and generators, these options are too expensive to invest in for smaller businesses (Muluh and Lekgau, 2023). As such, these tangible benefits were greatly appreciated for several reasons, including that they addressed the immediate challenges facing the tourism sector, addressed the long-standing challenges facing rural communities in South Africa (i.e., lack of connectivity), and allowed graduates to continue operating their businesses even during load shedding.

Changed perceptions of tourism and tourism entrepreneurship

The majority of the participants applauded Airbnb for changing the perception of tourism. Historically, tourism was undertaken by white people, and later the tourism sector grew to cater to international tourists, with the black domestic market being on the periphery. While there have been some efforts to change these stereotypes, these feelings of 'other linger in today's society. Interestingly, the participants explained that the Airbnb model changed perceptions on not only being tourism producers, but consumers as well, (for instance, *'especially for us blacks, we don't know much about tourism. We think tourism is for whites and people from overseas*' IIP7). In terms of being producers, some participants added that the requirements in starting a business were much less through Airbnb:

Most definitely. Everybody needs to be on Airbnb because I love the fact that it promotes village and township tourism and as well as encourages people to start with what you have [GI3P2].

Moreover, several participants mentioned the program to have changed their perception of venturing into their own enterprises:

Before the Airbnb academy, I had a lot of doubts. Venturing into the programme taught me that its okay to start at zero and gradually grow. The fact that I am not yet complete but I was able to get guests who were okay with my establishment, it gave me confidence, it gave me the motivation to push [II8]

Most people are misled in terms of starting businesses. They think you need to have lots of capital and resources. So, with Airbnb their moto is saying, start with what you have, start with that extra room in your house, don't think you need to have a guesthouse to get into the tourism industry. I think we need to get out there and inform people that you can start with anything that you have [II6].

From the above quotes, it is clear that Airbnb positively changed the mindset of the participants. Further, considering regions such as the Waterberg are typically characterised by close social networks, there is an opportunity to leverage the social change fostered by Airbnb to have a greater societal impact. In fact, many of the participants mentioned that through their own informal networks, they spoke positively about Airbnb and the opportunities in the tourism industry.

Destination marketing

One of the objectives of Airbnb's intervention was centered on creating a destination promotion campaign for the Waterberg region. As the Waterberg was primarily a mining region, having only transitioned to sustainable growth through inclusive tourism, the region has a low tourism presence. The study found the destination promotion campaign to have been executed in two phases, the first phase showcasing the work done by Airbnb (and partners) in driving inclusive tourism in the District, and the second phase centering on shining a spotlight on the broader Waterberg region and its tourism appeal, using Facebook, Instagram, and Twitter. Further, the interviews with Airbnb partners revealed their assistance in sharing the content on their social media pages, with the tagline 'Escape the normal' was consistently used in this social media campaign, which aimed to inspire tourists to diversity from the most commonly visited destinations and rather explore the Waterberg region. Moreover, this promotional campaign also had a strong domestic market focus, especially in considering the close proximity of the Waterberg to Johannesburg. Interestingly, the discussions with graduates of the Academy uncovered that marketing exposure was their greatest, forefront challenge. Many, if not all, of the participants stressed the need for more marketing and awareness of the tourism offerings in the Waterberg: Outside and within the community, we need to sell Waterberg biodiversity and the community that lives here. Like now, there are quite a few of our people who don't know much about birding. So, when I got myself into birding, I found out that it is only mainly white people who are interested in bird watching. I also found out that this is one of the fastest growing hobbies worldwide, also nature, in general, not only birding, even my industry mates, they can witness that most of the people interested in nature are white people. So, we need to sell it to the people so that they can get awareness about nature, tourism and hospitality.

Market access (apartheid legacies)

Several participants drew concern about the lack of transformation in the tourism market in the Waterberg region. Largely, these participants underscored that while the nature reserve and game farms were drawing tourists to the region, these assets, and leading lodges and guesthouses were white-owned. Further, there remain limited opportunities to tap into that market, which is explained in the quote below by G5P5:

Okay I feel that we're struggling to transition. The reason being, we have a lot of game reserves. So when a tourist books, let's say they go into a game reserve they book everything. So they move from the airport, they get a shuttle straight to the lodge or the reserve, [and] they do everything inside the reserve once they're done. Back to where they come from. So I feel that in the Waterberg we need more opportunities where tourists don't only go to the game reserves and go back to the airport. We need to start creating our little market the local economy where we know that there are activities. [GI5P5]

Additionally, some participants allude to racial issues and mistrust still prevails, thereby limiting opportunities for collaboration or working collectively. One partner had the following to say regarding this matter:

There is [a] lack of trust among the different groups and the different [races] are still. If I were to just call a spade a spade, those who are whites, they're able to support one another and those who are black, are limited in terms of accessing the market. And particularly because even if you if even if they can do they need to [make] a football effort to attain one guest. But if you are white and whether you got qualification or no qualification, it's not an issue. You are able to just get a guest that regardless of what your skills are, but in us as a society amongst black, we need to really do quite a lot, you need to show and prove that you have a certificate and skills that [are] required [PI5].

DISCUSSION

The current study sought to examine interventions made by Airbnb towards growing inclusive tourism. Many countries recognise this global imperative and it has subsequently drawn much attention. Using the Waterberg District as a case study, valuable insights can be derived from understanding inclusive tourism in the Global South. Inclusive tourism is typically understood as a multidimensional concept focused on access and equity. Regarding the former, the results suggest access to be an important component of inclusive tourism in rural communities such as the Waterberg. This is owed to the history surrounding these areas, and the continued exclusionary legacies prevalent. As such, driving inclusive tourism requires addressing the substantial prevailing barriers facing host communities in tourism. Interventions by Airbnb demonstrate the power of providing access in addressing (to a certain extent) these institutionalised barriers. In this case study, the findings showed the Airbnb Academy fast-tracking the entry of new local tourism producers through the practical component leading to the development of tourism businesses, marketing. Additionally, the Academy provided practical and tangible assistance (addressing current tourism challenges, specifically the energy crisis) and proved instrumental in not only opening up the sector to marginalised communities but providing some assistance in their tourism enterprise operations.

Further, the findings illustrated how Airbnb changed the perceptions of graduates. Traditionally, tourism has always been understood as an exclusive activity, tailored by white people, for white people and international guests. In many developing nations, this perception of tourism is further exacerbated in resource-rich contexts that are sometimes characterised by land ownership conflicts, and limited access to natural resources. By the end of the Academy, the study found these perceptions to have broadened, owing to the inclusion of more disadvantaged groups in the tourism supply. Certainly, Tapfuma et al. (2024) argued inclusive tourism must be understood beyond economic pathways, but encompass the influence of empowerment. In this study, this is related to changing societal perceptions, or perceptions of those that must be included. Primarily, the findings point to the simplicity of Airbnb, in that one can easily become a host thereby making great strides to positively alter views on tourism and tourism entrepreneurship. Importantly, while tourism is promoted to host communities (especially marginalised communities) as a sector with immense potential for socioeconomic upliftment, the confines of tourism participation (or lack thereof) have yet to be fully understood. In the current case study, this intervention was able to absorb more people who are not traditionally included in the tourism sector. This also changed the perceptions of the District government on tourism, its stakeholders, and the broader tourism value chain. This is especially important for a destination is that newly developing its tourism industry, to effectively manage and grow.

Moreover, the use of an Airbnb case study sheds light on the impact of the sharing economy model on inclusive tourism growth in the Global South. Generally, the literature is contested and complex regarding the impact of the sharing economy on income equality, as while some studies argue that it can reduce inequality by providing opportunities and income to marginalised and/or poorer communities, others suggest that it may exacerbate inequality within the majority of the population (World Economic Forum, 2016; Hussain et al., 2023; Li, 2023). Interestingly, the study on the Airbnb Entrepreneurship Academy showcased both viewpoints. In terms of providing income generation opportunities, the Academy demonstrated the numerous opportunities to leverage these natural and cultural resources with many of the participants leaning more toward the Airbnb Experiences which has some remarkable potential to bring in more individuals to become producers in the tourism industry. This allowed graduates to build complementary tourism experiences, such as bird guiding, nature walks, and consultations with traditional healers. However, the findings similarly highlight the difficulty these small enterprises faced after the Academy, particularly in terms of sourcing capital (with little to no collateral) to maintain and grow business operations as well as meet the standards of international guests, thereby concurring with studies that have shown that inequality, related to (in the case study) access, income, and power can hinder sustained inclusive growth and potentially increasing inequality by shifting more income and opportunities to better-off households and providers. This thereby causes a wider disparity in the power dynamics within the tourism environment. In fact, the closed-off nature of the tourism market (dominated by white South Africans), as shown in the results, confirms the assertion of Baird et al. (2017), that social structures and systems that perpetuate marginalisation, poverty, and access to resources often exhibit considerable resilience and reliance on established paths. The continuation of these deeply seated issues affects the ability of the marginalised communities to operate successfully in the tourism industry. These graduates would have to compete with long-established tourism businesses, thereby reducing their chances of success, and longevity in the tourism industry. Indeed, Scheyvens and Biddulph (2018) argue that direct attempts at challenging these social and power dynamics are battling the odds.

Inclusive tourism should encompass the active involvement of all tourism stakeholders (Nyanjom et al., 2018). In many developing economies, such as South Africa, inclusive economic growth is premised to be driven by public-private partnerships, resulting in organisations such as PPGI seeking ways to connect government authorities with members of the private sector in collaborative relationships geared towards meaningful impact. The current showcased Airbnb’s contribution towards fostering inclusive tourism through its partnerships, which resulted in the Airbnb Academy as well as destination marketing which has a role in changing the tourism map to involve new places and people. Indeed, private-public partnerships hold great potential, especially in leveraging the strengths of private-sector partners. In this case, Airbnb has experienced a rapid global expansion and has become a well-known and relatively trusted platform (Nyanjom et al., 2022), and the findings demonstrated how the company was able to leverage its global scale of the platform to showcase newer and less developed (and visited) destinations. Interestingly, while the marketing campaigns positively depicted the community, culture, and relationship with nature, these campaigns took a centralised planning approach led by Airbnb. This demonstrates a risk in the leveraging of public-private partnerships in inclusive tourism, more especially in cases where one stakeholder leads it. Relatedly, while Airbnb was able to reach a large number of people through its marketing campaigns, the limited tourist arrivals to the region were a commonly mentioned challenge highlighting that progress toward inclusive tourism requires time and an equitable multi-stakeholder approach.

CONCLUSION

The current study explored the role of Airbnb, specifically the Airbnb Entrepreneurship Academy in the promotion and development of inclusive tourism, using the Waterberg Region of South Africa as a case study site. In conclusion, the study found that the Airbnb Entrepreneurship Academy significantly raised the scope of opportunities for tourism entrepreneurs in the Waterberg, increasing the number of individuals involved in the sector.

Along with this, the Academy provided opportunities for locals to create experiences that complement existing tourism offerings in the regions, diversifying the current offering. The simplicity of the Airbnb model allowed participants easy access to launching their own tourism businesses, providing them with the necessary resources to create successful tourism ventures. The Acadamy furnished local participants with tangible products supporting entrepreneurship such as Wifi routers and provided market access to those previously excluded from tourism activities.

The literature on inclusive tourism and Airbnb’s contribution (as well as its operations within tourism destinations) have been largely centred on developed and urban spaces. Airbnb’s involvement in the Waterberg makes an interesting case study owing to the expansion of this global company into rural areas not developed in tourism but has the potential to grow in the sector. As such, the study makes a valuable contribution to literature as it broadens the scope of inclusive tourism research, particularly focusing on important matters such as providing access to marginalised communities and challenging power dynamics. Several lessons can be learned from this case study, including that inclusive tourism, more especially to address socio-economic challenges in destinations must adopt a multi-stakeholder approach, especially through private-public partnerships. Indeed, the approach to driving inclusive tourism growth must itself be inclusive of a myriad of voices, more especially those which have been silenced and/or marginalised.

This study presented several ways in which the sharing economy is able to provide opportunities for access in marginalised communities, however, it also highlighted when this sharing economy is introduced in rural spaces, the socioeconomic challenges affect the ability of marginalised communities to adequately and competitively operate. As such, inclusive tourism interventions, as such Airbnb’s, should involve economic, spatial, and sociopolitical integration and subsequently be context-driven. It is recommended that to grow the extent to which Airbnb can assist in the development of inclusive tourism in the future, partnerships be extended beyond the Waterberg and that focus is placed on inclusive tourism capacity building for local stakeholders through an inclusive tourism development strategy. Similarly, future research needs to consider the role of stakeholders and formalised partnerships in driving inclusive tourism.

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PRESERVING CULTURAL HERITAGE: A CASE STUDY OF CULTURAL TOURISM SUSTAINABILITY DEVELOPMENT IN GIRSANG SIPANGAN BOLON, INDONESIA

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Abstract: The objective of this study is to assess the sustainability of cultural aspects within sustainable tourism and to investigate the current conditions and procedures involved in preserving cultural heritage in three selected tourist destinations in Girsang Sipangan Bolon District, North Sumatra Province, Indonesia. This research employs a mixed-methods approach, consisting of quantitative data gathered from questionnaires distributed to 120 respondents (local tourists and residents) and qualitative data obtained through interviews with relevant government officials and direct observations at the study sites. The study's findings reveal the successful preservation of Girsang Sipangan Bolon's culture, which continues to impress many people. However, it is crucial that all stakeholders continue to safeguard local culture to ensure its ongoing preservation. It is hoped that this research can serve as a reference and a consideration in developing cultural tourism, as well as raising awareness of the region's extraordinary cultural diversity. This should be enhanced in terms of management and promotion, extending from the local community to the international level, positioning this area as a key cultural tourism destination within the Lake Toba region, North Sumatra, Indonesia.

Keywords: Culture, Tourism, Sustainable, Tourist destination, Sustainable, Traditional, Cultural Heritage

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INTRODUCTION

The implementation of economic, social, and environmental aims can enhance competitiveness through sustainable tourism development. However, obstacles continue in the way of changing environmental conditions, increasing consumer motivations, and altering behavior to promote more sustainable tourism services (Streimikiene et al., 2020). Sustainable tourism development attempts to manage tourism using sustainable principles to guarantee a long-term balance of economic, social, and environmental advantages (Pforr and Dirk, 2021). The goal of sustainable tourism development is to promote local development and improve tourism's role in preserving natural resources by finding a balance between economic growth and environmental protection (Sharma and Jain, 2020) and also reflecting economic growth that combines ecological balance and social growth while preserving cultural integrity, diversity, and life support systems (Mateoc-Sîrb et al., 2022). It also promotes local culture and products, influencing tourist satisfaction through motivation, perception of the destination, and travel satisfaction, and establishing policies that lead to jobs for the locals (López-Sanz et al., 2021). Sustainable tourism ensures that natural, social, cultural, and environmental resources should be passed down to future generations (Arini and Mardianta, 2022). It includes destination standards that address social and economic sustainability, environmental sustainability, cultural sustainability, and sustainable management (GSTC, 2019; Kemenparekraf, 2021; UNWTO, 2017). Not only does sustainable tourism improve destinations, but the necessary network

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topology can be described using social networks (Naja et al., 2021). Because of these advantages, sustainable tourism development could be implemented in any tourist destination, particularly those related to aspects, to preserve culture and enhance the prosperity of target destinations, specifically cultural and social influence (Falatoonitoosi et al., 2021).

Tourism planning that aligns with the genius loci of cultural heritage places can be guided by their perceived essentialism and intrinsic value, ensuring its societal acceptance and durability (Roszczyńska-Kurasińska et al., 2021). Cultural heritage may play an essential role in sustainable development, addressing economic, social, and environmental concerns through concrete and intangible components (Giliberto and Labadi, 2021). Sustainable integration between cultural heritage and tourism requires 15 key factors, such as community engagement, education, authenticity, sustainability-based tourism management, integrated planning, and stakeholder participation (Loulanski and Loulanski, 2011). Therefore, sustainable cultural tourism is the ideal model for local tourist development globally, emphasizing authentic qualities and distinctive components of a destination's cultural identity (Parusheva, 2023).

By exploring historical literature, many studies emphasize the importance of historical and cultural tourism (Purnamawati et al., 2022; Wijaya et al., 2022). The region and climate have a close relationship with cultural development, as the physical state of a region often influences the psychological state and behavior of its society (Prayitno et al., 2024). For instance, cultural tourism significantly impacts the local economy in Ban Wangka Village, Thailand, and a religious-based ecotourism village in Bali, both closely linked to the impact of cultural change (Sangchumnong and Kozak, 2018). As a result, this study will specifically focus on the development of cultural heritage in the context of sustainable tourism, dividing it into three aspects based on literary reviews: (1) cultural heritage, (2) cultural artifacts, and (3) the protection of cultural assets. These aspects will serve as a reference for assessing the sustainability of cultural heritage development in Girsang Sipangan Bolon district, North Sumatra, Indonesia.

Studies on the cultural aspects of sustainable tourism at Girsang Sipangan Bolon are still rare. Therefore, this study aims to improve understanding of cultural sustainability in the tourism sector. We anticipate that this research will bridge the scientific gap on sustainable cultural aspects within the framework of sustainable tourism. The study comprehensively examines culture as a major tourist attraction in Girsang Sipangan Bolon district, North Sumatra, Indonesia.

LITERATURE REVIEW

1. Elements of Cultural Sustainability

Many studies have examined the link between cultural tourism and cultural heritage preservation (Hilary du et al., 2023). Some cultural heritage aspects discussed in other research related to cultural sustainability describe supporting elements of cultural sustainability, such as cultural heritage, cultural artifacts, and protection of cultural assets (de Oliveira et al., 2024; Fatimah et al., 2019; GSTC, 2019; Kemenparekraf, 2021; Pop et al., 2019; Sangchumnong and Kozak, 2018; UNWTO, 2017; Yeniasir and Gökbulut, 2018). In this research, these three aspects become benchmarks or indicators in assessing the sustainable development of cultural heritage at the research location.

1.1. Cultural Heritage

Cultural heritage must be passed down to future generations to preserve a community’s or area’s identity. That is why cultural heritage tourism is linked to cultural and heritage tourism (Sangchumnong and Kozak, 2018). By maintaining a cultural legacy through cultural tourism, a generation can continue to live their life and cherish their culture and customs. The protection of cultural heritage requires the improvement of certificates of origin, a limitation on categories of objects that warrant additional safeguards, and the unconditional return of stolen or unlawfully exported objects to their original states (Vrellis, 2019). Several components support the presence of cultural heritage, namely the respect between communities and cultural heritage (UNWTO, 2017), cultural objects and historical buildings Managed by the local community (Jagielska-Burduk and Stec, 2019), some tradition, Art, Music, Language, Gastronomy, Place identity, Local specialities, Cultural festivals (GSTC, 2019; Kemenparekraf, 2021), and Tradition and oral, Expression, Language, Performance art, Social practice, Rituals and festive events, and Traditional crafts (UNESCO, 2022).

1.2. Cultural Artifacts

Cultural artifacts can be rituals, ceremonies, symbols, and stories, which are visible components of organizational culture (Barnhill et al., 2020). Cultural artifacts can be oral histories as well as visual objects. Narratives such as drawings and specific signals serve as a platform for people to express their fantasies, stories, and dreams. It is similar to the images on cave walls worldwide (Rahman, 2013). Artifacts of organizational culture include rituals, ceremonies, symbols, and stories, which effectively summarize the organization's intrinsic behavior (Barnhill et al., 2020). Cultural artifacts are associated with the most comprehensive data regarding their historical background, traditional configurations, and places of origin (Barnhill et al., 2020). Cultural artifacts are associated with the most comprehensive data regarding their historical background, traditional configurations, and places of origin (Lindsay, 2012).

They can take on specific meanings and serve as a source of identification, understanding, and personal application (López et al., 2015). Archaeological sites represent the combination of the natural sciences and the humanities, with two components: culturological (artifacts) and natural-historical (eco-facts, nature-facts, cultural-natural objects) (Bochkarev, 2021). In this issue, archaeology is one study that shows how cultural artifacts could be exhibited by leaving history (GSTC, 2019; Kemenparekraf, 2021; UNWTO, 2018). Archaeological sites require conservation and exhibition principles, including site planning, conservation methods, and restoration techniques, to protect and display artifacts (Zeren, 2022). Based on these publications, several components of cultural artifacts can be concluded: cultural exhibitions, history, and historical objects. Cultural artifacts, which are historical relics, have values of cultural importance.

1.3. Protection of Cultural Assets

By safeguarding cultural assets, we enable communities to continue educating others and making money from their artistic expertise. efforts can occasionally result in the vulnerability of heritage or its destruction (Rosén, 2020). Popular tourist destinations regularly contribute a percentage of tourism revenue to help preserve the area's cultural treasures (GSTC, 2019; Kemenparekraf, 2021). To protect the cultural assets, several aspects must be fulfilled, such as preserving culture, economic opportunity for the local community, and local community knowledge (UNWTO, 2017), how to keep tourism in the market, linking small sites, Improving management and conservation (Snowball and Courtney, 2010).

It was concluded that there are several components of protection of cultural assets, such as rehabilitation of cultural assets and conservation of cultural assets. Table 1, presents the results of several previous studies conducted and summarized in the literature review, the cultural tourism component in this study is cultural heritage, which consists of cultural traditions, rituals, cultural festivals, place identity, and local specialties. Then, there are cultural artifacts, which consist of cultural exhibitions, history, and historical objects. Finally, protecting cultural assets consists of rehabilitating and conserving cultural assets. These sub-variables will be used as indicators, and later, a parameter will be developed that shows sustainable tourism in the Girsang Sipangan Bolon district.

Table 1. Variables of Cultural Tourism Elements (Sources: Authors analysis)

Aspects of Sustainable Tourism	Elements of Cultural Tourism	Research variable component
Culture Aspect	Cultural Heritage	▪ Cultural traditions ▪ Cultural rituals ▪ Cultural festivals ▪ Place identity ▪ Local specialties
	Cultural Artifacts	▪ Cultural exhibition ▪ History ▪ Historical objects
	Protection of Cultural Assets	▪ Rehabilitation of cultural assets ▪ Conservation of cultural assets

METHODOLOGY

This study was conducted in Girsang Sipangan Bolon (Figure 1), located in Simalungun Regency district in North Sumatra Province, Indonesia. This district is on the shores of Lake Toba and is one of the entrances to Samosir Island. The Girsang Sipangan Bolon District has many tourist destinations like Aek Nauli Elephant Conservation. Tigarihit Village has become a tourist destination because of its "colorful village" on Lake Toba's outskirts.

In another area, Parapat Village is one of the tourist destinations in Simalungun Regency, which has one of the crossing ports to Samosir Island and is one of the areas with various lakeside tourist centers. One of the popular tourist destinations is Bebas Beach in Parapat, which is often visited as one of the open spaces and as a public park.

Figure 1. (a) Research Location in Indonesia, (b) Girsang Sipangan Bolon District, (c) Aek Nauli Elephant Conservation, (d) Bebas Beach in Parapat, and (d) Warna-Warni Village in Tigarihit (Source: Figure a, b, c GoogleEarth and Figure d, e, f by Author)

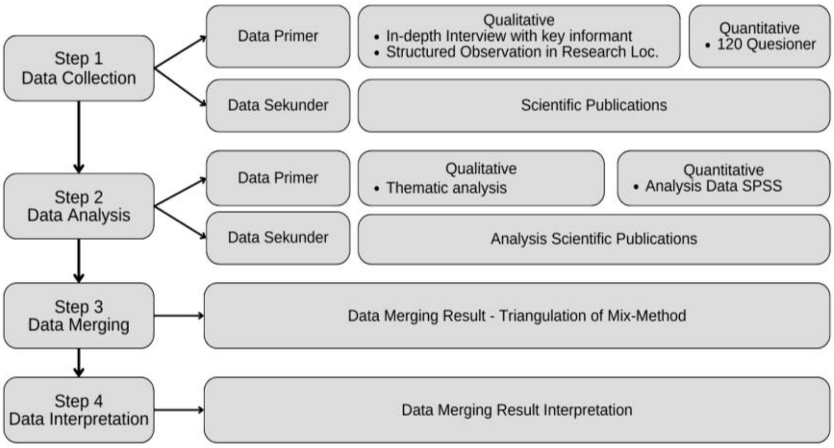

Figure 2. Flowchart of Methodology (Sources: Authors analysis)

This study uses a mixed methods approach, integrating qualitative and quantitative techniques commonly employed in comparable studies. For a better understanding of a problem and to enable a wider reach in empirical study (Convention et al., 2020). In the qualitative method, in-depth interviews and direct observation were carried out. The process of determining the interview sample applies the purposive sampling method (Ginting and Michaela, 2020; McCrudden and McTigue, 2019), the research used interviews to obtain the results of respondents' perceptions about the uniqueness of environmental elements in sustainable tourism on Samosir Island consisting of stakeholders (local government), tourism experts, tourist attraction managers, local communities, local tourists, and Foreign tourists (Zhao et al., 2024), studying the evolution of sustainable tourism development through Chinese drama, also used in-depth survey methods and interviews with economic experts, tourism management, ethnographers, and cultural heritage administration who focused on drama. The researched the development of cultural tourism in Ban Wangka Village, Thailand, using in-depth interviews with 50 informants from 5 tourism policy stakeholder groups (Sangchumnong and Kozak, 2018). Following previous research, the key informants used in the present research are stakeholders and local government, tourist attraction managers, Pokdarwis (Tourism Awareness Group), hotel managers, Micro, Small Medium Enterprise (MSMEs) managers, and local communities. For the quantitative method, a questionnaire survey was carried out by selecting respondents using the Slovin method, which is often used because it has a straightforward formula and only requires information on the number of residents in the area to be studied (Purnamawati et al., 2022). Respondents are selected people designated as data sources (Sinulingga, 2018). This research selected a sample of 120 individuals from the total population in Girsang Sipangan Bolon District, which included the regional government, local communities, and tourists. The survey employed a Likert scale, where a score of 1.00 indicates a low quality and strong disagreement with the statement, and a score of 5.00 indicates a high quality and strong agreement with the statement.

Data analysis was carried out in 2 stages, namely for qualitative data, case study analysis with a presentation of the conditions resulting from observations, and the results of interviews with key respondents. Meanwhile, quantitative data obtained through the questionnaire was processed using SPSS, and both of the results were analyzed using triangulation. Secondary data was also collected from archives such as journals, government publications, official government websites, census data, official sites, and literature studies that have been verified.

RESULTS & DISCUSSION

1. Analysis of the Sustainability of Cultural Tourism – Cultural Heritage

1.1. Cultural Tradition

There was a total of 120 respondents answered the survey, consisting of 52.5% female and 47.5% male. This questionnaire is intended for respondents consisting of the public local residents and tourists in the Girsang Sipangan Bolon sub-district.

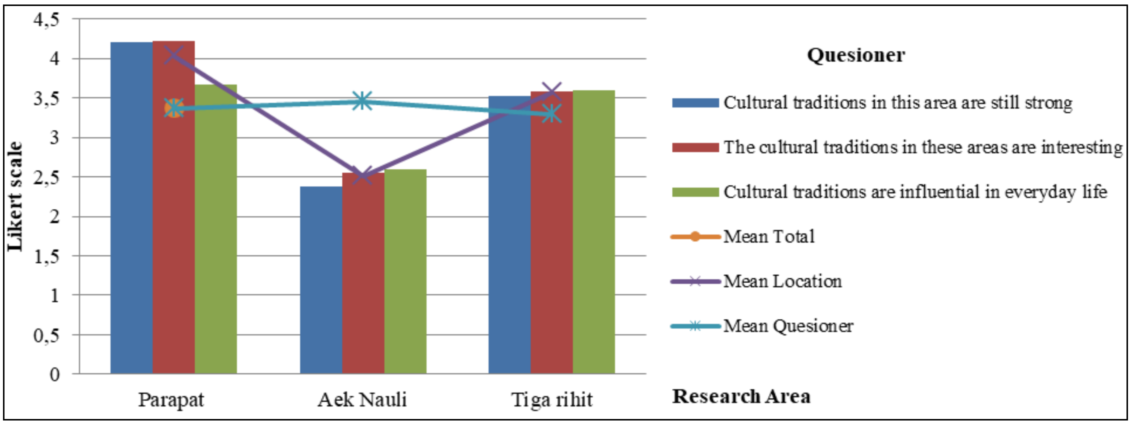

Figure 3. Response to Cultural Traditions (Sources: Authors analysis)

Based on the results of the questionnaire in Figure 3, it can be seen that the respondents disagree that Aek Nauli has a solid cultural tradition (2.38). In contrast, respondents agree that Tigarihit (3.53) and Parapat (4.2) have strong cultural traditions. The local tribe at Girsang Sipangan Bolon is the Simalungun tribe, which lives in the Simalungun area. From the questionnaire results, respondents also agreed that Tigarihit (3.58) and Parapat (4.23) have fascinating cultural traditions.

It can be concluded that the cultural tradition in Girsang Sipangan Bolon is quite good (3.37). Local people still pass on their traditions to their children. They introduce the Simalungun tradition through traditional events, such as the *tor-tor* dance competition (Figure 4a) at Bebas Beach in Parapat. In addition, there are also physical things such as *ulos* (Figure 4b), *hiou*, and *suri-suri*, a traditional cloth from the Simalungun tribe. This finding is also supported by the statement from the Head of the Economic and Development Department of Girsang Sipangan Bolon District: "*We have instilled in the teenagers now that they should remember their Simalungun tradition through their teachers or parents, and not only to remember but also to learn to love our cultural products*." Results also show tourists' interest in the cultural traditions of Simalungun indicating that Girsang Sipangan Bolon still has traditions and culture that are still preserved.

Figure 4. (a) Tor-tor Dance and (b) Ulos (Sourse: a.author & b.googleImage)

1.2. Cultural rituals

As the results show in Figure 5, respondents in Aek Nauli disagree that certain taboos or prohibitions exist in this area (2.32). In Tigarihit (3.37) and Parapat (3.42), the questionnaire respondents agreed that some specific bans exist. It can be concluded from these three places that cultural rituals are typical (2.67). The observation results also showed that no statue or other worship object was found in the area of Girsang Sipangan Bolon.

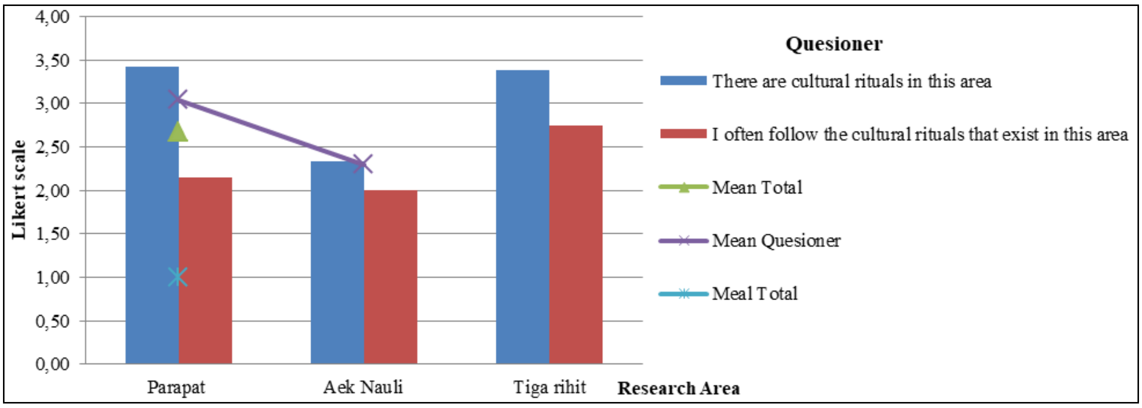

Figure 5. Responses to Cultural Rituals (Sources: Authors analysis)

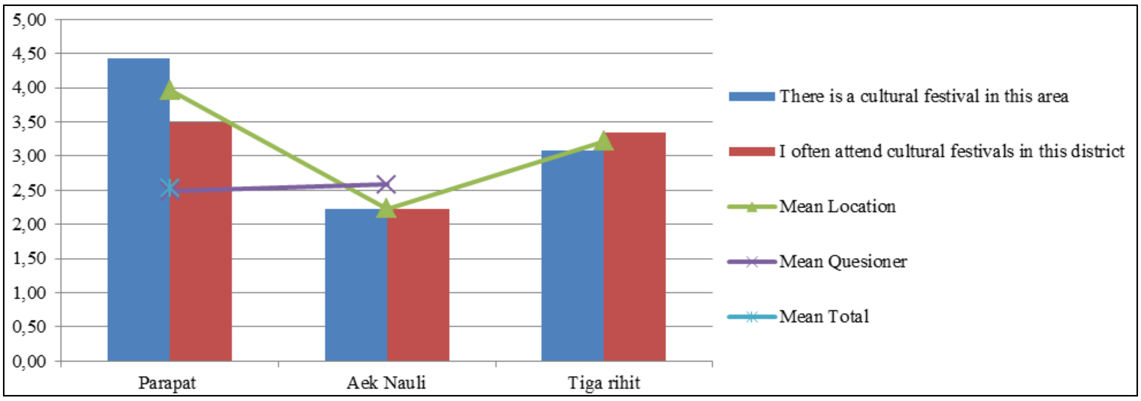

Figure 6. Responses to Cultural Festivals (Sources: Authors analysis)

1.3. Cultural Festivals

In the questionnaire statement of Figure 6, the respondents disagree that there is some cultural festival in Aek Nauli (2.22). However, the cultural festival in Tigarihit is average (3.1), and the local community and tourists in Tigarihit follow the existing festival (3.35). The Tigarihit community presented their unique food, namely *Dolung-dolung*, as shown in (Figure 7a) and Saok Beans in (Figure 7b). However, it is best to use as a souvenir because it is easy to carry anywhere. This is reinforced by the statement of the Aksari hotel manager located in Girsang Sipangan Bolon.

Figure 7. (a) Dolung-dolung and (b) Saok Beans (Sourse: author)

"Yes, there is a special food they should try because it is only available here and nowhere else. Instead of promoting, the sale of saok beans can help the economy of the Tigarihit community." However, respondents strongly agreed that cultural festivals still exist in Parapat (4.42), and Parapat respondents often attended cultural festivals on Parapat beach (3.5). It can be concluded that the cultural festival is average (3,13). The festival may attract tourists not just because of the handicrafts but also because of the regional specialties and other attractions (Sugiyarto and Amaruli, 2018).

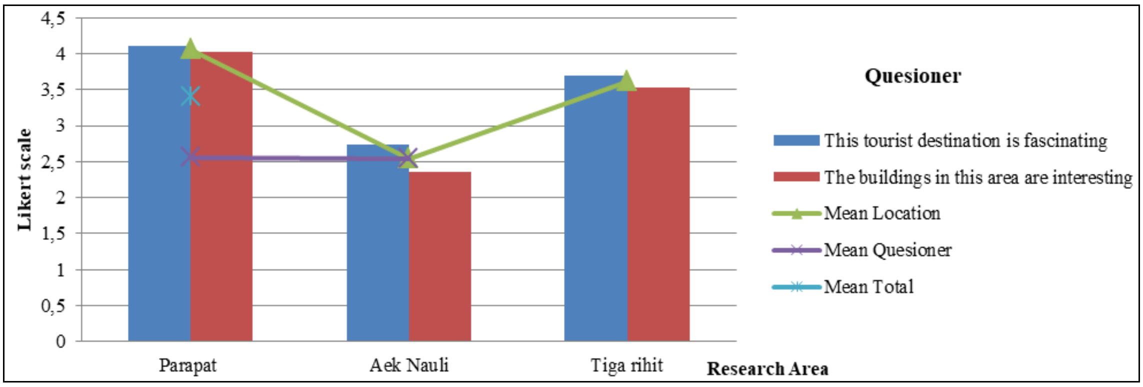

Figure 8. Responses to Place Identity (Sources: Authors analysis)

1.4. Place Identity

From the questionnaire statement in Figure 8, respondents assessed that Aek Nauli Elephants Conservation Camp is quite average (2.75). Some respondents disagreed about exciting buildings in the Aek Nauli area (2.35).

Figure 9 (a) Aek Nauli Elephant Conservation Camp marker board and (b) Aek Nauli Elephants (Sourse: author)

Based on the observation results, Aek Nauli Elephant Conservation Camp (ANECC) is relatively easy to find because it is on the side of the main road on Parapat Street and is equipped with vast and clear signage (Figure 9a). The specialty of this area is the elephant itself (Figure 9b). However, some Tigarihit respondents agree that this area is attractive (3.7), and the buildings in Tigarihit are also interesting (3.52).

The village is said to be colorful because this settlement is filled with various colors. Not only are the streets (Figure 10a) but the bright walls and roofs of the community's houses can be seen in (Figure 10b).

Figure 10. (a) Street condition in Tigarihit and (b) Local houses in Tigarihit (Sourse: author)

Figure 11. (a) the Condition of Bebas Beach and (b) Toba Lake in Bebas (Source: author)

Respondents in Parapat agreed that this area is attractive (4.1), and the buildings in this area are also beautiful (4.0). The conclusion from the three tourist destinations is that the identity of the place in Girsang Sipangan Bolon is good (3.40). From the results of an interview with one of the respondents in Parapat, Bebas Beach, Soekarno's guesthouse, and Lake Toba are Parapat's identities. Tourists can enjoy the beauty of Lake Toba (Figure 11b). The condition of Bebas Beach in Parapat shows that the place is being treated (Figure 11a). The diverse, unique, and attractive place identity in Girsang Sipangan Bolon serves as a key appeal that can enhance tourist visits. With the identity of the place, tourists will come. Due to its distinctiveness, the owned location will stand out from other locations (Wang and Xu, 2015).

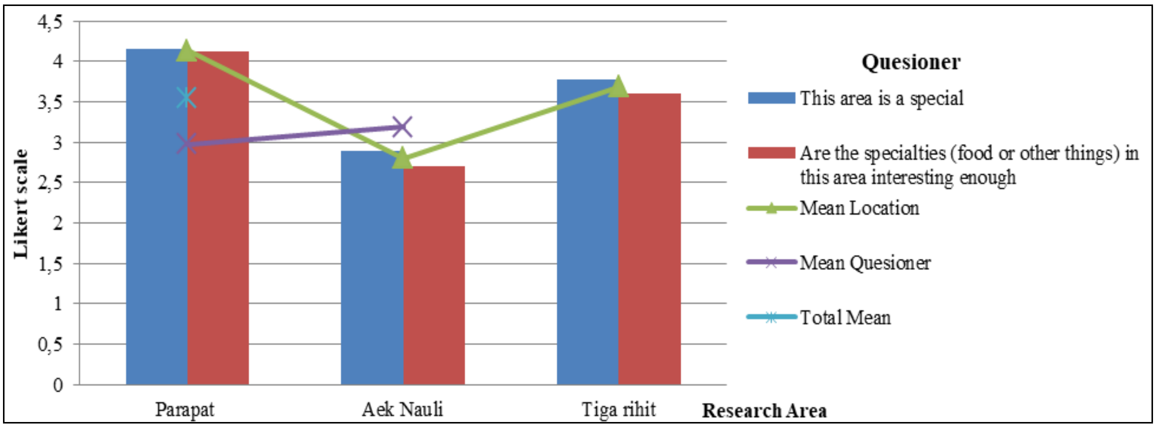

Figure 12. Respondents' Opinions about Local Specialties (Sources: Authors analysis)

1.5. Local Specialties

With the arrival of tourists, instead of enjoying tourist attractions, the place must own authentic souvenirs. Local specialty items are products with unique qualities originating from specific regions, elevated to luxury status through historical or popular storytelling (Kim and Lee, 2021).

According to Figure 12, the respondents feel that Aek Nauli is not very special (2,9), and the uniqueness of this direction is also typical (2,7). The observation results indicate that Aek Nauli Elephant Conservation Camp lacks cultural significance as a tourist spot. However, the respondents agree that Tigarihit is unique (3.77) and has certain peculiarities (3.6). Tigarihit has local specialty foods such as *saok* beans and dolung-dolung.

Wrapped in bamboo leaves, Dolung-dolung (Figure 13a) *combines rice, brown sugar, and coconut. Not only that, but the way it is sold is also unique.* Unfortunately, there are no more *Dolung-dolung* sellers like that. If there were still Dolung-dolung sellers, many tourists might be intrigued by their distinctive sales approach. Next, Figure 13b illustrates the production process of Saok Beans. *Saok* beans also have similarities with *Sihobuk* beans. Sihobuk beans roast with ordinary sand, while Saok beans roast with Lake Toba sand.

Figure 13. (a) *Dolung-dolung* Manufacturing Process and (b) *Saok* Bean Manufacturing (Source: author)

Respondents agreed that Parapat is a unique place (4,15) and Parapat also has local specialties (4,12). The conclusion is that the regional specialties in Girsang Sipangan Bolon are good (3.54). As the Head of the Economic and Development Department of Girsang Sipangan Bolon District said:

"This batak culture is non-physical and physical, such as ulos, hiou, and suri-suri. There are even special Simalungun foods, such as nabinatur dayok and traditional medicinal ingredients".

From the information obtained, only two people who make the *ulos* in Parapat are left, and so far there is no successor to the *ulos* maker. The local specialty in Girsang Sipangan Bolon is the specialty of Simalungun culture. It could be more specific where the specialty is made, such as *Dolung-dolung* and *Saok* Beans made directly by local Tigarihit residents, and the making of *Ulos* Cloth that gets in the Parapat. Local specialties are distinctive foods exclusive to a particular area, serving as tourist attractions and enriching the region's culture (Dalem, 2021). Therefore, local specialities are needed to make them unique from the area and attract tourists to try new things.

2. Cultural Artifacts

Cultural artifacts are indicators of communication that cultural groups employ to discern identity in their communications. Therefore, cultural items might be the most attractive tourist attractions (Isnaini et al., 2022; Rahardjo et al., 2022). Cultural artifacts are also human-made objects that reveal historical information about cultural values, beliefs, and traditions, and can enhance the learning experience by fostering historical thinking and multicultural literacy (Chung, 2009). Cultural heritage artifacts embody human identity and provide evidence of past existence and activities over time (Fistos, 2022), Cultural artifacts reflect identity, attract tourism, and offer historical insights, enhancing learning by revealing past human activities and values, The artifacts are categorized into three sections: Cultural Exhibitions, History, and Historical Objects.

2.1. Cultural Exhibitions

Cultural exhibitions are venues that provide services and experiences designed to foster a sense of cultural unity among participants (Zeng and Uo, 2019). Based on the results of interviews and observations, there are no cultural exhibitions in Girsang Sipangan Bolon. There is a need for Simalungun cultural exhibitions here. In an interview with the Head of the Economic and Development Department of Girsang Sipangan Bolon District, the statement: " *Girsang Sipangan Bolon could not host any cultural exhibitions. This place does not have any cultural exhibits. However, sometimes there are traditional performances like the Simalungun Tor-tor dance.*"

2.2. History

One thing that attracts tourists to a place may be its history. Tourist attractions can be created by excavating, protecting, and sustaining cultural treasures (Simamora et al., 2016). Cultural history involves examining prehistoric social, political, economic, and religious behaviors through material culture, offering a productive and adaptable approach to archaeology (Richard, 2016). Figure 14 states that the respondents in Aek Nauli feel familiar with the history of Aek Nauli Elephant Conservation Camp and are not too interested in hearing the history of this area. Unlike Tigarihit, respondents agreed that Tigarihit has a history (3.45) and wants to hear this place's history (3.17).

According to Pokdarwis Tigarihit's interview results, Tigarihit Village means *pasar pasir*, or in English, it is called a sand market (Figure 15a). The respondents concurred with the final statement, stating that Parapat has a history (4,17) and expressed a desire to learn more about the history of the location (3,8).

It can be inferred that the history of Girsang Sipangan Bolon is conventional (3,33). Soekarno's guesthouse (Figure 15b) is the most historically significant structure in Parapat. It is evident from the history of Girsang Sipangan Bolon that each region in the area has its own unique narrative. Historical tourism attraction in specific regions may be influenced by historical value, historical history, character, and cultural heritage (Wijaya et al., 2022).

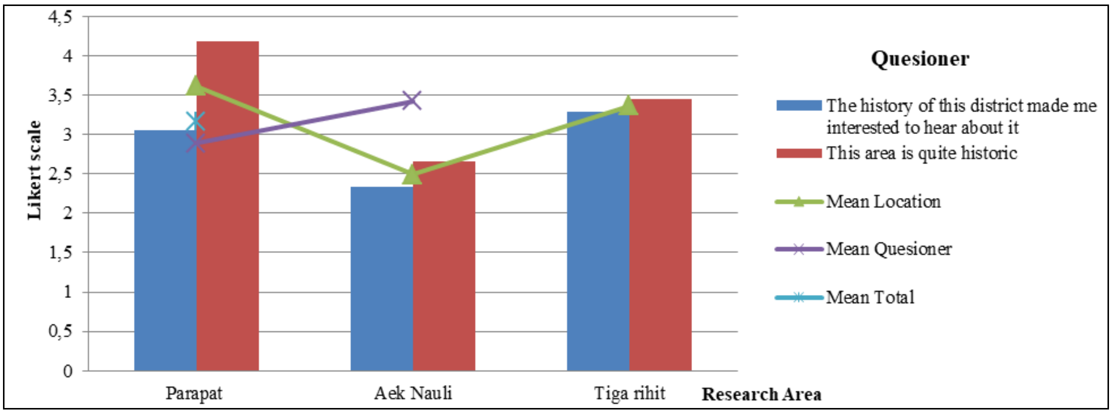

Figure 14. Respondents' Opinions about History (Sources: Authors analysis)

Figure 15. (a) Tigarihit Condition and (b) Soekarno's guesthouse in Parapat (Sourse: author)

2.3. Historical Objects

Historical objects are historical relics that must be protected and preserved. This effort should be done by the government and even the surrounding community (Tuppang, 2020). Historical objects are items that have been preserved or historically designed, highlighting the importance of analyzing building height composition for improved design integration (Sobczyńska et al., 2023). The presence of these relics can attract tourists to see what old things look like.

Table 2. Respondents' Opinions about Historic Objects

No.	Questions	Location			Mean
		Aek Nauli	Tigarihit	Parapat	
1.	In this area, some objects have historical values	1.65	1.9	2	1.85
Mean		1.65	1.9	2	1.85

Table 2, indicate that the respondents do not agree with this statement. In Girsang Sipangan Bolon (1.85), there are historical objects. Historical relics in Girsang Sipangan Bolon no longer exist and have even become extinct. The Simalungun Museum, located in Pematang Siantar, houses relics of Simalungun history. An interview with Aksari's hotel manager confirms this assertion Girsang Sipanganbolon writes, *"Historical things are extinct and no longer exist.things here. Maybe you can go to the Simalungun museum, but it's far from here."*

3 Protection of Cultural Assets

3.1. The Rehabilitation of Cultural Assets

Cultural asset rehabilitation includes conservation, restoration, and enhancement, with smart sensors, data mining, and artificial intelligence playing crucial roles (Talamo et al., 2020). Restoration of a building's form is known as rehabilitation of cultural assets. This procedure is analogous to fixing a broken part of the structure.

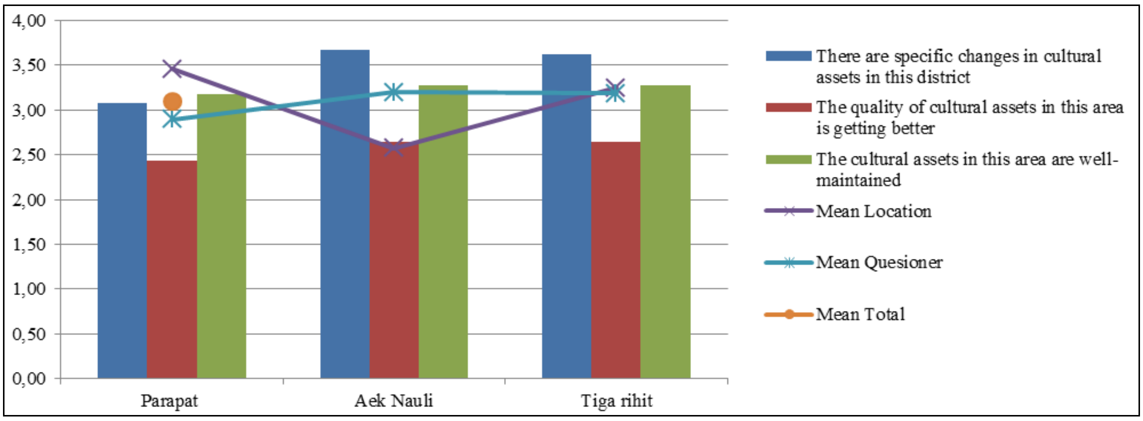

Figure 16. Respondents' responses about rehabilitating cultural assets (Sources: Authors analysis)

It can restore the architectural form and function properly (Pereira et al., 2021). Based on Figure 16, the average respondent did not agree that there were specific changes in Aek Nauli (2.42). Respondents also disagreed that the quality of cultural assets is improving (2.65) and that the quality of cultural assets in Aek Nauli is maintained (2.64). Unlike Tigarihit, respondents agree that there are changes in Tigarihit (3.17) and that the quality of culture is maintained (3.27). Lastly, Parapat respondents also agree that there are changes in this area (3.07), the quality of cultural assets in Parapat is getting better (3.67), and the quality is maintained (3.62). Then, it can be concluded that Girsang Sipangan Bolon has average cultural asset rehabilitation (3,09). The colorful village, or *Kampung Warna-warni* of Tigarihit before rehabilitation, was just an ordinary settlement, and there was nothing special about it.

However, the local community agreed that Tigarihit should be made into a tourist spot that has its uniqueness. The house has many colors, and Warna-warni village has a good photo spot direct to Lake Toba (Figure 17a). After the rehabilitation, the current condition of Bebas Beach is better and quite comfortable for visitors (Figure 17b).

Figure 17. (a) Photo spot in Tigarihit and (b) Bebas Beach (Source: author)

3.2. The Conservation of Cultural Assets

Most nations aim to preserve their cultural treasures as part of the global legacy. Around the world, many creative cultural tours work to conserve cultural assets, including entertainment, design, architecture, and cultural goods and services. Based on Figure 18, respondents disagreed that cultural assets in Aek Nauli are preserved (2.57), as well as Tigarihit's dan Parapat respondents (3.25). However, the respondents disagreed that Aek Nauli has the government's efforts to preserve culture (2,6). At the same time, the Tigarihit respondents stated that there are expected to be government efforts to protect culture (3,27), and the Parapat respondents agreed that there will be government efforts to preserve culture.

However, from all the research locations, it can be concluded that conserving cultural assets at Girsang Sipangan Bolon is quite average (3,02). Since no historical objects exist in Girsang Sipangan Bolon, this area's tourist attractions, buildings, and traditions are most appropriate to preserve. Tourism cannot be viable unless the cultural essence and core principles characterizing various art forms are preserved (Zhao et al., 2024).

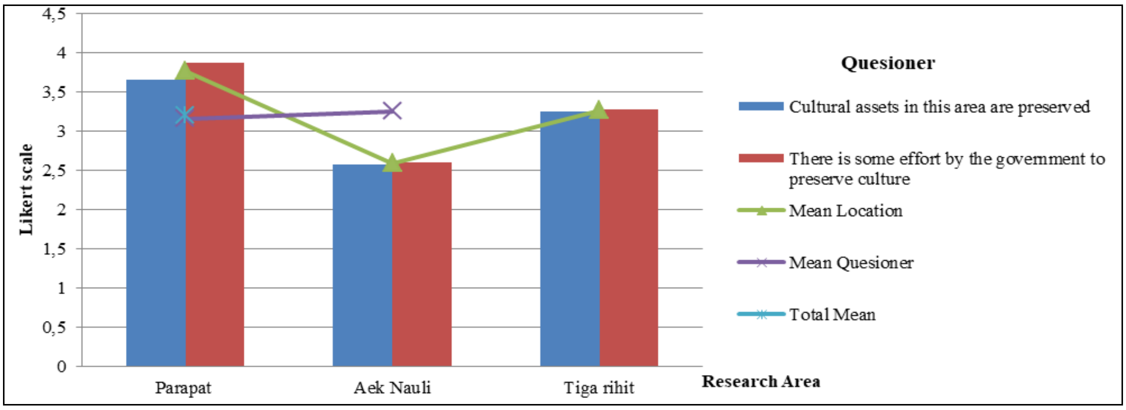

Figure 18. Respondent's opinion about the conservation of cultural assets (Sources: Authors analysis)

CONCLUSION

The results show that Tigarihit and Parapat have stronger cultural traditions than the Aek Nauli area, although cultural rituals are more prevalent, with the exception of the annual celebration in Parapat and Tigarihit. The results of place identity and local speciality revealed that the areas of Parapat and Tigarihit were quite good, with an average score of 3 to above 4, but this was inversely proportional to Aek Nauli, which only received an average of above 2, indicating that place identity and local speciality were low in Aek Nauli. Cultural artifacts are quite good in Parapat and Tigarihit, with an average score of 3 to above 4, but this is inversely proportional to Aek Nauli because Aek Nauli Conservation Camp only focuses on elephant conservation and education, not on Girsang Sipangan Bolon's culture. The three places each attract a certain amount of visitors, with Bebas Beach in Parapat being the most popular. The government should also actively promote the Girsang Sipangan Bolon tourism destination. If the government is engaged, the place has to be monitored. Visitors will continue to visit and appreciate the cultural charm of this tourist site as long as it exists.

The implication of this research is the discovery of the influence of the cultural aspects of the Simalungun community in the Girsang Sipangan Bolon area, North Sumatra, Indonesia, which is still one of the tourist attractions, such as celebrations, festivals, and dance performances, and typical food from the area. which still exists today, but its management and development are still not optimal. It can be seen from the results which provide scores with varying averages, and most scores are quite low, showing that cultural development has not been a priority because several tourist destination areas have focused on another development. From these findings, it is hoped that this research can become a reference and material for consideration in preparing the development of cultural tourism, as well as a realization that this area has extraordinary cultural diversity, so it needs to be improved in management and promotion from the local community level to abroad as a tourist destination. in the Lake Toba area, North Sumatra, Indonesia.

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SUSTAINABLE (RE)DEVELOPMENT OF TOURISM DESTINATIONS AS A PLEDGE FOR THE FUTURE – A CASE STUDY FROM THE WESTERN BALKANS

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Abstract: The study aims to analyse and thus obtain a comprehensive understanding of the current situation, issues, needs, and challenges related to the tourism sector in the five Western Balkans economies in the post-COVID-19 context. The survey collects and analyze information for each of the five Western Balkans economies and explores the needs and trends of the current stakeholders in the tourism sector and how sustainable tourism can be used to overcome future uncertainties. The results are further discussed from the point of Western Balkans economies and tourism destination to make their management more sustainable for the future. Western Balkans countries have the potential for sustainable tourism development, but to better position themselves in the tourist market, they need to achieve a competitive advantage. Bearing in mind the changes that occurred during and after the crisis, it is necessary to have a good plan for the re(development) of tourist destinations.

Keywords: crisis management, destination management, sustainable tourism, post-COVID-19 recovery, Western Balkans

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INTRODUCTION

According to Kumar and Raman (2024), the ability of tourist destinations to adapt represents a key aspect of crisis management. It is necessary to look at the problem from different angles and come up with a solution based on research and scientific results (Sun et al., 2021). The crisis during the Covid-19 pandemic showed that tourism can respond to numerous problems that tourist destinations were facing (Camară, 2022). First at all, with forms of tourism that can satisfy the primary needs of modern man: the health need (Gibson, 2019). By studying the research that supports that kind of view (Senbeto, 2022; Rastegar, 2022; Liu-Lastres et al., 2024; Gan et al., 2024) it can be concluded that numerous countries and their Tourist Organizations have responded to such forms of tourism, which have the epithet: sustainable (Antolini et al., 2024; Fu et al., 2024). Sustainable tourism (Santiago et al., 2024), i.e., “Green tourism” (Tok et al., 2024), “Environmental tourism” (Liu et al., 2022), “Agro tourism” (Susila et al., 2024), “Rural tourism” (Du et al., 2024), “Recreational tourism” (Bojović et al., 2024), “Wellness and Spa tourism” (Li and Wen, 2024) etc., have become not only a trend, but a form of sustainable development and a pledge of the tourist destinations future. So, it is quite clear that the development of precisely these forms of tourism will be increasingly represented in the tourist destinations supply, i.e., all countries that want to put themselves in the future tourism market will base their competitiveness on uniqueness and specificity in terms of sustainable tourism supply.

The paper started from the main hypothesis H that the Western Balkans has the resources for sustainable tourism development and that sustainable tourism can be the basis for achieving a competitive advantage in relation to the main competitors from the environment. The Western Balkan as a political and geographical determinant includes the economies of Albania, Bosnia and Herzegovina (BIH), Montenegro, North Macedonia, and Serbia (World Bank), which represent the

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heart of Europe (EEAS), whose rich cultural heritage is multi-layered, whose history is often colorful (Manchev, 2001) and full of challenges. Precisely, this influenced the Western Balkan region to remain undiscovered, insufficiently unknown, and to some extent even mystical for a broader European and global audience. Pandemics largely hit all five Western Balkan economies and led to a huge fall in tourist arrivals (nearly 60% on average) and overnight stays (54.7% on average) in 2020 [8], in addition to reduced tourism revenue and exports, which lessened the contribution of tourism to the total GDP and endangered many jobs. Before the Coronavirus pandemic, in 2019, the economies of the Western Balkans were visited by 12 million people, which brought a total profit of 7.2 billion euros, while tourism accounted for 10.2% of the regional GDP [8]. After the pandemic, tourism globally recovered by 70% and in the Western Balkans by as much as 92% (OECD).

These five economies face many challenges along the recovery way. In the core, they are related to the need to adapt and enhance their tourism offer to the changed travel market, improving the management of the tourism sites to provide more sustainable tourism products. This is especially important, bearing in mind the numerous potentials that can support the concept of sustainable tourism development in the direction of sustainable recovery and lasting change (OECD) adopting SDGs (Sustainable Development Goals) as the fundamental development guidelines. However, on that path, it is crucial to analyze the current situation and identify the main problems, challenges, needs, and gaps in the tourism sector of the Western Balkan region. It is essential to understand the recovery strategies these countries have developed and implemented to keep their tourism sectors stable in uncertain and turbulent times. In light of this, the paper aims to obtain a comprehensive understanding of the current situation, issues, needs, and challenges related to the tourism sector in the five Western Balkans economies in the post-COVID-19 context (EU Commission).

Although numerous authors have analyzed the negative impact of COVID-19 on the tourism sector internationally (Gunter et al., 2022; Yang et al., 2022; Korinth, 2022), even at the level of the Western Balkans economies (EBRD; Nientied and Shutina, 2020), where limited attention has been paid to identifying outstanding gaps in the tourism sector that arose in the post-COVID-19 period between valid tourism policies, measures and strategies on the one hand, and the real needs of tourists and key stakeholders (at the level of individual countries and the Western Balkans region as whole), on the other. In this sense, this study seeks to contribute to the understanding of the impact of crises on the tourism sector of the Western Balkans economies, the changed tourists' needs, and consequently, the need to take action to create conditions for the development of more sustainable and resilient tourism in the coming period, offering practical implications for stakeholders. Additionally, although at the global level, research regarding the need to create regional tourism partnerships and joint tourism products is increasing (McComb et al., 2017; Thraenhart and Morrison, 2023), in the Western Balkans, this is still an insufficiently researched part, especially from a practical aspect, which represents another research gap to which this study seeks to contribute.

Bearing all this in mind, it was concluded that all five observed WB countries share similar advantages when it comes to sustainable tourism development. Resources adequate for the development of numerous sustainable forms of tourism are singled out. With their activation, the potentials would be transformed into competitive advantages, and a better positioning among competitors would be made possible by the comparative advantages of each country, individually.

Theoretical Background

Despite the insufficiently developed general and tourism infrastructure (Mansi et al., 2020), inadequate level of tourism products development and their diversification (Lehmann and Gronau, 2019) high fragmentation of the tourism market (Nientied and Shutina, 2020) unfavourable accessibility and seasonal demand (Ndou et al., 2023), insufficiently efficient education and inadequate knowledge on benefits that sustainable development can bring (Göler, 2018; Melovic et al., 2019), resulted in a limited understanding of the concept of sustainable tourism development (Göler, 2018; Ciro, 2019), applied more competitive than co-operative approach (Nientied and Shutina, 2020; Porfido, 2020), tourism in the Western Balkans region continues to flourish mainly due to its the natural and cultural richness, but above all, the spirit of its inhabitants (Stankova and Kaleychev, 2022). In pre-pandemic period, tourism records strong growth in the Western Balkan region, proving once again that it is one of the fastest-growing global economic sectors today (Kennell et al., 2020). Among other things, the growing role of tourism in the Western Balkans region can be partially explained by its positive influence on the region's democratization process and the stimulation of European integration (Priniotaki-Ioannis and Kapsis-Stavros, 2008). Some authors go a step further (Benner, 2019) and claim that tourism will help the Western Balkans region overcome development gaps and reach the desired level of overall development.

However, the positive surge was interrupted by the COVID-19 pandemic, which strongly affected the global economy and especially the tourism sector (Hussain and Fuste-Forne, 2021). The emergence of "pneumonia of unknown origin" in Wuhan, China, in December 2019 caused unprecedented consequences on people's psychological and physical aspects (Li et al., 2021). The crisis did not avoid the tourism of the Western Balkan economies, which led to a tourism collapse, especially in countries whose economies were highly dependent on tourism, such as Albania, Croatia, and Montenegro where tourism accounted more than one fifth of total economy (Bieber et al., 2020; EBRD). The pandemic brought a sharp decline in tourism receipts and remittances due to travel restrictions and shocks in emission markets (OECD). Further, the health crisis dealt a big blow to the employment rate in tourism (Lazić and Bradić-Martinović, 2021). Hence, the backbone of the adopted measures by the competent authorities in Western Balkans region was aimed at maintaining employment and assisting the most vulnerable groups (Horwart) respecting "national values, politics and variations" of advice from local experts (Li et al., 2021:1). Nevertheless, tourism once again demonstrated its flexibility and power of relatively quick recovery, especially in the Western Balkans region. According to UNWTO data (2022a), (UNWTO, 2022) despite the forecasts, already in the first seven months of 2022, Serbia, Albania, and North Macedonia have recorded a strong recovery of tourism income of 73%, 32%, and 24%, respectively (UNWTO, 2023). That trend continues in the first seven months of 2023, where certain countries of the Western Balkans region, such as Albania and Serbia, record double-digit growth compared to the same period in 2019: 56% and 17%, respectively (UNWTO, 2023). At the same time, Albania, Montenegro, and North Macedonia recorded an increase in income from international tourism by 82%, 77%, and 56%, respectively, compared to the pre-pandemic level (UNWTO, 2022). The structure of tourist demand in the Western Balkans region in the post-lockdown period has changed (Lazić and Bradić-Martinović, 2021), with the dominance of domestic tourists and a very intensive mutual exchange of tourists (UNWTO, 2023).

The strong recovery in the Western Balkans region has put, to a certain extent, the understanding of what bring the so-called “new normal” in the background. "New normality," considered in the context of tourism and hospitality, essentially refers to new patterns of tourist behavior and their preferences, tourist & hospitality industry responses, and decision-makers' actions, risk assessment and management (Nientied and Shutina, 2020) emphasizing that the health crisis caused by the pandemic can be a trigger for (positive) changes, in other words, a potential game changer in the tourism industry (Hall et al., 2020; Gössling, 2020) of the Western Balkans region, finally putting sustainability, resilience and green transition in the foreground, favouring smarter and safer tourism (UNWTO), which in the pre-COVID 19 periods, despite the declarative strategic determinations of Western Balkans region policymakers, and the efforts of global tourism authorities such as UNWTO and WTTC, did not occur to the expected extent (McCool, 2015). In the Western Balkans region, among others, sustainability intends to promote sustainable forms of tourism, tourism's contribution to the well-being of local communities, availability and reduction of seasonality, and the employees working conditions improvement (Radovanov et al., 2020).

A continuation of changing tourist consumption habits based on higher environmental and social awareness and concern for sustainability and social issues is expected (Del Valle, 2020). Further, research shows that awareness of green tourism and returning to nature has gained value in the post-COVID-19 period (Kupi and Szemerédi, 2020). More scholars warn (Nientied and Shutina, 2020; Porfido, 2020; Arežina, 2020; World Bank) that Western Balkans economies should not be fooled by the statistics that testify to the relatively quick tourism recovery because a return to the old means insufficient competitiveness on the global tourism market and loss in the long term (Nientied and Shutina, 2020).

Instead, decision-makers and creators of tourism policies in Western Balkans regions, whose economies are deeply integrated into the EU which represents the major source of international tourists of the region, should take into account the trends and the EU strategic determinations, which are primarily contained in the EU Green Deal and the Next Generation program. Green and digital transformation, circular economy, CO_2 emissions reduction with permanent strengthening of sustainable tourism development (World Bank; Mitić et al., 2022), and adoption of new knowledge and skills with the inclusion of new technological solutions in tourism value chains are becoming imperative. Also, latest technological solutions, including the Internet and its numerous tools, have enabled social media networks to function, allowing their users to increasingly participate in generating destination brand content (Zeng et al., 2023). Further, it is necessary to raise awareness that modern tourists are aware of climate change challenges and prefer destinations that can offer more sustainable but authentic tourist experience, which implies the need for additional diversification of the Western Balkans region's tourist offer (Porfido, 2020). On the other hand, raising awareness and, despite historical disagreements, the need to strengthen cooperation towards creating a unique tourism brand for the region is gaining more importance (Cela et al., 2022).

MATERIALS AND METHODS

Respecting research topic, the main aims of the paper will be achieved through a two-stage process of the research (Figure 1), (Huang et al., 2021; Roya et al., 2023), which includes combination of quantitative and qualitative approach: Stage 1 refers to desk research aimed to collect and analyze strategic documents for each of the five Western Balkans economies. This stage is about gathering and reviewing information on post-COVID-19 trends in Western Balkans economies, examining tourism measures introduced by Western Balkans governments, an overview of tourism strategic documents and plans for Western Balkans countries, the status of EU approach in Western Balkans economies regarding tourism, an overview of human resources in tourism sector in Western Balkans economies followed with regional documents that take into account all five economies of Western Balkans.

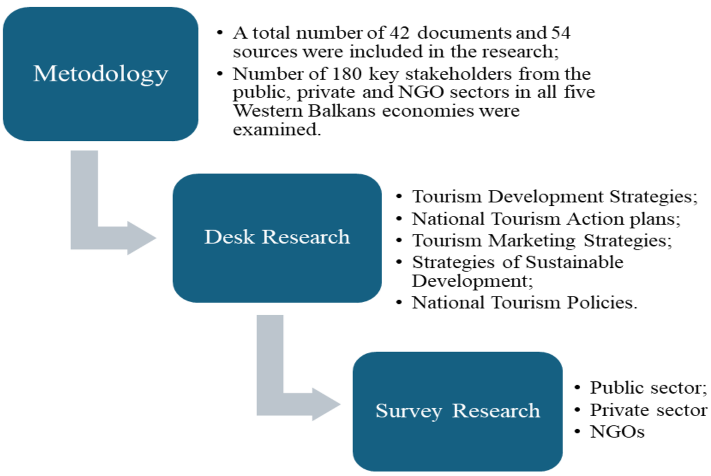

Figure 1. Methodology flow chart (Source: Prepared by the authors)

Desk research included analysis of key documents for each country, such as tourism development strategies or national tourism action plans, tourism marketing strategies, strategies of sustainable development (section related to tourism), and national tourism policies. A total of 42 documents were included in the research. A total of 9 regional documents were analyzed as well as 33 national documents: Albania (3), Bosnia and Herzegovina (7), Montenegro (8), North Macedonia (7), Serbia (8). Analysis of the plans on the local level could not be done, since the authors analyzed total of 42 documents and 54 sources on a national and regional level. Further, the analysis included documents on the national level addressing the following issues: the impact of COVID-19 on tourism development and how it is managed, analysis of the effects of COVID-19 on tourism, proposed strategies to deal with new uncertainties, analysis of strategies, policies, and achievements that are addressing or are in line with the EU Agenda and the Green Deal, existence of measures related to the further development of tourism, especially the instruments through which international organizations, donors, and creditors support tourism development, EU status in part related to the Green Agenda and SDG in tourism for Western Balkans.

Stage 2 refers to conducting survey research with tourism stakeholders in Western Balkans. The purpose of this stage is to systematically explore the needs and trends of the current stakeholders in tourism sector promotion and explore the impact of COVID-19 on the tourism sector in the Western Balkans economies and how sustainable tourism can be used to overcome future uncertainties. In order to do so, the thorough questionnaire is conducted with 180 key stakeholders from the public, private and NGO sectors in all five Western Balkans economies. The survey was conducted from January till the end of February 2023. The survey is optimized so that it can be filled out via an online link using Google forms and sent by e-mail or other means of online communication. Moreover, the part of the sample is interviewed by phone, Skype and zoom. The total sample that was targeted was 180 (approximately 48 subjects from public sector, 108 representatives of private and 24 representatives of NGOs). The questionnaire consisted mainly of open questions in order to gain some initial insights into their opinion about topic, but also some close questions analyzed through descriptive statistics.

Public representatives included the national ministries in charge of tourism, representatives of the national tourism organizations or regional tourism organizations, public tourist attractions (e.g., museums), Universities, media and other important decision-makers in tourism coming from the public sector. Representatives from the private sector are representatives from the hotel industry, travel agents, tourist attractions, entrepreneurs, media, food producers and other private tourism-related subjects connected with different types of tourism (i.e., city/town, rural, eco-tourism, cultural tourism, wellness, and business). NGOs included in the survey were NGOs related to tourism, sustainability, local development, tourism, and business associations, etc. The major topics the survey covered include demographic information about stakeholders (gender, age, education) and their position and relevance for tourism, work experience in tourism, etc; opinions, experiences, and the current situation in tourism in the post-COVID-19 pandemic context; experience and findings of tourism sector providers regarding tourists' behavior and needs in the post pandemic; and the views and opinions of stakeholders about the benefits and challenges for further promotion of tourism development in the five Western Balkans economies.

RESULTS AND DISCUSSION

Desk Research Results (Research Stage 1)

As previously mentioned, desk research included the analysis of the total of 42 documents. A total of 9 regional documents were analyzed as well as 33 national documents. The results of the overview of tourism development in five Western Balkans economies are presented in the following text:

Overview of Tourism Development and Tourism Recovery after COVID-19

The data show that Albania, Bosnia and Herzegovina and Serbia are the leading countries regarding the number of tourism arrivals, while Albania and Montenegro dominate in the number of tourists' overnight stays. North Macedonia is the least visited country in terms of both tourism arrivals and overnight stays. When it comes to the drop in tourists' visits and overnight stays after Covid-19, *Albania* succeeded in almost fully recovering in 2021, obtaining almost 98% of the tourist arrivals and 79.5 overnight stays before COVID-19 (Chember investment forum Western Balkans). Judging by the percentage increase, Albania was the leading country in the number of tourists arriving and in the value of international tourism receipts in 2019 when compared to the previous year (2018), (Chember investment forum Western Balkans). The earthquake in 2019 and the COVID-19 pandemic in 2020 both affected the economy and were likely to drive Albania into recession and expose its external and fiscal vulnerabilities.

Bosnia and Herzegovina has had the highest average annual growth of international tourist arrivals (14%) in the Western Balkan region during the last decade (Chember investment forum Western Balkans). In 2021, Bosnia and Herzegovina obtained around 58.5% of the tourist arrivals and 66.1% overnight stays compared to 2019, (Agency for statistics of Bosnia and Herzegovina), showing signs of slow recovery. The Government has established the National crisis headquarters for the prevention and control of the pandemic to slow its spread and protect the health of people. Policy measures to stop emigration and more rational spending of funds due to the pandemic should bring results despite the country's very complex institutional structure and unused resources. Reforms are necessary to address structural and institutional weaknesses and strengthen competitiveness.

Montenegro has had the largest percentage increase in tourist arrivals in comparison to the previous year (2018), but in terms of the number of tourist arrivals in 2019, Montenegro is second to Albania (National Tourism Organization of Montenegro). Based on the performance overview for each country, published by the World Economic Forum 2152 (World travel tourism & tourism council), Montenegro has the best overall rank (67th). Montenegro has reached 63.1% of tourist arrivals and 68.29% of overnight stays before COVID-19, showing signs of steady recovery (Monstat).

North Macedonia in terms of the number of tourists arriving in 2019 ranks last. It has reached 59.28% of tourist arrivals and 70.91% of overnight stays before COVID-19 (Republic of North Macedonia, State statistical office), showing that the number of tourists is recovering slowly, but they stay longer at their destination.

Serbia in 2019, was second to Albania in the value of international tourism receipts and together with BIH is a leader in terms of average receipt per arrival. In 2021, it has reached 70.2% of tourist arrivals and 81% of overnight stays before Covid-19, showing signs of fast recovery (Statistical Office of the Republic of Serbia).

Regarding the total contribution of tourism to GDP, Montenegro is leading by 30.8% (World travel tourism & tourism council), while Serbia is in the last place with 5.9% (World travel tourism & tourism council) of the total contribution of tourism to GDP. When analyzing the total contribution of tourism to employment, Montenegro, Albania and Bosnia and Hercegovina are leading, while the rest of the countries still have rather small contributions of tourism to employment. The indicators of foreign exchange inflow from tourism show the leading positions of Albania and Serbia, followed by Montenegro, but it can be also noticed that Serbia in this case shows slower signs of recovery, compared to the other analyzed countries (World travel tourism & tourism council). When comparing the mentioned tourism indicators in 2019 (before COVID-19) and 2021 (after COVID-19) it is evident that tourism is still struggling to reach the levels before COVID-19, but there is a good tendency in tourism recovery. Regarding key tourism products, it is notable that the offer is very diverse, especially in the case of Montenegro, Albania and Serbia; however, the level of development of these products differs, with Montenegro having the leading position. Montenegro has the most diverse sustainable tourism offer consisting of rural, cultural and religious, health, sports and recreation, ski, adventure, nature-based tourism (hiking, biking, mountaineering), camping, glamping, golf tourism, nautical, and ethno-gastro tourism.

This is followed by Serbia, as its Strategy of Tourism Development 2016-2025 (Strategy of tourism development of Serbia) recognizes some sustainable tourism as priority tourism products namely mountain tourism, spa & wellness/health tourism, thematic routes (natural and heritage, bike routes), rural tourism, nautical tourism special interests-adventure and ethno-gastro tourism. Albania also promotes sustainable tourism products as eco-tourism, rural, adventure, special interest, wellness, and thematic routes. When it comes to North Macedonia (events, mountain tourism, spa & wellness, wine routes and adventure), Bosnia and Hercegovina (mountain tourism, spa & wellness and health tourism, rural tourism, special interests-adventure tourism and ski). The analyzed Western Balkan economies differ in their tourism recovery measures but also in measures coming from international donors, SDG's in tourism sector, human resources in tourism etc.

Post-COVID-19 Measures

In Albania, post-COVID-19 measures mainly focus on governmental support to the private sector in advancing tourism in rural areas which will enhance further tourism development. This especially refers to small, private accommodation facilities development in rural but also coastal areas. Albania is one of four destinations worldwide that lifted the travel restrictions to continue tourism. This country has made some progress in developing a tourism data collection framework and in developing a VET framework. The Albanian Government has established the national tourism recovery programme, which includes incentives to local businesses, establishing partnerships with airlines, promoting blue tourism, online promotion of Albania as a safe tourist destination, organizing events and reorienting public investments. After overcoming the crisis, economic activity and the earthquake damage recovery are expected to boost growth, but structural reforms are needed in the medium-term

Bosnia and Herzegovina also emphasized strengthening the private sector but in terms of IT skills development and digitalization. The recovery plan includes the identification of new markets to attract in short term with specially tailored marketing approaches and focus on less seasonal tourism offers. Moreover, a recommendation from the Ministry of Foreign Trade and Economic Relations of BIH is to promote domestic tourist attractions. It is extremely important to convey to the citizens the importance of traveling to local destinations in an attempt to recover domestic tourist capacity in the circumstances caused by the pandemic.

Montenegro has recognized the importance of green, smart and sustainable tourism for achieving the recovery goals such as - an increase in tourism spending, reducing seasonality and regional imbalances, but also improving the local quality of life.

Some good measures focused on recovery are related to intense targeted promotion, reduction of the grey economy and regular following of the trends and changes in the market to adapt tourist offers.

North Macedonia is, on the other hand, emphasizing on strengthening domestic tourism, cooperation of the subjects in the country but also between countries and sustainable tourism development. They strive to shift from mass tourism to individual experience design and sustainable tourism products.

Serbia has implemented some specific measures related to post-pandemic recovery such as developing the safe travel protocol (using the World Travel and Tourism Council Safe Travels standard) and creating a new support package for the tourism sector (wage subsidies, business subsidies, domestic vouchers, and business grants). Moreover, in 2020, the Government set aside 2.8 billion RSD for 560,000 tourist vouchers worth 5,000 RSD intended for (at this moment maximum) 560,000 citizens of Serbia who want to spend their vacation (or part of it) in the Republic of Serbia, to develop sustainable domestic tourism (Ministry of tourism and youth, Republic of Serbia).

Mutual key findings for Western Balkans economies

Four Western Balkans economies (Albania, Montenegro, North Macedonia and Serbia) have tourism development strategies and are committed to the development of an efficient governance structure involving inter-ministerial coordination, vertical cooperation, and dialogue with private and other tourism stakeholders. Albania, Montenegro and Serbia have made the most progress in this area. Despite efforts to develop tourism investment policies, tourism innovation frameworks are not yet in place. Challenges include monitoring and evaluation, investment procedures, urban planning and awareness raising among private investors. The competitiveness of tourism marketing and branding remains a challenge for most Western Balkans economies and it is pivotal to increase their visibility in international markets. Digital marketing frameworks are incipient. Albania, Montenegro, North Macedonia and Serbia economies have established tourism brands. Only Montenegro, Serbia and the Republic of Srpska in BIH have valid marketing strategies that have not yet expired. Marketing strategies are under development in all other economies.

The crisis revealed gaps in tourism development that will need to be addressed in the future. The main gaps and challenges in all Western Balkans economies are similar, therefore establishing regional cooperation to address these challenges which could help each Western Balkans economy to overcome them more efficiently. All Western Balkans economies have made some progress in enhancing the overall tourism policy framework by improving the governance structure and cooperation with the private sector. Progress has been made in accommodation capacity, the quality assurance framework, in providing incentives for investment in accommodation and other tourist infrastructure as well as in tourist information availability and tourism data collection. Comprehensive natural and cultural heritage enhancement frameworks for sustainable tourism development are still incipient. The Western Balkans economies should focus on establishing effective inter-ministerial cooperation and introducing regular monitoring and evaluation of policy measures. The absence of a common regional tourism brand and marketing activities lessens the visibility of the Western Balkans as an attractive tourist destination that offers a diversity of unique tourist experiences.

SURVEY RESULTS

Profile of Respondents (Research Stage 2)

The sample includes 181 stakeholders from five Western Balkans economies, 50 of which are public, 107 are private and the rest of the sample is stakeholders from NGOs (24). The sample consists of 50.3% of male and 49.7% of female respondents. The average age of the sample is 38.69 (std. 10.175) with an age range 20-65 years. Most of the respondents are highly educated (bachelors – 28.2%, masters 28.2%, PhD 35.9%), while there is 21% of those have finished secondary school. The average work experience of the respondents is 13.7 (Std.8.45), with a range of 1-37. The basic characteristics of respondents are provided in Table 1. The number of respondents per country is provided in Table 2.

Table 1. Characteristics of respondents (N=181)

<table>
<tr><th colspan="2">Gender</th><th colspan="2">Work experience</th><th>No of respondents per institution type</th></tr>
<tr><td>Male
Female</td><td>50.3%
49.7%</td><td colspan="2">Average - 13.7 years (Std.8.45),
with a range of 1-37</td><td rowspan="5">Public 50
Private 107
NGO 24</td></tr>
<tr><td colspan="2">Age (Average)</td><td colspan="2">No. of respondents per Country</td></tr>
<tr><td colspan="2">38.69 years, age range 20-65 years, (std. 10.175)</td><td rowspan="3">Albania
Bosnia and Herzegovina
Montenegro
North Macedonia
Serbia</td><td rowspan="3">36
32
35
24
54</td></tr>
<tr><td colspan="2">Education</td></tr>
<tr><td>Secondary
Bachelors
Master
PhD</td><td>21%
28.2%
28.2%
35.9%</td></tr>
</table>

Table 2. The number and structure of respondents per country

Country	Public	Private	NGO	Total
Albania	10	21	5	36
Bosnia and Hercegovina	10	18	4	32
Montenegro	10	20	5	35
North Macedonia	6	15	3	24
Serbia	14	33	7	54

Table 3. The main strengths and weaknesses of destinations according to stakeholders' opinion

Albania
Strengths: country awakes curiosity, vivid history, rich natural and cultural heritage, gastronomy and wine, high safety, beach tourism, and cheaper than other coastal destinations. **Weaknesses:** lack of promotion, lack of strategic vision, tourism infrastructure, low destination awareness
Montenegro
Strengths: elite tourism, beautiful coast, diverse visitors, diversified tourism offer, rural tourism, good air connectivity with main markets. **Weaknesses:** high seasonality, low hotel and road infrastructure, lack of employee training, non-sustainable use of tourism resources.
Bosnia and Herzegovina
Strengths: hospitality of people, pristine nature, rich cultural heritage, central position on Balkans, gastronomy, plenty of activities in nature. **Weaknesses:** low connectivity with other parts of Europe, low level of digital promotion, lack of specialized restaurants, lack of cooperation between stakeholders, no existence of a central tourism organization, low destination awareness, lack of tourism products.
North Macedonia
Strengths: geographical predispositions, climate, cultural heritage, 43 lakes, more than 4,000 archaeological sites, five Roman cities, great cultural and historical wealth, gastronomy and wine tourism, developing business tourism, a wealth of thermo-minerals sources. **Weaknesses:** Unfavorable political situation, poor employment in industry, the unused potential for active tourism, low quality of tourism infrastructure.
Serbia
Strengths: Natural and cultural heritage, hospitality of people, rich nightlife, gastronomy, wine tourism, rural tourism. **Weaknesses:** low promotion and destination image, lack of tourism infrastructure, lack of walking and cycling paths, lack of good tourism interpretation, tourism signalization, lack of tourism activities that would prolong the tourism stays.

Tourism in the Post COVID-19 Pandemic Context

Firstly, the respondents were asked to state the main strengths and weaknesses of their destinations, to identify the strengths and the weak points of each surveyed destination. The answers are summarized in Table 3.

It can be seen that Western Balkan countries share a lot of common strengths and weaknesses. The major strengths of all destinations are rich cultural and natural heritage, good geographical predispositions, and hospitality of people. Some common weaknesses they share include a lack of tourism infrastructure, low connectivity, low destination awareness and promotion as well a lack of employee training. The respondents were then asked if they think that tourism of their destination is undervalued on regional and international levels. The majority of stakeholders say they strongly believe their destination is undervalued, and this attitude is the most prominent in Bosnia and Herzegovina, North Macedonia and Serbia.

Furthermore, the respondents were asked to estimate on a scale from 1- not affected at all to 5 - very affected, how much their business activities were affected by COVID-19. The results indicate that all stakeholders consider their business to be moderately affected, while stakeholders from Serbia and Bosnia Herzegovina were the least affected. This can be explained by the high increase in domestic travel in those two countries. The estimation of how much the business activities were affected is provided in Table 4. The respondents were also asked what were the most affected areas and major challenges in their business/activities during/post-pandemics. The stakeholders emphasize that their businesses were largely affected from various perspectives. They state that tourism was one of the first sectors to be deeply impacted by the pandemic, as measures introduced to contain the virus led to a near-complete cessation of tourism activities around the world.

Table 4. Estimation of how much the business activities were affected by COVID-19 (%)

Country	**1**	**2**	**3**	**4**	**5**
Albania	2.8	8.3	27.8	33.3	27.8
Bosnia and Hercegovina	0	0	71.9	6.3	21.9
Montenegro	0	0	44.4	30.6	25
North Macedonia	0	4.2	29.2	29.2	37.5
Serbia	0	14.7	50	20.6	14.7

The answers and their frequencies are summarized as follows: Lack of tourists and fewer people involved in tourism (12); Insufficient subsidies (21); Reduced business capacities (7); The crisis put millions of jobs in the tourism sector at risk (1); Very tangible economic and social consequences for many people, places and businesses (1); Problem with paying salaries to workers (31); Operating at a loss (15); Lack of working stuff (19); Events and large gatherings were prohibited (1); Lack of investments in tourism (5); Small and medium enterprises were largely affected (13); Lack of budget for tourist activities and new projects (5). Moreover, the majority of them state that they are in the process of recovery and the tourist and business flows are reaching higher levels. The respondents were then asked if their entity applied some measures and solutions to tackle these challenges in the post-pandemic travel market and they were asked to shortly elaborate. The majority of them state they have adapted to the COVID-19 rules and new situation but did not provide an explanation. Some of them state they applied the following changes and measures: Developed a new business strategy to attract new markets (3); Adapted the exhibition space to provide more distance between visitors (2); Focus on domestic and regional markets (15); Applying all the measures advised by the country to fight pandemics (22).

Promotion of active vacation and outdoor activities (8); New marketing approach focusing on well-being and cleanliness (6); More aggressive promotional campaigns (3); Training has been conducted with the tourism stakeholders for the introduction and the appliance of the protocols for the protection of tourists (Safe Travels) (2); Safe Travel stamp was received which added value to safety of tourists (1); Applied safety measures according to ATTA standards (1); Virtual events and exhibitions were introduced (5). In the next question, the respondents were asked to shortly explain if they know about some governmental measures to tackle post-pandemic issues in tourism. The most important governmental measures that were reported were: Reduced VAT for the accommodation and gastronomy sector (2); Removing visas for India, UAE, Egypt, Saudi Arabia etc. New markets replaced the classical western countries (1); Support of small business and individuals through payments (11); The government via Agency for tourism support and promotion participated in making the pandemic and post-pandemic promotional videos (5); The financial support for travel agencies and travel guides (8).

Regarding some external support in overcoming COVID-19 consequences in tourism, the respondents did not mention much data about how they were supported. Several stakeholders mention that the external support comes from traditional donors, such as JICA training on tourism promotion and marketing-new normal (pandemic and post-pandemic period), and the video commercials for safe travels made by Swiss Agency for Development and Cooperation.

Regarding technological innovations to support tourism products in uncertain times in their destination, most of the respondents are largely unaware of how technological solutions could help them in overcoming the negative effects of COVID-19. For North Macedonia stakeholders state that two technological solutions are needed. The first and most important one is the real time - overnights calculator, as central and local governments, will know what is the effect of the funds they invest in various events, additionally, hoteliers will know what is the number of overnights in the city/town, compared to their occupancy. The second technological innovation that should be implemented is the Satellite Account. Moreover, stakeholders mention a nationwide application with an integrated map and possible audio guides.

Concerning new socially/environmentally responsible tourism products developed to tackle post-COVID-19 issues in tourism, the respondents particularly emphasized rural and agritourism started to thrive due to the changes in the travel behavior of tourists (Albania) (2); eco-tourism and nature-based tourism (Montenegro) (5); the emergence of green destinations (such as Tivat in Montenegro) (2); Higher involvement of the governments in getting eco certifications (Montenegro)(7); Higher use of solar panels and other renewable energy sources in tourism (Albania) (1); Adventure tourism which is mainly responsible for local communities (2); Tourism staff training – “Safe and clean” programme of education and training (Serbia) (3); and production of new souvenirs made of domestic resources (for instance wool) (1).

Tourists’ Behavior and Needs in the post-COVID-19

The first question in the second part of the survey referred to the major changes in tourists’ needs and behavior in post-pandemics that respondents have noticed. The results are presented in Table 5.

Apart from these, some respondents think that tourist are starting behaving like before pandemics, and that there were no significant changes in their travel behavior. In the next question, the respondents estimated their level of agreement (1-I totally disagree, 5-I totally agree) with the statements shown in Table 6. The respondents mainly agree that requirements for hygiene are higher, that tourists choose more nature-based activities and that open-space activities are more popular in the post-COVID-19 period. The respondents were also asked how they plan to adapt to the changed travel market. They have option to choose multiple answers and the frequency of each answer is shown in Table 7.

Table 5. The key answers related to tourists’ behavior and needs in the post-COVID-19 can be grouped as follows:

The key answers related to tourists’ behavior and needs in the post-COVID-19 (grouped responses as follows)
Keeping distance and hygiene (7)
Visitor number (tourists) has slightly increased and as well the length of staying using mainly hotels (2)
Mostly people are traveling in short distances, not for longer days especially those who travel individually and go after unpopular places (4)
Tourists are going towards smaller groups (11)
Tourists want more rural experiences, natural attractions, relaxing and meeting the locals (7)
Tourists are more concerned about health and hygiene (6)
Search for destinations in nature, outdoor activities (9)
More interest for rural vacations (2)
Tourists became for demanding (15)
More individual and family travels (4)
Longer stay at destination (5)
More concern about safety (2)
Higher use of bicycles on destinations (1)
Requests of unique destination and more local experiences (3)
Responsible Traveling (1)
Search for experiences on local tradition and food experience (2)
Less expenditure on destination (8)
Eco-friendliness and insurance policies in case of emergency (2)
More opting for “clean and safe” accommodation (5)

Table 6. Respondents’ attitudes regarding change in tourists’ behavior

	1	2	3	4	5
Tourists’ length of stay becomes longer after pandemics	3.9	22.1	35.4	23.8	14.9
Tourists avoid traveling in large groups and being in crowded places	5	1.1	29.3	32	32.6
Requirements for hygiene are higher	0.6	2.8	27.1	22.1	47.5
Tourists choose more nature-based activities	2.2	9.4	16	22.7	49.7
Open-space activities are more popular in the post-COVID-19 period	5.5	9.4	11	21	53
Social distancing at sites is required by tourists	8.8	4.4	47	31.5	8.3
Dominant travel segments changed after COVID-19	14.9	3.9	11	34.3	35.9

Table 7. Ways of adaptation to the changed trends in the travel market

Adaptation to the changed travel market	Frequency of answers
a) With new, adapted tourism products	61
b) With joint products with other subjects in tourism – i.e. travel and cultural routes	56
c) With stronger cooperation in promotional activities	36
d) By new types of product certification - i.e clean and safe, environmentally friendly etc.	31
e) Understand and track new market trends and the drivers of demand	56
f) Taking advantage of renewed interest in sustainability (in shaping tourist activities)	43
g) Implementation of stronger health and hygiene protocols in tourism	42
h) By providing clear information to visitors, avoiding uncertainty	47
i) Strengthened multi-lateral cooperation with other Western Balkans countries	42

Table 8. Types of cooperation between tourism actors

Type of cooperation	Frequency of answers
a) Joint promotion	62
b) Joint tourism products	62
c) New projects	72
d) Training and Education	63
e) No cooperation till now	22

The results show that they mainly opted for new, adapted tourism products and joint products with other subjects in tourism – i.e. travel and cultural routes, but also understanding and tracking new market trends and the drivers of demand.

Afterwards, the respondents were asked if they cooperate with other tourism actors in tackling the changes in the market and what kind of cooperation do you have. The frequency of answers is shown in Table 8. The answers indicated that all listed types of cooperation are very present with new projects being the most dominant.

The respondents were also asked to estimate what kind of support –internal and external (local, regional, national, international) they think would be the most beneficial in tackling post-COVID-19 issues in tourism. The scale that was applied to estimate their opinion was 1 (not beneficial at all) to 5 (very beneficial). The answers are presented in Table 5.

The results show that respondents think that cooperation on new tourism strategies and plan documents, projects and tourism initiatives, support in making cooperation between other tourism subjects in the region and joint promotion and branding with other Western Balkans countries are the most beneficial types of support. Regarding the technologies and tools that could be used for joint tourism promotion and branding on the Western Balkans level, the respondents state that digital branding platforms, websites for specific tourism products, and joint promotional tools for the region are the most beneficial (Table 10). The encouraging result is that all surveyed respondents would like to join some future joint work or projects with other destinations in the Western Balkans. In the last question, respondents evaluated on a scale from 1 (I totally disagree) to 5 (I totally agree) the degree of their agreement with the potential of the stated socially and environmentally responsible measures to create more resilient tourism development. The results are shown in Table 11.

Table 9. Type of support the respondents consider beneficial in fighting COVID-19

	1	**2**	**3**	**4**	**5**
Direct funding	0.6	4.4	26.5	26	42.5
Legal frameworks	0	8.8	22.7	35.4	33.1
New tourism strategies and plans	0.6	5	7.2	40.9	46.4
New infrastructural projects that will support tourism	0.6	11	7.2	33.1	48.1
Cooperation on projects and tourism initiatives	0.6	4.4	13.8	21	60.2
Support in making cooperation between other tourism subjects in the region	0.6	0.6	8.8	34.3	55.8
Joint promotion and branding with other Western Balkans countries	1.1	5	10.5	15.5	68
National stimulations/incentives for tourism development	0.6	1.1	28.7	12.2	57.5

Table 10. Technologies and tools that could be used for joint tourism promotion and branding on the Western Balkans level

Answers	**Frequency**
a) Destination specific websites	46
b) Websites for specific tourism products	53
c) Joint promotional tools for the region	55
d) Joint travel routes under the same umbrella brand	43
e) Digital branding platforms	63
f) Mobile application for travel	47

Table 11. The agreement with the potential of the stated socially and environmentally responsible measures to create more resilient tourism development

	1	**2**	**3**	**4**	**5**
Local employment	1.7	0	15.5	30.4	52.5
Empowerment of local entrepreurship	0	1.7	13.8	18.2	66.3
Gender equality - empowering women-owned businesses and women tourism employees	3.3	3.9	12.7	32.6	47.5
Increasing youth employment	0	1.7	21.5	20.4	56.4
Green agenda of each tourism service provider	3.3	0.6	36.5	13.3	46.4
Preservation of environment	0	0	9.4	22.7	68
Monitoring of positive and negative effects of tourism on surroundings	0	3.3	19.3	19.3	58
Offering unique local products and services	0	1.7	17.7	20.4	60.2
Stronger cooperation between different tourism services providers	0	3.9	22.7	27.6	45.9
Joint work (partnership) with other countries in Western Balkans	0	6.6	16	30.4	47

The most dominant measures include local employment, empowerment of local entrepreneurship, preservation of the environment, and monitoring of the positive and negative effects of tourism on the surroundings. All this confirm the main hypothesis H that the Western Balkans has the resources for the sustainable tourism development and that sustainable tourism are the basis for achieving a competitive advantage in relation to the main competitors from the environment.

CONCLUSION

The Western Balkans region has high potential (natural and cultural heritage) for sustainable tourism development, ranging from mass tourism with overcrowded destinations to green and sustainable destinations, offering unique tourism experiences. However, research results regarding changes in the behavior and needs of tourists visiting the Western Balkans region indicated that tourists in the post-COVID-19 period are becoming increasingly demanding, especially in terms of safety and hygiene, and they travel in smaller groups. Aware of the challenges brought by climate change, they prioritize sustainable tourism development, which will provide them with a nature-based or even rural experience, enabling them to immerse in the local environment. These results are particularly important considering that the tourists' behavioral intentions are in a direct positive correlation with the destination's competitiveness (Zeng et al., 2021). Besides, improving the tourist infrastructure and applying technological innovations are necessary to overcome common weaknesses such as low connectivity, low destination awareness and promotion, and a lack of employee training. To achieve this, the Western Balkan economies have to define a new strategic framework that aligns with recent changes and respects the latest tourism market trends. Further, region's economies need to additionally diversify their offer (Porfido, 2020) and disperse further tourism development to new destinations while applying and promoting the principles of sustainable tourism development. Research findings suggest that to achieve sustainable tourism development in the Western Balkans region, which will be, among other things, more resilient to some future challenges, in addition to following trends and innovations, it is primarily necessary to strengthen regional partnerships, knowing that the regional (joint) tourist offer brings advantages and multiple benefits (Thraenhart and Morrison, 2023). Open Balkan and other regional initiatives present an excellent base to create joint regional products and a common Western Balkan market, which is crucial for creating a stronger tourist image of the Western Balkans destination (Cela et al., 2022).

The Western Balkans region also needs a change in the traditional mind-set (Cela et al., 2022), which would stimulate the accelerated development of human capital and innovation (Knezović et al., 2020) as a prerequisite for the development of tourism resilience and the adoption of new business models (Reinhold et al., 2019), based on the principles of sustainability with the entire application of new technological solutions. Resilience primarily refers to establishing systems in tourist destinations that will enable them to manage adverse situations better based on the principles of trust-based coalitions, which is necessary for establishing tourism system resilience (WTTC). However, this is not a sufficient prerequisite for the progress and long-term development of sustainable tourism in the Western Balkans region. Namely, Metodijeski and Temelkov (2014) notably advocate the joint presentation and promotion of the Western Balkans region on third markets, especially long-haul ones. However, joint marketing and creating a cross-border strategic tourism brand while respecting the Western Balkans region economies' similarities, differences, and peculiarities is a relevant strategic objective. It will require the selfless sharing of knowledge and cooperation of educational institutions and experts (Ramhorst, 2021). However, above all, this process will need the Western Balkans political elites support (Petrevska, 2022). New approaches and common platforms like the Open Balkans are needed and more than welcome. They can positively impact sustainable tourism development in the Western Balkans region if the consensus of all relevant stakeholders is ensured (Petrevska, 2022). Although there are more and more studies regarding the need to create regional tourism partnerships, it is still an under-researched part of the literature (Thraenhart and Morrison, 2023). The importance of all relevant stakeholders' participation in creating regional partnerships and their potential to influence decisions was emphasized. In this sense, the findings of this research can serve as a good informative basis, aware that regional tourism partnerships are subject to constant changes and challenges.

Limitations and future research directions

Apart from the fact that this is one of the pioneer studies in Western Balkan region that analyses the responses and strategies in Post-Covid tourism recovery, focusing on authorities and decision-makers, the study also have certain limitations. The study was conducted as initial study which is rather qualitative in its nature, targeted only at authorities and decision-makers. The study represents the basis for some future quantitative research as it gave some insights into perception of the authorities and decision-makers about tourists' behavior and needs have occurred in the post-COVID-19, the level of adjustment of the existing tourism offers and capacities of the Western Balkans economies to these changes, common strategies for making entire tourism industry more competitive and resilient and awareness of the importance of technological innovations for the more sustainable tourism development. The future quantitative research should focus on visitors of Western Balkan Countries and their perceptions, needs and opinions regarding the explored elements and issues. In this way, we could capture the gap between their real time needs and the current offer at tourism destinations and define some possible necessary adjustments and improvements.

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BIBLIOMETRIC ANALYSIS OF INNOVATION IN THE SOCIAL ECONOMY. ITS THEORETICAL IMPLICATIONS

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Abstract: The present research develops a bibliometric analysis of innovation in the social economy, the study provides a comprehensive vision of the current state of the field and highlights the most relevant publications, authors, sources and research topics, taking as its general objective to analyze the behavior and advances in the literature about innovation in the social economy through a bibliometric analysis, in this way Scopus and Web of Science (WoS) were considered as data sources, forming a database of 304 registered articles, of which 111 belong to Scopus and 193 Web of Science (WoS). In the processing and representation of data, the Bibliometrix and VoSviewer programs were used, which highlights information on trends, citation analysis, H index, analysis of co-occurrences, keywords, affiliations on innovation research in the social economy. The growing scientific production underlines the growing importance of the social economy as a driver of sustainable economic development. Geographic distribution, thematic trends, and identification of influential contributors contribute to future research and practical efforts within this field.

Keywords: innovation, social economy, bibliometric analysis, social innovation

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INTRODUCTION

Innovation involves the creation and application of new ideas, methods or technologies that result in significant improvements or advances in various fields (Weerawardena et al., 2021), such as technology (Santos et al., 2012), business and industry (Jeon et al., 2016), markets and economic aspects (Durand and Henseler, 2023), social (Vercher et al., 2023; Sun et al., 2023). In this way, it is a driving force behind the progress and growth of society, enabling people, organizations and nations to adapt, evolve and prosper in a rapidly changing world (Bernal and Rodríguez, 2019). Innovation encompasses a wide range of activities, from scientific discoveries and technological advances to creative problem solving and novel approaches to business strategies, the innovation is fundamental in shaping the competitive landscape, driving economic development and addressing social challenges through the introduction of novel solutions, as well as expanding the boundaries of what is possible. That is, innovation is present in the analysis of the social economy (Evans and Syrett, 2007; Foronda et al., 2018).

The social economy is based on the idea that it can and should be a means to promote individual and community well-being (Bapuji et al., 2019), which promotes solidarity, equity and the participation of citizens in economic decision-making, the basis of the social economy must be at the service of people and not the other way around, therefore, it focuses on the creation of decent employment, social inclusion, equal opportunities and environmental

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sustainability. Thus, the social economy sector is crucial to fill the gaps in the public and private sectors by offering innovative solutions to society's challenges, in order to foster community development, promote social inclusion and advance the Development Goals. Sustainable (SDG) (Villalba and Pérez, 2019; Akbari et al., 2021).

In this sense, innovation in the social economy encompasses a wide range of transformative ideas and practices that pose social challenges, with the purpose of improving the well-being of people and communities, as has been demonstrated in different research (Gallego, 2008; Rodríguez and Guzmán, 2013; Pérez and Espasandín, 2014; Phillips et al., 2015; Akhmetshin et al., 2018; Weerawardena et al., 2021; Padilla, 2023). These innovations occasionally emerge as responses to complex social and environmental problems, driven by the desire to create positive change.

For example, social enterprises have increasingly adopted innovative business models that combine financial sustainability with social impact and environmental (Defourny and Nyssens, 2013). Thus, innovative social economy initiatives go beyond traditional profit-based approaches, with values of solidarity, inclusion and sustainability to create lasting social value (Moulaert et al., 2013), such innovations require collaboration between diverse stakeholders, including the Government, civil society organizations and private and public sector actors, to collectively shape a more equitable and sustainable future (Dey et al., 2020). Generally, innovation in the social economy serves as a catalyst for positive social transformation, driving change at the individual, organizational and systemic levels (Núñez et al., 2020).

In this way, studies on innovation are diverse, since the evolution and creation of scientific production, in recent years, has shown growth. A method that allows reflecting the evolution of studies on a topic is the bibliometric method, which relates the theoretical aspects, the current situation and the trends in the activity of the social economy. Thus, there are several studies of the bibliometric analysis of innovation (Salam and Senin, 2022; Fitz and Wasgen, 2023; Zhang and McGuire, 2023). However, there are no bibliometric studies on innovation in the social economy, so this research becomes a pioneering and relevant one, which allows us to observe the evolution of the literature and the theoretical implications of the topic.

LITERATURE REVIEW

Citation network analysis has become a leading technique for mapping the knowledge structure of scientific disciplines (Martinez-Perez et al., 2022), likewise, machine learning and natural language processing techniques have been used to automate the extraction of bibliographic data, which has optimized bibliographic scalability (Yang et al., 2022). Thus, Glänzel et al., (2019), by examining co-authorship networks, identified influential researchers, thus highlighting research communities and studying the impact of interdisciplinary collaboration on scientific production. Scholars have debated its limitations, leading to the development of alternative indicators, such as field-normalized metrics and percentile-based measures (Bornmann and Haunschild, 2018). Advanced visualization techniques, such as science overlay maps and density-based clustering, allow researchers the ability to explore the structure and evolution of scientific disciplines (Leydesdorff et al., 2020). For Martinez et al. (2020), combining topic models with traditional bibliometric methods provides a more nuanced understanding of the intellectual landscape within a specific field. For their part, Ballardo et al. (2022) investigated articles to search for innovation techniques using Web of Science data as the main source. In this ranking, you can see an interesting discussion that reveals that the most productive authors and universities are located in the United States. These innovations provide more accurate and fair assessments of academic performance, so researchers can analyze early-stage studies and incorporate a broader range of literature into their analyses, resulting in more comprehensive bibliometric assessments (Álvarez et al., 2019; Bornmann, 2020; Gao et al., 2020).

According to McLaren and Bruner (2019), this study showed the multiple dimensions and interpretations of social innovation, with the understanding of its theoretical foundations, however, the main focus was the use of knowledge for the establishment of good practices. For their part, Le et al. (2019) had a bibliometric approach, where various articles were evaluated with the Web of Science database, this globally and with the theme of innovation. Likewise, Yoga et al. (2022) used bibliometric analysis to evaluate the interdisciplinary nature of innovation in the social economy, thus, in sociology, management and economics, the multidimensional nature of social innovation is highlighted (Simao et al., 2021; Peng et al., 2021; Palacios et al., 2022). In their study of management and economics, the use of a bibliometric analysis is noted, with the Web of Science and Scopus database, where the temporality of individual publications, citation rates and keywords were identified (Zakrzewska et al., 2022). In this way, a growing trend was confirmed in the last five years of publications in the administrative and economic field (Akay et al., 2022), with information in the fields of economics with an econometric vision, which provides knowledge for future research. Thus, bibliometric analysis is used as a new modeling technique, since the information is collected through the Scopus database, where researchers increasingly collaborate to improve their publications (Zehra and Urooj, 2022; Ayaviri-Nina et al., 2023).

The patterns used for the research determined the innovative behavior in consideration of the journals, countries and academic discipline in Scopus, therefore, innovation behavior is important in the social factor worldwide (Salam and Senin, 2022). Impact investing has become a prominent approach within the social economy, to generate positive social and environmental outcomes along with financial returns (Silva et al., 2018). This approach has gained ground among investors and philanthropists, with new ways to finance social innovation initiatives (Bugg and Emerson, 2011; Rao-Nicholson et al., 2017); in such a framework, the integration of social impact metrics in investment decisions has opened opportunities to align capital with social objectives, leading to greater innovation in the sector.

On the other hand, blockchain technology has attracted attention for its potential to address social and economic challenges, as it offers decentralized and transparent systems that improve trust and allow efficient transactions (Hadi et al., 2019; L'Esteve, 2023). In the social economy, blockchain has been used to improve transparency and accountability in charitable giving

(Samudra, 2023), in addition, blockchain-based platforms have facilitated peer-to-peer lending, allowing people to support causes directly social (Ahmad et al., 2022), these innovations have transformed the social financing landscape.

MATERIALS AND METHODS

The methodology of this research is the application of a bibliometric analysis of innovation in the social economy, of an analytical type, of a descriptive-retrospective nature, with a quantitative and qualitative approach. To do this, a combination of typologies will be obtained, which allows analyzing, measuring and identifying the different bibliographic data and relevant aspects of scientific publications (Quispe et al., 2023). To develop bibliometric analysis, it is necessary to obtain bibliographic data from Scopus and Web of Science because it has world-class academic information and scientific articles are highly relevant.

Table 1. Search criteria and Analysis parameters (Source: Own elaboration)

Search criteria	
Database	Scopus and Web of Science
Language	English and Spanish
Analysis period	1997-2023
Consultation date	January 20, 2024
Document types	Scientific articles
Magazine type	Any kind
Field and search terms	"innovation" and “social economy”
Total Results	304
Analysis parameter	
The parameters analyzed are the annual scientific production by country, most cited articles, authors with the highest number of citations, journals with the highest number of publications on innovation in the social economy, and keywords with the highest number of entries.	

Subsequently, a search string “Title of the article” must be generated with the terms already established in English and entered with quotes (“Innovation” and “social economy”). Therefore, conference proceedings, book citation indexes, book reviews and articles under review are excluded, resulting in 304 published articles. Table 1 shows the search criteria and the analysis parameter, while Figure 1 shows the flow chart of the methodology steps.

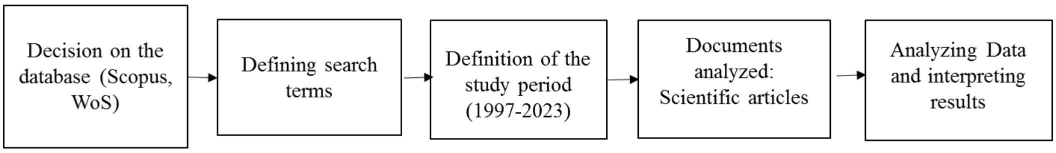

Figure 1. Flow Chart of Methodology Steps

RESULTS

The results obtained from the bibliometric indicators indicated are presented below. Figure 2 indicates the scientific production of 304 articles registered in Scopus and Web of Science, where a trend line can be seen in which the growth of publications in the last six years is verified. In this Scopus context, the first article on innovation in the social economy in the title appears, for the first time, in 2013, in the University of Toronto Press, in the magazine Explore JESTOR by Bouchard (2013), titled “Innovation and Social Economy: the Quebec Experience.” While in Web Of Science, the first article on innovation in the social economy in the title appears, for the first time, in 2009, in the magazine Revesco-Revista de Estudios Cooperativos, titled “The social economy: International perspectives on economic solidarity” followed by (Klein et al., 2009; Smith and Teasdale, 2009).

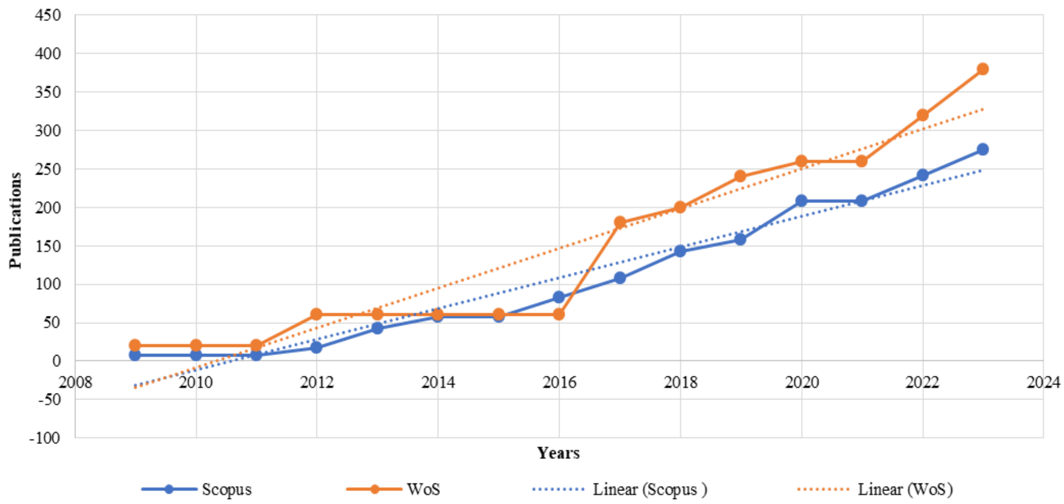

Figure 2. Scientific Production Average

Thus, the average annual growth rate of Scopus is 1.08% and of Web of Science is 1.47%, taking into account that the latter mentioned has had a greater growth in publications starting in 2017 when they obtained 180 scientific articles on innovation in the social economy, while Scopus has 108 published articles.

In this sense, a total of 304 articles established by Scopus and Web of Science were identified, thus, the two search engines agree that 55 articles are written by a single author. Thus, the co-authorship rate has an average of 1.17% in Scopus and 2.05% authors per scientific article in Web of Science. This reflects the increase in the number of authors due to the number of scientific articles. In Table 2, based on the indicator ("H" Index), it was ranked for the top 20 researchers found in Scopus and Web of Science due to its greatest impact. This indicator shows the visibility of each author's work, such as the number of citations per publication and determines H = number of articles/citations at the time of calculation (Hirsch, 2005). In such a way that recognized researchers and innovation professionals standout such as (Bouchard, 2012; Afonasova et al., 2019; Agyapong et al., 2019; Calvo Martinez et al., 2019; Vercher, 2022).

Table 2. Main Authors and H-Index (Note: This table represents the Scopus and Web Of Science (WoS) H-index based on Bibliometrix, 2023)

Rank	Authors	Scopus	WoS	Host	No. of Appointments	H Index
1	Bouchard (2012)	x		University of Rosario, Colombia-Bogota	45	12
2	Chalmers (2013)	x		University of Strathclyde, Scotland	81	11
3	Catalá (2023)		x	University of Masarykova, Czech Republic	181	9
4	Martin et al. (2015)	x		University of Leeds, United Kingdom	181	9
5	Bernardo et al. (2023)		x	Complutense University of Madrid	98	7
6	Potts and Hartley (2015)		x	University of California, United States-California	50	7
7	Agyapong et al. (2017)	X		Nova Science Publishers, United States	50	7
8	Rodriguez and Guzman (2013)		x	Complutense University of Madrid	71	6
9	Nelms et al. (2018)	X		University of California, United States-California	71	6
10	Padilla-Meléndez et al. (2014)		x	Complutense University of Madrid-Spain	36	6
11	Chaves and Monzo (2018)	X		University of Valencia, Spain-Madrid	103	6
12	Espasandín-Bustelo et al. (2023)		x	Journal of Technology Managemente 6 Innovation, United States	103	5
13	Vercher (2023)		x	University of Valencia, Spain-Madrid	96	5
14	Afonasova (2019)	X		Polish Journal of Management Studies	96	5
15	Wadhwa et al. (2017)	X		Emerald Insight: Discover Journals, Books & Case Studies	26	5
16	Street (2020)		x	University of Leeds, United Kingdom	40	4
17	Bouchard (2012)		x	University of Rosario, Colombia-Bogota	45	3
18	Muñoz Medraño et al. (2018)		x	University of Strathclyde, Scotland	50	2
19	Rodríguez and Guzman (2013)	X		International Journal of Production Economics, United States	50	2
20	Nicholson et al. (2017)	X		University of Kent, United Kingdom	11	1

From the registered affiliations of the authors, it was possible to identify the main institutions and countries to which they belong, which makes it possible to visualize and determine the productive behavior between countries or institutions (Padilla, 2016; Duran-Sanchez et al., 2018; Cui et al., 2023).

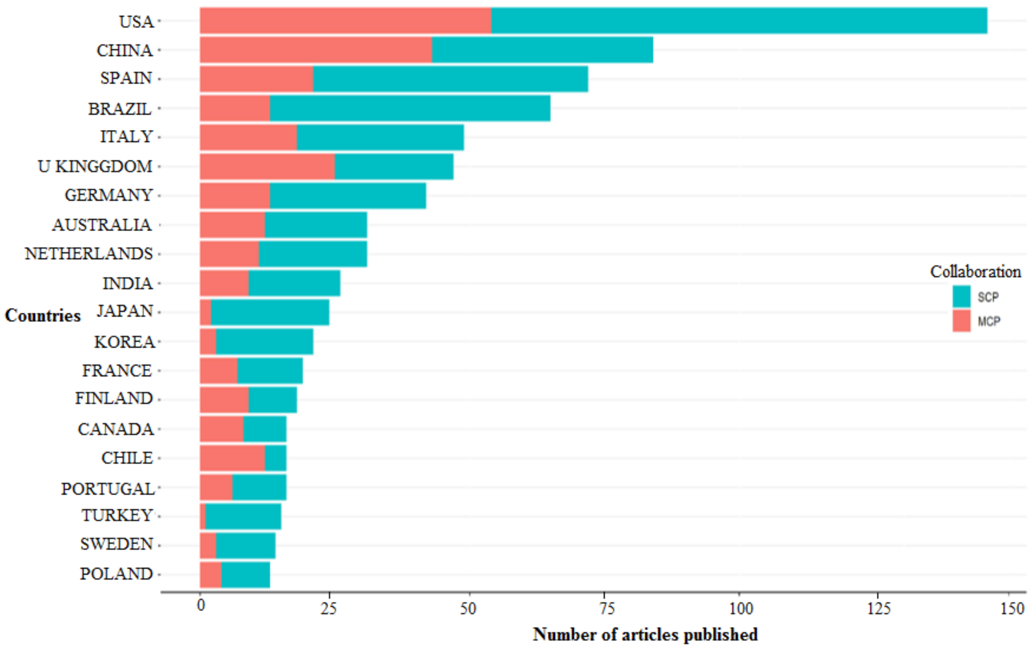

Figure 3. Scientific production by country (Note: Statistical relationship of intra-country (SCP) and inter-country (MCP) collaboration, based in Bibliometrix, 2023)

Figure 3 shows the 20 countries that contributed the greatest number of publications related to the topic of innovation in the social economy, based on the articles published by a single country (SCP) and through other countries (MCP).

In this way, you can see the ranking of the countries that have the greatest number of publications on the topic to be studied. This topic is led by the United States with 92 (SCP) articles published by a single country and 54 (MCP) by other countries, followed by China with 41 (SCP) and 43 (MCP) publications, while Spain has 51 (SCP) and 21 (MCP) Brazil has 52 (SCP) and 13 (MCP), Italy 31 (SCP) and 18 (MCP), United Kingdom 22 (SCP) and 25 (MCP), Germany 29 (SCP) and 13 (MCP). MCP), Australia 19 (SCP) and 12 (MCP), Netherlands 20 (SCP) and 11 (MCP), and finally, there is India with 17 (SCP) and 9 (MCP) completing the top 10 most productive countries in research developed and focused on innovation in the social economy, within the bibliographic databases in Scopus and Web of Science.

Regarding the authors who collaborated by country, it can be seen in Figure 2, that intra-country collaboration (SCP) is the majority, especially in the United States and China. For intercountry collaboration (MCP), both Scopus and WoS, the United States, China, the United Kingdom and Spain stand out.

For its part, Figure 4 represents the 20 universities with which Scopus and Web of Science coincide, of a total of 304 institutions identified with the most contributions in Innovation in the social economy, among them nine come from the United States and are of high level scientific in recent years, followed by the United Kingdom with four high-quality universities, Spain with five universities and finally Latin America, Argentina and Colombia with one university each.

Among them, the Georgia Institute Technology stands out. School of Public Policy is located in the state of Atlanta in the United States, known for being leaders in addressing social problems through political processes and in this way generates knowledge that contributes to sustainability, creating a more equitable society, implementing innovation in the intersection of technological sciences. Similarly, with 12 published articles, there is the University País Vasco, Spain, specialized in economic and business sciences.

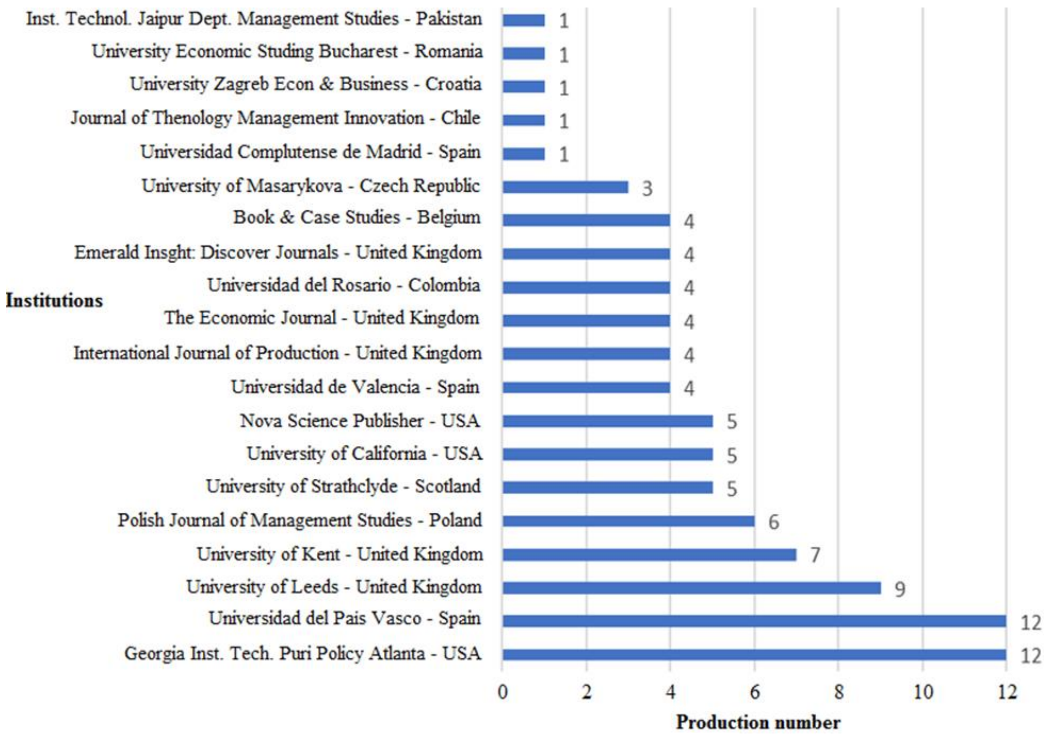

Figure 4. Productivity by type of institution

Table 3 presents the first 20 most relevant authors in Scopus and Web of Science based on the citation index in the field of innovation in the social economy. In these works, each author presents a different idea, with different lines of research for the study and theoretical and empirical development within the field. Thus, in Scopus, the work with the highest number of references is by Marchesi (2021), who carried out a commercial orientation in grassroots social innovation, with perspectives from the collaborative economy.

In turn, Chaves and Monzón (2018) exposed the social economy to emerging economic paradigms: social innovation, collaborative economy, circular economy, and corporate social responsibility, economy of the common good, social enterprise and solidarity economy. In Web of Science, the research with the greatest number of references was that of Catalá (2023), who pointed out the entrepreneurship and innovation ecosystems, as well as the social economy ecosystem, followed by Rodríguez (2013), who spoke about innovation in social economy companies.

In the analyzed period, the top twenty in the ranking are observed (Table 4). Switzerland leads with 7 journals with high impact factor Q1 and Q2; Spain also registers 4 journals with an impact of Q2 and Q3, followed by Canada and the United Kingdom with an impact of Q1 and Q2. Among the most important journals and published topics, the following journals are noted: Sustainability, Ciriec-España Revista de Economía Publica, Social, Innovation And The Social Economy: The

Quebec Expe, Annals Of Public And Cooperative Economics, Revesco-Revista de Estudios Cooperativos, 70% of the magazines are described, the table publishes topics related to innovation in the social economy, helping to create more inclusive, creative and sustainable societies and economies, thus helping to generate innovative solutions to improve the quality of life and well-being of people (Abhari et al., 2019; Bernardo, 2023; Calle et al., 2020).

Table 3. Article Titles and Number of Citations
Note. The following table represents the titles used for the study and the citations, based on Bibliometrix (2023)

Author	Scopus	WoS	Article title	Appointment number
Catalá (2023)		x	From entrepreneurial and innovation ecosystems to the social economy ecosystem	181
Martin (2015)	x		Commercial orientation in grassroots social innovation: Insights from the sharing economy	181
Marchesi (2021)	x		Social innovation for a circular economy in social housing	180
Chaves and Monzón (2018)	x		The social economy in the face of emerging economic paradigms: social innovation, collaborative economy, circular economy, corporate social responsibility, economy of the common good, social enterprise and solidarity economy	103
Rodríguez (2013)		x	Innovation in social economy firms	103
Bernard (2023)		x	The challenge of maintaining the principles of the social economy in the long term: the case of TUSGSAL	98
Afonasova (2019)	x		Digitalization in Economy and Innovation: The Effect on Social and Economic Processes	96
Chalmers (2013)	x		Social innovation: An exploration of the barriers faced by innovating organizations in the social economy	81
Street (2020)		x	Social Economy, Environmental Proactivity, Eco-Innovation and Performance in the Spanish Wine Sector	81
Klein (2010)		x	Social economy-based local initiatives and social innovation	71
Bouchard (2012)	x		Social innovation, an analytical grid for understanding the social economy: the example of the Québec housing sector	45
Bouchard (2012)		x	Social innovation, an analytical grid for understanding the social economy: the example of the Québec housing sector	45
Lyne (2018)		x	Understanding social enterprise, social entrepreneurship and the social economy in rural Cambodia	34
Klein (2010)	x		Social economy-based local initiatives and social innovation	32
Briones (2012)		x	Academic cooperation in agribusiness: innovative strategies and experiences of the Tecnológico de Costa Rica	28
Chatzichristos (2021)		x	Regional Institutional Arenas for Social Innovation	27
Bouchard (2013)	x		The Social Economy in Québec: A Laboratory of Social Innovation	27
Espasandin-Bustelo et al. (2023)		x	Innovation and performance in social economy enterprises	26
Abhari (2019)	x		Collaborative innovation in the sharing economy: Profiling social product development actors through classification modeling	24
Acquier (2018)	x		Sharing Economy and Social Innovation	10

Table 4. Magazines and quartiles based on Innovation in the Social Economy
Note. Analysis of the magazines and their quartiles based on innovation and social economy, own elaboration 2023

Rank	Scopus	WoS	Magazine	No. of Items	Country	Quartiles (2024)	ISNN
1	X		Sustainability	7	Swiss	Q1	20711050
2	X		Ciriec-Espana Journal of Public and Social Economy	4	Spain	Q2	19896816
3		x	Ciriec-Espana Journal of Social and Cooperative Public Economy	8	Spain	Q2	19896816
4	X		Innovation And The Social Economy: The Quebec Expe	3	Canada	Q1	14678292
5		x	Annals Of Public And Cooperative Economics	4	United Kingdom	Q2	13704788
6		x	REVESCO-Journal of Cooperative Studies	3	Spain	Q2	18858031
7	X		Social Innovation And Territorial Development	3	Canada		
8		x	Journal Of Business Research	2	USA	Q1	1482963
9	X		Cogent Business And Management	2	United Kingdom	Q2	23311975
10		x	Technology in Progress	2	USA	Q1	17508614
11	X		Entrepreneurship And Regional Development	2	United Kingdom	Q1	14645114
12		x	Agriculture And Human Values	1	Netherlands	Q1	15728366
13		x	Dixie	1	Spain	Q3	18869440
14	X		Journal Of Business Research	2	USA	Q1	1482963
15	X		Migration Letters	2	United Kingdom	Q2	17418992
16		x	Economic And Social Changes-Facts Trends Forecast	1	USA		
17		x	Economy And Society	1	United Kingdom	Q1	3085147
18		x	Environment And Planning C-Politics And Space	1	United Kingdom	Q1	23996552
19	X		Social Enterprise Journal	2	United Kingdom	Q1	17508533
20	X		Strategies And Best Practices In Social Innovation	2	USA		9783319

Similarly, Figure 5 shows a thematic analysis of the most significant research sources based on a number of keywords to provide a broad view of the level of agreement with the theme of innovation in the social economy. However, to know the most used keywords, a reference system was used to determine the future development of different searches. Tentatively, the VOSviewer package was used, based on the authors' keywords to identify the most current topics or research directions of innovation in the social economy (Aria and Cuccurullo, 2017). Thus, a total of 601 terms were identified: social (137) is the word that is most repeated, based on the search criteria, as well as social innovation (101); impact (116); science (110); social economy (91); technology (62); emerging (13); digital (6); impact (4), among others.

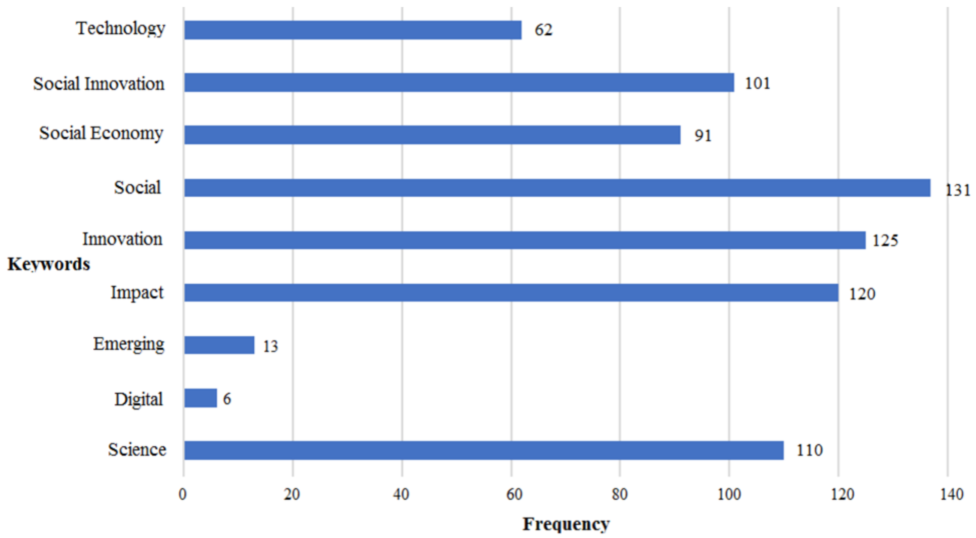

Figure 5. Keywords

In this context, Figure 6 shows that research on innovation in the social economy was related to innovation, corporate principles, and social innovation, among the most important. Between 2014 and 2016 it was related to the social economy, public economy, social capital, economic growth. As of 2018, research is closely related to innovation, social innovation, and technology. The co-occurrence map shows the themes and trends according to the keywords used from January 2022 to January 2023, this is how the analysis provides a valuable perspective on the current state of knowledge about innovation in the social economy, being this multidisciplinary field is influenced by factors such as innovation, social economy, sustainable consumption and social innovation. Our findings also highlight the potential for interdisciplinary collaboration between the social economy and other sectors, such as finance, technology and policy, to accelerate innovation and promote social and environmental progress. Several themes were also identified that are not commonly associated with innovation in the social economy but that appear in the literature due to the nature of co-occurrence analysis such as: Public policy and administration, Theory and organizational behavior, Management and strategy innovation.

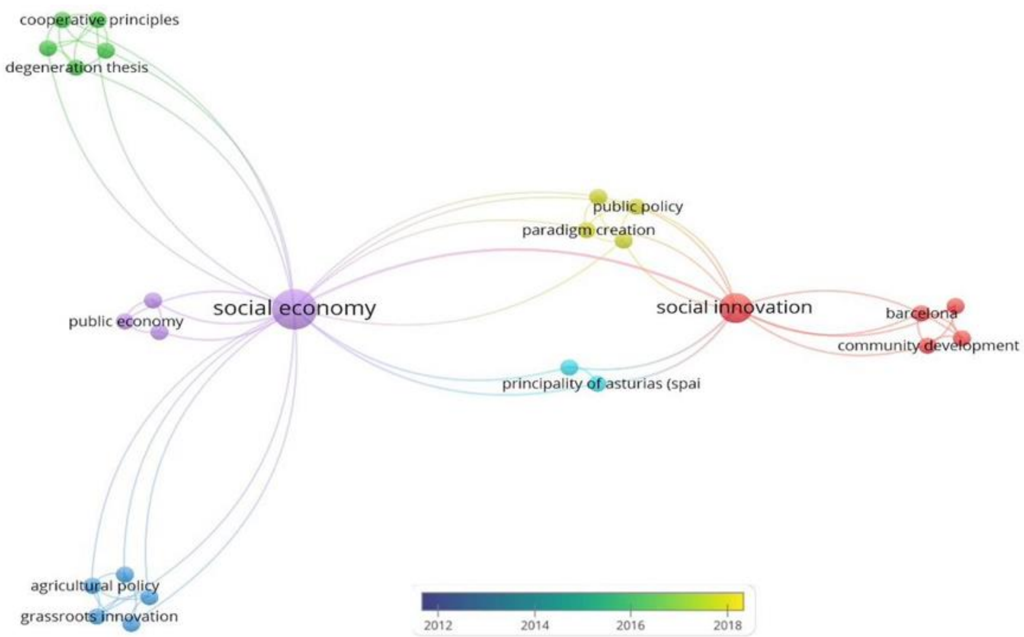

Figure 6. Co-occurrence map (Note. The figure represents the co-occurrence
network based on the information search criteria of Scopus and WoS, based on VOSviewer, 2023)

Likewise, in Figure 7, it can be identified that the databases on the authors and their publications on innovation in the social economy, 12% in Scopus of 100% and WoS 25.6%. On the other hand, the authors published in different international journals, such as Sustainability (8.4%), followed by Revista de Economía Publica, Social (10%).

It is observed that there is a strong correlation between the eminence of a scientist and his productivi ty, the Lotka index was considered, which mentions Divide the authors of the publication group into three levels of productivity: Small producers (only one article or equal productivity index to 0), average producers (2 to 9 articles and productivity index) (greater than 0 and less than 1) and large producers (10 or more papers and a productivity index equal to or greater than 1) (Lotka, 1926) cited in (Abhari et al., 2019) being (Bouchard, 2012), followed by (Klein et al., 2010), (Lyne et al., 2018), these authors being with greater scientific production in social economy innovation, the rest are small producers or collaborators in research.

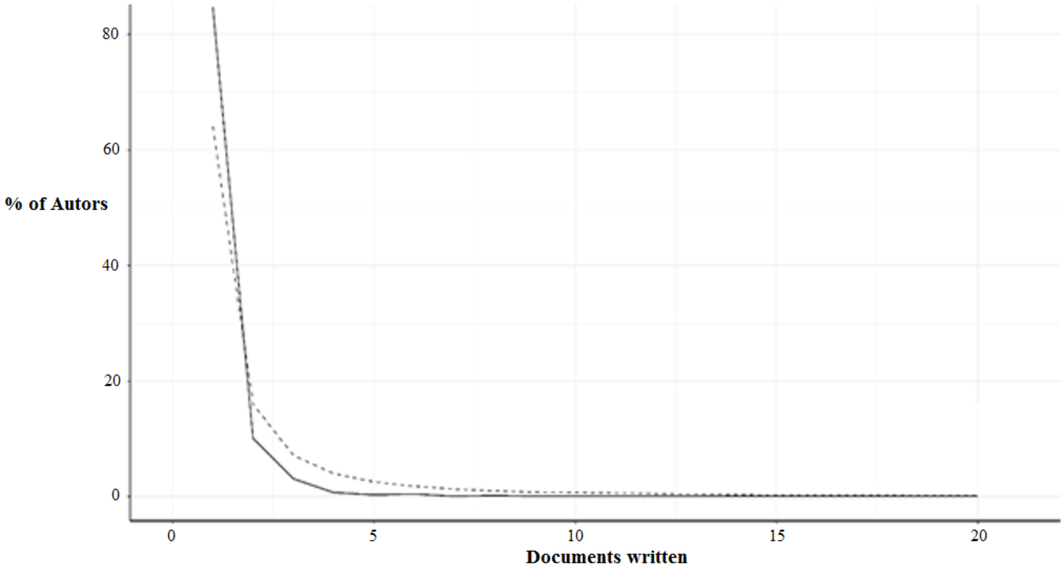

Figure 7. Author productivity through Lotka's law

Next, in Figure 8 you can identify the analysis of the main currents of the study where three scenarios are presented.

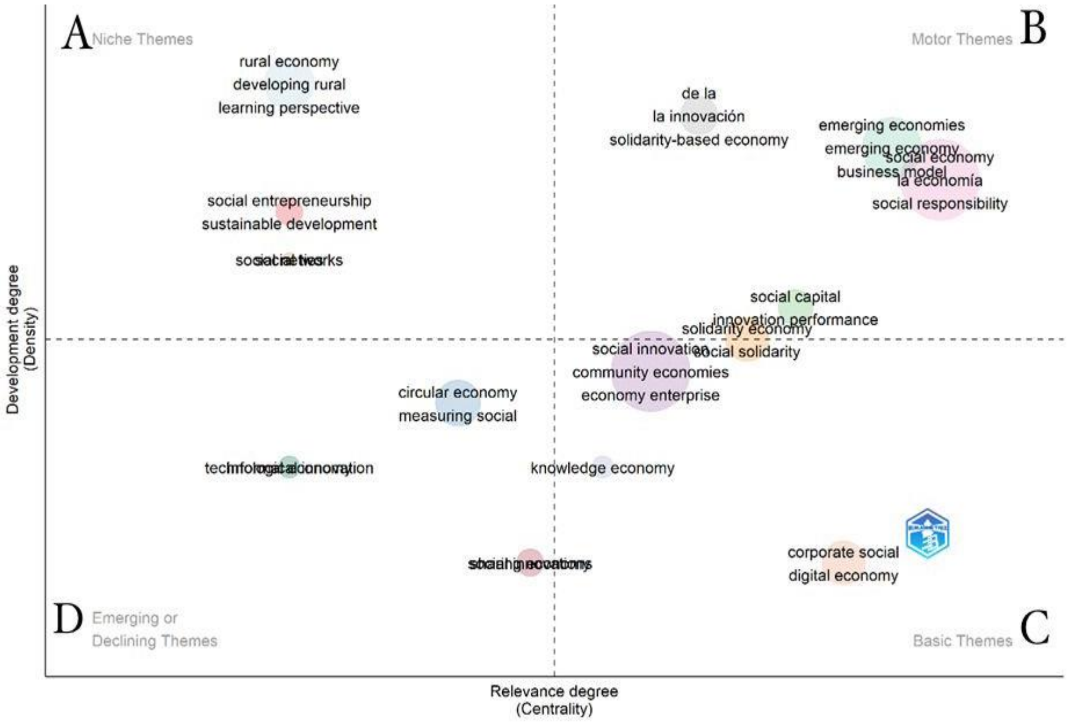

Figure 8. Main research streams

Niche Themes (A)

This quadrant reflects different study topics that accompany the construction within innovation in the social economy. In such a way that, innovation is taken as a meaning of improvement within the social economy to generate new processes, in the development of products, aid and social innovations. Within innovation in the social economy, its greatest impact on innovation and the social economy is maximized (Martin et al., 2015; Cohen et al., 2017; Nelms et al., 2018; Wadhwa et al., 2017), since entrepreneurship and digital generate more value in the social economy (Creech and Nadler, 2018). Thus, it is possible to determine that the social economy has an association with entrepreneurship, environmental sustainability and non-profit organizations, to promote different businesses with the help of innovation, in order to develop new income for different sectors. Overall, the main research trends on specific topics suggest a growing focus on the role of social and environmental factors in economic development, as well as on the importance of technology and innovation. Furthermore, the need to consider the relevance and centrality of certain research topics, as well as the driving forces behind economic growth and development, is recognized.

Motor Themes (B)

Based on the bibliometric data provided, the main research trends in the driving themes of quadrant B can be analyzed as follows: First of all, it can be observed that the density and centrality of the theme "social responsibility" developed by Marchesi (2021) is high, indicating that it is a well-researched and significant topic in the B quadrant driving themes. This is consistent with the growing awareness and importance of corporate social responsibility in modern business practices. While Afonasova (2019) in her topic on "digital economy" also has a high density and centrality, suggesting that it is an important and rapidly growing research area in the driving themes of quadrant B. This reflects the digital transformation in course of economies and societies, and the need to understand its implications for business and society. For this, Bouchard (2012) with his themes developed in "corporate social" has a high centrality, but a lower density, which indicates that it is an important but less researched theme in the motor themes of quadrant B. This may suggest the need to conduct more research on the role of corporations in promoting social responsibility and sustainability.

Calle's (2020) work with the theme "innovation performance" has moderate density and centrality, indicating that it is a significant research trend in the driving themes of quadrant B. It is likely that research in this area will be focus on understanding the factors that contribute to innovation success and how organizations can improve their innovation performance to remain competitive in the digital economy. Key research trends in quadrant B driving topics include social responsibility, economics digital, corporate social activities, innovation performance.

Basic and relevant topics (C)

In this quadrant, the topics that with a greater degree of density that have been the basis for the emergence of new topics specialized in innovation in the social economy are analyzed: social capital, digital economy, innovation, entrepreneurship, community economies.

Regarding social capital, the performance of micro and small businesses in an emerging economy and the mediating role of innovation within the company are highlighted (Agyapong et al., 2017). In this quadrant, it is necessary to take into account the importance of the issue of innovation in the social economy in entrepreneurship and community economies, according to Theodorakopoulos et al. (2014) and their argument about the importance of the fusion of technology and innovation within ventures. On the other hand, Gibson-Graham (2008) analyzed social innovation for community economies, which promotes scientific production.

Emerging or Declining Themes (D)

he emergence of new themes and the decline of old ones have been key trends in the themes of degree of development (density), studies such as: circular economy, social entrepreneurship, sustainable development, social capital, innovation performance emerge. All these topics, innovation in the social economy, are key when facing a problem in emerging issues (D'ovidio and Pradel, 2013; Acquier, 2018; Chavez and Monzón, 2018; Bouchard, 2013; Briones, 2012), these authors study three factors of the role of innovation and the social economy, as a fusion to generate a contrast. For their part, Abhari et al., 2019.

They studied the collaborative innovation in the shared economy, with the profile of the actors in the development of social products through classification models, taking innovation within a shared economy as a starting point, in order to develop subsequent studies on the social economy, the Decline of old themes, such as community economies, indicates a shift in focus towards more innovative and sustainable development approaches.

Implications with the trends of the bibliometric study of innovation in the social economy

Topics such as social entrepreneurship, sustainable development and technological innovation continue to emerge in research on innovation in the social economy. These trends illustrate a growing interest in using innovative approaches to address social and environmental challenges and create new economic opportunities (Agyapong et al., 2017). At the same time, some topics are losing importance, such as the circular economy and the solidarity economy. This may suggest that although these concepts were once considered important, they are no longer relevant today (Acquier, 2018; Chaves and Monzón, 2018). From the perspective of basic issues, social responsibility and corporate responsibility stand out and become important driving forces of innovation in the social economy.

This reflects a growing recognition of the role that businesses can play in creating positive social and environmental impact, and the need for innovative approaches to address social and environmental challenges (Gibson-Graham, 2008). Trends in innovation research in the social economy indicate a growing interest in using innovative approaches to address social and environmental challenges and create new economic opportunities (Briones, 2012).

At the same time, the importance of understanding the social and economic context in which innovation occurs and the role of business and social capital in driving innovation is recognized. The narrowing of topics demonstrates that, while some concepts may no longer be as important, the field of innovation research in the social economy remains dynamic and responsive to emerging trends and challenges.

DISCUSSION

In accordance with the results of the research, it was evident that there are no bibliometric analyzes in the innovation of the social economy, therefore, in innovation, it was found that there is a general vision with a greater number of scientific production carried out by the United States, as well as explained by Ballardo et al. (2019), who indicated a ranking where the authors and universities with the most research on innovation are located in the United States, taking Web of Science as a source. By systematically examining the academic literature with Scopus and Web of Science, a mapping of the innovation landscape in the social economy was generated, where the evolution over time is revealed. This mapping exercise has identified key themes, trends and areas of interest, shedding light on the dynamic nature of innovation in this sector.

In the bibliometric analysis, the authors and institutions that have played key roles in innovation in the social economy were studied. Through citation counting and H-index scoring, Martin (2015) from the University of Leeds collected 181 citations within his scientific article. This information is not only of academic interest, but can help professionals and policymakers identify potential collaborators and experts when they intend to implement innovative solutions in the social economy.

One of the main contributions of this study is the identification of research gaps and emerging trends in the field of social economy innovation. By analyzing the frequency of keywords and citation networks, areas where more research is required are evident, for example, circular economy, social entrepreneurship, sustainable development, social capital and innovation unemployment, these insights provide valuable guidance for future research agendas.

Innovation in the social economy is inherently interdisciplinary and this analysis highlights that fact, as research on this topic comes from a wide range of disciplines, including economics, circular economy, sustainable development, management and public policy. This interdisciplinary nature highlights the complexity of innovation in the social economy and the need for collaborative efforts across academic and practical domains to foster meaningful change.

CONCLUSION

Innovation is crucial in the social economy as it helps not only the growth of companies but also to address and solve social and environmental problems. Innovations in the social economy, in particular, have long-term impacts on society and can be advanced through the efforts of businesses and nonprofit organizations. In today's interconnected world, innovation in the social economy has become necessary to address global challenges such as financial instability, political instability, hunger, poverty and disease. Furthermore, prosperous societies are those that solve social problems in innovative ways with economic and social growth in mind. The bibliometric analysis carried out in this research project reveals several key ideas about innovation in the social economy, research production in this field has increased significantly since 2009, highlighting the scientific production of the United States with 146 publications followed by China, with 84 and Spain, with 72. For this, it becomes especially significant if only articles published in English and Spanish are considered. In turn, Georgia Institute Technology is in first place in the ranking of universities.

School of Public Policy with 12 contributions, followed by the University Pais Vasco, Spain, with 12 contributions, below the University of Leeds. In this way, among the 20 most productive universities, 2 of them are from Spain, which is how the importance of research on innovation in the social economy in that country is corroborated. However, the scientific journals that publish the most articles in this area of research are mostly from English-speaking countries, because their authors are mainly associated with universities based in the United States and the United Kingdom.

This bibliometric analysis provides a complete vision of the evolution and trends in the study of innovation within the social economy. The growing research output underlines the growing importance of the social economy as a driver of sustainable and equitable economic development. Geographic distribution, thematic trends, and identification of influential contributors contribute to future research and practical efforts within this field. By promoting international collaboration, diversification of research perspectives, and engagement with key stakeholders, we can harness the innovative power of the social economy to address pressing social challenges and contribute to a more inclusive and sustainable global economy.

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INFLUENCE OF INSTITUTIONAL FACTORS ON CIRCULAR ECONOMY PRACTICES IN EMERGING TOURIST DESTINATIONS

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Abstract: This study examines how key institutions such as policies, incentives and stakeholder collaboration influence the implementation of circular economy initiatives in emerging tourism destinations. Main approach for this study is a case study method with documentary analysis and interviews with key stakeholders using Kazakhstan case. The documentary analysis showed the shortcomings of regulatory framework and adherence to a "planned circularity". The analysis leads to practical recommendations for policymakers, including the development of comprehensive circular economy guidelines addressing tourism, financial incentives for businesses, infrastructure investment and increased collaboration among stakeholders. This study contributes to the literature by providing a detailed examination of how institutional factors shape circular economy practices in tourism in emerging destinations context. It offers insight into how global circular economy principles can be adapted to local conditions, thereby expanding understanding of the circular economy in different geographic and economic contexts.

Keywords: circular economy, circular tourism, sustainable tourism, institutions, emerging destination, case-study

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INTRODUCTION

Tourism plays a vital role in many economies, creating jobs, boosting GDP and even revitalizing rural and less developed areas. However, tourism also has a huge impact on the environment, reliance on a linear "take-make-waste" model puts enormous pressure on local resources and generates significant negative externalities.

Sustainable tourism seeks to minimize the negative impacts of tourism activities while maximizing positive benefits for both the environment and local communities, advocating responsible travel practices, resource conservation, cultural preservation and active participation of local communities. The transition to sustainable tourism is not just an ethical imperative, but also an important factor in ensuring the long-term viability of the industry itself.

Circular economy challenges the traditional linear model and promotes a closed-loop system in which resources are used as long as possible and waste is minimized through recovery, reuse, recycling of resources.

Although the concept of circular economy is becoming more and more widely used, its application in tourism is still under-researched and fragmented (Rodriguez et al., 2020). In the context of a circular economy in the tourism sector, institutional factors play a critical role in shaping the adoption and implementation of circular economy practices (Jones and Wynn, 2022). These institutions include policies, rules, regulations and other formal and informal structures that influence the behavior of businesses, governing bodies and consumers.

Kazakhstan's tourism industry is experiencing significant growth, making it a suitable example for other emerging destinations. In 2022, according to the World Travel and Tourism Council, the share of tourism in Kazakhstan's GDP is at 7.6% and in monetary value at $7.7 billion ((WTTC) World Travel and Tourism Council, 2023)[1], meanwhile, the country's government has ambitious plans to increase the contribution industry in GDP up to 15% within five years (Astana Invest City Investment Development Center, 2024). Kazakhstan has initiated programs and policies aimed at promoting sustainable development, making it a valuable case study for analyzing the effectiveness of such initiatives. The transition to circular economy in tourism will help harness the potential of tourism not only to protect natural and cultural heritage, but also to promote economic prosperity and social well-being of local people (Nocca et al., 2023). In addition, there is less research on circular economy in tourism in developing countries than in traditional destinations, and the Kazakhstan case helps fill this knowledge gap.

Existing literature highlights the potential of circular economy for environmental and economic benefits in tourism (Jones and Wynn, 2022; Pongsakornrungsilp and Pongsakornrungsilp, 2021; Rodriguez et al., 2020; Santos et al., 2023), but limited evidence exists regarding factors influencing its implementation. This study aims to investigate the influence of institutional factors, including policies, incentives, and stakeholder collaboration, on the implementation of circular economy initiatives within the tourism sector of emerging destinations. Specifically, it seeks to understand drivers and barriers shaping the adoption of circular economy practices in tourism businesses and contribute to the overall sustainability of the industry. By examining the case of Kazakhstan, the study aims to provide insights into the challenges and opportunities for transitioning to a circular economy in tourism and offer practical recommendations for policymakers and industry stakeholders.

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LITERATURE REVIEW

Institutional theory and Circular Economy

Institutional theory provides a framework for understanding the drivers and barriers of the circular economy by analyzing the institutional environments in which circular economy initiatives are implemented. The theory recognizes that institutions, such as laws, regulations, norms, and cultural-cognitive beliefs, shape the behavior of individuals and organizations, and influence the adoption and diffusion of new practices and technologies. In the context of the circular economy, institutional theory helps to identify the institutional drivers and barriers that influence the implementation of circular economy initiatives (Ranta et al., 2018). For example, regulatory policies have primary impact on recycling efforts on both the consumer and manufacturer sides, while some attempt toward recycling, and increasing reuse faces cultural-cognitive barriers. By analyzing the institutional environments of China, the US, and Europe, Ranta et al., (2018) identified the institutional factors that support or hinder the adoption of the circular economy, highlighting the importance of a holistic institutional approach for advancing the circular economy. Before transition to circular economy governments need to carefully design and strengthen their regulation to handle challenges like uncertainty, and public pushback with special attention to the design of the institutional arrangements (Riazi et al., 2023). Alonso-Almeida and Rodríguez-Antón (2020) further underscored the role of institutional pressure, including coercive and mimetic pressures, in driving the adoption of circular economy practices at both the macro and regional levels.

Technologies recognized as an important enabler of movement to circularity, for example information and communication technologies can support traceability for reusable packaging at a large scale (Ellsworth-Krebs et al., 2022), big data analytics and knowledge management enhance competitive advantage and performance through sustainability marketing (Horng et al., 2022).

According to the theory developed by Bauwens et al. (2020), there is four possible different scenarios of the future of circular economy, which depend on the type of governance structure: centralized or decentralized; also on type of used technologies: high-tech innovations or low-tech innovations. The study explores four potential paths for the future of circular economy: a) "planned circularity" relies on centralized management and regulation and low-tech innovations to drive the transition; b) "bottom-up sufficiency" emphasizes local, individual actions focused on reducing consumption and waste but relies on low-tch innovations; c) "circular modernism" leverages advancements in technology and centralized management to maximize resource use and extend product lifespans, and d) "peer-to-peer circularity" prioritizes decentralized networks and community-based exchanges of goods and services by using tach innovations (Bauwens et al., 2020).

In the transition to a circular economy, institutions also play a crucial role in enabling and accelerating this shift. The study of Dagilienė et al., (2021) tackled obstacles to a circular economy, including weak waste management, staffing imbalances, poor networking, and underdeveloped local businesses. To overcome these, the study proposed a framework inspired by global and local success stories, focusing on learning, shared vision, responsive governance, smart regulations, and collaborative networks (Dagilienė et al., 2021).

Henrysson and Nuur (2021) emphasized the importance of institutions in regional path development, particularly in the natural resource-based sector, with physical flows, market networks, and cooperation patterns being key determinants. By recognizing importance of networking and cooperation for transition to circular economy Ho et al. (2022) dug into the complex relationship between businesses and civil society groups and uncover how these two players interact, both working together and pushing against each other, to navigate this shift towards a more sustainable system.

Stakeholders cooperation and social networks were recognized as vital enablers of transition to circular economy and in that context, universities play a crucial role in this transition by adopting sustainable environmental policies, providing life-centered and environment-centered educational services, and cultivating environmental awareness and behavioral changes. (Erdoğan, 2022). The concept of circular economy is perceived differently in the academic sphere, industry and government, but there is a substantial consensus space focusing on materials and products, creating new resources and businesses from waste. The Triple Helix model which requires collaboration and shared goals among business, government and academia, suggests to combine their competences for more sustainable economic and social development (Anttonen et al., 2018).

Among policy and regulation of circular economy except the production policy and wasty management, vitality of consumption policy were highlighted by several studies (Arranz et al., 2023; Arranz and Arroyabe, 2023; Camilleri, 2021; Pinyol Alberich et al., 2023). Furthermore, a growing wave of individuals, initiatives, and hybrid organizations actively challenging the dominant profit-driven model of consumption, these changemakers are paving the way for a consumption revolution, prioritizing experiences and connections over the endless acquisition of material goods e.g. peer-to-peer sharing, community initiatives, sharing economy and cooperative economy (Schulz et al., 2019).

Similar to the aim of our study, Ho et al., (2023) tried to identify main enablers and barriers of circular economy in the case of Australian state, and by interviewing main stakeholders found significant role of regulatory framework and collaboration whereas lack of guidelines and financial challenges are barriers of transition to circularity. More recent study of Feldman et al. (2024) by reviewing barriers of circular economy in Australia again highlighted regulation policy and financial obstacles. These studies were conducted in developed economy and were not industry specific. And analysis of factors affecting implementation of circular practices in emerging economy also highlighted importance of government policy among others (Khan et al., 2022).

Overall, the studies collectively highlight the significant influence of institutions, including policies and regulation, technologies, collaboration among stakeholders, consumption patterns in shaping the transition to a circular economy. Furthermore, most of studies related to institutional changes in the transition to circular economy carried out in developed countries, while developing and emerging countries have more specific institutions which should be investigated to promote circular economy models. Another research gap relates to industry specific studies, manufacturing industries mostly under the consideration of researchers, studies related to circular economy in tourism sector is reviewed below.

Circular Economy and Tourism

The transition to a circular economy in the tourism sector requires a multi-faceted approach, with a key role for innovation in business models (Florido et al., 2019). The circular economy and natural capital offer environmental and business benefits, but there is limited evidence of their integration into sustainability programs in the tourism and hospitality industry (Jones and Wynn, 2022; Manniche et al., 2021). Human Circular Tourism is proposed as a strategy to achieve a more sustainable and circular tourism, with a focus on increasing awareness among travelers (Nocca et al., 2023). Special role in the movement to circularity in tourism played by tourists itself (Sørensen et al., 2020), indeed, consumers awareness and attitudes are key as in driving so in hindering transition to circular economy (Julião et al., 2019; Kirchherr et al., 2018; Nassanbekova and Yeshenkulova, 2022). Consumer acceptance of circular products and services is crucial and one of the most powerful tools to foster this acceptance is effective communication of sustainability messages (Julião et al., 2019).

The eco-hotel industry is increasingly adopting green practices and circular economy principles, driven by consumer demand and the potential for cost savings (Santos and Marques, 2023). These practices include energy and water conservation, waste management, and the use of renewable energy resources (Julião et al., 2019). Li et al., (2024) in their critical review discussed circularity cases in tourism through water-energy-waste-food-transport prism and highlighted concentration of previous studies on energy efficiency and less on food and waste issues. Hotels that adopt sustainable practices are more likely to succeed if they have government backing, industry-wide standards, competition that prioritizes environmental concerns, and strong support from employees, the local community, and investors (Ouyang et al., 2019). The implementation of circular practices is associated with benefits such as reduced operating costs, increased guest satisfaction, and positive environmental and social impacts (Julião et al., 2019).

This transition can lead to new business models and practices, but there is a need for further research and case studies to fully understand its implications (Manniche et al., 2021). However, the adoption of circular economy practices in tourism is still in its early stages, with a focus on cost-saving measures (Santos et al., 2023). Among few empirical studies relating to circular economy in tourism, by conducting longitude research (Pongsakornrungsilp and Pongsakornrungsilp, 2021) drown main conclusion about vital role of value networks among stakeholders in driving circularity in practice. Further research is required at the macro level, involving various groups and stakeholders, most studies confirm that a successful transition to a circular economy in tourism requires the involvement of residents in the process and ensuring the cooperation of government officials with the community (Renfors, 2023).

Among main barriers for implementing circular practices in tourism are lack of regulatory enforcement and government support while main drivers refers to education and awareness (Bittner et al., 2024).

The transition to a circular economy in tourism is gaining traction but faces significant challenges. While the industry recognizes the potential environmental and economic benefits, implementation remains in its early stages, primarily focused on cost-saving measures. Consumer awareness and behavior are crucial for driving circular practices, but effective communication strategies are needed to foster acceptance. Collaboration among stakeholders, including government, businesses, and tourists, is essential for successful implementation. Overcoming barriers such as lack of regulations and support requires concerted efforts and further research to understand the full implications of circular economy in tourism.

METHODOLOGY

The research design for this study was based on qualitative case-study in Kazakhstan. This study had two main parts: (1) analysis of regulatory frame for transition to circular economy in Kazakhstan, and (2) interviews with experts from industry, government, and academia. The flowchart of the study is given in Figure 1.

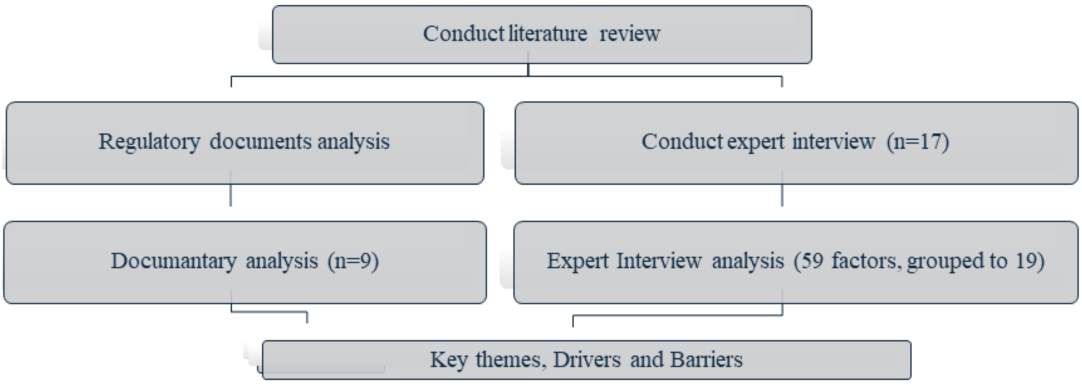

Figure 1. Flowchart of the study

After conducting literature review, governmental strategic and regulatory documents outlined in the Table 1 were revised. Total 3 strategic and 6 regulatory documents from Legal information system of Regulatory Legal Acts of the Republic of Kazakhstan adilet.zan.kz (Ministry of Justice of Republic of Kazakhstan, n.d.) by using keywords “circular economy”, “sustainability”, “green economy”, and “tourism” identified. Then reports and document of Kazakhstan’s governmental and other official organizations relating to waste management, ecological situation, production and consumption were analyzed. After initially breaking down the policies into smaller, concrete themes (first-order codes), grouped them into broader, more theoretical categories (abstract categories).

This iterative process of analyzing and revising helped refine understanding of the policies' content and led to the identification of three key themes: energy efficiency, water resources, and waste management. Additionally, Bauwens et al., (2020) framework to evaluate future for circularity in Kazakhstan applied.

Table 1. List of analyzed policy documents (Source: Compiled by author)

1. National Development Plan of the Republic of Kazakhstan until 2025 (Decree of the President of the Republic of Kazakhstan No. 636 dated February 15, 2018). (2018/636)
2. Concept for the transition of the Republic of Kazakhstan to a "green economy" (Decree of the President of the Republic of Kazakhstan No. 577 dated May 30, 2013) (2013/577).
3. Strategies for achieving carbon neutrality of the Republic of Kazakhstan until 2060. Decree of the President of the Republic of Kazakhstan dated February 2, 2023. No. 121) (2023/121)
~~4.~~ Environmental Code of the Republic of Kazakhstan. Code of the Republic of Kazakhstan dated January 2, 2021. No. 400-VI ZRK (as amended from 01/02/2023 No. 184, from 04/19/2023 No. 223, from 07/05/2023 No. 17) (2021/400-4)
5. The Law of the Republic of Kazakhstan On Support of the Use of Renewable Energy Sources dated July 4, 2009 No. 165-IV. (2009/165)
6. Decree of the Government of the Republic of Kazakhstan dated February 26, 2021, No. 99 "On amending the Decree of the Government of the Republic of Kazakhstan dated November 29, 2017, No. 790 "On approval of the State Planning System in the Republic of Kazakhstan." (2021/99)
7. Law of the Republic of Kazakhstan "On ratification of the Protocol on Pollutant Release and Transfer Registers to the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters" dated December 12, 2019, No. 279-VI ZRK. (2019/279-4)
8. Order of the Minister of Ecology and Natural Resources of the Republic of Kazakhstan dated July 11, 2022 No. 525 "On approval of the national carbon quota plan." (2022/5250)
9. Order of acting Minister of Ecology, Geology and Natural Resources of the Republic of Kazakhstan dated July 19, 2021, No. 261 "On approval of the Rules for the development and approval of accumulation limits and waste disposal limits, submission and control of reporting on waste management" (2021/261)

Also, through semi-structured interviews, the study explored factors promoting and hindering transition to circular economy model. Purposive sampling was used to select among key players in tourism industry shift to circular economy in Kazakhstan. To choose the experts from the industry in senior manager or director position representers with experience in sustainable tourism practices were invited to the interviews. From academia professors or senior researchers specializing in sustainable tourism, circular economy and sustainable development were selected. The main criteria for selecting policymaker experts were representers from national and regional government level or Destination Management Organization (DMO), with specific involvement to tourism or environment policies. Professional networks and industry associations were used to find and reach potential interviewees. The interview protocol was developed based on the literature review and the documentary analysis. The author interviewed 17 experts and practitioners from tourism, representing accommodation sector, including general managers of big hotel chain operating in Kazakhstan and business owners representing small and medium enterprises; academicians who research area related to sustainable development of tourism or circular economy, and policymakers among them the head of one of Destination Management Organization and environmental and tourism areas policymakers (Table 2). The interviews took place between August – November 2023 on hybrid form, some interviews online through Zoom platform and other were face-to-face interviews.

Table 2. Profile of interviewees (Source: Compiled by author)

	Background	Number of persons	Duration of each interview
1	Industry	6	55-90 minutes
2	Academia	7	
3	Government	4	

Through open-ended interviews, the research explored institutional drivers and barriers existing in tourism in its transition to circular economy, and what factors enabling or hindering that shift. The questions for the interviews were designed based on literature review and group related to key institutions: policy and regulation, financial incentives and social cooperation. The interviews were continued while new factors were not identified. The records of the interviews were transcribed for future data analysis. For data analysis thematic analysis were used. Drivers and barriers relating to local institutions were first analyzed from the interview transcripts. A total of 59 factors were identified and coded, then the identified factors were clustered for more broad themes and clustered them to 19 groups (16 main and 3 additional).

RESULTS

Kazakhstan, like other UN member countries, reaffirmed its commitment to the Sustainable Development Goals in 2015. The principles of sustainability and inclusiveness form the basis of the new National Development Plan of the Republic of Kazakhstan until 2025 (2018/636) (National Development Plan of the Republic of Kazakhstan until 2025, 2018). A new state planning system has been in effect since 2021 (2021/99), the essence of the updated system is that documents of the State Planning System must contain UN Sustainable Development Goals indicators. For these purposes, national Sustainable Development Goals indicators were also approved in 2021 (Institute of Economic Research & Ministry of National Economy of the Republic of Kazakhstan, 2022).

However, Kazakhstan still does not have any special strategy or other regulatory document for transition to Circular economy. Among strategic documents "Concept for the transition of the Republic of Kazakhstan to a "green economy" adopted in 2013" (2013/577) (Concept for the Transition of the Republic of Kazakhstan to a "Green Economy," 2013) and "Strategies for achieving carbon neutrality of the Republic of Kazakhstan until 2060" (2023/121) (Strategy to Achieve Carbon Neutrality of the Republic of Kazakhstan until 2060, 2023) contain some elements supporting movement to the Circular Economy Model. And main regulation of waste management in the country is covered by the Environmental Code of the Republic of Kazakhstan (2021/400-4) (Environmental Code of the Republic of Kazakhstan, 2021). Concept for the transition of the Republic of Kazakhstan to a "green" economy has three stages of transition: 2013–2020, 2020–2030, 2030–2050. The second phase for 2020–2030 is currently being implemented and provides for measures to transform the national economy, focused on the careful use of water, encouraging and stimulating development and broad implementation of renewable energy technologies.

Strategies for achieving carbon neutrality provides for a set of key measures to reduce emissions and decarbonize the economy, such as abandoning new coal generation projects and phasing out coal combustion (2021-2025), doubling the share of renewable energy sources in electricity production (2030), 100% sorting municipal solid waste (2040), sustainable agriculture on 75% arable land (2045), 100% electrification of personal passenger transport (2045), use of "green" hydrogen and complete elimination of coal production starting from 2050.

The regulation frames relating to resource utilization are mostly related to the energy sector and water resources. In accordance with the Law of the Republic of Kazakhstan "On Supporting the Use of Renewable Energy Sources" (2009/165), clean energy producers have the opportunity to sell generated electricity from renewable energy sources in the public network, at special tariffs through the Settlement and Financial Center for Support of Renewable Energy Sources (Government of the Republic of Kazakhstan, 2024). This, in turn, guarantees the purchase of electrical energy from renewable energy sources. Producers of renewable energy sources are exempt from paying for the services of energy transmission organizations for the transmission of electrical energy; priority has been determined for renewable energy sources when transmitting electricity through networks. These government support measures in the form of guaranteed purchase of electricity should help stimulate the development of renewable energy sources. To receive the above support measures, the implementation of renewable energy projects is carried out through an auction mechanism (Government of the Republic of Kazakhstan, 2024).

However, according to experts from the energy sector in Kazakhstan, this incentive as a guaranteed purchase of electricity is not an effective measure in practice and previous measures as a tax incentives for companies using renewable source of energy were more effective (Nassanbekova et al., 2023).

The country maintains cadastral records of all water bodies, including in terms of clarifying and observing the regime for the use of land in water protection zones and strips and bringing them into compliance with water and land legislation by reducing the anthropogenic load on water bodies and applying water conservation at all levels of water use, especially in agriculture. In order to manage the supply and demand for water in the Republic, water use limits have been established (28.4 km3 annually until 2025) and provisions have been introduced to regulate water use in the context of individual water users (Ministry of Ecology and Natural Resources of the Republic of Kazakhstan, 2023). At the same time, the environmental component of water resources (stability of ecosystems, development of fish farming, ecotourism and preservation of unique natural resources) should not be infringed in favor of industrial development (Concept for the Transition of the Republic of Kazakhstan to a "Green Economy," 2013).

Regulation in waste management area in Kazakhstan mostly consist of restrictions and quotas for waste generation and emissions. These measures could be found in Order of the Minister of Ecology and Natural Resources "On approval of the national carbon quota plan." (2022/5250) and Order of acting Minister of Ecology, Geology and Natural Resources "On approval of the Rules for the development and approval of accumulation limits and waste disposal limits, submission and control of reporting on waste management" (2021/261). Based on a valid environmental permit or environmental impact statement, operators make payments for negative environmental impact quarterly, no later than the 25th day of the second month following the reporting quarter. Payment for environmental impact assessment is one of the types of arrangements for economic regulation of environmental protection – art. 126 of the Environmental Code of the Republic of Kazakhstan dated (2021/400-4). At the same time, according to official reports, in 2021: the share of processing and disposal of solid household waste in their generation is only 21.1%, the provision of the population with waste collection and removal services is 82.0%, the share of landfills that meet environmental requirements and sanitary standards – 20.0% (Ministry of Ecology and Natural Resources of the Republic of Kazakhstan, 2023).

To promote green technologies and support business to increase the competitiveness of the economy and reduce the negative impact on the environment, the International Center for Green Technologies and Investment Projects was created. The transition of enterprises to comprehensive environmental permits is envisaged, subject to the implementation of the best available technologies (Institute of Economic Research & Ministry of National Economy of the Republic of Kazakhstan, 2022). This initiative particularly is example of encouraging utilization of high-tech innovations in transition to more sustainable economy. Regarding the effectiveness of local and regional institutional mechanisms, the work in this area is only at the initial stage (Institute of Economic Research & Ministry of National Economy of the Republic of

Kazakhstan, 2022). Furthermore, the country remains unresolved the issue of consolidating sustainable projects of entrepreneurs and the civil sector, which together can open up opportunities for Kazakhstan to attract domestic and international partners, best practices and additional financing (Institute of Economic Research & Ministry of National Economy of the Republic of Kazakhstan, 2022). While Kazakhstan has not particular strategy for transition to circular economy, the regulation in this field is fragmented and not consistent. The analysis above shows that regulations relating to energy and water resources consumption and waste management is heavily involving restrictions, limits and bans.

Application of the energy, water and waste regulatory in Kazakhstan to tourism industry limited because for example, restriction and bans for waste generation mostly oriented to mining and manufacturing industry, while tourism companies do not generate waste in the volume pointed in the above documents. The incentive for using renewable energy also more applicable for companies specialized on producing renewable energy in considerable volume.

The results show that while national policies generally support sustainable practices with a strong environmental focus, specific tourism-related initiatives and industry standards in general are lacking. For example, according to the interviews with practitioners from industry, some eco-hotels are implementing measures to reduce waste and use renewable energy sources, but regulatory and financial barriers prevent wider adoption.

Table 3 summarizes institutional drivers and barriers in transition to circular economy in tourism in Kazakhstan. They divided to the groups: policy and regulation, financial incentives and social cooperation.

Table 3. Institutional drivers and barriers in the transition to circular economy in Tourism in Kazakhstan (Source: Compiled by author)

	Policy and regulation	**Financial incentives**	**Social cooperation**
Drivers	- Consistency with national strategic goals (PRD1) - Supporting regulatory frameworks (PRD2) - Public pressure (PRD3)	- Grants and subsidies (FID1) - Tax breaks and green labeling schemes (FID2)	- Community engagement (SCD1) - Supporting influencer marketing (SCD2) - Education and awareness campaigns (SCD3)
Barriers	- Inconsistent policies (PRB1) - Weak enforcement (PRB2) - Bureaucracy and complex permitting processes (PRB3)	- Limited funding. (FIB1) - Lack of awareness (FIB2) - Unclear return on investment (FIB3)	- Limited access to information (SCB1) - Negative perceptions (SCB2)

Policy and regulations' drivers and barriers

In analysis three main drivers and three barriers were found: PRD 1 – Consistency with national goals (the Concept of Kazakhstan's transition to a green economy and commitment to international environmental agreements), PRD2 – supporting regulatory framework (support for the transition to renewable energy sources and the adoption of energy efficiency, water and waste management standards) and PRD3 – public pressure (growing pro-environmental movements).

PRD1 were mentioned by most part of interviewees, including interviewees from governmental sector and academia. Participants outlined Kazakhstan's commitment to UN Sustainable Development Goals. In the opinion of interviewees "Kazakhstan is country with strong vertical integration across level of government and any initiatives top down works better than bottom-up" and accordingly setting transition to circular economy in national level strategies is key driver.

Second policy and regulation driver tightly related with previous, setting national strategies relating to transition to circular economy is bases for development regulatory documents and industry standards. The interviewees agreed that setting stricter energy efficiency standards, water usage permits, and waste management practices could positively affect transition to circular economy in tourism. However, business owners expressed opinion too strict regulation without economic benefits would lead to increase of additional expenses for business. At the same time interviewees from industry "is not considering changes in current business models, if there is not pressure from regulatory authorities".

Public pressure PRD3 considered as key driver in transition to circular economy and were highlighted by nine interviewees. Interview participants explained that demand is key factor for any product offer, and it is true also for transition to circular economy, tourists as a customer can require from service providers eco-friendly products. Growing awareness of environmental issues driving demand for eco-friendly options, furthermore, influencing policy change. Participant from academia convinced that public is most influential tool in transition to more sustainable business practices, not only customers but investors, shareholders, local communities can make pressure and initiate changes.

By analyzing the interviews, policy and regulatory barriers divided to three main groups: PRB1 - inconsistent policies (lack of coordination between different levels of government, lack of a holistic approach), PRB2 - weak enforcement (effectiveness in practice may be low due to non-compliance and generating unfair competition), PRB3 – bureaucracy and complex permitting processes (lengthy procedures for obtaining permits and licenses hinder many initiatives).

Interview participants admitted contradictions in regulatory policy of Kazakhstan, and lack of coordination between government regulatory agencies (PRB1). "While some agencies persuading business to waste recycle, most of recycle companies closing due to strict regulation and lack of support". Furthermore, there's a growing concern that existing regulations are failing to achieve their intended purpose due to insufficient enforcement, leading to increased non-compliance and unfair competition (PRB2). As the causes for weak enforcement "lack of qualified personnel in governmental agencies and outdated technology" were highlighted. PRB3 recognized as a key factor inhibiting the process of transition to circular economy. Participants provided different examples for PRB3, among them: "the government stated that there is opportunity to sell generated electricity from renewable energy sources in the public network, however in practice, concluding contracts is difficult, and the purchase of electricity from small producers is not carried out willingly", ".. for eco-tourism initiatives in quite bureaucratic and time-consuming".

Financial Incentives' drivers and barriers

Financial incentives are among the most effective institutions for changes. The analysis identified two main drivers: FID1 – grants and subsidies (government subsidies for energy-efficient equipment, water-saving technologies and waste management infrastructure) and FID2. – tax incentives and green labeling schemes. FID1 can reduce investment costs, encourage adoption and stimulate research in the circular economy area, while FID2 providing financial benefits for eco-friendly businesses can make them more competitive and attract tourists. However, as industry representatives noted, "this is not yet practised in our country, or we do not know about them".

Participants additionally pointed need for green labelling schemes or industry eco-standards with green certification is key driver of circular economy in tourism, the hotel chains operating at the international level have green certifications, in contrast, the local hoteliers cannot see the benefits of practising circularity.

Among the barriers to financial incentives in this study, identified: FIB1 – limited funding, FIB2 – lack of awareness (businesses may not know about existing financial incentives or how to access them) and FIB3 – unclear return on investment (long-term benefits from sustainable development, measures may not be immediately obvious, which deters businesses from participating). The most of participants recognize financial incentives for the transition to the circular economy in Kazakhstan are insufficient and FIB1 is one of themain drawbacks. "Tax breaks practised before are not active anymore, unfortunately". The participants from the industry outlined FIB2 and FIB3. Some participants from academia gave examples of information campaigns and research projects relating to increasing awareness and educating SMEs about sustainable and circular practices, but agreed about limited coverage and needs for future works in these areas.

Social cooperation's drivers and barriers

Findings suggest that collaboration and partnerships can drive the transition through: SCD1 – community engagement, SCD2 – influencer marketing and SCD3 – education and awareness campaigns.

The interviewees stated importance of SCD1, because local communities can advocate for sustainable tourism practices, protect natural resources, and influence visitor behavior. One of participants attributes the success of government programs to community engagement. Another interviewee believes that "then higher is engagement of local communities to circular economy practices then faster and easier the implementation and effect". "There needs cooperation not only between government and industry or government and local community but between industry and local community, between companies and within the communities". By them own experience, the participant know that "mostly pro-environmental behavior and practices succussed in communities where leaders are encouraging those initiatives".

Above statement is true also for next social cooperations' driver SCD2. More than half of the participants mentioned the role of social media influencers who promote responsible tourism and can raise awareness and encourage eco-conscious travel choices. The participants noted the popularity and powerfulness of influencer marketing in Kazakhstan, "It is influencers on social networks that cause resonance on environmental problems and incidents in our country, and they dictate trends towards sustainable practices and often take the initiative to promote".

Importance of SCD3 were explained that educating tourists and businesses about the importance of environmental protection can promote responsible behavior and demand for sustainable options. By opinion of participants "transition to circular economy in tourism possible only if there are demand and support for it from society, tourists." SCD3 recognized by this study as key institutional factor highlighted by 15 out of 17 interview participants.

Social cooperation is very important for the transition to circular economy in tourism, but there are some barriers to circular economy in tourism: SCB1 - limited access to information and SCB2 - negative public perception of circular economy initiatives. SCB1 is interrelated with SCD3 and the interviewees expressed opinion that rural communities might not have access to information about circular tourism practices and "in our country quazi-governmental companies and big corporations have privileged position, have better access to information and resources". However, "thanks to digital technologies and social media access to information is beaming better". SCB2 explained by misconceptions about eco-tourism being less fun or luxurious might discourage travelers. And there is negative perception about products from reused materials. The analysis of the interviews helped to find additional factors influencing the transition to circular tourism in the case of Kazakhstan. These findings:

- The need to consider the specifics of individual regions, driving forces and barriers may vary depending on the specific type of tourism and environmental problems in different regions of Kazakhstan.
- Important role of technology and innovation to provide solutions to improve energy efficiency, water management and waste management in the tourism sector.
- The importance of public oversight, regular monitoring of the effectiveness of policies, incentives and network initiatives is critical for continuous improvement.

By addressing these barriers and harnessing the driving forces, emerging tourism destinations can promote sustainable tourism practices and facilitate the transition to circular economy, benefiting the environment, local communities and the tourism industry itself.

DISCUSSION

According to classification of Bauwens et al. (2020), policy and regulation of Kazakhstan relating to transition circular economy identified predominantly as "planned circularity" with some elements of circular modernism. In the analyzed regulatory documents and reports the dominant rule of centralized governance with "low-tech" and in some cases force for "high-tech" innovations were identified. Particularly, this is clear from ban, limits and quotas for resource use and waste generation, in simpler terms, this scenario describes a future where the government takes strict control over both production and consumption to push everyone towards "high R" strategies, which prioritize reuse, repair, and recycling (Bauwens et al., 2020). Finaly, Kazakhstan's policies currently neglect alternative systems like local self-reliance and decentralized sharing models. While this scenario could limit consumer choice and force companies to follow government regulations, it could also push the adoption of new technologies.

A review of the literature showed importance of institutional factors such as policy and regulation, financial incentives and social cooperation for transition to circular economy. The findings also confirmed results of previous research that holistic perspective in policy and regulation needs (Hartley et al., 2023; Ranta et al., 2018), lack of awareness of customers among the barriers (Kirchherr et al., 2018) and focus on learning and importance of collaborative network for transition to circular economy (Dagilienė et al., 2021; Henrysson and Nuur, 2021). The study partly confirmed needs for coercive and mimetic pressure for transition to circular economy (Alonso-Almeida and Rodríguez-Antón, 2020) by emphasizing public pressure as a driver and weak enforcement of policy and regulation as a barrier for transition to circular economy in tourism. Some institutional drivers and barriers of circular economy in tourism finding from this study are specific for emerging destinations, they are bureaucracy and complex permitting processes, limited resources and influencer marketing importance for transition to circular economy in tourism. This knowledge can be valuable for other emerging destinations by allowing them to anticipate and address similar obstacles.

Experience from other countries and research highlight the importance of developing policies that support the transition to a circular economy; Kazakhstan, like many developing destinations, does not have a clear regulatory framework and supporting initiatives for the transition to circularity, particularly in tourism.

Comparasing Kazakhstan's experience with global examples, while Kazakhstan faces unique regulatory challenges, the emphasis on stakeholder collaboration is consistent with successful practices observed in other regions. This highlights the need to develop tailored strategies tailored to local conditions.

CONCLUSION

Institutions play a significant role in shaping the adoption of circular economy practices in the tourism sector. Addressing policy gaps, strengthening enforcement mechanisms, providing financial incentives, investing in knowledge and capacity building, and engaging local communities are key steps to transitioning to a circular tourism.

The findings of this study are intended to assist decision makers in developing guidelines to choose strategies towards more sustainable tourism. This study highlights the urgent need to improve understanding of circular economy among businesses and communities in developing tourism destinations. The practical significance for policy makers and practitioners is to develop the following recommendations:

- Development of consistent policies at all levels of government with clear goals and step-by-step guidelines for tourism business including regulatory in waste reduction, recycling target and sustainable resource use.
- Reducing bureaucracy and developing financial instruments and to encourage businesses to implement circular practices in tourism. For example, as one industry respondent suggested during the interview, this could include subsidies covering up to 50% of the costs of installing energy efficient systems and using recycled materials in tourism infrastructure projects. Also, to move toward high-tech circularity, establish grants for academic and industry partnerships to develop and pilot circular economy innovations, such as eco-friendly packaging or waste-to-resource initiatives. Another funding direction is development infrastructure for circular practices such as recycling and composting facilities.
- Establishing industry environmental standards and certification programs to encourage and recognize enterprises using circular practices. To achieve this, the national DMO Kazakh Tourism should initiated the implementation of a national green certification program for tourism enterprises that meet the criteria of a circular economy, providing them with marketing advantages and consumer trust.
- Foster collaboration and partnerships between different stakeholders within the destinations to promote and develop circular practices. This could be achieved by creating a digital platform for stakeholders in the tourism sector to share resources, best practices and collaborate on circular economy projects.
- Special attention should be paid to education and awareness program for tourism actors and consumers. For successful practical implementation nationwide campaign in social media with involvement of influencers and signage at the destination to educate tourists about sustainable practices and how to reduce their environmental impact when traveling are recommended.

The study's theoretical contribution is to highlight the limited effectiveness of regulatory frameworks without economic incentives, contributing to the ongoing debate about policy instruments for the transition to sustainable development. Businesses can use the study's recommendations to identify opportunities to improve resource efficiency, reduce waste, and collaborate with local communities to implement circular practices that can lead to cost savings and improved brand image. Non-governmental and community organizations can use the study's findings to advocate for policies that support circularity in tourism and raise awareness among tourists and local communities about the benefits of sustainable tourism practices.

The main limitation of the study is its geographical focus, primarily on Kazakhstan, which may limit the generalizability of the findings to other regions with different socio-economic and regulatory environments. Although the study focuses on Kazakhstan, the three-pillar framework (policy and regulation, incentives and social cooperation) can be applied to any emerging destination considering transition to circular economy in tourism. This allows readers to assess their own context and identify relevant drivers and barriers.

The study goes beyond general challenges and identifies specific obstacles facing developing countries such as Kazakhstan, including inconsistent policies, limited resources, and lack of awareness. This knowledge may be useful for other emerging fields by allowing them to anticipate and address similar obstacles. Using a case study, the study provides rich empirical evidence and real-life examples of how these drivers and barriers play out in practice.

Further, this research provides a high-level overview of addressing circular economy barriers but lacks specific actions for businesses. To move forward, research should explore how to adapt circular economy concepts for the service and hospitality industries. In addition, while the study highlights the importance of institutions, it might overlook other factors influencing circular economy implementation, such as technological advancements, consumer behavior, and economic conditions. There is no universal approach to the transition to circular economy; it is necessary to consider institutions both formal such as policy and regulation, and informal such as socio-cultural norms, interaction between stakeholders. This study specifically analyzes the institutions that promote and hinder the introduction of circular economy in tourism of developing destinations, which provides valuable information to develop effective support strategies.

Future research should delve deeper into these factors and explore specific solutions tailored to the unique context of different tourism destinations, revealing the enormous potential of circular economy for a more sustainable tourism future. Future research directions may also involve understanding the specific influence of individual institutional factors on the adoption of circular economy in the tourism context.

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THE RELATIONSHIP BETWEEN ELECTRONIC WORD-OF-MOUTH AND GEN Z CONSUMERS' INTENTION IN SELECTING EATING PLACE IN HO CHI MINH CITY, VIETNAM

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Abstract: Electronic Word of Mouth (eWOM) is one of the prevalent forms of information interaction activities in the era of digital technology. In the F&B field, it can be understood as the method by which consumers share information, experiences and reviews about the products and services from individuals or businesses through various online channels such as social media, forums, personal blogs and other platforms. Reflecting current trends, this research aims to examine the factors and the extent to which eWOM influences the behaviour of Generation Z consumers in Ho Chi Minh City. The research methods employed include qualitative and quantitative approaches, serving the purpose of literature review, statistical data analysis and structural equation modelling to assess the relationship between eWOM and the decision-making process in choosing eating places. The study reveals that four factors, namely information quality, information credibility, relevance of information and attitude towards information, directly impact the acceptance of eWOM information, subsequently influencing the intention selection of Gen Z consumers in Ho Chi Minh City. Additionally, brand trust is identified as a positive factor in this research relationship. The findings provide valuable insights into the role of eWOM in the intention selection of Gen Z consumers. This information can be applied by managers and marketers to develop more intelligent management and marketing strategies in Ho Chi Minh City, providing a competitive advantage for businesses.

Keywords: Generation Z consumers, eating places, eWOM, eWOM information, intention selection

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INTRODUCTION

Online communication and advertising have become integral components of marketing strategies and customer engagement for businesses in the era of the 4.0 digital technology (Shankar et al., 2022; Leung et al., 2022). Electronic Word-of-Mouth (eWOM) is recognized as one of the effective marketing and brand promotion channels in the online landscape (Hussain et al., 2018). The diversity of devices and digital platforms allows businesses and consumers to create, share and evaluate various types of content to achieve individual goals. These objectives include information provision and retrieval, product evaluation, reflection on substandard products, provision of business remediation services and alerting other consumers about specific products or services (Shankar et al., 2022).

In the realm of the food and beverage industry, intangible factors, such as the ambience of a restaurant, cannot be assessed prior to the consumer experience. Consequently, purchasing intangible products and services carries higher risks, making consumers more reliant on the personal influence of eWOM (Yan et al., 2018). eWOM extends customers' choices in gathering information about products and services from other consumers; in other words, the digital environment plays a pioneering role in collecting reliable information. As a result, eWOM exerts a significant influence on the consumer decision-making process (Jeong and Jang, 2011). The rapid development of technology and the surge in social media have brought about significant changes in how consumers, particularly the Gen Z demographic, seek and make decisions about eating places. Gen Z has emerged as one of the most important and influential customer groups in the food service industry. They tend to utilize social media and electronic communication platforms to seek information, share experiences and provide reviews about dining establishments (Skinner et al., 2018). Currently, eWOM has become a crucial factor in the decision-making process of Gen Z consumers when selecting eating places.

The research aims to determine the impact of eWOM on the selection decision of Gen Z consumers in choosing eating places in Ho Chi Minh City. In addition, the study aims to provide managerial implications in the food service industry to maximize the potential of eWOM in attracting and retaining this consumers segment.

THEORETICAL BACKGROUND

eWOM and eWOM Information Acceptance

One of the widely used definitions of eWOM is provided by Hennig-Thurau et al., 2004 stating that "eWOM is any positive or negative statement made by potential, actual, or former customers about a product or company, which is made

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available to a multitude of people and institutions via the Internet". The Internet has created a new environment for sharing opinions, reviews and feedback from consumers, facilitating the growth and proliferation of eWOM. Simultaneously, it has transformed the traditional form of word-of-mouth (WOM) into a new information-sharing form that can occur through various online platforms (Yang, 2013). Notably, the information can be accessed and viewed at any location and time, within a short timeframe (Abubakar and Ilkan, 2016; Cư et al., 2022). The robust development of the internet and online social networks has significantly expanded the potential impact of eWOM on consumer decisions (Almana and Mirza, 2013). It provides consumers with a reliable source of information and reflects others' opinions and evaluations of products or services. Using personal social networks, they can now interact and share opinions and experiences about products or services with family, friends and even strangers through various methods (Chu and Kim, 2011).

This creates a multi-dimensional interactive environment, allowing consumers to receive detailed information and authentic perceptions of a specific service, product or location. Reviews and evaluations are important factors that help them make purchasing decisions (Almana and Mirza, 2013). When consumers read positive reviews from other users about a product, they are more likely to trust and are more inclined to make a purchase decision. If there are negative reviews, they may eliminate that product from their consideration list (Malika et al., 2022).

The acceptance of eWOM information is considered a essential theory in conducting research on eWOM. According to Zhang and Watts (2008), eWOM information acceptance is defined as the extent to which consumers accept online reviews after considering the validity of these reviews and using them to make consumption decisions. Research on the influencing factors of eWOM acceptance has been conducted both domestically and internationally, but there is no consensus on these factors. Filieri and McLeay (2014) identified factors including information timeliness, information understandability, information relevance, information accuracy, value-added information and information completeness. On the other hand, Sardar et al., (2021) suggested that information quality, information credibility, needs of information, attitude towards information, information usefulness and information adoption are the six main factors influencing eWOM acceptance. Identifying these factors helps to gain a deeper understanding of which elements may impact the process of eWOM acceptance and subsequently develop influencing strategies in shaping consumer decision-making processes.

Gen Z Consumers

Although numerous studies have been conducted on Generation Z (Gen Z), there is still no complete consensus on the age range of this group among researchers, particularly regarding differences in views on the starting and ending points of this generation. Some researchers argue that Gen Z began in the mid-1990s (Berkup, 2014), while others consider 2005 as the starting point. According to Bassiouni and Hackley (2014): Gen Z can mainly be classified as those born between 1995 and 2012. Another study on Gen Z by Priporas et al. (2017): "Generation Z are young adults who were born in 1995 or later", without specifying the end birth year limit. Customers belonging to Gen Z exhibit tech-savvy characteristics and tend to embrace innovative services more readily (Bravo et al., 2020). With a passion for technology, innovative spirit and high standards for quality, Gen Z has initiated a consumer revolution. Current researches indicate that generational differences play an important role in technology adoption (Priporas et al.,2017; Lina et al., 2022). This is the first generation born into a fully digitized world, transmitting information and connecting through online platforms and social media. They seek freedom and exploration while demanding interaction and diverse experiences (Skinner et al., 2018). Gen Z consumers have created their own consumer world, placing high demands on the innovation, uniqueness and value of products or services. They has become a significant force in the modernconsumer market. In this study, the authors adopt the age limit perspective of Bassiouni and Hackley (2014), implying that customers in the study comprises individuals born from 1995 to 2012.

Information Acceptance Model (IACM)

The Information Acceptance Model (Figure 1) by Erkan and Evans (2016) is an extension of the Information Acceptance Model (IAM) integrating the Theory of Reasoned Action (TRA). Erkan and Evans assert that the impact of information should not be limited solely by the characteristics of the information; in conjunction with this, consumer behaviour towards information also needs to be evaluated in combination when considering influencing factors. The study identifies four fundamental factors, namely information quality, information reliability, information needs, and attitude towards information, contributing to the impact on the utility of information and influencing the acceptance of eWOM information. Consequently, these factors affect the behaviour of consumers in the online context.

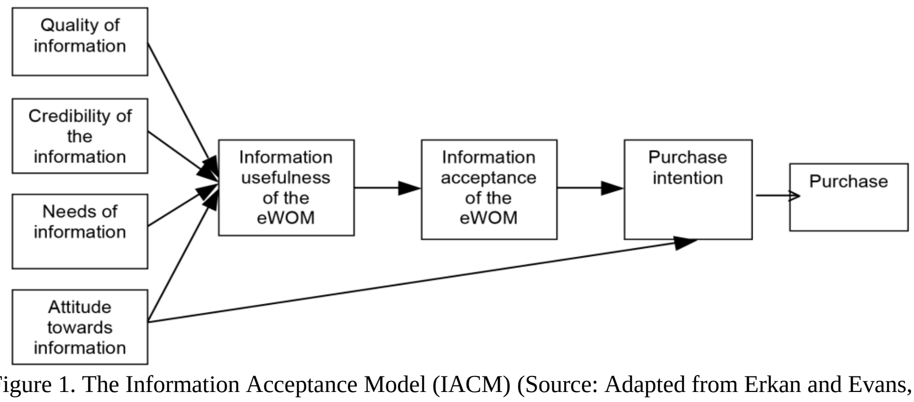

Figure 1. The Information Acceptance Model (IACM) (Source: Adapted from Erkan and Evans, 2016)

Information Quality

The internet enables people to share opinions and reviews about products and services from anywhere. However, this raises concerns about the quality of information and the difficulty in assessing accuracy (Sardar et al., 2021). Park et al. (2007) emphasize that information quality plays a crucial role in influencing consumer behavior and attitudes in the online environment. In the online context, information contributed by online consumers responds better to the information needs of users (Salaün and Flores, 2001). Consumers perceive that the eWOM information provided is of high quality, they tend to accept and trust that information when engaging in online consumption (Sussman and Siegal, 2003; Lee et al., 2012). In the current Food and Beverage (F&B) industry, information quality is considered an important factor (Ho et al., 2015) for consumers to consider the eating places they plan to choose. They often rely on information to assess the quality of service and products of a specific F&B business. Based on these arguments, a hypothesis is proposed:

Hypothesis 1 (H1): Information quality positively influences the eWOM information acceptance of Gen Z consumers.

Information Credibility

The credibility of information stands as a crucial determinant in the acceptance of eWOM information by consumers (Sardar et al., 2021) and holds a significant role in consumer decision-making processes (Leong et al., 2022). In the digital landscape, consumers benefit from an environment where they can freely exchange information, utilizing anonymous accounts to share product experiences and reviews transparently without divulging personal details (DeNardis and Hack, 2015). This enables the provision of authentic reviews, including negative feedback, fostering user-generated content that aligns closely with reality (Mosteller and Poddar, 2017). Consequently, this contributes to enhancing information credibility and positively affecting the acceptance of eWOM information. Moreover, contemporary users exhibit a tendency to read and trust information from “profiles” perceived as reliable, such as individuals with credibility in the respective field or notable figures who garner substantial interaction within the community (Watts and Zhang, 2008; Putri, 2022). Therefore, it becomes evident that highly reliable information brings numerous benefits and establishes optimal conditions for the acceptance and utilization of information (Ko et al., 2005). The credibility of eWOM information further extends its impact to the psychological aspects of customers engaged in research related to places or services in the F&B field. Consequently, the subsequent hypothesis is postulated:

Hypothesis 2 (H2): Information credibility positively influences the eWOM information acceptance of Gen Z consumers.

Relevance of information

The issue of information overload has become a concern in the information search activities of internet users (Chen et al., 2009). Online consumers always want to seek information quickly and effortlessly, with the relevance of information being a part in their decision-making process (Thảo and Tâm, 2017). Leong et al. (2022) point out that the appropriateness and relevance of information to users’ opinions on social media have a positive relationship with acceptance information, indirectly affecting consumer intentions. When information on social media is relevant and meets the users’ needs, it is considered valuable and affects the acceptance of information in the online environment. Therefore, the next hypothesis is proposed as follows:

Hypothesis 3 (H3): Relevance of information positively influences the eWOM information acceptance of Gen Z consumers.

Attitude towards eWOM information

Erkan and Evan (2016) have indicated that the attitude of consumers towards information plays a crucial role in determining the impact of eWOM on their purchasing behavior through social media. A positive attitude of consumers can positively influence the application of eWOM information to their purchase intentions, recipients of information tend to utilize the information contained in messages as long as their attitude towards eWOM is positive (Sardar et al., 2021). Customers with positive attitudes are often willing to interact, ask questions or share opinions, thereby increasing interaction and the spread of eWOM information (Abedi et al., 2020). When an individual has a positive attitude and a need to seek information on social media, they are inclined to perceive this information as useful. Consequently, their likelihood of accepting the information is higher, positively impacting the final decision (Cao et al., 2021). Therefore, the following hypothesis is proposed:

Hypothesis 4 (H4): Attitude towards eWOM information positively influences the eWOM information acceptance of Gen Z consumers.

The relationship between WOM Information Acceptance, Brand Trust and Intention Selection

When customers embrace eWOM information, they systematically evaluate and scrutinize it as a pivotal factor in the product or service selection process (Srivastava and Sivaramakrishnan, 2020). This acceptance serves as an indicator of their trust in the information source, exerting a substantial influence on brand trust. eWOM information contributes significantly to building brand trust by fostering shared personal experiences, positive reviews and commendations for a brand’s products or services (Lực, 2023). Positive reviews and recommendations from acquaintances, family or fellow users on social media enhance consumer integration and confidence (Porter and Donthu, 2008) when making purchase decisions or opting for the services of a particular brand. Research by Lực (2023) underscores the role of eWOM in amplifying brand trust and reducing barriers to purchasing decisions. Consequently, the acceptance of eWOM information assumes a pivotal role in shaping customer perceptions and purchasing decisions (Kaur and Singh, 2020).

Brand trust, functioning as a critical factor establishing commitment between customers and purchasing behavior (Delgado-Ballester and Munuera-Alemán, 2001), instills consumer confidence in a brand’s products or services meeting stringent quality standards and being dependable. This confidence significantly influences their inclination to choose and contributes to the decision-making process in favor of adopting the products or services of that brand. Additionally, this trust-building mechanism aids consumers in perceiving their role in minimizing market uncertainty (Haefner et al., 2011) and serves as a strategy to mitigate risks in the consumer selection process (Anderson and Narus, 1990). Grounded in these arguments, the following hypotheses are postulated:

Hypothesis 5 (H5): Acceptance of eWOM information positively influences the brand trust of Gen Z consumers.

Hypothesis 6 (H6): Brand trust positively influences the intention selection of Gen Z consumers.

In addition, eWOM information acceptance is the result of positive reactions from consumers towards the provided information (Leong et al., 2021). The ability to engage positively and participate easily in online discussions makes information appealing and relatable to customers (Moran and Muzellec, 2017). Consumers particularly value opinions from those they trust or influential individuals, accepting eWOM information from these sources helps build trust and shape their decisions (Watts and Zhang, 2008; Chu and Kim, 2011; Putri, 2022).

After accepting and assimilating information about the product, they have a tendency to lean towards purchasing this product if there is a need (Cư et al., 2022). The decision-making process goes beyond accepting information; it also involves creating a link between this information and the personal values of customers (Simon, 1966). The acceptance of eWOM information is not merely a facet of information-seeking but also an interactive and positive experience that affect the final decisions of consumers. Therefore, the final hypothesis is proposed:

Hypothesis 7 (H7): Acceptance of eWOM information positively influences the intention selectionof Gen Z consumers.

Based on the research hypotheses, the proposed research model is as follows (Figure 2):

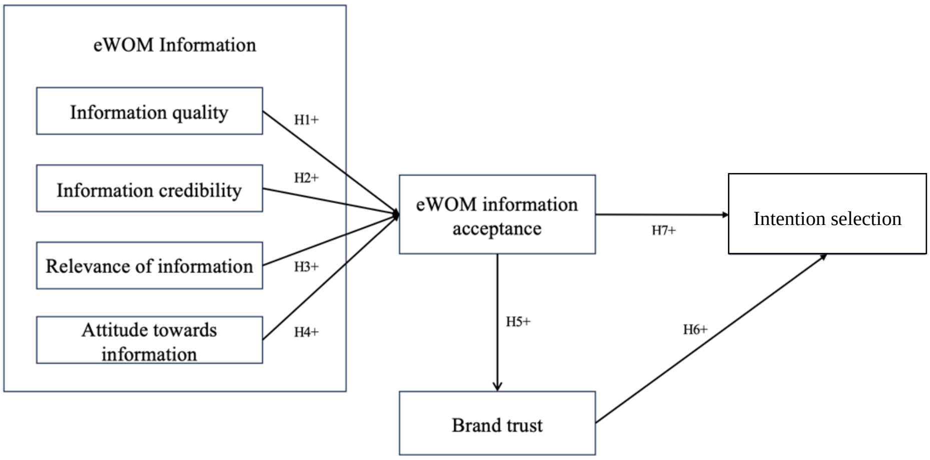

Figure 2. Research model

METHODOLOGY

The study employs a mixed-methods approach, combining qualitative and quantitative methodologies. In the qualitative phase, a literature review is conducted to establish the theoretical foundation and research model, as well as construct measurement scales relevant to the research topic. This is complemented by expert discussions to refine and supplement the scales to align them with the research objectives. Likert scales are utilized in the study, comprising 5 levels from 1 to 5, corresponding to “Strongly disagree” to “Completely agree”. The survey questionnaire includes respondent information and 23 quantitative questions. The research is implemented through an online survey form and the collected valid primary data is then utilized for the subsequent quantitative analysis. The gathered data is analysed using quantitative methods, encompassing descriptive statistics, the reliability test using Cronbach's Alpha, exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and structural equation modelling (SEM). This comprehensive methodological approach allows for a rigorous investigation of the research topic, integrating the strengths of both qualitative and quantitative methods to draw conclusions and make meaningful insights based on the collected data.

Sample and data collection

The primary data collection method utilized in this study is an online survey conducted through a survey form built using the Google Forms. The survey was then distributed to the target respondents through online links. The survey participants were selected based on age criteria, limited to individuals born between 1995 and 2012. Additionally, respondents were required to have actively sought and used eWOM information in the process of choosing eating places in Ho Chi Minh City. Based on these two fundamental screening criteria, a total of 315 valid samples were obtained from the 343 collected responses over a three-month period (from January to March 2024).

RESULTS

Descriptive Statistics

The results include 315 valid samples utilized for the research project. Table 1 (below) show that the male proportion (43.5%) is lower than the female proportion (56.5%). The age of the participants is predominantly between the birth years of 2000 and 2004 (ranging from 19 to 23 years old). The income of the survey respondents, who belong to the Gen

Z consumer group, is relatively low, with a majority earning less than 3 million VND (50.5%) and between 3 to less than 6 million VND (25.7%). However, the frequency of dining out for this demographic is relatively high, with 47.3% eating out 6 to 10 times per month and 26% dining out more than 10 times per month.

Scale Reliability Tests

The measurement scales yielded a Cronbach's Alpha coefficient of ≥ 0.6, and the variables within the scales exhibited a Corrected Item–Total Correlation coefficient of ≥ 0.3, ensuring reliability. Therefore, the study retained all 23 items for further analysis.

Table 1. Profile of respondents

Characteristics		Frequency	%
Gender	Male	137	43.5
	Female	178	56.5
Age	1995 - 1999	86	27.3
	2000 - 2004	196	62.2
	2005 - 2009	31	9.8
	2010 - 2012	2	0.7
Frequency of dining out	Once	11	3.5
	From 2 to 5 times	73	23.2
	From 6 to 10 times	149	47.3
	More than 10 times	82	26
Income (VND/month)	Under 3.000.000	159	50.5
	From 3.000.000 to under 6.000.000	81	25.7
	From 6.000.000 to under 10.000.000	47	14.9
	Above 10.000.000	28	8.9

Table 2. The EFA of Intention Selection factor (* Total variance explained: 62.194 %)

Factors/items	Factor loading	Eigenvalue	% of variance explained	Cronbach's alpha	Overall mean
***Intention Selection* (QD)**		2.242	62.194	0.831	
QD1	.813				3.77
QD3	.805				3.69
QD2	.747				3.75
KMO					0.721
Bartlett's Test	Chi-Square				356.155
	df				3
	Sig.				0.000

Table 3. The results of the EFA (* Total variance explained: 61.694%.)

Factors/items	Factor loading	Eigenvalue	% of variance explained	Cronbach's alpha	Overall mean
Information quality (CL)		2.562	11.220	0.868	
CL3	.858				4.05
CL1	.837				4.03
CL2	.782				4.07
Information credibility (TC)		1.601	6.650	0.851	
TC1	.861				4.13
TC2	.810				4.14
TC3	.750				4.15
Relevance of information (LQ)		1.207	4.438	0.795	
LQ1	.899				4.07
LQ3	.678				4.10
LQ2	.671				4.07
Attitude towards information (TD)		1.493	5.952	0.833	
TD3	.796				4.07
TD1	.788				4.10
TD2	787				4.11
eWOM information adoption (CN)		1.092	4.161	0.791	
CN1	.931				4.10
CN2	.661				4.11
Brand trust (NT)		5.931	29.273	0.837	
NT2	.820				3.78
NT1	.750				3.80
NT3	.683				3.83
NT4	.660				3.81
NT5	.640				3.85
KMO					0.838
Bartlett's Test	Chi-Square				2759.221
	df				171
	Sig.				0.000

Exploratory factor analysis (EFA)

Through the exploratory factor analysis (EFA) conducted initially, rrevealing that in the information credibility scale (TC), item TC4 did not meet the KMO criterion with a factor loading of 0.488 < 0.5 and was consequently excluded. After re-running the analysis with the removal of the item TC4, the EFA results indicated that the remaining items, including TC1, TC2, and TC3, all met the necessary conditions.

The results of the analysis of the factor of selection decision are presented in Table 2, considering three observed variables, showed a total variance explained of 62.194%. The research model demonstrated a KMO index of 0.721, and Bartlett's Test with Chi-Square = 356.155; df = 3 and Sig. = 0.000 < 0.05, indicating a strong correlation among the variables.

The results of testing the independent factors (Table 3) with 19 observed items yielded a KMO measure of 0.838, exceeding the threshold of 0.5, and a significant significance level (Sig.) in the Bartlett's Test, with a value of 0.000, less than 0.05, equivalent to rejecting the null hypothesis that the factor model is not suitable. This demonstrates that the collected research data used for analysing the factors affecting the decision-making process in choosing eating places is appropriate. The total variance explained recorded is 61.694%, surpassing the 50% threshold. This implies that the factors in the study account for 61.694% of the variation in the research data. Most factor loading values exceed 0.6 and are statistically significant at p < 0.001 (Tabachnick et al., 2013). The research model is entirely fitting, with all these factors utilized to assess the decision-making process in choosing eating places.

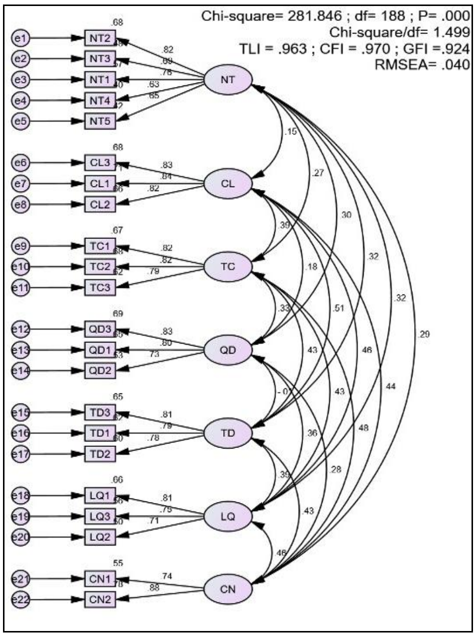

Figure 3. CFA results of the saturated model

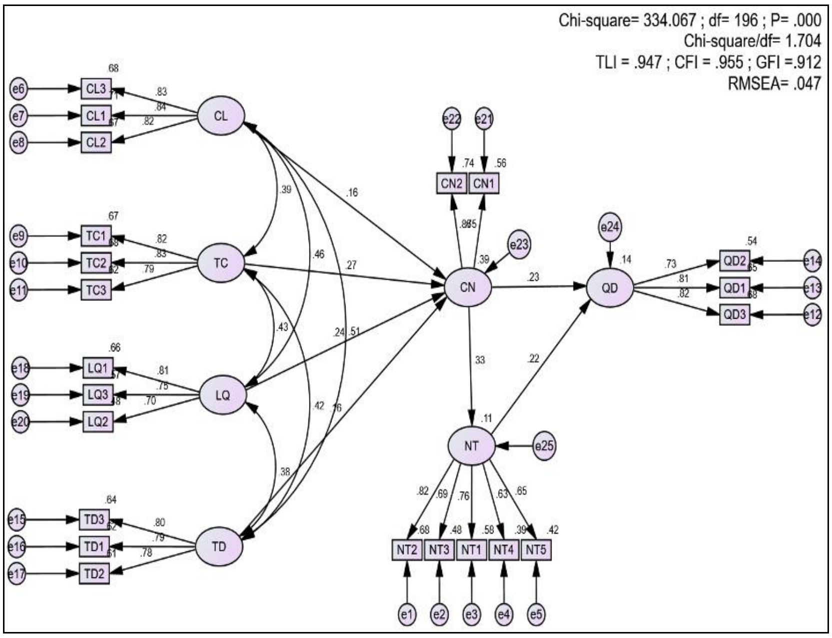

Figure 4. Standardized SEM model

Confirmatory factor analysis

Figure 3 demonstrates the results of the analysis through the Modification Indices (MI), show that: The research model has a P value of 0.000, Chi-square value = 281.846, degrees of freedom (df) = 188, Chi-square/df = 1.499, which is less than 2. RMSEA = 0.040, less than 0.08; TLI = 0.963, CFI = 0.970, both greater than 0.9, and the GFI index = 0.924, greater than 0.9. Thus, the indices indicate that the constructed model is suitable for the research data and the research concepts introduced are convergent. Table 4 (below) shows that the CR coefficient is greater than 0.7 and AVE is greater than 0.5, satisfying the conditions for CFA analysis.

Table 4. Correlation matrix

	CR	AVE	MSV	MaxR(H)	NT	CL	TC	QD	TD	LQ	CN
NT	0.837	0.510	0.102	0.852	**0.714**						
CL	0.869	0.688	0.257	0.869	0.152*	**0.829**					
TC	0.851	0.657	0.230	0.852	0.271***	0.387***	**0.810**				
QD	0.830	0.621	0.131	0.837	0.301***	0.175**	0.325***	**0.788**			
TD	0.833	0.624	0.257	0.833	0.316***	0.507***	0.425***	-0.005	**0.790**		
LQ	0.799	0.571	0.214	0.806	0.319***	0.463***	0.435***	0.362***	0.385***	**0.756**	
CN	0.800	0.668	0.230	0.828	0.292***	0.439***	0.479***	0.275***	0.434***	0.458***	**0.817**

Structural Equation Modelling

Tests for model goodness of fit and hypotheses

Figure 4 briefly shows the SEM analysis results regarding the adequacy of the research data show values of Chi-square = 334.067, df = 196, P = 0.000, GFI = 0.912, TLI = 0.947, CFI = 0.955, RMSEA = 0.047. The proposed model is considered to meet the required criteria. It can be asserted that the research model is reliable.

Hypotheses tests using SEM model

Hypotheses H1, H2, H3, H4, H5, H6, H7 are accepted based on the SEM analysis results, which demonstrate standardized coefficient (β) different from 0 and positive (+), indicating positive relationships between the factors (Table 5).

Table 5. Coefficients from SEM Model

Hypothesized relationship				**Coefficient**	**Standardized Coefficient *β***	**S.E**	**C.R.**	**P**	**Conclusion**
H1	CN	←	CL	.141	.156	.068	2.058	.040	**Supported**
H2	CN	←	TC	.261	.271	.071	3.691	***	**Supported**
H3	CN	←	LQ	.240	.239	.077	3.111	.002	**Supported**
H4	CN	←	TD	.147	.156	.071	2.066	.039	**Supported**
H5	NT	←	CN	.482	.326	.101	4.779	***	**Supported**
H6	QD	←	NT	.218	.223	.068	3.203	.001	**Supported**
H7	QD	←	CN	.333	.231	.103	3.242	.001	**Supported**

CONCLUSION AND IMPLICATIONS

Conclution

The factor of information quality demonstrates a positive impact on the acceptance of eWOM information (β = 0.156). This finding aligns with the research conducted by Sardar et al. (2021). Consumers seek information and evaluate its quality before incorporating it into their individual decisions. When consumers highly value the quality of eWOM information, they are inclined to accept and utilize it in the decision-making process for selecting an eating place. This underscores the vital role played by both the availability and quality of information in shaping consumers' choices. The information credibility also exhibits a positive impact on information acceptance (β = 0.271). This indicates that, for Gen Z consumers, trust in online review sources plays an important role in the decision-making process. This result is consistent with previous research, particularly the study conducted by Sussman and Zhang (2008). Aspects of credibility, such as the reviewer's reputation, source reliability and transparency in the evaluation process, likely contribute to enhancing the acceptance of eWOM.

Furthermore, it is evident that the acceptance of eWOM information is influenced by the positively oriented relevance of the information (β = 0.239). This outcome is consistent with the research conducted by Choi-Meng Leong et al. (2022). These findings substantiate the hypothesis that Gen Z consumers are more likely to embrace online review information when it is pertinent to their decisions. Optimizing online messaging and ensuring its positive relevance to the needs and desires of Gen Z consumers can enhance the acceptance of eWOM information. In addition, it is found that a strong relationship exists between the attitude towards information and the acceptance of eWOM. Specifically, a positive attitude towards information has a constructive impact on the acceptance of eWOM (β = 0.156). The attitude towards information serves as a factor shaped by various elements, including personal experiences, prior brand relationships and the influence of others. This underscores that when Gen Z consumers possess a positive attitude towards information, they are inclined to accept and trust eWOM information positively (Sardar et al., 2021). The study's findings regarding the favorable influence of information acceptance on brand trust (β = 0.326) mark a noteworthy revelation, enriching our comprehension of how the acceptance of information can impact the trust that Gen Z consumers place in a brand. This substantiates that when Gen Z consumers embrace eWOM information positively, it concurrently fosters trust in the associated brand. The alignment of these outcomes with the research conducted by Porter and Donthu (2008) heightens the cohesiveness and reliability of the study. Brand trust emerges as a pivotal determinant shaping customer choices and fostering loyalty. Hence, recognizing the interconnection between eWOM information acceptance and brand trust is imperative for establishing and sustaining positive relationships with Gen Z customers. Furthermore, brand trust exerts a positive influence on the decision-making process for selecting a dining place (β = 0.223). This outcome underscores that the capacity to cultivate and uphold brand trust in customers' minds can significantly impact their decision-making regarding the choice of an eating establishment.

Finally, grounded on the research findings, the acknowledgment of eWOM information emerges as a pivotal factor influencing the decision-making process in the selection of dining establishments among Gen Z consumers (β = 0.231). This observation is in congruence with the extensive research conducted by Erkan and Evans (2016). The notable role played by eWOM information acceptance in shaping the decisions of Gen Z consumers concerning their eating choices underscores the substantive impact of online reviews and recommendations on their preferences. The alignment of this result with preceding studies further substantiates the robustness and reliability of the research outcomes. Gaining an in-depth understanding of how the acceptance of eWOM information directly contributes to the decision-making process offers valuable insights for businesses striving to align with the preferences and choices of Gen Z consumers within the dining industry.

The research results identified four factors affecting the acceptance of eWOM information in the process of selecting eating places among Gen Z customers in Ho Chi Minh City. The impact levels from high to low are as follows: information reliability (β = 0.271), relevance of information (β = 0.239), the quality of information and attitude towards information with equal impact levels (β = 0.156). The acceptance of eWOM information is considered a significant factor affecting the decision-making process for selecting eating places among Gen Z customers, with a standardized coefficient of 0.231. These results affirm that the distinctive characteristics of information through eWOM positively influence information acceptance and impact the decision-making process for selecting eating places. Furthermore, the study has identified that the brand trust factor has a positive impact on the Intention Selection (β = 0.223).

Managerial implications

Online communication channels such as websites, fan pages and social media are considered effective means of communication for businesses. Transmitting information on these channels requires completeness, detail, and clarity. To meet these requirements, interface design activities need to organize information clearly and be easy to navigate, avoiding difficulties for users. Businesses can use category bars or collections to classify information about products and business services. Aesthetic appeal also plays a crucial role, as a well-designed interface will attract and engage visitors for a longer period. Information on communication channels needs to be updated regularly to maintain freshness and continuity. Ensuring the accuracy of shared information is the most important aspect, as misleading information can affect the assessment and reputation of the business in the perception of social media users. Expanding eWOM communication channels is an effective way to enhance the credibility of online information about products and services. This helps businesses reach and raise awareness of their brand to a larger customer. The success of expanding eWOM communication channels depends on several critical factors. Firstly, businesses need to build a robust communication strategy, including defining objectives, content and communication formats suitable for the target customers. The content should accurately and sincerely reflect the products and services, fostering trust and encouraging customers to engage in brand discussions. Secondly, businesses should create a vibrant information-sharing network by encouraging current customers and potential customers to share their experiences and reviews of products or services on social media platforms, personal blogs or industry forums. This creates a trustworthy information exchange environment and enhances trust from real users. Finally, businesses need to create positive interaction and feedback regarding opinions and feedback from consumers. Responding promptly, sharing knowledge and addressing questions help build trust and foster positive interaction from customers.

In addition, contemporary consumers rely on sharing and advice from others, especially from product reviewers on social media platforms such as TikTok, Facebook, etc. “Food reviewers” on these platforms have become famous and have a significant impact on consumers’ selection decisions. Consumers often watch short videos on TikTok or read reviews on Facebook to learn about the quality and experience of products. The popularity of food reviewers on social media has changed how customers seek information and evaluate products or services. They trust the experiences and opinions of real users, signalling to businesses that having a good reputation on social media and receiving positive reviews from food reviewers can impact the success of a product and brand. Establishing an online community is a way to enhance the relevance of eWOM information and create a positively interactive environment between businesses and consumers. By creating an online community, businesses provide customers with a space to interact with each other and share information between businesses and potential customers, fostering interaction within potential customers themselves. This helps create a convenient small community where people can meet, exchange opinions and share their experiences. They can ask questions, provide opinions or review products; businesses can respond and interact directly with them on specific topics, products or services.

Furthermore, using hashtags (#) is an effective way to increase the connectivity of eWOM information in the online community. By using hashtags, businesses can create thematic links between posts and related information. When customers use hashtags in their posts, it automatically links to other posts with the same hashtag. This helps enhance the connectivity of eWOM information and allows customers to easily find information related to a specific topic. Additionally, hashtags allow businesses to easily track and participate in conversations around a specific topic. By searching for hashtags related to their products or business area, businesses can find customer posts and opinions. This allows businesses to engage in the conversation, answer questions, provide opinions and offer official information. Participating in the conversation creates a positively interactive environment and increases the connectivity of eWOM information.

Businesses need to adopt an open and flexible attitude towards eWOM information. Instead of viewing eWOM as a negative factor or avoiding opinions and reviews from consumers, businesses should see eWOM as an important source of information to understand customer opinions, expectations and needs. A positive acceptance attitude helps businesses grasp feedback information from customers and adjust their business strategies accordingly. The business’s attitude towards consumer information can be likened toa two-way mirror. When a business has a positive attitude and accepts information in a favourable direction, consumers will recognize the value and usefulness of eWOM information. In addition, consumers perceive that eWOM information can provide important and reliable information about a product, they are more likely to trust and give it significant consideration when making their final choice.

Analysing and evaluating eWOM information is also an important aspect of using this factor effectively. Businesses need the ability to differentiate between reliable and unreliable opinions and reviews, making strategic decisions wisely. By evaluating the credibility of the contributors, relevance to the target reader and the quantity and quality of reviews, businesses can filter and understand important information to improve products, services and the overall customer experience.

Effectively building and strengthening consumer trust through eWOM involves harnessing the power of reviews and real user sharing. This stands as one of the most crucial factors for consumers to trust a business's product or service:

Firstly, businesses should encourage current and potential consumers to share their experiences through reviews and comments on social media channels, the company's website or specialized forums. This creates a reliable source of information for other consumers researching the product or service.

Secondly, leveraging the effect of influencers and opinion leaders can contribute significantly to building consumer trust through eWOM. Collaborating with individuals with a large following and the trust of consumers can enhance brand recognition. Users often tend to trust and pay attention to what they say about products or services.

Thirdly, implementing multi-channel advertising and marketing campaigns is another crucial factor for building brand trust through eWOM. By utilizing various communication channels such as websites, social media, email marketing or online advertising, businesses can achieve a broader reach and enhance brand awareness across the online consumer community.

Lastly, actively listening and responding positively to customer reviews and comments is highly important. A positive attitude from the business helps build trust and fosters positive interactions with consumers. When a business responds and engages positively with eWOM from consumers, they create a trustworthy environment and establish a connection with customers. This increases consumer trust and encourages them to make final selection decisions based on the eWOM information. This reflects the business's commitment to quality and continuous improvement.

Research limitations

While the research has achieved its initial goals, it has limitations. Focusing solely on Ho Chi Minh City may limit the study's representativeness and not be indicative of other regions nationwide. Future research should broaden the geographical scope to gain a more comprehensive understanding of how eWOM influences Gen Z consumers nationwide.

Moreover, the study concentrated on dining establishments in general, requiring further exploration into the impact of eWOM on specific businesses like restaurants, eateries and cafes. This would enhance understanding of how Gen Z consumers interact with eWOM and provide insight into its impact on decision-making in different business models. Finally, the research examined only four influencing factors on eWOM acceptance, limiting the scope. While it provided detailed insights into these factors, numerous other factors impacting eWOM acceptance have remain unexplored. Subsequent studies could identify new factors, filling gaps and providing more insight into customer decisions regarding eWOM acceptance.

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HOW PERCEIVED EASE OF USE, TRUST, AND PERCEIVED USEFULNESS INFLUENCE TOURISTS' DECISION TO BOOK HOMESTAY SERVICES ONLINE

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Abstract: This research aims to investigate the relationships between perceived ease of use, perceived usefulness, tourist trust, and online booking intention. 450 tourists around Thailand were invited to join this research via survey questionnaires. This research applied a structural equation model (SEM) to analyze the collected data. Findings from the statistical analysis indicated that IT ease of use significantly influenced tourists' perceived usefulness. Moreover, tourist trust was influenced by only perceived usefulness. Finally, trust and perceived usefulness significantly influenced tourists' intention to book homestay services online. The results of this research can enable policymakers of this industry to develop effective policies to attract online booking intention among tourists.

Keywords: trust, decision, online, information technology, perceived ease of use, usefulness

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INTRODUCTION

In the current digital era, various types of commercial activities between buyers and sellers are at the tips of individuals' fingers (Amin et al., 2021). With the advancement of technology, online booking services become more convenient and faster; thus, it can result in low costs of searching for services and fast purchase decision-making (Talwar et al., 2020). These days consumers can log in to the firms' websites, search for service information, customize service preferences, and book available services that meet their consumption purposes (Park et al., 2019).

This allows online booking services to become an effective and efficient reservation system for all consumers. Subsequently, these advantages promote consumers' intention to book services online. Past studies have found that online booking intention has significant associations with actual online purchase behavior (Lai et al., 2024), sale performance (Sujood et al., 2024), and business sustainability (Park et al., 2019). In this sense, it seems that online booking intention can significantly influence firms' business growth and sustainability in the current digital era. Therefore, all service firms have to find ways to promote online consumers' booking intentions.

Meanwhile, Thailand is one of the popular tourist destinations in Southeast Asia, particularly Southern Thailand, where its tourist attraction sites such as mountains, rivers, beaches, temples, etc. have attracted both local and international tourists to visit locations, enjoy nature, and relax with their friends and families (Amazing Thailand, 29.12.2023, 01; Smart Local Thailand, 13.07.2023, 01). With the environmental-friendly policy supported by the Thai government, those areas have significantly reduced their carbon footprint and continuously conserved their natural resources making the areas clean and fresh. Subsequently, the areas have become tourists' favorite destinations during their holidays.

By witnessing these opportunities, the homestay services have been developed and opened their doors to all tourists to make their accommodation reservations (Chapel, 2024). Since many customers actively search for service information and make their purchases online (Amin et al., 2021; Sujood et al., 2024), online booking service systems that allow customers to customize their searching functions and settings (e.g., sizes, locations, prices, brands, payment methods, etc.) are developed to smoothen various types of transactions for all customers. Likewise, homestay service firms also upgrade their ICT in their websites and social media to create their online booking service systems available for their customers to check and reserve all available rooms, houses, and locations. Despite the availability of online booking service systems to all tourists, information regardless of factors influencing the intention to book homestay services online has remained narrow in the existing literature. Consequently, the lack of this information makes policymakers and managers in the homestay service industry difficult to understand their tourists' online booking behaviors; thus, the related firms cannot find any

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solutions to improve the key areas that can satisfy their tourists' demands. This creates high uncertainty where the homestay service firms are unable to estimate their business growth, sustainability, and success rate. Hence, investigating factors influencing online booking intention is the primary mission to all homestay service firms.

To understand consumer behavior on information technology (IT) of a particular application system, past research recommends checking perceived ease of use (Sujood et al., 2024) and perceived usefulness (Hamzah et al., 2022). These factors have significant impacts on online booking behaviors as the users perceive the application system can help them finish e-transactions easily and improve their task productivity. Unlike these electronic factors, it has been suggested that individual users are triggered by their psychological factors, particularly consumer trust (Wang et al., 2024). If online consumers trust the service information provided online, they are likely to contact the online sellers to book or purchase the services. Even though past research emphasizes the significant impacts of these factors influencing consumers' online booking behaviors, respectively; integrating these factors and investigating how these factors influence online booking intention in the homestay service industry have been neglected. The current gap in the literature indicates low awareness of the associated factors influencing online booking intention among tourists leaving the homestay service industry with fewer effective solutions to improve the key areas for promoting their tourists' online booking intention. To fill in the gap in the literature, this research proposes a constructive model aiming to investigate the relationships between perceived ease of use, tourist trust, perceived usefulness, and online booking intention. The exploration process and results can contribute more knowledge and solutions to enhance tourists' online booking intention in the homestay service industry.

LITERATURE REVIEW

Online Booking Intention and Technology Acceptance Model

In the last two decades, the evolution of information communication technology (ICT) has been developed at a fast rate (Amin et al., 2021) allowing travelers and tourists to change their ways of searching for information regardless of their trips and booking accommodations. So far, tourists now rely significantly on the Internet, which is considered a convenient way to access information information on websites that they can seek and book accommodation online with less time, effort, and boundary (Talwar et al., 2020). In the hospitality service industry, many related firms have developed online booking systems in which customers can customize their preferred services by arranging accommodation types, spaces, numbers of rooms, locations, and prices (Amin et al., 2021); therefore, it becomes even more convenient for all tourists to reserve the accommodation by themselves. As a result, many hospitality service firms such as guesthouses, hotels, and homestays have applied ICT to develop their online booking systems which make the systems become the new marketing and distribution channels on their websites after they have realized that their potential customers depend heavily on it (Park et al., 2019). Subsequently, online booking systems have become virtual platforms for all tourists and traveling customers allowing all related firms to engage in fierce competition with each other. Despite their fierce competition to attract more booking intentions from customers, their common fundamental purpose is to provide their customers with booking accommodation online through virtual platforms (Talwar et al., 2020).

From theoretical underpinning, the technology acceptance model (TAM) is applied and integrated to study users' intentions and behaviors in numerous application systems of ICT (Amin et al., 2021). TAM is introduced by Davis (1989) to analyze computer users' behavior and technology acceptance by examining the relationship between perceived ease of use and perceived usefulness. Different contextual studies have adopted TAM to analyze consumer behaviors in different fields, namely e-banking (Naeem et al., 2023), education (Saif et al., 2024), online marketplace (Mofokeng, 2023), and tourism (Amin et al., 2021). Even though TAM has been extensively applied and well accepted in the field of online purchasing environments (Abu-Alsondos et al., 2023; Jiang et al., 2023; Lai et al., 2024), previous studies have confirmed that it has some drawbacks because the original model neglects other causes and aspects that may potentially influence user behaviors. Excluding those causes and aspects from the TAM may not provide enough valid reasons to justify user behaviors in technology since those excluded factors seem to affect the user behaviors following their own environments. To the authors' best understanding, different factors including, both technological and psychological factors, should be involved in the IT behavior analysis. So far, recent studies in the hospitality service industry have been investigated to extend the IT user behaviors which can be found in Table 1.

To differentiate from past studies, this research extends the TAM by examining the associations between perceived usefulness, perceived ease of use, trust, and online booking intention which can be found in Figure 1.

Table 1. Past focused factors in TAM in the hospitality service industry

Source	Investigated Factors
(Amin et al., 2021)	Perceived ease of use, perceived usefulness, visual presentation, online review
(Biswas, 2023)	Credibility, perceived ease of use, perceived usefulness, interactivity, affordability, and risk
(Sujood et al., 2024)	Perceived ease of use, perceived usefulness, attitude, subjective norms, and perceived behavioral control
(Gupta et al., 2024)	Perceived value, compatibility, enjoyment, social influence, and satisfaction
(Kim et al., 2024)	Perceived ease of use, self-efficacy, perceived usefulness, and anxiety
(Rafdinal et al., 2024)	VR quality, enjoyment, immersion, perceived usefulness, cost, risk, complexity, and perceived value

Perceived Ease or Ease of Use

Perceived ease of use which is sometimes called "perceived ease" in technology refers to a user's belief that he or she can use a particular application system to complete their tasks with effort-free (AbdulKareem and Oladimeji, 2024). In information technology (IT), ease of use gives users a variety of functional utilities to complete their tasks with less time and effort. In the link with perceived usefulness, the application system that offers more ease of use can save more time and effort for the users (Go et al., 2024). These days the IT ease of use can help users accomplish their tasks effort-free and receive quicker outcomes. It has been revealed that the ease of use of technology provides users with innovative ways that can be considered as technological advantages to let users get better work outputs (Latreche et al., 2024).

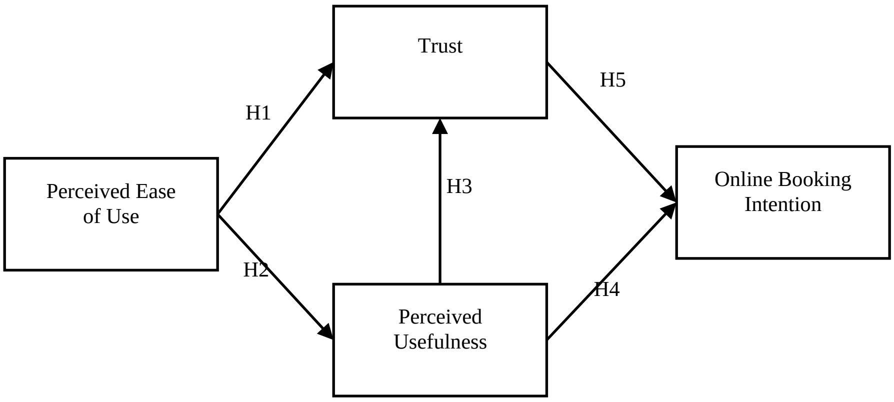

Figure 1. A Constructive Model Diagnosing Tourists' Online Booking Intention

In link with trust, users often see the ease of use of technology as the way to get tasks done efficiently (Tan et al., 2024). Ease of use of any application system is a uniqueness of achieving quick results giving the users more confidence in using the application system with the firms. Past research found that users feel less risky with the application system when they are sure that it provides more convenient functions to complete their tasks on time (Shahzad et al., 2024). Therefore, this research can hypothesize the relationships as follows:

H1: Perceived ease of use significantly influences perceived usefulness.

H2: Perceived ease of use significantly influences tourist trust.

Perceived Usefulness

Perceived usefulness refers to a user's belief that technology existing in a certain application system can promote their work productivity (Mican and Sitar-Taut, 2024). It outlines the users' perceived benefits and advantages that are derived from using any technology existing within the application system. In the link with trust, users can experience smooth task completion after using the technological support (ElSayad, 2024). The technological benefit can convince users to believe in the capability of the application system to handle their work issues and ensure better work results. Therefore, the application system can be found as a promising service system that users can rely on (Nguyen et al., 2024).

In the link with online booking intention, users find the usefulness of the application system as a means to access the necessary information they need (Madi et al., 2024). The benefits of the system can serve the users' purposes and demands. Therefore, it motivates users to further contact the sellers for possible reservations of their desired services and products (Baydeniz et al., 2024). In the online booking system, the users do not hesitate to book their product and service reservations when the system is useful for completing the booking transactions for consumers. Therefore, this research can hypothesize the relationships as follows:

H3: Perceived usefulness significantly influences tourist trust.

H4: Perceived usefulness significantly influences online booking intention.

Trust

Trust refers to a person's willingness to accept a vulnerability based on his or her positive expectations of products or services offered by another party (Baidoun and Salem, 2024). Trust is a psychological state that influences a person's attitudes and behaviors. In the link with online booking intention, when users trust a particular application system, they appear to demonstrate their positive attitudes (e.g., accepting or continued intention) toward the application system (Akhtar and Siddiqi, 2024). Based on perspectives in technology, users can conduct their electronic activities (e.g., shopping, reservation, and contacting the dealers) without any concerns when they already believe in the firms' application system. In the e-reservation system of the hospitality sector, consumers are willing to book for room reservation when they trust the online booking system (Wang et al., 2024). Therefore, this research can hypothesize the relationships as follows:

H5: Trust significantly influences online booking intention.

MATERIALS AND METHODS

Sample and Data Collection

This research employed a convenience sampling method to collect data from 450 tourists around Thailand to join this research via survey questionnaires. This method allowed the researchers to survey all related participants with convenience sampling method through both various social media (e.g., Instagram, Line, and Facebook) and face-to-face approach at public locations such as parks, supermarkets, malls, railway stations, etc. allowing them to meet random participants at different locations. To join the survey process, participants had to be at least 18 years old and used to visit any tourist destination in Thailand. This research intented to explore the intention to book homestay services in Southern Thailand through online. In this case, only those participants who were curious to explore and try or currently looking for homestay services at Southern Areas of Thailand are the main targets of this research.

In sample criteria exclusion, those who had low intention or preferred other destinations rather than southern areas of Thailand were not included in the survey processes. Moreover, they had to be familiar with online booking service activities through digital devices such as laptops, smartphones, and tablets. Therefore, all participants need to pass a screening question before answering the rest of the questionnaire "Are you interested in booking homestay service through online?" Once the participants met these minimum criteria, the researchers asked for their consent to join the survey. Finally, the participants received copies of questionnaires with an approximate time (10-15 minutes) when they agreed to participate. Finally, researchers applied a snowball sampling method to ask the participants to give further suggestions about other qualified participants so the researcher could further contact them to join this research.

Survey Construct

A full survey construct included four main variables, and their items were mainly developed by interviewing 20 homestay owners who have established their homestay services in Southern Thailand for more than 8 years. The interviews focused on issues related to variables such as perceived ease of use, perceived usefulness, trust, and online booking intention. Subsequently, interviewees gave all updated answers following the current situation of their customer behavior in the homestay service industry. After completing each interview, researchers recorded and summarized all items regardless of the main variables. Thus, the items were developed as follows.

First, four items of perceived ease of use were developed. Next, three items of perceived usefulness were developed. Then, four items of trust were developed. Finally, four items of online booking intention were developed. Additionally, a 5-point Likert scale technique was applied to let the participants rate each item.

All items were adapted from different contextual research, and their contents were revised and modified to be more suitable in the homestay service context. Next, the whole survey construct was conducted in the pilot with 30 tourists to check content reliability and validity before conducting a full-scale data collection. In content reliability, Cronbach's Alpha scores (>0.7) were used to check the reliability statistics (Kim et al., 2024). In Table 2, the statistics underlined the content reliability since all variables were obtained above the thresholds. In content validity, the researchers further revised and adjusted some items to enhance the content clarity following the pilot testing participants. Finally, the full-scale data collection was conducted with 450 tourists. The whole survey tool along with pilot testing results were reported in Table 2.

Table 2. Survey Measurement and Pilot Test

Variable	Items	Pilot Alpha(α)
Perceived ease of use	1) I think online booking services is easy to use. 2) I think online booking services offers various search functions about the homestay services and price. 3) I think everyone who is interested in finding homestay services in Southern Thailand can easily find all related information in both social media and google. 4) I think online booking services (e.g., Agoda) saves my time and effort when searching for available homestay services in Southern Thailand.	0.90
Perceived usefulness	1) I think online booking services for homestay services in Southern Thailand are really help for both foreigners and Thais. 2) I think online booking services help both foreigners and Thais access to all special promotion about homestay services in Southern Thailand. 3) I think online booking services can be a good platform for foreigners and Thais to learn more about homestay services in Southern Thailand.	0.84
Trust	1) I think homestay services in Southern Thailand can be a good choice for visitors. 2) I think I am confident with service performance of homestay services in Southern Thailand. 3) I believe in homestay services offering good hospitality and food services. 4) I believe information mentioned in online about homestay services in Southern Thailand.	0.82
Online Booking Intention	1) I will book any available room through online booking services next month. 2) I plan to search through online regardless of any available homestay services in Southern Thailand. 3) I think I will study more about homestay services in Southern Thailand through various websites. 4) I will recommend my friends and relatives to search for homestay services in Southern Thailand if they want to travel and relax in Thailand.	0.91

RESULTS

Data Statistics

This research applied a structural equation model (SEM) to analyze the data. Before conducting the data analysis, several statistical assessments were provided. First, loading factors' scores for items were kept for analysis if their scores were above 0.6. Next, the content reliability of each variable was evaluated using Cronbach's Alpha and Composite Reliability (CR) (scores $\geq$0.7). After that, the convergent validity of each variable had to be higher than 0.5.

Based on Table 3, all of the above-assessed indicators were at acceptable levels since their scores passed the thresholds. Finally, model fitness was evaluated using fitness indicators such as $CMIN^2$/df, GFI, NFI, CFI, PCLOSE, AGFI, and RMSEA following the suggestion of Kim et al. (2024). In Table 4, the model construct of this research obtained good fitness scores; thus, the regression statistics of SEM could be performed for analysis.

Table 3. Model Measurement of SEM

Variable	Items	Loading Factors	Alpha (α)	CR	AVE
Ease of Use	EU1 EU2 EU3 EU4	0.84 0.65 0.78 0.79	0.88	0.77	0.66
Perceived Usefulness	PU1 PU2 PU3	0.86 0.83 0.94	0.96	0.81	0.78
Trust	T1 T2 T3 T4	0.78 0.76 0.76 0.84	0.76	0.85	0.81
Online Booking Intention	OBI1 OBI2 OBI3 OBI4	0.73 0.73 0.69 0.89	0.90	0.93	0.69

Table 4. Model Fitness Statistics

Indexes	Scores	Thresholds	Results
$CMIN^2/df$	2.322	≤3	Good
GFI	0.944	>9	Good
NFI	0.926	>9	Good
CFI	0.991	>9	Good
AGFI	0.935	>8	Good
RMSEA	0.041	<0.08	Good
PCLOSE	0.993	>0.05	Good

SEM Statistical Results

All statistical results of SEM were reported in Table 5. Results revealed that ease of use (β=0.50, p<0.001) significantly influenced perceived usefulness. Next, perceived usefulness (β=0.54, p<0.001), except ease of use (β=0.07, p>0.05), significantly influenced tourist trust. Finally, perceived usefulness (β=0.61, p<0.001) and tourist trust (β=0.79, p<0.001) significantly influenced online booking intention.

For mediating testing of Ease of Use→Perceived Usefulness→Trust, ease of use (β=0.35, p<0.001) showed an indirect impact on tourist trust. Therefore, perceived usefulness stood as a mediator between ease of use and tourist trust.

Table 5. Statistical Results and Hypotheses Summary (Note: ** indicates p-value<0.001)

Chanel A: Direct Path Testing					
Predictors	Dependent Variables	St.D Beta	p-value	Sig. Lv.	Hypotheses Results
Ease of Use	Perceived Usefulness	0.50	0.000**	Sig.	Accepted
Ease of Use	Trust	0.07	0.193	Insig.	Accepted
Perceived Usefulness	Trust	0.54	0.000**	Sig.	Accepted
Perceived Usefulness	Online Booking Intention	0.61	0.000**	Sig.	Accepted
Trust	Online Booking Intention	0.79	0.000**	Sig.	Accepted

Chanel B: Mediating Path Testing					
Relationships	St.D Beta		p-value	Sig. Lv.	Mediating Results
Ease of Use→Perceived Usefulness→Trust	Direct	Indirect			
Ease of Use	0.07	0.35	0.000**	Sig.	Confirmed

Discussion and Theoretical Contributions

For the impact on perceived usefulness, perceived ease of use positively influenced perceived usefulness, accepting hypothesis 1. Ease of use of online booking systems allowed tourists to check and make available accommodation reservations for their homestays conveniently. They could also check the reviews, post comments, prices, etc. on the homestay service firms’ websites and social media without going directly to the homestay service firms. Furthermore, they could also contact and question the service providers directly for more clarifications using the current online booking systems. With direct and automated online system responses, tourists could receive reservation information and other confirmed information regardless of the payment process with the homestay service firms. The ease of use of the online booking systems offered tourists significant advantages, ensuring the tourists to have a smooth and successful completion of their booking homestay services. Therefore, the advantages derived from IT ease of use made the tourists acknowledge the usefulness of online booking systems with the homestay service firms.

For the impacts on tourist trust, perceived usefulness positively influenced tourist trust, accepting hypothesis 3. Tourists found the online booking service systems useful for their accommodation reservations. The system allowed the tourists to customize booking forms, receive a quick automation payment report, record historical and personal booking transactions, have convenient access to the system, and receive confirmation from the homestay service providers. These offered the tourists more efficiency in searching and making their service reservations with the homestay service firms.

Based on the current technological processes of online booking systems, tourists could understand and evaluate some levels of the online booking system's performance, which ensured high accuracy and safety in completing online booking transactions with homestay service firms. Subsequently, it could lower the propensity of curiosity and perceived risk among the tourists making them trust the online booking homestay service system. As a result, the technological usefulness found in online booking service systems of homestay service firms significantly influenced tourist trust. In contrast, perceived ease of use did not significantly impact tourist trust, rejecting hypothesis 2. This research rejected the previous research results (Shahzad et al., 2024; Tan et al., 2024) that highlighted the significant impact of IT ease of use on user trust. In a further assessment of testing a mediation impact, this research found that perceived usefulness mediated the relationship between ease of use and tourist trust, making ease of use have an indirect impact on tourist trust. According to this result, it seemed that tourists saw the IT ease of use in the online booking service systems differently from other e-booking service platforms. The side effect of IT ease of use could not immediately convince tourists to trust without acknowledging the perceived usefulness of the online booking service systems.

They were likely to further check and assess the benefits of using online booking systems with the homestay service firms. Furthermore, this probably involved risk assessments before making their conclusions about the current online booking platforms. Hence, once they felt safe with the technological usefulness provided by the systems, it led to a positive psychological state indicating their degree of trust in the online booking systems.

Regradless the impacts on tourists' online booking intention, perceived usefulness positively influenced online booking intention, accepting hypothesis 4. The benefits of using online booking homestay service systems significantly influence tourists' booking decisions. Based on the tourists' perspectives, the online booking service systems allowed the tourists to immediately check and reserve the rooms, spaces, locations, and price tags with customizable functions within 24 hours with artificial intelligence (AI) monitoring and automatic responses to their tourists' online requests. This could instantly help tourists to generate the reservation criteria based on their preferences which saved their time and effort in further contacting the online reservation staff for customizable assistance.

Meanwhile, the current booking system also provides payment functions with e-payment methods which allow tourists to settle their payment transactions after confirming their online booking with the homestay service firms. These benefits offered transaction efficiency and positive customer experience with the online booking service systems with the homestay service firms. With these perceived benefits derived from technological performances, tourists could not overlook the online booking service systems as a means to reserve their accommodations for their upcoming holidays. Therefore, there could be high propensity of tourists' intention to make online reservations for their homestay services.

Finally, trust positively influenced online booking intention, accepting hypothesis 5. Based on psychological perspectives, having high trust in online booking homestay service systems could significantly convince tourists to make their online booking decisions with the firms. In the evaluation processes, the tourists already cross-checked the IT ease of use of the online booking system, and the benefits of using the current system before making their final judgments on the online booking service systems. Tourists may have found that these key indicators outlined the capability, convenience, and efficiency in helping the tourists accomplish their search and reservation tasks following their preferences; thus, it promoted more confidence and belief in the online booking service systems with the homestay service firms. With the outcomes of positive views and expectations, they possibly felt safe to make their online reservation and payments with the firms. With this level of trust, there could be high intention among tourists to make homestay reservations through the online booking systems. In terms of contributions, this research significantly advances the existing literature by conceptualizing, operationalizing, and analyzing the relationships between perceived ease of use, tourist trust, perceived usefulness, and online booking intention. First, IT ease of use offers tourists the ability to check and customize the accommodation services such as room sizes, locations, price tags, and payment methods which they can conveniently get the services following their preferences. Next, this research also enhances our understanding regardless of how tourist trust and perceived usefulness influence tourists' online booking decisions in the homestay service industry. Tourists can find many benefits in using online booking systems (e.g., search and booking efficiency, convenient e-payment, customization functions, and so on) making their lives easier to approach and obtain homestay services from the firms; thus, tourists see fewer risks of using the online booking systems with the firms. Subsequently, this creates high trust in the online booking systems when they can assess more information (e.g., comments, opinions, and reviews) from previous tourists' experiences along with their perspectives on the current system performances giving more opportunities to better understand the online booking homestay service system.

Based on these attitudes toward technology, tourists can finally make their decision to contact the homestay service firms to book available and preferred rooms for their upcoming trips. Finally, this research significantly contributes to the Technology Acceptance Model (TAM) (Davis, 1989) by evaluating both technological (IT ease of use and perceived usefulness) and a psychological factor (tourist trust) on IT user behavior. The results of this evaluation can provide extra details regardless of how technological and psychological factors interact with each other which pave the way for the users to make their decisions to apply technology as a means to serve and accomplish their tasks. To sum up, it gives a logical and valid explanation for tourists' decisions to book homestay accommodation online.

CONCLUSION

The primary objective of this research was to examine the associations between ease of use, perceived usefulness, trust, and online booking intention. This research found that tourists' perceived usefulness was influenced by ease of use. Next, their trust was influenced by perceived usefulness, except for ease of use.

Finally, their online booking intention was influenced by trust and perceived usefulness. Despite achieving these objectives, this research still has some limitations. First, this research concentrated mainly on the influences of tourist trust, perceived usefulness, and ease of use on tourists' online booking intention.

Future research should consider adding more psychological factors such as perceived risk, perceived convenience, and perceived IT quality to further explore the new findings and conclusions. Second, this research focused on consumer behaviors in the hospitality service industry which can be limited to other service industries such as the e-banking and delivery service industry. Therefore, the current research model can be applied to explore consumers' insights in those industries. Finally, this research contained diverse participants who were from different demographic areas making the results broader generalization. It can be an interesting topic if future research can explore and elaborate deeper by comparing online booking behaviors between different genders or age groups.

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EXPLORATION OF GENDER PATTERNS AND DIFFERENCES IN ENDURANCE SPORTS EVENT TOURISM

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Abstract: Event tourism represents one of the rapidly expanding segments within the realm of sports tourism globally. This research aims to investigate the emerging patterns in sports event participation and sports tourism among endurance athletes, with a specific emphasis on gender distinctions. Using a survey methodology, a dataset comprising 609 endurance athletes was analyzed to examine their sporting habits, behaviors, motivations, and attitudes. Special attention was given to preferences for sports events and tourism-related aspects. The findings indicate that female athletes tend to prioritise external motivational factors more than their male counterparts. In terms of sports event preferences, female respondents attributed significantly higher importance to factors such as race accessibility, affordability, and program offerings. Regarding travel behavior, female athletes exhibited greater inclinations towards traveling with family and supporters, as well as planning supplementary tourism activities around their race engagements. The study underscores the importance of recognizing gender-specific preferences and motivations in sports event participation and sports tourism among endurance athletes, highlighting the need for tailored strategies to enhance engagement and satisfaction among both male and female participants.

Keywords: sports event tourism, sports participation, endurance sports, gender, sports tourism

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INTRODUCTION

In recent years, global changes and societal characteristics have significantly altered the domains of sports and tourism. Longer-term health provisions such as social distancing, increased leisure time, confinement, and the easing of travel restrictions have all contributed to a continual surge in the popularity of sports and tourism (COMCEC, 2022; UNWTO, 2022), concomitantly amplifying the prominence of sports tourism. It is crucial to highlight that "sports and tourism are among the most sought-after leisure experiences," significantly contributing to the promotion of economic growth (Getz – Page, 2016; Myburgh, 2017; Nyikana and Tichaawa, 2018; 2020). Sports tourism, emerging at the intersection of these fields, is a multi-billion dollar global industry and the fastest-growing segment within the global tourism and travel sector, realizing significant economic growth (Giampiccoli et al., 2015; Myburgh, 2017; McKay et al., 2019; UNWTO, 2024).

According to UNWTO (2024) statistical analyses, sports tourism is responsible for 10% of the expenditures realized and generated in the global tourism sector. Forecasts reflect the prominent role of sports tourism, with a projected growth rate of 17.5% between 2023 and 2030 (UNWTO, 2024). It is a fact that Covid reduced the desire and opportunity to travel in the field of sports tourism as well, and due to restrictions on participation in competitions **()**, similar to what research has confirmed for other tourism products (Kumar and Nafi, 2020, Korinth and Ranasinghe, 2020). However, athletes and active participants in sporting events generated increasing demand in the market again after the restrictions (Maditinos et al., 2021), which was confirmed by a Croatian study among runners (Hemmonsbey et al., 2021), as well as being proven for other tourism products (Rogerson and Rogerson, 2021; Pahrudin et al., 2022, Cehan and Iaţu, 2024).

The complexity of sports tourism is demonstrated by its multifaceted positive effects. These include instances where sports activities serve as either primary or secondary motivations during travel. Additionally, it encompasses tourism

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related to various sizes of sports events, attracting tourists as participants or spectators (UNWTO, 2024). Among these, sports events represent one of the most dynamically developing segments of sports tourism worldwide (Neirotti, 2003; Getz, 2008; Myburgh, 2017). This is partly due to sporting events' appeal to a wide range of audiences and their ability to expand tourism geographically and seasonally (Gibson et al., 2012).

Moving masses intra- and intercontinentally, sports tourism plays a key role in promoting economic, social, and environmental actions, accelerating development, and leaving a long-lasting positive legacy. However, to generate real revenues, these events must be both attractive and affordable for specific target markets (Myburgh, 2017). They must incorporate the sporting event in a manner that satisfies the needs of specific travelers while also integrating additional tourism sectors (Candrea and Ispas, 2010). This study aims to examine the patterns related to sports event tourism among endurance athletes, with particular attention to gender differences. Specifically, we seek to map and analyze the attitudes and preferences associated with the sports tourism behavior of endurance athletes, focusing on event characteristics, travel preferences, and spending patterns. By understanding these factors, we can provide valuable insights for event organizers, tourism-related businesses, and local governments to develop more effective strategies and services.

LITERATURE REVIEW

Sports tourism can be categorized based on the individual's role, distinguishing between active sports tourism, where individuals actively participate in sporting activities, and passive sports tourism, where individuals attend these events as spectators. Getz (2013) emphasizes that sports tourism encompasses sporting events involving both amateur and professional participants, as well as spectators. Thus, sporting events are spatial-temporal phenomena shaped by the unique interactions of location, people, and various systems, including design and programs (Getz, 2008). Understanding the motivation and behavior of sports tourists is crucial for destinations and tourism-related businesses to improve their services and develop effective marketing strategies (Gibson, 2005). Dixon et al. (2012) highlighted the necessity of examining the socio-demographic characteristics, travel habits, and the impacts of these factors on different groups of sports tourists. This approach enables the creation of profiles that assist event organizers in developing appropriate tourism products, services, and packages, ultimately leading to greater benefits for both the event and its surrounding environment.

Parra-Camacho et al. (2019) examined the sporting habits and motivational patterns of participants in urban running events. They identified five dimensions in the motives for participating in running competitions: physical-psychological, interest in running events, leisure time and social recognition-related, competition-challenge, and material motives related to prizes. Gender differences in sports participation have been widely studied. While various sports activities may be categorized as feminine, masculine, or neutral, sports in general are typically considered a masculine domain (Riemer and Viso, 2003). Numerous studies indicate that men exhibit higher levels of physical activity and participation in physical activities compared to women (Getz and McConnell, 2011; Stamm and Lamprecht, 2011). Additionally, men are not only more likely to engage in sports activities but also spend more on sports than women (Lamb et al., 1992).

This pattern is similarly observed in endurance sports. Scheer (2019) examined participation in ultra-endurance sports and found that, although there is a global increasing trend in participation among both men and women, men participate in such events at a significantly higher rate. Moreover, the gender gap in participation appears to be widening over the years. However, it's worth noting that this study may not account for regional variations in participation trends or explore the underlying reasons for this widening gap. In contrast, a Spanish study showed the dominance of female participants (Ramos-Ruiz et al., 2024). Regarding motivational factors, studies have consistently shown that males and females exhibit different motives for participation in physical activities (Morris et al., 1995; Egli et al., 2011; Chowdhury, 2012; Molanorouzi et al., 2015, Ramos-Ruiz et al. 2024). For instance, Egli et al. (2011) found that male college students are more motivated by internal factors such as challenges and competition, while females are more motivated by extrinsic factors like weight management and appearance.

However, these studies often focus on general physical activities and may not fully capture the nuances specific to endurance sports. There are studies that highlight the different motivations of female and male runners and running event participants, with results showing that women are more motivated by weight maintenance, self-esteem, and psychological coping motives (Malchrowicz-Mośko and Poczta, 2019; Hanson et al., 2015). Ramos-Ruiz et al. (2024), examining the motivations of Cordoba half-marathon runners, not only pointed out the gender difference, confirming that out of 416 participants, female participants dominated, as they were more motivated than men to compete and surpass themselves. At the same time, this recent study identified two new motivational factors in addition to the previous ones: one is "inclusivity at various levels" and the other is "posting of images on social networks".

The importance of event characteristics such as accessibility, reputation, and organizational aspects has been highlighted in several studies. Alexandris et al. (2011) categorized participation constraints into two major groups, with accessibility playing a significant role among external factors. Miragaia and Martins (2015) emphasized the crucial roles of proximity, accessibility, and cost in the choice of winter sport destinations. While these studies provide valuable insights, they may not fully account for the unique aspects of endurance sports events.

Scheer's (2019) examination of ultra-endurance sports reveals a significant increase in participation over the last 25 years, particularly among women and older athletes. This trend reflects broader societal shifts towards health consciousness and the pursuit of extreme personal challenges. A Polish study confirms the importance of health-related motivation, which is particularly significant for runners and endurance athletes who have gone through Covid infection. The research demonstrated that for these individuals, health orientation, psychological coping, and self-esteem are the primary motivations (Rozmiarek et al., 2022). However, the article's focus on participation numbers lacks a deeper exploration of the underlying factors driving these changes, such as cultural influences or the role of social media in popularizing these events. Additionally, while it highlights the growing participation of women, it doesn't sufficiently address the barriers they may still face or how these events are adapting to meet their needs. Ben Dori and Kemp (2020) further explore the rise of women in endurance sports, identifying increasing female participation as a significant trend. They provide a more nuanced analysis by considering factors like community support and changing perceptions of female athletes. Nevertheless, their study could benefit from a broader geographical scope, as the trends observed may differ significantly across different regions, influenced by varying cultural norms and economic conditions.

The UNWTO (2024) report on sports tourism highlights the sector's rapid growth and its substantial economic impact. This report underscores the role of sports events in boosting local economies and fostering international tourism. However, the report tends to focus on the economic benefits, somewhat overlooking the environmental and social implications of mass sports tourism, such as the strain on local resources and potential disruption to communities. Furthermore, while it mentions the economic gains, it does not sufficiently discuss how these benefits are distributed among different stakeholders, which is crucial for understanding the broader impact of sports tourism. Getz (2008) emphasize the increasing importance of studying gender differences in the context of organizing sports events, whether in terms of design, production, or management. The information obtained from such studies proves crucial in developing effective sports tourism services, sports events tailored to meet the needs of consumers, and marketing strategies designed for more efficient sales.

This study aims to address some of the gaps in the existing literature by providing a more thorough understanding of gender differences in endurance sports tourism. By focusing on motivations, preferences, and economic behaviors specifically related to endurance sports events, we hope to contribute valuable insights to the field of sports tourism research and practice. Our findings could help event organizers, tourism businesses, and policymakers develop more targeted and effective strategies to cater to the diverse needs of male and female endurance athletes, potentially leading to increased participation, satisfaction, and economic impact of endurance sports events.

MATERIALS AND METHODS

During the data collection process, purposive sampling was employed (Neuman, 2007), as the aim of the research was to examine the characteristics, habits, and attitudes of individuals engaged in specific endurance sports (Figure 1.). Participation in the study required individuals to be 18 years or older, actively involved in sports, and to have participated at least once in the past year in an endurance sports competition of their preference. Athletes were provided the opportunity to complete the questionnaire either in person at various domestically held endurance race venues or via email sent by race organizers, until the end of the 2022-2023 competitive season.

The questionnaire design aimed to gather comprehensive information regarding participants' demographic characteristics, socioeconomic backgrounds, sporting habits, and attitudes. This facilitated detailed examination of correlations between different factors and emerging patterns within the research. Accordingly, the questionnaire was structured into three main segments: basic personal information, habits related to sporting activities, and questions focusing on sporting attitudes. Following data cleansing, 609 valid responses were available for further analysis. Analyses predominantly revolved around descriptive statistics (mean, standard deviation, frequencies, etc.) to gain insight into participants' general characteristics and provide a foundation for subsequent investigations. Various correlation analyses, such as contingency table analyses and independent samples t-tests, were employed to explore gender differences.

Descriptive statistics were utilized to document information regarding participants' gender distribution, age group distribution, residency, and most frequently practiced endurance sports. Additionally, these data served a validating purpose, ensuring that adult participants engaged in endurance sports competitions were also examined.

In addition to descriptive statistics, correlation analyses were conducted to methodically uncover differences and similarities between data groups. The primary focus of the research was to examine gender differences evident in endurance sports. Therefore, the analysis extended to potential disparities in sporting habits, expenditure propensity, etc., between the two genders. Cross-tabulation analysis, including Pearson's chi-square test, was employed as part of structural examination and validation methods. Furthermore, independent samples t-tests were conducted for the two groups.

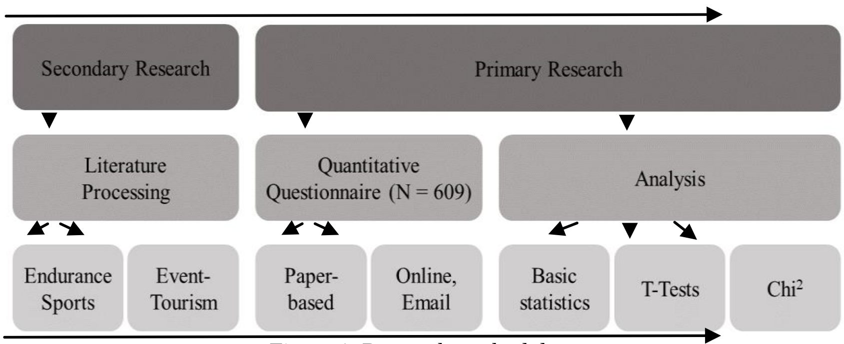

Figure 1. Research methodology

RESULTS AND DISCUSSION

The statistical data summarizing the most significant demographic characteristics of the sample (N=609) are presented in Table 1. In terms of the gender distribution of respondents, it can be stated that the sample exhibited an optimal representation, as the database encloses data from 49.43% male and 50.57% female athletes. On the one hand, demonstrating such gender distribution is undoubtedly advantageous as it renders our sample population suitable for the study of gender patterns. On the other hand, given that the questionnaire was administered among endurance athletes (at race venues; distributed via email to registered competitors by organizers), this outcome corroborates recent developments in endurance sports, indicating an increasing interest among women in such disciplines (Joyner, 2017; Scheer, 2019; Ben Dori and Kemp, 2020). The age distribution within the age groups presented a more diversified picture. However, the results align with the trend observed in endurance competitions, indicating that athletes participating in such disciplines predominantly belong to the middle age group (Scheer, 2019). Based on the regional overview, it can be observed that athletes from all regions of Hungary were represented in the sample. The distribution pattern however indicates a predominance of individuals from northern regions among endurance athletes.

Table 1. The demographic characteristics of the sample (N=609)
*Based on the exchange rates of the Hungarian National Bank on the 19th April 2024

Demographics	Category	Distribution
Gender	Male	49.43%
	Female	50.57%
Age	18-30 yrs	10.67%
	31-40 yrs	29.23%
	41-50 yrs	49.26%
	51 yrs or above	10.84%
Region	Northern Hungary	17.73%
	Northern Great Plain	12.48%
	Southern Great Plain	9.85%
	Central Hungary	33.99%
	Western Transdanubia	11.49%
	Central Transdanubia	7.06%
	Southern Transdanubia	7.39%
Place of Residence	Capital City	20.85%
	County Seat	27.59%
	Town	35.14%
	Village	16.42%
Highest level of Education	University	67.98%
	High School	10.84%
	Technical School	16.91%
	Vocational School	3.94%
	Primary School	0.33%
Labor market Status	Entrepreneur	14.78%
	Employed	76.68%
	Student	2.30%
	Job Seeker	2.46%
	Retired	1.81%
	On Parental Leave	1.97%
Per capita net income*	Below 250 Eur	2.46%
	251 – 350 Eur	11.99%
	351 – 450 Eur	15.27%
	451 – 550 Eur	17.73%
	551 – 650 Eur	15.76%
	651 Eur or above	36.78%

In the case of the highest level of education attained, more than half of the sample (67.98%) is considered highly educated with a university degree, while athletes with only primary school education represented a negligible percentage (0.33%). As of their labor market status, the vast majority of the sample are in an employed status (76.68%), with 14.78% being entrepreneurs. Additionally, there are negligible percentages of students (2.30%), job seekers (2.46%), retirees (1.81%), or athletes on parental leave (1.97%) pre-sent. This distribution was expected based on the age categories and the high physical demands of endurance sports. Based on the distribution of per capita net income, the majority of the sample (36.78%) were represented from the highest income category, while the least were represented at the bottom of the list from the lowest income category (2.46%).

Due to the pronounced specificity of the sport discipline, examining the attitudes and habits of endurance athletes necessitates mapping out the sports-specific profile. Based on the sporting categories, the basic population was divided into two major segments. One group consisted of competitors exclusively engaged in endurance running events (e.g. road, cross-country, trail, or ultramarathon running), while the other group encompassed multi-sport athletes who participate in multiple disciplines, including triathlon, cycling, or even obstacle course racing.

As depicted in Table 2, based on the distribution according to sporting categories, the sample consists of 57.64% athletes exclusively engaged in endurance running, while 42.36% are multisport athletes. Based on the competition experiences, the following picture emerged regarding the competitors. On average, the sample started engaging in endurance sports activities 9.31 years ago (standard deviation: 5.99), with some competitors indicating their involvement in the sport as early as 20 years ago. Regarding competitive participation, the average duration of involvement in competitions is 7.76 years (standard deviation: 5.70). Concerning participation in endurance competitions per year (median: 5; mode: 5) (Table 3.), the highest percentage (40.23%) participates in such events 5-9 times annually, followed by those participating 5 times or fewer (33.00%), 10-14 times (18.56%), 20 times or more (5.75%), and 15-19 times (2.46%).

Table 2. The sporting characteristics of the sample (N=609)

Demographics	Category	Distribution
Sporting categories	Runners	57.64%
	Multisport athletes	42.36%
Participation in competitions per year	Less than 5	33.00%
	5 – 9	40.23%
	10 – 14	18.56%
	15 – 19	2.46%
	More than 20	5.75%
Competitive level	Beginner	7.26%
	Average	49.17%
	Advanced	26.97%
	High	7.88%
	Veteran	8.71%
Aim	Challenges	32.28%
	Fitness	60.63%
	Social	7.09%

The frequency of participation in competitions indicates that the sample consistently and purposefully attends these events (Cumm.: 67.00% participate in more than 5 races annually), making it a lifestyle choice that integrates into their leisure and consequently travel habits, generating a high number of yearly trips and thus a constant demand for endurance competitions. This ensures organizers a consumer base necessary for their operating.

Regarding the level of competition, based on their self-reporting, nearly half of the athletes consider themselves to be at an average level (49.17%), followed by 26.97% at an advanced level, with approximately equal proportions considering themselves to be beginners (7.26%), high-level competitors (7.88%), and veterans (8.71%). As for the primary motivation for participation, the sports and fitness value of the competitions was highlighted most prominently (60.63%), followed by the physical demands of the races and the challenges they present (32.28%), and the social aspect of sports events (7.09%).

After establishing the basic athlete profile, we further examined the attitudes of the population segmented by gender. As seen in Figure 2, gender patterns appear in all three questions. Regarding their sporting discipline, in exclusively running athletes females were more involved (53.8%), while in multisport athletes higher percentage of male athletes (53.9%) were found. It is interesting to note that in terms of competitive level, between Beginner and Advanced athletes, as the level increases, the higher percentage of male competitors are present, while on the top- (High), and Veteran level the split is equal. The result also indicates that efforts to eliminate gender inequality in endurance sports are becoming evident, as an increasing number of female athletes can be observed at entry levels (Joyner, 2017; Scheer, 2019; Ben Dori and Kemp, 2020). This trend is undoubtedly positive, not only for the sustainability of endurance sport event organizers but also for the enhancement of competition and performance regarding the sport.

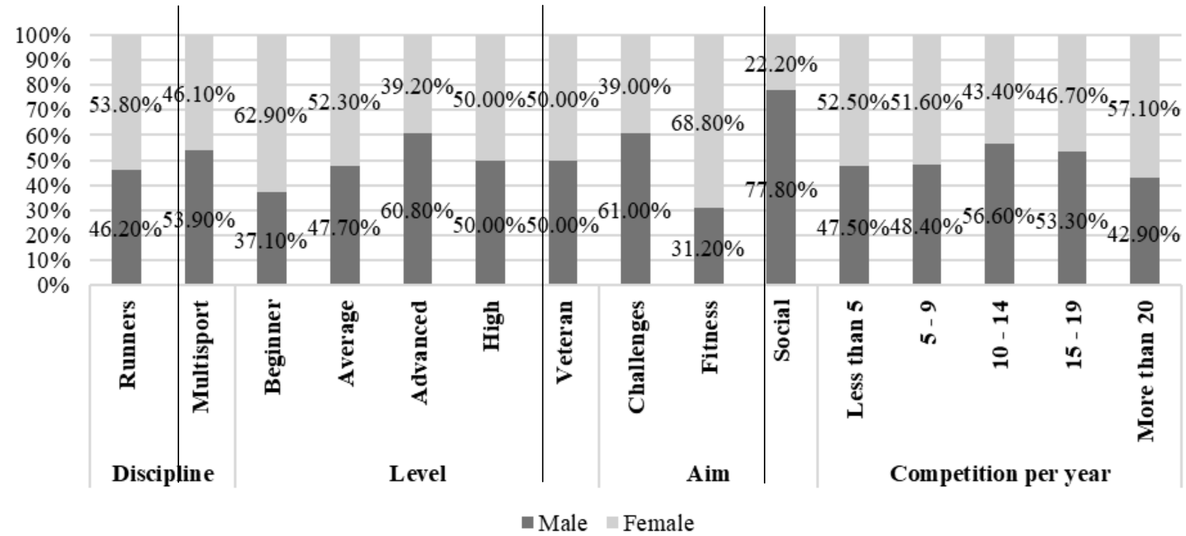

Figure 2. The sporting profiles based on gender (N=609)

Looking at the background motive or aim of the respondents, a noticeably higher per-centage of female respondents indicated that they compete with a focus on fitness (68.8%), whereas male respondents were more likely to identify with competing for challenge (61.0%) and social purposes (77.8%). The results are consistent with the main thesis of many sports and gender research findings, namely that males and females exhibit different motives for participation in physical activities. Furthermore, the results also align with the notion that certain motivational factors play a more significant role for each gender (Morris et al., 1995; Egli et al., 2011; Chowdhury, 2012; Molanorouzi et al., 2015). Egli et al., (2011) in their research state for example that male college students are more motivated by internal factors (challenges, strength, competition), while females are more motivated by extrinsic factors, such as weight management, appearance and fitness. Chowdhury (2012) presented similar findings, highlighting that male athletes reported higher motivation for challenge and affiliation, whereas female athletes reported higher motivation for appearance.

Morris et al. (1995) found that the strongest discriminating factors between the genders sporting motives were challenge, health and status. Further explaining that females rated health higher, while males regarded challenge and status more important. Regarding the frequency of competition, gender differences followed the pattern of competitive levels. Although there were no significant differences between the two genders, as with the competitive levels, men were represented at a higher percentage among advanced and high-level competitors. In contrast, the gender distribution among veterans was largely equal. Similarly, in terms of frequency, men were more likely to report competing 10–14 or 15–19 times per year. However, at the highest level, this difference was no longer evident.

To further analyze gender differences, beyond the athletic profile, we deemed it essential to examine preferences related to the endurance sports events. We analyzed these attitudes through five major dimensions, each represented by three statements. This allowed us to assess the importance of the accessibility, reputation, sports value, core- and supplementary programs, and organizational aspects surrounding these events (Table 3.). Respondents were asked to choose which factor is important to them regarding an event. Initially, we evaluated the results comprehensively across the entire sample, followed by a gender-specific analysis. Based on the responses from the entire population, the five most important criteria were the well-organized nature of the event (O1) (72.2%), easy accessibility (A2) (72.2%), affordability of the related costs (A1) (70.8%), the challenge presented (S1) (70.6%), and the proximity of the event (A3) (47.3%).

It is important to highlight that for the entire sample, all three statements within the accessibility dimension were among the most highly valued event characteristics. The importance of accessibility is reflected in numerous studies related to sports events and competitions. Alexandris et al. (2011) categorize participation constraints into two major groups, with accessibility playing a significant role among external factors (Hungenberg et al., 2013). In their examination of the relationship between leisure time involvement and psychological commitment, Iwasaki and Havitz (2004) also highlight the significance of accessibility as a personal moderator. Myburgh et al. (2018) emphasize Iwasaki and Havitz's thesis in their study on the commitment of endurance athletes, in which they state that the accessibility of a sports event plays a key role in participation. In their research focusing on the choice of winter sport destinations, Miragaia and Martins (2015) highlight the crucial roles of proximity, accessibility, and cost. The importance of affordability and the level of registration fees is also emphasized by Fotiadis et al. (2016) in their study on cycling competitions.

In terms of gender differences (Table 3.) across the five dimension two major differences were found. Females regarded significantly more important the affordability of the related costs of the events (eg. registration and travel expenses) (A1) (F: 76.6%, M: 64.8%) (p=0.001), and the charitable purpose of the event (P3) (F: 42.9%; M: 28.5%) (p=0.000). While below the significant threshold value, there are tendency like differences in other event characteristics preferences as well. Females rated more than 5 percent higher the importance of the event accessibility (A2), and the well-organized nature of the event (A3), but scored higher on the different available categories (O1) and the supplementary activities and attractions of the event (P2) as well. While males rated higher the importance of the challenge presented (S1) and the annuality of the events (O2). The former result corroborates to those presented earlier in Figure 2, in which men indicated "challenge" as a motivation for competitions at higher percentage than women (F: 31.0%; M: 69.0%).

Table 3. The importance of different event characteristics, based on gender (N=609)

Dimension		Statement	Male	Female	Sig.
Accessibility, affordability	A1	The registration for the event and the travel expenses are affordable.	64.80%	**76.60%**	**0.001**
	A2	The event is easily accessible.	69.40%	75.00%	0.147
	A3	The event is close to my hometown.	48.50%	46.10%	0.571
Reputation, attractiveness	R1	The event receives significant media coverage and publicity.	3.00%	2.60%	0.810
	R2	The event has a good reputation and international recognition.	32.20%	32.10%	1.000
	R3	The event attracts the world's top endurance athletes.	7.30%	6.20%	0.629
Sports value	S1	The event presents a challenge for me.	72.40%	68.80%	0.374
	S2	The event helps me qualify for other events.	13.60%	13.60%	1.000
	S3	The event offers cash prizes.	3.00%	2.90%	1.000
	P1	The event includes 'pre-events' that cater to the entire family (e.g., fun runs, junior events).	8.60%	8.10%	0.884
Programs	P2	The event venue offers numerous activities and attractions.	19.90%	23.10%	0.375
	P3	Participation in the event serves charitable purposes.	28.60%	**42.90%**	**0.000**
Event, organizing characteristics	O1	The event offers various categories including professional, amateur etc.	19.30%	24.70%	0.118
	O2	The event takes place annually.	24.90%	20.50%	0.208
	O3	The event is well-organized.	69.40%	75.00%	0.147

Following the examination of attitudes related to competitions, we also investigated travel behavior associated with events, analyzing both the entire sample and the data broken down by gender (Table 4). Seven items were formulated, which athletes rated on a Likert scale from 1 to 5, where 1 meant "strongly disagree" and 5 meant "strongly agree."

Based on these ratings, the highest average score for the entire sample was for travel planning to accommodate competitions (T2) (Overall Mean = 3.29; Std. = 1.28), followed by traveling with family and friends (T7) (Overall Mean = 3.18; Std. = 1.25), and travel opportunities provided by the competitions (T1) (Overall Mean = 3.16; Std. = 1.26). Holiday planning around sporting events (T4) (Overall Mean = 2.88; Std. = 1.23) and visiting tourist attractions besides the competitions (T5) (Overall Mean = 2.82; Std. = 1.29) were in the middle of the list.

The lowest ratings were for visiting attractions and destinations (T6) (Overall Mean = 2.69; Std. = 1.36) and returning to the competition location for vacation purposes (T3) (Overall Mean = 2.60; Std. = 1.22).

Table 4. Event participation and the travel behaviour, based on gender (N=609)

	Statement	t - value	p - value	Mean	Male	Female
T1	Endurance sports competitions offer opportunities for extensive travel.	-1.601	0.110	3.16	3.08	3.24
T2	I plan my trips to accommodate my competitions.	-1.675	0.094	3.29	3.21	3.38
T3	I intend to return to the destination where I participated in the race for vacation purposes.	-1.678	0.092	2.60	2.51	2.68
T4	I plan holidays around sports activities.	-2.395	**0,017**	2.88	2.76	**3.00**
T5	I visit tourist attractions before, during, and/or after participating in endurance events.	-2.616	**0.009**	2.82	2.68	**2.95**
T6	I plan my sports participation to include visits to various attractions and destinations.	-2.884	**0.004**	2.69	2.53	**2.84**
T7	Family and friends can accompany me to endurance events.	-2.925	**0.004**	3.18	3.03	**3.32**

Gender differences were observed in four instances (Table 4). Female athletes rated travel with family and friends (T7) significantly higher. Additionally, they also rated tourism-related activities organized around the competition significantly higher (T4, T5, T6). These results underscore a nuanced aspect of female athletes' approach to event-tourism, revealing a multifaceted engagement beyond the confines of the sporting competition itself. The tendency of female athletes to integrate tourism-related activities into their competition travel planning, such as organizing holidays around competitions and visiting attractions before and after the event, suggests a broader perspective on their athletic pursuits. This behavior aligns with the broader concept of sport tourism, wherein individuals engage in travel activities for the purpose of participating in or observing sports events, but also seek to explore the cultural, recreational, and leisure opportunities available at the destination (Kruger and Saayman, 2013; 2015; Zarotis, 2019).

The inclination of female athletes towards such integrated travel experiences reflects their desire to maximize the benefits derived from participation in sports events beyond the competitive aspect. It underscores their recognition of competition travel as an opportunity for holistic personal enrichment, encompassing not only athletic performance but also cultural immersion, leisure, and social engagement (Getz and Andersson, 2010; Lamont and Kennelly, 2012).

Beyond travel behavior, we also examined the spending profiles of athletes (Table 5). For this purpose, we identified seven areas related to their sport, each rated on a Likert-scale from 1 to 5 to indicate the intensity of annual spending, where 1 represented the lowest and 5 the highest expenditure. Within these seven dimensions, we naturally included spending related to competition travel (C1) and registration fees (C2). Additionally, we identified areas related to preparation, maintenance, and improvement of sports performance (e.g., gym membership, trainer) (C3), sports equipment (whether clothing (C6) or gear (C5)), as well as contributions to the overall well-being of athletes (Dietary supplements (C4); Health services (C7)).

Table 5. Annual sports related spendings, based on gender (N=609)

	Statement	t - value	p - value	Mean	Male	Female
C1	Travel-related costs (travel expenses, accommodation)	1.548	0.122	4.45	4.61	4.30
C2	Registration fees (event and competition expenses).	2.267	**0.024**	2.50	**2.64**	2.36
C3	Gym membership, trainer (offline, online, personal)	-2.036	**0.042**	2.29	2.12	**2.46**
C4	Dietary supplements (vitamins, proteins, etc.)	-0.249	0.804	2.43	2.41	2.44
C5	Sports equipment, gears (bicycles-, weights, etc.)	4.757	**0.000**	2.27	**2.62**	1.93
C6	Sportswear (clothing, footwear, watches etc.)	1.328	0.185	2.99	3.08	2.90
C7	Healthcare services (massage, physio, orthopedics, etc.)	-1.584	0.114	1.74	1.64	1.84

For the entire sample, the highest expenditure was related to travel costs (C1) (Overall Mean = 4.45; Std. = 2.49). This is not surprising, as it emerged from the question regarding competition frequency that the sample is a highly involved one, with over half of them participating frequently yearly. The result suggests that athletes prioritize participation in competitions, recognizing the necessity of these expenditures to achieve competitive success and personal goals. The willingness to invest heavily in travel underscores a commitment to their sport and the value placed on the experiences and opportunities derived from competing at various locations.

The second highest spending is realized in the sportswear area (C6) (Overall Mean = 2.99; Std. = 1.64). The substantial expenditure on sportswear (shoes, clothes, wearables) as the second-highest category indicates the importance athletes place on having appropriate and high-quality gear. This investment is likely driven by the need for functional, performance-enhancing, and often sport-specific apparel that supports their training and competition activities. The prioritization of sportswear spending also reflects broader trends in the sports industry where advanced materials and technologies are continually being developed to improve athletic performance and comfort.

In third place on the list are registration fees (C2) (Overall Mean = 2.50; Std. = 1.54). This can also be correlated with the high competition participation rate within the sample, although the relatively affordable registration fees domestically, lower the overall annual expenditures significantly. This expenditure represents the cost of access to structured competition, which is a critical component of an athlete's career and development. The financial commitment to registration fees indicates that athletes are dedicated to maintaining an active competitive schedule, which is vital for ranking, exposure, and career progression.

The relatively lower annual spending on dietary supplements (C4); gym membership and training (C3); sports equipment (C5); and healthcare services (C7) suggests that these areas, while still important, are less of a financial priority compared to the aforementioned categories. This can be due to the fact that on one hand athletes may perceive these areas as less immediately critical to their performance compared to travel, apparel, and competition participation. And on the other the varying costs and perceived value of these services and products might influence their spending patterns.

Spending patterns were further examined within the sample, segmented by gender, where three key differences were found (Table 5). According to self-reports, male athletes spend significantly more on registration fees (C2) (F: 2.36; M: 2.64) ($p = 0.024$) and sports equipment (C5) (F: 1.93; M: 2.62) ($p = 0.000$), while female athletes spend more on gym memberships and training (C3) (F: 2.46; M: 2.12) ($p = 0.042$). Although no significant difference was found, there is a trend indicating that males also spend more on travel costs (C1) (F: 4.30; M: 4.61) ($p = 0.122$). This result is in line with their higher spending on registration fees, both of which are critical component of event participation. It is also interesting to note, that in the question examining the importance of event-related characteristics (Table 3), female athletes rated the affordability of registration and travel costs significantly more important, so it is not surprising that males spend more on both of these.

The results present notable insights into the gender-specific spending patterns of athletes, revealing distinct financial priorities between male and female participants. Male athletes' significantly higher expenditure on registration fees (C2) and sports equipment (C5) suggests a greater investment in direct competition participation and the necessary gear for performance. The emphasis on sports equipment also underscores the importance placed on having the right tools and gear to optimize performance, which may reflect a prioritization of tangible assets that directly impact athletic outcomes. In contrast, female athletes' higher spending on gym memberships and training (C3) points to a different approach to athletic preparation and maintenance. This spending pattern indicates a significant investment in the foundational aspects of their training regimes, focusing on consistent physical conditioning and skill development. The emphasis on gym memberships and training can be interpreted as a commitment to long-term fitness (which was present in their motivation as well) and readiness, highlighting the importance of structured and guided physical preparation.

CONCLUSION

Present study aimed to examine the sports event participations of endurance athletes with special focus on gender differences. Utilizing survey method, a dataset of 609 endurance athletes was analyzed regarding their motivations, event preferences, travel behaviors, and expenditure patterns as well.

The findings revealed distinct patterns across several dimensions. In terms of motivational factors, female athletes exhibited a stronger inclination towards external motivations compared to their male counterparts. This suggests that factors external to the sport itself play a crucial role in influencing female athletes' participation decisions. Regarding sports event characteristics, accessibility, affordability, and program offerings emerged as significantly more important to female athletes than to males. In contrast, male athletes placed higher value on the challenge presented by the race, reflecting potentially different psychological orientations towards competition.

In terms of travel behavior, females expressed a greater preference for organizing trips that include family and friends, indicating a broader social context in their sporting engagements. Furthermore, female athletes were more likely to plan supplementary tourist activities around their race schedules, suggesting a multifaceted approach to their participation in sports events. Concerning spending patterns, male athletes tended to allocate more of their budget towards registration fees, possibly indicating a greater emphasis on competitive participation costs.

In contrast, females allocated more resources towards gym memberships and sports equipment, underscoring a focus on preparation and training outside of organized events. Overall, these findings underscore the nuanced ways in which gender influences various aspects of sports event participation, from initial motivations to logistical planning and financial considerations. Recognizing these differences is essential for developing targeted strategies to enhance the engagement and satisfaction of both male and female athletes in sports tourism contexts.

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EXPLORING THE TOURIST ATTRACTIVENESS OF CULTURAL SITES: THE CASE OF KAZAKHSTAN

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Abstract: The article examines the components contributing to the tourist appeal of cultural sites in the Republic of Kazakhstan, exploring the intricate relationship between their attractiveness and cultural significance. This is vital for promoting sustainable tourism, fostering cultural exchange, and preserving shared cultural heritage for future generations. Understanding what makes a place attractive to tourists is crucial for destination marketing, sustainable tourism planning, and revenue generation. The study was conducted in the context of the search for ways to popularize cultural heritage in domestic tourism. Fifteen distinct variables were identified to delineate the allure of these sites, encompassing criteria such as historical significance, aesthetic and architectural value, integration of a cultural object with the natural landscape and environment, involvement of the local community in the promotion and preservation of cultural heritage, among others. A comprehensive questionnaire was devised based on these variables, serving as the foundation for a survey where participants rated the significance of each variable on a 5-point scale. The survey garnered responses from 1,728 residents spanning all regions of Kazakhstan. Through correlation analysis, the acquired ratings were scrutinized, unveiling interconnections among variables and elucidating the primary factors shaping the attractiveness of cultural sites, namely safety and security at the site, the historical significance, accessibility for people with special needs, aesthetic and architectural value, as well as the availability of amenities such as restrooms, information centers, and guided tours.

Keywords: Tourist attractions, cultural heritage, cultural tourism, tourism attractiveness, correlation analysis

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INTRODUCTION

The tourism industry represents a vast and intricate network of interconnected sectors. The diverse array of industries directly and indirectly influencing tourism not only shapes the uniqueness of tourist offerings but also enhances the value of

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tourist experiences (Bacsi, 2017). Cultural tourism stands out as one of the most prevalent forms of travel, with cultural elements featured in nearly half of all tourist excursions (UNWTO, 2018), underscoring the special relationship between tourism and culture. Indeed, culture stands as a cornerstone in the development of tourism, mutually benefiting from its expansion. Both tourism and culture serve as primary drivers of regional allure and competitiveness (OECD, 2008; Zhu et al., 2023). The integration of various cultural sites into tourism initiatives has fostered the rise and development of distinct tourism niches, including cultural heritage tourism, urban cultural excursions, ethnic tourism, event-based tourism, and creative tourism (Richards, 2018). Cultural heritage, encompassing both tangible and intangible aspects, holds a distinct position within tourist activities. Given its delicate nature, cultural heritage demands careful stewardship within the realm of tourism (Oppio and Dell'Ovo, 2020). The journey of a cultural object from mere existence to a fully-fledged tourist attraction is a multifaceted process. This transformation involves the development of tourist infrastructure, construction of accommodations, and ultimately, strategic promotion within the tourism market. However, not all cultural sites garner equal popularity among tourists. While cultural significance is paramount, the attractiveness of a site to tourists hinges on a multitude of factors, including accessibility, tour expenses, aesthetic allure, historical significance, availability of infrastructure, and event offerings. Tourist attractiveness in a broad sense implies a set of images that attract visitors to a specific destination, and accordingly reflects more the specifics of tourist demand, reflecting the interests, tastes and preferences of tourists. Existing literature on attractiveness within the tourism context predominantly focuses on the attractiveness of destinations themselves (Reitsamer et al., 2016; Mikulić et al., 2016; Khairi and Darmawan, 2021; Koshim et al., 2023; Moldagaliyeva et al., 2024), as well as the indicators used to measure it (Hu and Ritchie, 1993; Krešić and Prebežac, 2011; Kim et al., 2020; Cheng et al., 2023), many of which align with the factors shaping it. Culture invariably holds a prominent position as one of the primary resources shaping attractiveness (Islam and Chaudhary, 2021). However, only a limited number of scholarly works delve into the attractiveness of individual components of the tourist offering, notably the cultural dimension (Kirillova and Lehto, 2015; Ouariti and Jebrane, 2020; Tiberghien et al., 2018).

In the Republic of Kazakhstan, much like in other tourist destinations worldwide, cultural sites alongside natural wonders constitute the keystone of the tourism experience. Kazakhstan's cultural landscape boasts remarkable diversity, owing to its expansive territory and rich history, each turn of which has left its mark on the cultural identity of the country. The country's most significant cultural sites find their place among the esteemed 250 historical and cultural monuments of national importance (State list of historical and cultural monuments of national importance, 2020). Upon examining these objects from the perspective of domestic tourism development, the authors of this study encountered striking differences between the cultural sites listed. While some enjoy well-developed infrastructure, prominent placement on maps, and ample informational resources, others, equally significant on a national scale, remain unknown, being in hard-to-reach conditions without the necessary tourist amenities. Thus, the study aims to find an answer to the following questions:

1) What factors contribute to the tourist attractiveness of cultural sites?
2) Can all cultural sites become tourist attractions?

LITERATURE REVIEW

The concept of tourist attractiveness is in a constant state of evolution and refinement, as it hinges on a multitude of factors that vary depending on the time, location, and purpose of travel. A common approach to defining attractiveness in tourism is to conceptualize it as a set of elements or a system of factors that contribute to its formation (Formica and Uysal, 2016). Broadly speaking, attractiveness encompasses a variety of factors that determine the forces influencing the ultimate choice of the consumer – tourist. The overall appeal of tourism is shaped by factors such as natural beauty, cultural heritage, recreational opportunities, accessibility and tourist infrastructure, including airports, roads, and accommodation facilities. Moreover, it encompasses opportunities for outdoor activities for the entire family, levels of hospitality and service, the destination's image, tourist satisfaction with services, as well as the economic stability and security of the destination. In essence, both natural landscapes and cultural attractions, as well as man-made structures and dynamic events such as carnivals, festivals, and concerts, can contribute to attractiveness (Kruczek, 2010). These factors of attractiveness serve as the driving force and are the primary determinants influencing tourists' decisions to embark on a journey.

Culture holds a vital role in tourism, influencing destination choices, shaping travel experiences, and fostering interactions with local communities. It often serves as the primary motivator for travel, enticing tourists with rich cultural experiences, whether through visits to historical sites, participation in traditional festivals, or exploration of local cuisine. Various forms of tourism revolve around the exploration and appreciation of cultural heritage sites, including UNESCO World Heritage Sites, historical landmarks, and cultural centers of indigenous peoples (Vecco and Caust, 2019; Whitford and Ruhanen, 2019; Carr et al., 2016; Issakov et al., 2023a). These sites not only showcase a destination's history and artistic achievements but also contribute to its identity and sense of place.

In response to the growing demand for cultural experiences, the tourism industry has diversified its offerings to include cultural tourism products. These can range from guided tours and cooking classes to craft workshops and performances featuring traditional music, dance, and theater. Cultural tourism holds immense potential to benefit local communities by generating economic opportunities, preserving cultural traditions, and instilling pride in cultural heritage. Community-based tourism initiatives empower local residents to share their culture with visitors on their own terms, ensuring a more equitable distribution of tourism benefits. Moreover, tourism serves as a platform for cultural exchange and mutual understanding between visitors and host countries. Through interactions with individuals from diverse cultural backgrounds, tourists gain insights into different lifestyles, values, and perspectives, fostering mutual respect and appreciation. In essence, culture plays a multifaceted role in tourism, driving destination choices, shaping travel experiences, and facilitating cultural exchange. Recognizing and celebrating cultural diversity, while promoting responsible tourism practices, are crucial to ensure that cultural tourism continues to enrich both travelers and host communities worldwide.

Cultural sites offer tourists distinctive experiences and the chance to delve into the history, traditions, and lifestyle of a particular destination (Ritonga et al., 2019). The tourist attractiveness of cultural sites, which serve as fundamental resources for tourists, comprises a myriad of components. The identification of variables contributing to the tourist attractiveness of cultural sites drew upon existing research. Historical significance stands as a fundamental category within the cultural aspect of tourism, bridging the past to the present and fostering enduring interest across diverse segments of tourists drawn to cultural experiences (Biranvand, 2018; Alberti and Giusti, 2012). Architecture similarly exerts a considerable influence on tourist appeal, directly intertwining with aesthetics and authenticity – crucial criteria for selecting and appraising tourist attractions. Numerous studies underscore the pivotal role of architecture in the advancement of cultural tourism (Genc and Gulertekin Genc, 2023; Gholitabar et al., 2018; Costa and Carneiro, 2021).

The interplay between culture and tourism manifests in various ways, giving rise to distinct sectors within the tourist landscape. Educational tourism, for instance, emphasizes the educational value of cultural sites, emerging as a significant draw for cultural enthusiasts (McGladdery and Lubbe, 2017; Collins-Kreiner and Tueta Sagi, 2011; Issakov et al., 2023b; Zhoya et al., 2024). Equally crucial are the connections between culture and nature across different dimensions. For instance, a cultural site often integrates seamlessly into the habitat of its cultural stewards, becoming intrinsic to the landscape and irreplaceable to them. The natural landscape surrounding a cultural site can greatly enhance its attractiveness to tourists. Stunning natural features, such as mountains, beaches, rivers, and forests, can create a picturesque backdrop for cultural exploration and add to the overall appeal of the site. A new generation of travelers is increasingly motivated by experiential journeys, driven by the desire to witness firsthand the intricate interplay between culture and nature, comprehend their interdependence, and appreciate the beauty of their coexistence (O'Donnell, 2023; Romão et al., 2013; Wei et al., 2020).

Interactive components in tourism manifest in various ways, with one of the most prevalent being the engagement of tourists in the co-creation process – wherein they actively contribute to the formation of their experiences. This collaborative approach enables tourists to derive exciting and meaningful experiences from the services, locales, and cultures they encounter during their journeys (Kastenholz and Gronau, 2020; Ross, 2020; Scott et al., 2010). In cultural tourism, such experiences entail fostering creative interactions between tourists and cultural artifacts, both tangible and intangible. This is achieved through gamification, master classes, storytelling, improvisational activities, theatrical presentations, and quests (Roque, 2022; Ariza-Colpas et al., 2023; Campos et al., 2023).

Numerous ways of engaging tourists and fostering their creativity are directly linked to the continuous development and differentiation of tourist offerings, in other words – the various approaches of interpreting a cultural site as a tourist attraction. Additionally, the organization of cultural events and festivals significantly impacts the attractiveness of cultural sites (Ogutu et al., 2023). By catalyzing the flow of cultural tourists to community gatherings, such events facilitate cultural exchange between tourists and local residents (Io, 2019). Many cultural events are intertwined with traditional celebrations, which themselves become distinct objects of tourist interest. For instance, the grand Nauryz celebrations in Central Asian countries exemplify this phenomenon (Zamani-Farahani, 2013).

Hosting cultural events vitalizes local communities, who serve as the custodians of culture itself. Their active involvement in the tourist process holds significant implications for the preservation, dissemination, and promotion of cultural sites. The opportunity for tourists to engage with local populations, communicate with them, learn from them, and partake in their daily lives serves as a catalyst for tourist flow. Such interactions offer the chance to acquire authentic experiences through collaborative exploration of art, heritage, or the unique ambiance of a place or specific tourist site alongside locals within the community (Ratten et al., 2019; Sarmento and Brito-Henriques, 2013). This phenomenon is also reflected in emerging forms of tourism, such as creative tourism, which pivots on creativity and creation and is gaining traction in numerous cultural tourist destinations worldwide (Lim, 2016; Aktymbayeva et al., 2023). Additionally, the warmth and hospitality of the local community can profoundly influence tourists' perception of cultural attractions and their overall satisfaction. Tourists often seek authentic experiences and value interactions with locals, making their receptions from the community a significant factor.

Tourists' interest in authentic tourism products, coupled with shifts in tourism paradigms towards prioritizing environmentally friendly destinations and products, underscores the evolving landscape of tourism preferences (Girard and Nijkamp, 2009; Tang et al., 2019). Consequently, efforts to promote sustainable tourism and safeguard the environment surrounding cultural heritage sites emerge as another pivotal component of the attractiveness of cultural destinations and individual sites. The tourist infrastructure, comprising a well-developed transport network and accessibility for all categories of visitors, alongside the quality and availability of online information about a cultural site, are foundational elements shaping its tourist appeal. Tourist infrastructure encompasses a comprehensive array of services essential for meeting the diverse needs of visitors during their stay in a destination. Current research underscores that the future trajectory of tourism hinges on substantial investments in infrastructure and its continual modernization, as it stands as a crucial factor driving the development and competitiveness of the tourism sector (Santos et al., 2014). Safety and security considerations are of high importance to tourists, both at the level of a tourist destination and individual sites. Safety serves as a fundamental prerequisite for tourists' positive perception of a destination, influencing the duration of their stay and shaping their overall impression (Kordić et al., 2015; Tasci and Boylu, 2010). Tourism attractiveness comprises a multifaceted synergy of various factors and conditions, collectively ensuring sustained tourist interest and, consequently, the competitiveness of a tourist destination or specific site. When discussing the cultural significance of these objects, it is crucial to highlight that it primarily encompasses historical, architectural, educational, and aesthetic values, each contributing to the formulation of tourist appeal. Below, we present the findings of the data analysis derived from the survey, reaffirming the intricate nature of the components comprising tourist attractiveness.

MATERIALS AND METHODS

The article employs a combination of the questionnaire method and correlation analysis to evaluate the factors contributing to the tourist attractiveness of cultural sites within the Republic of Kazakhstan. This integration of methodologies aims to offer a thorough examination of the research topic. The methodology of this study is a set of sequential steps involved in the research process, starting from defining the problem statement and research questions, followed by conducting a literature review to identify existing knowledge. Then, it progresses to identifying variables and developing a questionnaire, conducting the survey, analyzing the data, and interpreting the results. Finally, it concludes with discussing the findings and drawing conclusions. The flow chart of methodology is presented in Figure 1.

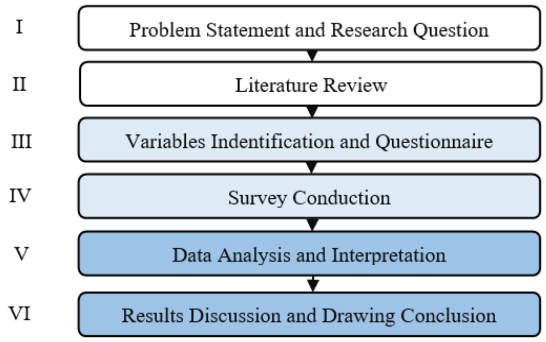

Figure 1. Flow chart of the methodology

The study was carried out in October-November 2023, including all five economic regions of the Republic of Kazakhstan: North, Central, East, West, and South. This extensive geographical coverage ensured the representativeness of the data and improved the study's reliability. Convenience sampling was employed, with participation extended to residents of the country who are active consumers of cultural offerings. The questionnaire consisted of two main parts: the first assessed the importance of certain factors, the second was designed to obtain demographic information (gender, age, region). The questionnaire questions were presented in three languages – Kazakh, Russian, and English.

Initially, respondents were tasked with evaluating the importance of various components contributing to tourist attractiveness. 15 variables were identified, namely historical significance (V1), aesthetic and architectural value (V2), the presence of cultural events, festivals at the heritage site (V3), accessibility, transportation facilities, and overall infrastructure (V4), cultural sites educational value (V5), availability of amenities such as restrooms, information centers, and guided tours (V6), cultural site integration with natural landscapes and scenic beauty (V7), availability of interactive experiences (V8), involvement of the local community in promoting and preserving the cultural heritage (V9), cultural site tourist interpretation (V10), cultural sites elements diversity (V11), accessibility for people with special needs (V12), safety and security at the site (V13), quality and accessibility of online information about cultural site (V14) and efforts to promote sustainable tourism and environmental conservation at the site (V15). The assessments were conducted based on the Likert scale, where respondents rated the significance of factors from 1 to 5. Here, 1 indicated "not important at all", 2 denoted "slightly important", 3 signified "moderately important", 4 represented "very important", and 5 indicated "extremely important". Furthermore, the questionnaire featured an open-ended question inviting respondents to provide additional insights or preferences concerning tourist cultural heritage sites. The survey was facilitated through Google Forms, providing convenient participation and efficient data collection. The sample group encompassed diverse age and gender categories, ensuring a representative cross-section of respondents (Figure 2a, 2b). The Southern regions boasted the highest participation rate, with 1020 respondents, comprising 57.3% of the total sample (Figure 2c).

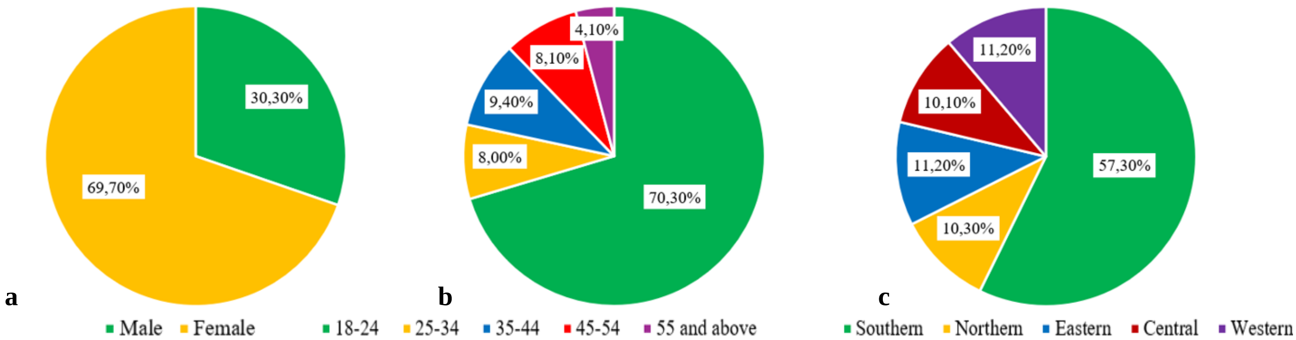

Figure 2. General information about the respondents: a) gender, b) age, c) place of residence

Quantitative data acquired from the survey underwent correlation analysis. This analysis identified the most significant variables contributing to the tourist attractiveness of cultural sites, based on average values, while also tracing correlations between these variables. Statistical processing of the quantitative data was conducted using the Statistical Package for the Social Sciences (SPSS), version 29.0.2.0.

RESULTS AND DISCUSSION

As mentioned earlier, the obtained data underwent statistical processing. Primarily, a reliability analysis was conducted, revealing that 1.728 responses (95.9%) were eligible for analysis (Table 1). The obtained Cronbach's Alpha (0.954) indicates the reliability and internal consistency of the collected data (Table 2). The constructive ranking of variables based on their average importance is given below in table 3 with the corresponding standard deviation.

Table 1. Case Processing Summary (Source: authors' data analysis results)

		N	%
Cases	Valid	1728	95.9
	Excluded	73	4.1
	Total	1801	100.0

Table 2. Reliability Statistics (Source: authors' data analysis results)

Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	N of Items
.954	.954	15

Table 3. The average value of the importance of the tourist attractiveness variables (Source: authors' data analysis results)

Observed Variables	Mean	Standard Deviation
Safety and security at the site	4.40	.969
Cultural sites historical significance	4.32	1.009
Accessibility for people with special needs	4.30	.999
Cultural sites aesthetic and architectural value	4.28	1.001
Availability of amenities such as restrooms, information centers, and guided tours	4.28	1.042
Cultural site tourist interpretation	4.25	.975
Cultural sites educational value	4.23	1.012
Quality and accessibility of online information about cultural site	4.23	1.034
Efforts to promote sustainable tourism and environmental conservation at the site	4.23	1.056
Cultural site integration with natural landscapes and scenic beauty	4.21	1.042
Accessibility, transportation facilities, and overall infrastructure	4.20	1.028
Involvement of the local community in promoting and preserving the cultural heritage	4.17	1.036
Cultural sites elements diversity	4.16	.997
Presence of cultural events, festivals at the heritage site	4.08	1.043
Availability of interactive experiences	4.08	1.007

Thus, the most significant components contributing to the tourist attractiveness of cultural sites were safety and security at the site (4.40), the historical significance of the object (4.32), accessibility for people with special needs (4.30), aesthetic and architectural value (4.28), as well as the availability of amenities such as toilets, information centers, and guided tours (4.28). The obtained results support findings from prior studies and can be attributed to the following:

Prioritizing safety and security addresses visitors' fundamental need to feel secure while exploring cultural sites. Moreover, the emphasis on historical significance suggests that many tourists are drawn to locations steeped in rich history and cultural heritage. Accessibility considerations may stem from the increasing promotion of inclusive tourism aimed at individuals with disabilities (Rita and António, 2020).

Perceived value, particularly in terms of aesthetic appeal, architectural significance, and the availability of amenities, profoundly influences visitors' overall impressions. Sites boasting well-maintained aesthetics and comprehensive amenities tend to offer more satisfying experiences, leading to higher levels of visitor satisfaction and positive word-of-mouth recommendations. The presence of facilities such as toilets, information centers, and guided tours reflects the quality of the tourist infrastructure at cultural sites. Well-developed infrastructure often attracts more visitors and garners higher ratings for attractiveness (Mamirkulova et al., 2020).

Cultural sites that effectively promote safety measures, historical significance, accessibility features, architectural beauty, and affordable amenities are likely to receive higher ratings from visitors. Effective marketing and promotion efforts can shape visitors' perceptions and expectations even before they arrive at the site. Engaging the local community in the promotion and preservation of cultural heritage can enhance the visitor experience and bolster perceptions of safety (Issakov et al., 2023c). Visitors tend to feel a stronger sense of trust and connection with cultural sites when they witness active community involvement and leadership. Government and institutional support, particularly initiatives aimed at promoting sustainable tourism and preserving the environment, as well as investments in infrastructure and enhanced accessibility, are poised to elevate ratings on safety, accessibility, and overall attractiveness.

An analysis of the correlation between variables was also conducted. It revealed the highest correlation between accessibility for people with special needs (V12) and safety and security at the site (V13); safety and security at the site

(V13) and the quality and accessibility of online information about the cultural heritage site (V14); the quality and availability of online information about the cultural heritage site (V14) and efforts to promote sustainable tourism and environmental protection at the site (V15) (Table 4).

Table 4. Inter-Item Correlation Matrix (Source: authors' data analysis results)

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15
V1	1.000	.695	.550	.526	.571	.527	.567	.462	.556	.535	.535	.542	.564	.544	.582
V2	.695	1.000	.626	.598	.585	.551	.609	.522	.595	.564	.551	.555	.575	.570	.596
V3	.550	.626	1.000	.583	.581	.501	.548	.543	.545	.547	.538	.505	.498	.523	.536
V4	.526	.598	.583	1.000	.598	.597	.584	.481	.560	.547	.556	.584	.579	.580	.567
V5	.571	.585	.581	.598	1.000	.569	.589	.501	.599	.553	.567	.565	.573	.557	.583
V6	.527	.551	.501	.597	.569	1.000	.671	.540	.598	.572	.558	.619	.647	.592	.627
V7	.567	.609	.548	.584	.589	.671	1.000	.605	.641	.601	.595	.586	.591	.589	.637
V8	.462	.522	.543	.481	.501	.540	.605	1.000	.623	.544	.543	.487	.484	.506	.516
V9	.556	.595	.545	.560	.599	.598	.641	.623	1.000	.672	.615	.609	.605	.612	.656
V10	.535	.564	.547	.547	.553	.572	.601	.544	.672	1.000	.651	.610	.595	.588	.605
V11	.535	.551	.538	.556	.567	.558	.595	.543	.615	.651	1.000	.656	.606	.580	.592
V12	.542	.555	.505	.584	.565	.619	.586	.487	.609	.610	.656	1.000	.728	.636	.636
V13	.564	.575	.498	.579	.573	.647	.591	.484	.605	.595	.606	.728	1.000	.701	.682
V14	.544	.570	.523	.580	.557	.592	.589	.506	.612	.588	.580	.636	.701	1.000	.706
V15	.582	.596	.536	.567	.583	.627	.637	.516	.656	.605	.592	.636	.682	.706	1.000

The observed correlations provide valuable insights into the interrelationships among factors influencing the attractiveness of cultural sites. First, there is a high correlation (.728) between accessibility for people with special needs (V12) and safety and security at the site (V13). Tourist demand has always been sensitive to security concerns, but in today's world, these considerations have taken on even greater importance. This is explained by the fact that people are concerned about the situation in the world as a whole, which is complicated by wars, political conflicts, viruses, and natural disasters. In such times, people, when choosing a tourist product, first of all want to be sure of their safety and security. Also, there's a heightened awareness of human rights, particularly the right to movement, leisure, and travel. Consequently, there's a growing emphasis on ensuring that recreational opportunities are accessible to all. This explains the correlation between the accessibility for people with special needs (V12) and safety and security at the site (V13). The host communities need to be aware of the importance of ensuring not only physical accessibility, but also a sense of safety at the destination or at a specific site. Installing amenities like ramps, tactile paths, and accessible facilities, coupled with attentive staff capable of delivering quality services, can enhance the appeal of a site and, by extension, the destination itself, making it more attractive to tourists.

Moreover, safety and security at the site (V13) have high correlation (,701) with and the quality and accessibility of online information about the cultural heritage site (V14). This relationship confirms the fact of how the travelers are convinced of the safety of the place/destination. Total digitalization has provided a person with the freedom in finding the necessary information about products and services, places and countries, therefore, the abundance of the information, its accuracy, reliability and relevance are important for a person. A lack of information can breed uncertainty and insecurity. Recognizing this, leading tourism suppliers understand the importance of communication with the consumer, and use the best and most convenient channels for this, in particular digital ones. Thus, the most attractive tourist sites are those that provide tourists with the accurate, up-to-date, and easily accessible information, including safety measures, emergency procedures, and visitor guidelines. The quality and accessibility of online information about the cultural heritage site (V14), in turn, correlates with the efforts to promote sustainable tourism and environmental protection at the site (V15).

This correlation (.706) is reasonable in the light of one of the latest tendencies, when the most appealing products and destinations are green ones. It means that tourists searching information first ensure their safety and security and then turn their attention to the environmental impact of the cultural site or destination. This concern stems from the sustainability issues. The most of the tourism generator countries are those with this new green mindset, when good physical and mental health is directly linked to the pristine nature, conscious consumption, good waste management. In other words, travelers are willing to see the engagement of the site or destination regarding environmental conservation initiatives. Comprehensive information about sustainability practices and environmental conservation efforts demonstrates how responsible and environmentally conscious cultural tourism sites are. It not only makes them more attractive to tourists, but also encouraging visitors to support and participate in conservation efforts.

Additionally, according to Table 4, a moderate correlation was observed between several variables. In particular, historical significance (V1) correlates with the aesthetic and architectural value of the object (V2) (.695). Historical significance fills attractive aesthetic objects with life and significance. Each pattern on the walls of architectural facades, each contour carries its own meaning. Culture serves as a bridge between the past and the present, imbuing any tourism object with profound significance. Cultural sites are popular among tourists, maintaining a stable leading position in the tourist offer, precisely because the past and present meet in them, where narratives come alive, enriching these sites with meanings that resonate deeply with visitors. Next, cultural site integration with the natural landscape and scenic beauty (V7) correlates moderately (.641) with the involvement of the local community in promoting and preserving cultural heritage (V9). Nature is an inseparable backdrop of every tourism activity.

Somehow, nature surrounds people in the most of their travels and along with culture stands as one of the ultimate resources shaping tourism attractiveness in general. Cultural narratives are often woven within the tapestry of the surrounding landscape which makes it mysterious and intriguing. However, there is another missing element – people, representing host communities, the primary custodians of a particular culture. Through their involvement in tourism practices they promote and preserve cultural heritage. Thus, cultural sites seamlessly integrated with their natural environment may benefit from greater community engagement and stewardship, which as a result enhance visitors' experiences and perceptions of authenticity. Furthermore, cultural site integration with the natural landscape and scenic beauty (V7) correlates with availability of amenities such as toilets, information centers, and guided tours (V6) (.671). Tourists value natural beauty when visiting cultural sites but they also seek convenience. Tourism infrastructure is transformed because of the demand from the conscious travelers who seek convenience built into the tourism product in a natural manner. Consequently, well-equipped amenities contribute to visitor comfort and satisfaction, while integration with the natural landscape enhances the site's ambiance and attractiveness.

Cultural site tourist interpretation (V10) has moderate correlation with the involvement of the local community in the promotion and preservation of cultural heritage (V9) (.672) and cultural sites elements diversity (V11) (.651). These relationships once again highlight the importance of enriching a cultural tourism product with a diverse array of elements and ways of interpretation aimed at unveiling culture and enhancing tourists' experiences and impressions. In this regard, the involvement of the local community, inherently custodians themselves, proves to be invaluable, particularly in cultural tourism offerings. Local communities often play a crucial role in developing interpretive programs and guiding visitor experiences, enriching tourists' understanding and appreciation of the site's cultural significance. Lastly, the efforts to promote sustainable tourism and environmental conservation at the site (V15) correlate with cultural site integration with the natural landscape and scenic beauty (V7) (.637) and involvement of the local community in promoting and preserving cultural heritage (V9) (.656). The first correlation raises from the basic idea of sustainability in tourism, encouraging natural and cultural resources preservation for the future generations. Environmental conservation is one of the most significant sustainability issues.

The efforts to promote sustainable practices, such as minimizing environmental impact and preserving natural habitats, reflect how cultural sites are designed and managed within their natural landscapes. Sites that prioritize environmental conservation and sustainability principles are highly sought after, particularly those seamlessly integrated into their surrounding landscapes. The correlation between involvement of the local community in promoting and preserving cultural heritage (V9) and efforts to promote sustainable tourism and environmental conservation at the site (V15) suggests that community involvement often aligns with initiatives to promote sustainable tourism and environmental conservation. Engagement of local communities often advocate for sustainable practices and participation in conservation efforts, contributing to broader sustainability objectives for cultural tourism destinations.

It is also noteworthy to consider the responses to the final open-ended question in the questionnaire: “Is there anything else you would like to share regarding your preferences for cultural heritage tourism sites?” Respondents who chose to share their insights provided 103 comments, covering a range of topics including infrastructure development, diversity of the tourist product, education of future generations, regional development, and the cultural enrichment of individuals. Respondents highlighted the importance of basic tourist infrastructure emphasizing its vital components – safety, cleanliness, and accessibility of cultural facilities. These aspects were deemed essential for ensuring a positive and comfortable visitor experience. Furthermore, respondents expressed a desire for diverse and enriching experiences, including access to high-quality and reasonably priced tours, as well as comprehensive information about the facilities available at cultural sites. This reflects a demand for a range of options to cater to different interests and preferences. Environmental stewardship, including waste collection and recycling in tourist areas, was also mentioned. Many of the environmental concerns highlighted in respondents' comments were advocating for sustainable practices such as waste collection and recycling in tourist areas. This demonstrates a growing awareness of the importance of environmental conservation and an aspiration for cultural tourism to minimize its ecological footprint.

Many respondents emphasized the role of cultural heritage sites in driving regional development, particularly in rural areas. The potential for these sites can be used to stimulate economic growth, create employment opportunities. However, it's crucial to approach their utilization with care, ensuring a deep understanding of the importance of preserving local traditions and identities. Besides, cultural sites are seen as valuable assets for fostering cultural awareness and appreciation, with visitors recognizing the inherent value of preserving national heritage and promoting cultural identity. This underscores the role of cultural tourism in safeguarding cultural heritage, both tangible and intangible, and promoting cultural diversity. Additionally, respondents emphasized the educational value of cultural sites in shaping the worldview of future generations. Many advocated for free and widespread access to cultural excursions for schoolchildren and students, recognizing the importance of instilling a sense of cultural heritage and identity from a young age.

Therefore, the assessments provided by the respondents, coupled with their insightful comments, have enabled discovery of the most crucial factors and facets influencing the attractiveness of cultural sites to tourists. Through this comprehensive examination, several key themes have emerged, shedding light on the multifaceted nature of cultural tourism and the diverse preferences and expectations of visitors. The conclusions drawn from the assessments and comments of the respondents amplify the intricate interplay of various factors in shaping the attractiveness of cultural sites for tourists. By recognizing and addressing these factors, stakeholders in the cultural tourism sector can better cater to the diverse needs and expectations of visitors, ensuring the continued vitality and sustainability of cultural heritage destinations.

CONCLUSION

Numerous components contribute to the tourist attractiveness of cultural sites, each carrying varying degrees of significance depending on diverse conditions, including the preferences of tourists. Nevertheless, the primary findings of the study underscore the following:

- safety and security at the facility emerge as paramount factors in attracting tourists. Visitors seek comfort and reassurance while exploring cultural sites, particularly amidst the backdrop of spreading viruses, conflicts, and political instability.
- the historical significance of the object plays a significant role, adding depth and intrigue to its allure. Tourists are inherently drawn to locations steeped in rich history, adorned with ancient artifacts, and intertwined with narratives from the past.
- accessibility for individuals with special needs, particularly physical accessibility – such as ramps, elevators, Braille signage, and audio guides – emerges as a crucial consideration.
- aesthetic and architectural value are also important, with tourists gravitating towards visually appealing objects characterized by unique architecture, well-preserved structures, and picturesque landscapes.
- the availability of facilities such as toilets, information centers, and guided tours significantly contributes to visitor satisfaction, enhancing the overall convenience and enjoyment of the visit.

The results from both the structured survey and open comments offer valuable insights into the diverse preferences of tourists regarding cultural heritage. The emphasis on safety, cleanliness, and accessibility underscores the pivotal role of tourism infrastructure in shaping visitor experiences. Furthermore, the demand for a variety of offerings, including excursions and informational resources, underscores the importance of developing cultural facilities that cater to a wide array of interests and preferences. The recurring theme of environmental stewardship reflects visitors' increasing awareness of the importance of sustainable tourism practices. Initiatives such as waste management and recycling signify a concerted effort to minimize the environmental footprint of cultural tourism. Additionally, the recognition of cultural heritage sites as catalysts for regional development underscores their potential to stimulate economic growth, preserve local traditions, and bolster community resilience, particularly in rural areas. Moreover, comments highlighting the role of cultural sites in promoting cultural awareness, value, and identity underscore the profound significance of these sites as custodians of national heritage and identity. Visitors acknowledge the importance of safeguarding cultural heritage and advocate for initiatives that celebrate cultural diversity and heritage preservation. Lastly, the emphasis on the educational value of cultural tourism for future generations underscores the enduring impact of these experiences on shaping individuals' worldviews and fostering a deeper understanding of cultural heritage and identity.

In light of these findings, it is evident that cultural heritage tourism holds immense potential not only for providing enriching and memorable visitor experiences but also for achieving broader societal objectives such as environmental sustainability, economic development, and cultural preservation. Moving forward, it is imperative for stakeholders in the cultural tourism sector to heed and incorporate these preferences into their strategies and initiatives to ensure the continued success and sustainability of cultural heritage tourism destinations. By doing so, we can ensure that cultural heritage sites remain sources of inspiration, education, and cultural exchange for generations to come.

Thus, while cultural significance forms an integral condition for the tourist attractiveness of objects, it is the "tourist" conditions that predominantly influence the degree of appeal for visitors. Therefore, a well-established tourist infrastructure and a welcoming, amiable atmosphere should remain the primary indicators of success for tourist facilities in drawing visitors. Additionally, it is crucial to maintain a balance between the preservation of cultural sites and their accessibility. Sustainable development of cultural sites, appreciated by a broad spectrum of visitors, necessitates this equilibrium. Simultaneously, it's crucial to acknowledge that these conditions don't materialize in isolation.

They stem from the direction of tourist flows, drawn by specific attractions. Without such allure, neither infrastructure nor other amenities can be effectively developed. Hence, the process by which cultural objects evolve into tourist resources raises pertinent questions for further investigation, paving the way for new research to explore the underlying factors contributing to the formation of tourist cultural resources.

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THE IMPRESSIVE OF GEOLOGICAL EVIDENCE OF KUALA MUDA DISTRICT: A PROPOSAL FOR GEOTOURISM PRODUCTS IN KEDAH, MALAYSIA

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Abstract: This study provides primary evidence about the geological features in Kuala Muda district, indicating significant potential for development as a geotourism product. To collect primary data, we conducted survey and mapping activities to gather information about the current condition of 11 geosites, as well as the facilities already in place to facilitate seasonal tourism. In addition, a review of previous scientific research for each geosite is also carried out so that geosite speciality data can be summarized. The study's results have facilitated the creation of 17 tourism packages under the AncKed Sungai Batu Association, encompassing geology, geoarchaeology, biology, history, heritage, and culture tourism products in the Kuala Muda district. Offering tour packages enables the district to conduct knowledgeable tourism activities involving people from all walks of life and ages, with trained locals serving as tour guides. This ensures the preservation of geotourism at its optimal level.

Keywords: Kuala Muda district, survey, mapping, geosites, geology

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INTRODUCTION

A geosite highlights the diversity and unique value of scientific, pedagogical, cultural, or tourism values, enabling its development into a successful tourism product. Generally, a geosite refers to a geological location or landform that reveals a unique aspect of geodiversity (Komoo, 2004; Reynard et al., 2007; Pralong, 2006: 2009; Reynard, 2009; Comănescu et al., 2011; Neches, 2016; Maghsoudi and Maryam, 2018), enabling the creation of geotourism with a specific focus on natural tourism elements like landscape and geology. According to Dowling and Newsome (2006: 2018); Hose (2008); Kubalíková (2013); Ólafsdóttir (2019) and Sadry (2021) geotourism is defined as one that maintains the local geographical features (environment, culture, aesthetics, heritage, and the well-being of its residents) in order to sustain this tourism.

The geological formation of Kuala Muda district (Figure 1), which forms the geological component of the Northwest Tectonostratigraphic Domain of Peninsular Malaysia, is the most complete sequence of Paleozoic-age clastic sedimentary rocks that comprise the geology of Jerai Mount. This region represents the lowest part of the sequence, which is the Cambrian age (Bradford, 1972). This domain has formed a series of gravel and carbonate sedimentary rocks in a variety of marine environments, ranging from the shallow sea to the deep sea. These rocks eventually became terrestrial due to granite body fractures in the early Triassic (Bradford, 1972). After that, a continuous denudation process involving weathering and erosion produced the panoramas and landscapes of the present terrain (Burton, 1967; Bradford, 1972).

As the area revealed unique geological evidence, academic studies began to be planned and conducted to enable field data to be observed. To achieve this goal, the National Geopark Committee was founded in 2015 (Ali et al., 2019) and began conducting research since 2016, which has been able to provide a complete set of primary data on geological, geoarchaeological, biological, and cultural specialities in this area. This research is in line with the establishment of the

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National Geopark Committee itself, which encourages efforts to develop national geoparks in each state so that it is eligible to become a UNESCO Global Geopark (UGGp) (Komoo and Said, 2019). The former director Center for Global Archaeological Research, Universiti Sains Malaysia, Penang conducted this academic research as the Chairman of the Jerai Geopark Promotion and Development Committee, under the transparent supervision of the Ministry of Natural Resources and Environmental Sustainability of Malaysia (Anynamous, 2018). To smooth the work of data observation in the field, cooperation with several parties, such as Sungai Petani Municipal Council, Yan District Council, Forestry Department of Peninsular Malaysia, Malaysian Geological Heritage Group, Universiti Kebangsaan Malaysia, Department of Wildlife and National Parks, Malaysia, and the Department of Irrigation and Drainage, was established.

The research focuses on characterizing and identifying geoheritage values or geoparks that have outstanding universal value (OUV) in geopark development. Consequently, survey activities recorded a total of 24 geosites (11 geosites in Kuala Muda district), encompassing various geological classifications such as 1) coastal landscape evolution, 2) Jerai Mount evolution geosite, 3) regional metamorphism geosite, 4) late magmatic phase and contact metamorphism geosite, and 5) quaternary geological evolution geosite mapped in this area. Such academic studies will undoubtedly benefit the area, transforming it into a lucrative sales product (Jenkins, 2003; Grayson and Martinec, 2004; Holt, 2004).

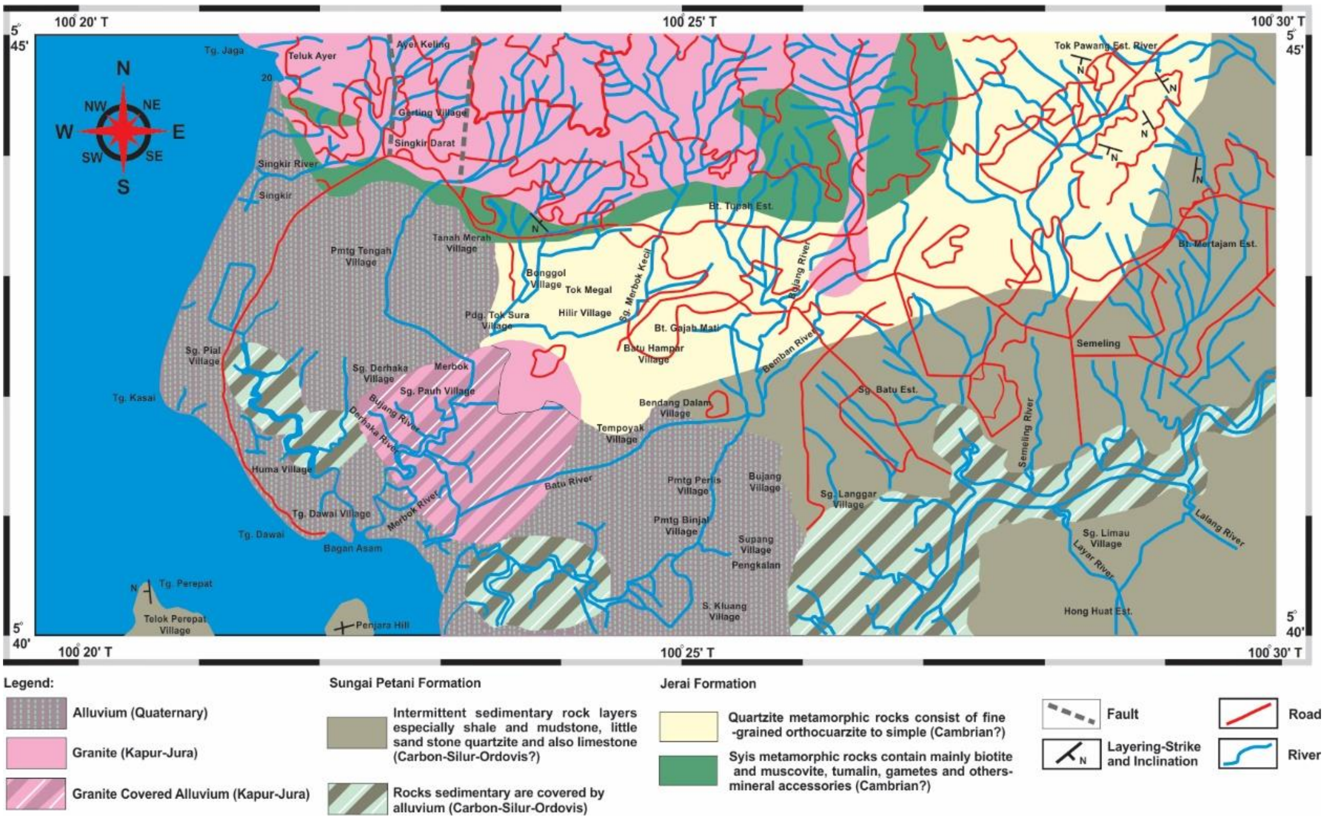


Figure 1. The geological formation of Kuala Muda district (Source: Director of National Mapping Malaysia, 1972)

Geological Setting

Jerai Geopark covers Kuala Muda and Yan districts, covering an area of up to 816 km² (Figure 2). The area encompasses both terrestrial and archipelago environments, where field observations recorded 24 geotrail findings. Field observations have classified the boundaries of Jerai Geopark as Sungai Limau (Yan) in the north, Persekutuan Road Fi and F257 (Kuala Muda-Yan) in the east, Muda River (Kuala Muda) in the south, and the sea border covering Sayak Island (Kuala Muda), Bidan Island (Yan), Songsong Island (Yan), Telor Island (Yan), and Bunting Island (Yan) in the west (Komoo and Said, 2019).The area around Kuala Muda-Yan district shows how Jerai's Mount geology and landscape have changed over time. The main things that were used to choose the borders of the Jerai Geopark were geoarchaeological sites, the biology of the Merbok River, and the beautiful islands off the coast of Kuala Muda and Yan (Komoo and Said, 2019). On July 5–7, 2017, the validity of the facts led to its designation as a national geopark.

Based on the geological map in Figure 2, it is clear that the Jerai Geopark area has a rock structure that forms the geology of Mount Jerai, apart from the low undulating hills at its feet and the beautiful island landscape to the west. This area also records the existence of the Jerai and Mahang Formation (Table 1), which formed from the Late Cambrian period to the Middle Ordovision for the Jerai Formation and from the Central Ordovision to Central Devon for the Mahang Formation, thereby explaining the geological features of Jerai Geopark in Kuala Muda and Yan districts.

LITERATURE REVIEW

Globally, there has been a sustained focus on studies related to geological specialties and the development of heritage tourism packages. Sasso di Castalda, located 20 km south of Potenza in the Southern Apennines thrust-belt, is one of the geological tourism locations actively developing its tourism products. According to Palladino et al. (2013), this area boasts distinctive outcrops of Mesozoic rocks (Bertinelli et al., 2005). These outcrops are so spectacular that stakeholders have created seven stops to allow tourists to witness the unique Mesozoic stratigraphy of the Deep Sea Lagonegro from the Triassic to Cretaceous age (Bentivenga et al., 2017). Bentivenga et al. (2017) classified and focused the first stop on 1) the geology of the Craco village area, 2) the Aliani Badlands, 3) the Alianello Anticline, 4) II Monte, 5) the Monte Volturino structure, 6) the Monte Lama-Serra di Calvello structure, and 6) structures at Sasso di Castalda. The focus of all excursion programs is on the unique geological processes that occur in this area, making it unique in the history of Earth's formation.

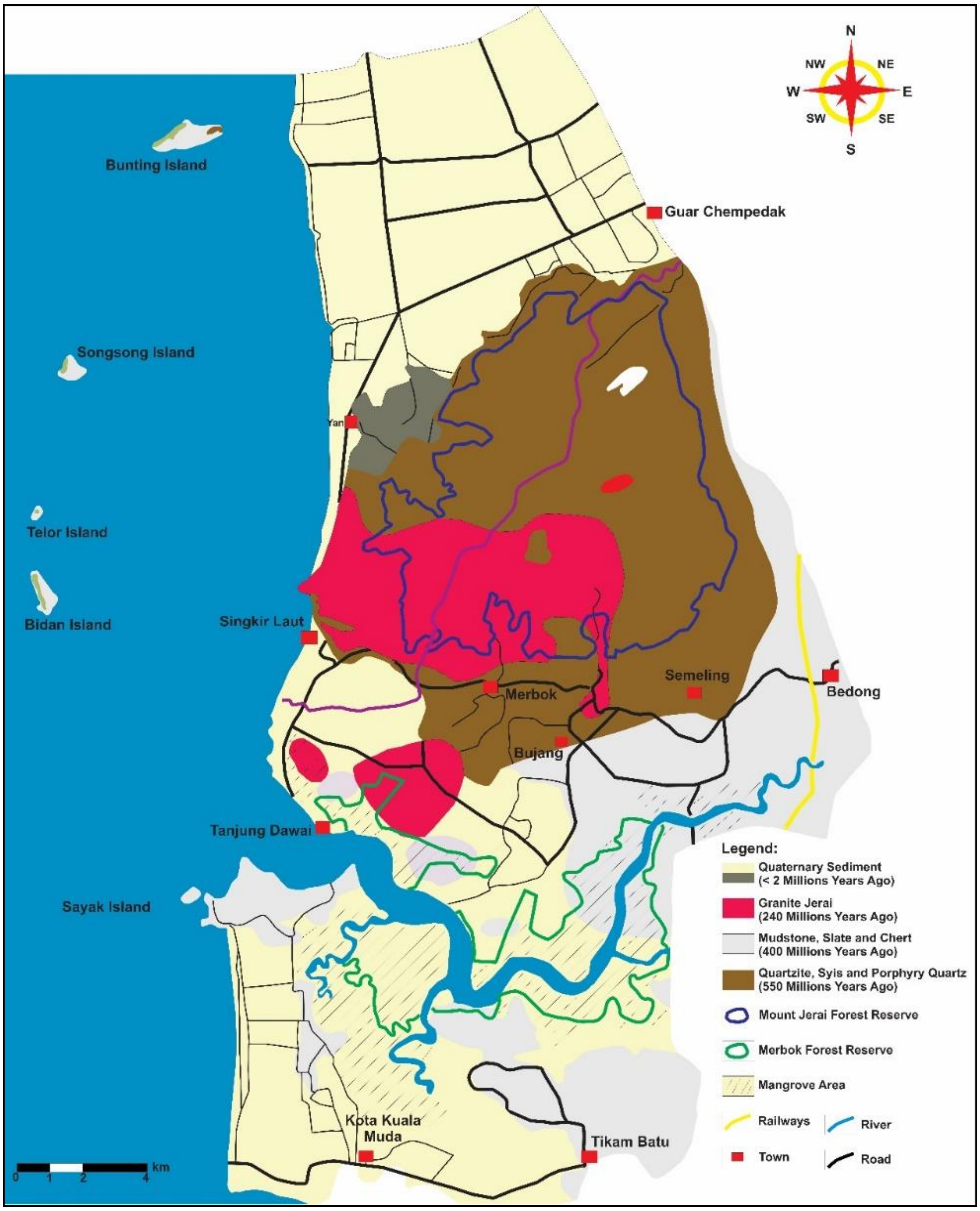


Figure 2. The Kuala Muda-Yan district area revealing the uniqueness of the geological formation that allows it to be recognized as Jerai Geopark (Source: authors based on data from Komoo and Said, 2019)

According to Palladino et al. (2013), the story was made so that people could (1) see the thick layer of sediment that fills the Lagonegro Basin in deeply cut natural sections that show off the lithology, stratigraphic contacts, and geometry of the sedimentary bodies; (2) look at 3D-fold geometry at different sizes; and (3) see well-exposed postorogenic faults that cut through the earlier structures that were stretching. Even to maximize the tour experience, the packages offered also involve geologists as tour guides. Additionally, Prykhodchenko and Tykhonenko (2017) discussed the geological features around the Mokra Sura river (Archean Rocks) to facilitate the creation of tour packages. The area's tour packages concentrate on two main attractions: 1) the outcrop of plagiogranites from the Sura Mesoarchean complex (Surianochka open-pit) and 2) the Novomykolaivka granite quarry. In fact, Prykhodchenko and Tykhonenko (2017) suggested incorporating photography and video recording activities into future tourism activities in this area to enhance tourist satisfaction.

Table 1. Classification of Jerai and Mahang Formations in Jerai Geopark
(Source: authors based on data from Burton, 1967; Bradford, 1972; Jones, 1973)

Formation	Characteristics
Jerai	• Sequences of sedimentary and metasedimentary rocks exposed on Mount Jerai at altitudes above 80 m above sea level; • Is a gravel sedimentary rock that has been regionally metamorphosed and metamorphosed again by contact during granite body crushing; • It forms the Lower group and the Upper group of the Jerai Formation; • The lower member is formed by the Argilite Facies which consists of quartz-mica shale, phylit and in some places garnetized amphibolite rocks and 900 m thick; • The Upper group is represented by a 500 m thick Arenite Facies represented by quartz arenite with spherical grit present in a finite distribution
Mahang	• This formation is represented by exposed rocks in the eastern part of Mount Jerai at an altitude not exceeding 80 m above sea level; • Consists of three facies namely Argilitic Facies, Arenitic Facies and Calcium Facies; • Arenite facies are characterized by a sequence of red shale and chert especially south of Mount Jerai; • Arenite fissures consist of relatively sparsely dispersed sandstone and orthocuarzite; • The calcareous facies are represented by a single outcrop of limestone on Bidan Island located about eight kilometers west of the foot of Mount Jerai

Researchers in the Batuecas-Sierra de Francia-Candelario region (Martinez-Grana et al., 2019), Spain, have documented scientific data about the area's distinctiveness. The study's findings revealed that this area has 100 geosites scattered in the provinces of Salamanca, Paservila, and C. Paserceres (Spain). Using geomatics tools for field data observation, the organization organized digital information from various thematic layers and integrated it with pictures, diagrams, and descriptive cards to create educational resources. The Google Earth platform processes the data for 3D virtual flights (Martinez-Grana et al., 2019), providing access in various formats (mpeg, avi, wma). This ensures the sustainability of the tourism development program. LeBlanc (2022) discusses the itinerary of geological tourism in Qatar, which involves a three-day excursion program. The first day of the tour program focused on visits to 17 tourist sites, five on the second day, and six geological tourism sites on the third day. The test is based on evidence from outcrops in the Lower Eocene Rus Formation, Middle Eocene Dammam Formation, Lower Miocene Dam Formation, Mio-Pliocene Hofuf Formation, and Pleistocene and Holocene deposits. The field trip's aim is to help the participants recognize the various formations and their members, as well as the most obvious features (faults, folds, dissolution, mineralization, fossils, etc.).

In addition, the Talib et al. (2022) study made it possible to identify eight geoarchaeological sites that show how prehistoric humans interacted with the geological landscape, as well as 27 geosites that illustrate four significant geological and historical tectonic evolutions and unique geomorphic features in the Lenggong Valley. The distinctive and conserved customs of life, art, and culture now have greater value thanks to the geosites. Furthermore, 22 geosites encompassing land and island areas were discovered in the Mersing district of Johor, Malaysia, according to a study conducted by Said et al. in (2021). Within the protected region, noteworthy plants and fauna have also been identified by researchers. This geopark has potential to become a prosperous geotourism destination because of its distinctive and still-preserved customs of life, art, and culture.

Particularly in Malaysia, researchers have carried out numerous studies that not only concentrate on geological features (Rapidah et al., 2018), but also uncover evidence of geoarchaeological sites (Abd Halim et al., 2022a, b: 2023; Ali et al., 2023), biology (Ali et al., 2021a), history (Ali et al., 2021b), and culture (Hasan et al., 2018), all of which contribute to the creation of tourism itineraries. Researchers are currently required to carry out field research and gather primary data on the unique characteristics of the region, enabling the provision of heritage tourism packages to visitors. In particular, this will guarantee the effective and sustainable implementation of knowledge tourism activities.

Aims of the Study

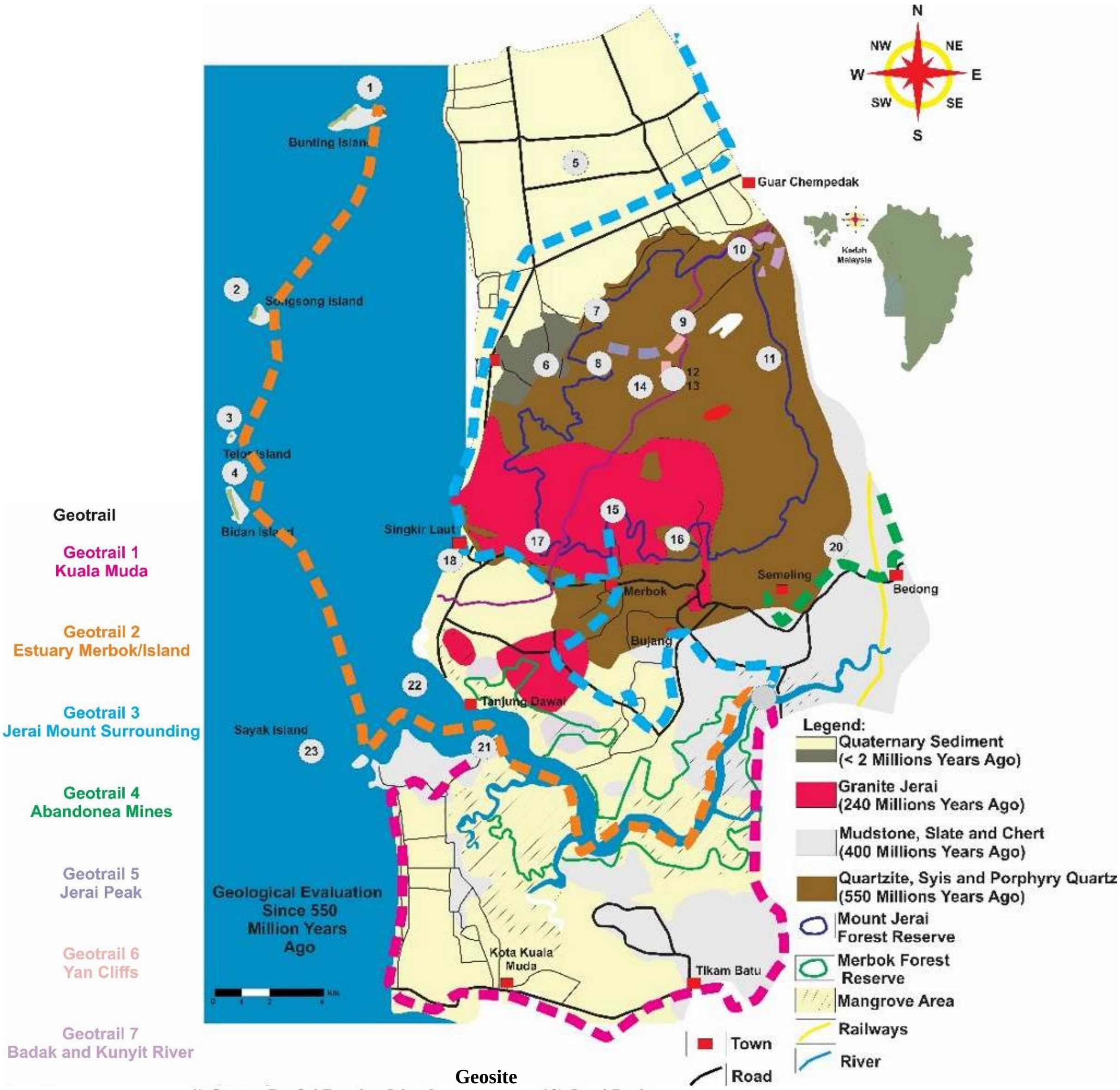
This study aims to infer data related to privileges, availability of basic facilities, and development of special geotourism packages in Kuala Muda district. In addition, the study aims to offer a total of 15 tour packages that combine geological, geoarchaeological, biological, historical, and cultural tourism locations. Several global geopark tourism locations in Malaysia, particularly Lenggong Valley (Rapidah et al., 2018) and Langkawi (Komoo et al., 2018), have implemented such tourism packages and successfully attracted tourists.

METHODOLOGY

The Jerai Geopark survey and mapping study conducted research on the thesis, journals, articles, scientific studies, newspapers, and online websites to identify suitable areas for field survey activities. Additional references were also made at Hamzah Sendut Library, Universiti Sains Malaysia, Penang, the Centre for Global Archaeological Research Library, Universiti Sains Malaysia, Penang, and the Sungai Batu Archaeological Site Library, Bujang Valley, Kedah, to maximize data findings before survey and mapping activities were carried out.

The district of Kuala Muda conducts a survey and mapping process to determine the geosite location for a potential geological tourism product. This survey activity entails investigating the Jerai Geopark map, which includes geosite and geotrail features (a), the Sungai Petani Municipal Council's existing tourist site location map (b), the Sungai Petani district road network map (c), and the river network system (d). The goal is to gather information about the area's location and basic facilities, thereby promoting it as a district tourism product. The study on the Jerai Geopark map

(Figure 3) enables the study, identification, and recording of basic information about the geopark's location and the seven geotrails, particularly those that are close to each other and can be traced through roads and rivers. Based on the information, it is possible to determine the parameters of the geosite survey only in the vicinity of the district.



Geosite

1) Quartz Porfiri Banting Island	13) Jerai Peak
2) Baki Island-Songsong Island	14) Kemelong quartzite Jerai
3) Baki Island-Telor Island	15) Batu Pahat River aplit and aplo pegmetite Jerai
4) Baki Island-Bidan Island	16) Besta Gold mine mineralization zone, Tupah
5) Yan plain	17) Padang Tok Syeikh cliff zone
6) Ancient landslides of the Raga Hill	18) Singkir Laut
7) Sri Perigi waterfall quartzite	19) Tanjung Jaga
8) Yan-Titi Hayun cliffs	20) Former Semeling-Tok Pawang tin ore mine
9) Teroi River	21) Penjara Hill red mud stone
10) Badak and Kunyit River hornfell Jerai	22) Estuary Merbok River
11) Gurun quartzite quarry	23) Sayak Island
12) Padang Tok Syeikh argilite meta stone	

Figure 3. Analysis of the Kuala Muda-Yan Geopark Jerai map which provides basic data on geosite, geotrail and other tourist sites in this district (Source: authors based on data from Ali et al., 2019)

The Sungai Petani Municipal Council, Kedah (MPSPK) also conducted a study on the existing tourism map (Figure 4) to bolster the data from the Jerai Geopark map. The tourism map study reveals that the well-developed road network system enables easy access to all the mapped geotaps, and the river route has established a water taxi service in Sungai Merbok, leading to the development of geosites in Kuala Muda-Yan district (Figure 5).

The map of the river drainage system (Figure 6) clearly demonstrates that the Kuala Muda district boasts two main tributaries, the Muda and Merbok Rivers, capable of irrigating water into tributaries such as the Bujang, Terus, Simpor, and Batu River. These tributaries are in close proximity to several geosites in the area. Therefore, it is not unexpected that the district of Kuala Muda not only boasts a geosite but also reveals a geoarchaeological, biological, heritage, history site, and so on, where the river served as the primary communication and trade route in the past.

Figure 4. Tourism map in Kuala Muda-Yan district (Source: authors based on data from Ali et al., 2019)

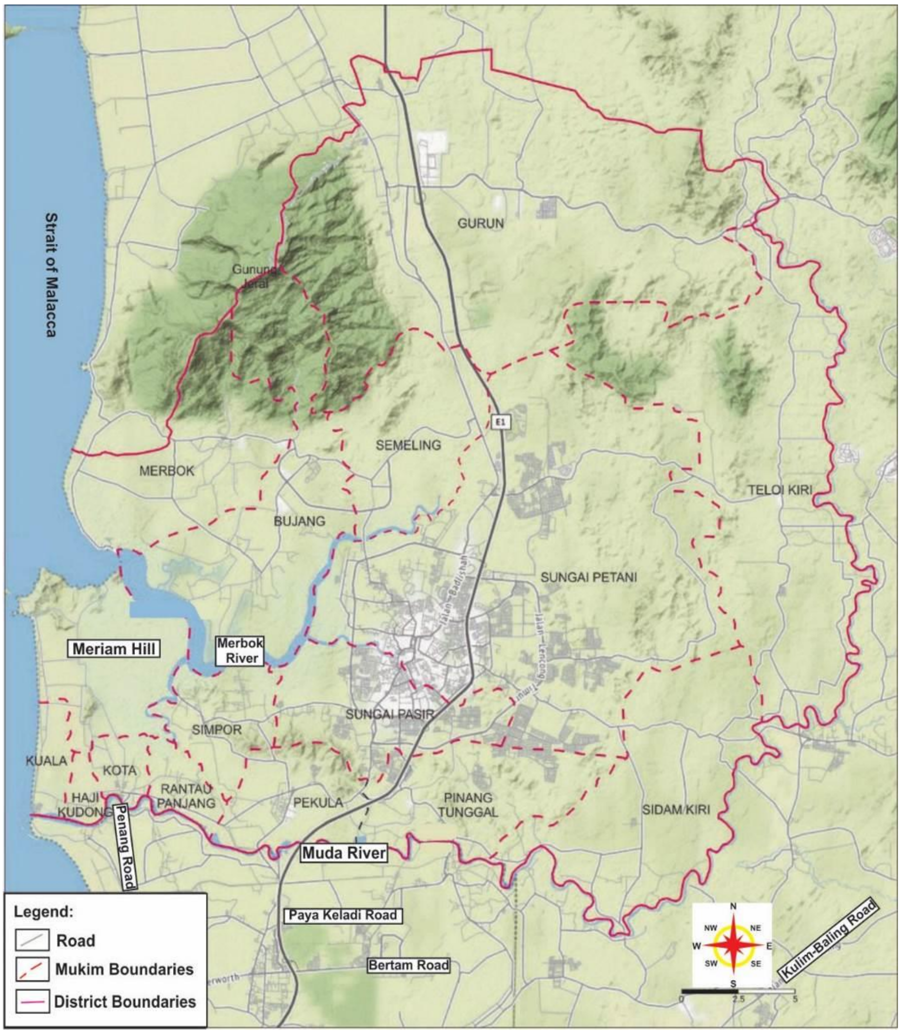


Figure 5. Existing road network system in Kuala Muda district (Source: authors based on data from Stamen, 2020)

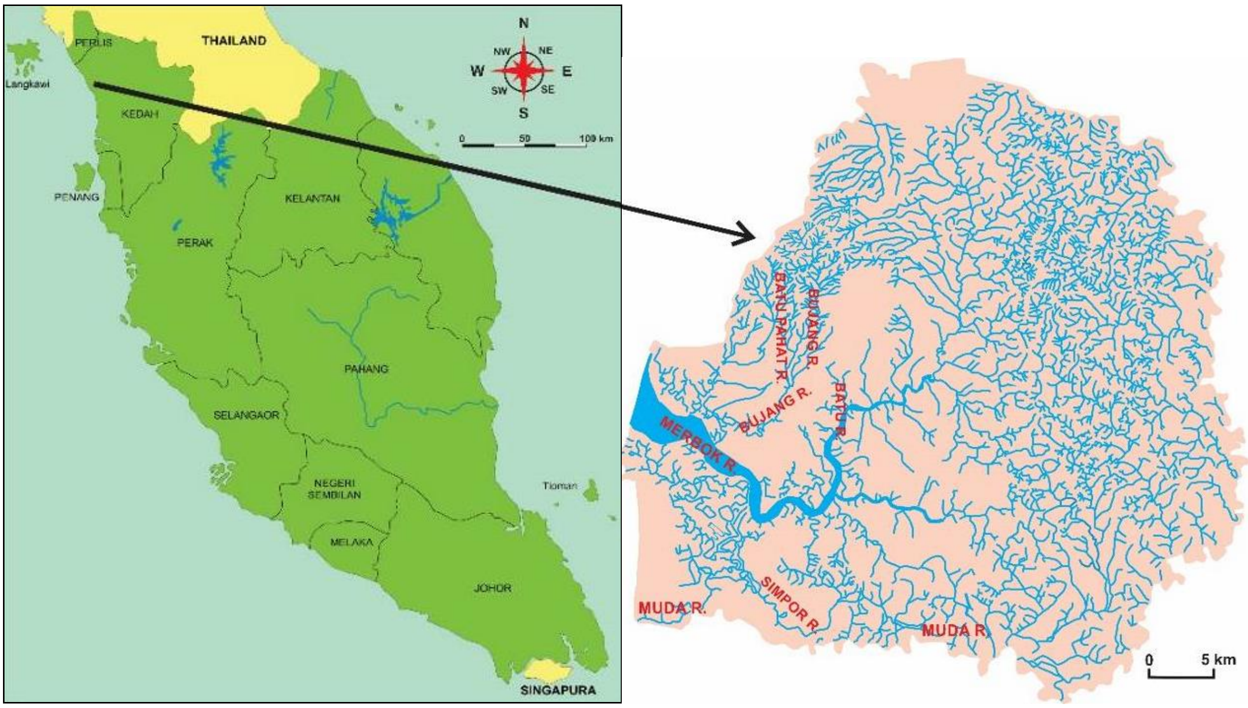


Figure 6. Map of the river drainage system of Kuala Muda-Yan district
showing the location of the geosites, close to the river drainage (Source: authors)

The study used the Jerai Geopark map (which includes geosite and geotrail) (Figure 7), the existing tourist site location map by the Sungai Petani Municipal Council, the Sungai Petani district road network map, and the river network system to find out more about the geosite's unique features and how to make it a sustainable district geological tourism product. This was done through a field study that included surveying and mapping in the Kuala Muda district. Good tourist infrastructure has made it possible to offer tour packages effectively. As demonstrated in the Iskandar Malaysia (WIM) region, the outcome will empower the tourism sector in a more sustainable direction (Said et al., 2022).

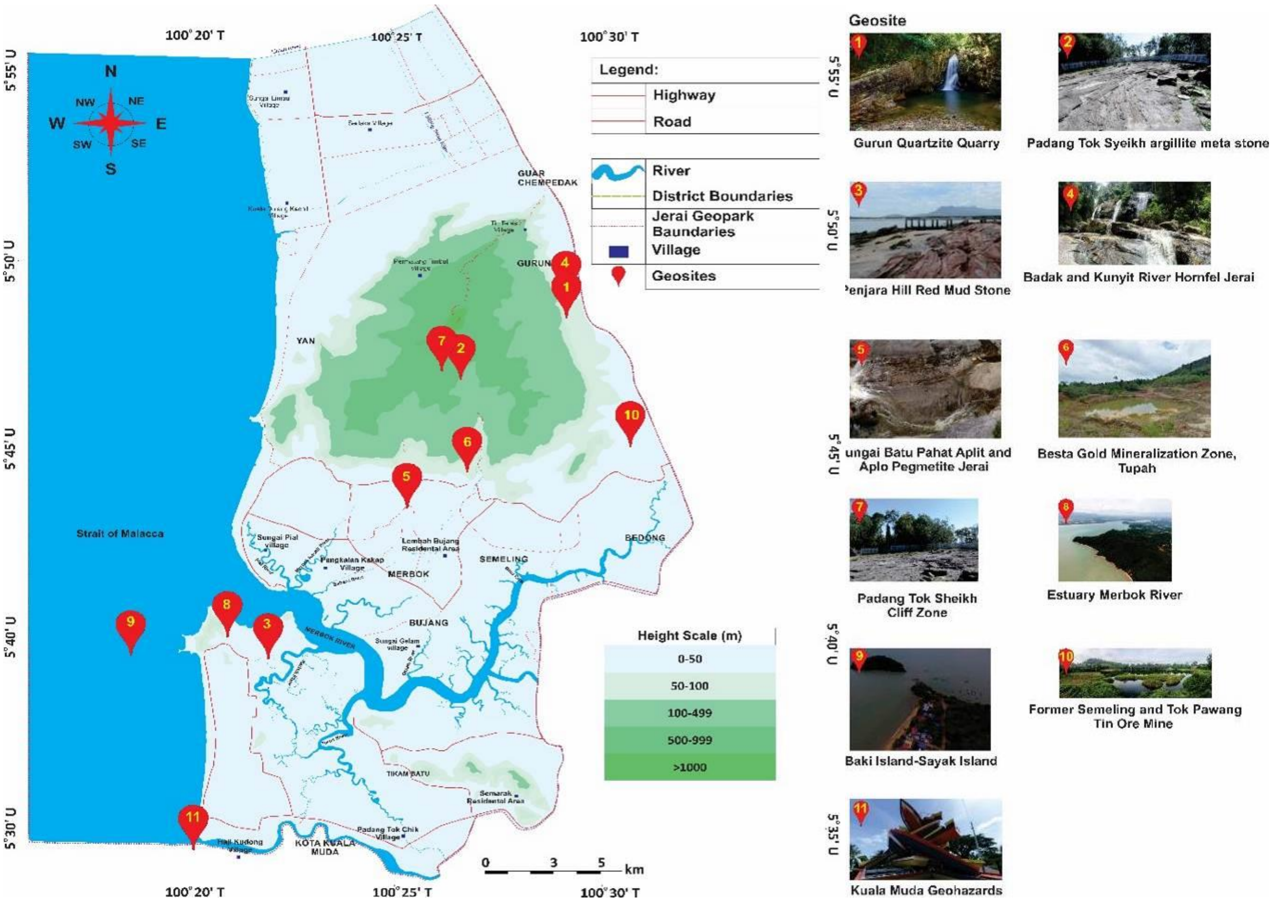
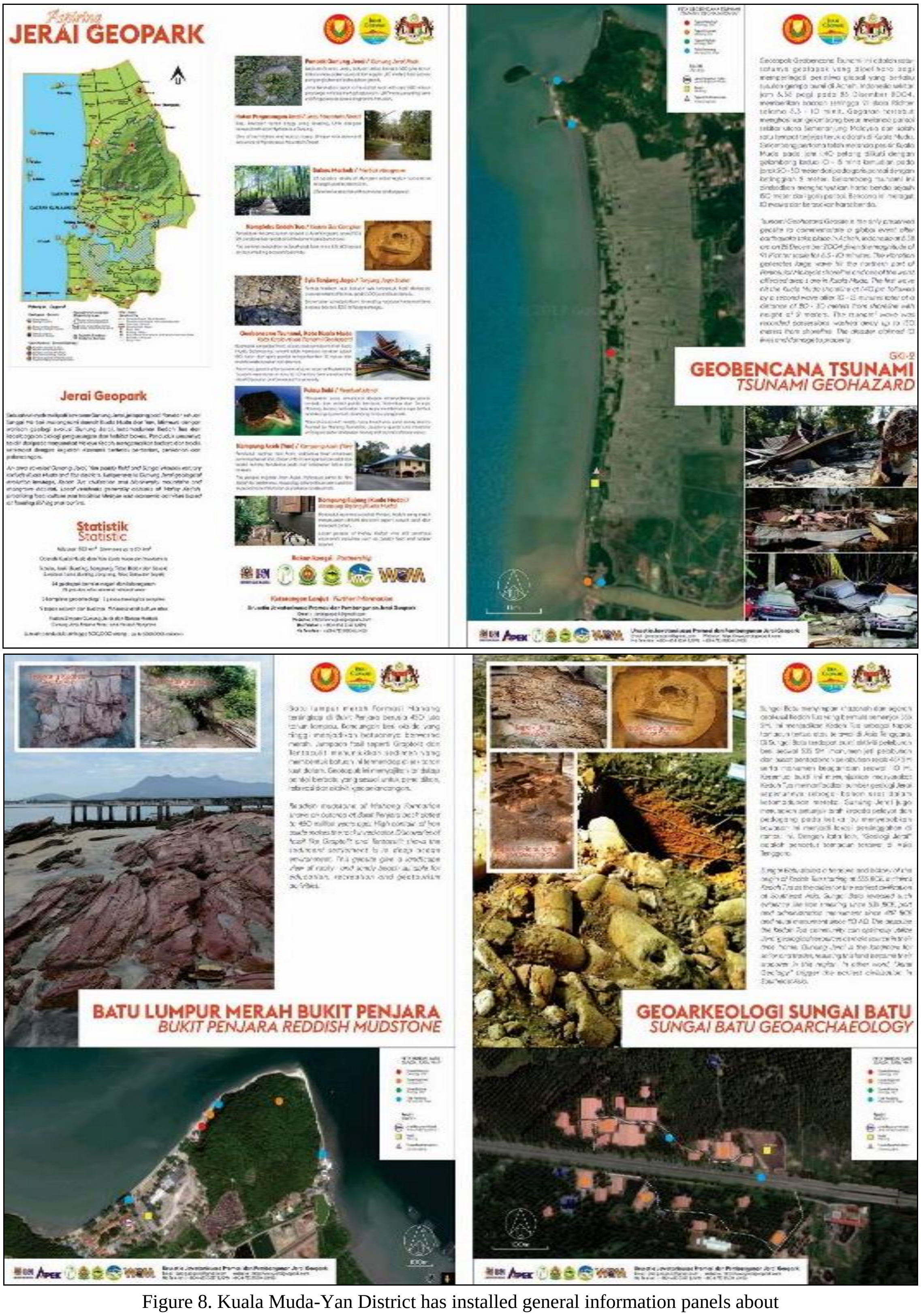


Figure 7. Geosites location mapped in Kuala Muda district (Source: authors)

RESULT AND DISCUSSION

1. Geotouristic Itinerary

The survey (Figure 8) classifies the geosite into two main categories: (i) easily accessible and (ii) difficult to access based on road network system in Kuala Muda district. The creation of each geotrail necessitates daily visits to the site, accessible by car, motorcycle, and water vehicles like water taxis. Some geosite require walking activities to visit in order to fully experience the area. In fact, the survey activity revealed that the installation of an info panel pertaining to each geosites facilitated the process of providing tourists with basic information about tourist destinations. This means that the basic information for each geosite has been obtained in the field.



(a) (b)

(c) (d)

Figure 8. Kuala Muda-Yan District has installed general information panels about Jerai Geopark (a) and special information panels for each geosite (b, c, d) (Source: authors)

The mapped locations of 11 geosites within the Kuala Muda district represent various categories such as coastal landscape evolution, Jerai Mount, regional metamorphism, late magmatic phase, contact metamorphism, and quadrant geological evolution. The survey and mapping process revealed the value of global excellence in the 11 geosites, which the data that can use in the dossier process to recognize as a national geopark and later designate as a UNESCO Global Geopark (UGGp) as a Langkawi (Anynamous, 2018) and Kinabalu (Dousin et al., 2024) UNESCO Global Geopark). This is due to the fact that the Jerai Geopark area, home to rocks from the Cambrian-aged Jerai Formation, possesses significant scientific value worthy of global recognition (Table 2). Therefore, the academic research of Saidin et al., (2019) in the district of Kuala Muda district has so far successfully provided a knowledgeable tourism product in the category of geotourism for this district. Although there are geosites that require tourists to walk, the geotrail created is not too difficult or challenging. The recreational sites of Kunyit and Badak River waterfalls are accessible due to their sloping and safe routes. Four-wheel drives can access the geotrail of the former Semeling and Tok Pawang tin mines.

Table 2. List of geosites at Kuala Muda distict (Source: authors)

no.	NAME OF GEOSITE	COORDINATE	ACCESSIBILITY	RELATED ACTIVIES
1	Gurun Quartzite Quarry	5.797492° N and 100.473156° E	Four wheel drives	Visiting for tourism, research, and educational purposes
2	Padang Tok Syeikh argillite meta stone	05°47’43” N and 100°26’18” E	Motorbike and four wheel drives	Visiting for tourism, research, and educational purposes
3	Penjara Hill Red Mud Stone	5.669439° N and 100.369838 E	All means of transportation and walking	Visiting for tourism, research, and educational purposes
4	Badak and Kunyit River Hornfel Jerai	5.822474 N and 100.461217 E 5.815375 N and 100.464630 E	All means of transportation and Walking	Variety of leisure activities including visiting and camping
5	Sungai Batu Pahat Aplit and Aplo Pegmetite Jerai	05°44’288” N and 100°24’908” E	All means of transportation	Variety of leisure activities including visiting and camping
6	Besta Gold Mine Mineralization Zone, Tupah	5.735229 N and 100.386113 E	All means of transportation	Visiting for tourism, research, and educational purposes
7	Padang Tok Syeikh Cliff Zone	5.790625 N and 100.435422 E	All means of transportation and walking	Visiting for tourism, research, and educational purposes
8	Estuary Merbok River	5.681932 N and 100.467846 E	Boat and river taxi	Variety of leisure activities including visiting, camping, guided and fishing
9	Baki Island- Sayak Island	5.662541 N and 100.330664 E	Boat and river taxi	Variety of leisure activities including visiting, camping, guided, fishing, swimming
10	Former Semeling and Tok Pawang Tin Ore Mine	5.711539 N and 100.474032 E	Four wheel drives	Visiting for tourism, research, and educational purposes
11	Kuala Muda Geohazards	05°35’10.71” N and 100°20’23.55” E	All means of transportation	Visiting for tourism, research, and educational purposes

2. Evolution of Coastal Landscapes Geosite

The Tsumani disaster on 2004 (Rossetto et al., 2007; Ramalanjaona, 2011; Moon et al., 2022), struck by a volcanic eruption in the Indian Ocean with a magnitude of 9.0 on the Richter scale, has caused waves with a height of more than 10 meters. The wave has affected 13 countries, especially in Indonesia, Thailand, Myanmar, Bangladesh, India, Somalia, Sri Lanka, Tanzania, Kenya, Yemen, Maldives, Seychelles, and Malaysia (Asmawi and Ibrahim, 2013).

In Malaysia, the states affected by the tsunami disaster are Penang, Kedah, Perak, and Selangor. The tsunami disaster also affected 13 villages in Kuala Muda, Kuala Triang, and Langkawi Island in the state of Kedah (Krishnaswamy et al., 2012; Zahari et al., 2013), leading to a change in the local landscape. In the Kuala Muda area, we built a museum and tsunami memorial (Figure 9) to commemorate the incident, which now serves as a geosite for cultural tourism.

Figure 9. The Kuala Muda Tsunami gallery (a), exhibition space (b) and memorial (c) as a cultural geosites at Kuala Muda district (Source: authors based on data from Mohd Nor et al., 2019)

3. The evolution of Mount Jerai Geosite

Jerai's Mount evolution lists three geosites: the former Gurun quarry, Padang Tok Syeikh quartzite, and Penjara Hill

Red Mudstone. The fracture of granite into the rock sequence of the Jerai Formation has metamorphosed the rock structures of the former Gurun quarry into hornfels. This Gurun Quarry clearly reveals the structure of quartzite, granulite, and grit interspersed with argillite facies. Padang Tok Syeikh quartzite represents the lower (oldest) part of the Jerai Formation, revealing thin layers of fine-grained quartzite as well as trace fossils that represent deeper marine life.

Dictyodora sp., one of the most notable fossils found in this area, is associated with the Machinchang Formation in Langkawi. The Penjara Hill Red mudstone reveals the geological features, which are 480 million years old and the only clastic rock of the Mahang Formation to date (Ali et al., 2019). The deep sea environment has deposited these massive red mud rocks, as evidenced by the discovery of graptolite fossils found there. The high content of iron oxide in the mudstone, which contributes to its red color, further explains the site's uniqueness. The tourism sector of Kuala Muda district has selected the area as a geosite due to its high scientific value for educational and research purposes (Figure 10).

(a) (b) (c)

Figure 10. Gurun quarry (a) Padang Tok Syeikh quartzite with fossil traces (b) and Penjara Hil red mudstone which highlights the geological uniqueness of the area which is used as a tourism product of Kuala Muda (Source: authors based on data from Ali et al., 2019)

4. Late Magmatic Phase and Metamorphism Geosites

Three geosites were selected to represent the late magmatic phase and metamorphism of Kuala Muda tourism products, namely Hornfels Jerai Badak and Kunyit River, Aplit and Aplo Pegmetit Jerai Sungai Batu Pahat, and Besta Gold Mine Mineralization Zone, Tupah. The hornfels of the Badak and Kunyit Rivers are formed as a result of the heat carried by the magma having erupted into empty cavities, causing the surrounding wall rocks to turn into tactile metamorphisms. Wave ripples, which indicate sediment formation in the Jerai Formation, have occurred in the shallow marine environment. Trace fossil finds were also recorded in this area, which showed the high potential of this area to be developed as a geosite. In addition, the pegmatite of Jerai Sungai Batu Pahat has revealed three sets of dykes and pegmatite veins on the granite rock slate outcrop. The geosite also recorded the discovery of very large pegmatite minerals in this area, such as feldspar, tourmaline, and muscovite. The Besta Gold mine site in Tupah, on the other hand, revealed the occurrence of a mineralization process due to the ingress of magma during the granite fracture that occurred in this area. While conducting survey activities, the area also recorded the discovery of two exotic iron ores such as muscovite, garnets, and coarse-sized tourmaline with perfect crystal shapes (Ali et al., 2019).

The validity of the facts supports the use of the area (Figure 11) as a geosite in the Kuala Muda district.

5. Landscape Evolution Geosite

The geosite classifications in the Kuala Muda district include the Padang Tok Syeikh Cliff Zone, the Estuary Merbok River, Baki Island-Sayak Island, and the former Semeling and Tok Pawang Tin Mines (Figure 12).

On top of Jerai Mount, there is also a Padang Tok Syeikh Cliff Zone, located a top Jerai Mount, is the result of fault displacement between hard rock (metquartzite) and soft rock (meta-argillite).

Figure 11. The geosites of Badak and Kunyit River (a), pegmetite Jerai Sungai Batu Pahat (b), and the Besta Gold Mine Mineralization Zone, Tupah (c) reveal the characteristics of late magmatic phase and contact metamorphism in Kuala Muda district (Source: authors based on data from Ali et al., 2019)

Figure 12. Padang Tok Syeikh Cliff Zone (a), Estuary Merbok River (b), the former Semeling and Tok Pawang Tin Mines (c), and Baki and Sayak Island (d) are the geosites of Kuala Muda district for the landscape evolution category geosites (Source: authors based on data from Ali et al., 2019)

This displacement leads to soft rock erosion, leaving the hard rock in the foot block as Estuary Merbok River is a geosite with a beautiful view, particularly at the mouth of the Merbok River, a tidal estuary that used to be a large bay. Because it serves as an estuary, it is able to accommodate the diversity of mangrove swamp species that thrive in this area. In fact, the Merbok River estuary also serves as a route and gateway for merchant ships to the ancient port of ancient Kedah Kingdom, further emphasizing the significance of this geosite.

Sea erosion on the 450 million-year-old Fomasi Mahang rocks formed the remaining Baki-Sayak Island geosite. Due to its remnant evidence of marine geological processes directly related to Holocene sea level changes, it holds high scientific value (Burton, 1967; Bradford, 1972; Ali et al., 2019; Ali, 2022). The geosite of the former Semeling and Tok Pawang tin mines is an area of active mining sites from 1946 to 1964.

This area's main mining products are garnet, molybdenite, struverite, ilmenorute, and minerals like columbite-tentalite and cassiterite, which come from eroded pegmatite and are found in alluvial sediments. These minerals show the variety of minerals that have built up in an area. Due to the academic value of the geosite, which has an impact on the world, the geology-based tourism sector empowerment program is intensifying in the Kuala Muda district area. To meet these needs, the Minister of Energy and Natural Resources, Dato Dr. Shamsul Anuar Nasarah, has allocated a total of RM 0.5 million to upgrade the Jerai Geopark Gallery at the Wan Mat Saman Gallery and another RM 0.5 million to upgrade the Forestry Museum at Gunung Jerai (Anynamous, 2020) to strengthen the geopark tourism sector.

Figure 13. The AncKed Sungai Batu Association has created a brochure list of tour packages that emphasize visits to geological sites (Source: AncKed Sungai Batu Association, 2024)

6. Tourism Packages

As the geological evidence of Kuala Muda district reveals its specialty, the AncKed Sungai Batu Association has offered 15 tour packages that combine geological, geoarchaeological, biological, historical, and cultural tourism sites (Figure 13). Of the total of 17 tour packages, six focused on visiting geological tourism sites in Kuala Muda District (Table 3). This enables tourists to learn about the history of Kuala Muda Earth's formation during their visit.

Through the provided tour guide services, the created tour packages enable tourists to gain comprehensive information about the areas they visit. This implies that a guided tour package only includes a visit to the selected travel site, as specified in the package. The description of the study data for each site is discussed comprehensively to reveal the uniqueness of the Kuala Muda district since 550 million years ago until now. In addition to guided tours to selected tourist sites, the complete package includes demonstrations and hands-on activities, particularly at SBAC. Among the activities created are iron smelting demonstrations, hands-on excavations, and ancient brick making (Figure 14), which are able to provide a clearer picture and understanding of tourism based on the participating activities carried out.

(a) (c) (b) (d)

Figure 14. The full package activities include a site visit (a), an iron smelting demonstration (b), hands-on ancient brick making, (c), and excavation (d) (Source: Sungai Batu Archaeological Complex, 2024)

Table 3. Tour packages managed by the AncKed Sungai Batu Association (Source: authors)

Packages	Locations	Classification
1	Sungai Batu Archaeological Complex [SBAC] (geoarchaeology)	Tour package
2	SBAC (geoarchaeology)	Full package
3	SBAC + Gallery Archaeology Guar Kepah (geoarchaeology)	Tour package
4	SBAC + Bujang Valley Archaeological Museum + Bukit Batu Pahat Archaeological Complex (geoarchaeology) + Pegmetite Jerai (geology)	Tour package
5	SBAC + Bujang Valley Archaeological Museum + Bukit Batu Pahat Archaeological Complex (geoarchaeology) + Pegmetite Jerai (geology)	Full package
6	SBAC + Pengkalan Bujang Archaeological Complex (geoarchaeology)	Tour package
7	SBAC + Pengkalan Bujang Archaeological Complex (geoarchaeology)	Full package
8	SBAC + Bujang Valley Archaeological Museum + Bukit Batu Pahat Archaeological Complex (geoarchaeology) + Pegmetite Jerai (geology) + Pengkalan Bujang Archaeological Complex (geoarchaeology)	Tour package
9	SBAC + Jeniang Archaeological Site (geoarchaeology)	Full package
10	SBAC (geoarchaeology) + Kedah Tua Interpretation Center	Tour package
11	SBAC (geoarchaeology) + Kedah Tua Interpretation Center	Full package
12	SBAC (geoarchaeology) + Kedah Tua Interpretation Center + Singkir Laut (geology) + Tanjung Dawai (culture) + Pillbox Sungai Muda (history)	Full package
13	SBAC (geoarchaeology) + Padang Tok Syeikh + Jerai Peak (geology)	Full package
14	SBAC (geoarchaeology) + Kedah Tua Interpretation Center + Pengkalan Kakap Mosque (history)	Full package
15	SBAC + Kuala Muda Fort (geoarchaeology) + Whisper Market + Tsunamy Gallery (culture) + Merdeka Beach (geology, geoarchaeology)	Full package
16	SBAC + Pengkalan Bujang Archaeological Complex + Bujang Valley Archaeological Museum	Full package
17	Living culture gallery at SBAC (iron smelting demonstration, hands-on excavation and ancient brick making	Living culture gallery package

DISCUSSION

Research from the past has demonstrated that the Kuala Muda district boasts unique geological, biological, geoarcheological, cultural, historical, and other tourism sites that can serve as a profitable tourism product. The survey also revealed that every geosites remains intact, equipped with an information panel that provides essential details about the tourist destination. Additionally, the presence of roads facilitates easy access, and the tourist location boasts a variety of basic amenities like restaurants, restrooms, mosques, surau, pharmacies, and clinics.

The completion of this development aligns with the global availability of tourism facilities, as it will significantly enhance the tourism industry (Rojas and Huete-Alcocer, 2021; Pengemanan et al., 2022).

Generally, tourism development serves as a "super capital," capable of bringing about change and demonstrating mutual dependence with the country, state, district, or local area (Ibrahim et al., 2013). This is because in tourism development, the availability of tourist attractions such as tourist places that have good network and coverage characteristics, such as the availability of transportation service networks (Tajidin and Abd Rahman, 2021), accommodation (Roosli and Jusoh, 2017), culinary (Mapjabil et al., 2020), and so on, in addition to the availability of internet coverage and telephone lines, especially in the area of biological tourism sites, allows a tourist area to grow. The diversity of tourism site offerings, such as geoarchaeology, geology, and biology of mangroves and Jerai mountain forests, which are accessible through transportation logistics and route tracks, is an attractive feature to expand tourist destinations.

Moreover, organized tourism marketing has the potential to enhance the tourism industry. Various parties initiated and executed the tourism marketing work. They all aim to enhance the existing tourist sites in the district. Well-organized, sophisticated, and up-to-date marketing methods can provide or highlight the unique identity and uniqueness of an area, making it a desirable destination (Svajdova et al., 2019; Marios, 2021). This is because well-targeted tourism promotion helps the local economy grow and increases awareness of a destination's appeal (Vitalisova et al., 2017).

This is due to the fact that marketing places in a quality, planned, and structured manner can specifically target tourist destinations (Azhar et al., 2019), while also actively contributing to regional and rural development (Maheshwari et al., 2011). Particularly in the Kuala Muda district, the identification of the geological formation's peculiarities led to the serious creation of tour packages. Travel agencies, professionals, press conferences, documentaries, tourism festivals and events, and the internet all played a regular role in planning and executing the effective promotional channels for tourism.

The tourism promotion movement effectively disseminated information about tourist destinations in the Kuala Muda district, paving the way for increased visits. In fact, the AncKed Sungai Batu Association has played a significant role in preserving tourism in the district by providing a dynamic and focused archeotourism package that caters to the geological, geoarchaeological, historical, and cultural tourism locations within the district. The creation of archeotourism activities has provided tourists, the local community, and the current generation (students, universities, and researchers) with opportunities to learn about the Earth's formation history and its relationship to the development of early civilizations, particularly in Kedah, Malaysia. This undoubtedly fosters a strong sense of identity and cultivates a love for the homeland, thereby fostering a more dynamic next generation.

Two-way communication during tourism activities shall be ensured in order to guarantee the achievement of this goal. This enables tourists to effectively receive and comprehend information, thereby enhancing their overall tourism satisfaction. The AncKed Sungai Batu Association offers a more academic tour package that leverages the primary information from the study's results, with the researchers themselves serving as the tour guides. This is because, having been extensively trained in a particular tourist destination, a licensed tour guide will surely offer value and bring visitors an entertaining experience (Tetik, 2016; Mustafa et al., 2021; Abdul Satar et al., 2022).

As in other parts of the world, such as Ciletuh-Palabuhanratu (Yani et al., 2021), Danxia Shan National Natural Reserve, and Geo-Park (Xu et al., 2012), accredited tour guide services are an added value to the advancement of tourist locations. Even if digital technology is applied to the geosite, as discussed by Pica et al. (2017) and Fassoulas et al. (2022), it is also the best measure to empower this geological tourism sector. Only geoarchaeological sites in Kuala Muda district have access to digital technology (Abd Halim et al., 2024), necessitating its extension to all geological, biological, historical, cultural, and other tourism sites within the district. Therefore, the continuous academic studies that facilitate the collection of primary data have paved the way for the provision of tour packages in Kuala Muda district. Furthermore, the AncKed Sungai Batu Association, which offers 15 geology, geoarcheology, biology, history, and culture tour packages with an accredited geoguide, has boosted the development of the Kuala Muda district's tourism industry. A sustainable stakeholder approach (Pásková and Zelenka, 2018) is expected to preserve this geotourism so that it can become part of the UNESCO Global Geopark community in the future.

CONCLUSION

Systematic academic research since 2017 has succeeded in realizing the idea of Jerai Geopark which has become one of the iconic tourism products in Kuala Muda District. Starting from 550 million years ago with a series of sedimentation, metamorphism, fission and denudation that resulted in the formation of the beautiful panorama of Kuala Muda newday. As a result, a total of 11 geosites with geological features such as i) coastal landscape Evolution, ii) Mount Jerai Evolution, iii) late magmatic phase and metamorphism and iv) landscape evolution have been mapped and elevated into geotourism products created through seven geotrail tours in the district.

To maintain this tourism then products that reveal this geological-cultural interest must be preserved. The conservation process should begin with continuous academic studies by researchers to record as much data as possible related to geosites so that appropriate control measures can be proposed and nominated as a UNESCO World Heritage Site. This is because existing research has proven that Kuala Muda is the only area in the world that is able to reveal three important evidences related to the uniqueness of geology, geoarchaeology and biology in the same area.

The Kuala Muda district has leveraged this privilege to promote the location as a tourism product, leading to the creation of 15 iconic tourism packages. All of this is done with the sole purpose of ensuring that the current generation gets useful benefits as a result of knowledgeable tourism experiences in the Kuala Muda district.

Limitations and suggestions for future studies

The mapping of iconic tourism products in the Kuala Muda district served as the foundation for this study. The mapping records geological, geoarchaeological, and biological tourism products and byproducts, including historical, religious, agro, eco and recreational, cultural, health, education, sports, and gastronomy tourism sites. However, this study solely provides scientific proof of geological tourism spots, enabling their development as distinctive tourist destinations in the Kuala Muda district. Therefore, we suggest that future research should incorporate surveys that directly benefit all tourism locations in the Kuala Muda district, enabling their development as sustainable tourism destinations.

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CARBON REDUCTION STRATEGIES BY THE HOSPITALITY SECTOR: A GLOBAL SOUTH PERSPECTIVE

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Abstract: Climate change is an imminent crisis faced by the global community and tourism is identified as a significant sectoral contributor. The purpose of this study, therefore, is to investigate the carbon reduction strategies of the hospitality sector in Zimbabwe. A survey was done with 165 randomly selected accommodation establishments in Zimbabwe. Descriptive analysis was done with the aid of SPSS version 29. The results reveal that the major source of GHG emissions comes from diesel/petrol-powered generators, transport and electricity usage. The findings also disclose that energy management strategies are seen as important in the reduction of GHG.

Keywords: climate change, carbon emissions, greenhouse gases (ghg), carbon reduction, hospitality sector, Zimbabwe

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INTRODUCTION

‘The world is witnessing a disturbing acceleration in the number, speed and scale of broken climate records’ (United Nations Environment Programme, 2023: 1). This has increased extreme events linked to climate change such as droughts, flooding, wildfires and rise in sea levels leading to the destruction of property and loss of lives (Goodwin, 2023; Gössling and Scott, 2024; Gössling and Hall, 2006; Sinclair-Maragh, 2016). Consequently, climate change debates have been dominating the global developmental discourse in the past two decades (Sharma et al., 2020). Recently, the Sustainable Development Goals (SDGs) and the Paris Agreement have increased attention on the need to reduce global carbon emissions and have set out ambitious targets to reduce global warming (Chong, 2018; Dube and Nhamo, 2021; Scott et al., 2016; United Nations World Tourism Organisation/Pacific Asia Travel Association, 2016). The 2022 IPCC report notes that global warming reaching 1.5^{o}c in the near term would result in unprecedented climate hazards to the ecosystem and humans (Intergovernmental Panel on Climate Change/IPCC, 2022). This has led a number of actors including governments and the business world to shift attention to climate change mitigation (UNWTO and ITF, 2019).

Arguably, the tourism industry is a significant contributor to global carbon emissions (Gössling et al., 2023; Reid et al., 2017; Rogerson, 2016). An estimated 8-10% of global carbon emissions emanate from tourism-related activities (Tourism Panel on Climate Change, 2023a). Therefore, there is increasing pressure on the industry and its sub-sectors to adopt carbon emissions reduction strategies (Gössling and Scott, 2024; Nhamo et al., 2020b). The hospitality sector is regarded as a significant emitter of tourism GHG (Dube, 2021; Manganari et al., 2016; Shereni and Rogerson, 2023a; Gössling and Lund-Durlacher, 2021). It contributes approximately 1% of global carbon emissions and about 20% of tourism carbon emissions (UNWTO and UNDP, 2017; Xu et al., 2022). Relatedly, it is estimated that globally, on average, a guest's stay at a hotel produces 13.8 kg of carbon dioxide emissions (Claudia et al., 2017). Mbasera et al. (2016) note that an average hotel is estimated to produce between 160 kg and 200 kg of CO_2 per square metre of room floor area per year. There is no doubt that the operations of the hospitality sector leave a significant carbon footprint (Shereni, 2022). In this regard, to keep pace with global targets aimed at reducing carbon emissions, the hospitality sector will need to reduce its carbon footprint emissions per room per year by 66% from 2010 levels by 2030, and 90% by 2050 (International Tourism Partnership, 2017).

Low levels of business during the COVID-19 pandemic have resulted in a decline in tourism carbon emissions (Chan, 2021b; Nhamo et al., 2020a; Rogerson and Baum, 2020). However, this status is temporary and will not be sustained in the long term (Shereni and Rogerson, 2023b). The United Nations Environmental Programme (2023) observes that all economic sectors globally, except for transport, have rebounded from the reduction in carbon emissions resultant from the COVID-19 pandemic downturn and now exceed 2019 levels. As tourism demand is set to escalate in the post-COVID-19 era, carbon emissions by the hospitality sector are also set to continue increasing (Shereni and Rogerson, 2023b). This necessitates the adoption of climate change mitigation strategies in order to reduce the carbon footprint of the hospitality sector.

It is evident that much of the impacts of global climate change will be felt by countries in the Global South that contribute the least to carbon emissions (Chong, 2018). In this regard, the sub-continent of Southern Africa is seen to be vulnerable to the long-term impacts of climate change because of its record of a weak adaptive capacity (Pandy, 2017).

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Research on tourism carbon footprint assessment in the Global South is still limited and mainly concentrated in Global North destinations (Abeydeera and Karunasena, 2019; Koiwanit and Filimonau, 2021; Scott and Gössling, 2022). It is against this backdrop that this study seeks to examine the climate change mitigation strategies pursued by the hospitality sector in Zimbabwe. This study contributes to the international body of knowledge on carbon mitigation strategies in tourism with a particular focus on the hospitality sector.

LITERATURE REVIEW

Sources of carbon emissions

The major sources of carbon emissions in the hospitality sector are as a result of energy consumption (Abeydeera and Karunasena, 2019). The hospitality sector is regarded as an energy-intensive sector that relies on energy sources mostly from fossil fuels (Gössling et al., 2023; Li et al., 2020; Shereni and Rogerson, 2024). The over-reliance on electricity generated from coal a fossil fuel is seen as problematic in the drive to achieve net zero targets (Dube and Nhamo, 2021). The nature of the hospitality sector requires establishments to operate on a 24/7 basis and include guest facilities such as swimming pools which increases energy consumption (Chan, 2021b; Koiwanit and Filimonau, 2021). In addition, energy demands in the sector are necessitated by the need to provide lighting, heating, ventilating and air conditioning as well as operating various equipment which boost carbon emissions (Gössling et al., 2023; Huang et al., 2015; Vourdoubas, 2018). There is, therefore, a need to pay critical attention to the energy sources as this strongly determines the carbon neutrality of the hospitality sector.

Hotels and other accommodation providers in destinations with a high frequency and intensity of extreme heat events have adopted air conditioning as an adaptation measure. However, this has seen an increase in electricity emissions leading to maladaptation (Tourism Panel on Climate Change, 2023b). In addition, old and inefficient equipment used in some hospitality establishments consumes more electricity which further adds to carbon emissions (Abeydeera and Karunasena, 2019). Vehicles used by hotels to transport guests, employees and for other daily hotel operations are another major source of GHG emissions (Dube and Nhamo, 2021). This said, few studies have focused on transport emissions and other sources in the hospitality sector, suggesting that the major source of GHG emissions is electricity use.

Carbon reduction strategies

The Paris Agreement's goal of keeping global temperature increase at 1.5^{o}-2^{o} C pre-industrial levels requires the tourism industry to halve current GHG emissions by 2030 and seek to reach net zero by 2050 (Gössling et al., 2023; Tourism Panel on Climate Change, 2023a). This makes significant carbon reduction integral if the targets are to be achieved. However, with a strong growth projection expected in the future, there is a need for commitment from the hospitality sector to implement measures such as the use of energy-efficient equipment, transitioning to low-carbon energy, sustainable procurement, use of renewable energy and waste reduction among other adaptive measures (Gössling et al., 2023; Shereni et al., 2022). Arguably, the phasing out of high energy-consuming and inefficient equipment, buying environmentally friendly supplies, providing low carbon transportation options to guests and employees and adopting emission reduction technologies are vital in reducing GHG emissions in the hospitality sector (Shanshan et al., 2023). The use of sustainable energy sources such as solar, wind and hydroelectricity is important in reducing carbon emissions emanating from energy consumption (Koiwanit and Filimonau, 2021; Vourdoubas, 2018). Indeed, as shown by several studies, effective energy management is crucial for reducing the carbon footprint of the hospitality sector considering its high energy intensity (Chan, 2021a).

One strand of research points to the vital role that technology can play in mitigating climate change. Youssef and Zeqiri (2022) propose different ways in which the hospitality sector can adopt Industry 4.0 technologies to reduce its carbon footprint. These strategies include leveraging on the Internet of Things (IoT) to achieve energy efficiency through the application of smart devices, the use of Artificial Intelligence (AI) and big data to manage waste in the kitchens and the use of Industry 4.0 technologies to promote a circular economy. Hospitality businesses also need to adopt pro-environmental technologies when installing guest amenities (Koiwanit and Filimonau, 2021). Other technologies that have helped to improve the carbon footprint in hotels encompass the installation of occupancy sensors, the use of energy-saving light bulbs as well as key cards to manage energy consumption in hotel rooms (Dube and Nhamo, 2021).

Regulatory and market-based approaches are also seen as critical for attaining net zero targets (Gössling et al., 2023). Chan (2021) observes that the existence of environmental laws and pressure from the market are key drivers for environmental awareness in the hospitality sector. In the Global South legitimation has been pinpointed as a strong driver for the adoption of sustainability practices in the hospitality sector as establishments comply with legislation in order to avoid lawsuits (Shereni, 2022; Shereni et al., 2023). Further, guests have a valuable contribution to make in mitigating carbon emissions and as such hospitality establishments need to inform them about the importance of engaging in climate-friendly behaviour (Koiwanit and Filimonau, 2021). For at least the past two decades the hospitality sector has been including guests in various initiatives that reduce hotel carbon footprint such as the linen reuse policy (Gössling and Lund-Durlacher, 2021; Shereni et al., 2022b). In addition, providing discounts to guests who exhibit carbon reduction behaviours is another way of involving guests in decarbonizing the hospitality sector (Dube and Nhamo, 2021; Koiwanit and Filimonau, 2021). Hospitality businesses can also encourage guests to use sustainable transportation through measures such as bicycle tourism and providing information concerning public transportation (Tourism Panel on Climate Change, 2023b).

Xu et al. (2022) maintain that employees' pro-environmental behaviours such as using less electricity, printing on double sides of paper and preference for reusable over disposable utensils can contribute to the reduction of the carbon footprint in hospitality enterprises. Indeed, employees have more control of carbon reduction activities in hospitality establishments through behavioural change than external guests (Li et al., 2020). Dube and Nhamo (2021) note carbon offsetting strategies such as planting trees and purchasing locally to reduce emissions associated with transporting hotel supplies. Gössling and Lund-Durlacher (2021) also observe that environmental certification provides businesses with numerous economic advantages and at the same time helps them to achieve environmental goals. Other low-carbon practices that can be implemented by the hospitality sector include waste recycling, green training, and energy management (Li et al., 2020).

METHODOLOGY

This study utilized a quantitative approach to ascertain the carbon reduction strategies of the hospitality sector in a Global South setting. A survey was undertaken with 165 randomly sampled accommodation establishments located in Bulawayo and Victoria Falls tourism regions in Zimbabwe between May and June 2023. The sampling frame was obtained from the Zimbabwe Tourism Authority detailing registered designated tourism facilities. Respondents were drawn from a cross-section of hotels, guest houses, bed and breakfast and self-catering establishments.

A semi-structured questionnaire designed based on literature was developed to collect data with the aid of trained research assistants. The questionnaire asked respondents about sources of GHG as well as carbon reduction strategies implemented by the hospitality sector in Zimbabwe. The research instrument was pre-tested and a pilot study was carried out with a cross-section of the respondents. This pilot study helped to restructure the questionnaire, reword some questions and in some instances remove certain questions that were deemed ambiguous.

Authority was sought from the Hospitality Association of Zimbabwe to collect data from its members. Descriptive statistics were generated with the aid of SPSS version 29. The profile of the sampled establishments (Figure 1) shows that the majority were small establishments with between 1-50 rooms (64.2%) followed by 51-100 rooms (15.8%). Most of the establishments were hotels (34.4%), followed by lodges (32.5%) and guest houses (15.3%). The forms of ownership indicate that 75.6 % were individually owned and 18% were part of a chain group.

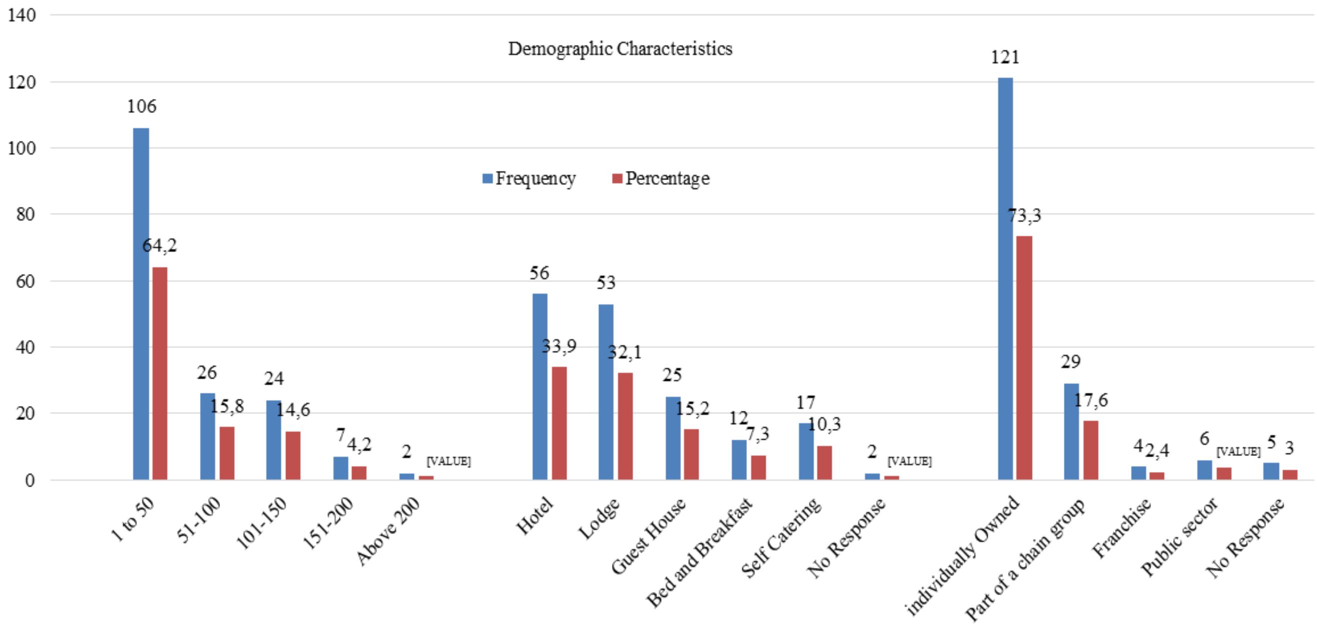

Figure 1. Profile of Establishments (n=165) (Source: Author survey)

Findings

Table 1 presents the results on the sources of GHG in the sampled establishments in the Zimbabwe hospitality sector. The overall findings reveal that petrol/diesel-powered generators are seen as a major source of GHG emissions in the sampled establishments with a mean score of M=3.65. This is attributed to the energy crisis facing the country which prompted businesses to resort to generators as an alternative power source. The country has been facing electricity shortages for the past two decades resulting in constant load shedding. In establishments with between 1-100 rooms issues such as vehicles used in business operations, shuttle vehicles used to carry guests, air conditioning, waste generated from business operations and laundry operations are not regarded as major sources based on the mean scores in the neither agree or disagree range. Nevertheless, it is evident that large establishments with above 100 rooms recognise such activities as major sources of GHG emissions. Of note is that electricity usage from air conditioning (M=417) and emissions from food waste generated in restaurants and kitchens (M=4.50) in 100-150 roomed establishments are considered high.

In establishments with above 200 rooms, the major sources of carbon emissions are indicated to be from transport carrying employees (M=4.25), electricity usage from energy consuming appliances (M=4.25), other waste generated in business operations (M=4.00), air conditioning (M=3.75) and coal-powered boilers (M=3.75). The respondents were also asked to identify the carbon reduction strategies being implemented in their different hospitality establishments. The results are presented in Table 2 which shows that the use of energy-saving light bulbs (M=4.13), clean energy sources (M=410), energy-efficient appliances in the kitchen (M=4.04), the adoption of renewable energy technologies (M4.02) and planting of trees (M=4.02) are prominent carbon reduction strategies in the sampled establishments.

Table 1. Sources of GHG Emissions (n=165) (Source: Author survey)
On a Likert Scale ranging from 1=Strongly Disagree to 5= Strongly Agree

Sources of Carbon emissions	Total	1-50 rooms	51-100 rooms	101-150 rooms	151-200 rooms	Above 200 rooms
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Diesel/Petrol powered generator	3.65 (1.223)	3.62 (1.229)	3.50 (1.286)	4.33 (.816)	3.20 (1.304)	4.75 (.500)
Emissions from vehicles used in business operations	3.32 (1.324)	3.26 (1.360)	3.33 (1.047)	4.33 (1.211)	3.00 (1.225)	4.25 (.500)
Emissions from shuttle vehicles used for carrying guests	3.28 (1.264)	3.24 (1.286)	3.33 (1.047)	4.00 (1.549)	2.80 (1.304)	4.00 (0.000)
Electricity usage from air conditioning	3.24 1.302	3.19 1.313	2.87 .990	4.17 1.329	4.00 1.225	3.75 1.500
Emissions from transport carrying employees to and from work	3.21 (1.243)	3.14 (1.286)	3.13 (.834)	4.00 (1.225)	3.60 (1.140)	4.25 (.500)
Electricity usage from inefficient energy-consuming appliances	3.10 (1.286)	3.10 (1.295)	2.73 (1.100)	3.00 (1.265)	3.40 (1.342)	4.25 (1.500)
Emissions from other waste generated in business operations	3.09 (1.176)	3.05 (1.206)	2.93 (1.033)	3.83 (.753)	2.80 (1.304)	4.00 (0.000)
Emissions from food waste generated in restaurants and kitchens	3.06 (1.270)	2.97 (1.268)	3.14 (.949)	4.50 (.548)	3.20 (1.643)	3.50 (1.732)
Emissions from laundry operations	3.00 (1.231)	2.95 (1.229)	2.80 (1.082)	4.17 (1.169)	3.00 (1.581)	3.50 (1.000)
Coal powered boilers	2.82 (1.470)	2.83 (1.480)	3.00 (1.464)	1.50 (.837)	3.00 (1.225)	3.75 (1.500)

Table 2. Carbon reduction strategies (Source: Author survey)
On a Likert Scale ranging from 1=Strongly Disagree to 5= Strongly Agree

	Total	1-50 Rooms	51-100 Rooms	101-150 Rooms	151-200 Rooms	Above 200 Rooms
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Use of energy-saving light bulbs	4.13 (1.103)	4.16 (1.109)	4.20 (.775)	4.17 (1.329)	3.60 (1.517)	3.67 (1.528)
Use of clean energy sources	4.10 (.991)	4.17 (.947)	3.93 (.961)	3.50 (1.643)	3.40 (1.342)	4.50 (.577)
Use of energy-efficient appliances in the kitchen	4.04 (1.045)	4.09 (1.030)	3.93 (1.072)	3.00 (1.414)	4.00 (.707)	4.50 (.577)
Adoption of renewable energy technologies	4.02 (1.009)	4.03 (1.007)	3.87 (.834)	3.67 (1.751)	4.40 (.894)	4.25 (.500)
Planting of trees	4.02 (1.182)	4.01 (1.170)	4.13 (1.060)	3.83 (1.835)	3.80 (1.643)	4.50 (.577)
Purchasing locally made products to reduce transport emissions	3.88 (1.071)	3.87 (1.073)	3.53 (.915)	4.67 (.816)	3.80 (1.643)	4.50 (.577)
Raise awareness among guests	3.85 (1.151)	3.82 (1.178)	3.87 (.640)	3.83 (1.835)	4.00 (1.225)	4.50 (.577)
Waste separation and recycling	3.84 (1.179)	3.81 (1.180)	3.73 (1.100)	4.17 (1.329)	4.00 (1.732)	4.50 (.577)
Training staff on climate change issues	3.76 (1.191)	3.74 (1.225)	3.60 (1.121)	4.17 (.983)	3.80 (1.095)	4.50 (.577)
Installation of motion sensors	3.76 (1.241)	3.74 (1.267)	3.73 (1.100)	4.00 (1.265)	3.80 (1.095)	4.25 (1.500)
Green building designs	3.53 (1.223)	3.54 (1.202)	3.33 (1.113)	3.50 (1.517)	4.00 (1.732)	3.50 (1.732)
Green Certification	3.59 (1.143)	3.53 (1.163)	3.53 (.990)	4.50 (.837)	4.25 (.957)	3.75 (1.258)
Conducting periodic energy audits	3.57 (1.158)	3.53 (1.211)	3.53 (.743)	4.17 (1.169)	3.80 (1.095)	4.00 (0.000)
Climate change disclosures/ Reporting	3.50 (1.179)	3.49 (1.166)	3.13 (1.187)	4.00 (1.549)	4.40 (.894)	3.50 (1.000)
Use of room key cards to control energy use	3.55 (1.325)	3.48 (1.319)	3.43 (1.505)	4.17 (1.169)	4.20 (.837)	4.25 (1.500)
Charge guests a carbon footprint offsetting fee	3.04 (1.343)	3.10 (1.341)	2.67 (1.175)	2.17 (1.602)	4.00 (1.414)	3.00 (1.155)

The use of energy-saving light bulbs is a regulatory requirement and clean energy sources like solar have proved to be popular because of the energy crisis facing the country hence their high adoption in hospitality establishments. The findings also disclose that irrespective of size all establishments are engaged in decarbonisation efforts in some form.

Establishments with between 1-100 rooms were shown to be stronger in implementing strategies that require less resources and less commitment. These strategies include purchasing locally-made products, raising awareness among guests, waste separation and recycling, and training staff on climate change issues.

By contrast larger establishments with more than 100 rooms are strong on strategies such as installation of motion sensors, green building designs, green certification, conducting periodic energy audits, climate change disclosures, and use of room key cards to control energy use that requires huge capital investment. It is evident that charging guests a carbon footprint offsetting fee is not common in the context of the hospitality sector in Zimbabwe.

DISCUSSION

This research sought to examine the carbon emission strategies of the hospitality sector in a Global South environment. Firstly, it determined the main sources of GHG and then identified the current strategies used by businesses to reduce carbon emissions in the hospitality sector in Zimbabwe. The findings disclose that most emissions come from generators which are powered by fossil fuels. The country has been facing an energy crisis for over two decades now. This resulted in businesses experiencing long hours of load shedding and most hospitality establishments have invested in generators as an alternative. Unfortunately, the generators are powered by fossil fuels which makes them lead sources of carbon emissions. In addition, transport emissions from vehicles used in business operations, shuttles used to carry guests and transport used to carry workers to and from work are significant factors in establishments with more than 100 rooms.

This is because large establishments have the capacity and need to invest in a fleet of vehicles to sustain their operations. Similarly, electricity consumption is high in bigger establishments, especially in air-conditioning properties and also from inefficient electrical appliances. The excessive consumption of electricity by hospitality establishments results in an increase in GHG emissions mainly because the major source of electricity in Zimbabwe comes from coal-powered power stations. Also, waste generation is seen to be high in establishments with over 100 rooms leading to high carbon emissions. Overall, the results reveal that establishments with less than 100 rooms do not perceive that they have a significant carbon footprint as compared to those with above 100 rooms.

The findings of this study are comparable with the results of other studies, for example, in research done in Victoria Falls in Zimbabwe Dube and Nhamo (2021) concluded that the major source of GHG is electricity usage mainly generated from coal which is a fossil fuel. The study further noted that transport emissions from vehicles used in daily operations, for shuttling guests and carrying employees were also significant. Elsewhere in the Global South Abeydeera and Karunasena (2019) argue from work conducted in Sri Lanka that most of the emissions from hotels come from purchased electricity. The hospitality sector is energy-demanding and, therefore, would have a high electricity demand. Air conditioning is singled out as one of the activities that drives electricity usage, especially in tropical countries where there is a need to control temperatures for guest comfort (Chan, 2021b). In addition, old equipment such as refrigerators consumes more electricity adding to the carbon footprint of the hospitality sector (Abeydeera and Karunasena, 2019). That being said, the hospitality sector is considered highly wasteful when it comes to energy use because of its round-the-clock operations, available facilities and functions they offer which contribute significantly to their carbon footprint (Gössling and Lund-Durlacher, 2021; Huang et al., 2015). Also, in parallel to the results of this study, there are indications from other studies that large hospitality establishments produce more GHG emissions as compared to smaller establishments (Chan, 2021b; Gössling et al., 2024).

Regarding the strategies to reduce carbon emissions, energy-saving strategies are considered important for several reasons. First, the use of energy-saving lights is a regulatory requirement hence its huge adoption. Second the use of clean energy sources such as Liquid Petroleum Gas (LPG) and solar is common in hospitality establishments mainly because these are alternatives to electricity which is in short supply in the country and also because of its cost-saving implications. Third, energy-efficient appliances reduce the electricity bill and therefore cut electricity-induced emissions by the hospitality sector. Other important initiatives include planting trees, purchasing locally-made products to reduce transport emissions, raising awareness among guests, waste separation and recycling, and training staff on climate change issues. Carbon reduction strategies that require large capital investment such as green building designs, green certification and energy management systems are prominent in bigger establishments because they have the capacity to invest in such initiatives.

Previous studies note that the use of sustainable energy sources such as solar, wind and hydroelectricity is significant in reducing carbon emissions emanating from energy consumption in the hospitality sector (Koiwanit and Filimonau, 2021; Vourdoubas, 2018). Shanshan et al. (2023) emphasise the importance of phasing out high energy-consuming and inefficient types of equipment. In further studies, it was noted that the planting of trees, use of LED lights, sourcing local products and waste recycling are common carbon reduction strategies in the hospitality sector (Dube and Nhamo, 2021). Relatedly, the use of solar energy, installing energy-efficient lighting, investing in energy management systems, and charging guests a carbon footprint offsetting fee are regarded as additional measures that assist in carbon reduction (Chan, 2021b).

However, charging guests a carbon footprint offsetting fee has not been widely embraced in the context of Zimbabwe. Likewise, carbon disclosures have seen minimum adoption in the resource-scarce environments of the Global South (Shereni, 2023). As guest involvement is central to decarbonizing the hospitality sector Gössling and Lund-Durlacher (2021) point out that the linen reuse policy has received wide attention as one of the initiatives that involve guests in sustainability practices. Shanshan et al. (2023) argue that buying environmentally friendly supplies, providing low-carbon transportation options to guests and employees and adopting emission reduction technologies are vital for reducing GHG emissions in the hospitality sector.

Extant literature also concurs that environmental certification, energy management and waste recycling are critical in reducing the hospitality carbon footprint (Gössling and Lund-Durlacher, 2021; Li et al., 2020).

CONCLUSION

There is no doubt that the hospitality sector is a significant emitter of tourism GHG. Emissions are mainly from its energy-demanding operations such as heating and ventilation. In this era when attention is focused on climate change, the sector needs to play a big role in reducing its carbon footprint. The hospitality sector in the Global North already has started implementing various climate change mitigation strategies. In the resource-scarce context of the Global South progress has been noted to be slower albeit there are growing calls for the sector to green its operations.

The results of this study add to international scholarship and debates on the decarbonisation of the hospitality sector. Literature focusing on climate change mitigation in the hospitality sector in the Global South is still limited and this study provides insight into the major sources of carbon emissions and the current mitigation strategies under implementation. Furthermore, this study informs the hospitality sector in the Global South on various actions it can implement to contribute significantly to SDG 13 on climate action and the targets set out in the Paris Agreement. Arguably, the need exists for hospitality operators to adopt clean and renewable energy sources as an alternative to electricity which is generated from fossil fuels. Solar energy is a viable option in Zimbabwe considering that sunlight is available throughout the year. Further, to cut transport emissions the hospitality sector can consider the use of electric vehicles in business operations, to shuttle guests from one point to another and for transporting employees. Carbon disclosures are important in revealing climate action strategies implemented by businesses. They can be made mandatory to increase their uptake and also to encourage hospitality establishments to focus attention on climate change issues. Smaller hospitality establishments can invest in energy management systems, energy audits and environmental certification as these have proved to help in reducing the hospitality carbon footprint.

This study is limited in that it focuses on a specific context, the hospitality sector in Zimbabwe. Caution should be exercised in generalizing these findings in different situations as practices are context-specific. Further comparative research investigations are needed in different contexts both in Zimbabwe and in other resource-scarce contexts of the Global South. The results of this study signal that establishments with 1-50 rooms and 51-100 rooms consider themselves to have a low carbon footprint as compared to those with above 100 rooms. Comparable studies can be dedicated to ascertaining carbon mitigation strategies in hospitality establishments of different sizes.

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EXPLAINING TOURIST SATISFACTION WITH COMMUNITY-BASED TOURISM IN THE MEKONG DELTA REGION, VIETNAM

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Abstract: In the Mekong Delta region (Vietnam), community-based tourism is developing and achieving impressive results. To maintain this success, community tourism sites should pay special attention to improving tourist satisfaction. Therefore, this study aims to demonstrate the factors influencing tourist satisfaction with community-based tourism in the Mekong Delta region (Vietnam). A mixed research method was used, combining qualitative and quantitative research to test the research hypotheses. The research data were collected using a convenient sampling with a sample size of 350 tourists who had experienced community-based tourism services in the Mekong Delta region. The research results have pointed out 08 factors that positively affect tourist satisfaction with community-based tourism in the Mekong Delta region, including trust, responsiveness, assurance, empathy, tangible facilities, perceived price, cultural interaction, and local cuisine. Among these, the trust factor has the most powerful impact on tourist satisfaction. Several management implications have been proposed for community tourism sites to enhance service quality and tourist satisfaction with community-based tourism in the Mekong Delta region, Vietnam.

Keywords: satisfaction, service quality, community-based tourism, tourists, Mekong Delta.

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INTRODUCTION

In Vietnam, the Mekong Delta region boasts rich tourism resources with an intricate network of canals and diverse ecosystems from freshwater to saltwater, particularly a rich cultural heritage (Mai et al., 2023). In the Mekong Delta region, community-based tourism models are increasingly developing in quantity and quality. Some well-known community tourism sites that are popular with both domestic and international tourists include the Con Son community tourism area (Can Tho City) and the Con Chim community tourism area (Tra Vinh Province). To meet the growing demands of tourists, community tourism sites improve service quality and diversify activities, focusing on exploiting local specialities. However, these community tourism sites still face challenges regarding capital, human resources, and operation procedures. These issues certainly impact tourist satisfaction with community-based tourism in the Mekong Delta region.

Tourist satisfaction is a measure of the success of a tourist destination (Kozak and Rimmington, 2000; Hui et al., 2007; Nowacki, 2009). Ensuring tourist satisfaction is the basis for creating differentiation and competitive advantage for a tourist destination (McQuilken et al., 2000). Previous studies in tourism have often focused on demonstrating tourist satisfaction with various types of tourism such as coastal tourism (Regalado-Pezúa et al., 2023; Castillo-Canalejo et al., 2023), river tourism (Nguyen and Mai, 2021; Masitenyane and Mokoena, 2023), ecotourism (Cheraghzadeh et al., 2023; Phung et al., 2024; Talukder et al., 2024), agricultural tourism (Son et al., 2023; Wang and Hao, 2023), and culinary tourism (Kim et al., 2022; Rehman et al., 2022). However, few studies demonstrate the factors affecting tourist satisfaction with community-based tourism. Additionally, most studies focus on showing that tourist satisfaction is influenced by service quality and destination image. Meanwhile, for community-based tourism, cultural interaction, an essential factor, is rarely mentioned in research. Therefore, to address the limitations of previous studies, this study approaches by synthesizing factors related to service quality and destination image and adding the factor of cultural interaction to demonstrate tourist satisfaction with community-based tourism in the Mekong Delta region, Vietnam.

THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

1. Theoretical framework

Community-based tourism is a form of tourism where local people participate in providing services, creating products/services, managing, and directing development (Nghi et al., 2012). Community-based tourism is characterized by the

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involvement of the local community in tourism development activities (Goodwin and Santilli, 2009; Tasci, 2013), particularly as co-creators of tourism products (Mai et al., 2023). It is a tourism development approach where the community plays a leading role (Nga et al., 2022). Community-based tourism is a type of tourism that is established, managed, and provided by the local community within a specific territory (Terencia, 2017). According to Ellis (2011), community-based tourism is a suitable approach for sustainable tourism development because it is based on the community's existing assets.

Customer satisfaction is the customer's response to meeting their desires (Oliver, 1997). In a study in 2006, Kotler and Keller suggested that satisfaction is the perceived level of fulfilment based on the comparison between the perceived and expected quality of a product/service. Tourist satisfaction is the positive perception or feeling tourists have when participating in leisure activities, expressed by their enjoyment level from those experiences (Chen and Tsai, 2007). Tourist satisfaction is the evaluation of service quality and the fulfillment of their needs and expectations (Fu et al., 2019). According to Tian-Cole and Cromption (2003), there are two approaches to measuring tourism satisfaction: appraisal-based and need-based. In this study, the need-based approach is used to demonstrate tourist satisfaction.

2. Research hypotheses

The relationship between trust and tourist satisfaction

Trust refers to the ability to consistently and dependably perform the promised service (Chaudhary and Aggarwal, 2012), including commitments and the ability to fulfil those commitments by the provider (Shafiq et al., 2019). Reliability is an important factor that positively affects tourist satisfaction with a destination (Phung et al., 2024). The positive relationship between trust and tourist satisfaction has been demonstrated by many researchers (Al-Ababneh, 2013; Attallah, 2015; Ibrahim et al., 2015; Cilliers et al., 2018; Shah et al., 2018; Long, 2019; Masrurul, 2019; Thuy, 2020; Thanh and Ha, 2021; Hong et al., 2022; Phuong et al., 2022; Hien et al., 2023; Talukder et al., 2024). Therefore, the study proposes hypothesis H1: Trust positively affects tourist satisfaction with community-based tourism in the Mekong Delta region.

The relationship between responsiveness and tourist satisfaction

In tourism, responsiveness is the ability to provide tourists with service experiences that meet their expectations (Thuy, 2020). A lack of understanding in resolving customer inquiries can lead to customer dissatisfaction with service quality (Attallah, 2015; Shafiq et al., 2019). Besides, customers always expect service providers to meet their needs patiently and enthusiastically (Canny, 2013; Markovic and Raspor, 2010). Responsiveness is a crucial factor in service quality that positively affects tourist satisfaction (Ibrahim et al., 2015; Phu, 2016; Cilliers et al., 2018; Shah et al., 2018; Masrurul, 2019; Hong et al., 2022; Hien et al., 2023; Phung et al., 2024; Talukder et al., 2024). Therefore, the study proposes hypothesis H2: Responsiveness positively impacts tourist satisfaction with community-based tourism in the Mekong Delta region.

The relationship between assurance and tourist satisfaction

Safety and security at tourist destinations have become an increasing concern of tourists (Poon and Adams, 2000). Assurance is a very important criterion for tourism service quality, influencing tourism development at a destination (Cavlek, 2002; Garg, 2015). Tourists want to feel relaxed and safe at their destinations, so they highly value this criterion (Tuyet et al., 2014). Several researchers have demonstrated that assurance positively affects tourist satisfaction (Attallah, 2015; Shah et al., 2018; Carvalho and Medeiros, 2021; Giao et al., 2021; Thuy, 2020; Hong et al., 2022; Dung and Canh, 2023; Cheraghzadeh et al., 2023; Sapkota et al., 2023; Son et al., 2023; Phung et al., 2024; Talukder et al., 2024). Therefore, the study proposes hypothesis H3: Assurance positively influences tourist satisfaction with community-based tourism in the Mekong Delta region.

The relationship between empathy and tourist satisfaction

Empathy is a multi-faceted concept that includes both cognitive and emotional elements (Kerem et al., 2001; Smith, 2006). According to Wieseke et al. (2012), empathy is the ability of an individual to understand others' thoughts (Davis, 1996) and share in others' emotional experiences (Duan and Hill, 1996; Moore, 1990). The ability and willingness to understand customer perspectives play an important role in delivering quality services (Parker and Axtell, 2001). Additionally, empathy encourages employees to understand customer needs, resulting in increased customer satisfaction (Homburg et al., 2009). Empathy positively correlates with tourist satisfaction (Shah et al., 2018; Long, 2019; Masrurul, 2019; Thuy, 2020; Dai and Quynh, 2019; Thanh and Ha, 2021; Hien et al., 2023; Phung et al., 2024; Talukder et al., 2024). Therefore, the study proposes hypothesis H4: Empathy positively affects tourist satisfaction with community-based tourism in the Mekong Delta region.

The relationship between tangible facilities and tourist satisfaction

According to Akbaba (2006), tangible facilities are the most important factor in service quality. Al-Ababneh (2013) suggests that tangible facilities significantly impact tourist satisfaction. The more investment in the tangible facilities of a tourist destination, the higher the tourist satisfaction with that destination (Phung et al., 2024). The impact of tangible facilities on tourist satisfaction has been demonstrated by many researchers (Attallah, 2015; Ibrahim et al., 2015; Phu, 2016; Shah et al., 2018; Long, 2019; Masrurul, 2019; Thuy, 2020; Phuong et al., 2022; Cheraghzadeh et al., 2023; Hai et al., 2023; Sapkota et al., 2023; Sugiama et al., 2024; Talukder et al., 2024). Therefore, the study proposes hypothesis H5: Tangible facilities positively influence tourist satisfaction with community-based tourism in the Mekong Delta region.

The relationship between perceived price and tourist satisfaction

Price is the amount of money charged for a product/service or the total value exchanged by customers for the benefit of using the product/service (Kotler et al., 2008). Lower service prices and costs positively influence the demand and decision to choose a destination (Nicolau and Mas, 2006; Chi and Qu, 2008). Perceived price is a very important factor that positively contributes to tourists' satisfaction with a destination (Son et al., 2023). Several researchers have shown a positive relationship between perceived price and tourist satisfaction (Long and Khai, 2021; Giao et al., 2021; Phuong et al., 2022; Cheraghzadeh et al., 2023; Hien et al., 2023; Huong et al., 2023; Sapkota et al., 2023). Therefore, the study proposes hypothesis H6: Perceived price positively affects tourist satisfaction with community-based tourism in the Mekong Delta region.

The relationship between cultural interaction and tourist satisfaction

Culture includes values, ethics, symbols, physical expressions, and behaviors governed by a distinct world (Gnoth and Zins, 2013). In the field of tourism, cultural contact is considered a new concept to measure the purposes and experiences of tourists interacting with a different culture (Gnoth and Zins, 2013). According to Vengesayi (2003), indigenous culture is one of the resource factors of a destination that creates its attractiveness. The influence of cultural interaction on tourist satisfaction has been demonstrated by many scientists (Jayasinghe et al., 2015; Romão et al., 2015; Zeng, 2017; Carvache-Franco et al., 2018; Si and Bang, 2018; Chia et al., 2021; Son et al., 2023). Therefore, the study proposes hypothesis H7: Cultural interaction positively affects tourist satisfaction with community-based tourism in the Mekong Delta region.

The relationship between local cuisine and tourist satisfaction

Local cuisine is defined as food and drinks produced locally or labelled with a local brand (Kim et al., 2009; Nummedal and Hall, 2006). Local cuisine reflects the cultural and social identity of a place and plays an essential role in tourists' destination choices (Sengel et al., 2015). Culinary experiences are among the most enjoyable activities for tourists throughout their journey (Frochot, 2003). Several researchers have demonstrated a positive relationship between local cuisine and tourist satisfaction (Chen and Rahman, 2018; Si and Bang, 2018; Suhartanto, 2018; Björk and Kauppinen-Räisänen, 2019; Cheraghzadeh et al., 2023). Therefore, the study proposes hypothesis H8: Local cuisine positively impacts tourist satisfaction with community-based tourism in the Mekong Delta region.

Based on the literature review and the proposed research hypotheses, the research model identifying factors affecting tourist satisfaction with community-based tourism in the Mekong Delta region is established below (Figure 1).

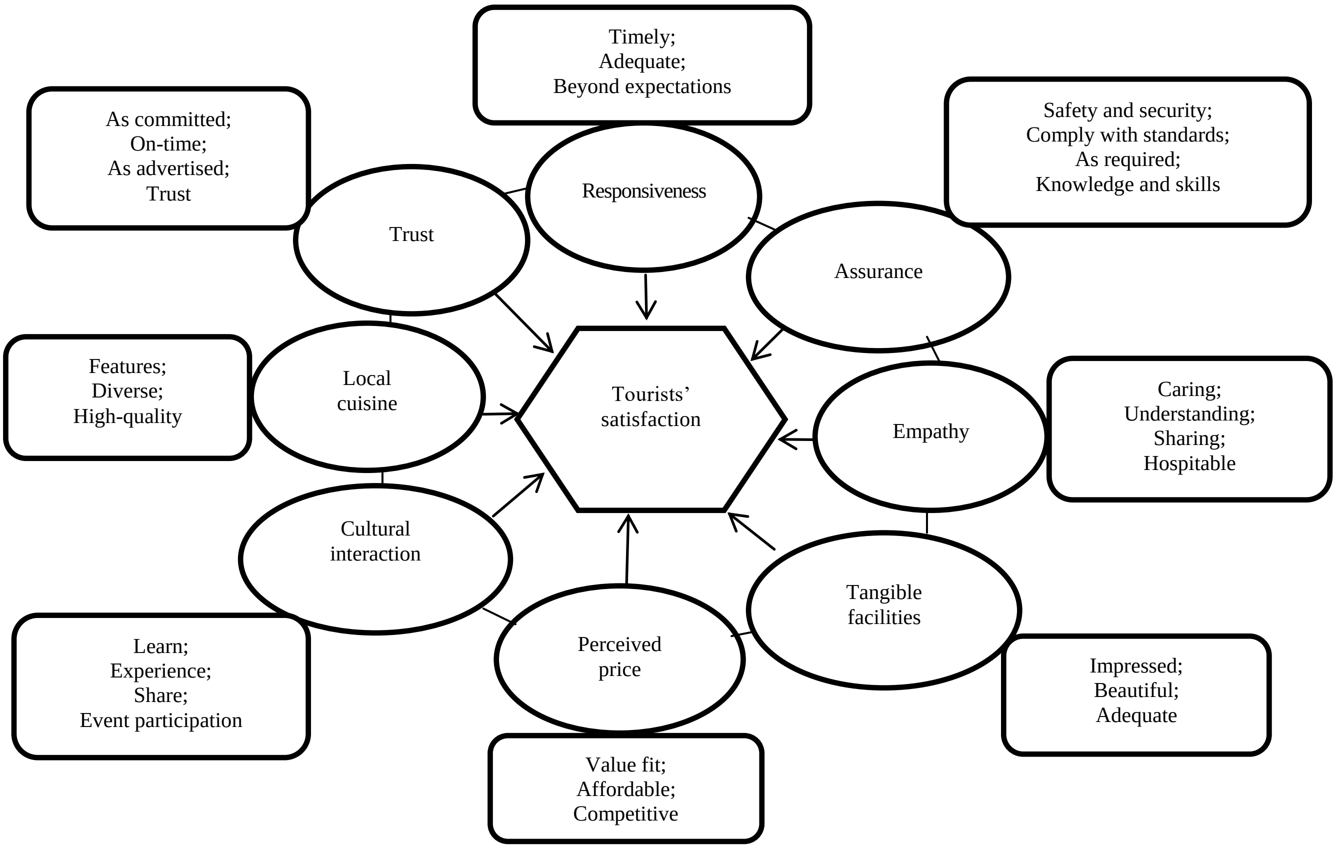

Figure 1. Proposed research model

Based on the research model (Figure 1), the independent research scales include trust, responsiveness, assurance, empathy, tangible facilities, perceived price, cultural interaction, and local cuisine. The only dependent research scale in the model is tourists' satisfaction with community-based tourism in the Mekong Delta region, Vietnam.

RESEARCH METHODOLOGY

A mixed-method approach was used to identify the factors affecting tourists' satisfaction with community-based tourism. The research was conducted in two phases: preliminary research and formal research. In the preliminary phase, the research team conducted a literature review to identify the research problem and theoretical basis for the study. This phase also involved identifying preliminary scales and consulting experts to refine these scales. The experts included five community-based tourism researchers and four community-based tourism managers. The research scales were adapted from relevant studies. The service quality scales (trust, responsiveness, assurance, empathy, tangible facilities) were inherited from the research of Phung et al. (2024) and Talukder et al. (2024); the perceived price scale was inherited from Hai et al. (2023) and Son et al. (2023); the cultural interaction scale was inherited from Chen and Rahman (2018) and Si and Bang (2018); and the local cuisine scale was inherited from Kim et al. (2022) and Hai et al. (2023). After consulting experts, the research team conducted pilot interviews with 30 tourists to identify any errors and make adjustments before the official survey.

In the formal research, the survey was designed with two main parts: the first part measured the factors affecting tourists' satisfaction with community-based tourism, and the second part collected tourists' demographic information. In the first part, questions were measured using a 5-point Likert scale, with responses ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The survey focused on tourists who had experienced community-based tourism services at the Con Son Community-based Tourism Site (Can Tho City) and Con Chim Community-based Tourism Site (Tra Vinh Province). These two sites were selected because they are among the most famous community-based tourism sites in the Mekong Delta region, attracting many domestic and international tourists (Figure 2). The survey was conducted from March to April 2024. A convenient sampling method with direct surveys was used. According to Hoelter (1983), the minimum sample size required for structural equation modeling (SEM) is 200 observations to ensure reliability. The total number of collected surveys was 358, and after removing invalid responses (lack of reliability), a total of 350 valid surveys were used to test the research hypotheses.

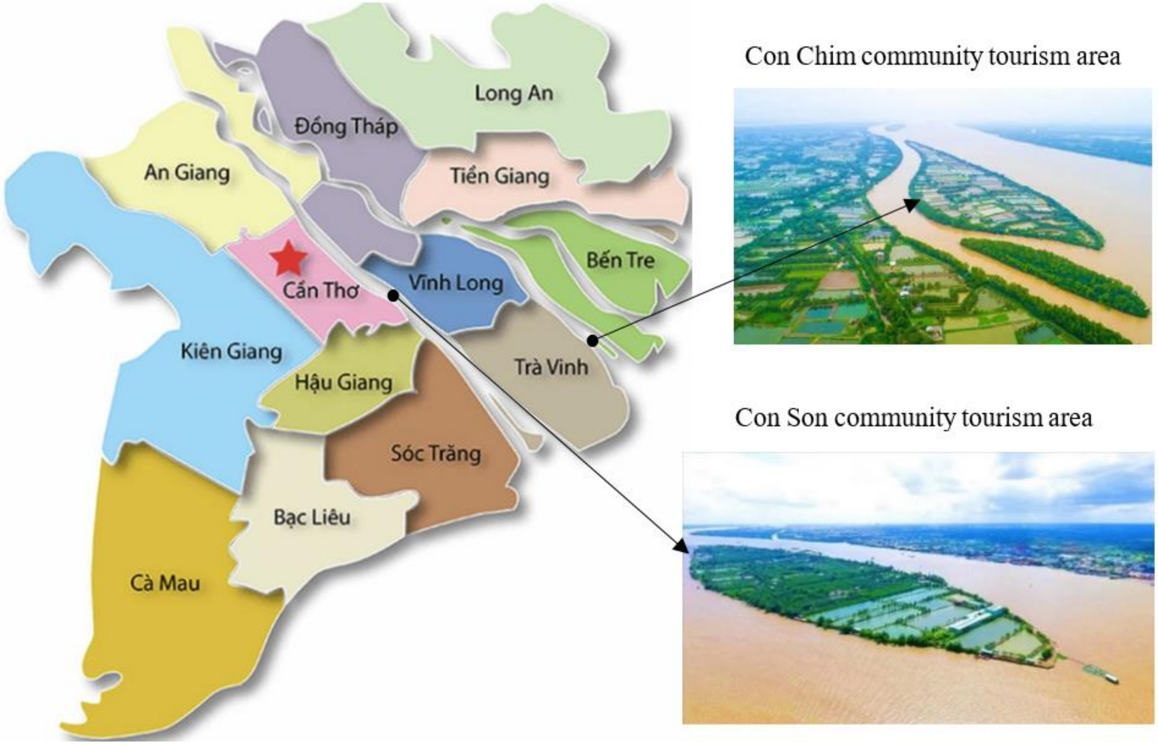

Figure 2. Location of Con Son community tourism area and Con Chim community tourism area (Source: private document authors, 2024)

Data analysis method: Quantitative analysis tools were used in the following sequential steps. Step 1: Internal consistency reliability testing was employed to assess the linkage of observed variables within the scale. Step 2: Exploratory Factor Analysis (EFA) was used to evaluate the convergent validity and discriminant validity of the scale. Step 3: Confirmatory Factor Analysis (CFA) was used to test the suitability of the research data. Step 4: Structural Equation Modeling (SEM) was used to test the research hypotheses.

Table 1. Sample's characteristics (n = 350)

Tourist type	**Frequency**	**%**	**Education level**	**Frequency**	**%**
Domestic	248	70.86	Postgraduate	22	6.29
International	102	29.14	University	140	40.00
Gender	**Frequency**	**%**	College	44	12.57
Female	181	51.71	High school	112	32.00
Male	169	48.29	Junior high school	32	9.14
Age	**Frequency**	**%**	**Occupation**	**Frequency**	**%**
16-30	98	28.00	Officer	104	29.71
31-45	135	38.57	Public sector employee	88	25.14
46-60	85	24.29	Manager	82	23.44
Above 60	32	9.14	Freelancer	76	21.71

RESEARCH RESULTS

Description of survey respondents

Based on the statistical results of the survey respondents' characteristics shown in Table 1, the sample size ensures representation based on the main characteristics of the tourist market in the Mekong Delta region. The proportion of domestic tourists is 70.86%, while international tourists account for 29.14%. Regarding the gender of the respondents, male tourists make up 48.29%, and female tourists account for 51.71%. The majority of respondents are aged between 31 and 45 (38.57%). In terms of educational attainment, most respondents are university graduates (40%). The respondents' occupations are diverse, with office workers making up the highest proportion at 29.71%.

Evaluation of scale reliability

Based on the test results in Table 2, all research scales have Cronbach's alpha values greater than 0.8. The lowest Cronbach's alpha value (0.855) belongs to the tangible facilities scale. This indicates that all scales meet the requirements for internal consistency reliability (Nunnally, 1978; Peterson, 1994; Slater, 1995). Therefore, all research scales were used in the next Exploratory Factor Analysis (EFA). The EFA result for the independent scales yielded the following values: (1) model suitability test (0.5 < KMO = 0.902 < 1.0). (2) Bartlett's test of variable correlation (Sig. = 0.00 < 0.05). (3) Reliability of the observed variables (Factor loading > 0.5). (4) Total variance explained = 77.64% > 50%. Similarly, the EFA result for the dependent scale (satisfaction) showed the following indices: (1) model suitability test (0.5 < KMO = 0.840 < 1.0). (2) Bartlett's test of variable correlation (Sig. = 0.00 < 0.05). (3) Reliability of the observed variables (Factor loading > 0.5). (4) Total variance explained = 74.55% > 50%. These results indicate that the observed variables in the research scales achieve discriminant validity and convergent validity (Hair et al., 1998).

Table 2. Scale reliability test result

Scale	Number of observed variables	Cronbach's alpha	Factor loading
Trust (TR)	4	0.875	0.715 – 0.826
Responsiveness (RE)	3	0.866	0.734 – 0.871
Assurance (AS)	4	0.889	0.794 – 0.838
Empathy (EM)	4	0.903	0.779 – 0.863
Tangible facilities (TF)	3	0.855	0.805 – 0.866
Perceived price (PP)	3	0.867	0.701 – 0.871
Cultural interaction (CI)	4	0.869	0.745 – 0.819
Local cuisine (LC)	3	0.864	0.736 – 0.879
Sactisfaction (SA)	4	0.886	0.779 – 0.848

According to Hu and Bentler (1999), the key indices considered to assess model fit include CMIN/df, CFI, TLI, GFI, and RMSEA. The data analysis results of the study show the following indices: CMIN/df = 1.965, CFI = 0.945, TLI = 0.936, GFI = 0.873, and RMSEA = 0.053. These indices are all at good and very good levels (Bentler and Bonett, 1980; Carmines, 1981; Anderson and Gerbing, 1988), indicating that the model fits well with the market data. Table 3 indicates that the research scales ensure convergent validity with the average variance extracted (AVE) values for all factors being greater than 0.6. The composite reliability (CR) values for all factors are greater than 0.8, achieving very good levels (Fornell and Larcker, 1981). The study also ensures discriminant validity, with all maximum shared variance (MSV) values smaller than the AVE, and the square root of the AVE values greater than the correlations between that variable and other variables in the model (Fornell and Larcker, 1981). Summarizing the scale validation results, the research data fits well with the market data, achieving convergent validity, discriminant validity, and reliability.

Table 3. Correlation matrix between conceptual constructs

	CR	AVE	MSV	TF	EM	RE	AS	CI	PP	LC	TR	SA
TF	0.886	0.721	0.381	**0.849**								
EM	0.904	0.701	0.458	0.501	**0.837**							
RE	0.869	0.689	0.356	0.372	0.457	**0.830**						
AS	0.889	0.668	0.273	0.227	0.397	0.394	**0.817**					
CI	0.870	0.626	0.395	0.446	0.486	0.373	0.396	**0.791**				
PP	0.867	0.685	0.455	0.403	0.474	0.492	0.452	0.461	**0.828**			
LC	0.864	0.680	0.424	0.374	0.477	0.474	0.486	0.463	0.622	**0.825**		
TR	0.876	0.638	0.520	0.596	0.549	0.479	0.337	0.441	0.634	0.546	**0.799**	
SA	0.886	0.661	0.520	0.618	0.676	0.597	0.523	0.628	0.674	0.651	0.721	**0.813**

Testing research hypotheses

In social science research, all proposed causal relationships with a 95% confidence level (or a significance level of 5%, corresponding to p-value $\leq$ 0.05) are considered good (Cohen, 1988). According to the structural equation modeling (SEM) analysis results shown in Table 4, all research hypotheses are accepted with 95% confidence.

Additionally, all standardized coefficients of the factors are positive. This indicates that the satisfaction of tourists with community-based tourism in the Mekong Delta region is positively influenced by eight factors: trust, responsiveness, assurance, empathy, tangible assets, perceived price, cultural interaction, and local cuisine.

DISCUSSION AND IMPLICATIONS

Based on Table 4, the factors related to the quality of community-based tourism services (trust, responsiveness, assurance, empathy, tangible assets) positively impact tourists' satisfaction with community-based tourism in the Mekong Delta. The research results confirm that the components of service quality are important factors contributing to enhancing tourists' satisfaction with the destination (Hai, 2014). These results align with several studies in the field of tourism proposed by Chen et al. (2011), Lee et al. (2011), Canny and Hidayat (2012), Rajaratnam et al. (2014), and Si and Bang (2018). In the field of tourism, the study further demonstrates the close relationship between the service quality of a tourist destination and tourists' satisfaction (Huong et al., 2023; Cheraghzadeh et al., 2023; Phung et al., 2024).

Table 4. Results of estimating relationships in the SEM model

Hypotheses	Relationship	Estimate	P-value	Result
H1	TR → SA	0.208	0.000	accepted
H2	RE → SA	0.129	0.005	accepted
H3	AS → SA	0.111	0.012	accepted
H4	EM → SA	0.179	0.000	accepted
H5	TF → SA	0.158	0.001	accepted
H6	PP → SA	0.126	0.029	accepted
H7	CI → SA	0.174	0.000	accepted
H8	LC → SA	0.120	0.025	accepted

The study results also demonstrated a positive correlation between perceived price and tourists' satisfaction with community-based tourism in the Mekong Delta. These results align with several studies in the field of tourism proposed by Long and Khai (2021), Giao et al. (2021), Phuong et al. (2022), Cheraghzadeh et al. (2023), Hien et al. (2023), Huong et al. (2023), and Sapkota et al. (2023). Tourists are concerned with a tourist destination that offers reasonable prices and services that match the quality provided (Thong and Phung, 2021). Perceived price is also an important criterion that enhances the attractiveness of a tourist destination (Swarbrooke and Page, 2012; Hai et al., 2023). This shows that setting reasonable service prices aligned with tourists' willingness to pay will help improve tourists' satisfaction with community-based tourism services in the Mekong Delta.

Table 4 shows that cultural interaction positively affects tourists' satisfaction with community-based tourism in the Mekong Delta. These results align with studies in the field of tourism proposed by Jayasinghe et al. (2015), Romão et al. (2015), Zeng (2017), Carvache-Franco et al. (2018), Si and Bang (2018), Chia et al. (2021), and Son et al. (2023). The development of community-based tourism is always linked with the preservation of community cultural values (Brunt and Courtney, 1999). Cultural exchange and interaction between residents and tourists help enhance tourists' experiences with community-based tourism (Mai et al., 2023). The research results affirm that cultural interaction is a crucial factor that improves tourists' satisfaction with community-based tourism. This suggests that community-based tourist destinations should pay special attention to cultural exchange, information sharing, and creating interactions about the customs, rituals, and lifestyle of the local community.

The analytical results also show a positive correlation between local cuisine and tourists' satisfaction with community-based tourism in the Mekong Delta. In the field of tourism, these research results align with several studies on tourist satisfaction proposed by Chen and Rahman (2018), Si and Bang (2018), Suhartanto (2018), Björk and Kauppinen-Räisänen (2019), and Cheraghzadeh et al. (2023). Indeed, a positive culinary experience at a tourist destination increases tourists' satisfaction and fosters positive behavioral intentions (Antón, 2019; Lai et al., 2021). At a tourist destination, local specialty dishes are an important part of the culinary culture (Thuy, 2023), enhancing the destination's attractiveness (Hai et al., 2023). The research results suggest that community-based tourist destinations in the Mekong Delta should further promote the value of local cuisine and regional specialties, which will enhance the destination's attractiveness and improve tourists' satisfaction with community-based tourism services.

Theoretical implications

The research findings have expanded the explanatory capacity for tourist satisfaction with destinations, particularly community-based tourism destinations. Besides the service quality and destination image factors that have been substantiated by many researchers, this study has added the factor of cultural interaction to explain tourist satisfaction with community-based tourism destinations. This is an essential factor in measuring tourist experience when participating in community-based tourism. This suggests that different types of tourism at different destinations should be supplemented with additional characteristic factors to enhance the explanatory power of tourist satisfaction. Furthermore, the study has demonstrated that trust has the strongest influence on tourist satisfaction with community-based tourism destinations. Due to the intangible nature of tourism services, tourists are concerned about the commitment, sincerity, and honesty of the tourism destination. Thus, this study has emphasized the crucial role of trust in tourist satisfaction with community-based tourism destinations.

Managerial implications

Based on the research results, several management implications for community-based tourist destinations in the Mekong Delta are proposed as follows: First, improve the quality of community-based tourism services, with special attention to the trust factor. Second, develop service pricing strategies that align with tourists' willingness to pay and are competitive in the tourism market. Third, enhance local cultural experiences through activities that promote cultural exchange and information sharing about the customs, rituals, and lifestyle of the local community.

Fourth, promote the value of local cuisine and regional specialties to enhance the destination's attractiveness and tourists' satisfaction with community-based tourism services.

CONCLUSION AND NEW RESEARCH DIRECTIONS

This study aims to explain tourists' satisfaction with community-based tourism in the Mekong Delta by identifying the factors that influence tourists' satisfaction. Overall, the research results have demonstrated that eight factors influencing tourists' satisfaction with community-based tourism in the Mekong Delta include trust, responsiveness, assurance, empathy, tangible assets, perceived price, cultural interaction, and local cuisine. All these factors positively affect tourists' satisfaction, with trust having the most powerful impact. As this is a type of community-based tourism, the most important discovery of the study is that cultural interaction positively affects tourists' satisfaction. The research results provide useful references for managers of tourism destinations and researchers in community-based tourism.

Although the study has made important findings, it still has certain limitations, including: First, it is a cross-sectional study and thus has limited generalizability; Second, the scope of the research was only conducted at two typical community tourism destinations in the Mekong Delta, limiting the ability to generalize to other destinations; Third, the study has not tested the differences in satisfaction levels between international and domestic tourists. Therefore, future research should examine these differences, especially by testing satisfaction levels based on tourists' demographic criteria to enhance the explainatory power regarding tourists' satisfaction with community-based tourism.

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LEVERAGING ARABIC CALLIGRAPHY SYSTEMS AND ISLAMIC ARCHITECTURAL SYMBOLS TO ENRICH THE AESTHETIC VALUES OF METAL PAINTING

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Abstract: This study aimed to investigate the potential for utilizing Arabic calligraphy and the symbols of Islamic architecture to enrich the aesthetic values of metal painting. The study presented a conceptual framework that included an exploration of calligraphy, its letters, plastic values, expressive values, and select symbols of Islamic architecture. The study employed a descriptive-analytical approach, as well as a quasi-experimental method. It examined the linear systems that can be created through various types of lines in terms of form, as well as the diverse relationships that can be achieved between those line types. An evaluation tool based on frequencies and percentages was utilized, and its validity and reliability were verified. The study sample consisted of 15 specialized arbitrators who assessed the executed metal plates. A total of 12 metal paintings were analyzed, with their content and components described and analyzed according to the study variables. The results indicated that it is possible to benefit from linear systems in creating metal panels with diverse aesthetic values. Linear systems possess the characteristics of diversity to generate formal and expressive relationships in combination with the elements and symbols of Islamic architecture, making them suitable as a primary basis for the design and construction of metal paintings. The linear system also contributed to achieving multiple functions with the metal painting and enhancing artistic values in general. The study recommends an in-depth examination of the vocabulary of Islamic architecture and Arabic calligraphy in terms of their compositional structure, to extract the fundamental principles for creating metal panels inspired by their integration. Additionally, the study suggests adapting the aesthetic and plastic capabilities of metals and employing them in new plastic formulations, both in terms of design and performance methods.

Keywords: metal painting, aesthetic values, elements of islamic architecture, plastic values, expressive values, symbols and connotations of islamic architecture

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INTRODUCTION

The study of metal painting presents a rich and compelling opportunity to explore the intersections between Arabic calligraphy, Islamic architectural elements, and the aesthetic values inherent in the artistic medium. Arabic calligraphy is recognized as one of the foundational intellectual and plastic starting points in this discourse, distinguished by its unique qualities and expressive capabilities. The plastic and formal properties of Arabic letters, characterized by their flexibility, fluidity, and intertwining forms, offer a wellspring of creative potential. As Abdel-Razzaq and Tarshawy (2020) note, the calligraphic script possesses distinct formative components, such as the ability to separate and connect, which imbue it with a singular aesthetic. This visual elegance and structural coherence have long been leveraged by Muslim artists to decorate buildings and artifacts, as Bihan and Nabi (2023) have observed.

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The integration of Arabic calligraphy into the fabric of Islamic architecture has imbued the latter with a profound sense of uniqueness. As Nakhla et al. (2016) explain, the flexible and harmonious nature of the calligraphic forms has been instrumental in defining the distinctive qualities of domes, doors, muqarnas, courtyards, columns, mihrabs, pulpits, crescents, walls, and balconies. Al-Jabri (2023) further elaborates on the unparalleled ingenuity and creativity inherent in Islamic architecture, where a geometric system of decorative design prevails, setting it apart from other architectural traditions.

The potential to harness these rich cultural and artistic elements within the medium of metal painting presents an intriguing prospect. Metalwork, as a branch of artistic education, aims to explore the problems of artistic formation using metal materials and their integration with other architectural and artistic components (Suleiman, 2018; Al-Arabi, 2017; Puig et al., 2014). The interplay between the plastic and structural qualities of the metal, combined with the expressive potential of Arabic calligraphy and Islamic architectural motifs, can give rise to works of profound aesthetic value.

In the contemporary context, artistic works in general, and metal paintings in particular, have undergone significant transformations. As Zalat and Al-Jawhari (2017), Al-Saud et al. (2024), and Zhongyan and Shaoguo (2016) have noted, there has been a departure from the traditional concept of representation, with a growing trend towards abstract and symbolic formations that directly translate the fusion of material, form, and expression. This structural specificity, manifested in the organizational frameworks of the formal elements, can imbue the artistic work with a heightened sense of creativity and sensual appeal, fulfilling the pursuit of aesthetic value.

When examining any artwork, it can be understood as a composite system comprising various interrelated subsystems. These subsystems, as Zalat (2017) and AlAli and Al-Barakat (2023) observe, encompass the formative elements of the work, such as color, line, space, and texture, among others. Each of these elements has its own distinct system within the work, with a specific plastic role in shaping the character of the artwork, contingent upon the dynamic relationships and modes of interaction between the different elemental systems. The interplay and interdependence of these subsystems have a profound impact on the visual and aesthetic perception of the artwork. Altering the nature of a subsystem or modifying its relationships with the other constituent elements can, in turn, lead to a shift in the overall aesthetic experience and interpretation of the work. It is from this theoretical vantage point that the current study seeks to explore the potential of integrating the vocabulary of Islamic architecture and Arabic calligraphy. These cultural and artistic elements are considered a fertile field, rich in plastic and expressive values, which can be strategically employed as design components to enrich the aesthetic qualities of the metal plate. By harnessing the distinctive formal and expressive properties of Arabic calligraphy and Islamic architectural motifs, and imbuing them within the structural and material dynamics of metal painting, the study aims to uncover new avenues for enhancing the visual and sensory appeal of the artistic medium. This approach recognizes the inherent capacity of these cultural and artistic forms to play a transformative aesthetic role, elevating the overall impact and reception of the metal-based artwork.

The study problem

The types of lines and symbols prevalent in Islamic architecture possess a multitude of values and capabilities that hold significant impact on the overall aesthetics of design. These inherent capabilities necessitate rigorous experimentation to uncover the aesthetic merits of these lines and symbols through their optimal exploitation within the material medium (AlAli and Al-Barakat, 2023a). This line of inquiry deepens our understanding of the subject matter and positions it as a fertile ground for further experimentation. Such an approach can contribute to the development and enrichment of the broader field of artistic works, particularly in the domain of metal paintings, by ushering in a novel vision aligned with the evolving requirements of the contemporary era. The researchers have identified a close relationship between the plastic (formal) capabilities of Arabic calligraphy and the symbols of Islamic architecture, and their potential to elevate the aesthetic qualities of metal plate surfaces. Given the researchers' expertise in the field of art, both in general and its specific sub-disciplines, the role of calligraphic and Islamic architectural elements in constructing and aesthetically formulating metal paintings has become increasingly apparent. These lines and symbols of Islamic architecture can be considered a foundational system that constitutes the artistic work, owing to their diverse formal expressions and the intricate relationships that arise through their systematic arrangement. It is within this context that the problem of the current study lies - in uncovering the aesthetic impact that can be achieved through the utilization of linear systems and symbols of Islamic architecture in the execution of metal plate designs. The study seeks to address the following research questions:

1. How can the surface of the metal plate be enriched by combining the vocabulary of Islamic architecture and Arabic calligraphy?
2. What is the content of describing and analyzing the plastic and aesthetic foundations in the content of the metal painting executed through the combination of Islamic architectural elements and Arabic calligraphy?
3. To what extent is it possible to benefit from Arabic calligraphy systems in creating metal paintings with aesthetic (plastic and expressive) values?

Study hypotheses

1. The study hypothesizes that the strategic combination of selected elements from the vocabularies of Islamic architecture and Arabic calligraphy can contribute significantly to enriching the surface of the metal plate.
2. The study further posits that there are multiple experimental approaches grounded in the integration of architectural and calligraphic elements, through which the surface of the metal plate can be effectively enhanced and elevated.
3. Additionally, the study proposes the existence of a substantive relationship between the systems of Arabic calligraphy and the achievement of aesthetic values (both formal and expressive) in the context of enriching metal painting.

Objectives of the study

To identify experimental approaches for creating design compositions that integrate carefully selected elements from the vocabularies of Islamic architecture and Arabic calligraphy, leveraging their formal variables to provide design visions that enrich the surface of the metal plate.

- To uncover the inherent plastic (formal) values embedded within the systems of Islamic architecture and Arabic calligraphy.
- To explore the plastic and aesthetic possibilities that arise from the strategic combination of chosen elements from Islamic architecture and Arabic calligraphy, with the aim of developing innovative experimental approaches.
- To employ the identified plastic capabilities that emerge from the integration of Islamic architectural and Arabic calligraphic elements, with the intent of enriching and elevating the surface of the metal plate.

Importance of the study

The significance of the current study lies in its potential to illuminate the possibility of benefiting from linear systems (Arabic calligraphy) to enrich the metal plate with aesthetic values, carrying several important theoretical and applied implications:

- Addressing a pressing issue: The use of Arabic calligraphic forms can have substantial positive impacts on the surface treatment and sustainability of metal plates. By focusing on this issue, the study highlights the importance of finding effective interventions to address calligraphy in various aesthetic aspects, particularly as represented in the decorative elements of Islamic arts and architecture.
- Exploring a new approach: The study's focus on utilizing experimentation with Arabic calligraphy on metal surfaces offers a unique and innovative treatment method. By investigating the effectiveness of this approach, the study contributes to the current body of knowledge by expanding the range of techniques available for addressing the use of lines as fundamental systems in metal plate design.
- Enhancing creativity and self-expression: The method of employing Arabic calligraphic forms on metal plate surfaces provides a means for designers to express and innovate creatively. By leveraging these lines and their potential as an aesthetic tool, the study aims to not only address aesthetic aspects, but also to enhance the felt experience of these values among those interested in artistic works.
- Potential for broader benefits: The use of lines can have wider positive effects on the aesthetics of metal painting. By shedding more light on the plastic values involved in Islamic architecture and Arabic calligraphy, the study can contribute to the preservation of this cultural heritage, as well as to raising the level of public appreciation for those interested in metal plate artworks.
- Practical implications for environmental intervention and treatment: The results of the study could have practical implications for designers of artistic works in general, and metal panels in particular. If the research demonstrates the effectiveness of arriving at innovative formulations and textures by combining selected elements from Islamic architecture and Arabic calligraphy to enrich the surface of the metal plate, this could benefit the development of methods and treatments for the surfaces of various artistic media. Overall, the importance of the study lies in its ability to contribute to the knowledge base on addressing the use of Arabic calligraphic forms, explore a new intervention approach to demonstrate the aesthetic values of metal painting, enhance creativity and self-expression among art designers, and provide practical insights for professionals working in the field of art. This significance is further reinforced by the expertise of the research team, each member contributing their applied and theoretical design knowledge to provide compatible visions for the display of plastic and expressive values on the surface of the metal plate.

Terms of study

Pairing: Abdel

Hafez (2017) defines pairing as the element that merges into another in a tight, inseparable manner. This term also refers to the mixing and intermixing of colors. Procedurally, pairing is defined as the process of rapprochement, compatibility, and harmony between the vocabulary of Islamic architecture and Arabic calligraphy within the metal plate, resulting in a unified artistic vision and outcome. Islamic Architecture: Amedwari (2018) defines Islamic architecture as one of the most important and authentic references for recording and embodying the stages of Islamic civilization and its development across various eras. Procedurally, the elements of Islamic architecture are defined as those with formal characteristics, aesthetic and structural values, which serve to enrich the plastic value of the metal painting.

Arabic Calligraphy: Arabic calligraphy is a collection of distinctive literal drawings and shapes used by Arabs to denote their spoken words and the language in which they communicate, as confirmed by Al-Saadi and Amori (2023) and Al-Saud et al., (2023). In this study, Arabic calligraphy is defined as any type of calligraphic form that contributes to creating an aesthetic difference by combining it with the elements and symbols of Islamic architecture on the surface of the metal plate.

Metal Painting: Ahmed (2019) defines metal painting as one of the forms of expression in the field of metalworking, which includes the use of techniques and methods of surface treatment appropriate to the material and its plastic capabilities, as well as the elements linked to artistic expertise to create innovative plastic treatments. Procedurally, metal painting is defined as every empty space surrounded by a general frame to be hung on the walls, carrying the content of the idea inspired by the dialogue between Islamic architectural vocabulary and Arabic calligraphy, which contains expressive and plastic values within a framework that encompasses the formulation of metal formation methods.

Previous studies

Al-Dahim (2024), aimed to identify the suitability of the artistic, aesthetic, and functional aspects of metal jewelry designed by the researcher. It used a descriptive analytical approach to analyze some of the works of the late architectural artist Zaha Hadid, as well as a practical applied approach in the research experience. The study population consisted of architectural designs by Zaha Hadid from 2010 to 2022, and the sample was a purposive selection of 5 designs. The study found that Zaha Hadid's diverse and different designs opened the way for the graphic designer to create many innovative and diverse designs, and emphasized the diversity in plastic construction and the aesthetic relationships of the geometric elements formed with contemporary metal ornaments.

Al-Saadi and Amori (2023), aimed to investigate the aesthetic dimensions of cursive letters in contemporary Arabic painting. The research was structured in four chapters: the methodological framework, the theoretical framework (historical origins and types of Arabic calligraphy, and the use of Arabic calligraphy in Islamic arts), the research procedures, and the results and conclusions. The study found that Arabic calligraphy was employed in various Islamic arts to document dates and names, and to carry aesthetic messages that express the spirit of Islamic arts, combining order, perfection, and spiritual beauty in abstract forms.

Al-Ajami (2021), explored the modern era of making metal crafts that suit the requirements and conditions of this era, specifically using aluminum treated with electrostatics as a new metal material. The researcher taught a metalworking course and implemented metal pendants inspired by human elements, which were judged by professors to determine the validity of the hypothesis and the success of the research experiment. The study found that the use of colored metal materials in making metal artifacts can contribute to improving the artistic taste of the research sample and transforming their skills into productive energy within society.

Suleiman (2018), conducted a study that aimed to identify the role of the plastic capabilities of lettering in metal painting. The study presented a conceptual framework that included (calligraphy, Hurufiyya, Arabic calligraphy, the Arabic letter, and plastic values). The research employed historical, descriptive, analytical, and experimental methods. Metal shapes are considered an artistic field, and metal working as a branch of art education aims to study the problems of artistic formation with metal ores. The paper explained that metal painting depends on two aspects: the plastic to build and structure the painting, and the treatment of its surface. The study outlined that technology in this field is a complex process for the artist, and in order for the metal painting to come into being, the artist must use a technique that enables them to shape the material to harmonize their creative ideas with the plastic construction of the painting. The paper presented formation methods (addition, removal, direct formation) and referred to the technique as a visual stimulus. The study reviewed the concepts associated with both form and technology in modern metal painting (material, function). It referred to three theories for rooting the art of lettering in the modern plastic experience, and the results confirmed the adaptation of the aesthetic and plastic potential of metals and their employment in new plastic formulations, whether in terms of design or methods of performance.

Khalil (2018), conducted a study that aimed to integrate the performance skill of a bachelor's degree student in the metal working project subject and direct it to serve the educational community with an innovative vision that invests in self-cognitive education in a cooperative teaching framework. The study relied on the quasi-experimental approach and the descriptive analytical approach. The aesthetics of Arabic calligraphy were employed in light of the lettering trend as an artistic starting point for crafting metal artifacts. The study indicated the possibility of employing the aesthetics of Arabic calligraphy to formulate a contemporary metal mural aimed at beautifying educational environments, as well as benefiting from experimentation with remnants and consumables of educational mineral raw materials according to manual shaping methods for crafting metal murals.

Zalat (2017), conducted a study entitled "To benefit from linear systems in creating artistic artifacts with aesthetic values". The goal was to use linear systems that can be created through multiple types of lines in terms of shape, as well as the multiplicity of relationships that can be achieved between those types and the possibility of relying on linear systems in a way that is essential in the construction and formulation of an artistic painting. The research reached the following results: Linear systems can be used to create artistic works with diverse aesthetic values. The calligraphy element also has the characteristics represented in the diversity of its forms, as well as the relationships that can be created between these various types of lines, which qualifies it to be relied upon primarily in the design construction of the metal plate. The linear system contributes to enriching the artistic values of the painting executed in the study.

Comment on previous studies

- A review of the previous studies indicates that while they employed diverse techniques and tools, the majority aimed to integrate calligraphy with elements of Islamic architecture to showcase the aesthetic aspects of the artworks. This aligns with the objectives of the current study.
- The preceding studies share a common goal of demonstrating aesthetic values, whether plastic or expressive, through experimental approaches. This common thread is consistent with the aims of the present research.
- The sampling methods varied among the previous studies, with some utilizing student participants, others relying on self-experiments, and some analyzing the implemented works themselves. The current study agrees with certain prior studies in its approach to analyzing the content of the executed artworks.
- Most of the reviewed studies employed the quasi-experimental method and the descriptive analytical method, which is consistent with the methodological approach adopted in the present investigation.
- While the prior studies explored a diverse range of environmental and industrial raw materials, the current study has chosen to focus specifically on yellow and red copper.
- In summary, the current study aligns with the general goal of the previous research in its aim to showcase aesthetic values in works of art. The present study will benefit from the sampling, methodology, and tools used in the earlier investigations, while adapting and developing them to suit the purposes and sample of the current research.

THEORETICAL FRAMEWORK

The theoretical framework encompasses an examination of the elements of Islamic architecture (dome, minaret, doors, and balconies) and their associated symbols (crescent, circle, triangle, and square). It also explores the aesthetic values of Arabic calligraphy, including linear rhythm, the dominance of the word in calligraphic composition, calligraphic balance, and harmony. Furthermore, the framework discusses the plastic values of Arabic calligraphy in Islamic architecture, focusing on the elements and principles of artistic creation.

1. Vocabulary Elements of Islamic Architecture

The vocabulary of Islamic architecture is characterized by its diversity and the richness of its architectural and decorative elements. Arabic calligraphy, an essential decorative element in various buildings, symbolizes the Islamic religion and the language of the Holy Qur'an. The researchers selected key elements, including:

A. The Dome: The dome represents a pivotal stage in the evolution of architectural art, allowing for the design and construction of large public spaces without the need for columns or pillars. According to Al-Sharif (2022), the dome has become a significant architectural feature, showcasing the artistic and engineering creativity of architects. The dome's role in Islamic architecture is evident in its decorative and structural contributions to various buildings, with regional variations highlighting different historical periods. Studies by Adawi et al. (2023), Bell (2020), and Al-Shammari (2022) emphasize the ingenuity of Islamic architects in designing domes in various forms, such as hemispherical, elliptical, or polygonal surfaces with spiral shapes.

B. The Minaret: Minarets are prominent in Islamic cities, symbolizing the religious identity and distinctive architecture of mosques. They are vertical architectural units that serve as visual landmarks and evidence of worship places. Al-Hayali (2019) and Tarboush (2019) describe the minaret as a vertical structure rising above surrounding buildings. Minarets often feature circular or quadrilateral shapes, as noted by Alwan (2020), reflecting the geometric balance in Islamic architecture. Marouf (2016) points out that over time, minarets became standalone structures with multiple functions and symbolic meanings, enhancing their aesthetic and decorative appeal. High minarets served as navigational aids for travelers and as reference points within cities.

C. Doors: Doors are significant architectural elements in Islamic architecture, showcasing both functional and aesthetic excellence. Islamic artists employed various materials, such as wood, copper, and metals, to create doors that reflect unity in form and content, as shaped by Islamic principles. Ahmed (2021) and Dogan and Acar (2013) highlight the philosophical and scientific thinking behind Islamic art, emphasizing abstraction and the reduction of forms to their essential elements. Nabawi (2018) notes that Islamic artists prioritized proportionality, continuity, synthesis, and intertwining in the design of doors, resulting in grand and majestic entrances in Islamic buildings that convey a sense of sanctity and splendor.

D. Balconies: Balconies, or mashrabiyas, are external architectural elements used for decoration. Abdel Majeed (2020) identifies two types: leafy balconies, featuring abstract plant shapes, and indented balconies, which may be inclined or non-inclined. These balconies serve as significant decorative elements in Arab architecture, particularly in mosques. Their distinct shapes and decorative features contribute to the aesthetic identity of Islamic buildings.

The theoretical framework presented here underscores the importance of integrating Arabic calligraphy and Islamic architectural elements to enrich the artistic and aesthetic values in various forms of art, particularly in metalwork. By examining these elements and their historical and cultural significance, the study aims to develop innovative design principles that draw from the rich heritage of Islamic art and architecture.

2. Symbols of Elements in Islamic Architecture

Islamic architecture features a variety of symbols, including the crescent, circle, triangle, and square. Each of these shapes carries specific spiritual meanings, which will be explored in detail below:

A. The Crescent: The crescent became prominent in Islamic culture due to its association with the lunar calendar and the Islamic pillars of fasting and Hajj. This symbol, emerging after the advent of Islam, is discussed by Hassan (2023), who notes that the crescent is inspired by nature and carries ideological and religious significance. It is also an engineering symbol. The crescent, as part of a circle, became a common feature in mosque architecture. Studies by Okasha (2021), Abdel Aziz (2015), and Okasha (2020) suggest three reasons for the crescent's use in Islamic architecture:

1. The Islamic calendar is based on lunar months, linking it to acts of worship such as fasting and Hajj.
2. The crescent moon dispels darkness, symbolizing the emergence of Islam and the eradication of pre-Islamic polytheism.
3. Its prominent placement on structures like the Dome of the Rock integrates it into the broader Islamic aesthetic.

B. The Circle: The circle is a widely recognized ancient symbol. Mustafa (2017) explains that the circle represents the moon and the sun, often referred to as "the two moons" in Arab culture, reflecting ancient worship practices. Attia (2017) and Tarboush (2019) assert that the circle symbolizes zero, the origin of all forms, and serves as the foundation for most Islamic decorations. It represents the Absolute, with no beginning or end, embodying centrality and infinite expansion. Darwish (2017) adds that the circle symbolizes eternal immortality and protection against envy, closely linked to the number five and perfection.

C. The Triangle: The triangle is an artistic symbol with deep cultural and spiritual significance. Mahmoud (2021) discusses its ancient origins, noting that pre-dynastic Egyptians depicted plateaus, mountains, and Nile waters as triangles on pottery. Ahmed (2019) highlights that the triangle, a facet of the pyramid, symbolizes solar deities and the soul. In Islamic thought, the triangle signifies monotheism, transcendence, and glory. Repeated triangles represent continuous praise of God, the Most High, the One and Only.

D. The Square: In Islamic civilization, the square symbolizes constancy, stability, and justice through the equality of its sides. Sadkhan and Mahmoud (2020) and Al-Dahim (2024) identify the square as the most balanced geometric shape, reflecting the spiritual stability of Muslims, particularly during visits to the Kaaba. Architects incorporate squares in mosque designs, including walls, pulpits, and decorations, to evoke this sense of balance and stability.

Each of these shapes - crescent, circle, triangle, and square - plays a crucial role in Islamic architectural symbolism, contributing to the rich spiritual and cultural tapestry of Islamic art and architecture.

3. The Aesthetic and Design Values of Arabic Writing

The aesthetic values of Arabic writing are considered one of the most important decorative heritage elements in Islamic architecture. Its characteristics allow it to express unique aesthetic values, making it distinct among other art forms. Arabic writings, in their various forms, are notable for their innovative designs and precise execution. These features have led to the emergence of distinctive aesthetic values in Islamic architecture, represented as follows:

A. Linear Rhythm: Linear rhythm refers to the organized forms of equal rhythms at equal distances, which can be repetitive, alternating, growing, or flowing. Rhythm, as an aesthetic value, is achieved through various other aesthetic principles. Rizk (2022) identifies several types of rhythm: rhythm through balance, contrast, unity, repetition, progression, variety, and continuity.

B. Dominance of the Word in Calligraphic Composition: This concept is demonstrated by the calligrapher’s ability to design a piece of calligraphy that emphasizes a specific, significant word within the calligraphic theme. Jaber (2023) suggests that the aim is to draw the viewer’s eye to the calligraphic artwork and convey the meaning of this word, thereby influencing the viewer morally and encouraging them to incorporate it into their daily life.

C. Linear Balance: Balance in calligraphy involves organizing the relationship between parts of the artwork so that the various elements interact according to their correct positions, thereby achieving balance. Saad et al. (2018) and Jawish (2011) classify linear balance into three types: axial balance, radial balance, and imaginary balance. Imaginary balance, which is particularly significant, refers to a sense of equilibrium and equality achieved through imaginary axes. This type of balance relies on the perception of the center of gravity and involves the opposition of elements rather than symmetry.

D. Calligraphic Harmony: Calligraphic harmony is the compatibility of words within a unified, harmonious composition. It is one of the essential principles of beauty, relying on the taste and creativity of each artist. Researchers posit that calligraphy and the vocabulary of Islamic architecture are interconnected, sharing similar artistic styles. Both feature balance, symmetry, bifurcation, and repetition, creating an integrated unit. Arabic calligraphy, with its decorative and formal qualities, complements Islamic architectural elements through its straightness, grace, symmetry, extension, rotation, and proportion. In summary, the aesthetic and design values of Arabic writing play a crucial role in Islamic architecture, contributing to its unique artistic and aesthetic appeal.

4. The Plastic Values of Arabic Calligraphy in Islamic Architecture

Arabic calligraphy possesses numerous plastic components that have allowed it to maintain its originality, characterized by majesty, sobriety, and spiritual depth. Abdullah (2018) emphasizes that Arab artists and calligraphers have skillfully reconciled the traditional rules of calligraphy with their artistic vision, effectively integrating Arabic calligraphy into Islamic architecture to highlight its aesthetic and expressive qualities. Key plastic components of Arabic calligraphy include:

- Madd (Extension): The ability to extend letters upwards, exemplified by characters such as the alif and the letter lām.
- Spreading: The horizontal spreading of letters, as seen in characters like Ya and Ba.
- Rotation: Forming letters into semicircles.
- Roundness and Elasticity: The capacity of letters to expand in size and length, along with features like compression, angularity, interlocking, and overlapping. These plastic components contribute significantly to the distinctiveness and enduring appeal of Arabic calligraphy within Islamic architectural contexts.

METHOD AND PROCEDURES

Study approach

The present study employed a quasi-experimental method in the production of metal plates with aesthetic values, coupled with a descriptive analytical approach to examine the elements of the metal plates by the researchers and compare them with the results of the quantitative analysis. This dual methodological approach was selected as it aligns with the nature and objectives of the study. The variables affecting the phenomenon under investigation were controlled, with the exception of one variable, which the researchers adapted and manipulated to determine and measure its impact.

Study population and sample: The study population and sample consisted of a group of specialized arbitrators and artists who were invited to attend the art exhibition held for this purpose in the Department of Art Education at King Faisal University. The sample was purposively selected due to their invitation to judge the metal art paintings. The artworks were executed from raw metal using multiple techniques, incorporating various linear systems and symbols of Islamic architecture. The sample size reached 15 specialists. Additionally, 12 metal plates, which were the result of the applied experiment, were also analyzed.

Study tool: The study utilized an evaluation card comprising 15 criteria that assessed the effectiveness of the linear systems and the aesthetic values (variety and expressiveness) in the metal paintings. The evaluation card was divided into two sections: the first addressing the effectiveness of the linear systems in metal painting, and the second addressing the impact of plastic and expressive aesthetic values in metal painting. The researchers relied on a scoring system that employed frequencies, percentages, and arithmetic averages to assess the potential for benefiting from linear systems and symbols of Islamic architecture to enrich metal painting with aesthetic values (variety and expressiveness).

Validity of the scale: To establish indications of the validity and stability of the scale, the researchers presented it to a panel of 10 art specialists as arbitrators to verify its validity after formulating the axes and their corresponding items. The purpose was to achieve the veracity of the arbitrators and then make any necessary amendments to the criteria of the card axes based on their feedback. The arbitrators evaluated the following aspects: the suitability of the scale for the study sample, the scale's inclusion of the criteria and axes necessary to judge the metal plates, and the accuracy and appropriateness of the scale's wording for application. The researchers incorporated the suggested revisions, and the rate of agreement among the arbitrators reached 97% on the availability of the evaluation card criteria.

Scale reliability: The researchers extracted the reliability coefficient of the card scale criteria to judge the potential for benefiting from linear systems and symbols of Islamic architecture in enriching the metal paintings with aesthetic values. This was achieved through the application of the scale to a sample of 7 arbitrators outside the main study sample, using the test-retest method. The time interval between the first and second experiments was two weeks. The researchers employed the Pearson Correlation Coefficient to determine the correlation between the results in both cases, which yielded a value of 93%. This reliability coefficient was considered sufficient for the purposes of the present study.

Scale Correction: In its final form, the scale consisted of 15 criteria representing the two fields of study: the effectiveness of linear systems in the metal plates, and the aesthetic values (plastic and expressive). Each criterion was assessed by placing a checkmark () in front of each criterion achieved in the plate. Subsequently, the arithmetic averages and percentage weights were calculated for each criterion separately and for the tool as a whole. The researchers established a predetermined threshold of 80% as the minimum score required to achieve the study's objectives in the two fields of investigation. This criterion was informed by findings from prior research, including studies by Zalat (2017), Al-Barakat et al. (2022), and AlAli and Al-Barakat (2022). The calculations were conducted using equations referenced in these earlier studies, and this equation is as follows:

$$M = (\Sigma x)/n$$

Overall ratio = (Total score of paintings x 100)/(Σ scores of fields x Number of arbitrators x Number of boards)

Where: M = Arithmetic mean; Σx = Sum of scores; n = Number of plates; Σ scores of fields = Sum of scores in all fields of study. This approach allowed the researchers to thoroughly evaluate the effectiveness of the linear systems and the aesthetic values (variety and expressiveness) in the metal paintings, ensuring a rigorous and systematic assessment of the study objectives.

Study procedures

1. The researchers conducted a comprehensive review of the theoretical framework and previous studies in the field, providing commentary and analysis on their findings. This allowed the researchers to situate the current study within the broader context of existing knowledge and highlight its importance and contribution.
2. The researchers determined the criteria for the evaluation card, which were represented in two key areas: the effectiveness of the linear systems and the aesthetic values to enrich the metal paintings.
3. The validity of the scale was verified through the use of expert arbitrators. The arbitrators evaluated the suitability of the criteria, their clarity, and their coverage of the study objectives and procedures, reaching a 97% agreement rate on the availability of the evaluation card criteria.
4. The researchers utilized red and yellow copper ores in their plastic forms, with a thickness of 1 mil., as the primary materials for the metal paintings.
5. The researchers optimized the use of various tools, including a jigsaw, an electric drill, drill bits, welding tools, a watchmaker's file, and a drill machine for making joints and notching lines, as well as punches of different diameters.
6. The distinguished fabrication methods employed in the study included sawing, hollowing out, filing, notching, the use of tin and silver as soldering materials, creating circular halves, and finishing and polishing techniques.
7. The group of executed metal paintings was presented to the research sample for evaluation, through an invitation to 15 specialist arbitrators to visit an art exhibition held for this purpose, where the evaluation was completed.
8. The researchers utilized the SPSS statistical software program to transcribe and analyze the data, calculating the frequencies and arithmetic means of the scores for evaluating the card achievement criteria in general, as well as the mean scores for each of the card achievement criteria separately.
9. The researchers will present and discuss the results, including the design of their own tables. Additionally, they will include photographs of some design products as samples and examples of the executed metal paintings.

Study Variables: The study included the following variables. Independent variables:

- The evaluation card criteria and its axes, which encompassed:

1. The effectiveness of the linear systems in the metal paintings;
2. The aesthetic values (plastic and expressive) to enrich the metal paintings.

- Elements and symbols of Islamic architecture

Dependent variable: The grade of the competent arbitrator, which was affected by the independent variables and achieved on the evaluation card and its respective fields.

Statistical Processing: To answer the study questions, the researchers employed the following statistical techniques:

1. Arithmetic averages and percentages were calculated to provide a comprehensive understanding of the data.
2. Frequencies were calculated for each criterion by:

a. Calculating the average through the sum of the scores on the number of implemented metal panels.

b. Calculating the percentage through the total score of the implemented panels multiplied by 100% over the total scores of the criteria, the number of arbitrators, and the number of executed works.

This statistical approach allowed the researchers to measure the study sample's opinion on the possibility of benefiting from linear systems in enriching the metal plates with aesthetic values. The use of these rigorous analytical methods ensured the reliability and validity of the study's findings.

DISCUSSION OF RESULTS

Answer to the first question: The primary question addressed in this research is: How can the surface of a metal plate be enriched by combining the vocabulary of Islamic architecture and Arabic calligraphy? The researchers were inspired by the idea of creating metal panels for an art exhibition, focusing on the dialogue between selected elements of Islamic architecture and Arabic calligraphy. This inspiration was utilized to design metal panels using various metal forming techniques. The exhibition, titled "Dialogue Inside the Metal Panel Between Islamic Architectural Vocabulary and Arabic Calligraphy," showcases the symmetrical and balanced integration of Islamic architectural elements and Arabic calligraphy within each metal plate. This fusion is seen as a new creative equation that invites contemplation and dialogue from the viewer. The researchers combined three main components in their metal artwork: 1. Selected vocabulary of Islamic architecture; 2. The written word of Arabic calligraphy; 3. Various metal forming methods. These elements collectively reflect the rich Islamic heritage and demonstrate a high level of harmony, calmness, and comfort. The researchers used red copper with a thickness of 1 mil, employing techniques such as repoussé (pushing from the back), cutting, welding, and the addition of other metal materials. These methods contribute to a dynamic formal rhythm while maintaining a unified aesthetic.

Artistic Aspect: In creating the works for this exhibition, the researchers combined elements of Islamic architecture and Arabic calligraphy to enrich the metal plate surface, emphasizing the aesthetic qualities of red and yellow copper.

Technical Aspect: The researchers leveraged the plastic and aesthetic capabilities of red and yellow copper to form the metal plates. Aesthetic Aspect: The aesthetic values in the exhibition’s metal paintings were achieved through metal forming methods that highlight the plastic and expressive qualities resulting from the combination of Islamic architectural elements and Arabic calligraphy. Contemporary aesthetic values identified in the study were incorporated alongside other elements such as idea, content, and construction.

Formative Elements: The structural and design relationships in the metal paintings resulted in several formative elements:

1. Combination of Islamic Architecture and Arabic Calligraphy: The compositional construction within the metal plate clearly illustrates this integration.
2. Shadow and Light: Achieved through color treatment of surfaces using chemical and thermal oxidation.
3. Texture: Real texture was created through tactile effects from the roller machine and line definition, resulting from the interaction of light and surface characteristics like smoothness and roughness.
4. Color: Evident in the interplay between the colors of red and yellow copper.

Aesthetic (Expressive) Values:

These values were achieved through various metal forming methods and can be summarized as follows:

1. Unity: The interconnectedness of elements within the metal plate, creating a cohesive whole.
2. Movement: Derived from structural relationships in shapes, such as linear relationships and the shape-ground relationship.
3. Contrast: Achieved through differences in specific areas of the metal plate, as well as the contrast in metal color resulting from chemical and thermal oxidation treatments.
4. Diversity: Evident in the variety of Arabic writing, architectural vocabulary, textures, and dimensions resulting from repoussé techniques.
5. Rhythm: Produced by the repetition of textures and the direction of architectural vocabulary and Arabic writing, contributing to the richness of the form.
6. Balance: Attained through the symmetrical distribution of selected vocabulary from Islamic architecture and Arabic calligraphy, giving appropriate relative weight to all elements.
7. Proportion: Maintained by considering the relationship between the proportions of the metal plate elements (length, width, and area).
8. Idea, Construction, and Content: These interconnected elements were effectively realized in the implemented metal panel, demonstrating their efficacy. Overall, the results reveal a sophisticated integration of Islamic architectural vocabulary and Arabic calligraphy in metal art, enriching the aesthetic and expressive dimensions of the medium.

Researchers aim to achieve aesthetic, technical, and plastic excellence in their artistic works by combining selected elements from Islamic architecture and Arabic calligraphy. This approach is driven by several factors:

1. Flexibility and Malleability of Metal: The use of yellow and red copper, known for their flexibility and malleability, allows for diverse shaping techniques.
2. Formation Techniques: The methods used in metal formation enhance the aesthetic and compositional qualities of the metal plate, revealing the beauty of Arabic calligraphy.
3. Aesthetic Elements of Islamic Architecture: Islamic architectural elements inherently possess aesthetic qualities that further enhance the beauty of the metal plate.

The results indicate that integrating Islamic architectural elements with Arabic calligraphy offers a novel approach, providing new design inspirations to enrich the field of metalworking. These findings align with the studies of Khalil (2018), Al-Saadi and Amori (2023), and Al-Dahim (2024), which underscore the benefits of blending Arabic scripts with Islamic architectural elements. This fusion creates a contemporary vision across various styles and offers multiple models of metal artistic formation, showcasing both plastic and expressive aesthetic aspects.

Answer to the second question: Research Question: What is the content of describing and analyzing the plastic and aesthetic foundations in the content of the metal painting through the combination of Islamic architectural elements and Arabic calligraphy? To address this question, the researchers employed a two-step process:

1. Description: The researchers detailed the metal plate's linear systems, aesthetic values, symbols, and architectural elements.

2. Analysis: The content of each executed metal plate was analyzed to discern its formal and aesthetic foundations, followed by interpreting these contents for all the plates. The process is illustrated as follows:

First Panel: Plastic and Aesthetic Foundations in Constructing and Processing the Metal Plate: For the first metal plate (Plate No. 1), the researchers utilized several techniques, including hammering, welding, and texturing. The design integrates selected elements from Islamic architecture and Arabic calligraphy. Key features include:

- The pivotal word "the light of the Prophet" positioned upwards in an Islamic chain ending with a minaret on the right side.
- Semi-circles made of yellow brass to enhance the readability of the word.
- The crescent to accentuate the minaret.
- A pyramid-shaped minaret on the left side.
- The lower part of the metal plate features a door, a significant architectural element symbolizing unity in form and content.
- Compact yellow copper wires on the left side and a compact diameter on the right side to enrich the form.
- Tactile effects created using an electric drill and roller machine to highlight tactile values in the metal plate.

Artistic Analysis and Extraction of Aesthetic Values: The combination of Islamic architectural elements and Arabic calligraphy significantly contributes to the composition's aesthetic appeal. Key observations include:

- Line Work: Sequential lines that achieve continuity and diversity, with varying degrees of relief and recession, depending on the line's function and its relationship to the overall composition.
- Color Treatment: The light and dark effects from chemical and thermal oxidation treatments enhance the balance within the metal plate.
- Material Utilization: The structural and formal properties of red and yellow copper serve the artistic vision and achieve unity in compositional elements.
- Texture Formation: Using a wheel tool, the researchers created varied textures and densities, which clarified the surfaces' general features and tactile values. This variation also altered the optical properties of the metal plate's background.

Overall, the researchers' methodology of integrating Islamic architectural vocabulary and Arabic calligraphy into metal artworks effectively enriched the surface aesthetics and provided a profound expressive quality to the metal plates.

Figure 1 below is a metal plate inspired by the integration of selected elements from Islamic architecture and Arabic calligraphy, centered around the pivotal phrase "the light of the Prophet" in its structural composition.

Figure 1. Panel 1

Figure 2. Panel 2

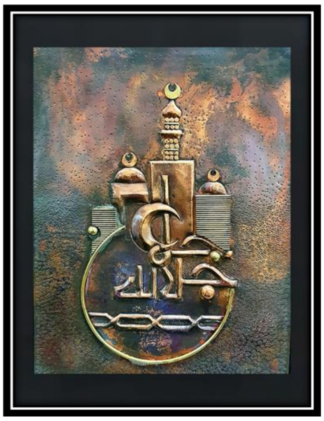

Figure 3. Panel 3

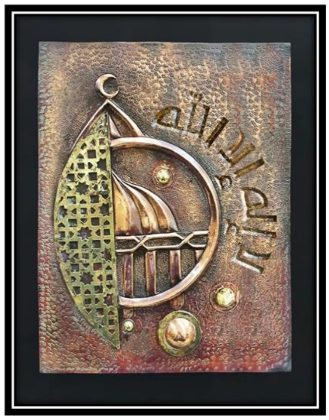

Figure 4. Panel 4

Second Panel: Plastic and Aesthetic Foundations in Constructing and Processing the Metal Plate: For the construction and processing of the second metal plate (Plate No. 2), the researchers employed methods including hammering, vacuum forming, welding, and texturing. This design integrates selected elements from Islamic architecture and Arabic calligraphy. Key features include:

- Pivotal Word: The phrase "God is the light of the heavens and the earth" forms the central theme of the composition.
- Division into Three Parts:
  - First Part: Features a minaret in the form of a hollow circle with Islamic geometric decorations made of yellow brass, ending with a crescent.
  - Second Part: Highlights the word "God" at the forefront, representing sovereignty within the metal painting. This part utilizes saw-toothed balconies made of yellow brass, serving as a significant decorative element in Islamic architecture.
  - Third Part: Complements the metal plate with the Arabic inscription "Light of the Heavens and the Earth" in a semicircular shape. It includes a door, a crucial architectural element throughout history, surrounded by textured patterns.

Artistic Analysis and Extraction of Aesthetic Values: The researchers describe this work as a dialogue between two primary components: the combination of selected Islamic architectural elements and Arabic calligraphy, and the materials (red and yellow copper). Both parts dominate the metal painting, with varying positions and sizes of the inscriptions creating a dynamic, harmonious composition. The semicircular arrangement suggests movement and vitality.

- Texture: Achieved through plastic solutions applied to the metal panel's surface, resulting in tactile values created by light and dark contrasts from chemical and thermal oxidation treatments.

- Prominent Words and Writings: These elements stand out against the metal plate's rough texture background, enhancing the overall aesthetic. The researchers found that the balanced use of space and the careful distribution of various elements result in a cohesive and aesthetically pleasing metal plate. This unified design exemplifies a harmonious aesthetic vision and a well-balanced perception, emphasizing the compatibility between different elements. Figure 2 depicts a metal plate inspired by the fusion of select elements from Islamic architecture and Arabic calligraphy, featuring the central phrase "God is the light of the heavens and the earth" as the focal point of its structural composition.

Third Panel: Plastic and Aesthetic Foundations in Constructing and Processing the Metal Plate: In creating and processing the third metal plate (Plate No. 3), the researchers utilized techniques such as hammering, sawing, welding, and texturing. This design incorporates selected elements from Islamic architecture and Arabic calligraphy, focusing on the central phrase "Glory be to Him." The metal plate is divided into two parts:

1. First Part:
   - Features a central minaret flanked by two domes on either side, differing in size and formation style.
2. Second Part:

- Contains a circle with various symbols inside, including a crescent.
- The circle itself forms an Islamic chain in a seam position, surmounted by the central phrase "Glory be to Him."
- Half-spheres are used to emphasize the calligraphic writings, aligning harmoniously with the Islamic architectural vocabulary.

Artistic Analysis and Extraction of Aesthetic Values: The methods employed in forming the metal painting contributed significantly to achieving aesthetic values such as rhythm, balance, unity, dominance, and contrast. Key findings include:

- Rhythm: Achieved through the repetition and distribution of materials and techniques, different tactile values, and contrasts between light and dark, resulting from chemical and thermal oxidation treatments.
- Balance: Realized by the calculated distribution of visual weights and tactile values throughout the metal painting, facilitated by various metal forming methods.
- Unity: Emerged from the continuous connection of external lines between the first and second parts of the metal plate, along with the repetition of tactile and technical elements.
- Dominance: Established through the prominence of calligraphic writing and other elements within the metal painting.
- Contrast: Attained through plastic treatments and techniques applied to the metal surface, highlighting color contrasts created by chemical and thermal oxidation treatments.

In summary, the combination of Islamic architectural elements and Arabic calligraphy in this metal panel demonstrates a sophisticated interplay of aesthetic principles. The rhythmic repetition, balanced visual weights, unified structure, dominant calligraphic features, and contrasting textures collectively contribute to the overall aesthetic and expressive quality of the metal artwork. Figure 3 presents a metal plate inspired by the integration of selected elements from Islamic architecture and Arabic calligraphy, featuring the central phrase "Glory be to Him" as the focal point of its structural composition.

Fourth Panel: Plastic and Aesthetic Foundations in Constructing and Processing the Metal Plate: In creating the fourth metal plate (Plate No. 4), the researchers employed techniques such as hammering, sawing, welding, and texturing. The design integrates selected elements from Islamic architecture and Arabic calligraphy, with the central phrase "There is no god but God" arranged in a semicircular form. This semicircle is adjacent to a circular structural composition that includes:

- Selected vocabulary from Islamic architecture, represented by a dome.
- A collection of symbols, including Islamic decorations engraved on yellow brass.
- Various sized hemispheres distributed harmoniously.
- A crescent.
- A linear structure with double strands and straight lines based on the circle.
- A variety of textures, ranging from rough to smooth, enriching the surface of the metal plate.

Artistic Analysis and Extraction of Aesthetic Values: The composition's construction relies on Islamic architectural geometric forms, specifically a circular shape incorporating selected vocabulary from Islamic architecture, symbols, decorations, and Arabic calligraphy. Key aesthetic values include:

- Line Diversity: The mixture of vertical and horizontal lines contributes to a sense of stability.
- Balance: The distribution of vocabulary, symbols, and decorations within the composition space is balanced, maintaining proportional relationships.
- Color Contrast and Harmony: Achieved through surface color treatments using chemical and thermal oxidation.
- Texture Variety: The contrast between rough and smooth textures, created by the wheel machine, dominates much of the metal plate, guiding the viewer's visual journey.
- Repetition and Rhythm: The repeated diversity of spheres, techniques, and textures creates an irregular tactile rhythm, allowing the viewer's sight to follow the tactile values smoothly between words and symbols, reinforcing the overall balance of the metal plate. Overall, the fourth panel exemplifies a sophisticated blend of Islamic architectural elements and Arabic calligraphy, creating a visually engaging and aesthetically balanced composition. The interplay of textures, colors, and geometric forms results in a rich and harmonious metal artwork. Figure 4 depicts a metal plate inspired by the integration of selected elements from Islamic architecture and Arabic calligraphy, with the central phrase "There is no god but God" serving as the focal point of its structural composition.

Fifth Panel: Plastic and Aesthetic Foundations in Constructing and Processing the Metal Plate: For the fifth metal plate (Plate No. 5), the researchers employed techniques such as hammering, sawing, welding, and texturing. The design combines selected elements from Islamic architecture and Arabic calligraphy, centering on the pivotal word "God" (the word of Majesty). The metal plate is divided into two parts:

1. First Part: Features two minarets characterized by remarkable aesthetic qualities, supported externally by semicircular towers; Includes a dome, a significant element in Islamic architecture, known for its decorative and design role; Utilizes symbols such as the half-sphere and crescent, emphasizing spiritual values.
2. Second Part: Focuses on the dominance of the word "God" within the metal plate; Combines selected elements from Islamic architecture with textures created using a rotating machine, producing stipple-style effects of varying densities to enrich the metal plate's surface. Technical Analysis and Extraction of Aesthetic Values: The researchers applied numerous plastic and technical treatments that enhanced the metal plate's aesthetic and technical richness, including:

- Forming by Ribossing: Pushing from behind to shape the metal.
- Forming by Welding and Sawing: Creating detailed and intricate designs.
- Texturing: Utilizing various techniques to produce diverse surface effects. Key aesthetic values include:
- Balance: Achieved through the careful distribution of elements within the composition's space and maintaining proportional relationships.
- Contrast: Realized through color treatments of the surfaces using chemical and thermal oxidation, creating harmony between the elements.
- Aesthetic Values: The shapes of the surfaces within the composition result in color contrasts and relationships between light and dark, organized to reinforce the unity of the idea and purpose of the composition.

Unity: Achieved by:

- Ensuring the relationship between the parts of the painting and the whole, resulting in a cohesive overall composition.
- Unifying the elements of the composition and the texture, which represents latent energy in the plastic elements. This texture is the product of the interaction between light and the surface's nature, including its softness, roughness, and heaviness.

In summary, the fifth panel showcases a sophisticated integration of Islamic architectural elements and Arabic calligraphy, resulting in a metal plate that embodies both aesthetic and spiritual depth. The combination of balanced design, contrasting colors, and varied textures contributes to a unified and harmonious composition. Figure 5 depicts a metal plate inspired by the integration of selected elements from Islamic architecture and Arabic calligraphy, with the central focus being the word "God" (Allah) in the structural composition.

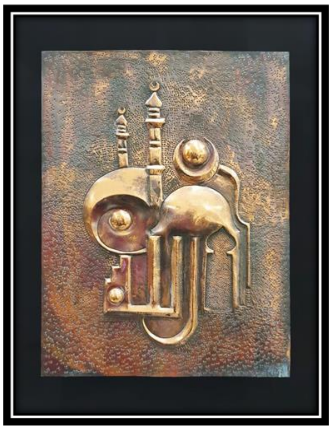
Figure 5. Panel 5

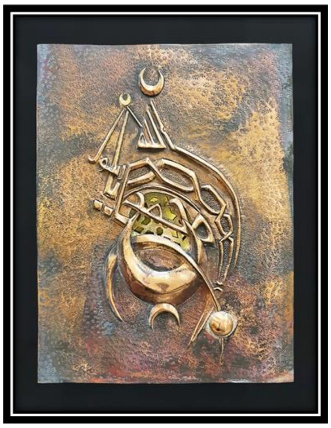
Figure 6. Panel 6

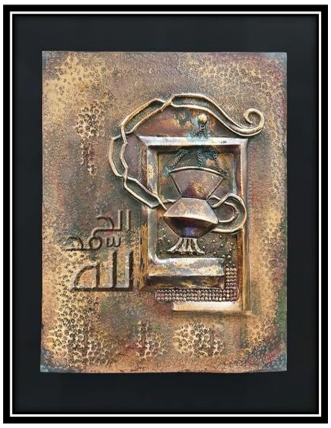
Figure 7. Panel 7


Figure 8. Panel 8

Sixth Panel: The construction and manipulation of the metal plate (Plate No. 6) involved a nuanced approach blending aesthetic considerations with practical techniques. Researchers employed a range of methods including hammering, sawing, vacuuming, welding, and texturing to shape the plate. The resulting design is a fusion of elements drawn from Islamic architecture and Arabic calligraphy, with a central focus on the pivotal phrase "Muhammad, O Messenger of God." This phrase is meticulously crafted into the plate, with the word "Muhammad" positioned prominently at its center, achieved through careful hammering and subsequent embellishment with a hollowed-out brass hemisphere. This method not only adds visual depth to the piece but also serves to emphasize the importance of the phrase, reinforced further by the subsequent inclusion of "O Messenger of God." The extension technique, particularly evident in the elongation of certain letters like "alif" and "lām," contributes to the visual flow of the composition, accentuated by the spread of crescents of varying sizes and the emergence of an Islamic chain motif. The base of the plate is anchored by a crescent, symbolizing the foundational support for the imagery and text adorning the plate. Artistic Analysis and Aesthetic Evaluation: The metal plate epitomizes a harmonious interplay of form and content, with Arabic calligraphy and selected vocabulary seamlessly integrated throughout the composition. This integration fosters a sense of unity and continuity, with each element contributing to the overall aesthetic coherence. The meticulous attention to detail, from the distribution of text to the tactile qualities of the surface, imbues the work with a tactile richness that engages the viewer's senses. Furthermore, the strategic use of texture serves to enhance the visual impact, creating contrasts between light and shadow that accentuate the spatial depth of the piece. Through a judicious combination of formal elements and material treatments, the researchers have succeeded in creating a visually striking and conceptually resonant artwork. Figure 6 illustrates a metal plate inspired by the integration of selected elements from Islamic architecture and Arabic calligraphy, with the central phrase in the structural composition being "Muhammad, O Messenger of God."

Seventh Panel: The construction and manipulation of the metal plate (Plate No. 7) similarly employed a variety of techniques, including hammering, sawing, welding, and texturing. Drawing inspiration from both Islamic architecture and Arabic calligraphy, the researchers centered their design around the phrase "Praise be to God," leveraging its structural significance to establish a coherent compositional framework. Elements such as double strands, broken lines, and interlaced motifs, reminiscent of decorative motifs found in Cairo mosques, further enrich the visual narrative, creating a tapestry of textures that animate the surface of the plate. Artistic Analysis and Aesthetic Evaluation: The structural integrity of the composition is underpinned by a nuanced understanding of formal and spatial dynamics, with careful attention paid to achieving a harmonious balance between diverse elements. The integration of Islamic architectural motifs and Arabic calligraphy demonstrates a keen sensitivity to aesthetic traditions, while the strategic juxtaposition of textures adds depth and complexity to the visual narrative. Through a judicious interplay of form, color, and texture, the researchers have succeeded in creating a visually arresting artwork that resonates with both cultural significance and aesthetic appeal. Figure 7 illustrates a metal plate inspired by the integration of selected elements from Islamic architecture and Arabic calligraphy, with the central phrase in the structural composition being "Praise be to God."

Eighth Panel: The construction and processing of Plate No. 8 involved a meticulous approach, employing techniques such as hammering, sawing, welding, and texturing to create a synthesis of architectural vocabulary, Islamic, and Arabic calligraphy. Central to this design is the deliberate incorporation of the word "God," intended to evoke immediate emotional resonance and enhance the expressive capacity of the metal artwork. Textual elements are intricately woven into the painting's fabric, with texture serving to amplify the interplay of light and surface characteristics. Artistic scrutiny reveals a deliberate emphasis on the word "God," positioned prominently to command attention and imbue the composition with a sense of movement and harmony. The curvature of lines, alternating between gentle arcs and sharp angles, serves to evoke contrasting emotional responses – tranquility juxtaposed with strength. Symbolic motifs, such as crescents, are strategically placed to accentuate architectural elements, while the distribution of texture enhances the artwork's tactile richness, contributing to its overall visual depth and complexity. Figure 8 depicts a metal plate inspired by the integration of selected elements from Islamic architecture and Arabic calligraphy, with the pivotal word in the structural composition being the word "God."

Ninth Panel: Similar care was taken in the crafting of Plate No. 9, employing techniques like hammering, sawing, hollowing out, welding, and texture application. This piece draws inspiration from Islamic architecture and Arabic calligraphy, with the pivotal phrase being "the Most Merciful," encircled by intricate texture work. A structural motif, reminiscent of Islamic calligraphy, gracefully traverses the composition, culminating in a large crescent positioned atop the artwork, symbolizing completeness and unity. Aesthetic analysis underscores the dynamic interplay between vertical and horizontal surfaces, each contributing to the artwork's distinctive visual appeal. Texture and color gradients, achieved through chemical and thermal oxidation treatments, imbue the piece with a sense of depth and cohesion. The careful orchestration of form and distribution, alongside the strategic placement of focal elements, achieves a harmonious balance that elevates the metal panel to a unified aesthetic whole. Figure 9 illustrates a metal plate inspired by the fusion of selected elements from Islamic architecture and Arabic calligraphy, centered around the pivotal word in the structural composition: "the Most Merciful."

Figure 11. Panel 11 Figure 12. Panel 12 Figure 9. Panel 9 Figure 10. Panel 10

Tenth Panel: The fabrication of Plate No. 10 involved a comprehensive methodology encompassing hammering, sawing, hollowing out, welding, and texture application. Rooted in Islamic architecture and Arabic calligraphy, this artwork centers on the word "Majesty" (Allah), exuding a sense of grandeur and significance. Positioned prominently at the heart of the composition, the word "Majesty" ascends vertically, transforming into four distinct minarets capped with crescents, symbolizing completeness. Emotive curved lines in the first segment of the plate add an impulsive dynamism, enhancing the artwork's expressive capacity. Aesthetic inquiry reveals the deliberate orchestration of elements to accentuate the prominence of the word "Majesty," harmonizing with selected architectural motifs. The diversity in minaret shapes and sizes contributes to the composition's aesthetic richness, while horizontal lines convey a sense of stability, juxtaposed with vertical and curved lines evoking elevation and emotional resonance. The tactile dimension is enhanced through roller machine treatments, complemented by nuanced color gradients resulting from surface oxidation treatments. Figure 10 depicts a metal plate inspired by the amalgamation of chosen vocabulary from Islamic architecture and Arabic calligraphy, featuring the central word in the structural composition, which is "God."

Plate Eleven: The creation of Plate No. 11 involved a methodical approach, employing techniques such as hammering, sawing, hollowing out, welding, and texture application. Drawing inspiration from Islamic architecture and Arabic calligraphy, the artwork revolves around the central word "Majesty" (Allah), augmented by architectural motifs and symbolic elements like crescents and circles. The arrangement of letters within the word fosters aesthetic cohesion, with contrasting repetition lending rhythmic dynamism. Artistic examination underscores the technical and expressive richness of the metal painting, marrying linear relationships with Islamic architectural vocabulary. Varied line orientations infuse the composition with vitality and movement, while careful distribution of architectural elements and calligraphy ensures balance. Contrasting sizes of vocabulary and symbols create visual depth, accentuated by color contrasts from surface oxidation treatments. Repetition of motifs and textures enriches the tactile experience, with symbolic meanings attributed to line shapes, particularly the vertical line symbolizing ascension and strength. The interplay between vertical and horizontal lines imbues the composition with architectural force and structural integrity. Figure 11 illustrates a metal plate that draws inspiration from selected vocabulary found in Islamic architecture and Arabic calligraphy. The pivotal word in its structural composition is "God."

Plate Twelfth: The fabrication of Plate No. 12 involved a meticulous process, employing techniques such as hammering, sawing, hollowing out, welding, and texture application. Rooted in Islamic architecture and Arabic calligraphy, this artwork integrates selected vocabulary elements, including the dominant word "Majesty" (God), alongside architectural motifs such as domes and symbolic representations like crescents and circles. These elements converge to create a unified composition characterized by interconnectivity and coherence, with the use of red copper lending essential material integrity. An aesthetic examination reveals the deliberate juxtaposition of sharp and soft geometric lines, treated both formatively and aesthetically. The centrality of the word "Majesty" is emphasized through vertical longitudinal lines, imparting a sense of elongation and grandeur. Horizontal lines, in conjunction with vertical elements, reinforce unity and cohesion within the composition. Balancing spatial relationships and contrasting sharpness with softness, alongside tactile effects facilitated by roller machine treatments and nuanced color gradients from oxidation processes, imbues the artwork with a rhythmic dynamism. The researchers elucidate the findings derived from analyzing the metal plates, highlighting the harmony between the selected vocabulary and linear systems with regards to their plastic and expressive qualities. Diverse implementation techniques contribute to the display of aesthetic values, with copper's natural hues further enhancing these qualities. Quantitative evaluations affirm the effectiveness of linear systems in showcasing the plastic and expressive aesthetic values of metal painting. This aligns with previous studies by Zalat (2017), Suleiman (2018), and Lafabrie et al. (2014), underscoring the potential of metal materials to adapt to contemporary artistic goals while leveraging the symbolic and aesthetic nuances of Islamic architecture. Figure 12 showcases a metal plate influenced by a blend of chosen elements from Islamic architecture and Arabic calligraphy, featuring prominently the pivotal word "God" in its structural composition.

Addressing the third research question pertaining to the utilization of Arabic calligraphy systems in creating metal paintings with aesthetic values, the researchers conducted a comprehensive analysis using frequency data and arithmetic averages. Their evaluation, facilitated through a dedicated assessment card, underscores the integration of calligraphic systems and Islamic architectural elements in achieving plastic and expressive aesthetic values within metal painting.

Table 1. Arithmetic Averages and Percentages of Linear System Effectiveness in Metal Plate

no.	Standard	Arithmetic average of each standard	Percentage for each standard	Level of effectiveness
1	Line Contribution to Metal Plate Construction and Design	4.67	88%	High
2	Directional Lines Establishing Axes within Metal Plate Design	4.78	82%	High
3	Diversity of Calligraphy Utilized in Metal Plate Artwork	4.22	82%	High
4	Utilization of Linear Relationships: Contact, Conjunction, and Convergence	4.54	90%	High
5	Achievement of Third Dimension through Linear System in Metal Plate	4.76	96%	High
6	Interconnectedness of Linear System between Mass and Space	4.77	88%	High
7	Attainment of Tactile Values through Linear System in Metal Plate	4.55	90%	High
8	Variability of Plastic Characteristics within Linear System of Metal Painting	4.23	82%	High
Total		4.57	88%	High

The data presented in the preceding table provides insight into the efficacy of the linear system employed in the execution of metal panels. It underscores the presence of a robust linear system in design construction, characterized by the diversity of line types and their varied relationships within the metal panel. Moreover, the directional orientation of lines delineates multiple axes within the design construction, while disparities in linear densities contribute to the attainment of tangible and conceptual tactile values, synergizing with elements of Islamic architecture. Across the criteria, percentages ranged from 82% to 96%, yielding an overall arithmetic average of 4.57. These percentages denote a high level of potential for leveraging linear values in metal paintings and their enrichment. The researchers attribute these findings to the inherent versatility of linear systems and the adaptability of elements and symbols from Islamic architecture in creating diverse surface effects on metal plates. This assertion is substantiated by the analysis of executed paintings, which underscores the role of rhythm, unity, harmony, and balance in enhancing aesthetic values. Furthermore, the utilization of diverse implementation methods and color shades, alongside the incorporation of multiple levels, contributes to this enrichment. These results align with prior research by Al-Ajami (2021), Al-Saadi and Amori (2023), as well as Grigoriev et al. (2013) and Zalat (2017).

Table 2. Average Availability and Percentage of Aesthetic Values (Formative and Expressive) in Metal Paintings

No.	Aesthetic values	Standard	Arithmetic average	Percentage	Level of effectiveness
1	Formative values	Balance within the Metal Plate	4.5	90%	High
2		Rhythm Exhibited in the Metal Plate	4.4	88%	High
3		Unity Demonstrated in the Metal Plate	4.3	86%	High
4		Proportionality in the Metal Plate	4.6	92%	High
1	Expressive values	Conceptual Integrity in Metal Painting	4.4	88%	High
2		Assurance of Craftsmanship in Metal Painting	4.2	82%	High
3		Structured Execution in Metal Plate Creation	4.3	85%	High
Total			4.35	87%	High

The preceding table illustrates the degree of availability of aesthetic values (plastic and expressive) within the executed metal paintings. It highlights the presence of plastic values, including balance, rhythm, proportion, and unity, with their respective percentages of availability, the highest of which reached 90%. Additionally, the attainment of expressive values in the metal paintings reached 88%. The overall achievement of aesthetic values (plastic and expressive) registered a percentage of 87%, surpassing the default threshold of 80%. This indicates that these artworks are of commendable quality, encapsulating the aesthetic essence inherent in metal plate artistry. Thus, the validity of the hypothesis positing a significant relationship between Arabic calligraphy systems, elements, and symbols of Islamic architecture, and aesthetic values (plastic and expressive) in enriching metal painting can be affirmed. The arithmetic average for all criteria reached 4.35, further corroborating this relationship. The effectiveness and potential of linear systems and symbols of Islamic architecture in influencing painting surfaces may be attributed to the emergence of new materials facilitated by modern technology, recognizing their plastic potentials. This allows for innovation and diverse plastic solutions for metal plates. Moreover, the multiplicity and diversity of metal materials, coupled with their inherent plastic potentials, offer avenues for artistic innovation and enhancement. The affirmation of calligraphic systems and Islamic symbols in enriching metal painting is underscored by the unanimous agreement of all arbitrators, surpassing the 80% threshold. This reaffirms the success of the applied experiment in implementing metal painting, leveraging copper metal materials, elements, and symbols of Islamic architecture to enhance the aesthetic value and functionality of metal plates. These findings align with previous research by Al-Ajami (2021), Al-Saadi and Amori (2023), Fouda (2018), and Grigoriev et al. (2013), highlighting the exploration of novel metal raw materials such as aluminum and copper treated with various techniques to expand color capabilities and obtain multiple color shades in metalwork formations.

CONCLUSIONS

1. Linear systems serve as effective tools for creating artistic works imbued with aesthetic values.
2. The element of calligraphy exhibits diverse forms and relationships, rendering it a primary candidate for shaping the design of metal plates.
3. The utilization of linear systems contributes to fulfilling multiple functions within artwork, particularly within the realm of metal plate design.
4. The integration of linear systems enriches the artistic values of executed metal paintings, as demonstrated through the study's samples and methodologies.
5. The aesthetics inherent in selected Islamic architecture and Arabic calligraphy can be leveraged to enhance the visual appeal of metal plates, introducing additional aesthetic dimensions derived from their combination.
6. Arabic calligraphic writings and the chosen vocabulary from Islamic architecture offer avenues for enriching the tactile experience of metal plates, fostering contrast between textural elements and selected vocabulary within the metal composition.
7. Symbols originating from the Islamic era, notably the circle as a foundational shape, play a pivotal role in the vocabulary of Islamic architecture, serving as a primary source for diverse geometric forms.
8. The combination of selected Islamic architectural vocabulary and Arabic calligraphy possesses unique artistic qualities that distinguish it from other forms of art, presenting an opportunity to enrich the field of metalworking with innovative design inputs.
9. The aesthetic values of ribose (push from behind) can be further enhanced by integrating it with other plastic techniques such as cutting, hollowing out, overlaying, and oxidation methods.

Limitations of the study:

- The current study is confined to the exploration of metal formation techniques using selected elements from Islamic architecture, which are then combined with Arabic calligraphy to enrich the surface of the metal plate.

- The study will utilize red and yellow copper in their molded forms, with a thickness of 1 mil, to carry out the molding operations.
- The effectiveness of the linear system will be evaluated based on 8 key aesthetic and expressive values: plastic values (balance, rhythm, unity, proportion) and expressive values (concept, content, and composition of the design work).

Temporal Limitations: The current study is limited to the second semester of the 2023/2024 academic year. Spatial Boundaries: The study will be conducted at King Faisal University, and an art exhibition will be held to showcase the outcomes. Human Limitations: The human participants in the study will be limited to a panel of judges specialized in the field of art, who will evaluate the resulting design works. These limitations define the scope and parameters within which the current research will be carried out, ensuring a focused and well-defined approach to exploring the innovative integration of Islamic architectural elements and Arabic calligraphy in the enrichment of metal plate surfaces.

Recommendations:

1. Organize artistic workshops centered on the integration of Islamic architectural vocabulary and Arabic calligraphy, aimed at providing art students, particularly those specializing in the metalworking, with diverse artistic approaches and methods for combining these elements to achieve plastic and aesthetic values in metal painting.
2. Introduce novel intellectual dimensions in metalworking education, fostering a culture of continuous research and experimentation in metal forming methods to discover innovative approaches that yield artistic values and novel formulations in metal painting.
3. Further delve into the study of Islamic architectural vocabulary and Arabic calligraphy, focusing on their compositional structures to derive fundamental principles for crafting metal panels inspired by their fusion.
4. Explore the vocabulary of Islamic architecture and Arabic calligraphy in depth, delving into their spiritual, philosophical, artistic, and engineering aesthetic values to uncover their inherent aesthetics, which lend them originality and uniqueness.
5. Foster creative thinking and experimentation in design construction and material utilization in art education, cultivating a plastic vision characterized by novelty and originality in artistic production.
6. Enhance students' skills in handling diverse materials and leveraging them to create varied plastic visions in executed artistic works within the realm of art education.
7. Stay attuned to modern developments in the art field and establish connections between contemporary changes and the subject matter of artistic works.
8. Harness the aesthetic and plastic potentials of metals, adapting them in innovative plastic formulations, whether in terms of design concepts or execution methods, to continually evolve and enrich artistic practices.

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THE MEDIATING ROLE OF EMPLOYEE SATISFACTION IN THE RELATIONSHIP BETWEEN HUMAN RESOURCE PRACTICES AND TOURIST SATISFACTION: EVIDENCE FROM LEBANON'S TOURISM SECTOR

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Abstract: The study aims to highlight the critical role of HR practice in shaping tourist experience and satisfaction, ultimately contributing to the success and reputation of tourism enterprises. Additionally, it aims to understand how effective HR management influences the overall experience and satisfaction of tourists. Using a mixed-methods approach, data was collected from 112 employees and tourists in Lebanese resorts. Structural Equation Modelling revealed significant relationships between HRP and employee satisfaction and performance. Employee satisfaction strongly correlated with tourist satisfaction, while employee performance showed a weaker correlation. Notably, tourists prioritized employee friendliness over professional expertise. This study contributes to the literature by highlighting the importance of employee attitude in shaping tourist experience in a developing country context. The findings have implications for HR strategies in the tourism industry, emphasizing the need to focus on fostering positive employee attitudes alongside professional skills.

Keywords: human resource practices, employee satisfaction, employee performance, tourist satisfaction, Lebanon

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INTRODUCTION

Human Resource Management (HRM) is crucial for the prosperous development, operational, and enduring viability of companies (Al Harrasi, 2024). While these issues may have a global focus, they also have significant local consequences. The success or failure of tourist organizations in developing countries heavily depends on their human resources. The research has also indicated that tourist organizations have encountered significant challenges in recruiting and retaining skilled labor. Consequently, numerous new initiatives, plans, and strategies have been implemented worldwide to tackle the human resource management issues. Watson and Maxwell (2004) recognized that effectively providing tourist services presents various organizational challenges. Thus, efficient Human Resource Management serves as a valuable tool for addressing these challenges and contributes to the overall value of tourist organizations (Baum, 1993). Human Resource Management is a crucial aspect of the tourism industry, often referred to as a "human contact industry" by researchers (Baum and Kokkranikel, 2005).

According to Ngirwa (2005), human resources refer to the managerial philosophy, policies, and practices that are focused on effectively managing people in order to facilitate the achievement of desired outcomes within an organization. Human resource management is a collection of managerial actions aimed at optimizing the use of human resources within an organization to enhance performance (Alkhamis, 2024). Organizational management encompasses the ongoing process of adapting the structure of an organization to align with its objectives. This involves ensuring the availability of sufficient and appropriate human resources, providing opportunities for employee development, and creating an environment that encourages their active participation in the efficient operation of the enterprise. It includes various functions such as strategic planning, talent acquisition, employee training and development, performance assessment, occupational health and safety, and management of labor relations. In addition, it encompasses ancillary tasks such as job design and analysis, orientation, placement, career planning and development, motivation, job satisfaction, quality of life programs, employee supervision, communication, disciplining, management of termination, employment contracts, HR search, accounting, auditing, Human Resource Information System, HR policies and procedures (Alkhamis, 2024). Globalization has changed the nature of the marketplace. In a very volatile and competitive marketplace, human resource practices are becoming more and more crucial for the success of any organization (Rudawska, 2024). Nevertheless, despite the fact that globalization created more competition and unstable environments, also it has added to the development of the human resource concept. Globalization has significantly enhanced HRM in the tourism sector by promoting diversity, standardization, advanced

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training, technology integration, and strategic HR practices (Al Harrasi, 2024). These improvements help tourism companies better to manage their human resources, leading to increased efficiency, employee satisfaction, and superior customer service. The findings of the article align with many similar studies (Shah et al., 2024; Elrehail et al., 2020; Keltu, 2024).

MATERIALS AND METHODS

The framework of the research is as follows Figure 1. The concept of Human Resources Practices has been delineated from various perspectives. Schuler and Jackson (1987) defined the concept as a system that draws in, cultivates, motivates, and retains employees to guarantee the efficient execution and longevity of the organization and its members, as stated in Tan and Nasurdin (2010). An entity's human capital contributes to the achievement of business objectives through a set of internally consistent policies and practices. These policies and practices are designed and implemented to ensure that the firm's human resources are effectively utilized (Delery and Doty, 1996). Mimbaeva (2005) argued that HR practice refers to a collection of strategies employed by organizations effectively to manage their human resources.

These strategies aim to foster the growth of specialized skills that are unique to the organization, cultivate intricate social relationships, and generate organizational knowledge to maintain a competitive edge. It refers to a set of formal policies and philosophies that aim to attract, develop, motivate, and retain employees who are crucial for the organization's effective functioning and long-term survival. Katou and Budhwar (2007) and Pfeffer (1998) argue that a universal bundle of best practices, including recruitment, training, staff appraisal, and compensation systems, indirectly enhances organizational performance. Wagner (1994) states that forward-thinking companies view HR practices as a strategic tool to promote team accountability, improve organizational culture, and foster customer relationships through participation and empowerment. This, in turn, aids in the development of new markets and services (Singhal and Gupta, 2005).

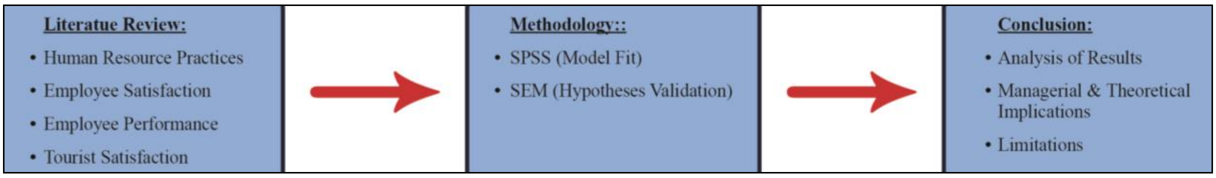

Figure 1. Flowchart of the study

Satisfaction of employees

Theories, approaches, and concepts regarding employee behavior, motivation, and satisfaction were developed in response to the managerial challenge of effectively managing individuals within organizations to achieve organizational goals (Miljkovic, 2007). This challenge served as the foundation for the development of leadership strategies. The manager's role is to choose and implement suitable strategies, tailored to the precise circumstances, to promote desired employee behavior and achieve the organization's goals and objectives, as well as the personal goals of the employees (Rudawska, 2024). Employee satisfaction, as initially defined, encompasses the interplay of psychological and environmental factors that influence an employee's contentment with their performance (Pavlović and Marković 2014).

According to Locke (1976), employee satisfaction is defined as a favorable or optimistic emotional condition that arises from the execution of a job or the overall work experience. According to Davis and Nestrom (1985), employee satisfaction is a straightforward concept that encompasses both positive and negative emotions that an employee experiences towards their job. These authors assert that job satisfaction is intricately connected to an employee's behavior in the workplace and the extent to which their expectations align with the actual rewards they receive from their work. Statt (2004) also supports this perspective, asserting that employee satisfaction is demonstrated by the degree to which the employee is content with the rewards they receive for their job performance.

According to Lease (1998), employees who are more satisfied with their work are less likely to be absent, more productive, more committed to the organization and its objectives, and generally more content with their lives. Sagger et. al (2012) assert that organizational factors have a significant influence on employee satisfaction levels. Given the significant amount of time employees dedicate to their work, it is reasonable to expect that various factors within the organizational environment will have an impact on employee satisfaction (Davras and Aktürk, 2024).

Enhancing employee satisfaction can be achieved by effectively managing various organizational factors, including organization development, the rewards system, promotion and career development, work environment, relationships with management, teamwork, and overall work satisfaction (Drinić et al., 2014).

This is particularly apparent in the service sector, specifically in industries like tourism and hospitality, where the emphasis on quality lies in the services delivered by employees. The quality of these services is heavily reliant on the employees' knowledge, skills, appearance, and behavior toward tourists. Given the intangible nature of services in the tourism industry, consumers have limited options for assessing their overall experience.

Among these options, the most significant tangible indicators of service quality are the employees' courtesy, service, and professionalism (Awad et al., 2024). Hence, the level of tourist satisfaction with the quality of services provided is largely determined by the caliber of interaction between employees and tourists.

The performance of employees

According to Ahmad and Zainol (2011), employee performance is reflected in the employee's beliefs about their behavior and contributions to the organization's success. They also mentioned that compensation practices, performance evaluation, and promotional practices are factors that influence employee performance. Anitha (2014) defines employee performance as a measure of the financial or other results achieved by an employee, which directly impacts the organization's performance and success. Anitha also identifies several key factors that influence employee performance, including the work environment, leadership, teamwork, relationships with colleagues, training and career development opportunities, reward programs, guidelines and procedures, and employee engagement.

Nevertheless, a study conducted by Alagaraja and Shuck (2015) sought to uncover predominant perspectives on organizational structure and employee engagement to comprehend the factors linked to improving individual performance. The study argues that employee performance can be elevated through training and development. In addition, Ng and Feldman (2010) utilized various indicators to assess employee performance. These indicators encompassed core task performance, which encompassed in-role performance, safety performance, and creativity. They also considered citizenship performance, which was further divided into target-specific and general organizational citizenship behaviors. Lastly, they examined counterproductive performance, which encompassed general counterproductive work behaviors, workplace aggression, substance use, tardiness, and absenteeism.

Hence, the performance of employees contributes to the overall performance of the company by fostering innovation. Specifically, when employees are satisfied, motivated, and dedicated, they generate innovative ideas for new products or services. This, in turn, leads to improvements in quality, operational efficiency, and customer satisfaction (Sadikoglu and Zehir, 2010). The process of globalization has led to numerous changes and difficulties that impact both the private and public sectors worldwide, including for example Nigerian universities. While there may be ongoing debates regarding the advantages and disadvantages of these changes, it is essential thoroughly to examine and evaluate employee performance. Consequently, due to the declining state of employee performance in universities, it is necessary to establish a policy that can effectively enhance the management of Nigerian universities and promote higher employee performance across all institutions.

Employee performance measures

The argument presented by Ahmad and Shahzad (2011) is that the apparent performance of an employee is a manifestation of the employee's complete conviction with regard to the actions and contributions that they make toward the accomplishment of the organization's goals and mission. In addition, they mentioned that the practices of compensation, evaluation of performance, and practices concerning the promotion of an employee are the benchmarks for determining the performance of a worker. In addition, Anitha (2014) stated that the performance of an employee is a gauge or pointer of the monetary or other result of the employee and that this result has an unchanging relationship with the performance and accomplishments of the organization. Additionally, Anitha (2014) reveals that the environment in which employees perform tasks and other schedules, the relationship with supervisors, the relationship between co-workers and the team, the compensation procedures, and the level of engagement of an employee are all factors that determine performance.

On the other hand, Alagaraja and Shuck (2015) reveal that the performance of employees can be evaluated through the implementation of consistent training and further development. As an additional point of interest, Thomas and Feldman (2010) consider the measures of employee performance to be core job performance, which encompasses in-role performance, security performance, and inventiveness. Following closely behind is citizenship performance, which is branded as equally targets-specific and wide-ranging organizational citizenship. For this study, however, the dimensions for measuring employee performance that were presented in the research conducted by Liao et al. (2012) were selected. This is because the dimensions of employee performance in those studies were measured from the perspective of the organization, the employee, and the job itself. Specifically, organizational objectives, employee objectives, performance development, and employee satisfaction were used as measures of employee performance, which makes it more comprehensive.

Therefore, the performance of an employee creates space for innovativeness influencing the performance and innovativeness of the general firm (Al-Nakeeb and Ghadi, 2024). This is done in such a way that the successful work of accomplished, inspired, and enthusiastic human resources results in ground-breaking ideas for newer products or services, as well as an increase in performance quality and the satisfaction of customers (Sadikoglu and Cemal, 2010).

According to Ruky (2010), performance is a type of business activity or program that is initiated and implemented by the leadership of the organization or company in order to direct and control the performance of the employees. In the meantime, according to Praditya (2020), performance is the result of work in both quality and quantity that an employee achieves in the course of carrying out his duties under the responsibilities that have been assigned to him. As was mentioned earlier, the poor performance of an employee will affect the overall performance of the organization. To put it another way, the performance of employees can be a reflection of the performance of the organization (Al-Nakeeb and Ghadi, 2024).

According to Astuti and Amalia (2021), Performance can be defined as the outcome of a process (Sumarsi and Rizal Thomas, 2021) or the degree to which an individual or an entire group achieves success in carrying out their responsibilities over a specific time period in terms of both the quality and quantity of their work. Consequently, performance is always evaluated based on the results, and not on the efforts that individuals make; more specifically, it is evaluated on how well individuals can fulfill the requirements of their work (Hosmani and Shambhushankar, 2014). It is possible to draw the conclusion that employee performance is the result of employee work as a whole or during a certain period of time, both in terms of quality and quantity, based on criteria that have been predetermined and agreed upon. This conclusion can be drawn from the definition of performance shown above. There are many factors that can affect the performance of an employee (Al-Nakeeb and Ghadi, 2024). There were only two aspects that were investigated in this study, and those were job satisfaction and work discipline. Two factors that are thought to have the potential to influence employee performance are job satisfaction and work discipline. According to Astuti and Amalia (2021), employee performance is influenced by a number of factors, including compensation, employee training, work environment, work culture, leadership, motivation, discipline, and job satisfaction. This is based on the opinion that "employee performance is influenced by several factors."

According to Praditya (2020), performance is the result of work that has a strong relationship with the strategic objectives of the organization, the satisfaction of the customers, and the contribution to the economy. Consequently, performance is about carrying out the work and the outcomes that are achieved as a result of that work. Performance, according to Asbari et al. (2021), is defined as the result of work accomplished by an individual or group of individuals within an organization, in accordance with their respective authorities and responsibilities, in an effort to achieve the goals of the organization concerned, legally not violating the law, and in accordance with morals and ethics.

In order to evaluate employee performance for the purpose of this study, the following dimensions of employee performance were considered: 1. Quantity of Work (quantity of work) with indicators; the amount of work completed in a given time period, including things like meeting work targets, finishing work on time, and maintaining a disciplined work environment. 2. The quality of the work with indicators; the quality of the work that is accomplished is determined by conformity and the requirements that have been determined, such as accuracy, skill, and accuracy. 3. Job knowledge, also known as work knowledge, along with indicators; the breadth of their knowledge regarding the job and their skills. 4. Creativeness (creativity) with indicators; the genuineness of the ideas that are presented and the actions that are taken to solve the issues that are brought up. 5. Cooperation with indicators; willingness to cooperate with other people or fellow members of the organization. 6. Dependability (dependence) with indicators; awareness to gain confidence in attendance and completion of work; awareness to gain work completion and attendance. Initiative (initiative) with indicators; and enthusiasm to carry out new tasks and to expand their responsibilities are the seventh and eighth characteristics. Individual characteristics, including personality, leadership, hospitality, and personal integrity, are outlined in the eighth point.

Satisfaction of Lebanese tourists

There are many different ways to define the concept of customer satisfaction (Davras and Aktürk, 2024). In their 1982 study, Churchill and Surprenant define satisfaction as the result of a purchase and its subsequent use. This result is derived from the buyer's comparison of the reward and the cost of the purchase, which is related to the anticipated consequence. Customer satisfaction is defined by Peter and Olson (2010) as the "degree to which a consumer's pre-purchase expectations are fulfilled or surpassed by a product." That is the definition of customer satisfaction. Hansemark and Albinson (2004) define satisfaction as "an overall customer attitude towards a service provider, or an emotional reaction to the difference between what customers anticipate and what they receive, regarding the fulfilment of some needs, goals, or desire" (Hansemark and Albinson, 2004) Customer satisfaction can be defined as "an emotional reaction to the difference between what customers anticipate and what they receive."

When it comes to the satisfaction of tourists, it can be viewed as a post-purchase construct, which primarily consists of the function between pre-travel expectations and travel experience (Moutinho, 1987). According to Pizam et al. (1978), tourist satisfaction can also be defined as the interaction result between the tourist's experience at the destination and the tourist's expectations regarding the destination. The term "tourist satisfaction" is defined by Tribe and Snaith (1998) as "the degree to which a tourist's assessment of the attributes of a destination exceeds his or her expectations for those attributes." This definition speaks to the level of satisfaction that tourists have concerning the characteristics of the destination.

Because of their intangibility and the fact that they cannot be stored, the goods and services that a tourism organization provides are of a nature that is considered to be an example of perishable goods. Employees working in tourism are tasked with ensuring that customers have an enjoyable and memorable experience. There are many different services that are provided by a tourist organization, and the quality of those services is heavily dependent on the quality of the employees who provide them (Davras and Aktürk, 2024). As a consequence of this, human resources should be aware that they are required to make a significant investment in the development of the tourist labor force. This is necessary in order to ensure that the needs of the skilled labor force are satisfied and that the expansion of tourist organizations is preserved (Awad et al., 2024). The lack of available skilled labor force will make it difficult for a tourism organization to achieve its growth goals, which will, in turn, have a negative impact on the organization's socioeconomic status. Although the tourism industry is a global one, a successful human resource manager must also take a local approach when developing strategies to address the shortages in human resource management, and to adopt the unique opportunities. Offered by the available local workforce.

In tourism organizations, the concept of collaboration is referred to as the communication between tourists and employees during the process of service realization (Jawabreh et al., 2024). The success of this interaction is largely dependent on the capabilities, knowledge, and skills of employees in the provision of services. The degree to which workers in the tourism industry are content in their jobs is the primary factor that determines the quality of their performance. According to Vrtiprah and Sladoljev (2012), employees who are not sufficiently professional and who are dissatisfied can have a long-term negative impact on the quality of services and products, and consequently, on the satisfaction of customers in the tourism industry. The assumption that there is a correlation between employee satisfaction and consumer satisfaction in the service industry was validated by the findings of a number of empirical studies (Harter et al., 2002; Koys, 2003; Wangenheim et al., 2007; Yee et al., 2008; Jung andYoon, 2013). These studies indicate that there is a significant impact of employee satisfaction on the creation and maintenance of customer satisfaction and loyalty, which ultimately leads to an increase in sales and profitability for the organization. Even though there are studies in domestic, expert and scientific literature that examined various factors of tourist satisfaction and employee satisfaction in the tourism sector (Laškarin and Ažić, 2017; González et al., 2007; Sekulić, 2016), there is a significantly lower number of studies which have investigated the impacts and effects of employee satisfaction on customer satisfaction (Jeon and Choi, 2012).

This has led to a subject of the research that is being conducted in this paper, which is to investigate the impact that the satisfaction of employees has on the satisfaction of tourists with the services that are provided by spa tourism in the Republic of Serbia. Organizations in the tourism industry employ a variety of strategies in order to achieve and maintain competitiveness. As a result, it is essential to investigate whether correlation between the satisfaction of employees and the satisfaction of customers with the quality of services provided. This is necessary in order to devise an efficient strategy and allocate significant resources in order to increase employee satisfaction. Considering that tourist satisfaction can be interpreted as an evaluation of the user's experience with the services that are provided, it is essential that tourist satisfaction with the service be rated at least as good as what was anticipated (Hunt, 1977).

As Oliver (1980) explains further, customer satisfaction or dissatisfaction is the result of an individual experiencing the service and comparing the experience to the expectations that they had for the service. Therefore, the satisfaction of tourists is determined by their actual experiences as well as their overall impression of the quality of the service that is provided.

There are two dimensions that make up the quality of services. These are the technical quality and the functional quality. The technical quality refers to the actual benefits that the consumer receives from the service that is provided, while the functional quality refers to the ways in which the consumer receives the service (Drinić et al., 2014). In his work from 1984, Gronroos asserts that the technical aspect of service quality should not be overlooked; he emphasizes that the functional quality is the most important factor in determining the quality of service. As a result, the interaction that tourists have with the staff members working in the tourism industry is a significant factor that plays a role in determining the overall quality of the service that is provided (Ayele and Singh, 2024). It is persuasive, indeed in many ways self-evident, to draw the conclusion that there is a direct relationship between employee satisfaction and the level of satisfaction that tourists have with the quality of service. This conclusion can be reached by considering the findings of the research that was mentioned earlier on the impact of employee satisfaction on their work performance and their commitment to their employers. The assumption that there is a correlation between the satisfaction of employees and the satisfaction of customers in the service industry is supported by the findings of a number of studies.

According to the findings of one of the earliest studies, which was conducted by Schneider and Bowen (1985), satisfied employees demonstrate greater initiative, which further positively reflects on increasing customer satisfaction with the quality of service. The findings of the longitudinal study that was carried out by Bernhardt et al. (2000), in order to examine the relationship between employee satisfaction, consumer satisfaction, and the profitability of fast food restaurant chains, have shown that there is a positive and significant relation between employee satisfaction and consumer satisfaction. In the research that Spinelli and Canvos (2000) carried out in six hotels (involving 240 employees and 600 guests) the researchers were able to establish a statistical correlation between the level of satisfaction experienced by employees and the level of satisfaction experienced by guests. According to the findings of a meta analysis that was conducted on 7,937 business units across 36 companies, the purpose of which was to investigate the influence of employee satisfaction on customer satisfaction, profitability, productivity, and employee fluctuation, it was discovered that employee satisfaction has a significant impact on all of the variables that were mentioned (Harter et al., 2002).

A survey was carried out by Chi and Gursoy (2009) in order to investigate the connections between the satisfaction of employees and the satisfaction of tourists in 150 three- and four-star hotels. The findings of the research are in agreement with the findings of the studies that were mentioned earlier. It has been established that there is a direct connection between the satisfaction of the employees and the satisfaction of the tourists or hotel guests. The findings of the mentioned and other empirical studies provide ample evidence for the firm conclusion that satisfied employees are highly motivated to provide quality service to customers. Thus wise management of tourist organizations should place a primary emphasis on employee satisfaction. Analyzing the gaps in the literature review, the study generated the conceptual model below seen in Figure 2.

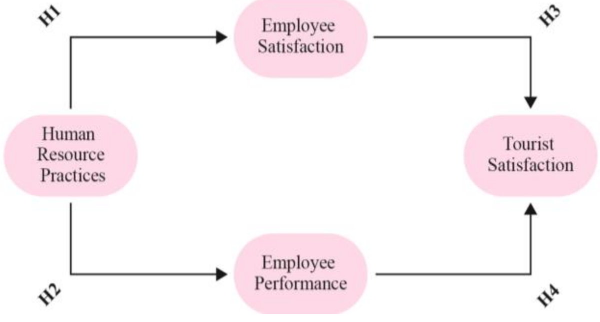

Figure 2. Conceptual Model

Hypothesis (1): The impact of Human Resource Practices- **HRP** on Employee Satisfaction-**ES**
Hypothesis (2): The impact of Human Resource Practices-**HRP** on Employee Performance-**EP**
Hypothesis (3): The impact of Employee Satisfaction-**ES** on Tourist Satisfaction-**TS**
Hypothesis (4): The impact of Employee Performance-**EP** on Tourist Satisfaction-**TS**

RESULTS AND DISCUSSION

As the famous proverb states*: "To win in the marketplace, you must first win in the workplace"***-** Douglas R. Conant is a noted keynote speaker and New York Times bestselling author with over 40 years of experience in leadership at elite international corporations. This quotation emphasizes how crucial it is to put employee happiness, engagement, and well-being first as the cornerstones of success in the business. Moreover, workers are more likely to be creative, inventive, and customer-focused when they feel appreciated, driven, and encouraged- *by adequate Human Resource Practices*. Positivity in the workplace encourages loyalty, draws in top talent, and eventually boosts competitiveness and corporate growth leading to profitable results in all business aspects - *client satisfaction.* Therefore, making investments in your staff is not just the morally right thing to do, but also a wise business move.

Method of Sampling

To choose the participants, a stratified random sampling procedure is employed. It guarantees that every population subgroup is accurately represented in the sample. Out of the 150 respondents who were given the survey, 112 of them replied. 112 of the data were deemed suitable for analysis after cleaning. Diversity across industries and corporate sizes is ensured by this size.

Methodology used

Deductive reasoning is used in the reasoning technique to test generic hypotheses with generated data and go from them to specific observations. A *cross-sectional research design* has been used in this work to investigate how Human Resource Practices (HRP) affects Tourist Satisfaction (TS). A cross-sectional method makes it possible to gather information at a particular moment in time, giving an overview of the variables being studied as they stand right now.

A *quantitative survey* is the ideal measurement tool. Next, a 24-question structured questionnaire was utilised, made up of four divisions, each holding between 5 to 8 questions. SPSS is used statistically to evaluate the scale. The study performed an approach used for the first time in this academic area when dividing the questionnaire into 2 parts, where part 1 evaluated employee satisfaction and performance and the second part highlighted tourist satisfaction from the same resorts so that the questionnaire can be analyzed as one entity. A pre-test to find out whether there are any possible problems with the items' clarity, comprehension, or relevance before distributing the questionnaires to the sample. Cognitive interviews or focus groups with a small number of people within the target demographic can be used for this. Pilot testing is essential to guaranteeing the trustworthiness and validity of the research. In this case, the questionnaire was distributed to ten doctorate level experts in the field and to four human resource managers to obtain their opinions on any adjustments that should be implemented. The survey has closed-ended Likert scale questions with answers that range from Strongly Disagree to Agree Strongly. Data was converted to two Google Forms, and the selected sample received the link through WhatsApp. We used stratified sampling to select our responders. Random sampling was used to ensure that each individual had an equal opportunity to be designated, selecting members of the population in an entirely impartial and equitable fashion. This strategy is a fundamental component of reliable research methodology since it is necessary to generate samples that accurately represent the overall population.

Conclusion

To sum up, this study investigated the complex relationships that exist between tourist satisfaction and human resource practices, as mediated by employee performance and satisfaction. The study's goal was to determine how these variables interacted with one another through the development of hypotheses and a well-organized conceptual model. In terms of methodology, the use of stratified sampling techniques in conjunction with primary data gathering through surveys guaranteed a solid dataset for analysis. The study instrument's validity and reliability were further improved by pilot testing and instrumentation. Descriptive statistics, and factor analysis were all used in the statistical studies, which were mostly carried out with SPSS and offered thorough insights into the relationships that were being examined. Overall, by examining the mediating roles of employee performance and satisfaction, this study adds to our understanding of how HR policies affect visitor satisfaction and have important consequences. SEM was utilized to validate the hypotheses deduced at the end of the literature review.

Human Resource Practices:

Utilizing the Kaiser–Meyer–Olkin (KMO) test, one can assess the statistical appropriateness of data for factor analysis. The test evaluates how well each variable and the entire model are sampled. The statistic expresses how much of the volatility in a set of variables may be common variance.

It determines if every correlation coefficient is zero. For factor analysis to be performed, the test determines the likelihood that the correlation matrix contains significant correlations between at least some of the variables in a dataset.

Table 1. KMO and Bartlett's test for HRP

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.815
Bartlett's Test of Sphericity	Approx. Chi-Square	273.779
	df	28
	Sig.	.000

Table 2. Communalities- HRP

	Initial	Extraction		Initial	Extraction
HRP1	1.000	.496	HRP5	1.000	.603
HRP2	1.000	.498	HRP6	1.000	.547
HRP3	1.000	.585	HRP7	1.000	.642
HRP4	1.000	.685	HRP8	1.000	.702

The KMO measure in Table 1 is 0.815, which is regarded as good (greater than 0.6). It implies that there is sufficient shared variance among the variables in the dataset to move forward with factor analysis.

The results of Bartlett's Test suggest that the correlation matrix does not conform to an identity matrix, as the p-value of 0.000 (<0.05) is a statistically significant indication. The fact that the variables are consequently associated demonstrates the utility of factor analysis. The extraction communalities as can be observed in Table 2 indicate the degree to which the factors taken out of the data account for the variations in the variables that were observed. The factors are more successful in capturing the variance in the associated variables when the extraction communalities are higher. For variables with lower communalities and to sufficiently explain their variance, more research or other factors could be required.

In the above table, there exist two sets of communalities: Extraction communalities and initial communalities. Initial communalities compriseis the relationship between the variable and every other variable (that is, the squared multiple correlations between the item and every other item) that is represented by these initial communalities prior to rotation. The probability that results could be skewed is greater when the sample size is small and the majority or many communalities are small (<0.5). Since it is assumed that every variable accurately captures its underlying hypothesis without considering any other considerations, these values are initially set to 1.000. Focusing on the above table, analyzing HRP1 through HRP8, it is remarkable that HRP1 and HRP2 have values lower than 0.5, but they are considered acceptable since they are very close to the desired value. It is recommended to remove the questions that are less than 0.5 to make the scale more consistent.

Employee Satisfaction

The KMO value in the analysis is 0.845, which is a relatively high value. This implies that the variables can be used for factor analysis because of their strong correlation with one another. KMO readings are generally regarded as acceptable when they are above 0.6 and as creditable when they are over 0.8.

A rough Chi-Square value, degrees of freedom, and a significance level (Sig.) are also produced by the test.

A rough Chi-Square value of 286.276 with 10 degrees of freedom and a significance level (Sig.) of.000 were obtained from the analysis using Bartlett's Test. The statistical significance of the Bartlett's Test is demonstrated by the significance level (Sig.) being less than 0.05. This indicates that rejecting the null hypothesis is justified. The variables are correlated and appropriate for factor analysis since the correlation matrix is not an identity matrix.

We conclude that applying the factor analysis can be extremely appropriate for the data, as indicated by the significant Bartlett's Test (Sig. <0.05) and high KMO value (0.845). While Bartlett's Test shows that these correlations are statistically significant and not the result of chance, the KMO value indicates that the variables have significant correlations with one another. This implies that the dataset can be used with confidence to apply the factor analysis.

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.845
Bartlett's Test of Sphericity	Approx. Chi-Square	286.276
	df	10
	Sig.	.000

Table 4. Employee Satisfaction – Communalities

	Initial	Extraction		Initial	Extraction
ES1	1.000	.587	ES4	1.000	.814
ES2	1.000	.506	ES5	1.000	.622
ES3	1.000	.791			

The Extraction communalities demonstrate that the components extracted from the data account for a substantial portion of the variation in each variable. Higher communalities suggest stronger links between the variables and the extracted components. In this instance, ES2 and ES5 have comparatively lower communalities, indicating moderate associations, whereas ES3 and ES4 have exceptionally high communalities, showing strong relationships with the extracted components. Since it is required that Communalities should be >0.5, closest to 1, looking through Employee Satisfaction-ES1 till ES5 they all hold values above the required as can be observed in Table 4.

This indicates that there is a strong relationship between the observed variables and the factors extracted during factor analysis. Furthermore, it describes a good model fit and good interpretability. This means that the factors provide a clear and meaningful representation of the underlying constructs measured by the variables.

Table 5. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.850
Bartlett's Test of Sphericity	Approx. Chi-Square	369.689
	df	15
	Sig.	.000

Table 6. Employee Performance- Communalities

	Initial	Extraction		Initial	Extraction
ES1	1.000	.506	ES4	1.000	.715
ES2	1.000	.733	ES5	1.000	.747
ES3	1.000	.720	EP6		.654

Employee Performance

The KMO value in this investigation is 0.850, which is a rather high value. This implies that the variables are appropriate for factor analysis because they have strong relationships with one another. In general, a KMO score of 0.6 is regarded as acceptable, and values above 0.8 as creditable. A rough Chi-Square value of 369.689 with 15 degrees of freedom and a significance level (Sig.) of.000 were obtained from this analysis using Bartlett's Test as can be observed in Table 5. The statistical significance of the Bartlett's Test is demonstrated by the significance level (Sig.) being less than 0.05. This implies that it is appropriate to reject the null hypothesis. The variables are correlated and proper for factor analysis since the correlation matrix is not an identity matrix.Strong evidence for the data's suitability for factor analysis comes from the combination of a high KMO value (0.850) and a substantial Bartlett's Test (Sig. <.05.

Bartlett's Test shows that the correlations between the variables are statistically significant and not the result of chance, while the KMO value suggests that the variables have strong correlations with each other. Factor analysis on the dataset can thus be done with confidence. To summarize, the extraction communalities serve as a scale for how well the factors derived from the data account for the variations observed in the variables. Higher communalities suggest stronger links between the variables and the extracted components. To understand why certain variables—like EP1—are underrepresented in the retrieved factors (Table 6), more research may be necessary.

Tourist Satisfaction

In this case, the KMO value of 0.612 (Table 7) satisfies this condition, indicating that the variables in the dataset are appropriate for factor analysis and have a reasonable level of correlation since the value for acceptance should be >0.6. This supports the conclusion that the correlation matrix in the statistical significance of Bartlett's Test of Sphericity further supports the existence of correlations between the variables and is not an identity matrix. Thus, it seems that the dataset is appropriate for factor analysis based on the KMO value and Bartlett's Test, and more research using this technique is necessary. All communalities are within accepted ranges as can be observed in Table 8.

Table 7. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.612
Bartlett's Test of Sphericity	Approx. Chi-Square	44.882
	df	10
	Sig.	.000

Table 8. Communalities- TS

	Initial	Extraction		Initial	Extraction
TS1	1.000	.631	TS4	1.000	.501
TS2	1.000	.725	TS5	1.000	.610
TS3	1.000	.569			

Table 9. Crombach alfa- HRP – Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.824	.824	8

Table 10. Cronbach Alfa- ES

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.871	.871	5

Table 11. Cronbach Alfa- EP – Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.871	.874	6

Table 12. Cronbach Alfa- TS – Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.549	.550	5

Reliability: Cronbach Alfa

Cronbach's alpha determines how closely connected a group of objects is to one another. It evaluates if a scale's elements are reliably measuring the same construct. Greater reliability is shown by higher Cronbach's alpha values, which imply that the scale's items are more closely related and consistently measure the same underlying notion. Researchers commonly use Cronbach's alpha to evaluate the validity of questionnaires, surveys, and psychological examinations. It helps guarantee that the components of these devices are consistently measuring what they are supposed to measure. For research purposes, Cronbach's alpha levels above 0.7 are typically regarded as acceptable. Cronbach's alpha in Table 9 is 0.824, according to the dependability statistics in the above table, and this figure holds even when taking into account standardized items. There are eight items on the scale. As shown by Cronbach's alpha value of 0.824, the scale's components seem to have a high degree of internal consistency. Stated otherwise, the scale's items assess the same underlying structure or concept consistently and are closely related. This suggests that the form intended to determine can be reliably measured with the scale.

According to the dependability statistics given, the employee satisfaction scale has a Cronbach's alpha of 0.871 as can be seen in Table 10. Even when standard items are taken into account, this value stays the same. There are five items on the scale. The elements in the scale appear to have a good degree of internal consistency, as indicated by Cronbach's alpha rating of 0.871. As stated otherwise, the scale's elements evaluate the same fundamental idea of employee satisfaction consistently and are closely related to one another. This suggests that, in this situation, the scale for determining employee happiness is valid. The validity of any results reached from utilizing this scale in employee satisfaction-related research or assessment is increased since researchers can be confident that the scale's items are accurate indicators of job satisfaction.

According to the reliability numbers given, the scale's Cronbach's alpha is 0.871 (Table 11); taking into account standardized items, it rises slightly to 0.874. There are six items on the scale. When the items in the scale have a Cronbach's alpha value of 0.871 (or 0.874 when the items are standardized), it indicates a high degree of internal consistency. This shows that the scale's items assess the same underlying idea consistently and are closely related to one another. When standardized items are taken into account, Cronbach's alpha increases, which could mean that the internal consistency of the scale has been somewhat enhanced by standardizing the items (for example, through z-score transformation). These dependability data show that all things considered (the idea it measures isn't stated here), the scale is fairly reliable. This scale offers consistent measurements that researchers can rely on, which increases the validity of any findings that may be made when utilizing it in a study or assessment. According to the dependability statistics supplied, the scale's Cronbach's alpha is 0.549 (Table 12); when standardized items are taken into account, this value rises slightly to 0.550. There are five items on the scale. A Cronbach's alpha of 0.549 (or 0.550 for standardized items) indicates that the internal consistency of the items in the scale is not very high. This suggests that the scale's elements are not as tightly related to one another and could not be measuring the same underlying idea consistently. Cronbach's alpha of less than 0.7 indicates that there might be reliability problems as well as conceptual problems with the scale or that some of the scale's elements are not consistently helping to measure the desired construct. It is crucial to thoroughly examine every item on the scale, consider any possible sources of inaccuracy or inconsistency, and determine whether any adjustments are required to increase the scale's trustworthiness. Depending on its intended use and setting, further validation and improvement might be needed to confirm the validity and dependability of the scale for measuring the intended construct.

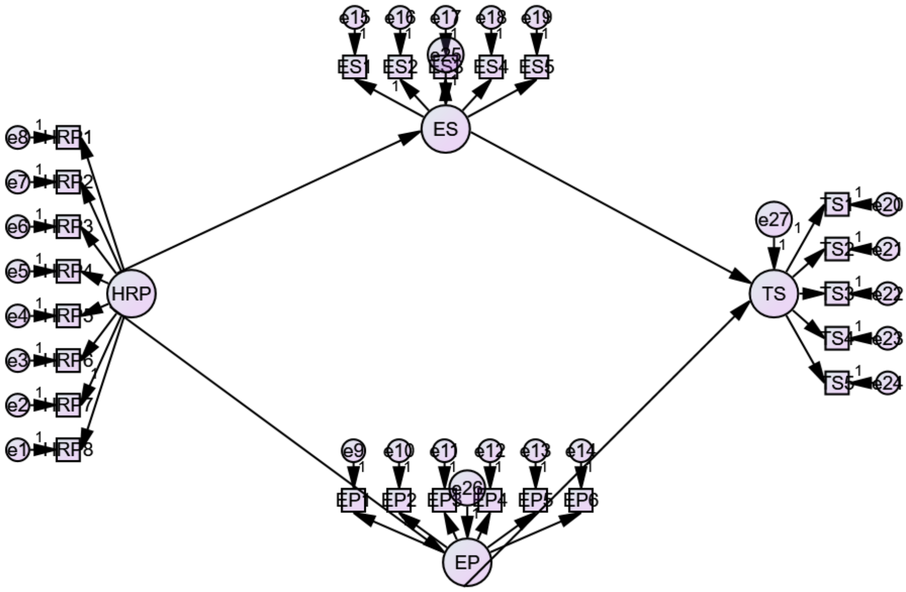

Figure 3. Conceptual model generated by SEM

Structural Equation Modelling (SEM) and SPSS (Statistical Package for the Social Sciences) are both valuable tools for hypothesis testing, but they serve different purposes and have different capabilities. SEM is more accurate and informative than traditional SPSS techniques in several contexts due to its advanced features and flexibility. Moreover, SEM was chosen due to its ability to simultaneously test multiple relationships between latent variables, which is crucial for our complex model involving HR practices, employee satisfaction, employee performance, and tourist satisfaction. In Figure 3, the path chart generated by SEM is presented. Analyzing the outcome results from the Structural Equation Modelling, the p value is 0.078 as can be observed in Table 13 which shows a very weak correlation between Employee Performance and Tourist Satisfaction. This, H4 is not valid. The results of this hypothesis may lead to very interesting findings in the service sector. Tourists are interested in the attitude of the employees more than their professional performance.

Table 13. Pathway for the SEM - Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
ES	<---	HRP	.704	.117	6.013	***	
EP	<---	HRP	.237	.074	3.203	.001	
TS	<---	ES	.125	.034	3.671	***	
TS	<---	EP	.069	.039	1.763	.078	
HRP8	<---	HRP	1.000				
HRP7	<---	HRP	.920	.141	6.508	***	
HRP6	<---	HRP	.912	.135	6.739	***	
HRP5	<---	HRP	.703	.130	5.415	***	
HRP4	<---	HRP	.720	.115	6.262	***	
HRP3	<---	HRP	.875	.139	6.295	***	
HRP2	<---	HRP	.602	.113	5.349	***	
HRP1	<---	HRP	.613	.126	4.882	***	
EP1	<---	EP	1.000				
EP2	<---	EP	1.909	.477	4.001	***	
EP3	<---	EP	2.086	.522	3.998	***	
EP4	<---	EP	2.212	.552	4.004	***	
EP5	<---	EP	2.245	.556	4.035	***	
EP6	<---	EP	1.741	.445	3.915	***	
ES1	<---	ES	1.000				
ES2	<---	ES	.870	.141	6.179	***	
ES3	<---	ES	1.232	.145	8.504	***	
ES4	<---	ES	1.316	.158	8.331	***	
ES5	<---	ES	1.061	.154	6.880	***	
TS1	<---	TS	1.000				
TS2	<---	TS	.836	.391	2.136	.033	
TS3	<---	TS	.986	.405	2.435	.015	
TS4	<---	TS	1.633	.517	3.158	.002	
TS5	<---	TS	2.762	.676	4.088	***	

Hypothesis (1): The impact of Human Resource Practices- **HRP** on Employee Satisfaction-**ES**

ES <--- HRP	.704	.117	6.013	***

Analyzing the outcome results from the Structural Equation Modelling, the p value is 0.000 which shows strong correlation between Human Resource Practices and Employee Satisfaction. This, H1 is valid.

Hypothesis (2): The impact of Human Resource Practices-**HRP** on Employee Performance-**EP**

EP <--- HRP	.237	.074	3.203	.001

Analyzing the outcome results from the Structural Equation Modelling, the p value is 0.001 which shows strong correlation between Human Resource Practices and Employee Performance. This, H2 is valid.

Hypothesis (3): The impact of Employee Satisfaction-**ES** on Tourist Satisfaction-**TS**

TS <--- ES	.125	.034	3.671	***

Analyzing the outcome results from the Structural Equation Modelling, the p value is 0.000 which shows strong correlation between Employee Satisfaction and Tourist Satisfaction. This, H3 is valid.

Hypothesis (4): The impact of Employee Performance-**EP** on Tourist Satisfaction-**TS**

TS <--- EP	.069	.039	1.763	.078

CONCLUSION

This study provides empirical evidence of the complex relationships between human resource practices, employee factors, and tourist satisfaction in Lebanon's tourism sector. The strong link between HR practices and employee satisfaction, and subsequently between employee satisfaction and tourist satisfaction, underscores the critical role of effective HR management in enhancing tourist experiences. The unexpectedly weak relationship between employee performance and tourist satisfaction challenges conventional wisdom and highlights the paramount importance of employee attitude and friendliness in shaping tourist satisfaction. These findings have significant implications for both theory and practice.

Managerial &Theoretical Implications

The activities that follow from the outcomes are summed up in the managerial implications. Stated differently, the Managerial Implications assess the outcomes approaching the action standard and suggest a valid course of action.

Investing in HR Practices: Businesses in the tourism industry should place a high priority on making investments in efficient HR procedures designed to improve worker performance and satisfaction. The findings align with the study of Shah et al. (2022). This involves actions to promote a healthy work environment, like training programs, performance management systems, and open lines of communication. Emphasis on Employee Happiness: Managers should give priority to activities that enhance the well-being and work happiness of their staff members, as these factors have a substantial impact on both employee performance and tourist satisfaction. Tactics, including career development opportunities, work-life balance initiatives, and recognition programs, can attain higher levels of employee satisfaction. Those findings align with the study of Elrehail et al. (2020). Data-Driven Decision-Making: By including metrics for customer and staff satisfaction in decision-making procedures, organizations can get important management insights. Managers may make well-informed decisions that promote customer satisfaction and employee engagement by using data analytics and feedback systems.

Performance management: Aligning individual performance with corporate goals can be facilitated by setting clear performance indicators and targets for staff members. Employees may monitor their progress and pinpoint areas for development with the help of regular performance reviews and feedback sessions, which will ultimately increase organizational performance. The findings of the article align with the study of Keltu (2024)

Longitudinal Research and Continuous Improvement: To track the efficacy of HR procedures and their influence on employee and customer outcomes over time, organizations should take a longitudinal approach to research and evaluation. Through ongoing evaluation and optimization of strategies grounded in empirical data, companies may effectively foster continuous improvement and adjust to evolving market conditions.

Limitations of the Research

Although the analysis provides insightful information on the connections among HR procedures, worker satisfaction, worker performance, and visitor satisfaction, it should be noted that it has some limitations. To begin with, the *cross-sectional* form of the study limits the capacity to determine causality or deduce temporal correlations between variables. More convincing proof of causality would come from experimental or longitudinal designs. Furthermore, if the study primarily focuses on a particular industry or geographic area, the *sample size* may limit the generalizability of findings. Greater diversity and size of the samples used in future research could improve external validity. Furthermore, compared to multi-item scales, the *use of single-item measures* for some categories, such as tourist satisfaction, may lack validity and reliability. Lastly, even though the analysis takes certain demographic variables into account, other relevant factors like *organizational culture* or market conditions might have an impact on the relationships that are being studied.

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THE IMPACT OF AGROTOURISM DESTINATION IMAGE ON TOURIST'S LOYALTY IN ZAGHOUAN, TUNISIA: MODERATING ROLE OF VISIT'S EXPERIENCE

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Abstract: This study tests the influence of destination image on loyalty. It also examines the moderation effect of visitors' experiences in the link between the two main components of destination image and loyalty. For this reason, responses from 302 visitors at Zaghouan, Tunisia were collected using a pre-examined questionnaire form. The collected responses were analyzed with SmartPLS SEM and Multi-group analysis. The findings showed that destination image significantly and positively affected visitors' intention to revisit and recommend agrotourism destination to others. The results confirmed that destination image dimensions (cognitive and affective) influence visitors' loyalty. These influences are significantly moderated by tourist's experiences. New visitors with new experiences have less influence on the link between image and loyalty than regular visitors. The findings have some propositions for tourism destination marketers and scholars.

Keywords: affective image, cognitive image, intention to revisit, intention to revisit, visitor's loyalty, visitor experience

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INTRODUCTION

Research on destination image (Aliedan et al., 2022; Artuger and Cetinsoz, 2017; Chew and Jahari, 2014; Maldonado-López et al., 2024; Wang et al., 2024) has confirmed that it is a key concern for scholars and tourism leaders alike. These studies confirmed that it critically affects visitors' decision to visit destination as well as their experiences and satisfaction. A consensus was clearly established between both scholars and practitioners that destination image shape the success or failure of tourism in such destination (Avraham, 2016; Stylidis and Cherifi, 2018; Khaydarova, 2024). Destination image draws on many factors such as service quality provided, which positively affect visitors' experiences (Aliedan et al., 2022; Lv et al., 2024; Ramadhani et al., 2024; Gursoy et al., 2014). Tourism destination image has paid special consideration from tourism specialists, especially its significant impact on behavioural intention of visitors (Bigné et al., 2001; Melo et al., 2024; Ghaderi et al., 2024). Hence, it is important that destination image properly developed to ensure visitors' satisfaction and loyalty as well as its generation of revenues (Ramseook-Munhurrun et al., 2015; Tsounis et al., 2024; Wafa et al., 2024). Studies (Zhang et al., 2014; An et al., 2024; Mbira, 2024) showed that destination image significantly affect visitors' behavioural intention. It was also well documented that consumers' loyalty is considered to be an antecedents of business competitiveness (Gursoy et al., 2014, Yen et al., 2024; Yang et al., 2024), which are all critical for today's business survival.

Agrotourism is a subgroup of rural tourism that encourages visitors to undertake their tourism activates at farms. It is an agriculturally-based tourism that promotes the involvement of local communities. Agrotourism has many positive economic and social impacts, especially with the development and involvement of small farmers (Ana, 2017).

It has become an important and constantly growing global industry (Mastronardi et al., 2015; Giaccio et al., 2018; Melović et al., 2024). Research on Agrotourism (Ana, 2017; Nurlaela et al., 2021, Romanenko et al., 2020) has focused on its importance, value and positive impacts, whether from economic or social aspects, including rural development.

However, there is a limitation of studies that addresses the perspective of visitors, particularly the impact of these agro-tourism destinations on their behavioural intention, which will be addressed in current research in an effort to bridge this knowledge gap. The purpose of current study is to test the impact of destination image, both affective and cognitive images,

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on tourists' loyalty, e.g. their intention to recommend and revisit these destinations. The research investigates the moderation influence of tourism experience of tourists or visitors in this relationship. The next parts of current paper is organized five parts. Following the introduction, part 2 presents studies related to tourism destination image and develop the study hypotheses. In part 3, we discussed the methodology adopted in this research. Part 4 shows the data analysis and results of the study. Part 5 section is devoted to the discussion of the findings and the last part (6) concludes the research

REVIEW OF CONCEPTS AND HYPOTHESES BUILDING

1. The concept of agrotourism

Agrotourism refers to a mixture of tourism with agriculture that accrue in the same rural setting (Sharpley and Sharpley, 1997; Yuristia and Sumantri, 2024). Belliggiano et al (2020) have indicated that agrotourism empower local community, particularly small farmers. At the same time, agrotourism best use the agricultural resources in the countryside to provide a unique experience for visitors (Mastronardi et al., 2015, Susila et al., 2024). Furthermore, Dubois and al (2017) found that agrotourism is linked to local development and aims to ensure sustainable development. Joyner and al (2018) stated that agrotourism offered a direct marketing opportunity from agronomist to visitors. Agro-tourism is an important global industry that is still growing (Giaccio et al., 2018; Masaleva and Nabiullina, 2024). Agrotourism is a tourism activity that complements agriculture. It brings together agricultural producers and tourists or day-trippers, enabling the latter to discover the farming environment, agriculture and its production.

2. The concept of destination image

The image of a tourism destination has been widely studied in earlier studies (Sio et al., 2024; Zhan et al., 2024). This concept is very important for understanding the behavior of tourists in the procedure of choosing a destination. It is at the heart of the concerns of professionals and academics (Liu et al., 2024). It is one of the most widely addressed themes in academic research and accounts for a large proportion of the work and research undertaken in the tourism context (Aliedan et al., 2022). Many researchers have also suggested that the destination image is a group of feelings, impressions, ideas and expectations that a potential or current visitor has of a precise place (Baloglu and Mc Cleary, 1999; Beerli and Martin, 2004; Zhao et al., 2024). Moreover, Jalilvand et al. (2012) have defined the destination image as "an individual's overall perception or a set of impressions of a specific place". Several researchers have found that the destination image is composed of three main aspects: cognitive, affective and conative image. The first main aspect refers to an assessment of the recognized features or aspects of the destination. The second aspect deals with emotional state towards a place. The third main aspect refers to analogue to behavior as it assesses the action aspect. Nevertheless, other studies, such as Gartner (1993), and Baloglu and McCleary (1999) postulate that the destination image is based entirely on the first two main components: cognitive and affective.

3. Destination image and intention to revisit

It has been argued that destination image significantly affects tourists' intention to revisit a place (Chew and Jahari, 2014; Li et al., 2018; Elmas et al., 2024). Earlier studies have confirmed that the destination image positively affects intention to revisit (Lee et al., 2008; Wei et al., 2024; Dewi et al., 2024). In fact, if tourists strongly appreciate a destination where they feel anticipated feelings, find a correspondence in their self-congruity or attain a positive overall perceptions, they are probable to make the decision to revisit the place (Lee et al., 2014; Zhu et al., 2024). Likewise, Sharma and Nayak (2019) empirically argued that image positively influences intention to revisit a destination. Hence, we argue that:

H1: Agro-tourism destination image has a positive impact on visitors' intention to revisit
H1/a: Agro-tourism cognitive image has a positive impact on visitors' intention to revisit
H1/b: Agro-tourism affective image has a positive impact on visitors' intention to revisit

4. Destination image and destination recommendation

Visitors' loyalty has some major aspects. The visitors' intention to recommend is one of these main aspects. There is no doubt that positive a tourist's destination image encourages visitors to endorse it to others. Positive relationship was confirmed between visitors intention to recommend and overall image components (Bigné et al., 2001; Yang et al., 2024), affective component (Lee et al., 2005) and cognitive component (McDowall and Ma, 2010). It was also found that new visitors seriously rely on recommendations from regular visitors (Stylidis et al., 2017; Zhang et al., 2014; Guo et al., 2024). Thus, the next hypotheses are proposed:

H2: Agro-tourism destination image has a positive impact on its recommendation to others
H2/a: Agro-tourism cognitive image has a positive impact on its recommendation to others
H2/b: Agro-tourism affective image has a positive impact on its recommendation to others

5. The moderating effect of tourism experience

It was acknowledged that visitors experiences, whether new or regular, has role between tourism destination and visitors loyalty, in particular intentions to revisit (Tosun et al., 2015; Jeong, 2024). When visitors repeat their visits, they are more willing to recommend this place or destination to others (Chi, 2012; Mou et al., 2024). This is because they perceive the place or destination more positively and would like to share their experiences with others. Therefore, their cognitive evaluations of the place could vary from new visitors (Tosun et al., 2015). However, converting new visitors into regular ones needs a unique experience, treating them in professional and unique way as well as meeting their expectations (Gursoy et al., 2014). Following the theoretical and empirical developments discussed above, our hypothesis regarding the moderating role of tourism experience is as follows:

H3: The visitors' experience (new versus regular visitors) has a significant moderating effect on the impact of the components of the destination's image on loyalty to the destination.

H3a: The visitors' experience (new versus regular visitors) has a significant moderating effect on the impact of cognitive image on loyalty to the destination.

H3b: The visitors' experience (new versus regular visitors) has a significant moderating effect on the impact of affective image on loyalty to the destination (Figure 1).

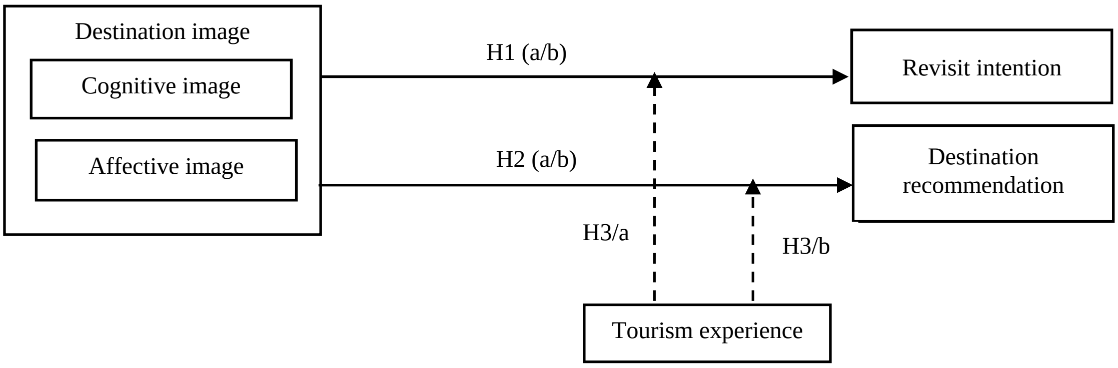

Figure 1. The conceptual model

METHODOLOGY

1. Data collection

This research undertook a quantitative approach using a convenience sample of 302 domestic and foreign tourists who visited Zaghouan as agro-tourism town and agreed to participate in this questionnaire. The survey is administrated online on an official page of Dar Zaghouan, which offers agro-tourism products. A summary of steps is presented in Figure 2.

We were fortunate in this research that our questionnaire was distributed not only through a well-known influencer on Instagram who presents content on rural tourism, hikes, camping and open-air activities, but also through popular pages in the field of tourism and agro-tourism. Table 1 presents the sample profile using demographic variables such as gender, age, socio-professional status and nationality. Our sample consisted of 302 respondents, 57.6% of whom were men (174) and 42.4% women (128). Moreover, the mainstream of responded visitors were aged between 30 and 39, which can be explained by the fact that this age group is most interested in visiting rural regions and practicing agro-tourism activities. The large part of participants was from Tunisia, more than 89.4% (270 participants). This is explained by the fact that the questionnaire was drawn up outside the tourist season. The majority of respondents were employees (34.8%).

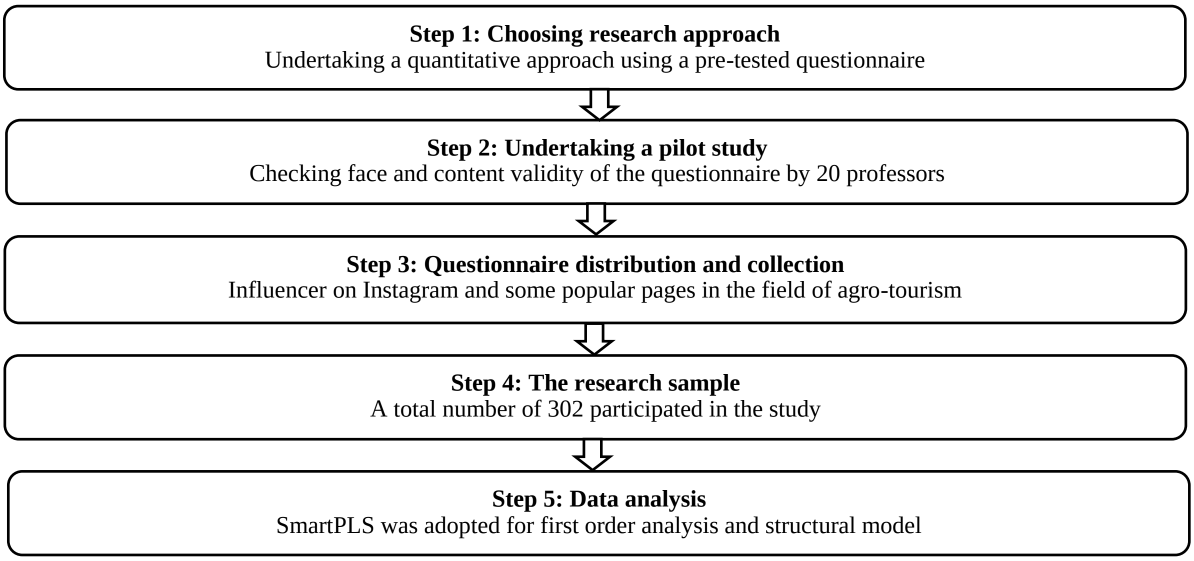

Figure 2. Steps undertaken for data collection and analysis

2. Measurements

This survey includes five constructs: cognitive image, affective image, revisit intention, destination recommendation and tourism experience. The cognitive image scale was evaluated with fifteen items on five main dimensions adapted from Artuger and Cetinsoz (2017). The affective image was assessed with four items obtained from Artuger and Cetinsoz (2017). The destination loyalty as a bidimensional construct containing revisit intention and destination recommendation were assessed using 7 variables undertaken from Prayag (2009) and Sun et al. (2013). The questionnaire was checked for face and content validity by 20 professors. The latter measured a scale of tourism experience used in Ragb et al., (2020). All variables were developed on a 5-point Likert kind scale (1=strongly disagree and 5=strongly agree).

Table 1. Respondents' demographic

		Frequency	%
Gender	Male	128	42.4%
	Female	174	57.6%
Age	From 18 to 29	111	36.8%
	From 30 to 39	130	43.0%
	From 40 to 49	48	15.9%
	Over 50	13	4.3%
Nationality	Tunisian	270	89.4%
	Moroccan	12	4.0%
	European	18	6.0%
	American or Canadian	1	0.3%
	Others	1	0.3%
Socio-professional status	Student	52	17.2%
	Agriculture	2	0.7%
	Employee	105	34.8%
	Executive	59	19.5%
	Worker	30	9.9%
	Liberal profession	45	14.9%
	Retired	7	2.3%
	Others	2	0.7%

Table 2. Discriminant validity

	Destination image	Destination recommendation	Revisit intention
Destination image	**0.773**		
Destination recommendation	0.553	**0.972**	
Revisit intention	0.607	0.793	**0.953**

ANALYSIS AND RESULTS

This current research utilized SPSS 25 for analyzing data. In addition, the study used Smart PLS-SEM adopted "partial least squares structural equation modeling" for testing the hypotheses and developing the structural model.

1. Exploratory factor analysis

The findings obtained via EFA "exploratory factor analysis" indicate that the KMO index is greater than 0.5 or even close to 1 (Cognitive image=0.912 / Affective image=0.823/ Revisit intention=0.842/ Destination recommendation=0.779) and Bartlett's sphericity test is significant at the 5% risk indicating that data are appropriate for factorial analysis. Furthermore, the reliability of the measurement scales reflects good internal consistency amongst variables with Cronbach's Alpha values over 0.7 (Cognitive image=0.952/ Affective image=0.823/ Revisit intention=0.842/ Destination recommendation=0.779).

2. Confirmatory factor analysis

To check the validity and reliability of the measurement scale for each variable, we undertook a CFA "confirmatory factor analysis" via Smart PLS. The findings of CFA revealed that the reliability was evaluated using the coefficient of Composite Reliability (CR) for the overall constructs, which is above the threshold of 0.7, confirming internal consistency (Destination image= 0.966/ Revisit intention= 0.975/ Destination recommendation= 0.981). In addition, we computed the convergent validity through the indicators of Average Variance Extracted (AVE), which are satisfactory because they are over the threshold of 0.5 (Destination image= 0.598/ Revisit intention= 0.908/ Destination recommendation= 0.945). To test discriminant validity, we used the approach of Fornell and Larcker (1981), which is based on the square of convergent validity that has to be higher than the relationship of the other constructs. In light of the results in Table 2, the square root of the convergent validity of each construct is higher than the inter-constructed correlations. Therefore, supporting discriminant validity.

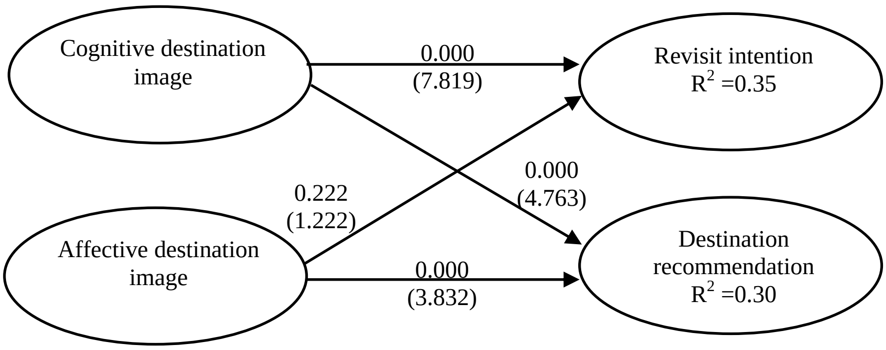

Figure 3. Structural model

3. Structural model

We used the SmartPLS to develop the structural model and test the significance of the hypothesized relationships, measuring the coefficient of determination or the explained variance (R2) (Figure 3). With regard to the explanatory power of the model, the coefficient of determination (R2) for the overall model is more than 0.35, i.e. the structural model has a satisfactory explanatory power of 35%. Thus, the results have a high degree of predictive accuracy.

4 Hypothesis testing

As can be seen in Table 3, all the research hypotheses are confirmed and significant. The findings presented in Table 3, show that most of the research hypotheses are confirmed. In addition, the student test is higher than 1.96 and the P values are significant for a 5% error risk. The link between affective image and revisit intention was not significant (T=1.222, P > 0.05). Multi-group analysis "MGA" was conducted to test the moderation influence of tourism experience on the link amongst image and tourists' loyalty (i.e. their intention to revisit and destination recommendation).

In fact, the visitors are categorised into two groups, first-time (n =125) and regular (n =177). Destination's image (both cognitive image and affective image) has a significant influence on loyalty to the destination especially the destination recommendation for the second group of visitors (regular ones) (Table 4). Such effect was significantly greater for regular tourists than for new ones. Therefore, this finding suggests that when regular visitors hold positive perceptions toward a destination, their likelihood of recommending it is high.

Table 3. Research hypotheses

Paths	T value	P value	Result
Cognitive destination image → Revisit intention	7.819	0.000	Supported
Affective destination image → Revisit intention	1.222	0.222	Not supported
Cognitive destination image → Destination recommendation	4.763	0.000	Supported
Affective destination image → Destination recommendation	3.832	0.000	Supported

Table 4. The moderating effect of tourism experience

Paths	Path coefficient difference (first-time visitors vs regular visitors)	P value original one tailed (first time visitors vs regular visitors)	P value (first time visitors vs regular visitors)
Destination image → Revisit intention	-0.162	0.876	0.248
Destination image → Destination recommendation	-0.257	0.980	0.039

DISCUSSION AND IMPLICATIONS

This paper explores the interrelationship the two-core components of destination image: cognitive and affective on visitor's loyalty, i.e. their intention to revisit and recommend with moderation influence from visitors' experiences. The results revealed a positive impact of the destination's image on the intention to revisit and recommend the destination. In particular, the cognitive image has significant effects on revisit intention and destination recommendation. In addition, affective image was also found to have a significant effect only on destination recommendation. Such findings corroborate the findings of previous research that have revealed an important role for destination image as an antecedent of tourist behavior. These results supports earlier research (Tan and Wu, 2016; Girma and Singh, 2019), which also found that cognitive and affective images have significant effects on revisit intention. Furthermore, the results coincidence with the findings of Papadimitriou et al. (2015) who also confirmed significant impacts of cognitive and affective images on intention destination recommendation. Additionally, the results confirm the argument of Pektaş et al. (2019) who urged that cognitive image of a destination supports affective image and lead to intention to recommend this to others.

The results interestingly showed that tourism experience has a moderation effect in the effect between the two components of destination image and revisit intention and destination recommendation. The results confirmed that the effect of destination image on visitors' loyalty is increased when tourism experiences was introduced. This means that this impact was significantly greater among regular tourists than first-time ones. These results are in line with previous studies (e.g. Beerli and Martin, 2004; Morais and Lin, 2010; Tosun et al., 2015) that destination image has more impact on visitors' loyalty for returning tourists than first-time visitors. The results of this research have many theoretical and practical implications. Theoretically, the study adds to the growing studies on destination image and tourist's behavioural intention, especially in the context of agro-tourism in Tunisia or similar environments, where there are few studies on this issue. As highlighted earlier, studies on agrotourism often focus on certain issues its importance, development, value and positive impacts, whether from economic or social aspects, including rural development (Ana, 2017; Nurlaela et al., 2021; Romanenko et al., 2020).

Additionally, this study is, unlike earlier studies on destination image and its linkage with behavioural intentions (Zhang et al., 2014); comprehensively integrate the multi-component of destination image. This study examined the impact of both components (cognitive and affective image) and found that the impact of cognitive image loyalty was the strongest than the impact of affective image on loyalty. This research is a first step towards examining the interrelationship between destination image and visitors' loyalty moderated by tourists' experiences in rural tourism. The present research examined the effect of the cognitive image and the affective image of an agro-tourism destination in the context of visitor loyalty processes. Furthermore, the current research examined and analyzed the moderation influence of the tourism experience on the link between the image of agrotourism destination and visitors' loyalty.

The results offer some implications for decision-makers and tourism marketers. The destination image scale developed and validated could be a good instrument for managers to assess their destination to understand the characteristics from tourists' perceptions (Table 5). In addition, the scale developed identified five dimensions that add positively to the creation of cognitive image: natural attractions, infrastructure, atmosphere, social environment, and value for money. These dimensions are very important when developing improving cognitive image. Given that the findings showed that, the image of the agrotourism destination is an important for shaping and strengthening visitors' loyalty. It is therefore important that destination marketers embrace proper strategies to improve and differentiate their destinations. Additionally, they could respond by developing the appropriate strategy for managing their destination image. The development of the destination's image should gain more attention and prioritized by managers in order to ensure positive behavioural intention of their visitors.

Table 5. Destination image scale adopted in the study (Adapted from Artuger and Cetinsoz, 2017)

1. Cognitive image
Natural Attraction: There are several natural parks in Zaghouan; Zaghouan offers much in terms of natural scenic beauty; Zaghouan has many historic sites and farms; Zaghouan has beautiful scenery.
Infrastructure: Zaghouan has good quality infrastructure (roads, airport, and/or utilities); Zaghouan has good quality accommodations; Zaghouan has a good network of tourist information. (Tourist Centers); Zaghouan has a good standard of hygiene and cleanliness.
Atmosphere: Zaghouan has a good nightlife; Zaghouan is an exotic destination; There are many sports and recreational opportunities in Zaghouan
Social Environment: Local community is friendly and helpful in Zaghouan; In general, Zaghouan is a safe place; Zaghouan is a clean and organized place
Value for Money: Zaghouan's accommodations are reasonably priced; Zaghouan is an inexpensive city; Zaghouan offers good value for my travel money.
2. Affective image
Zaghouan is a vivacious destination; Zaghouan is an exciting destination; Zaghouan is a pleasant destination; Zaghouan is an interesting destination.

CONCLUSION

Visitors' loyalty is crucial for any tourism destination. However, limited studies have addressed the influence of destination image on loyalty in the context of agro-tourism, particularly in counties such as Tunisia, despite the significance of agro-tourism to national economy. This study adds to knowledge and tourism industry in Tunisia by examining the moderation effect of visitors' experiences in the link between the two main components of destination image (affective and cognitive) and loyalty. Responses from 302 visitors at Zaghouan, Tunisia, collected via a pre-examined questionnaire and analyzed with SmartPLS SEM and Multi-group analysis, showed that destination image significantly and positively affected visitors' intention to revisit and recommend agrotourism destination to others.

Both dimensions of destination image: cognitive and affective were found to have significant influence on visitors' loyalty. These influences are significantly moderated by tourist's experiences. New visitors with new experiences wer found to have less influence on the link between image and loyalty than regular visitors. The findings provided some implications for tourism destination marketers and scholars with relation to the development of destination image to achieve visitor's loyalty in agro-tourism, particularly in developing countries, i.e. Tunisia.

Limitations and directions for future research

The findings of this research are related to the city of Zaghouan. The majority of study participants were Tunisian. Therefore, further studies could be undertaken to duplicate the current study on international visitors. Furthermore, the current research only tested Tunisian visitors, who had visited Zaghouan. Further research could also consider other factors that affect visitors' behavioural intention such as visitors satisfaction, perceived value, place attachment and novelty seeking. The study could also be duplicated on other countries contexts. The research did not examine the influence of respondents' profile (gender, education and family income) and travel characteristics (e.g. destination chosen, time of year) on the link between destination image and loyalty, so it would be interesting to add this type of variable in future research.

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TASTING TRADITIONS: THE IMPACT OF DEMOGRAPHICS AND GASTRONOMIC KNOWLEDGE IN GYŐR-MOSON-SOPRON COUNTY, IN HUNGARY

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Abstract: The most important objective of this study is to explore people's attitudes regarding the values of gastronomy in Győr-Moson-Sopron County. Data collection took place between September 1, 2023, and November 30, 2023 (N=784). The sample is not representative, the respondents were selected arbitrarily and randomly. The survey data was processed using JMP Pro17 Statistical software and Google forms were shared on social media platforms. The most important result of the primary research is that the study revealed the personal preferences and attitudes of respondents that influence the frequency of attendance at gastronomic events. To this end, we wanted to conduct a cluster analysis. Secondary research shows that the preservation and transmission of gastronomic culture is a key task in all historical periods. In this context, it becomes justified to examine our sample with a view to preserving cultural heritage and identity and to explore how the individuals in our sample relate to the gastronomic traditions of their region, which may influence their choices and the preservation of traditions that are part of their identity. The preservation of cultural heritage and contributions to it hold a significant role in gastronomic tourism. The implications of the results of the empirical research go beyond the borders of Győr-Moson-Sopron county and highlight the relationship between gastrotourism and local traditions.

Keywords: attitude, gastronomy, hospitality, Hungaricums, tradition

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INTRODUCTION

Tourism and hospitality are of strategic importance to many governments around the world, and many countries rely on this industry for a significant part of their GDP, such as Egypt and Bali. According to the latest report from the World Travel and Tourism Council (WTTC), Egypt's tourism sector will contribute around 24% of the country's GDP in 2023, with around EGP 953 billion, up almost 21% from its previous high (Egypt GDP).

In categorizing the types and forms of tourism, the literature uses the influencing factors (motivation) and the environment as grouping criteria. Accordingly, the motivation of a tourist can be recreational, cultural, social sports, economic, and political. Based on the origin of the tourism, it can be either domestic or foreign. The number of people involved in tourism can be divided into individual, group, mass, and family tourism. Based on the length of stay, tourism can be short-term or long-term, grouped by season, spring, summer, autumn, and winter (Kaspar and Fekete, 2004).

Gastrotourism is one of the youngest branches of tourism, and its exploitation has enormous potential. The pandemic had a huge impact on this sector, professionals must look ahead and not deal with this, but they have to focus on how they are able to restore the previous prestige of tourism and hospitality. Dávid and Reményik's research on Gyimes in 2015 draws attention to the culinary geography of multiculturalism, according to them, a mix of influences (Roman, Byzantine, Armenian, Turkish, Austrian, Hungarian, and Romanian) that have shaped the region's gastronomy over the centuries, as well as the traditions and practices developed by the ethnic groups living here (the Gyimes Csángó).

The study scrutinizes the "Counties" of Győr-Moson-Sopron County, with particular attention to the age group of youngsters who are under 20 years. After the literature background and the conceptualization of the concepts, the methodology of the empirical research and the evaluation of the relevant quantitative research are presented.

Győr-Moson-Sopron County is located in the north-western part of Hungary, also known as the gateway to the west. Thanks to its geography, it has played an important role in the life of Hungary throughout history. Its capital Győr is

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located 123 km from Vienna and 74 km from Bratislava. It is home to several landscapes, such as the Szigetköz, also known as Hungary's vegetable garden, the Rábaköz, the Hanság, Lake Fertő and the city of loyalty, called Sopron. Each of these places has its own local food and drink specialties, and this study examines people's knowledge of these.

People are in a decision situation before they travel, then they choose the best offer from the alternatives. Nowadays there are different decision support methods, one of which is the decision tree. Thiengburanathum et al., 2015 offer tourists TRS (Travel Recommendation System) to help them choose destinations in an unfamiliar city using a decision tree. Dudás used his database to categorize the tourists interviewed (N=302), whether they were interested in any form of tourism, and if so, according to which categories more relevant groups are formed. On this basis, the decision tree was constructed (Dudás, 2018). The study attempted to identify the attitudes of the sample. The research also aimed to investigate respondents' knowledge of local gastronomy, their participation in local gastronomic events, preferred food and drink, and types of gastronomic events, in which they would like to participate. The demographic variables used to understand tourists' intention to participate in gastronomic events are gender, education level, and age.

LITERATURE REVIEW

The scientific study of tourism started in Europe, which was the first region to experience the impact of mass tourism. In the period before the pandemic, this topic was also the focus of experts, how we could reduce the number of tourists in Venice or Barcelona, among others, so that those people who live in these places are not disturbed by tourists. "Overtourism" ended with the COVID-19 epidemic, and the most important issue of today has become the realization of sustainable tourism. Happ and Bolla (2020) outline a theoretical model of this for the realization of social sustainability in the synthesis of tourism, disability studies, and special education.

Ogilvie's (1933) book on tourism was the first social science treatise on the subject (written in English), followed by Norval's (1936) tourism book. However, tourism itself received little attention until the period after the Second World War, when tourism began to develop rapidly. However, the concept of tourist was not adopted in the literature, none of its conceptual definitions aimed at tourists were accepted by professionals, only Pearce (1982) conducted empirical research on people's ideas about roles related to tourists, which was based on Cohen's approach. Globalization is not a new concept, according to Friedman (2005) three eras of globalization can be defined. First relation can be linked to Colombus set sail in 1492 and ending in the early 1800s. The second dates end in the twentieth century when the development of markets and innovation has brought new products to people. The third dates from late 1990s with the rise of web technologies to allow people and businesses to collaborate on a global scale.

Many definitions of the conceptual definitions of tourism are now given in both Hungarian and international printed literature. The Hungarian Interpretive Dictionary defines tourism as follows, "noun press 1. Tourist traffic. 2. rare. Tourism, nature walks" (Juhász et al., 2006:1414). Tourism has been present in people's lives since prehistoric times, and people visited their relatives, acquaintances and friends even at this time. In ancient times, friends and family members accompanied the competitors to the Olympic Games. Tourism is a social, cultural and economic phenomenon that involves the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called visitors (who can be tourists or out-of-towners; residents or non-residents), and tourism refers to their activities, some of which involve tourism expenditures (https://www.unwto. org/glossary-tourism-terms). Also, tourism is frequently considered in terms of the demand side, meaning the tourists' motivations, and the supply side, the sector that satisfies tourist needs.

Other important terms associated with tourism are infrastructure, that components that an area's residents rely on such as roads, bridges, communications networks, markets and supermarkets, and so on; and superstructure, facilities that have been built to accommodate that needs of tourists such as cruise terminals, airports, and convention centers (although these support the area's residents), hotels, resorts, restaurants, and car rentals (Walker and Walker, 2011:7). Tourism is a general term used to cover supply and demand, which has been and is used in many forms around the world. The expansion of the services on the supply side is also justified by the increase in the number of users, and also by the fact that the service provider provides better and more comprehensive services than competitors (Happ, 2008). However, all tourism types exhibit negative interaction effects, suggesting diminishing returns of digital information as engagement increases (Salem et al., 2024). According to According to Michalkó, tourism encompasses activities undertaken during an individual's discretionary time, outside of their regular working hours. These activities are typically the result of personal, autonomous decisions, reflecting a voluntary choice to engage in experiences beyond everyday routines Michalkó (2012).

The development of tourism on a huge scale is also shown by the fact that digitization has reached this sector as well, and thanks to the deepening of communication channels, service providers can directly deliver their messages to consumers and guests through their applications installed on smartphones (Happ, 2013). According to Cordova-Buiza et al., 2024 gastronomy has become a pivotal element in tourism, significantly influencing tourists' satisfaction and their choice of destinations. The seasonality of the Sopron-Fertő tourism region was analyzed by Barcza et al., 2023, identifying the extent to which the COVID epidemic makes a region vulnerable to seasonality and the need to find new ways for tourism destinations and their service providers to manage tourism through different management methods, as threats to tourism may return periodically in parallel with the current pandemic.

Gastronomic tourism, often referred to as "food tourism," "tasting tourism," or "culinary tourism," focuses on exploring distinctive and memorable dining and drinking experiences. It involves traveling to places where the primary attraction is the local cuisine and beverages, offering travelers a deep dive into the culture, flavors, and traditions of the destination through its food. This type of tourism highlights the unique culinary offerings of a region and is driven by the desire to taste authentic local dishes (Dávid et al. 2010). The conceptual definitions of tourism are presented in Table 1.

Table 1. Conceptualising of the tourism and tourists (Source: The authors' editing, 2024)

Author	Year	Definitions
Rátz	2017	Democratized tourism consumption
Tasnádi	1998	Use of non-lucrative tourist services
Walker and Walker		Tourism is frequently considered in terms of the demand side, meaning the tourists' motivations, and the supply side, the sector that satisfies tourist needs
Böröcz	1996	Leisure migration
Lamb and Davidson	1996	„ ... purchaser of the tourism (tourist) must expereience the trip to access the product, the quality of the transportation experience…tourist require safe, comfortable, affordable, and efficient intermodal transportation networks…" (cited by Page 2011:20)
Jafari	1995	„Tourism is the study of man [the tourist] away from his usual habitât, of the touristic apparatus world networks, and of the ordinary [non-tourisml and non-ordinary [tourism] woÍlds and their diaÌectic relationship" (Jafari, 1995:5).
McKercher	1993	Industry
Leiper	1990	„…a traveller -generating region; tourism destinations regions; transit routes for tourists traveling between generating and destination areas …(cited by Page 2011:19)
Cohen	1984	Democratized travel: - modern leisure activity; - expression of basic cultural motifs; the process of adopting a foreign culture.
Greenwood	1982	It is an extremely large-scale and diverse industry that operates in different ways and under different circumstances.
Leiper	1979	Tourism can be thought of as a whole range of individuaÌs, businesses, organizations, and places which combine in some way to deliver a travel experience. Tourism is a multidimensional, multifaceted activity, which touches many lives and many different economic activities.
Wahab	1977	„A human intentional activity that serves as a mean of communication and as a link of interaction between the peoples, inside a country or even beyond its geographical demarcations. It involves the temporary displacement of people from one region to another, country or even continent, with the objective of satisfying necessities and not the reâlization of remunerated activiry. For the visited country, tourism is an industry whose products are consumed in loco, producing, invisible exports" (Wahab, 1977:26).
UNESCO	1976	Destroys the natural environment, • commoditizes host communities and their culture
Cohen	1974	Commercialized hospitality, the focus is on the visitor component of the role of the tourist, democratized travel: the focus is on the composition of travelers, tourism involvement; the tourist is seen as a kind of traveler marked by some distinct analytical features.
International Union of Official Travel Organizations	1963	Temporary visitors who stay at least twenty-four hours in the visited country and whose purpose of travel can be classified under one of the following factors: a) leisure (recreation, vacation, health, study, religion, and sports); b) business (family mission, meeting)
Krapf	1963	It has a positive economic impact
Hunziker - Krapf	1942	The summarise of connections resulting from people's travel and stay outside their place of residence (not settlement, not motivated by earnings)
Glücksmann	1929	„the bridging of distance by persons to a place where they do not have a permanent home" (cited by Lengyel 1992:21)

The concept of hospitality is defined in many different ways in Hungarian literature; for example Csizmadia, 1996; Burkáné, 1999; Endrődy and Veres, 2005; Martos et al., 2007. CLXIV of 2005 the law defines it as follows: "the distribution of ready-made or locally prepared food and drinks, typically for local consumption, including related entertainment and other service activities; furthermore, it must have an infrastructure for business-like catering in any form at the workplace and in educational and educational institutions (https://net.jogtar.hu/jr/gen/hjegydoc.cgi?docid= A0500164.TV).

"Hospitality is a specific commercial activity in which the local population and those participating in tourism are provided with food, drink and various services" (Voleszák, 2008:26). In a narrower sense, it is a specific sector of trade in which new value is created from the purchased goods through service and professional knowledge transfer. In a broader sense, it is a collective concept, during which the catering business provides complex services to the guests who come to it, meeting their wishes at the highest level; such as in connection with drinks, food and other services (Kőmíves, 2020).

Our national value system operates on the basis of the pyramid principle, i.e. it encompasses the entire Hungarian society, built from the bottom up. The Hungaricum Act, which entered into force on July 1, 2012, defines the term Hungarian as follows: "Hungaricum: collective term, which in an unified classification, classification and registration system denotes a value worthy of distinction and highlighting, which, with its characteristics characteristic of Hungarianness, with its uniqueness, specialness and quality, it is the peak performance of Hungarians" (http://www. hungarikum.hu/hu/content/mik-azok-hungarikumok-0). In Szákáli's interpretation, "...We cannot give up our values, the heritage left to us by our predecessors, because our common values provide guidance for us to know where we are going from and what is the true meaning of our lives (Szakáli, 2020:43). Attitude has been defined in the literature in several ways. Attitude is derived from the Latin word aptus meaning: aptitude or conformity to something: a subjective or mental state of readiness for activity. „*The attitude toward the behavior and refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question*" (Ajzen, 1991:188). Hence, in an accelerated competitive business environment, customer satisfaction and loyalty are the most important dimensions that influence the financial performance of a company (Untaru and Han, 2021). According to the Basic Dictionary of Foreign Words, "behavior, manner as a state of mind, attitude, action, conduct, behavior, attitude, attitude, position" (Tófalusi, 2015).

The Hungarian Dictionary of Interpretation describes a Tótfalusi Vocabulary defines it as "noun.1. [French <Italian<Latin] (Juhász et al., 2000). In Mészáros et al.,2006's interpretation, attitude is "...evaluative attitude...is a cognitive representation that summarizes an individual's evaluations of an attitude object" ourselves or others, a person, object, event, action positive, negative or neutral charge (Mészáros et al., 2006). Attitudes are learned by learning cognitive, emotional (affective), and behavioral (conative) conative components. Attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly and Chaiken, 1988).

MATERIALS AND METHODS

The objective of our study is to explore how personal preferences and attitudes influence the frequency of individuals' visits to gastronomic events. The foundational data collection for this research took place in Győr-Moson-Sopron County (presented on Figure 1.), from September 1 to November 30, 2023. The collected sample (N=784) is not representative, as the respondents were selected randomly.

Figure 1. Győr-Moson-Sopron County, the analysed region (Source: The authors' own editing; romantikusvendeghazak.hu, 2024)

Our research methodology relied on empirical data collection and computerized statistical analysis techniques. As part of the secondary research, we focused on the preservation of the region's gastronomic values and their exploitation as tourist attractions. Accordingly, the primary data collection emphasized the examination of the depth of knowledge related to local gastronomic traditions and specialties. The research methodology employed two main analytical techniques. The first was an attempt at cluster analysis, which yielded no results, leading us to choose the decision tree methodology as a second step.

In applying the decision tree, we initially based our approach on literature related to artificial neural networks (Zell et al., 1994; Porwal et al., 2003), which facilitate the determination of relationships and the classification of data. The advantage of neural networks is their capability to handle large volumes of data and approximate non-linear relationships, making them suitable for analyzing various gastronomic preferences and habits. In working with algorithms, we applied a simplified, top-down approach, providing clear guidance on which attributes to test and how to define divisions.

As a second step in our research methodology, we applied principal component analysis (PCA). During the PCA analysis, we selected the following variables:

- Knowledge of gastronomic traditions,
- participation in gastronomic events,
- preferred types of food and drinks,
- types of events attended by respondents.

For the analysis of the selected variables, we converted binary and ordinal values to numeric, excluded missing data, and normalized the data considering the sensitivity of PCA. Taking into account the ethical aspects of the research, every step of data collection and analysis was conducted in accordance with applicable laws and ethical standards, including strict adherence to data protection regulations. Participants were informed about the purpose of the research and provided their consent voluntarily for the use of their data, which was documented in the form of a written consent statement. To preserve participants' anonymity, data were handled in coded form with identifying information removed.

Every step of the analysis process was documented to ensure the reproducibility of the research. In addition to a detailed description of the computerized analysis, we thoroughly described all methods and processes used during the research, as well as the tools and techniques employed. The process of the empirical research is illustrated in Figure 2.

RESULTS AND DISCUSSION

Our secondary research highlights that the preservation and transmission of gastronomic culture is a key responsibility in every historical era. Based on this, it becomes justified to examine our sample for the purpose of preserving cultural heritage and identity, and to uncover how the individuals within our sample relate to their region's gastronomic traditions, which may influence their decisions and the survival of those traditions that form part of their identity. Furthermore, our secondary research examines the potential of gastronomic tourism as a relatively new sector of tourism. Therefore, it is worth exploring the results of our primary data collection not only from a cultural perspective but also in terms of the development of gastronomic tourism. Specifically, how our findings can assist local tourism organizations and businesses in better understanding and satisfying the gastronomic needs of visitors, thereby enhancing the region's tourist appeal and economic development. Accordingly, it may be relevant to raise the question: Q1: How do personal preferences and attitudes influence the frequency of participants' visits to gastronomic events? This is in order to understand how personal preferences affect individuals' visits to gastronomic events, which directly relates to the themes of regional gastronomic tourism and cultural preservation.

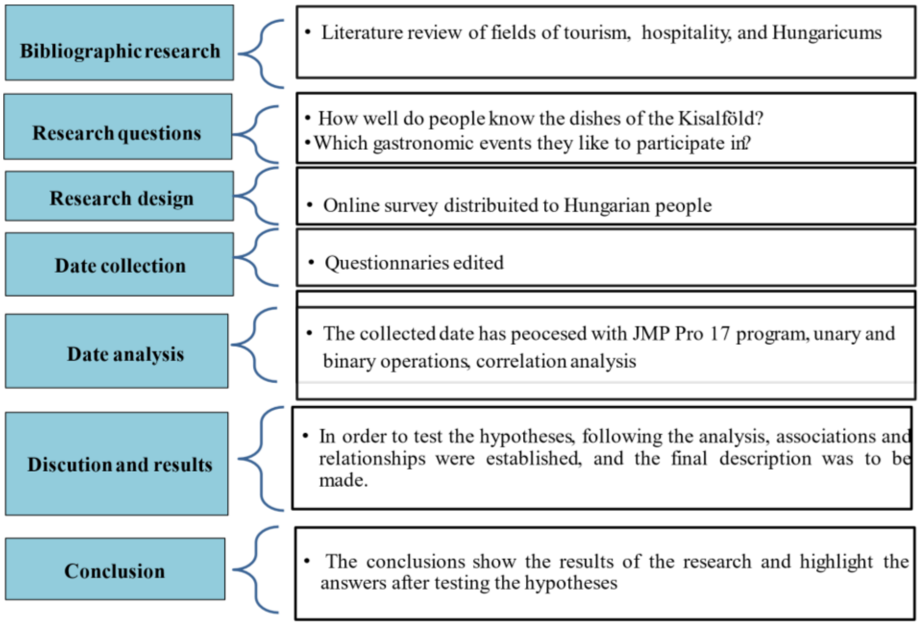

Figure 2. Research model (Source: The authors' own editing)

Considering demographic variables mentioned in the literature, such as place of residence and education, and thus the impact of education on the knowledge of gastronomic traditions, our research suggests that knowledge of local gastronomic traditions can influence event attendance. This deserves to be examined concretely, hence H1: The frequency of participants' visits to gastronomic events is primarily influenced by their knowledge of local gastronomic traditions.

Based on the findings in the literature, we consider it worthwhile to explore the proposition that frequent visitors likely possess a broader knowledge of gastronomy, which could facilitate the further dissemination and acceptance of gastronomic traditions. Therefore, we also examine the statement that H2: Participants who frequently attend gastronomic events are likely to have a wider knowledge and appreciation of various gastronomic traditions and specialties.

1. DTC Analysis

In the initial phase of our research, we sought to answer the question of which personal preferences and attitudes influence the frequency of visits to gastronomic events. For this purpose, we intended to conduct a cluster analysis process. However, during the hierarchical analysis, the leading distances justified the creation of a single group.

Ignoring this and attempting to run a K-means analysis for 2 or 3 groups resulted in distorted outcomes: unrealistic shifts in sample size towards one cluster group, and/or negligible differences in means, and/or overlaps in several examined attitudes. This suggests that the sample is quite homogeneous regarding this issue.

It implies that motivations related to gastronomic events cannot be uncovered through grouping, meaning that respondents do not have categorizable preferences but rather follow a certain pattern in their decision-making processes. Therefore, in this case, we found the application of decision tree methodology to be appropriate.

Artificial neural networks are a supervised machine learning technique capable of determining correlations and mapping out relationships among various variables for the classification of unknown data (Zell et al., 1998). Among the advantages of such networks, we count the handling of large amounts of data, the approximation of nonlinear relationships, but also the generalization from relatively inaccurate input data, and resistance to outliers and overfitting (Porwal et al., 2003). Decision tree classification (DTC) is a machine learning technique that operates by recursively partitioning the dataset in an attempt to categorize the target variable in a homogeneous manner. At every split, the DTC algorithm seeks to reduce the entropy of the target variable in the resulting datasets by selecting the optimal partition from a number of independent variables. The main advantages of this method are that it does not require as much computational resource as traditional artificial neural networks, it is not sensitive to the distribution pattern, and it is reliable in terms of missing data and redundant environmental variables (Tan et al., 2014). Therefore, the decision tree is a supervised, expressive, classifying algorithm consisting of a set of nodes, where the inner layers test the nodes. In applying algorithms, we relied on the traditional, top-down simplified approach for constructing the decision tree. These methods bring clearer choices for deciding which attribute to test in the decision tree and how to define the partitions. Figure 3, indicated above, displays a

ROC curve that represents the attendance at gastronomic festivals, wherein the green line symbolizes the "I attend all" path considered ideal by the current research, and attempts to explain deviations from this path using the DTC procedure.

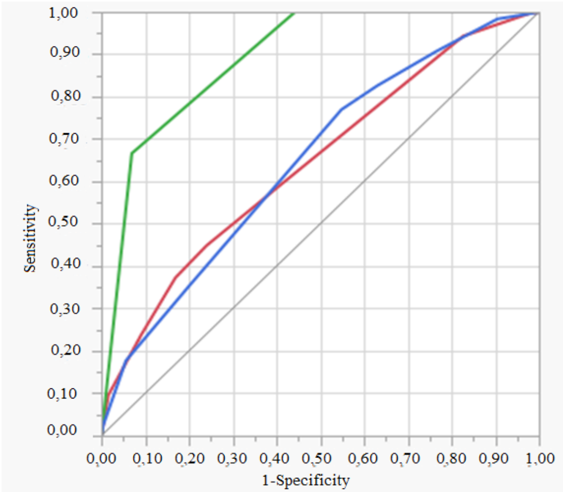

Figure 3. ROC curve (Source: Survey data, 2024)

The best paths and divisions can be marked by examining the G-squared sums, which led to the establishment of the DTC depicted in Figure 4. These G-squared sums can be viewed, if desired, as an explanatory force indicating the strength and nature of decision divisions. A striking, almost immediately noticeable result is the price factor's significant division capability. It fundamentally splits the sample based on the statement related to cost as a decision factor: "Businesses offer their products at an affordable price to festival participants." For a small segment of the sample (58 individuals), for whom this issue aligns with their expectations, their path ends abruptly (G2=90.9), without considering anything else.

For those for whom the price issue is not entirely satisfactory (G2=938), a previous habit is considered, namely, whether they are accustomed to buying from small producers. At this juncture, those who typically do not purchase from small producers generate a terminated path, clearly showing that price and previous habits are of cardinal concern.

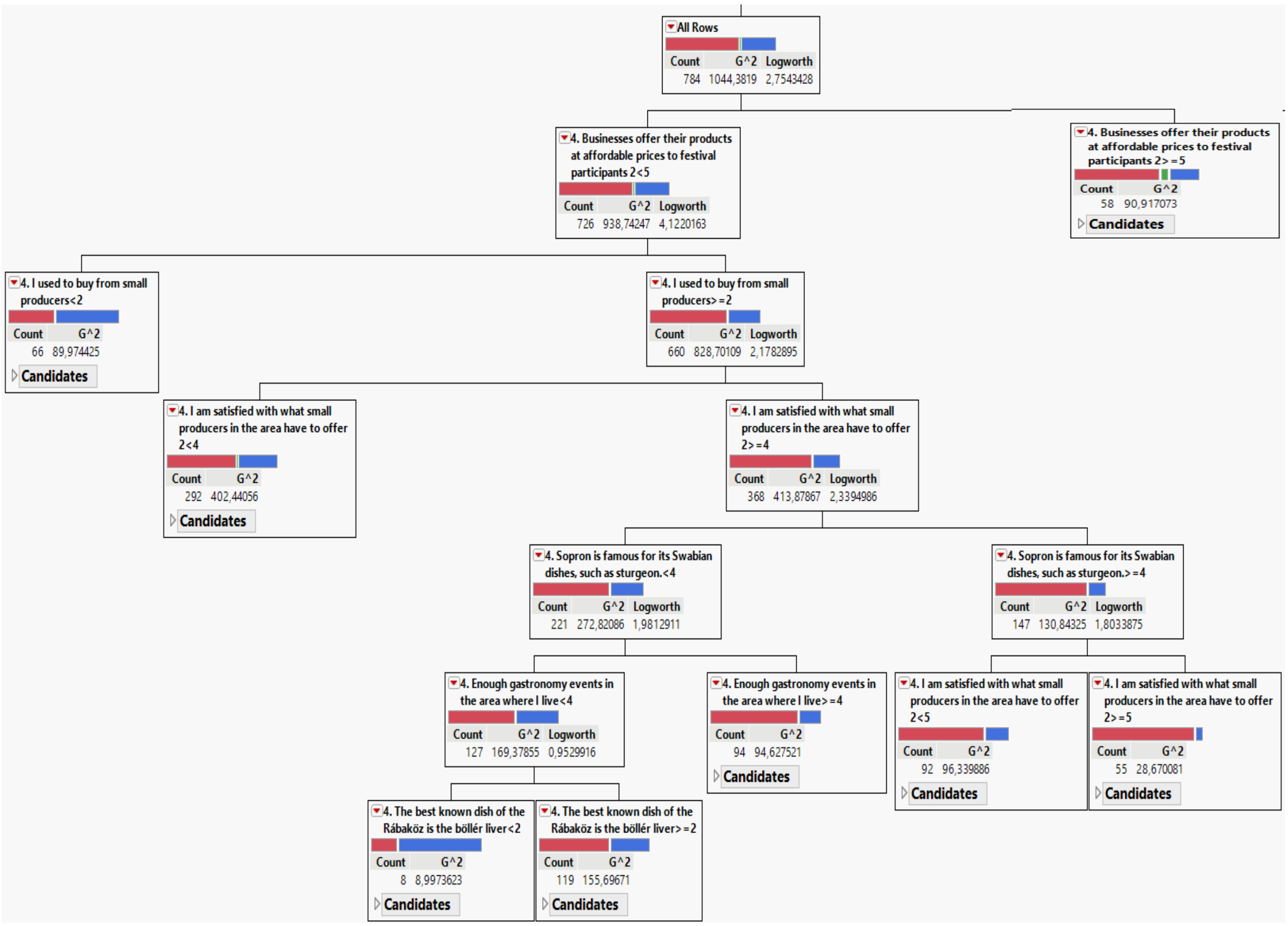

Figure 4. DTC tree (Source: Survey data, JMP output, 2024)

Those who typically do make purchases, precisely those for whom this factor does not fall into the negative range (2+), constituting 84% of the sample (660 individuals), examine the offerings of small producers. This factor has a G2 value of 828.7. The non-positive (less than 4) interval possibilities further divide according to interval values. At this point, respondents consider the offerings of small producers, which most significantly divides the sample: into those who thoroughly examine the offerings (292 individuals) (G2=402.4) and delve into the details before deciding on participation, and those who are generally satisfied with the offerings (368 individuals, G2=413.8).

A local specificity of Győr-Moson-Sopron county, the Sopron Swabian dishes, subsequently splits the sample. This local specialty is a particularly important decision factor for some (147 individuals, G2=130.8). For them, this essentially becomes the decisive factor at this point, as their division again focuses on the offerings – now from this context.

For the portion of the sample that considered the local specialty with a non-positive (4 and 5) interval value, the determining factor becomes the gastronomic events available in their vicinity (221 individuals, G2=272.2). For those with a positive opinion of this statement, their search ends, having found what they were looking for to decide whether to attend gastronomic festivals. For those for whom this is not decisive, another specialty comes under examination: the culinary delights of Rábaköz (127 individuals, G2=169.3). Following this, every branch of the DTC becomes more detailed, with further divisions not considered relevant.

2. PCA Analysis

In the second step, we aimed to assess whether Principal Component Analysis (PCA), a statistical procedure used for data dimensionality reduction, could identify the primary factors that most significantly determine the participants' gastronomic preferences and their relation to events. For the PCA analysis, we selected variables that focus on gastronomic preferences and event attendance habits. These data contain specific information about the types of food and events preferred by the participants, which can help uncover hidden patterns and groups within the data.

The selection of relevant variables for the PCA analysis included:

- Knowledge of gastronomic traditions (e.g., traditions of Szigetköz, Rábaköz, Sopron-Fertő, Pannonhalma)
- Participation in gastronomic events,
- preferred types of food and drinks,
- types of events participants are keen to attend. In this process, we handled categorical variables, such as "familiar/unfamiliar" type responses, by converting them into binary variables. We then reviewed and converted ordinal variables into numerical values, excluded missing data from the analysis, and normalized the data since PCA is sensitive to the scale of values. The distribution of the data and the groupings are shown in Figure 5.

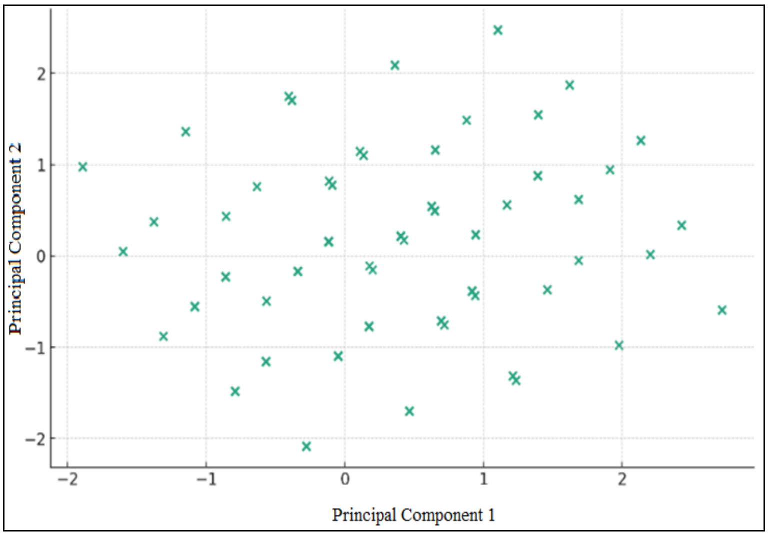

Figure 5. PCA Analysis of survey data (Source: Survey data 2024)

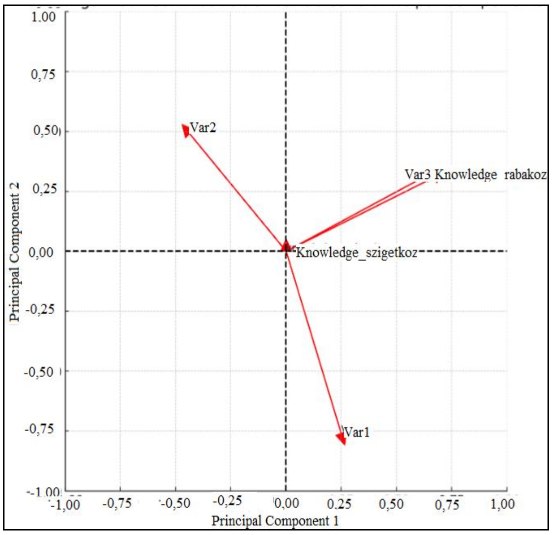

Figure 6. Loadings Plot - Contribution of Variables to Principal Components (Source: Survey data 2024)

The first principal component accounts for approximately 27.4% of the variance in the data, while the second principal component explains an additional 25.3%. This amounts to a total explanation of more than 50% of the variance. The loading plot shown in Figure 6 illustrates the contributions of the variables to the first two principal components. The plot uses arrows to denote the contributions of the variables, where the direction and length of the arrows indicate how a given variable relates to the first two principal components. The starting point of the arrows is at the origin of the coordinate system (0,0), meaning that the contributions of the variables "originate" from this point. This plot allows us to examine how different variables contribute to shaping the main trends in the data. From the analysis of the variables' contributions, it is evident that the **knowledge_rabakoz** variable (knowledge of Rábaköz's gastronomic traditions) makes a significant positive contribution to the first principal component, while **Var1**, **Var2**, and **Var3** contribute to both principal components in varying degrees and directions. Notably, **Var2** exhibits unique behavior by contributing negatively to the first principal component and positively to the second, suggesting that this variable captures different aspects of the observations in the data.

Given that **Var2** reflects the frequency with which respondents attend gastronomic events, its negative contribution to the first principal component indicates an inverse relationship with the trend encoded in the first principal component. That is, the first principal component mainly distinguishes those respondents who are less familiar with gastronomic traditions, so **Var2**'s negative contribution means that those who frequently attend gastronomic events are likely more familiar with these traditions, or vice versa. Positive contribution to the second principal component:

This suggests that the frequency of attending gastronomic events is positively related to the trends represented by the second principal component. This dimension signifies the active participation or interest of the sample participants in various gastronomic activities, which moves in the same direction as frequent visits.

The significant negative contribution of the **Var1** variable to the first principal component and its lesser contribution to the second principal component suggest that gastronomic interest tends in the opposite direction to the trend represented by the first principal component. Var1 represents the general interest in gastronomy, indicating that the first principal component may distinguish respondents with less interest in gastronomy. In other words, individuals with a higher interest negatively correlate with the first principal component, which encompasses those with less interest.

The contribution of the **Var1** variable also indicates that this dimension is not the primary factor determining the grouping of respondents in the data, as the deviation in the direction of the first principal component is relatively small compared to the second. This may suggest that while interest in gastronomy is an important variable, it is not the most defining factor in the behavior patterns hidden within the dataset. The result can also be interpreted to mean that a greater interest in culinary novelties may be associated with another, perhaps less obvious dimension captured by the second principal component. This could be a factor such as openness to new experiences or a broad search for cultural activities.

The contributions of the variables to the principal components, or loadings, help to understand which variables have the greatest impact on the main trends within the data. Positive loadings mean that an increase in a variable coincides with an increase in the principal component, while negative loadings mean that the variable's increase moves in the opposite direction to the value of the principal component. In this case, the positive contributions of the **knowledge_rabakoz** and **Var3** variables to the first principal component indicate that these variables are important in understanding the main trends in the data.

The **knowledge_rabakoz** variable indicates knowledge of Rábaköz's gastronomic traditions. This variable contributes positively to both principal components, especially to the first. This suggests that respondents who are well-acquainted with Rábaköz's gastronomic traditions may form a distinct group within the sample, exhibiting specific preferences and behavior patterns. **Var3** represents respondents' food category preferences, which play a significant role in shaping the main trend found in the data. Since **Var3**'s substantial contribution is positively directed with the first principal component, it suggests that respondents whose preferred food category closely relates to the gastronomic traditions represented by the knowledge_rabakoz variable may form a specific group within this data space. The combined positive loadings values of **Var3** and **knowledge_rabakoz** indicate that respondents who appreciate local specialties or certain types of food likely have a better knowledge of local gastronomic traditions, and this knowledge or preference could be a significant identifying factor in their grouping. This specificity, which intertwines with food knowledge, demographics, and behavioral dimensions, and is based on cultural interest and knowledge of foods and drinks, can be most clearly identified among them.

Based on the results, it can be determined that gastronomic knowledge and preferences significantly influence the grouping of participants in the sample. Notably, knowledge of Rábaköz's gastronomic traditions plays a prominent role in this context. In our research question – namely Q1: How do personal preferences and attitudes influence the frequency of participants' visits to gastronomic events? – it has been established that the gastronomic preferences and attitudes of the sample participants are complex and potentially behave according to different patterns when attending gastronomic events. This was indicated by our DTC procedure.

The DTC analysis highlighted that price is the primary decision factor, which, while not a surprising outcome given the pronounced price sensitivity of Hungarian society, precludes the clear validation of our first hypothesis that H1: The frequency of participants' visits to gastronomic events is primarily influenced by their knowledge of local gastronomic traditions. However, this hypothesis need not be discarded, as the knowledge_rabakoz variable contributes positively to both the first and second principal components, indicating that knowledge of Rábaköz's gastronomic traditions plays an important role in event attendance, thus we consider our H1 hypothesis partially validated.

Our second hypothesis can be confirmed, which states that H2: Participants who frequently attend gastronomic events are likely to have a broader knowledge and appreciation of various gastronomic traditions and specialties. This confirmation is based on the combined positive contribution of the Var3 variable and knowledge_rabakoz, which show that a diverse interest in gastronomy correlates with the frequency of visits to gastronomic events.

CONCLUSION

Upon examining the results of our study in terms of their significance and interpretability, it is paramount to consider how they relate to previous studies and our working hypotheses. We found that in Szigetköz, place of residence and education, and in Rábaköz, age groups, occupation, and education have a significant impact on the knowledge of the region's gastronomic traditions. In Sopron and Lake Fertő, only occupation showed a significant difference in the knowledge of their gastronomic traditions. When contextualizing our results, it is crucial to highlight that gastronomic knowledge and preferences have a significant influence on people's frequency of visiting gastronomic events.

Particularly, the knowledge of Rábaköz's gastronomic traditions stands out as a dominant factor, aligning with previous research that emphasizes the importance of a deep understanding and connection to local culture in gastronomic tourism.The DTC analysis conducted during our research illuminated that price is the most crucial decision factor, which is not surprising in a price-sensitive society like Hungary. However, this result challenged our first hypothesis, which suggested that the knowledge of gastronomic traditions primarily influences the frequency of visits to gastronomic events. Nonetheless, the positive contribution of the knowledge_rabakoz variable to both the first and second principal components validates that knowledge of Rábaköz's gastronomic traditions indeed plays a significant role, thus partially confirming our H1 hypothesis. The PCA analysis provided further in-depth insight into how gastronomic interest and the frequency of attending gastronomic events are interconnected. Based on the findings, our second hypothesis was also confirmed, suggesting that frequent visitors likely possess broader knowledge of various gastronomic traditions and specialties. This implies that the preservation of cultural heritage and contributions to it hold a significant role in gastronomic tourism.

The implications of our findings extend beyond the confines of Győr-Moson-Sopron County, shedding light on the relationship between gastronomic tourism and local traditions. Future research should therefore expand to other regions and explore changes in gastronomic knowledge and preferences over time, as well as their socio-economic impacts. Additionally, further analysis of the organization and marketing strategies of gastronomic events, particularly with a focus on sustainability and community involvement, would be important.

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ASSESSMENT OF POLICY FRAMEWORKS IN PROMOTING SUSTAINABLE ECOLOGICAL TOURISM

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Abstract: The goal of the study is to evaluate the Kazakhstan's sustainable ecological tourism possibilities in regard to the involving the communities, financing, involving the stakeholders, and creating awareness. Structural questionnaire was used and quantitative methods such as regression, correlation, and 't' tests were used to analyze the environmental and socio-economic effects of NRM. The results of regression analysis show that financial facilities have a positive impact and can be considered significant along with community involvement, while correlation analysis established the need for clear policies and stakeholders' engagement in the processes of public sector changes. Specifically, using the 't' test, there was an equal distribution in the interaction between rural and urban instructors and students in matters regarding policy efficiency. Thus, according to the conclusions of the study, it is necessary to develop a sustainable policy for the development of ecological tourism in Kazakhstan, for which norms that cover actors should be established, as well as active promotion should be ensured.

Keywords: ecological tourism, community, funding, stakeholder, regression

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INTRODUCTION

Sustainable tourism is thus a proper model of tourism development in an environment that seeks to maximize on economic returns while at the same time considering the state of the physical environment and the social structures within the given area (UNWTO, 2017; Hall, 2021). As a sub-field of sustainable development, sustainable tourism is tourism that is developed while maintaining cultural integrity, individual and territorial identities, and considering socioeconomic and environmental costs and benefits for present and future generations Sustainable tourism is defined by the United Nations World Tourism Organization (UNWTO) as 'tourism that is broken down to both immediate and long-term socioeconomic and environmental friendly impacts on the tourist, the business, the hosting environment, and the communities.

Tourism in natural environments, more popularly recognized as ecotourism, has recently been widely discussed as a necessary tool to improve people's condition and their interpersonal relations and ensuring sustainable impact on the environment. The role of tourism emphasizing the ability to get a rest, improve one's health or developing a personality is increasingly realized especially in the context of Kazakhstan. Ecotourism is conceived as a dynamic and interesting form of recreation that provides the participants with all-rounded rejuvenation that enhances the aesthetic and physical attributes. This approach of tourism does not only concentrate on individual gains but also works to preserve the earth's resources kind for the other generations' tourism purposes. To prove the role of the mentioned aspects in the development of Kazakhstan's tourist-resource potential for ecological tourism, this chapter presents the analysis of the authors' investigation of several regions of Kazakhstan, including the measures of tourist attractiveness that determine the strategic direction for the further sustainable tourism development in the country (Iskakova et al., 2021a).

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Business frameworks that govern the performance of organizations are important for sustainable tourism and they involve strategies or rules towards sustainable tourism aim and objectives (United Nations Environment Programme [UNEP] & World Tourism Organization [UNWTO], 2005). These frameworks involve a number of approaches all with an aim of integrating sustainable development within tourism destinations; these include legislative approaches, incentives and planning tools among others (Bramwell and Lane, 1993; Hall et al., 2015). Sustainable measures, however, not only control and limit tourism operations and visitors' behavior but also promote responsible action, social responsibility, and positive impacts on the physical environment and the quality of life of the host community (Baloch et al., 2023). Although it is well understood today that sustainable tourism policies need to be employed, there are still barriers to address in the practical application of such policies and the use of legal instruments (Butler, 1980). The lack of coordinated and streamlined governance structures, insufficient funds for implementation and overlapping stakeholder interests provide major barriers to the practical application of sustainable tourism policies (Dodds and Butler, 2010). Furthermore, the ions growing trend detrimental to tourism harms natural ecosystems, archaeological sites and cultural identity, in addition to communities, requiring contextual and fragile policy interventions (Hall et al., 2015).

The main purpose of this paper is to critically discuss and analyze a set of current and previous policy solutions concerning ecological tourism development in various areas and settings. In this context, this study aims to extract strengths and weaknesses of current policy approaches for further development based on the article review and questionnaire survey with a set of predetermined questions. This research method of collecting quantitative data from stakeholders working in the tourism management and policy-making sector will give empirical findings of policy implementation and its importance on the police impact on sustainable development (World Tourism Organization, 2018).

A Jining, China, case study found that museums cluster in certain areas. This is due to resource endowments, socioeconomic conditions, and accessibility factors like roads and rivers. According to Guo et al. (2024) this pattern shows that museums can be cultural assets and strategic components in increasing local tourism and cultural sustainability. This study examines spatial dynamics to inform cultural preservation and sustainable tourism policy frameworks. This will lead to holistic development methods that benefit cultural heritage preservation and ecological tourism programs.

Specific research objectives include:

- Evaluating the policy coherence of the policy frameworks with sustainable tourism principles and the international policy directives
- Assessing the clear and effective identification of its stakeholders and mapping of its interactions with them in policy-making processes.
- Evaluating the malleability of policies based on dynamic environmental changes and major socio-economic factors (Baloch et al., 2023).

Thus, these objectives of this work are to contribute to the theoretical and methodological framework of sustainable tourism policy analysis and to provide recommendations to improve its global action and outcomes, for further construction of a sustainable and inclusive tourism development on the international level. When approaching these challenges, policy-makers, as well as, stakeholders can effectively avoid such problems and promote sustainability in tourism development, which is crucial for the further socio-economic growth and preservation of natural and cultural heritage for the subsequent generations.

Accordingly, it is useful to assert that the development of sustainable tourism policy is critical and it has to be based on strong foundations for economic profit while also considering the negative impacts on the environment and social future. This research proposes to collect empirical data that can assist in the formulation and strengthening of public policies toward the right direction for sustainable tourism to continue fueling the conservation of the world's natural resources.

LITERATURE REVIEW

Overview of existing literature on sustainable tourism policies

Sustainable tourism has been an issue of significant concern in the scholarly discourse and within policy frameworks for several decades. Scholars have devoted tremendous resources in an endeavor to document sustainable tourism polices with regard to environmental conservation aspect, socio-economic impacts, and culture. International organizations such as the UN World Tourism Organization (UNWTO) and the UN Environment Program (UNEP) have outlined strategic frameworks and guidelines that view comprehensive and whole-system perspectives as critical to planning and managing tourism (World Tourism Organization, 2018). These studies have shown how policy frameworks play a significant part in developing sustainable tourism. For example, Bramwell and Lane (1993) address emergent sustainable tourism policies and the difficulties of implementing them in various locations.

This study by Hall et al. (2015) aims at discussing the ecological efficiency of tourism and the efficiency of a range of policies on tourism's environmental impacts. All these studies, therefore, bring out the need for well-framed policies that would enhance both economic development on the one hand and environmental conservation as well as social justice on the other hand. The significance of promoting cultural and historical heritage in fostering tourism development cannot be overstated. Aldybayev et al. (2021:1451) emphasize that "the development of new routes and the creation of technological maps of excursions allow for the systematic development of ethnocultural tourism, playing a defining role in intercultural communication and the appreciation of regional cultures".

Kazakhstan has a rather rich nature to include a considerable potential in the creation of the aesthetic or simply ecological tourism. According to Iskakova et al. (2021b), there are many well-preserved natural complexes in the country, which contribute to developing this segment. These natural resources' including such gifts of nature as wilderness, ecological and other similar areas are perfect for the formulation of sustainable tourism. The following natural complexes must remain untouched so as to ensure continued existence of fauna and flora, as well as create genuine tourist attractions to attract the increasing numbers of ecotourists. These orientations for preserving these natural resources correlate with the global tendencies of sustainable tourism, which shows the high value of the ecological tourism perspective in Kazakhstan.

There is an effect in the provision of ecotourism due to the growth of the anthropogenic pressure on native and archeological-touristic objects. Iskakova et al. (2021a) stated that this increasing pressure actually contributes to a phenomenon that is ecotourism, predominantly. This load is directly proportional to the increased number of visitors to different tourist destinations hence call for sustainable tourism. The World Tourism Organization estimates that tourism's rates in the 21st century will be higher; therefore, it is urgent to coordinate tourism demand with the reasonable utilization of tourism resources. This dynamic creates contradictions that can be managed through effective frameworks that will enhance tourism progress. The scientific and methodological foundations of ecotourism thus will fulfil a critical function of not only making the further tourism development friendly to the nature but also capable of answering the growing demands of a growing tourist influx. Thapa (2018) underlined the readiness of the human capital as the vital factor for setting up the foundation to foster ecotourism as well as other forms of tourism in Kazakhstan, thereby enhancing the quality, training, and skills to optimize the natural and cultural potential of the Kazakhstan's tourist attractions. This paper outlines four main activities for a curriculum development and capacity-building project and this includes field visits, collaborative activities, course development and training programs. The paper will also describe the actions taken and the results that have been attained in the process. This endeavor is germane in supporting the government's policy on enhancing international and domestic tourism since it has the skills required in the tourism sector.

Cruise industry, underwater tourism, and even marine tourism as a branch of the tourism industry ultimately prove complex in their management and effective governance play a significant role in their sustainable growth (Troian et al., 2023). Sustainable tourism development is a significant concept for developing countries and is in line with the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs), which are inherent to tourism, seeking to maximize the positive consequences in the socio-ecological-economic context while minimizing potential negative externalities. Recent studies on coastal and marine tourism (CMT) highlight key research topics like sustainable development, impact on destinations, management, conservation, and climate change effects, underscoring the importance of sustainable practices. Challenges such as the need for governmental support, stakeholder cooperation, refined policies, and technological integration have been identified, with innovations like Smart Maritime Tourism (SMT) using Virtual Reality (VR) emerging as potential solutions. Conceptual analyses propose "blue tourism," integrating the blue economy and growth strategies, emphasizing the sea as central to all marine-related leisure activities. These insights provide a comprehensive backdrop for understanding and developing policy frameworks essential for promoting sustainable ecological tourism (Troian et al., 2023).

Focus on studies using quantitative methods and surveys/questionnaires

Therefore, surveys and questionnaires are common research techniques adopted by the quantitative research to evaluate the efficiency of sustainable tourism policies and get stakeholders' perception and experience. For instance, Dodds and Butler (2009) used cross-sectional mail questionnaire to establish the factors that contribute to the failure of policy sustainable tourism in a mass tourism context. As highlighted by their studies there is a major problem of minimal stakeholder involvement, and limited amount of funds to counter act polices.

Likewise, Butler (1980) used a structured questionnaire to assess the applicability of the tourist area cycle of evolution and its reverberation on management of resources. This research demonstrated that various course stages of tourism affect policy requirements and issues differently and it was a great privilege and honor to gain such insights. Quantitative approaches are a highly structured way of amassing and analyzing data, thus allowing the researcher to make broad and definitive findings about policy frameworks' strengths and weaknesses.

Hence, there is a large volume of literature documenting sustainable tourism policies, however, several gaps are evident that require further research. There is a notable absence of substantial, wide-reaching, and predominantly cross-national policy efficacy reviews. All surveys are often dominated by the regional or tourist type of destination, which hinders the findings' diffusion (Hall et al., 2015). Also, more research needs to be conducted with the aim of identifying to what extent various policy measures can be implemented and to what extent they will work in different environments. One last area of research deficiency is the lack of attention to the evolutional characteristics of policy arrangements. Hall (2021) has agreed with the notion by stating that due to the advancement in environmental and socio-economic factors, there should always be new policies to cater with flexible policy measures. Still, contemporary research fails to identify the processes by which the policies may evolve and respond to changes, which leads to the proliferation of conservative recommendations based on current policies. Also, there is a scarce degree of emphasis on two ways of stakeholder participation in policy formulation as well as the implementation process. Bramwell and Lane (1993) along with Dodds and Butler (2009) have pointed out that, local people, traders and other stake holders should be involved in the policy making process. However, further research is required to establish the key strategies with regard to the encouragement of all stakeholders' participation and the improvement of the policies that would meet the needs of all stakeholders.

Thus, it can be stated that there have been advancements in identifying sustainable tourism policies but there are still some deficiencies that require further investigations. The limitations of the study call for a focus on the comparison of results, the flexibility in implementation of policies, and a focus on stakeholder involvement in future research for enhancing frameworks of sustainable tourism policies. Realizing the materialization of environmental rights for sustainable ecological tourism, environmental rights and human rights are inextricably connected, which requires enhanced legal protection. Shevchuk (2021) shows how the Aarhus Convention as well as the REACH regulation reveal the critical role law plays in enhancing the principles of legal compliance in relation to transparency, public participation, and access to justice in environmental issues. Furthermore, the jurisprudence of the ECHR also underlines that judiciary has a crucial role to play in protecting these rights: case-law of the European Court of Human Rights is important from the perspective of developing a rich and complex body of legal precedents necessary to ground comprehensive policies. Meeting the difficulties inherent in protecting these rights is paramount when it comes to attainable ecological goals (Shevchuk, 2021).

Thus, the environmental relationships of tourist development and management are objectified as a conceptual structure that maintains the gross company revenue and the total value of the environment (Sanetra-Półgrabia, 2022). Better still, Baloch et al. sought for an informed government paradigm, thus advocating for sustainable ecotourism with the potential of creating economic value besides ensuring conservation of the resources.

It seeks to facilitate the evolution of tourism concerning its impacts on the environment and people to be positive. Therefore, the framework stresses on contributing to the governmental tourist policies in a way that would indeed avoid all negative effects in this context and encourage sustainable behavior.

According to Baloch et al. (2023), the following paradigm was proposed for analyzing sustainable ecological tourism policy frameworks. Jiang and Engi stress the authors' observations, focusing on the necessity of the sustainable tourism development policy measures, and noting that these recommendations can be useful for other destinations developing identical frameworks. The nature and constituent of their variables and constructs can be employed in gathering useful information for managing destinations sustainably making the study a great contribution to the pool of knowledge in sustainable tourism expertise. Troian et al.,= (2023) investigated the peculiarities of competitive-innovative development within the tourism industry and its relation to the principles of sustainable development. The paper offers a comprehensive discussion that highlights the need to integrate SDGs in tourism enterprises' operations to achieve sustainable competitiveness. Uniquely, using qualitative data collection and analysis techniques such as case studies and themes, the authors establish how the advancement of management strategies and service delivery can improve market edge, as well as promote the protection of the environment and the general welfare of the society.

The research identifies several key findings, first of all, the necessity of using the new management methods that will allow the organization to adapt to the constantly changing consumer preferences and abide by the regulations related to sustainability. Second, the study aims at identifying the perceived obstacles among the tourism enterprises, for example, the bureaucratic regulation in the operations, the difficulty of funding for sustainable activities and achieving the organic growth of enterprise together with the protection of the environment. Third, it looks at the benefits afforded from positive engagement in sustainable practices such as: cost advantages, improvement of the company's image and access to the new consumer societal market within the tourism sector with emphasis on ecotourism niche.

Besides, Troian et al. (2023) pinpoint the importance of the development of policies as the framework to foster collaboration between key players such as the government and businesses and the local population when it comes to responsible tourism practices. They promote policies that encourage development in sustainable tourism, working on social transformation by creating awareness that leads to the actualization of capacities pertaining to the issue.

Hence, through the integration of corporate objectives and sustainable development goals, the tourism enterprises can not only avoid worst case scenarios in the affected environment and society but also promote distribution of social benefits involving inclusiveness of economic growth and readiness to counteract adverse global forces (Yankovska and Kovbas, 2021). Troian et al. (2023) draw beneficial conclusions about the significance of a sustainable development perspective to determine the competitiveness of tourism enterprises. This highlights the significance of policy support to create the necessary environment, incentives, and structures to encourage innovation and partnership useful for the development of ecological and sustainable tourism that ensures the generation of prosperity for all the stakeholders, people, and the communities as well as the preservation of the earth's environment.

This literature review point serves as the initial groundwork to come up with approaches on how the policy framework can contribute towards the integration of sustainability to the tourism enterprise strategies in line with your research interest regarding the evaluation of policy framework in marketing sustainable ecological tourism.

MATERIALS AND METHODS

The flowchart diagram for the Materials and Methods section of the research paper provides the view of how sequentially structured the study has been. The process starts with the major Research Methodology that is based on the Quantitative Research approach. From this element, the diagram splits into Data Collection in which statistical information shall has to be collected in support of the study.

At the same time, one of the critical parts of the research, such as Questionnaire Development, is represented as a several stage process which begins with Literature Review to identify the first questions for the questionnaire. These questions are subjected to a Pilot Testing to establish validity culminating in the Final Questionnaire Refinement. After the data collection procedures, the research moves to Statistical Analysis whereby several hypothesis are put to test. This analysis consists of Hypothesis Testing available in two options: Correlation for relationship analysis; Regression for outcome prediction and T-Testing for mean comparison of groups. Every box in the flowchart is linked to another one to show all the intertwining process, proving that the research methodology applied in the assessment of policy frameworks for encouraging sustainable ecology tourism is cyclical (Figure 1).

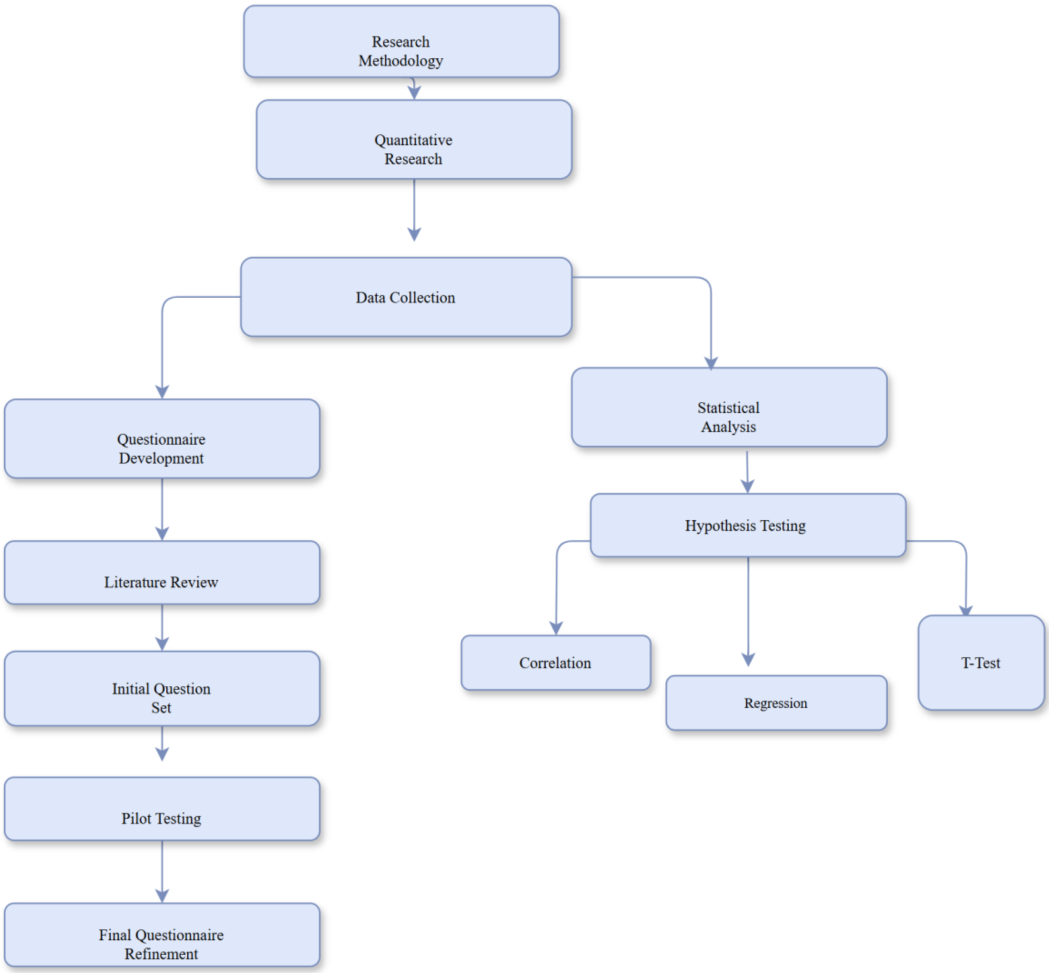

Figure 1. Flowchart of the quantitative research process: From questionnaire development to hypothesis testing

Explanation of the quantitative research design

The research methodology that is adopted in this study is quantitative research in a bid to analyze comprehensively the policy frameworks for Solomon for the promotion of ecological tourism.

The numerical method of data collection enables one to generate statistical data, which in turn will help provide a statistical analysis of the effectiveness of such policies. Quantitative methodologies' assumption of reality makes it possible to make dependable findings that can be applied to policies. In the following section, elaboration of the specific part of the questionnaires will be made in relation to the following questions.

Development process

To make sure that the developed questionnaire was valid and reliable, the following process was followed in the development of the questionnaire. First of all, the literature review took place in order to reveal variables linked with sustainable tourism policies and their effects. An initial set of questions has therefore been proposed from this review of the literature. The draft was presented to other specialists working within the same field in order to determine whether the questions matched the constructs that were being measured. The first questionnaire was completed by a small group of respondents to check appropriate questions, exclude the usage of possible ambiguous statements in the questionnaire, and check the completeness, clearness, and understanding of the respondents. Indeed, the questionnaire developed at this stage of research was refined after the results of the pilot testing were considered. Despite the fact, Kazakhstan has much potential for the development of ecotourism because of the preserved natural resources and unbelievable landscapes in combination with the national parks. The authors Kumar and Sheryazdanova (2021) mentioned, these protected areas can help to promote the ecotourism due to the centration of the protection of the ecosystems carrying out ecological, enlightening-popularizing, research-exploration, sightseeing, and recreational activity. Kazakhstan started the academic analysis of ecotourism relatively recently, the topic being initiated at the beginning of the years 2000s, while the phenomenon had emerged in the 1970s all over the world. However, it is necessary to state that there is no definite focus on this issue as a scholarly topic and the productivity relating to this area remains insufficient even after starting the research later than in other countries in Kazakhstan. Closing these gaps, the research by Kumar and Sheryazdanova (2021) analyzes the background, the state, and the outlook for Kazakhstan's ecotourism. They reveal the history of the development of ecotourism, the importance of national parks and new possibilities of further investigations in this field for strengthening the ecotourism in the country.

Thus, in Central Kazakhstan, especially in Karkaraly area, there are vast opportunities for ecotourism for which the representatives of tourist companies expressed their interest in developing specific sights beginning with the Karkaraly lowlands geosystems. Keukenov et al. (2022) also stress the need for developing ecotourism and such measures as the creation of eco-routes and the improvement of the tourist support system in this territory. The research was conducted through field, descriptive and cartographic approaches and yielded an ideal two days' eco-route. The conclusions are aimed at stressing the possibility to enhance the ecotourism development in the Central Kazakhstan due to presentation of the area's promising sights and fauna, as well as the special proactive directions of the eco-tourism routes promotion.

Katon-Karagai State National Nature Park situated in East Kazakhstan region is regarded as one of the most suitable places for the growth of eco-tourism because of the ground that contains different geosystems and many-sided sights. Turyspekova et al. (2022) emphasized that national parks, especially the example of Katon-Karagai, play an important role in the development of ecological tourism and education, which corresponds to the nature and history of the region. The park is one of the largest ones in terms of the size of the territory in Kazakhstan that experienced significant growth in terms of tourism, considering this point, the area is the main focus of ecological tourism. The findings involve the following objectives of the study. Determine the attractive recreational areas within the park and propose development strategies of ecotourism. Owing to these studies, it can be concluded that Katon-Karagai State National Nature Park is a promising object for the development of ecotourism, and therefore it can be stated that regional planning and organization is a decisive factor for the further development of this segment of tourism.

Types of questions

The questionnaire comprises various types of questions designed to gather detailed and relevant data: These questions enable the respondents to have specific answers to choose from, maintain order to the answers as well as the ability to easily quantify the results. Some examples of closed-form questions are the multiple choices questions; questions that require simple yes or no as their answer. These questions are presented in a way that elicits a respondent's attitude or perception of an issue on a scale, for instance, "Strongly Disagree/Strongly Agree" or "Not at all/Very". This enables quantitative evaluation of otherwise subjective data and, thus, entails a profound understanding of the perception of sustainable tourism policies among the respondents. These are structured with the aim of identifying basic demographic details of the respondents that include age, gender, job status, geographical location, and level of education respectively. This data aids to determine to what extent demographic variables affect the level of perception and awareness of sustainable tourism policies.

Sampling Technique

The study chosen for the present paper utilizes a stratified random sampling technique. Such a method is useful in making sure that the sample has been drawn from the population in a manner that ensures that all the members of the population are equally represented through a systematic process of making the selections from different strata that are created on the bases of different factors such as region, occupation, education level etc. This approach increases the probability of generalization of the findings so that distinct sections of the population are sufficiently sampled. The sample size for this study is 370 participants which will enable the research to have significant results that are statistically relevant.

Justification of the chosen method and questionnaire design

- The chosen quantitative method and the structured questionnaire design are justified for several reasons: The chosen quantitative method and the structured questionnaire design are justified for several reasons:
- Objectivity and Reliability: Quantitative techniques make use of numbers as indicators hence have lesser influence from the researcher. The use of questionnaire makes the data collection appear structured thus increases the reliability of the results.
- Scalability and Generalizability: This avoids bias in the sample taken, and the results can be generalized to the wider community since the sample taken is a small and fairly selected from the population.
- Depth of Insight: The combination of closed-ended and Likert scale questions provides both specific data points and nuanced insights into community awareness, policy clarity, stakeholder involvement, and other critical aspects of sustainable tourism policies.
- Efficiency: The structured format of the questionnaire facilitates efficient data collection and analysis, making it suitable for studies involving large sample sizes.
- Participants were selected from the Kazakh population, and the sample size was calculated using *G* Power to achieve statistical significance in the study.

Correlation Hypotheses. Purpose: To measure the strength and direction of the relationship between two variables.

Hypothesis 1 (Correlation)

- **H0:** There is no significant correlation between all independent variables in policy design, policy effectiveness and Environmental and socioeconomic impacts.
- **H1:** There is a significant correlation between all independent variables in policy design, policy effectiveness and Environmental and socioeconomic impacts.

Regression Hypotheses. Purpose: To predict the dependent variable (policy effectiveness or environmental and socioeconomic impacts) based on one or more independent variables.

Hypothesis 2 (Regression):

- **H0:** Clarity of policy guidelines, stakeholder involvement, and government support do not significantly predict policy effectiveness.
- **H1:** Clarity of policy guidelines, stakeholder involvement, and government support significantly predict policy effectiveness.

Hypothesis 3 (Regression):

- **H0:** Community involvement and funding/resources do not significantly predict environmental and socioeconomic impacts.
- **H1:** Community involvement and funding/resources significantly predict environmental and socioeconomic impacts.

T-Test Hypotheses: Purpose: To compare means between two groups for specific independent variables.

Hypothesis 4 (T-Test)

- **H0:** There is no significant difference in policy effectiveness between urban and rural locations.
- **H1:** There is a significant difference in policy effectiveness between urban and rural locations.

Variables for Each Test. Correlation Variables:

1. (Independent Variable)
2. Policy effectiveness (Dependent Variable)
3. Environmental and socioeconomic impacts (Dependent Variable)

Regression Variables:

1. Policy effectiveness (Dependent Variable)
2. Environmental and socioeconomic impacts (Dependent Variable)
3. Clarity of policy guidelines (Independent Variable)
4. Stakeholder involvement (Independent Variable)
5. Government support (Independent Variable)
6. Community involvement (Independent Variable)
7. Funding and resources (Independent Variable)
8. Control variables: Age, Gender, Occupation, Location, Education Level

T-Test Variables: Policy effectiveness (Dependent Variable); Location (Urban/Rural) (Control Variable)

These hypotheses and variable selections will help you structure your data analysis and ensure that your research objectives are met through appropriate statistical tests (Table 1).

Table 1. Descriptive statistics

	N	Minimum	Maximum	Mean	Std. deviation
Gender of the respondents	371	1.00	2.00	1.0997	.30004
Age of the respondents	371	1.00	5.00	2.3881	1.05281
Occupation	371	1.00	2.00	1.5364	.49935
Where you living	371	1.00	2.00	1.5148	.50046
Education	371	1.00	4.00	1.6415	1.00178
Valid N (listwise)	371				

The table presents descriptive statistics for 371 respondents across several variables. For gender, with values ranging from 1 to 2, the sample shows a slight skew towards one gender (mean = 1.0997, SD = 0.30004). Age, ranging from 1 to 5, indicates a relatively diverse distribution (mean = 2.3881, SD = 1.05281). Occupation, ranging from 1 to 2, leans towards one category (mean = 1.5364, SD = 0.49935), while residential location (where you live), also ranging from 1 to 2, shows moderate balance between categories (mean = 1.5148, SD = 0.50046). Education levels, ranging from 1 to 4, vary widely within the sample (mean = 1.6415, SD = 1.00178). These statistics provide a comprehensive snapshot of the demographic and categorical distributions among the respondents, highlighting the variability and central tendencies across gender, age, occupation, residential location, and education within the sample (Table 2).

Table 2. Statistics of respondents

		Gender of the respondents	Age of the respondents	What is your occupation	Where you live	Education
N	Valid	371	371	371	371	371
	Missing	133	133	133	133	133
Mean		1.0997	2.3881	1.5364	1.5148	1.6415
Std. error of mean		.01558	.05466	.02592	.02598	.05201
Median		1.0000	2.0000	2.0000	2.0000	1.0000
Mode		1.00	2.00	2.00	2.00	1.00
Std. deviation		.30004	1.05281	.49935	.50046	1.00178
Variance		.090	1.108	.249	.250	1.004
Range		1.00	4.00	1.00	1.00	3.00
Minimum		1.00	1.00	1.00	1.00	1.00
Maximum		2.00	5.00	2.00	2.00	4.00
Sum		408.00	886.00	570.00	562.00	609.00
Percentiles	25	1.0000	2.0000	1.0000	1.0000	1.0000
	50	1.0000	2.0000	2.0000	2.0000	1.0000
	75	1.0000	3.0000	2.0000	2.0000	2.0000

The table provides comprehensive descriptive statistics for five variables based on 371 respondents, with 133 missing values across all variables. For gender, the mean of 1.0997 indicates a slight skew towards one category, with a standard deviation of 0.30004, suggesting relatively low variability. Age, with a mean of 2.3881 and a wide range from 1 to 5, shows a notable standard deviation of 1.05281, indicating significant variability in respondent ages. Occupation, with a mean of 1.5364, predominantly falls into one category, as indicated by the mode of 2. Residential location (where you live), also predominantly in one category (mode = 2), has a mean of 1.5148 and a standard deviation of 0.50046, indicating moderate variability. Education levels vary widely (range from 1 to 4), with a mean of 1.6415 and a standard deviation of 1.00178, reflecting substantial diversity in educational backgrounds among respondents.

Table 3. Gender of respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Male	334	66.3	90.0	90.0
	Female	37	7.3	10.0	100.0
	Total	371	73.6	100.0	
Missing	System	133	26.4		
Total		504	100.0		

Overall, these statistics offer a detailed snapshot of the demographic and categorical distributions within the sample, highlighting central tendencies, variability, and the range of responses across different variables. Table 3 gives the gender distribution of the respondents in the study. Of the 504 participants, 371 responded validly to the question concerning their gender; out of this number, 334 self-identified as male (66.3%) while 37 were females (7.3%). The valid percent clearly depicts that, out of the total valid responses, 90% were from male and only 10% were from female. The results have also depicted that cumulative percent of the valid response is 100 percent. Also, 133 papers were missing responses which cumulatively accounted for 26 percent. 4% of total intended sample, hence, making the gross response rate of 73.6% (Figure 2, 3, 4).

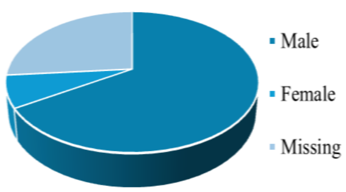

Figure 2. Gender of respondents

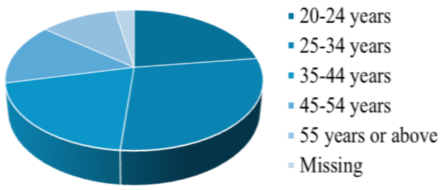

Figure 3. Age of respondents

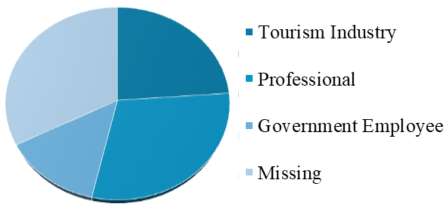

Figure 4. Occupation of respondents

The age distribution of the respondents in the study is as shown in Table 4. Among the total 504 participants, 371 completed the part of the survey referring to the age distribution of participants. Most of the respondents were within the age range of 25-34 years; this was comprised of 154 respondents which is 41.5% of the valid response rate followed by 35-44 years with 98 respondents who were 26.4% of the valid response rate. There were also respondents in other age categories: The remaining ages bracket as follows: 20-24 years, 19.1%, 45-54 years 7.3%, 55 years and above 5. 7%. The cumulative percentage depicts all valid responses sum to 100% while 133 responses were missing (26. 4% of the total sample) leading to an overall response rate of 73%. 6%. A breakdown of the respondents' occupations in the study has been presented in Table 5 as follows. Among all the 504 participants, 371 participants gave a valid response to the work status of the participants. When it comes to the occupation of the respondents, they are predominantly Government employees since 199 of the participants, which is 53. 6% of the valid responses provided belonged to this category. Tourism Industry Professionals was the second largest category of the respondents with 172 of them (46. 4% of the valid responses). The percent total gives the indication that the total of the valid scores is 100% of the data. Moreover, 133 of the responses received were missing (26. 4% of total sample Members'), which made the overall response rate equal to 73. 6%.

Table 4. Age of respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	20-24 years	71	14.1	19.1	19.1
	25-34 years	154	30.6	41.5	60.6
	35-44 years	98	19.4	26.4	87.1
	35-44 years	27	5.4	7.3	94.3
	55 years or above	21	4.2	5.7	100.0
	Total	371	73.6	100.0	
Missing	System	133	26.4		
Total		504	100.0		

Table 5. Occupation of respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Tourism industry professional	172	34.1	46.4	46.4
	Government employee	199	39.5	53.6	100.0
	Total	371	73.6	100.0	
Missing	System	133	26.4		
Total		504	100.0		

Table 6. Location of Respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Urban	180	35.7	48.5	48.5
	Rural	191	37.9	51.5	100.0
	Total	371	73.6	100.0	
Missing	System	133	26.4		
Total		504	100.0		

Table 7. Education of Respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	less than secondary school	236	46.8	63.6	63.6
	high secondary school or diploma	72	14.3	19.4	83.0
	Bachelor's degree	23	4.6	6.2	89.2
	Master's degree	40	7.9	10.8	100.0
	Total	371	73.6	100.0	
Missing	System	133	26.4		
Total		504	100.0		

Table 6 displays the residential locations of the respondents in the study. Out of the total 504 participants, 371 provided valid responses regarding their place of residence. The data shows that nearly half of the respondents live in rural areas, with 191 individuals (51.5% of valid responses), while 180 respondents (48.5% of valid responses) reside in urban areas. The cumulative percent indicates that all valid responses account for 100% of the data. There were also 133 missing responses (26.4% of the total sample), resulting in an overall response rate of 73.6%.

The educational level of the respondents in the study is set out in Table 7. From the overall sample of 504 participants, 371 respondents were valid in their responses concerning their education. Regarding school education, 236 participants (63. 6% of valid responses) said that they have less than secondary school level education. Moreover, seventy-two respondents (19. 4% of valid responses) stated to have finished high school or to have a diploma; 6. 2% of valid responses received a Bachelor's degree; 10. 8% of valid responses received a Master's degree. The cumulative percent reveals that all the valid responses have contributed 100 percent of the data or results. Thirty-three of the 398 rural respondents failed to answer some questions: 133 missing responses, 26.6% (Figure 5, 6).

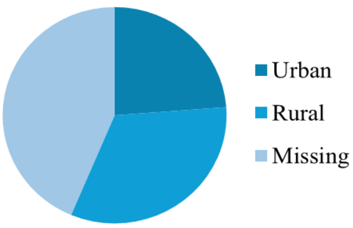

Figure 5. Location of Respondents

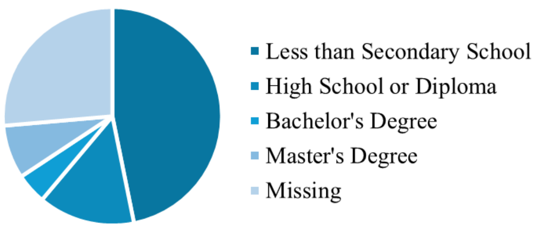

Figure 6. Education of respondents

Description of all demographic variables

The gifts of the demographic feature of the respondents in this study portray a diversified dispersion in several factors. With regards demographics, the gender distribution of participants was almost evenly split, with 66. 3% self-identified as male and only 7% for female, which could not in any way justify the tiny representation that women were given in solving the complex problem. 3% of them selected that they are female while 26%, 4% data missing.

Investigating by age, it is possible to state that most clients are between 25 and 34 years old (30. 6%), whereas a significantly smaller number of clients belongs to 35-44 (19. 4%), 20-24 (14. 1%) age category and even fewer customers are 45 and older. Regarding occupation, the following percentage of replies is obtained 64% of the respondents are house wives, 5% are students, 16% are civil servants, 1% are employed in the tourism industry, and 39.5% are government employees. Further, in terms of place of residence the respondents are divided almost equally between the urban and rural area; (Chi-square=3. 67; p>0. 05). Education levels at present reveal that a greater portion of the majority, 46. 8%, have a level below secondary academic schooling; 14. 3% have high secondary schooling, often a diploma; and only 6. 2% have attained a Bachelor's degree, with 10.8% having a Master's degree.

These demographics include the gender, age, occupation, geographical location, and educational background of the respondent, which give a snapshot of the respondents' details.

Hypothesis 1 (Correlation)

- H0: There is no significant correlation between all independent variables in policy design, policy effectiveness and Environmental and socioeconomic impacts.
- H1: There is a significant correlation between all independent variables in policy design, policy effectiveness and Environmental and socioeconomic impacts.

The table presents correlation coefficients among various factors related to sustainable tourism policies and their impacts, based on data from 371 respondents. Insight into sustainable tourism policies shows significant positive correlations with the source of policy information (r = 0.303, p < 0.01), but negative correlations with the clarity of policy guidelines (r = -0.083, p > 0.05) and stakeholder involvement in policy design (r = -0.051, p > 0.05).

The clarity of policy guidelines has strong positive correlations with stakeholder involvement (r = 0.826, p < 0.01), policy implementation (r = 0.716, p < 0.01), and enforcement mechanisms (r = 0.657, p < 0.01).

Stakeholder involvement in policy design also correlates positively with policy implementation (r = 0.784, p < 0.01) and enforcement mechanisms (r = 0.825, p < 0.01). Policy effectiveness shows significant positive correlations with public awareness campaigns on the environment (r = 0.309, p < 0.01) and the effectiveness of educational programs (r = 0.183, p < 0.01), but negative correlations with some factors like the clarity of policy guidelines (r = -0.144, p < 0.01) and stakeholder involvement (r = -0.113, p < 0.05).

Overall, these correlations highlight relationships among different elements of policy formulation, implementation, and their perceived impacts on environmental and socioeconomic outcomes in sustainable tourism contexts (Table 8).

Table 8. Correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Insight into sustainable tourism policies	1	.303**	-.083	-.051	-.036	-.075	-.011	-.038	-.019	-.043	-.040	-.075	-.072	.078
Source of policy information		1	.043	.049	.052	-.043	.018	.031	.060	-.069	-.008	.011	-.047	.058
Clarity of policy guidelines			1	.826**	.716**	.657**	-.363**	-.337**	-.298**	-.048	.191**	.413**	.340**	-.144**
Stakeholder involvement in policy design				1	.784**	.825**	-.319**	-.293**	-.311**	-.056	.183**	.381**	.426**	-.113*
Policy implementation					1	.686**	-.227**	-.296**	-.280**	-.013	.189**	.333**	.355**	-.136**
Enforcement mechanism						1	-.345**	-.291**	-.320**	-.039	.150**	.313**	.583**	-.083
Funding and resources							1	.692**	.807**	.261**	-.141**	-.248**	-.319**	.078
Community involvement								1	.698**	.135**	-.065	-.189**	-.315**	.114*
Support from local business									1	.410**	-.050	-.220**	-.352**	.130*
Government support										1	.239**	.141**	-.004	-.010
Effectiveness of educational program											1	.697**	.183**	.024
Public awareness campaign on the environment												1	.309**	-.114*
Environmental and socio-economic impact													1	-.061
Policy effectiveness														1

Hypothesis 2 (Regression):

● H0: Clarity of policy guidelines, stakeholder involvement, and government support do not significantly predict policy effectiveness.

● H1: Clarity of policy guidelines, stakeholder involvement, and government support significantly predict policy effectiveness (Table 9).

Table 9. Regression Coefficients for predicting policy effectiveness

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.442	.087		28.131	.000
	Stakeholder Involvement in Policy Design:	.007	.040	.017	.185	.853
	Clarity of Policy Guidelines	-.069	.040	-.159	-1.735	.084
	Government Support	-.007	.021	-.017	-.330	.742
Dependent Variable: Policy effectiveness; R=.146[a], R Square=.021, Adjusted R Square=.013						

The table provides a summary of a regression analysis predicting Policy Effectiveness based on Government Support, Clarity of Policy Guidelines, and Stakeholder Involvement in Policy Design. The model has a low R Square of 0.021, indicating that only 2.1% of the variance in policy effectiveness is explained by the predictors. The adjusted R Square (0.013) adjusts for the number of predictors, suggesting a slight improvement in model fit. The standard error of the estimate (0.52511) represents the average distance between observed and predicted values.

The F Change statistic (2.647) and its associated p-value (p = .049) indicate that the model is marginally significant, suggesting that the predictors collectively have some explanatory power for policy effectiveness. However, examining the coefficients reveals that none of the predictors—Stakeholder Involvement in Policy Design (B = 0.007, p = .853), Clarity of Policy Guidelines (B = -0.069, p = .084), and Government Support (B = -0.007, p = .742)—have statistically significant effects on policy effectiveness. These results suggest that while the model shows a marginal ability to predict policy effectiveness, the individual predictors do not significantly contribute to explaining variations in the dependent variable based on the data analyzed. Prokopenko et al. (2019) article on digital tools for tourism management stresses the importance of innovative tools and stakeholder engagement. The low R Square in your model suggests that even with stakeholder involvement, achieving policy effectiveness can be challenging, reflecting the discussions in Prokopenko et al. (2019) about the need for more effective engagement strategies.

Hypothesis 3 (Regression):

- H0: Community involvement and funding/resources do not significantly predict environmental and socioeconomic impacts.
- H1: Community involvement and funding/resources significantly predict environmental (Table 10).

Table 10. Coefficients and socioeconomic impacts

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.178	.224		27.616	.000
	Community Involvement	-.219	.081	-.182	-2.688	.008
	Funding and Resources	-.216	.076	-.193	-2.846	.005
Dependent Variable: Environmental and Socioeconomic Impacts; R=.345[a,] R Square=.119, Adjusted R Square=.114						

The table presents the results of a regression analysis predicting Environmental and Socioeconomic Impacts based on Community Involvement and Funding and Resources. The model shows an overall moderate fit with an R Square of 0.119, indicating that 11.9% of the variance in impacts is explained by the predictors. The adjusted R Square (0.114) adjusts for the number of predictors, providing a slightly more conservative estimate of the model's explanatory power. The standard error of the estimate (1.21958) reflects the average distance between the observed and predicted values.

The F Change statistic (24.819) and its associated p-value (p = .000) indicate that the model is statistically significant, suggesting that Community Involvement and Funding and Resources together significantly predict Environmental and Socioeconomic Impacts. The coefficients show that both predictors have negative standardized coefficients (Beta) of approximately -0.182 and -0.193, respectively, indicating that higher levels of Community Involvement and Funding and Resources are associated with lower impacts. Both predictors are statistically significant (p < .01), supporting their contribution to explaining variance in the dependent variable. Bashynska et al. (2022) emphasizes sustainable practices and the importance of effective resource allocation in creating smart agro-clusters. This aligns with your findings that community involvement and funding significantly influence environmental and socioeconomic impacts. Both highlight the importance of strategic resource allocation for sustainability.

T-Test Hypotheses

Purpose: To compare means between two groups for specific independent variables.

Hypothesis 4 (T-Test)

- H0: There is no significant difference in policy effectiveness between urban and rural locations.
- H1: There is a significant difference in policy effectiveness between urban and rural locations (Table 11).

Table 11. Independent samples test

		Levene's test for equality of variances		t-test for equality of means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% Confidence interval of the difference	
									Lower	Upper
Policy effecti-veness	Equal variances assumed	2.699	.101	-.465	369	.642	-.02557	.05497	-.13366	.08253
	Equal variances not assumed			-.468	363.0	.640	-.02557	.05467	-.13307	.08193

The results of the independent samples t-test do not support the hypothesis that there is a significant difference in policy effectiveness between urban and rural locations. The Levene's test for equality of variances indicates that the assumption of equal variances between urban and rural groups is valid (F = 2.699, p = .101).

The t-test for equality of means shows a non-significant difference in policy effectiveness between urban (M = 2.2833) and rural (M = 2.3089) areas (t (369) = -0.465, p = .642, 95% CI [-0.134, 0.083]). With a mean difference of -0.02557, the results suggest that, on average, policy effectiveness is slightly higher in rural areas, but this difference is not statistically significant. Therefore, we fail to reject the null hypothesis (H0), indicating that there is no compelling evidence from this analysis to support a significant difference in policy effectiveness between urban and rural locations based on the data provided. Popadynets et al. (2021) discuss the competitiveness of economic regions and prospects for innovative development. While their focus may not directly mirror the specific statistical analysis of urban versus rural policy effectiveness, their exploration of regional competitiveness and innovative development can conceptually align with the context of policy effectiveness in different geographical settings.

Popadynets et al. (2021) may provide insights into how different regional contexts, such as urban and rural areas, influence policy effectiveness through their discussion on economic competitiveness and innovation. Although they do not conduct a similar statistical test, their examination of regional dynamics and competitiveness can inform broader discussions about the implications of urban versus rural settings on policy outcomes, Thus, while not directly conducting the same analysis, their exploration of economic competitiveness and regional development can contribute to understanding the potential contextual factors influencing policy effectiveness between urban and rural locations.

Findings

The significant positive relationship between insight into sustainable tourism policies and the policy information source indicates that comprehensible policies result in sustainable practices. This points towards the strategies highlighted in the sustainable development literature as stating that credible and attainable information is vital for enhancing good policies. The comparatively reduced values of the associations between clarity of policy guidelines and stakeholders' engagement in policies development with the policy insights could signal concerns. This is why it is essential to improve the communication and engagement processes, similar to the importance of communication and engagement noted by authors focused on the development of rural tourism potential (Kovshun et al., 2023).

The book "Ecological Tourism in the Republic of Kazakhstan" outlines a theoretical and methodological research for the successful beginning of the ecotourism and geotourism of Kazakhstan. Among the findings made it is crucial to substantiate the importance of specially protected natural areas for the development of ecotourism. The paper of Iskakova et al. (2021) also supports that these protected areas are crucial for developing the scope of environmentally related tourist offerings. This study also describes the main prerequisites for the effective organization of ecotourism both in protected natural and rural areas and indicates the possibilities for their development.

In addition, the book provides detailed cartographic material that can demonstrate the geographical opportunities of currently existing and potentially developing areas for tourism in Kazakhstan, also guiding the state to strategically plan the budget for the specified sphere. This approach guarantees that the financial investment is done of the specific areas that have the prospects of the sustainable tourism, thus solving the problems of the present and future development of the ecotourism in Kazakhstan. The spearhead positive relationship between clarity of policy guidelines and policy, implementation and enforcement mechanisms were clear showing the importance of clear policy guidelines.

This resonates with findings from structuralist works stressing the role of systematic frameworks in the management of sustainable development programs (Popadynets et al., 2021).

Concerning Reliability, the relationships between stakeholder involvement and policy implementation/enforcement imply stakeholders' significant engagement in the process of transforming policies into real results. This contributes to the results regarding the identification of key stakeholders and utilizing the appropriate communication channels in encouraging sustainable tourism destinations (Prokopenko et al., 2019). Significant and positive correlations between policy effectiveness, public awareness campaigns in the environment, and effective educational programs mean that people, when they are enlightened, will embrace sustainable tourism. This is in line with the concern made on educational campaigns and public involvement in sustainable tourism policies.

These studies reaffirm various interesting and informative issues that relate to how policies are made, with which stakeholders, regarding implementation of specific strategies and the subsequent effects on sustainability of tourism. They stipulate that measures of increasing stakeholders' engagement, better communication of policy directions and raising awareness are necessary for success stories on sustainable tourism development. Koval et al. (2022) explained how environmental taxation affects clean technologies with a call for more significant financial structures in lowering carbon emission. This research corresponds to the finding of the relationships between ST policies and their consequences, mainly concerning the efficiency of policy interventions.

As Koval et al. (2021) rightly pointed out, sound approaches to environmental taxation help improve the implementation of policies by offering such incentives. This supports the overall view that the identification of good policy frameworks, involvement of the interested parties as well as enhanced development of awareness campaigns are critical for the enhancement of the sustainable tourism goals by appropriate use of policy measures.

CONCLUSION

It is therefore safe to say that, based on the respective correlations, the thing that makes sense regarding policy implementation and effectiveness in sustainable tourism is that there are facilitating factors such as stakeholder involvement or clear policy guidelines among others. These are among the difficulties that are faced ranging from the perplexity of guidelines to compile for the policies as well as greater involvement of stakeholders to make better the policies' impacts. From the analysis, one realizes that public awareness campaigns and other educative programs come out HIV / AIDS policy as very important in boosting policy outcomes. Again, the correlation findings also suggest that full-spectrum sustainable development goals in tourism policies have it that there are complex and diverse issues within covering; it is a holistic issue that cannot be overdosed by mere formulaic application, and it also shows the need to have good stakeholder involvement at the policy formulation, implementation, and review stages. Akbar et al. (2021) reveals in this case of the Aksu-Jabagly Nature Reserve that low community relevance and participation in tourism activities, along with inadequate community empowerments, pose great challenges to implement CBET strategies adequately. This concurs with the above general analysis pointing to the fact that for policy outcomes to improve, effective awareness campaigns and education have to be enhanced. Based on the results, it can be concluded that sustainable tourism policies, backed up with complete public awareness, can improve the efficiency of sustainable tourism projects.

The correlation findings also indicate that the achievement of full-spectrum sustainable development goals in the policies that relate to tourism cannot be single-spectrum. This entails effective and proper handling of numerous and different issues throughout the policy making, executing and evaluating procedures with effective stakeholder participation. These aspects suggest that there is need for having well-defined polices that are implementable for sustainable tourism while the local people should be involved fully in pushing for sustainable tourism that will both help boost the economic returns and at the same time protect the natural and cultural resources.

Therefore, one can conclude that sustainable tourism policies depend very much on the level of the involvement of stakeholders, the specificity of policy frameworks, and the scope and intensity of public campaigns aimed at awareness raising. Their inclusion is crucial to considering the multifaceted characteristics and achieving the sustainable implementation and effectiveness of the undertaken tourism activities.

Recommendations

1. Subsequently there is a need for policy makers to put policies for engagement of stakeholders throughout the policy formulation and implementing phases in order to allow for inclusion of diverse views.
2. Enhance the specificity of the policy guidelines so that they can be easily understood and applied by the stakeholders as well as enforcement authorities.
3. Promotion needs to be stepped up in support of sustainable tourism through additional public awareness campaigns and educational initiatives for the development of a better understanding of the issue at the local level.
4. Assure the government to carry out the monitoring and evaluation activities in order to review the effects of the policies and policy change activities as informed by empirical evidence and opinions from various stakeholders.
5. Enhance the government's support for the application of IT in managing sustainable tourism programs. The shift from the use of traditional technology to information technology in the management of public administration can improve the means and ways of implementing policies involving the citizens.

Limitations

1. The data on correlations collected are cross-sectional which restricts the viability of inferring causative relationships of the variables.
2. Generalization to other populations or geographical areas can be an issue because of the choice of the sample and its size.
3. Since respondents are likely to provide feedback self-estimated, the findings derived from such responses are predestined to contain certain bias, especially in terms of ratings of policy and subjectively perceived performance as well as the stakeholder engagement levels.
4. Additional factors beyond those evaluated in the study, structural external environment and socio-economic factors might shape work on polices thus giving meaning to the correlations.

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THE IMPACT OF DECEPTIVE HOSPITALITY AND TOURISM MARKETING TACTICS ON TOURISTS' SOCIAL MEDIA INTERACTIONS AND TRUST AND DESTINATION IMAGE IN EMERGING MARKETS

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Abstract: While previous research has examined the impacts of discrete deceptive marketing practices, limited studies have taken a holistic perspective to understand the interconnected relationships between various deceptive tactics across different marketing mix elements and key tourist behaviors and perceptions. This represents a significant gap as the complex interlinkages shape challenges for developing tourism industries. Therefore, this study explores how deception in products, pricing, promotion, and place collectively influences tourist trust, destination image, and online reviews of Egypt. Through a survey of independent travelers, we found deception indirectly hampers tourism by eroding trust and shaping a negative overall image. This provides nuanced insights into downstream consequences by assessing diverse deceptive practices through an established marketing framework. The findings offer valuable theoretical contributions by developing a more comprehensive understanding of causal interactions between deception types and critical outcomes. It also highlights challenges for policymakers seeking to expand hospitality sectors in developing economies.

Keywords: deceptive marketing, destination image, tourist trust, emerging economy, hospitality, Egypt, social media

* * * * * *

INTRODUCTION

Deceptive commercial practices remain an ongoing concern, including within the hospitality sector (Fang and Xiang, 2023; Kim et al., 2023). Recently, Marriott and Hilton faced legal and financial repercussions stemming from the

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undisclosed incorporation of mandatory daily resort fees into online room rate listings (Carrns, 2019). Commonly rationalized as covering amenities, these surcharges fluctuate widely among properties and are not transparently disclosed (Wang et al., 2021). As demonstrated through resulting litigation, such obfuscated billing contravenes consumer protection statutes while undermining brand trust. Thus, deceptive marketing techniques have become a critical issue facing the hospitality and tourism industry due to their susceptibility to unethical practices (Xu et al., 2022). Particularly, misleading tactics like false advertising harm companies through reputation damage and consumers through disappointment and distrust (Kuo et al., 2015). While marketing ethics have been studied extensively, most research focuses on the marketer perspective rather than the consumer viewpoint (Li and Ma, 2023; Moon et al., 2019). However, understanding consumer opinions is vital as marketing shifts to relationship-building, elevating the importance of ethics in customer interactions. Moreover, the backlash to deception can diminish trust and damage brand image.

Due to the hospitality service sector's inherently intangible nature and hypercompetitive environment, hospitality and tourism firms face heightened vulnerability to deceptive practices that mislead consumers (Fang and Xiang, 2023; Siddiqi et al., 2020). Such tactics undermine trust, satisfaction, and repurchase intentions while diminishing the destination's reputation through poor brand perception (Kuo et al., 2015). Deception manipulates consumers through false or incomplete information across marketing channels like advertising and packaging (Cawley et al., 2013). While illegal in developed nations, the ethics of such strategies remain ambiguous in developing contexts (Misra, 2015). Regardless, deception poses multifaceted concerns for stakeholders, given issues around truth, relevance, and intent (Bhattacharya et al., 2022).

Building hospitality, consumer trust, and a positive image are paramount for destinations to mitigate risk, expand offerings, and enter new markets for financial gains (Kim et al., 2023). However, research demonstrates marketing's inherent ethics substantially impact these relationship assets. As one of the most environmentally exposed operations, marketing falls prey to unethical pressures that erode trust if left unaddressed, as the unfavorable responses to deception endanger brand reputation Li and Ma (2023). Therefore, comprehending hospitality customers' attitudes assumes renewed importance, though empirical attention remains limited compared to insights into marketer standpoints (Moon et al., 2019; Xu et al., 2022). While the prevalence of deceptive practices persists, the body of academic knowledge surrounding their causes and effects remains limited. Knani (2014) identified that comparatively little research explores ethical marketing issues within hospitality versus broader business contexts. Further, deception has received disproportionately less attention from scholars in developing countries than industrialized nations, suggesting a gap in cross-cultural understanding of its justifications and ramifications (Yaman and Gurel, 2006). Most studies also narrow their focus to examining singular components of the marketing mix instead of evaluating deception holistically across all elements (Gaber et al., 2018). Finally, although past work has begun to link deception to trust and image, further empirical investigation is still needed to elucidate these relationships more thoroughly and better comprehend deception's broader consumer and reputational impacts (Kuo et al., 2015). These substantial knowledge gaps prompt the need for additional scholarly inquiry. Therefore, this study aims to address the following key research questions:

- To what extent can deceptive practices across the entire marketing mix influence consumer trust and destination image?
- How do fluctuating levels of trust and image impact social media engagement behaviors?
- Do trust and image levels mediate deception and online communications?
- Do relationships between deception, trust/image, and communications differ according to cultural contexts like developing countries? Addressing these questions will advance academics' understanding of the scope and consequences of deception through a more holistic multi-contextual lens. Highlighting the detrimental effects on trust and image can help discourage unethical hospitality marketing.

THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

1. Deceptive marketing and customer trust

Research into trust within tourism and hospitality emerged in the late 1990s (e.g., Crotts et al., 1998). Incidents of distrust erupted in these industries, such as unfair treatment from suppliers (Chang, 2012) and unfulfilled service promises from hotels (Lien et al., 2015). As a result, trust became a pivotal topic, driving further study. Trust is built on expectations of dependability, ethics, and social responsibility rather than opportunism. It also strengthens loyalty and long-term customer relationships. However, deceptive experiences undermine trust, leading consumers to seek alternatives. For example, TripAdvisor reviews detailing inaccurate room photos or misleading amenities at a resort can quickly eliminate trust in that brand. Beyond dissatisfaction, deception spawns doubt and distrust, negatively impacting repurchase intentions (Kuo et al., 2015). Deceptive online practices correlate with lower trust and satisfaction (Gaber et al., 2018). Marketing mix elements provide avenues for fraud, such as imitating prestigious brands, concealing product details, or price gouging through sham sales or arbitrary taxes (Gaber et al., 2018). Misleading promotions and non-transparent distribution tactics further erode informed choice. Studies confirm deception's trust-harming effects. Deceptive ads reduce trust (Darke and Ritchie, 2007). Ethical marketing cultivates trust, while unscrupulous practices undermine it (Kennedy et al., 2001). Witnessing deception breeds wariness (Darke and Ritchie, 2007).

The literature demonstrates the detrimental impacts of deceptive marketing practices across the four Ps of the marketing mix - product, price, promotion, and place. Deception in any element erodes consumer trust, satisfaction, and loyalty intentions while breeding scepticism and doubt. Customers expect transparency and ethical conduct from tourism suppliers. When promises go unfulfilled, or information is misleading, trust rapidly deteriorates. The downstream effects span beyond the individual encounter to damage brand reputation and destination image. Therefore, mitigating deception across all touchpoints is imperative for tourism marketers seeking to build lasting relationships and satisfaction. This comprehensive evidence warrants investigating deception's specific influences on trust for each marketing mix component. Accordingly, the following hypotheses are proposed:

H1-1. Product deception practices have a negative impact on consumer trust.

H1-2. Price deception practices have a negative impact on consumer trust.

H1-3. Promotional deception practices have a negative impact on consumer trust.

H1-4. Place deception practices have a negative impact on consumer trust.

2.2. Deceptive marketing and destination image

Consumers perceive deceptive marketing breeds adverse consequences like dissatisfaction, negative word-of-mouth, complaints, and switching behavior (Román, 2010), harming a destination's image. Dishonest travel blog posts misguide readers, affecting perceptions (Zehrer et al., 2011). For example, false online reviews influence impressions and destination images through unfavorable eWOM (Ahmad and Sun, 2018). Moreover, tourists use solitary unpleasant encounters to guide decisions (Kim et al., 2023), prone to adverse perspectives that jeopardize their reputation (Román, 2010). Social psychology's negativity bias explains more substantial emotional/behavioral impacts from bad versus good incidents (Nawijn and Biran, 2018). In this vein, tourists expect trouble-free vacations, requiring employee honesty to circumvent fraud (Tipton et al., 2009). Those believing services are deceptive may feel dissatisfied (Küçükergin and Dedeoğlu, 2014; Liu et al., 2019), as positive and negative emotions coexist (Hosany et al., 2016).

Desired emotional outcomes are tied to positives, while undesirable implications connect with negatives (Nawijn and Biran, 2018). In this regard, destructive emotions have longer-term negative intentions (Nawijn and Fricke, 2015) as deception reduces the perceived value (Darke and Ritchie, 2007; Tipton et al., 2009), impacting communications /products as distrust emerges toward goals/offerings (Darke and Ritchie, 2007) of the brand image (Liu et al., 2019). Therefore, emotions triggered by deception can damage the destination image through negative word-of-mouth and social signals (Hosany et al., 2016). These wide-ranging impacts endanger the destination image built on trust and satisfaction. This evidence supports the following hypotheses:

H2-1. Product deception practices have a negative impact on destination image.

H2-2. Price deception practices have a negative impact on destination image.

H2-3. Promotional deception practices have a negative impact on destination image.

H2-4. Place deception practices have a negative impact on destination image.

2.3. Customer trust and social media

Hospitality and tourism literature conceptualizes trust across two domains - organizational trust in government and tourism enterprises (e.g., Han et al., 2015) and interpersonal trust between tourists, locals, and guides (e.g., Ouyang et al., 2017). Adequate internet fraud protection bolsters confidence in online transactions. When sellers prioritize fraud prevention, buyers feel more secure purchasing virtually. However, few studies explore social media marketing's trust dynamics (Veloso et al., 2023; Wang et al., 2016). Prior works analyze vendor characteristics (Yahia et al., 2018) or image/commerce factors on social platforms (Hajli, 2015), yet trust remains pivotal for promotions via these media. Many businesses use social networks to promote products/services (Ai et al., 2022). As in traditional online contexts, trust likely determines social media purchase intentions. Successful transactions require faith in suppliers active across platforms. Consumers view social media as less credible than conventional outlets (Nadeem et al., 2015). User-generated content lacks traditional media's legitimacy. For example, a hotel promoting its amenities on Instagram must convince followers it authentically provides a luxurious experience. Organizations must exceed standards to cultivate trustworthiness in this sphere. Minor errors erode followership while enabling unfavorable opinions (Nadeem et al., 2015). Therefore, trust's importance for retention and relationships suggests:

H3. Consumer trust is linked to positive reactions on social media forms.

2.4. Destination image and social media

Information technology has evolved from a traditional marketing tool to a platform for knowledge creation and innovation in tourism (Xiang et al., 2015). Open data sharing and social knowledge on social media enabled tourism innovation while transforming communication between destinations and travelers, aided by mobile and internet advances (Song et al., 2022). Social media's interactivity allows tourists to create and share experiences on platforms like Facebook, Flickr, and WeChat. Thus, the destination image is continuously co-produced through traveler-generated content (TGC) and content from tourism organizations on social media (Mak, 2017).

Studies consistently show destination image significantly influences tourist decision-making, satisfaction, recommendations, and intentions to revisit (Agapito et al., 2013; Zuo et al., 2023). These are crucial insights for destination marketers seeking enhanced strategies, as Lo et al. (2011) found that 89% of tourists document trips, with 41% sharing images on social media. Given the intangible nature of destinations, marketers leverage image differentiation from competitors (Tsaur et al., 2016). Creating a distinctive image competes with other destinations.

Social media allows DMOs to gather consumer preferences and build brand relationships cost-effectively (Kim et al., 2014). It can also enhance brand image or perception as a must-visit place. Uner et al. (2022) argue destination branding enhances marketing and attracts visitors. Tourists act as customers and promoters for the destination (Gurung and Goswami, 2017). Thus, social media increasingly influences destination awareness and image formation (Veloso et al., 2023). This evidence supports the following hypothesis:

H4. Destination image is linked to positive reactions on social media forms.

2.5. The mediating role of customer trust

Trust facilitates effective social media communication (Cheng et al., 2017). Ai et al. (2022) found trust fundamental in shaping online and offline social behavior. Trust may play an even more significant role in social media relationships than in traditional settings (Yoo and Gretzel, 2016). Several studies identify trust as a critical mediating factor (e.g., Vohra and Bhardwaj (2017)). Trust fosters cooperation and informed decision-making among relationship parties (Ai et al., 2022). For example, Wang et al. (2015) showed eTrust mediates the relationship between hotel website effectiveness and online booking intentions. Trust reduces consumer apprehension and motivates purchase intentions by serving as an enabler (Wang et al., 2015). Meeting customer needs engenders positive intentions like purchases (Mikalef et al., 2017). However, without trust, customers may hesitate to shop via social media. Trust and perceived ethics are intertwined.

Lack of trust hinders online expansion and development (Li and Tsai, 2022). Trust diminishes perceived risk in online stores and promotes favorable attitudes toward tourism suppliers, ultimately driving purchase intentions. In contrast, perceived marketing deception damages trust (Jadil et al., 2022). A UK study showed consumers' perceptions of retailers' ethical website practices influenced their trust, attitudes, and intentions to revisit and purchase (Limbu et al., 2011). Trust and attitude mediate the relationship between perceived ethical performance and purchase/repurchase intentions (Al-Adwan et al., 2022). This evidence suggests marketing deception negatively affects trust, vital in social media e-commerce (Veloso et al., 2023). Thus, trust likely mediates the relationship between marketing deception and outcomes. This reasoning supports the following hypotheses:

H5-1: Consumer trust mediates the relationship between marketing deception in product and social media communications forms.

H5-2: Consumer trust mediates the relationship between marketing deception in price and social media communications forms.

H5-3: Consumer trust mediates the relationship between marketing deception in promotion and social media communications forms.

H5-4: Consumer trust mediates the relationship between marketing deception in place and social media communications forms.

2.6. The mediating role of destination image

Hospitality and tourism suppliers initially utilized online marketing as a new and potentially effective communication channel for product distribution (Law et al., 2004; Veloso et al., 2023). This transformed tourist behavior and helped close the gap between customers and suppliers. In recent years, the widespread adoption of social media has catalyzed a paradigm shift in communication, information sharing, and relationship building across geographical and cultural divides (Cao et al., 2022). However, concerns about the possible negative impacts of social media on social connections have emerged alongside its popularity (Yang and Mundel, 2021). Scholars refer to individuals' interactions with social media platforms and content - such as posting, liking, commenting, sharing, and following - as social media engagement (Veloso et al., 2023). Such engagement has become critical for businesses due to its influence on brand perception, customer loyalty, and purchasing decisions (Yang and Mundel, 2022). Experts predict ad fraud will remain an issue until efficient monitoring and stronger government controls on online advertising emerge (Cao et al., 2022; Statista, 2023). Consumers have expectations about communication details, truthfulness, relevance, and clarity. The technology exploits or damages these expectations through deception (Kavaratzis and Hatch, 2019).

As a communication and public relations tool, social media enables efficient dissemination of destination images and develops stakeholder relationships (Song et al., 2022). Numerous studies suggest social media interactions between consumers and suppliers shape destination branding and identification. Destination image positively impacts supplier-consumer relationships, increasing credibility and loyalty (Salamzadeh et al., 2022). Scholars increasingly recognize the importance of destination branding, as destination image positively influences tourism (Zuo et al., 2023). Social media shapes destination image and is a valuable tool for destination marketing organizations, though its use is often limited or underutilized (Mariani et al., 2016). More substantial efforts may be needed to attract and retain brand community members through social media (Luo and Zhong, 2015).

Drawing from destination brand image and social media marketing, we posit that the overall image associated with a destination acts as an intermediary construct through which deception in marketing communications shapes subsequent outcomes. Specifically, when consumers detect discrepancies suggestive of deceit in product, pricing, promotional, or place-related marketing, this can gradually deteriorate the favorable image built up in their minds regarding the destination (Akhtar et al., 2019). This diminished image results in less favorable communications on social media platforms. Therefore, we hypothesize the following mediating effects of the destination image:

H6-1: Destination image mediates the relationship between marketing deception in product and social media communications forms.

H6-2: Destination image mediates the relationship between marketing deception in price and social media communications forms.

H6-3: Destination image mediates the relationship between marketing deception in promotion and social media communications forms.

H6-4: Destination image mediates the relationship between marketing deception in place and social media communications forms.

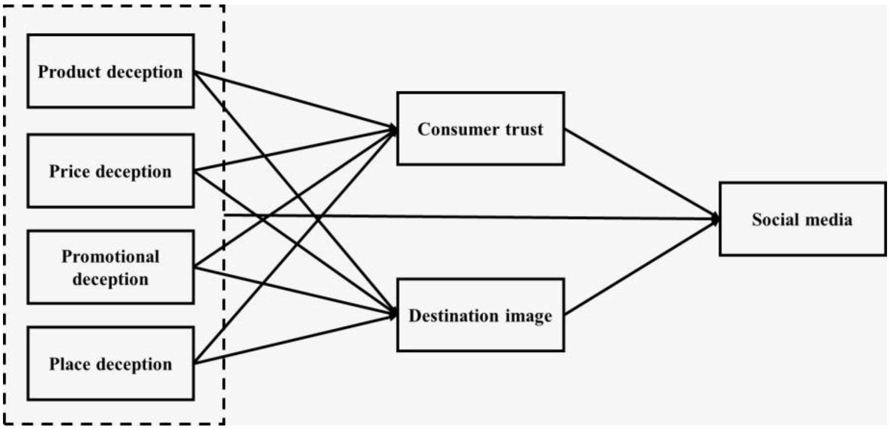

Figure 1. Theoretical framework and hypotheses

MATERIALS AND METHODS

1. Measures

This study examines four dimensions of deception within the marketing mix as predictor variables. Deceptive practices relating to place, pricing, products, and promotion will be evaluated as potential determinants of critical outcomes. Specifically, place, pricing, product, and promotion deception are implemented as independent variables. Tourists' usage of social media is also investigated as a dependent variable. Tourist trust in service providers and overall destination image are considered mediator variables. This study investigates the impacts of deceptive practices in tourism services on critical tourist perceptions and behaviors. Drawing from marketing literature, it adapts validated measures of deceptive pricing (Chandon et al., 2000), product (Darke and Ritchie, 2007), promotion (Xie and Peng, 2009), and place (Chan and Wong, 2006) practices as predictors of tourists' trust in Egyptian service providers, overall destination image, and satisfaction. The attached survey scales are adapted from prior studies measuring tourist trust, destination image (e.g., Chen and Tsai, 2007), and satisfaction (Hosany et al., 2016).

The usage of social media for reviews and sharing travel experiences is tested as a moderator of the effects of deceptive practices. This research aims to quantify the destructive impacts of deceptive tactics on critical tourist perceptions and behaviors. A more holistic understanding of tactics' collective imprint emerges by examining multiple deception dimensions simultaneously. This comprehensive approach addresses the limitations of isolated examinations that preclude interactions between mixed elements. While permitting experienced dissemination, they simultaneously concentrate on reputational exposures necessitating strategic vigilance. The integrated predictive model and moderation analysis advance theory by offering a systems-level perspective of the damage caused by deception. Practically, generating empirical proof of undesirable outcomes underscores the self-defeating nature of such practices.

2. Data collection and the study context

This study analyzes deceptive practices tourists face within Egypt's pivotal hospitality sector. As an emerging economy reliant on travel and tourism, the Egyptian hospitality industry, particularly, has struggled with such tactics that undermine development (Tomazos, 2017). Political and economic transformations have challenged hospitality service delivery and reputation management (Salem et al., 2021). Egyptian hospitality businesses also navigate a regulatory environment that is still maturing compared to advanced markets (Elbanna et al., 2015). Cultural influences further define relationships within Egyptian hospitality and how deception occurs and resonates (Eid et al., 2020). Examining deception in the Egyptian context offers the industry insights into addressing unethical behaviors amid volatility crucial for hospitality. Collectivism also shapes deceptive interpretations and consequences for hospitality, customer loyalty and word-of-mouth versus individualist settings. Tailored solutions can be proposed by sourcing primary data within Egypt's deception-susceptible yet tourism-reliant hospitality sector. Findings will guide Egyptian hospitality stakeholders in shedding light on tourism's economic importance through restoring confidence in upholding integrity (Tomazos, 2017). Better comprehending deception trajectories despite dynamic transitions cultivate balanced hospitality growth.

A pilot study was conducted with 35 students in Egypt to test the survey instrument. This enabled the assessment of question clarity and initial scale reliability. The results supported full distribution to tourists through Egyptian tourism agents' networks and online channels. Respondents were screened to target relevant international tourists who visited Egypt independently within the past year and used social media during their visit. Additional criteria were age 18 or older and utilizing hospitality services such as hotels and restaurants. After filtering out incomplete responses, the final sample was 375 surveys with an 85% response rate. This sampling approach ensured respondents had relevant, recent experience with Egyptian tourism services to provide insights into deceptive practices and their impacts.

3. Data analysis

The current study tested the hypothesized model utilizing partial least squares structural equation modelling (PLS-SEM) path analysis conducted with SmartPLS 4 software. IBM SPSS Statistics 24.0 was used for preliminary descriptive analysis. PLS-SEM was selected for this study for several reasons. First, it facilitates simultaneous assessment of the relationships between constructs in the inner model and the associations between constructs and their corresponding latent indicators in the outer model. Second, PLS-SEM is appropriate for complex research models, particularly mediation and moderation. Third, PLS provides a more user-friendly graphical interface than other path modelling software like AMOS. Fourth, PLS-SEM is a reliable component-based approach extensively utilized in prior studies (Hair et al., 2019). This method follows a two-step process; the validity and reliability of the measurement (outer) model are first examined, then the structural (inner) model is evaluated to test the hypothesized relationships (Hair et al., 2019).

RESULTS

1. Sample profile analysis

The demographic profile of the 375 survey respondents can be described as follows (Table 1): Males made up the majority at 64.8% of respondents compared to 35.2% females. Most respondents (71.5%) were under 25 years of age, with limited representation from older tourists as only 7.7% were aged 40 or above. Over 60% of respondents had a university education, suggesting a relatively high level of education among most participants. However, 27.2% had only secondary education or less, capturing some less educated perspectives. In summary, the sample skewed towards younger males with university degrees, while viewpoints from older tourists and those with lower education levels were underrepresented. The imbalanced demographic profile should be considered regarding the generalizability of the findings.

Table 1. Sample profile

Research sample variables		**Sample**	
		Frequency	%
Gender	Male	243	**64.8**
	Female	132	**35.2**
	Total	375	**100%**
Age range	less than 25 years	268	**71.5**
	25 and less than 40	76	**20.3**
	40 and less than 55	24	**6.4**
	55 and more	7	**1.9**
	Total	375	**100%**
Education Level	Without secondary	20	**5.3**
	secondary	82	**21.9**
	University education	231	**61.6**
	Master's / PhD	42	**11.2**
	Total	**375**	**100%**

2. Psychometric characteristics of the measurement model

Before hypothesis testing, a measurement (outer) model was developed and evaluated. Since PLS-SEM employs a different SEM approach than CB-SEM, fit indices commonly used in CB-SEM are either unavailable or not recommended (Hair et al., 2019). Based on Hair et al. (2019), model fit in PLS-SEM can be assessed by applying the following criteria: "factor loadings" (λ) should exceed 0.70, "Cronbach's alpha" (α) and "composite reliability" (CR) should surpass 0.70 for "internal consistency reliability," and "average variance extracted" (AVE) should be higher than 0.50 for "convergent validity" (CV). Adequate convergent validity indicates that the indicators of a construct converge or share a high proportion of variance (Hair et al., 2019). As shown in Table 2, the factor loadings, Cronbach's alpha, and CR values all exceed 0.70, demonstrating satisfactory internal consistency reliability. Additionally, the AVE values surpass 0.50, confirming adequate convergent validity of the outer model. For "discriminant validity" (DV), each construct's AVE should be greater than its highest squared correlation with any other construct (Fornell and Larcker, 1981) (Table 4). This indicates that constructs are empirically distinct. Furthermore, given various criticisms of Fornell and Larcker's criterion, scholars have proposed examining the "heterotrait-monotrait ratio" (HTMT) of correlations to assess DV more rigorously (Table 5). HTMT values below 0.90 imply satisfactory discriminant validity (Hair et al., 2019). As shown in Table 4 and Table 5, the AVEs and HTMT values confirm adequate discriminant validity of the outer model.

3. Structural model and hypothesis tests

A structural model must be assessed using the VIF, R2, Q2, and path coefficients because PLS-SEM does not have the global fit indices that CB-SEM provides, such as CFI, TLI, and RMSEA (Hair et al., 2019). For the possibility of "multi-collinearity" among constructs to be avoided, inner VIFs should be <5.0 for items, R2 of 0.20 or more is a highly suitable cut-off in behavioral research, and similarly, the Q2 should also meet the recommended point of 0.0 (Hair et al., 2019) Click or tap here to enter text.. All criteria in Table 6 prove that the structural model fits the data.

Further, Tenenhaus et al. (2005) indicated that the ensuing equation was employed to assess the Goodness of Fit (GoF) of the PLS-SEM model, and values of 0.1, 0.25, and 0.36, respectively, represent a low, medium, and high GoF. The GoF of the suggested model is 0.445, indicating a high GoF index.

$$\text{GoF} = \sqrt{AVE_{avy} \times R^2{}_{avy}}$$

Table 2. The measurement model statistics

Items	**λ**	**Mean**	**SD**
Product Deceptive (a=0.873, CR = 0.885, AVE = 0.527)			
Product_1	0.778	4.642	0.575
Product_2	0.846	4.450	0.59
Product_3	0.731	4.500	0.638
Product_4	0.740	4.340	0.768
Product_5	0.734	4.242	0.825
Product_6	0.605	4.155	0.824
Product_7	0.616	4.148	0.858
Price Deceptive (a=0.791, CR = 0.866, AVE = 0.620)			
Price_1	0.834	4.623	0.679
Price_2	0.876	4.547	0.689
Price_3	0.744	4.528	0.742
Price_4	0.679	4.396	0.832
Promotion Deceptive (a=0.712, CR = 0.821, AVE = 0.536)			
Promotion_1	0.787	4.075	0.908
Promotion_2	0.759	4.453	0.715
Promotion_3	0.638	4.321	0.842
Promotion_4	0.735	4.151	0.899
Place Deceptive (a=0.844, CR = 0.896, AVE = 0.683)			
Place_1	0.749	4.283	0.855
Place_2	0.837	4.189	0.891
Place_3	0.887	4.283	0.81
Place_4	0.827	4.396	0.809
Customer trust (a=0.931, CR = 0.951, AVE = 0.828)			
Trust_1	0.921	2.925	1.372
Trust_2	0.928	2.877	1.226
Trust_3	0.872	2.623	1.153
Trust_4	0.916	2.836	1.263
Destination image (a=0.909, CR = 0.943, AVE = 0.846)			
Image_1	0.920	3.264	1.291
Image_2	0.952	3.472	1.435
Image_3	0.886	3.415	1.295
Social Media (a=0.957, CR = 0.961, AVE = 0.658)			
Media_1	0.847	3.981	1.019
Media_2	0.810	3.84	0.998
Media_3	0.793	3.701	1.059
Media_4	0.848	3.874	1.068
Media_5	0.842	3.969	1.04
Media_6	0.867	3.802	1.056
Media_7	0.818	3.695	1.118
Media_8	0.860	3.871	1.046
Media_9	0.806	3.698	1.077
Media_10	0.818	3.528	1.137
Media_11	0.753	3.830	1.059
Media_12	0.726	3.660	1.148
Media_13	0.740	3.755	1.114

Note: a= "Cronbach's alpha"; λ = "factor loading"; CR = "composite reliability"; AVE = "average variance extracted"

Table 3. Cross Loadings

	Product Deceptive	Pricing Deceptive	Promotion Deceptive	Place Deceptive	Customer Trust	Destination image	Social Media
Product_1	**0.778**	0.396	0.004	0.051	-0.257	-0.224	-0.217
Product_2	**0.846**	0.344	0.180	-0.080	-0.279	-0.300	-0.212
Product_3	**0.731**	0.152	-0.005	-0.150	-0.081	-0.133	-0.040
Product_4	**0.740**	0.191	0.261	0.115	-0.230	-0.176	-0.008
Product_5	**0.734**	0.163	0.148	-0.019	-0.075	-0.079	-0.033
Product_6	**0.605**	0.096	0.164	-0.089	-0.027	-0.076	-0.036
Product_7	**0.616**	0.153	0.185	-0.041	-0.032	-0.111	-0.056
Price_1	0.289	**0.834**	0.331	0.077	-0.278	-0.225	0.074
Price_2	0.350	**0.876**	0.220	-0.021	-0.371	-0.242	0.034
Price_3	0.151	**0.744**	0.330	0.012	-0.349	-0.316	-0.001
Price_4	0.328	**0.679**	0.515	0.003	-0.221	-0.335	-0.026
Promotion_1	0.270	0.282	**0.787**	0.357	-0.316	-0.429	-0.110
Promotion_2	-0.018	0.411	**0.759**	0.201	-0.241	-0.290	0.034
Promotion_3	-0.003	0.264	**0.638**	0.062	-0.245	-0.342	0.008
Promotion_4	0.196	0.347	**0.735**	0.205	-0.289	-0.426	-0.135

Place_1	-0.054	0.009	0.243	**0.749**	-0.229	-0.237	-0.128
Place_2	-0.079	0.110	0.386	**0.837**	-0.239	-0.307	-0.042
Place_3	-0.044	-0.005	0.248	**0.887**	-0.313	-0.304	-0.154
Place_4	0.117	-0.047	0.103	**0.827**	-0.244	-0.317	-0.297
Trust_1	-0.159	-0.301	-0.369	-0.323	**0.921**	0.705	0.392
Trust_2	-0.301	-0.394	-0.367	-0.195	**0.928**	0.729	0.465
Trust_3	-0.247	-0.412	-0.309	-0.338	**0.872**	0.727	0.419
Trust_4	-0.237	-0.319	-0.330	-0.281	**0.916**	0.701	0.408
Image_1	-0.266	-0.345	-0.442	-0.344	0.739	**0.920**	0.484
Image_2	-0.260	-0.375	-0.543	-0.351	0.787	**0.952**	0.414
Image_3	-0.193	-0.262	-0.441	-0.276	0.637	**0.886**	0.388
Media_1	-0.160	-0.108	-0.274	-0.174	0.482	0.469	**0.847**
Media_2	0.033	0.076	-0.056	-0.159	0.343	0.389	**0.810**
Media_3	-0.228	-0.081	-0.205	-0.206	0.451	0.435	**0.793**
Media_4	-0.228	0.069	-0.037	-0.049	0.266	0.389	**0.848**
Media_5	-0.123	0.118	-0.056	-0.135	0.328	0.405	**0.842**
Media_6	-0.101	0.025	-0.021	-0.292	0.495	0.423	**0.867**
Media_7	-0.230	-0.067	-0.141	-0.084	0.456	0.361	**0.818**
Media_8	-0.079	0.032	-0.005	-0.269	0.379	0.428	**0.860**
Media_9	-0.141	0.078	-0.019	-0.229	0.446	0.328	**0.806**
Media_10	-0.067	0.083	-0.032	-0.022	0.271	0.289	**0.818**
Media_11	-0.127	0.058	0.098	0.003	0.284	0.383	**0.753**
Media_12	-0.099	0.120	0.137	-0.132	0.110	0.198	**0.726**
Media_13	-0.107	-0.014	-0.041	-0.132	0.320	0.268	**0.740**

Table 4. Fornell–Larcker criterion matrix

	Customer Trust	Destination image	Place Deceptive	Pricing Deceptive	Product Deceptive	Promotion Deceptive	Social Media
Customer Trust	**0.910**						
Destination image	0.788	**0.920**					
Place Deceptive	-0.312	-0.354	**0.826**				
Pricing Deceptive	-0.395	-0.359	0.019	**0.787**			
Product Deceptive	-0.262	-0.263	-0.016	0.351	**0.726**		
Promotion Deceptive	-0.378	-0.518	0.294	0.440	0.175	**0.732**	
Social Media	0.464	0.467	-0.190	0.024	-0.161	-0.083	**0.811**

Note: “Values off the diagonal-line are squared inter-construct-correlations, while values on the diagonal-line are AVEs”

Table 5. HTMT Matrix

	Customer Trust	Destination image	Place Deceptive	Pricing Deceptive	Product Deceptive	Promotion Deceptive	Social Media
Customer Trust							
Destination image	0.851						
Place Deceptive	0.351	0.400					
Pricing Deceptive	0.449	0.416	0.125				
Product Deceptive	0.233	0.231	0.145	0.346			
Promotion Deceptive	0.458	0.629	0.386	0.602	0.303		
Social Media	0.464	0.483	0.232	0.125	0.171	0.201	

Note: “For appropriate DV, all HTMT are below 0.90”

Table 6. VIF, R2, and Q2 results

Items	VIF	Items	VIF	Items	VIF	Items	VIF	Items	VIF
Product_1	1.771	Price_3	1.358	Place_4	1.922	Media_2	3.346	Media_11	2.671
Product_2	2.031	Price_4	1.283	Trust_1	3.952	Media_3	3.924	Media_12	3.155
Product_3	1.891	Promotion_1	1.453	Trust_2	4.770	Media_4	4.232	Media_13	2.538
Product_4	1.817	Promotion_2	1.690	Trust_3	2.649	Media_5	4.445		
Product_5	3.002	Promotion_3	1.445	Trust_4	4.750	Media_6	4.578		
Product_6	4.993	Promotion_4	1.422	Image_1	3.234	Media_7	4.119		
Product_7	4.480	Place_1	1.577	Image_2	4.460	Media_8	4.148		
Price_1	2.894	Place_2	1.972	Image_3	2.669	Media_9	3.350		
Price_2	3.170	Place_3	2.425	Media_1	4.103	Media_10	4.640		
Customer trust				**R2**	0.286	**Q2**	0.232		
Destination image				**R2**	0.365	**Q2**	0.304		
Social Media				**R2**	0.243	**Q2**	0.148		

The "Standardized Root Mean Square Residual" (SRMR) was also tested to prove the structure model's validity. SRMR > 0.1 is acceptable (Hu and Bentler, 1998). Our model's SRMR value is 0.098, representing a good model fit. We tested the provided hypotheses for the study, as indicated in Table 7, after demonstrating the validity of the outer and inner models.

Table 7. Hypotheses testing

The hypothesis	**β**	**t**	**p**	**Decision**
Direct Paths				
H1-1: Product Deceptive → Customer Trust	-0.143	2.776	0.006	"Supported"
H1-2: Product Deceptive → Destination image	-0.154	3.074	0.002	"Supported"
H2-1: Pricing Deceptive → Customer Trust	-0.271	5.295	0.000	"Supported"
H2-2: Pricing Deceptive → Destination image	-0.144	3.472	0.001	"Supported"
H3-1: Promotion Deceptive → Customer Trust	-0.156	3.350	0.001	"Supported"
H3-2: Promotion Deceptive → Destination image	-0.354	7.931	0.000	"Supported"
H4-1: Place Deceptive → Customer Trust	-0.263	6.382	0.000	"Supported"
H4-2: Place Deceptive → Destination image	-0.250	4.742	0.000	"Supported"
H5: Customer Trust → Social Media	0.253	4.331	0.000	"Supported"
H6: Destination image → Social Media	0.268	3.915	0.000	"Supported"
Indirect mediating Paths				
H6:Product Deceptive -> Customer Trust -> Social Media	-0.036	2.050	0.041	"Supported"
H7:Product Deceptive -> Destination image -> Social Media	-0.041	2.724	0.007	"Supported"
H8:Pricing Deceptive -> Customer Trust -> Social Media	-0.069	3.576	0.000	"Supported"
H9:Pricing Deceptive -> Destination image -> Social Media	-0.039	2.295	0.022	"Supported"
H10: Promotion Deceptive -> Customer Trust -> Social Media	-0.040	2.844	0.005	"Supported"
H11: Promotion Deceptive -> Destination image -> Social Media	-0.095	3.274	0.001	"Supported"
H12: Place Deceptive -> Customer Trust -> Social Media	-0.067	3.693	0.000	"Supported"
H13: Place Deceptive -> Destination image -> Social Media	-0.067	2.817	0.005	"Supported"

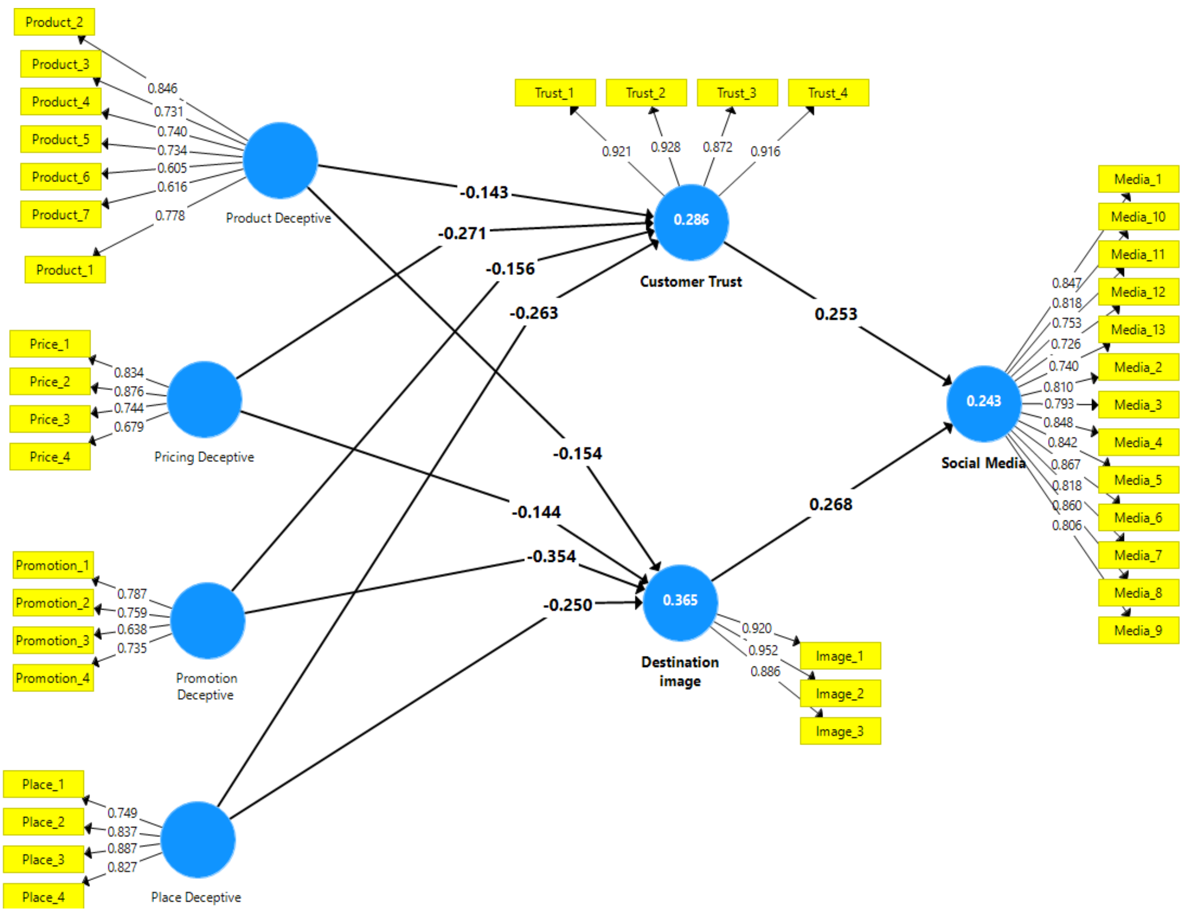

Figure 2. Estimation of structure model

The findings in Table 7 and Figure 2 demonstrate that the product deceptive had a negative impact on customer trust (β =-0.143, t = 2.776, p<0.001) and destination image (β = -0.154, t = 3.074, p< 0.002); thus, H1-1 and H1-2 were supported. The results also showed that deceptive pricing negatively affected customer trust at β = -0.271, t=5.295, p < 0.000, and destination image (β = -0.144, t = 3.472, p< 0.001), confirming H2-1 and H2-2. Similarly, promotion deceptive negatively influences customer trust (β =-0.156, t = 3.350, p<0.001) and destination image (β = -0.354, t = 7.931, p< 0.002); thus, H3-1 and H3-2 were supported. The results showed that place deception had a negative impact on customer trust (β =-0.263, t = 6.382, p<0.000) and destination image (β = -0.250, t = 4.742, p< 0.000), thus supporting H4-1 and H4-2.

The findings demonstrated that customer trust and destination image positively affect social media at β = 0.253, t = 4.331, p< 0.000, and at β = 0.268, t = 3.915, p< 0.000, respectively; thus, H5 and H6 were supported. Additionally, customer trust mediated the influence of product deception on social media ($\beta = -0.036$, $t = 2.050$, $p < 0.041$), pricing deceptive on social media ($\beta = -0.069$, $t = 3.576$, $p < 0.000$), promotion deceptive on social media ($\beta = -0.040$, $t = 2.844$, $p < 0.005$), and place deceptive on social media ($\beta = -0.067$, $t = 3.693$, $p < 0.000$), Supporting H6, H8, H10, and H12. While destination image mediated the influence of product deception on social media ($\beta = -0.041$, $t = 2.724$, $p < 0.007$), pricing deceptive on social media ($\beta = -0.039$, $t = 2.295$, $p < 0.022$), promotion deceptive on social media ($\beta = -0.095$, $t = 3.274$, $p < 0.001$), and place deceptive on social media ($\beta = -0.067$, $t = 2.817$, $p < 0.005$), Supporting H7, H9, H11, and H13.

DISCUSSION AND CONCLUSION

The results reveal that when customers perceive deceptiveness in how destinations market their products and services, this significantly damages their trust in that destination. For example, a study by Kuo et al. (2015) found that hotel website photos that exaggerate or misrepresent the quality of rooms undermine customer trust after they notice the discrepancy upon arrival. The findings also demonstrate that deceptive marketing practices negatively impact customers' overall image of a destination. Even small deceptions in promotional ads or brochures can gradually deteriorate the positive image that a destination has tried to build over many years (Uner et al., 2022). This underscores the importance of transparency and truthfulness in all marketing communications to maintain a strong brand image (Kavaratzis and Hatch, 2019). In addition to deteriorating trust and image, the analysis shows deceptive marketing indirectly harms word-of-mouth assessments on social media platforms. Dissatisfied customers who have lost trust due to deception are more likely to spread negative opinions, reviews, and ratings online after encountering deceptiveness (Li and Ma, 2023). This can rapidly spiral through social networks and seriously damage a destination's reputation, as evidenced in a study of fake hospitality reviews (Wang et al., 2021).

The results suggest destination marketing deceptiveness has detrimental downstream ripple effects: initial deception detection erodes trust (Siddiqi et al., 2020), the loss of trust then diminishes favorable image associations (Moon et al., 2019), and this, in turn, manifests in less positive social media evaluations and electronic word-of-mouth (Fang and Xiang, 2023). Collectively, the findings serve as a stark warning of the counterproductive outcomes of using deceptive marketing tactics merely to gain short-term visibility (Kim et al., 2023). The results demonstrate that customer trust is a crucial intermediary mechanism through which destination marketing deceptiveness impacts social media assessments (Xu et al., 2022). When product information is misleading, it damages trust, and in turn, this lowered trust leads to more negative social media evaluations. Similarly, deceptive pricing, promotions, and place marketing indirectly shape social media ratings by first eroding customer trust (Al-Adwan et al., 2022). Beyond trust, destination image emerges as a pivotal mediator (Jadil et al., 2022). Deceptiveness in products, pricing, promotions, and place marketing all indirectly influence social media evaluations by first degrading the overall image of the destination in customers' minds. Social media ratings suffer as the favorable image weakens due to detected deceit (Veloso et al., 2023). Taken together, these findings on mediation effects underscore the vital buffering roles that customer trust and destination image play in the chain reaction set off by marketing deceptiveness (Cao et al., 2022). These intangible assets deteriorate directly and indirectly, translating the negative impacts of deceit further down the line into unfavorable word-of-mouth (Song et al., 2022). The results powerfully demonstrate the upstream importance of maintaining authenticity in all marketing practices to preserve trust, image, and online reputation (Yang and Mundel, 2021).

1. Theoretical contribution

This study makes several vital theoretical contributions. First, it comprehensively examines deceptive practices across the entire marketing mix in hospitality and their impact on tourist perceptions and behaviors. Prior studies have predominantly focused on isolated elements like price or promotion deception. By integrating diverse fraudulent tactics from products to physical evidence, this research provides a holistic perspective on how combinations of practices holistically damage trust and destination image (Fang and Xiang, 2023; Kim et al., 2023). Second, the Egyptian context offers novel insights into these dynamics within an emerging economy's tourism-reliant hospitality sector compared to developed markets (Wang et al., 2021; Xu et al., 2022). Findings demonstrate how deception manifests distinctly in developing nations based on cultural factors and regulation (Kuo et al., 2015; Li and Ma, 2023), contributing to understanding of Egypt's industry given political transformations and economic reliance on travel (Elbanna et al., 2015; Tomazos, 2017). Third, this study addresses unresolved questions regarding relationships between deception, trust, image, and digital sharing. Results reveal trust and image mediate between deceptive practices and online engagement, advancing theoretical models (Al-Adwan et al., 2022; Li and Tsai, 2022). Moreover, cultural contexts shape deception's indirect effects through differential impacts on relationship assets (Jadil et al., 2022). Integrating diverse tactics, the Egyptian setting, behaviors, and local nuances comprehensively advance understanding of this multifaceted phenomenon's systemic outcomes (Cao et al., 2022; Veloso et al., 2023). The proposed integrative model of deceptive marketing's consequences opens avenues for future research (Song et al., 2022; Yang and Mundel, 2021).

2. Practical implications

The results of this study suggest several implications for hospitality practice within emerging economies like Egypt. Given the demonstrated damage of multifaceted deception to trust and destination image, policies are needed to increase oversight and regulation of deceptive marketing tactics. Standards should encompass pricing transparency, accuracy in promotion, and product quality verifications. Training programs can educate tourism marketers on ethical practices and build awareness of the detrimental impacts of deception. The findings also indicate a need to monitor online communications and proactively address negative reviews stemming from perceived deception. Responding quickly and sincerely to rebuild trust is advisable. Marketing campaigns could leverage cultural values of generosity and hospitality to counteract distrust. The results carry notable implications for hospitality managers. Findings showed how inflated product claims (e.g., exaggerating a hotel's amenities) diminished trust and image. Management must enforce accountability to avoid deception. For example, inspecting rooms quarterly ensures advertised facilities like pools and gyms are adequately stocked and functional. Moreover, unpredictable pricing, such as surprising customers with undisclosed resort fees, also reduced perceptions. Hoteliers should mandate upfront transparency of all obligatory charges. For instance, listing parking, wifi, and amenity costs on booking websites prevents distress later. Unrealistic promotional promises, like incorrectly hyping an attraction's opening hours, similarly impacted relationships. Additionally, promotions now require validation before distribution. For example, verifying an event venue's availability for promoted dates avoids planning disruptions. Obscured location attributes, like failing to disclose a remote property's distance from attractions, further eroded reputation. Also, place disclosures need standardization. For instance, uniformly integrated maps indicating proximity to critical landmarks allow informed selections. Beyond addressing individual issues, emphasizing trust as a core value through ongoing staff education and lead-by-example modelling will optimally restore integrity to strengthen community ties.

3. The study limitation and future research

While this study has made valuable contributions in theory and practice, it is essential to acknowledge certain limitations that indicate areas for further investigation. First, the focus on a single country's context, specifically the Egyptian hospitality industry, limits the generalizability of the findings. Comparative analyses across different cultural and developmental settings should be conducted to address this. Exploring other sectors within the tourism industry may also provide additional insights.

Second, by considering factors such as travel motivations or past experiences, we could obtain more nuanced perspectives on the effects of deception. Third, this study primarily examined perceived deception through self-reported survey responses, but incorporating objective behavioral and qualitative methods would complement these self-administered perspectives.

To overcome these limitations, future research should consider extending the sample periods, employing international sampling frames, incorporating new moderators, and using mixed research designs. Doing so can enhance our comprehensive understanding of this significant phenomenon across diverse scenarios. Replicating and expanding upon this study will contribute to the responsible development of the tourism industry, leading to sustained prosperity.

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HOW DO FACTORS INFLUENCE THE CHOICE OF MEDICAL TOURISM DESTINATIONS IN HO CHI MINH CITY, VIETNAM?

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Abstract: This study aims to identify the factors and their level of influence on the choice of medical tourism destination at medical facilities in Ho Chi Minh City. Based on a survey of 202 tourists, including domestic and foreign tourists, who have experienced one of the medical tourism services in Ho Chi Minh City. Through regression model analysis, the results show that there are three factors influencing the choice of Ho Chi Minh City as a medical tourism destination in descending order: Quality of medical services; Advertising and communication; Cost of medical services. Based on the research results, the similarities and differences with the results of previous studies were analyzed, drawing out the characteristics of medical tourism in Ho Chi Minh City. The study also points out proposals to develop the quality of medical services; enhance the promotion of medical services and other supporting solutions to develop medical tourism services in Ho Chi Minh City quickly and sustainably.

Keywords: medical tourism, tourism, choice, destination, Ho Chi Minh City, Vietnam

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INTRODUCTION

In recent times, many countries have made efforts to develop medical tourism, from investing in technology to recognizing hospitals that are qualified in terms of technical expertise and infrastructure suitable for medical tourism. Asian countries are leading in attracting medical tourists such as Malaysia, Singapore, Thailand, India, South Korea. In addition, some countries in Europe and Latin America such as Romania and Costa Rica have also risen to the top of the medical tourism rankings. Both demand and supply factors in medical tourism stimulate its growth. Some countries such as Columbia, Pakistan, China, Bolivia and Brazil are promoting organ donation, while Southeast Asian countries are focusing on heart surgery and spas and health care. Vietnam has great potential in developing health tourism with traditional Eastern medicine, advances in Western medicine (IVF, organ transplants, dentistry, infertility), natural resources (hot springs, natural landscapes), and socio-cultural resources. In addition, the system of tourist accommodation facilities with standard health care facilities is also an existing strength of Vietnam tourism. Destinations such as Hoi An, Nha Trang, Phu Quoc, Ho Chi Minh City have attracted a significant number of tourists with the main purpose of health care and medical treatment in recent times. However, on the world's health tourism map, Vietnam is still quite obscure because we have highlighted and set standards for health care/medical treatment services exclusively for tourists. At the same time, the work of promoting and developing the market for this product line has not been carried out effectively and systematically. It can be seen that health tourism in Vietnam is still in its infancy or is mainly combined with other types of tourism such as beach resorts, mountain resorts, and urban tourism.

Vietnam has great potential in developing medical tourism in many fields such as: periodic health care, rehabilitation and convalescence, surgery and intensive treatment, dental care, infertility, methods of changing appearance. From 2024,

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the health sector of Ho Chi Minh City is shaping to develop into a specialized medical center and a health care center in the ASEAN region. Tourism combined with health care (medical tourism) is also one of the major goals not only of the health sector of Ho Chi Minh City but also of the tourism industry and travel agencies. Traditional medicine is considered a strength in medical tourism in Ho Chi Minh City, because not only does it have its own unique characteristics, but Ho Chi Minh City also has a health system and human resources considered the strongest in the country. Recognizing the potential of medical tourism, since 2017, the Ho Chi Minh City Hospital of Traditional Medicine has accompanied the Department of Tourism,

After 5 years of implementing and coordinating the development of medical tourism products in Ho Chi Minh City, the city's medical tourism products have achieved encouraging results. 2023 is also a milestone marking the rise of medical tourism products with many activities implemented specifically and effectively, such as: Announcing 30 combo tour programs combining medical tourism and health care suitable for domestic and international tourist markets; Launching video clips introducing and promoting medical tourism products in the city; Updating, supplementing and adjusting the Medical Tourism Handbook in 6 languages with concise, clear and effective content. Determining factors affecting the choice of medical tourism destinations in Ho Chi Minh City is a study to help managers, travel companies as well as stakeholders understand customer preferences and thereby propose solutions to develop medical tourism in the city.

LITERATURE REVIEW AND RESEARCH HYPOTHESES

Medical tourism is an emerging form of tourism in developing countries (Nilashi et al., 2019). Syah et al. (2022) recognized that the development of medical tourism will cause inequality in many aspects in different localities in a country, which shows that the development of medical tourism will be concentrated in some localities with strengths in each country. If you want to develop medical tourism, the most important condition is the quality of medical treatment of medical facilities in that locality (Eze et al., 2020; Datta, 2020; Zarei and Maleki, 2019).

The issue of assessing the reputation and reliability of medical facilities in a locality in the present era is greatly affected by advertising and communication (Cham et al., 2021). The clear public disclosure of information and scheduled medical tourism services is a huge advantage for medical facilities as well as localities in competing to attract customers, especially those with experience in medical tourism services (Biswas and Rai, 2023). If local authorities coordinate better with each other in promoting local medical tourism services and have clear insurance policies, this is a huge advantage for the development of this type of tourism (Zarei and Maleki, 2019; Ushakov and Vasyuta, 2022). Destinations will only attract tourists if they have a safe and secure environment (Madani et al., 2020).

In addition to improving medical technical expertise, local medical facilities also need to find tourist destinations suitable for treatment as well as policies to support careful nursing care, which will help increase the effectiveness of customer satisfaction when these people are willing to spend a lot of money to receive the best care services (Kim et al., 2019; Datta, 2020). It is also agreed that the quality of care from doctors and nurses as well as the accompanying tourism environment will increase customer satisfaction when choosing medical tourism destinations (Sultana, 2021). Localities with additional natural resources that are good for supporting medical tourism such as hot springs, temperate climates, etc. are an additional strength to help strongly develop this service industry (Hojcska and Szabó, 2021).

The development of medical technology is also a point that localities and medical facilities need to pay attention to when wanting to develop the medical tourism sector (Nilashi et al., 2019). The cost of medical services is a factor mentioned in most studies affecting the development of medical tourism services (Biswas and Rai, 2023). Standard facilities will encourage tourists to choose the service and conversely, poor facilities can make tourists hesitate to receive the service (Zhang et al., 2018). Based on the results of the above prominent studies.

Kundury et al. (2024) pointed out some risks in medical tourism activities such as language differences, legal issues, and health insurance. This warns customers and stakeholders when carrying out medical tourism activities to consider the risks that may occur to them. Asa et al. (2024) compiled a number of research documents on medical tourism in Indonesia. In order to develop medical services in the country, the authorities need to pay attention to changing the quality of the health system in medical examination and treatment, and issue policies aimed at increasing people's trust and satisfaction with medical services. Li et al. (2024) commented that professionalism in treatment and medical examination is the factor that has the greatest influence on medical tourism services. Other factors such as the cost of medical treatment in different forms have a negligible impact on tourists' choice of medical tourism services.

Balouchi and Aziz (2024) found that the higher the self-efficacy of people, the higher their use of social media to plan their own medical tourism. This finding is a useful tool for medical tourism service providers to optimize online search channels for medical tourism information, orienting the market towards the effective use of social media to target medical tourism customers on a large scale. Toni et al. (2024) pointed out that there is a potential relationship between the quality of treatment, cost of medical treatment, and destination image affecting patient satisfaction in the field of medical tourism. Cha et al. (2024) studied the push-pull factors related to the medical tourism industry, and the results showed that there are three segments that strategists in this field need to pay attention to: those seeking high-quality medical tourism services, those seeking essential medical tourism services, and those seeking the rest.

Malhotra and Dave (2024) commented on the increasing demand for health care through medical tourism, emerging medical markets, especially those with advanced health care systems and especially near developed countries, are taking advantage of this industry. Majeed et al. (2024) applied the theory of cognitive dissonance to examine the behavior of medical tourists through which to assess the health status of tourists. The research results recommend that these strategists need to take measures to reduce cognitive dissonance before purchasing medical tourism services, and need to have social media methods to create positive impacts for tourists. Dhakate and Joshi (2024) stated that medical tourism is growing strongly in developing countries, through a survey of medical tourists. The research results indicate that it is necessary to develop infrastructure of medical examination and treatment facilities, along with improving the quality of medical services as well as building medical parameters and standards according to global standards if they want to attract more medical tourists. To attract medical tourists to their locality, there should be accompanying tourism packages from related parties such as culinary activities, spiritual and cultural tourism if they want to attract more customers (Kundury et al., 2024). The author proposes the following hypotheses in the model:

H1: Quality of medical services positively (+) influences the choice of medical tourism destination.
H2: Cost of medical services positively (+) influences the choice of medical tourism destination.
H3: Communication and promotion positively (+) influences the choice of medical tourism destination.
H4: Accompanying tourism services positively (+) influences the choice of medical tourism destination.
H5: Medical staff positively (+) influences the choice of medical tourism destination.

METHODOLOGY

To achieve the research objectives set out, the approach is based on theoretical foundations and previous studies to identify factors affecting the choice of Ho Chi Minh City as a medical tourism destination (Figure 1). Along with theoretical foundation research, the study especially focuses on practical approaches through surveys, interviews with experts, leaders in the medical industry, tourism services and especially those directly responsible for medical tourism tours, to supplement and test theoretical issues, in the context of many changes in the economy. Theoretical process: Starting from the research question, from previous studies combined with background theories will help the author identify factors affecting the choice of medical service locations and theoretical models. The author will synthesize and refer to studies in the world as well as in Vietnam related to medical tourism, based on fundamental theories related to the issue of choosing a medical tourism destination. From determining the research objectives, synthesizing studies in the world and Vietnam as well as related theories, the author identifies influencing factors, a model to propose factors influencing the choice of Ho Chi Minh City as a medical tourism destination.

Actual process: The author has synthesized and adjusted the influencing factors to suit the characteristics of tourists to Ho Chi Minh City and proposed a research model. In order to complete the research model, the author conducts in-depth interviews, discussions, and asks for expert opinions. After the interviews, experts will supplement and adjust the influencing factors, research hypotheses and scales to propose a complete research model, as a basis for the research method in the next section. Then continue to conduct field surveys to re-verify the research model. The study uses descriptive statistical methods, testing the scale using Cronbach's Alpha coefficient, EFA, linear regression, determining influencing factors, and testing the research model.

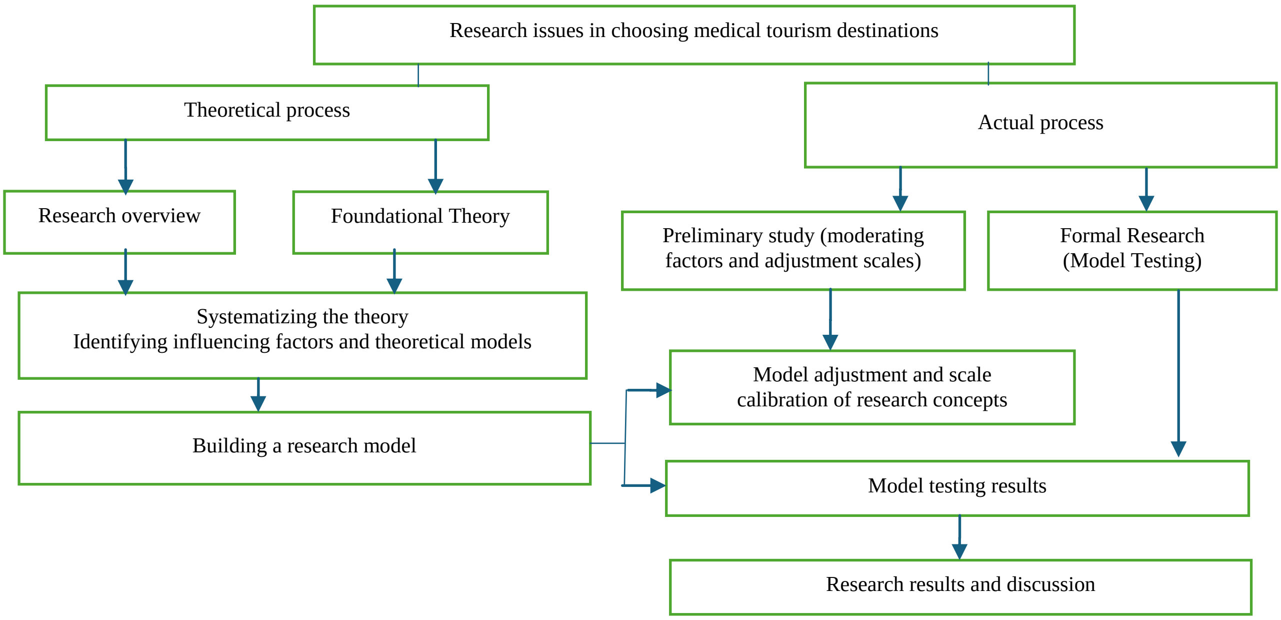


Figure 1. Research implementation process (Source: Compiled by the author)

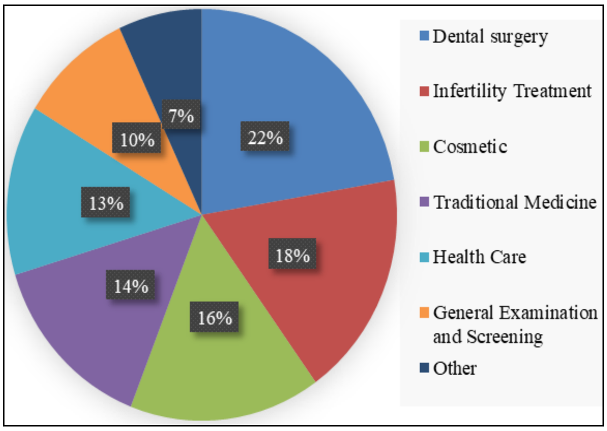
RESULT AND DISCUSSION

Through the results of Table 1, most of them had come to Ho Chi Minh City for the 3rd time or more, which shows that they have researched quite thoroughly about tourism activities, especially medical tourism products in Ho Chi Minh City. Among the medical tourism activities that tourists choose in Ho Chi Minh City, dentistry has the highest number, followed by infertility treatment, cosmetic activities at both public and private medical facilities (Figure 2). Some foreign tourists choose to experience traditional medical services at facilities specializing in Oriental medicine. Some other tourists choose services that combine relaxation and tourism as well as disease screening. The age of customers choosing medical tourism activities in Ho Chi Minh City ranges from 35 to 45 years old, accounting for the largest proportion of 44.55%. The survey results show that tourists spend from 50,000,000 to 100,000,000 VND on their medical tourism trips, which is a positive sign for the economic recovery of Vietnam in general and Ho Chi Minh City in particular.

Table 1. Descriptive statistics of the basic sample of visitors (Source: Compiled by the author)

		Frequency	Percent
Number of times traveling to Ho Chi Minh City	1-3 times	42	20.79
	3-5 times	98	48.51
	>5 times	62	30.7
	Total	202	100.0
		Frequency	Percent
Medical tourism activities	Dental surgery	45	22.28
	Infertility Treatment	36	17.82
	Cosmetic	32	15.84
	Traditional Medicine	29	14.36
	Health Care	27	13.37
	General Examination and Screening	19	9.41
	Other	14	6.92
	Total	202	100.0
		Frequency	Percent
Age	25-35 years old	64	31.69
	35-45 years old	90	44.55
	>45 years old	48	23.76
	Total	202	100.0
		Frequency	Percent
Average spending on medical tourism	<50.000.000 VND	87	43.07
	50.000.000-100.000.000 VND	74	36.63
	>100.000.000 VND	41	20.3
	Total	202	100.0
		Frequency	Percent
Classification of tourists by region	Domestic tourists	76	37.62
	Foreign tourist:	126	62.38
	+ Southeast Asian	47	23.27
	+ East Asia	18	8.91
	+ Western Europe	22	10.89
	+ Eastern Europe	11	5.45
	+ America	8	3.96
	+ Other	20	9.8
	Total	202	100.0

In Figure 3, the group conducted a survey of 202 different tourists including both domestic and international tourists, of which domestic tourists accounted for 37.62% and 62.38%.



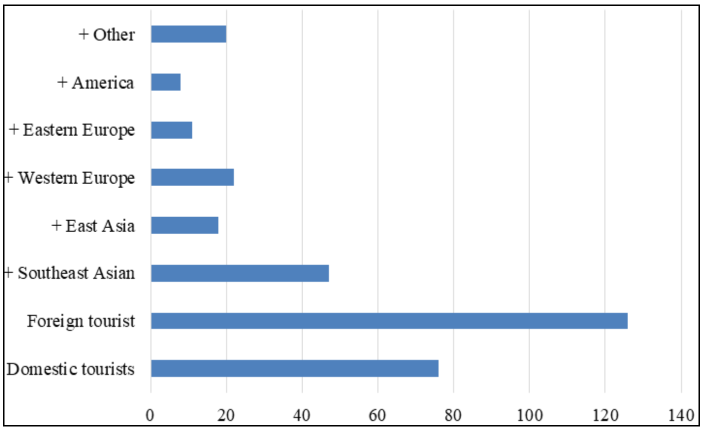


Figure 2. Classification of medical tourism activities (Source: Compiled by the author) Figure 3. Classification of medical tourism activities

Exploratory analysis of independent variables

The scale of independent variables is measured by 21 observed variables, after checking the reliability level by Cronbach's Alpha, 2 observed variables were removed, leaving 19 observed variables belonging to 5 independent factors existing in the model, all ensuring reliability (Table 2). Continue to conduct exploratory factor analysis EFA for independent factors. The results are as shown in Table 3, with KMO value of 0.733> 0.5 and Sig value of Bartlett's test of 0.000 < 0.05, showing that the variables are correlated with each other, so the model is suitable for exploratory factor analysis.

Table 2. Reliability according to Cronbach's Alpha coefficient (Source: Compiled by the author)

Factor	Factor abbreviation	Number of observations	Observation is eliminated	Cronbach's Alpha
Quality of medical services	QUAL	4		0.936
Medical service costs	COST	5	COST2	0.819
Communication and promotion	PROM	5	PROM5	0.898
Accompanying travel services	ACCO	4		0.902
Healthcare staff	STAF	3		0.788
Choosing a medical tourism destination	MEDI	3		0.845

Table 3. Exploratory factor analysis EFA of independent factors (Source: Compiled by the author)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.733
Bartlett's Test of Sphericity	Approx. Chi-Square	2611.365
	df	171
	Sig.	.000

Total variance explained (Extraction method: Principal component analysis)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.905	20.552	20.552	3.905	20.552	20.552	3.369	17.733	17.733
2	3.318	17.464	38.016	3.318	17.464	38.016	3.142	16.535	34.268
3	2.794	14.708	52.724	2.794	14.708	52.724	3.116	16.401	50.669
4	2.364	12.444	65.167	2.364	12.444	65.167	2.622	13.798	64.466
5	2.015	10.606	75.774	2.015	10.606	75.774	2.148	11.308	75.774
6	.728	3.831	79.604						
7	.609	3.207	82.812						
8	.529	2.786	85.598						
9	.458	2.411	88.009						
10	.421	2.215	90.223						
11	.371	1.952	92.175						
12	.343	1.804	93.980						
13	.226	1.190	95.170						
14	.215	1.133	96.303						
15	.212	1.115	97.418						
16	.172	.906	98.323						
17	.155	.818	99.141						
18	.120	.634	99.775						
19	.043	.225	100.000						

Rotated Component Matrix[a]

	Component				
	1	2	3	4	5
QUAL4	.944				
QUAL3	.926				
QUAL1	.884				
QUAL2	.883				
ACCO4		.901			
ACCO3		.881			
ACCO2		.881			
ACCO1		.837			
PROM1			.918		
PROM4			.871		
PROM2			.858		
PROM3			.835		
COST5				.895	
COST1				.797	
COST3				.765	
COST4				.747	
STAF3					.844
STAF1					.830
STAF2					.828
Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization					
(a. Rotation converged in 5 iterations)					

The extracted factors all have Eigenvalues greater than 1 and the stopping point when extracting factors at the 5th factor has an Eigenvalue of 2.015 > 1. The total variance extracted from the 5 factors is 75.774% > 50%, which shows that the ability to use these 7 component factors to explain 75.774% of the variation in observed variables. Based on the factor rotation matrix when running EFA, the remaining 19 variables are extracted into 5 factors.

Exploratory factor analysis of dependent variable

Results of exploratory factor analysis EFA with KMO equal to 0.727 > 0.5 and Bartlett's test with sig equal to 0.000 < 0.05, so it can be confirmed that the data is suitable for factor analysis. The analysis has extracted from 3 variables assessing the impact on night-time economic development into a main factor with Eigenvalue equal to 2.291 and total variance extracted is 76.359% >50% (Table 4).

Table 4. Exploratory factor analysis EFA of dependent variable

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.727
Bartlett's Test of Sphericity	Approx. Chi-Square	249.355
	df	3
	Sig.	.000

Communalities (Extraction Method: Principal Component Analysis)		
	Initial	Extraction
MEDI1	1.000	.753
MEDI2	1.000	.787
MEDI3	1.000	.751

Total variance explained (Extraction method: Principal component analysis)						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.291	76.359	76.359	2.291	76.359	76.359
2	.385	12.839	89.198			
3	.324	10.802	100.000			

Regression model analysis results

After extracting the factors from the exploratory factor analysis, we conduct a regression analysis to determine the factors affecting the choice of Ho Chi Minh City as a medical tourism destination.

The regression analysis will be performed with 5 independent factors: QUAL; COST, PROM, ACCO and STAF; the dependent variable is MEDI. The multivariate linear regression equation of this study is as follows:

Overall regression function

$$MEDI=\beta 0 + \beta 1QUAL + \beta 2COST + \beta 3PROM + \beta 4ACCO+ \beta 5STAF + Ui$$

The regression model will find the independent factors that impact the dependent factor. At the same time, the model also describes the level of impact, thereby helping us predict the value of the dependent factor.

According to Table 5, the level of explanation of the model with the Adjusted R Square index = 0.393, so about 39.3% of the choice of Ho Chi Minh City as a medical tourism destination is influenced by the independent factors of the model, with a confidence level of over 99% (F test, sig < 0.05).

Table 5. Results of regression model analysis (Source: Compiled by the author)

Model Summary[b]										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.638[a]	.408	.393	.48514	.408	26.978	5	196	.000	1.865
a. Predictors: (Constant), STAF, COST, PROM, ACCO, QUAL										
b. Dependent Variable: MEDI										

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.754	.469		1.606	.110
	QUAL	.373	.050	.424	7.511	.000
	COST	.250	.055	.253	4.538	.000
	PROM	.245	.047	.288	5.188	.000
	ACCO	-.053	.050	-.059	-1.054	.293
	STAF	.091	.058	.087	1.559	.121
a. Dependent Variable: MEDI						

The regression results show that 3 independent factors affect the selection in the following order: QUAL; PROM, COST because they are all statistically significant, sig < 0.05 is satisfactory and will be retained in the research model.

According to the above results, two factors ACCO and STAF are eliminated because they are not statistically significant, sig > 0.05. Based on the results of the Table 6, ANOVA has a Sig value = 0.000 < 0.05, which can be concluded that the model exists. In other words, with a significance level of 5%, it can be concluded that tourists choosing Ho Chi Minh City as a medical tourism destination is influenced by at least 1 of the remaining 3 factors.

Table 6. ANOVA analysis results

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.748	5	6.350	26.978	.000[b]
	Residual	46.131	196	.235		
	Total	77.880	201			
a. Dependent Variable: MEDI						
b. Predictors: (Constant), STAF, COST, PROM, ACCO, QUAL						

The quality of medical services at medical examination and treatment facilities in Ho Chi Minh City, regardless of whether they are public or private, is the most important factor influencing tourists choosing this as a medical tourism destination (Eze et al., 2020; Datta, 2020; Zarei and Maleki, 2019), this finding is completely consistent with the results of previous studies. The Ho Chi Minh City health sector has established a medical examination and treatment quality council. This Council has advised the leaders of the Department of Health on many issues regarding the quality of hospitals that need to be prioritized for improvement or rectification in order to gradually improve the quality of medical examination and treatment according to the hospital quality criteria issued by the Ministry of Health.

The city's health sector continues to continuously improve the capacity of the health system, ensuring quality, safety, efficiency and fairness in providing health care services to the people; striving to become one of the high-quality service sectors of Ho Chi Minh City, aiming to build Ho Chi Minh City into a health center of the ASEAN region. The results of this study once again showed that advertising and communication factors greatly influence tourists' choice of medical tourism destinations (Cham et al., 2021; Biswas and Rai, 2023). The launch of the Medical Tourism Handbook is one of the encouraging results after 5 years of implementing Joint Plan No. 1313/KHLT-SDL-SYT dated (June 19, 2017) between the Department of Tourism and the Department of Health of Ho Chi Minh City on coordination in developing medical tourism products. The two sides have developed and implemented criteria for hospitals and medical facilities to register to participate in the medical tourism program, launched a specialized website on medical tourism, created video clips, organized survey programs, learned and studied experiences in developing medical tourism models in Thailand, Cambodia, etc. 2023 is a milestone marking the rise of Ho Chi Minh City's medical tourism products with many activities being implemented specifically and effectively, such as: Announcing 30 combo tour programs combining medical tourism and health care suitable for domestic and international tourist markets, launching video clips introducing and promoting medical tourism products in the city; updating, supplementing and adjusting the Medical Tourism Handbook in six languages with concise, clear and effective content. Medical costs are also a factor influencing tourists' decisions when coming to Ho Chi Minh City to experience medical services. When tourists want to experience this activity, they are willing to spend a lot of money, but in return, they want to experience the best care services (Kim et al., 2019; Datta, 2020). This is a factor that is mentioned a lot in studies on medical tourism destinations (Biswas and Rai, 2023).

CONCLUSION

This study has partly pointed out the factors that influence domestic and international tourists to choose Ho Chi Minh City as a medical tourism destination. Through the results of this study, the author boldly proposed a number of issues that need to be discussed and solutions to promote medical tourism activities in Ho Chi Minh City as follows:

Proposing a tourism emergency model to promptly handle medical situations that arise for tourists; Designing and perfecting medical tourism products on the topics of infertility treatment, dentistry, traditional medicine, general examination and screening; Building types of traditional medicine services and products according to the development project until 2030 of the Ministry of Health; Introducing medical tourism products through the media;

Regularly promoting medical tourism products in annual events. In addition, there should be a number of combined solutions to develop medical tourism such as: Researching and building typical medical tourism products, linking with provinces and cities to build tours; Organizing roadshows to introduce medical tourism in Ho Chi Minh City in key markets; surveying and learning models from advanced countries;

Training soft skills, especially language, for those working in medical facilities. If these solutions are implemented synchronously, it will be a strong step forward to bring medical tourism in Ho Chi Minh City to develop quickly and sustainably in the future. In addition to the above results, the research team found that there are still some limitations in their research. Firstly, due to time and economic constraints, the sample size is still small compared to the number of tourists. Secondly, some new factors from recent studies such as insurance policies and language barriers have not been included in this research. Thirdly, the research model does not have intermediate or latent variables to clarify the relationships in the research.

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preparation, Le, T.A., Huyen, T.N.T. and Truc, P.M.V.; writing - review and editing, Le, T.A. and Huyen, T.N.T.; visualization, Huyen, T.N.T., Le, T.A. and Kim, T.N.L.; supervision, Le, T.A., Minh, N.P. and Phuoc, K.C.; project administration, Le, T.A., Huyen, T.N.T. and Phuoc, K.C. All authors have read and agreed to the published version of the manuscript.

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THE USE OF REMOTE SENSING TECHNIQUES FOR MODELING AND ANALYSIS OF THE URBAN EXPANSION OF AIN SALAH CITY IN THE ALGERIAN SAHARA BETWEEN 2000- 2023

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Abstract: This study examines the urban expansion of Ain Salah City in Algeria between 2000 and 2023 using remote sensing techniques and data. The analysis reveals significant changes in land use patterns, with rapid urbanization and infrastructure development driven by population growth, economic development, and infrastructure improvements. The study employed satellite imagery and geographic information systems (GIS) to detect urban sprawl and analyze the environmental impacts of urbanization. The results show that the city center has undergone significant changes, with more built-up areas and infrastructure emerging. The study's findings have implications for urban planning and management, highlighting the need for sustainable urban development strategies to address concerns about traffic congestion, waste management, and public health issues. The study's use of machine learning algorithms and high-resolution satellite imagery provides valuable insights into the dynamics of urbanization in arid environments and can inform future urban planning and sustainable development strategies in similar regions.

Keywords: remote sensing techniques, modeling, urban expansion, Ain Salah city

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INTRODUCTION

The world has witnessed rapid urban expansion in recent decades, driven primarily by a large influx of people migrating to cities in search of better economic opportunities, improved living conditions, and access to services.

Zhong (2023) highlights that this trend is not limited to Ain Salah but is a global phenomenon affecting cities across various continents. As populations continue to grow, urban centers like Ain Salah must adapt to the challenges posed by climate change, resource management, and sustainable development. Ain Salah is a city that embodies the complex relationship between geology, climate and urbanization. Its unique characteristics are shaped by the interplay of natural processes and human activity, making it a fascinating subject for scientific exploration and study. Understanding these dynamics is essential for developing effective strategies to address the challenges faced by urban areas in arid environments. The results of the study show the performance of the GEE platform in detecting urban sprawl in the city of Ain Salah.

The GEE platform can serve as a facilitative tool for deriving lessons from urbanization experiences to inform policymaking (Okan Yılmaz, 2024). The GEE platform enables the management and analysis of Earth observation big data, providing free access to numerous satellite images in the cloud. It also allows these images to be exported and used via APIs for various programming languages (Tamiminia et al., 2020). The capability of remote sensing technology to gather extensive data quickly presents significant opportunities for delivering precise and detailed energy demand evaluations in urban regions (Arunim et al., 2024). Unsupervised change detection methods in remote sensing have attracted considerable interest because they can identify changes on the Earth's surface without the need for ground truth data (Bipin et al., 2024).

Our planet is experiencing an extraordinary pace of urbanization, with over half of the global population currently living in urban areas. This figure is expected to rise to 68% by 2050 (Anand et al., 2024; United Nations, 2018). Ain Salah City, a vibrant urban center located in the heart of the desert, exemplifies this trend. Developed surfaces such as roads, buildings, and parking lots are prominent characteristics of urban areas (Tian et al., 2018; Rajveer et al., 2022; Weng, 2008). The world has witnessed rapid urban expansion, largely driven by a significant influx of people migrating to cities in search of better economic opportunities and improved living conditions (Zhong et al., 2023). In recent years, Ain Salah has experienced notable urban development. The construction of rads, buildings, and parking lots has become a defining feature of its urban landscape. These developments are crucial for facilitating transportation, commerce, and daily activities within the city. Research by Tian et al. (2018), Rajveer et al. (2022), and Weng (2008) underscores that such expansion is often accompanied by significant changes in land use and environmental impacts.

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The transformation of natural landscapes into urbanized areas can alter local climate patterns, contributing to phenomena such as the urban heat island effect, where built-up areas become significantly warmer than their rural surroundings (Ahmed Amine et al., 2023; Bouhennache et al., 2019; Bouzekri et al., 2015). This trend of rapid urban expansion is not confined to Ain Salah but reflects a global phenomenon affecting cities across various continents (Zhong, 2023; Zha et al., 2003; Zhong et al., 2023; Zha et al., 2003). As populations continue to grow, urban centers like Ain Salah face the dual challenges of adapting to climate change and managing resources sustainably. The city's unique characteristics, shaped by the interplay of natural processes and human activities, make it a compelling subject for scientific study. Understanding these dynamics is crucial for developing effective strategies to address the challenges posed by urbanization in arid environments (Hachemi and Benkouider, 2023; Dib et al., 2020).

The application of remote sensing in urban studies not only enhances our understanding of spatial dynamics but also aids in the formulation of effective urban policies" (Johnson et al 2023). The integration of remote sensing data with machine learning algorithms has revolutionized our understanding of urban expansion patterns, allowing for more accurate predictive modeling (Smith et al., 2024). Remote sensing techniques provide a unique vantage point for analyzing urban growth, enabling researchers to monitor changes over time with unprecedented details (Lee et al., 2024). The application of satellite imagery in urban studies not only enhances our analytical capabilities but also supports sustainable urban planning initiatives (Garcia and Patel, 2024). Remote sensing has revolutionized our capacity to monitor urban growth through the provision of high-resolution, multi-temporal imagery. Techniques such as sparse-constrained adaptive structure consistency have been successfully employed to facilitate change detection in remote sensing images, enabling precise identification of spatial changes over time (Sun et al., 2011).

This technique not only enhances change detection accuracy but also allows for the detection of gradual transformations within heterogeneous landscapes. One of the critical advancements in remote sensing is the development of soft change detection techniques, which enable the extraction of meaningful changes in optical satellite images with improved accuracy (Luo and Li, 2011). These techniques allow for more nuanced analyses by addressing uncertainties in change identification, making them particularly valuable for urban studies in heterogeneous environments. Applying such methodologies to Ain Salah City will enhance our understanding of the patterns and drivers of urban expansion in this unique desert context.

Recent studies have advanced our methodologies for continuous change detection, utilizing multi-source heterogeneous satellite image time series to track various alterations, including urban sprawl (Wang et al., 2023). Such approaches are crucial for cities like Ain Salah, where understanding the nuances of land coverage and urban morphology is essential for effective management and urban planning. Additionally, unsupervised change detection methods, such as those employing local gradual descent algorithms, have been introduced to address the challenges of extracting valuable insights from satellite imagery (Yandgin, 2012). These innovative strategies enable researchers to operate without the need for extensive training data, thus making them adaptable for diverse urban contexts.

The integration of these techniques culminates in the development of robust processes for change detection, including sparse-constrained adaptive structure consistency-based unsupervised image regression (Sun et al., 2022). This approach not only refines the detection of changes but also enhances the interpretability of results, allowing for a clearer understanding of urbanization patterns. The performance of the Google Earth Engine (GEE) platform in detecting urban sprawl in Ain Salah highlights its potential as a valuable tool for deriving insights from urbanization experiences and informing policymaking (Okan, 2024). The GEE platform facilitates the management and analysis of Earth observation big data, providing free access to numerous satellite images and allowing for their export and use via APIs for various programming languages (Tamiminia et al., 2020). The capability of remote sensing technology to rapidly gather and analyze extensive data presents significant opportunities for precise evaluations of energy demand and environmental impacts in urban regions (Anand et al., 2024; Lu et al., 2014; Ramadhan et al., 2022). Unsupervised change detection methods in remote sensing have garnered considerable interest due to their ability to identify changes on the Earth's surface without requiring ground truth data (Shah, 2024; Waqar et al., 2012; Benkouider et al., 2019). In summary, Ain Salah embodies the complex relationship between urbanization and environmental change, emphasizing the need for advanced remote sensing technologies to navigate the challenges posed by rapid urban expansion.

MATERIALS AND METHODS

1. Study Area

Ain Salah, a newly established province in Algeria, has been chosen as a model for studying urban expansion due to several compelling reasons. Firstly, as a new province, it is expected to undergo significant developmental projects and the construction of new buildings, providing a unique opportunity to observe and analyze urban growth from its inception. Additionally, Ain Salah has a strategic geographical location (Figure 1), connecting four major provinces in Algeria (Tamanrassand, Ouargla, Timimoun, El Menia), making it a critical hub for regional connectivity and development. This positioning not only enhances its importance but also offers a diverse range of urban planning challenges and opportunities, making it an ideal case study for urban expansion.

2. Data acquisition

Satellite images of Landsat 7, and Landsat 8 (OLI) with surface reflectance was the primary data source for this study. The Landsat data circa 1999 was sourced from the Landsat 7 Enhanced Thematic Mapper Plus (ANDM+) satellite, while data for 2023 were obtained from the Landsat 8 Operational Land Imager (OLI) satellite. In addition, reference data used in this study were in very high spatial resolution (15–30 cm) satellite imagery for 2023 was available from Google Earth Pro software. From this reference data, some data were used as training samples in the Landsat image classification process, while the rest were used for validation. A total of 2278 training features were processed for this study. As ancillary data, this study used administrative boundaries vector maps from The GADM database (https://gadm.org/).

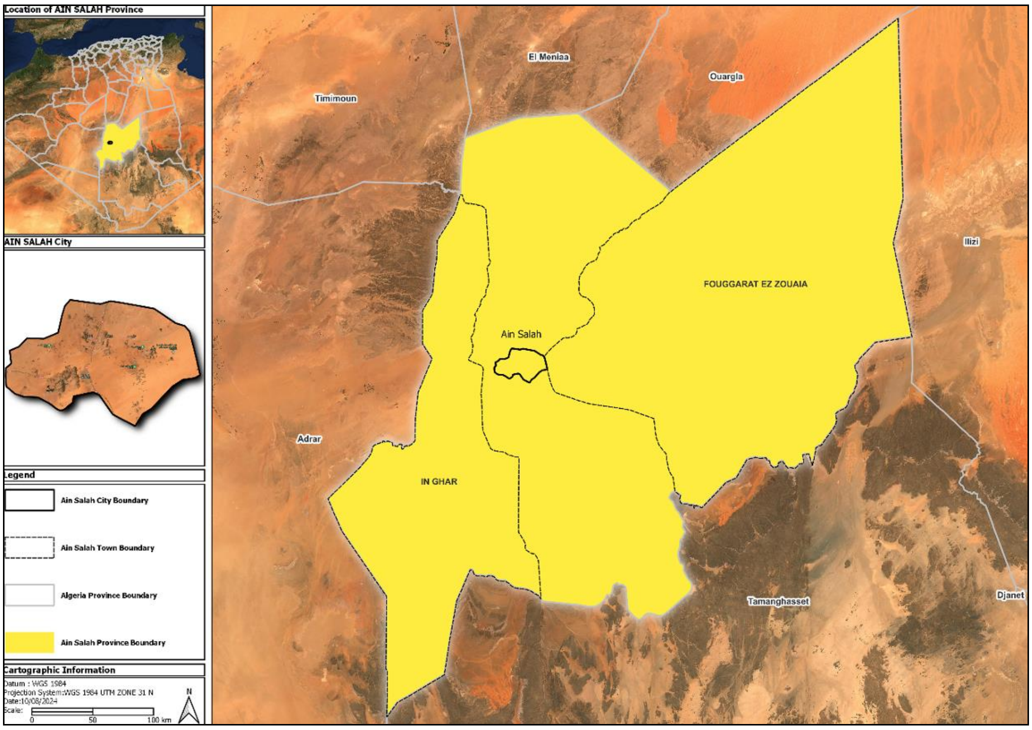

Figure 2. Study area (Source: GADM database, realized by authors)

3. Method

The workflow used in this study is depicted in Figure 2.

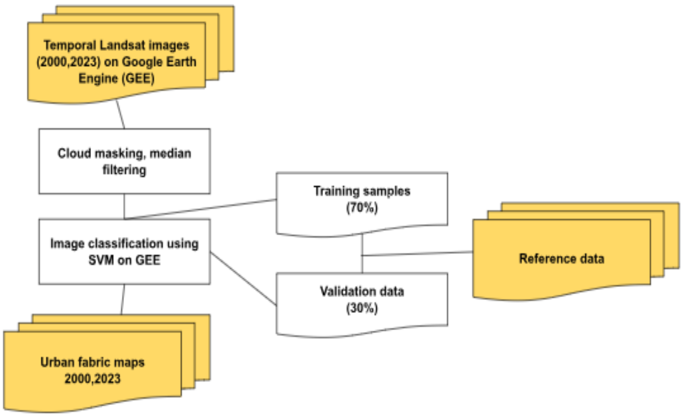

Figure 2. Methods used

3.1. Image Classification on Google Earth Engine (GEE)

The study utilized Landsat images from the google earth engine (GEE) database (Figure 3), specifically surface reflectance (SR) products. The data was selected from Landsat 7 ANDM+ for circa 2000, and from Landsat 8 OLI for 2013 and 2020. To ensure accuracy, cloud-free pixels were identified using the cloud masking function. The study focused on visible (VIS), near-infrared (NIR), and short-wave infrared (SWIR) bands, all with a spatial resolution of 30 meanders. A median filter was applied to obtain representative pixels for each location and spectral band from each year. To enhance the accuracy of image classification results, the 2000 and 2023 Landsat data bundles were combined with high-resolution satellite imagery data from the corresponding years and then clipped to the study area (city of Ain Salah).

The reference data were then prepared, with 70% being used as training samples to classify the Landsat images for 2000 and 2023 and the remainder being used to validate the image classification results. The reference data were distributed at random points generated from the high-resolution satellite imagery. These points represented the five land use/land cover categories addressed in our study area: (1) agriculture (farms, palm, fields), (2) built-up (settlements, industrial areas), (3) strand (4) water bodies (rivers, lakes, canals, and others) and (5) others (bare ground, others). Points were distributed across the study area, with a total number of 2278 points taken from each data year (Figure 4)

Before use, the data were visually checked using historical high-resolution images from Google Earth Pro. The training samples were used to classify the Landsat images using the support vector machine (SVM) algorithm, resulting in land use/land cover (LULC) maps for 2000 and 2023. The SVM classification results were then refined through post-processing techniques, which included a weighted smoothing process using a 3x3 moving window to remove noise and manually editing misclassified areas to produce final, accurate LULC maps. Accuracy assessment was performed for each of the LULC maps individually. To validate the accuracy, a random sample of 30% of the reference data was used. An error matrix was utilized to calculate the overall accuracy values for each LULC map, specifically for the years 2000 and 2023.

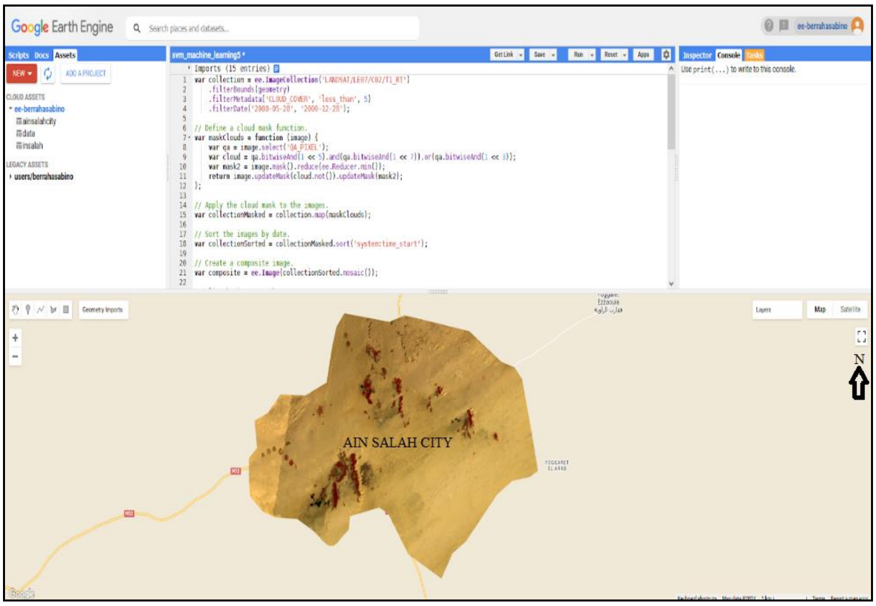

Figure 3. Satellite imagery data (Source: GEE database, realized by authors)

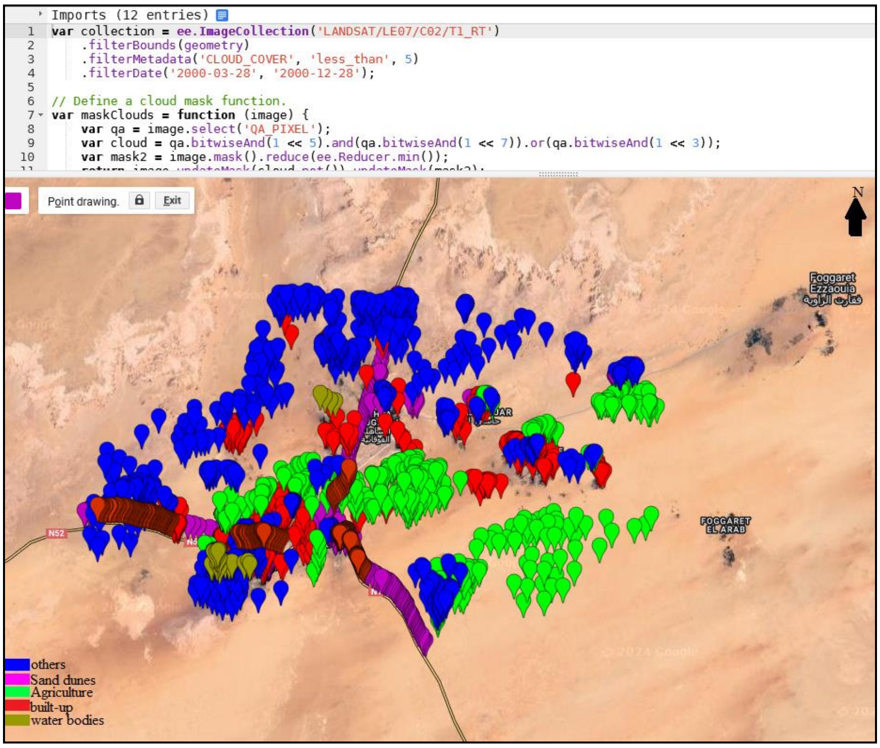

Figure 4. Training samples

3.2. Urban fabric Analysis

The machine learning approach aims to extract the urban fabric patterns of the city using Support Vector Machine (SVM) classification. This method involves collecting high-resolution satellite imagery, preprocessing the data, and extracting relevant features such as spectral features.

The extracted features are then used to train an SVM classifier on labeled data and urban fabric classes, including residential, commercial, and industrial spaces. The trained classifier is then applied to the preprocessed image data to classify each pixel into one of the urban fabric classes using the following equation (Cortes et al., 1995).

$$\mathbf{f(x) = sign(\sum \alpha i * K(x, xi) + b)}$$

where f(x) is the predicted class label, αi are the Lagrange multipliers, K(x, xi) is the kernel function, and b is the bias term (Cortes et al., 1995).

The kernel function is commonly associated with the Radial Basis Function (RBF) kernel, which is widely used in SVM literature but does not have a single author. It is a standard formulation in the context of SVMs used is defined as:

$$\mathbf{K(x, x\_i) = exp(-\gamma \, ||x - x\_i||\text{^}2)}$$

where: γ is a hyperparameter that controls the width of the RBF; ||x - x_i||^2 is the squared Euclidean distance between the input vector x and the training vector xi

RESULTS

1.Urban fabric Maps and Patterns

Feature maps of the study area showing distribution of urban fabric in each urban cluster for the years 2000 and 2023. The maps were created from the Landsat image classifications using the SVM algorithm provided on GEE. The accuracy assessment results for these three maps show an overall accuracy of 87% and 88% for 2000 and 2023, respectively. The urban expansion of Ain Salah City center has markedly extended north and south, while growth towards the west and east has been limited (Figure 5). This is due to the presence of old private oasis lands to the west, which restrict urban development, and dense sand dunes to the east, which are challenging to remove. As a result, the city has developed predominantly in a linear pattern along the north-south axis, closely following National Road N°01. According to the study results, the built-up area in the city center was estimated to be 138.19 hectares in the year 2000, and it increased to 334.18 hectares by the year 2023, showing a difference of 196 hectares (Figure 11). This significant expansion indicates a substantial growth in urban development over the 23-year period, reflecting increased urbanization and potentially higher demand for infrastructure and services within the city center. The expansion could be attributed to factors such as population growth, economic development, or changes in land use policies, highlighting the dynamic nature of urban planning and the need for strategic management to accommodate this growth.

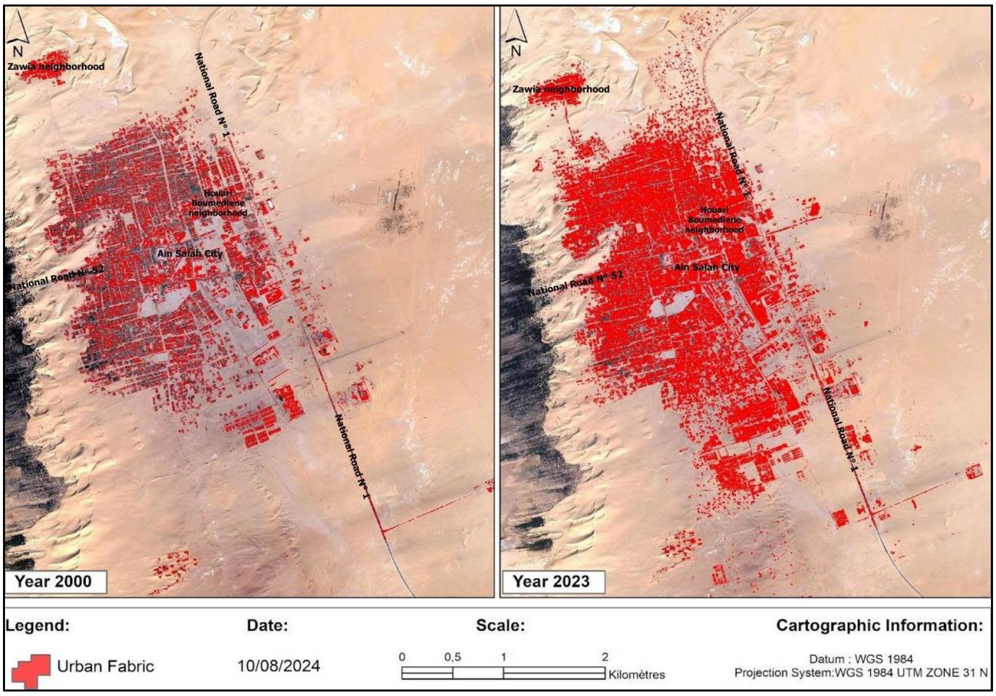

Figure 5. Urban expansion result 2000-2023, City center - AIN SALAH (Source: Output Raster from GEE, realized by authors)

The results from the Hassi El-Hjar settlement (Figure 6) show that the expansion pattern is divided into two parts: east and west. This division is due to the presence of oases in the central area of the settlement, which has posed a barrier to expansion. In the eastern part, urban expansion initially occurred, but due to the surrounding palm oases, more buildings began to emerge in the western part of the settlement. Consequently, urban growth has shifted towards the west.

According to the study results, the built-up area in the Hassi El-Hjar urban cluster was estimated to be 5.96 hectares in the year 2000, and it increased to 10.48 hectares by the year 2023, showing a difference of 4.52 hectares (Figure 11). This growth highlights a moderate expansion in urban development over the 23-year period. The increase of approximately 4.52 hectares reflects gradual but steady urbanization, suggesting a growing demand for residential or commercial space. The moderate expansion could be indicative of controlled development, which was influenced by geographic constraints such as the central oases that limit growth in certain directions. This pattern of development points to a strategic expansion towards areas with fewer obstacles, revealing a tendency for urban sprawl to adapt to environmental and spatial constraints.

The results from the El-Baraka settlements indicate that the expansion pattern is directed towards the north, south and east, but not west (Figure 7). This is due to the presence of oases to the west of the settlement, which hinders expansion in that direction. Additionally, the proximity to the city center in the east makes it an attractive area for growth. As a result, the city center is likely to be a key factor driving the settlement's expansion towards the east. According to the study results, the built-up area in the El-Baraka urban cluster was estimated to be 21.95 hectares in the year 2000, and it increased to 25.88 hectares by the year 2023, showing a difference of 3.93 hectares (Figure 11). This relatively moderate growth suggests a steady but controlled expansion over the 23-year period. The increase of approximately 3.93 hectares reflects ongoing urban development, potentially influenced by geographic and infrastructural constraints, such as the presence of oases to the west and proximity to the city center. These factors have directed the expansion towards the north, south and east, with the city center acting as a significant attraction for further growth.

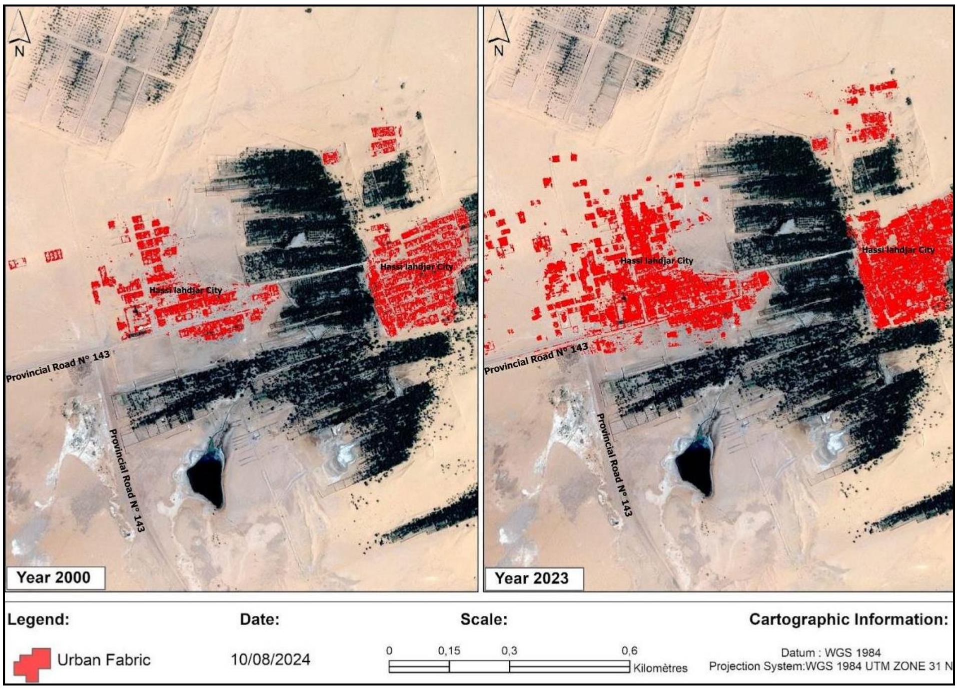

Figure 6. Urban expansion result 2000-2023, Hassi Lahdjar-AIN SALAH (Source: Output Raster from GEE, realized by authors)

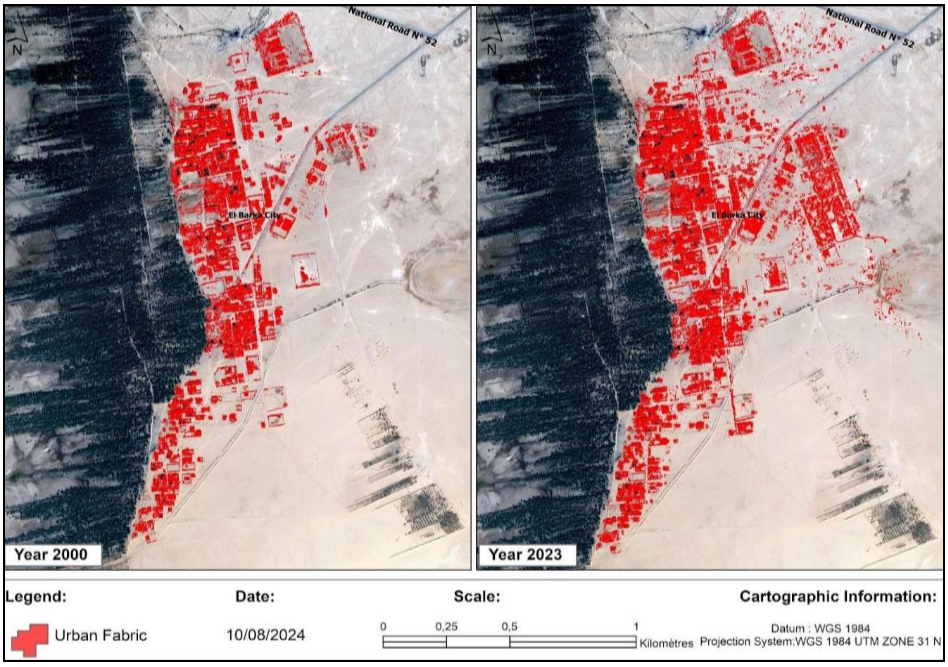

Figure 7. Urban expansion result 2000-2023, El Barka-AIN SALAH (Source: Output Raster from GEE, realized by authors)

The results indicate that the expansion of the Sahela Tahtania Est settlement has been directed towards the northeast and west, while avoiding the center and south (Figure 8). This is due to the presence of oases in the central and southern areas of the settlement, which have influenced the nature of the expansion by limiting growth in those directions. According to the study results, the built-up area in the Sahela Tahtania EST urban cluster was estimated to be 42.83 hectares in the year 2000, and it increased to 140.37 hectares by the year 2023, showing a difference of 97.54 hectares (Figure 11). This substantial increase in built-up area indicates a significant expansion of the urban cluster over the 23-year period. The growth of approximately 97.54 hectares reflects a high rate of urban development and urban sprawl, suggesting robust economic growth, rising population, or changes in land use policies. The dramatic increase also highlights the urban cluster's ability to accommodate growing demands for residential, commercial, or industrial spaces. This rapid expansion may necessitate enhanced infrastructure and urban planning to manage the growth effectively and ensure sustainable development in the future.

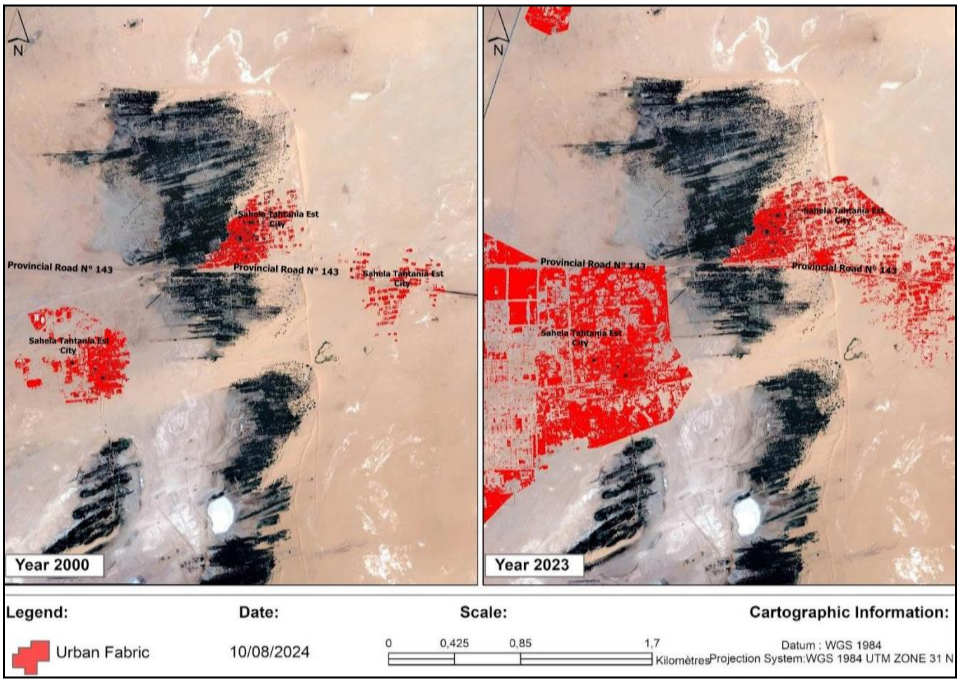

Figure 8. Urban expansion result 2000-2023, Sahela Tahtania Est-AIN SALAH (Source: Output Raster from GEE, realized by authors)

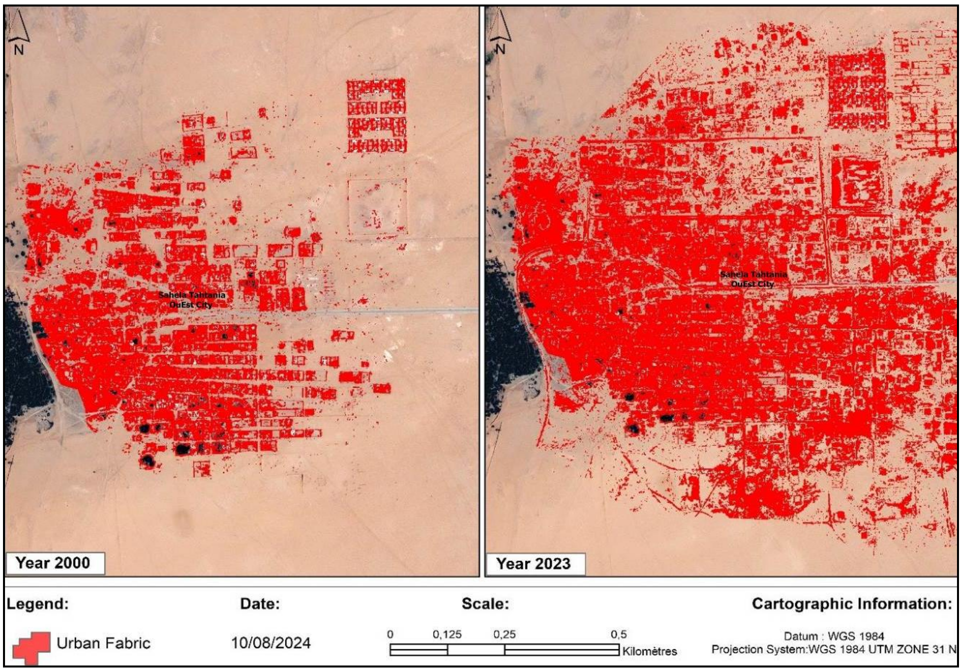

Figure 9. Urban expansion result 2000-2023, Sahela Tahtania OUEst -AIN SALAH (Source: Output Raster from GEE, realized by authors)

The results indicate that the expansion of the Sahela Tahtania ouEst settlement has been directed towards the northeast and south, while avoiding the west (Figure 9). This pattern is due to the presence of oases to the west of the settlemet, which has influenced the nature of the expansion. As a result, growth has primarily occurred towards the east, following the main road and extending to the settlement's periphery. According to the study results, the built-up area in the Sahela Tahtania ouEst urban cluster was estimated to be 22.76 hectares in the year 2000, and it increased to 48.85 hectares by the year 2023, showing a difference of 26.09 hectares (Figure 11). This increase indicates a substantial growth in the urban area over the 23-year period. The expansion of approximately 26.09 hectares reflects a notable rise in urban development, suggesting a significant demand for space and potentially driven by population growth or economic factors. The expansion trend, directed towards the northeast and south while avoiding the west due to the presence of oases, underscores the impact of geographic constraints on urban growth patterns. This considerable growth may necessitate further investment in infrastructure and urban planning to accommodate the increasing population and ensure sustainable development in the future.

The urban expansion of Igostene has markedly extended north and south, while growth towards the west and east has been limited (Figure 10). This is due to the presence of old private oasis lands in those parts which restrict urban development. According to the study results, the built-up area in the Igostene urban cluster was estimated to be 17.50 hectares in the year 2000, and it increased to 27.57 hectars by the year 2023, showing a difference of 10.07 hectares (Figure 11). This growth highlights a moderate expansion in urban development over the 23-year period. The increase of approximately 4.52 hectares reflects gradual but steady urbanization, suggesting a growing demand for residential or commercial space. towards areas with fewer obstacles, revealing a tendency for urban sprawl to adapt to environmental and spatial constraints.

The study's findings highlight the rapid expansion of built-up areas in the Ain Salah urban cluster, which is consistent with the rapid urbanization trend in many parts of Africa. The increasing urbanization has led to changes in land use patterns, with more commercial and industrial areas emerging, and a decrease in agricultural and open spaces.

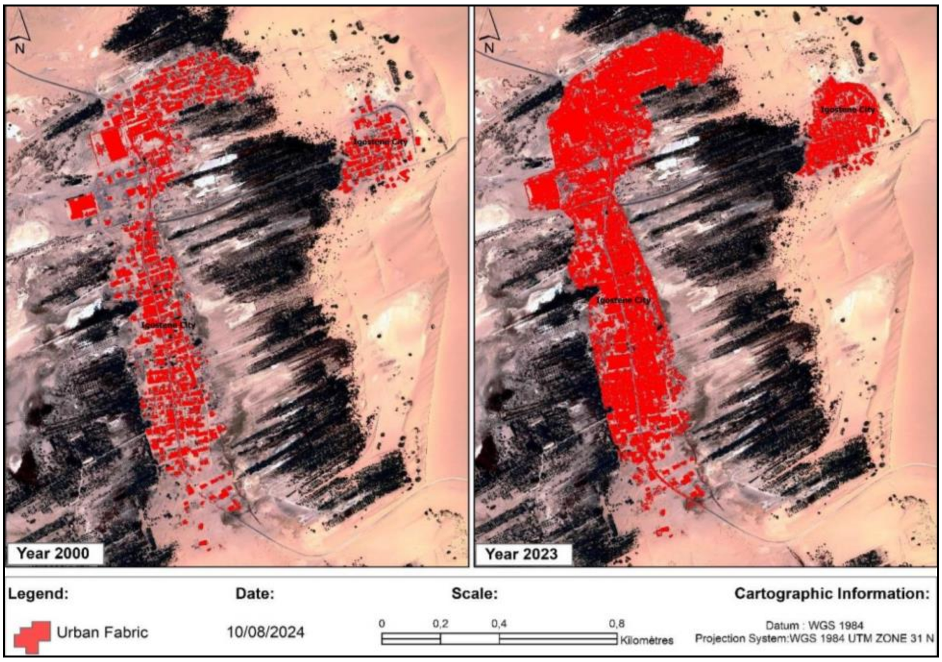

Figure 10. Urban expansion result 2000-2023, Igostene - AIN SALAH Source: output Raster from GEE, realized by Ali SAIDOU

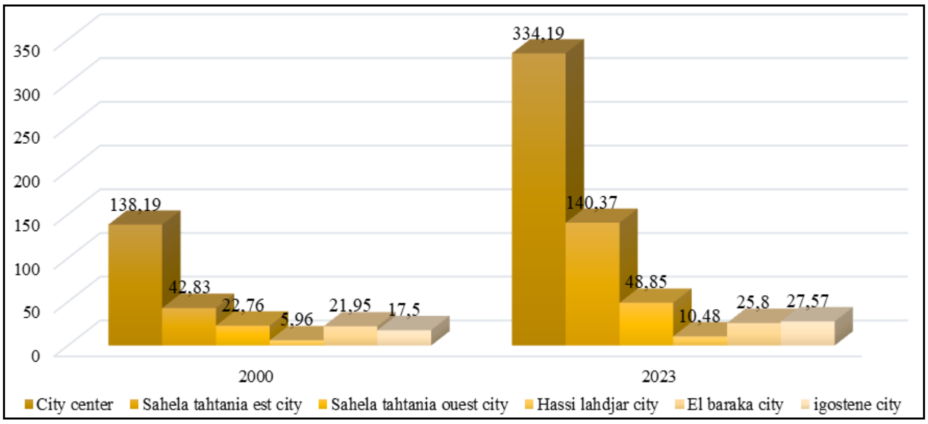

Figure 11. Evolution of built-up area from 2000-2023

CONCLUSION

In conclusion, this study demonstrates the effectiveness of remote sensing techniques and data in modeling and analyzing the urban expansion of Ain Salah City in the Algerian Sahara between 2000 and 2023. The findings highlight the significant changes in land use patterns, with a rapid increase in built-up areas and infrastructure development, driven by population growth, economic development, and infrastructure improvements. The results of this study provide valuable insights into the dynamics of urbanization in arid environments and contribute to a better understanding of urban development in similar regions. The study's use of machine learning algorithms and high-resolution satellite imagery enabled the classification of land use/land cover categories, including urban fabric patterns, with an overall accuracy of 87% and 88% for 2000 and 2023, respectively. The results show that the city center has undergone significant changes, with more built-up areas and infrastructure emerging, and the existing urban areas have become more densely populated.

The study's findings have implications for urban planning and management in Ain Salah City, highlighting the need for sustainable urban development strategies to address concerns about traffic congestion, waste management, and public health issues. The limitations of the study, including the use of satellite imagery and Landsat data, are acknowledged, but the study's results demonstrate the potential of remote sensing techniques for analyzing urban expansion and development.

Overall, this study provides valuable insights into the changes in urban fabric patterns over time and highlights the importance of using machine learning algorithms and high-resolution satellite imagery to analyze urban development. The study's findings can inform future urban planning and sustainable development strategies in Ain Salah City and similar regions, promoting sustainable urban development and ensuring the well-being of urban residents.

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DOES ENVIRONMENTAL, SOCIAL AND GOVERNANCE HAVE AN IMPACT ON HOW GREEN HOTELS ARE? PURCHASE INTENTION AS A MODERATOR VARIABLE. OPINIONS OF A SAMPLE OF HOTEL CUSTOMERS IN IRAQ

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Abstract: Investigating ESG and its effects on green hotels is the current study's goal. As well as the connection between the moderating effect of purchase intention. Applying the Theory of Planning Behavior (TPB) as a theoretical framework. Data (720) on workers in the hotel industry were gathered using the questionnaire. The data were analyzed using the structural equation model (SEM). The findings revealed that environmental (E) and social (S) factors have a significant impact on how green and sustainable hotels become, while governance (G) also has an impact on green hotels. These criteria are deemed suitable for use in the hospitality sector based on the theoretical justification and modification indicators. By demonstrating that purchase intention had a favorable influence on the choice to stay in an eco-friendly hotel, the analysis results further validated the TPB theory. In terms of customer purchase intent for green hotels, it had a significant impact on the use of green hotels that consider the environment and whose improvements include major solutions to major issues. So, The study also looked into customer purchase intent as a moderator variable in the relationship between ESG and green hotels.

Keywords: Environmental, Social, and Governance, Green hotel, Theory of Planned Behavior, purchase intention, tourism, hospitality

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INTRODUCTION

One of the fastest-growing segments of the global economy is hospitality, which sends millions of people abroad and generates billions of dollars for developed countries each year. Therefore, However, the expansion of the hospitality sector over time has put more strain on the environment (Wulandari et al., 2023). Consequently, many in the hospitality industry are working to reduce the adverse environmental effects of their operations (Damigos, 2023). where hotel managers are dealing with major environmental and reputational issues as a result of these factors. Modern customers' increasing awareness of these issues is reflected in their demands for "green" hotel operation management (Lin et al., 2023). Hotels referred to as "green hotels" make an effort to use less energy, water, and materials while still providing top-notch services (Dang-Van et al., 2023). Green hotels use less energy, water, and solid waste, which lessens their impact on the environment. Benefits have been realized, including decreased expenses and liabilities, opportunities for high-yield investments with low risk, increasing profits, and positive cash flows. Interest in eco-friendly hotels has increased as a result of awareness of these benefits and motivators (D'Acunto et al., 2023; Elshaer et al., 2022).

Scholars studying tourism and hospitality have recently become aware of this problem (customers believe that green products and services are more expensive and of lower quality, and eco-friendly upgrades come at too high a price for their clients) (Shehawy et al., 2024), Adoption by current or potential customers is always a prerequisite for the survival and

* Corresponding author

ultimate success of any new innovative product or service (Sharma et al., 2024). in addition, research on environmentally friendly hotels indicates that although visitors frequently express interest in staying at eco-friendly establishments, they don't always follow through on their desire (Fauzi et al., 2024). Therefore, it will be interesting to evaluate the elements or obstacles that affect consumers' desire to stay at green hotels with environmentally friendly services (Ray et al., 2024).

Due to their numerous uses and 24/7 operations, hotels are among the building types that use the most energy (Diwanji et al., 2023). Both the water heaters used to warm swimming pools, spas, and showers emit carbon dioxide (CO2). Hotels should reduce their carbon footprint by using clean energy, but most still obtain the majority of their energy from dirty fossil fuels. For the conduct of their business (Amalia and Furqan, 2023). Hoteliers are being urged to adopt green practices to revolutionize their industry due to the growing interest of consumers in sustainability and environmental issues. Currently, there is a significant opportunity for hotel managers to benefit from this market differentiation factor (Acampora et al., 2022). The hospitality industry has committed to closely monitoring the ESG movement as the importance of sustainable development has grown into a significant concern on a global scale. Consequently, ESG has become crucial for conducting business. The term "Environment, Social, and Governance" (ESG), which stands for "Environment, Social, and Governance," emphasizes the significance of excellent corporate environmental management, social responsibility, and open and honest governance (Chua and Han, 2022). ESG is increasingly recognized as being crucial to a hotel's success (Kim, 2022). Additionally, ESG is stressed internationally due to worries about sustainability. According to the ESG evaluation index, each nation assesses the level of corporate sustainability management and promotes ESG initiatives (Yoong, 2022).

Consumer demands for greener businesses in the hotel industry have grown in line with this general green trend (Fan et al., 2023). In these circumstances, ESG is insufficient to predict a person's intention or behavior. Even if a guest believes that there is social pressure to stay at green hotels, they might not be able to do so if the hotel is too expensive, their employer is pressuring them to visit a particular hotel, or the hotel is in an undesirable location (Legrand and Matthew-Bolofinde, 2022). TPB would be a better option in this scenario for predicting hotel guests' behavior. A variety of non-volitional factors may affect travelers' choices when making hotel reservations, which may restrict their ability or opportunity to select an environmentally friendly hotel (Wang et al., 2023). TPB provides a clear framework for a thorough investigation of how customers' intentions to book green hotels are formed while taking purchase decisions into account, serving as the theoretical basis for this study. in addition, the study problem is not how making hotels greener; rather, it is getting customers to change their intentions about what they will buy in favor of green services. This is because consumers are reluctant to try new things, take chances, or pay a premium for environmentally friendly products. Thus, the purpose of our research is to investigate the major factors (environmental, social, and governance) that affect consumers' propensity to pay a premium for environmentally friendly lodging products and to clarify the significance of their intention to purchase a distinctive experience in this particular context. The other goal is to assist hotel managers in implementing greener tactics that work better.

MATERIALS AND METHODS

A flow chart that shows the steps in the methodology is shown in Figure (1) below.

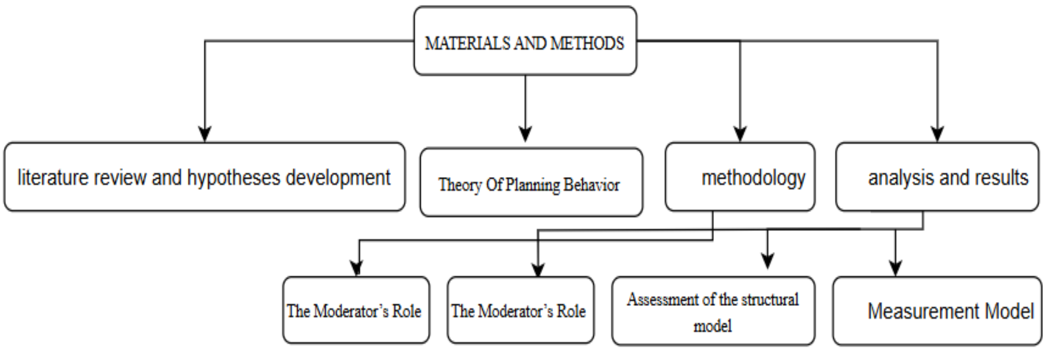

Figure 1. Flow chart of steps in the methodology

1 Theory Of Planning Behavior (TPB)

This study makes use of the Theory of Planned Behavior (TPB) as its overarching theoretical framework to better understand the factors that influence green purchase intentions (Al-Mamary and Alraja, 2022). The TPB provides the foundational knowledge required to understand why customers decide to buy specific products and services. Researchers commonly use TPB to evaluate consumer behavioral intentions toward eco-friendly hotel industry practices (Liu et al., 2023). where the tendency of customers to behave in a specific manner about a good or service is known as their behavioral intentions. According to TPB, consumer attitudes and subjective norms are the main cognitive forces behind consumers' behavioral intentions (Huang, 2023). TPB is subsequently defined as the widespread favorable predisposition of consumers toward a particular behavior, and the subjective norm is characterized as the anticipated recommendation an individual tends to experience from close social connections, such as the inevitable decision-making process (Wang et al., 2022). Furthermore, this theory contends that behavioral intentions are influenced by behavioral attitudes, subjective norms, and perceived behavioral controls, which together help to shape how people behave (Wang et al., 2022). This theory supports choices that have the potential to improve things, which in turn encourages positive customer behavior around a product or service (Wong et al., 2023; Bano and Siddiqui, 2024). The TPB is one of the most popular theoretical models for predicting human behavior. The TPB is predicated on the notion that, in general, people consider the effects of their behavior before deciding whether to engage in it. According to the theory, intention is influenced by three conceptually independent constructs: attitude (i.e., the overall advantages or disadvantages of a particular behavior), subjective norm (i.e., the pressure from significant others to perform the behavior), and perceived behavioral control (i.e., the perceived ease or difficulty of performing the behavior) (Patwary et al., 2023). TPB model has a strong capacity to explain why people choose to stay in eco-friendly hotels. The TPB framework can be used to examine how non-volitional factors, such as social pressure and personal factors, affect intention and ultimately the choice of green hotels (Aseri and Ansari, 2023).

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

1. Green Hotels

The beginnings of the green hospitality sector can be traced to a small group of elite independently owned and chain-affiliated resorts and hotels in the middle of the 1990s. The emergence of the green hospitality sector is due to financial gains and a shift in consumer perceptions toward environmentally friendly travel (Fauzi et al., 2022). Hotels that are built and run to minimize their impact on the environment are referred to as green hotels, eco-friendly hotels, or sustainable hotels. While offering comfortable and enjoyable stays to guests, these hotels also adopt several strategies and initiatives to promote sustainability and lower their carbon footprint (Nimri et al., 2020). A sustainable hotel can make significant financial savings in terms of energy, water, and waste (Wang et al., 2023). To save energy, Energy-saving lighting, ventilation, air conditioning, and heating systems are used in green hotels. They use water-saving appliances, install water recycling systems, and encourage guests to contribute to water conservation. Also, To reduce their impact on landfills, these hotels implement waste reduction programs, recycling initiatives, and effective waste management (Yarimoglu and Gunay, 2020). They might run their operations using renewable energy sources like solar or wind energy. Furthermore, to reduce their environmental impact during construction and operation, green hotels frequently use sustainable architectural designs and eco-friendly building materials (Xie, 2016). To demonstrate their dedication to sustainability, some green hotels seek certification from groups like LEED (Leadership in Energy and Environmental Design) or other local eco-certification programs (Grubor et al., 2019).

To demonstrate that it supports sustainability, the hotel industry has started several initiatives, including the adoption of environmental management systems, eco-labels, and sustainable behavior implementation practices (Fatoki, 2020). The hotel industry will undoubtedly be unable to advance into the future if sustainability and resource conservation are not incorporated into the core of its business culture because pollution can undermine the foundation for future industry development (Olya et al., 2019). One of the eco-friendly initiatives that aims to reduce negative environmental effects by saving energy is the use of green hotel practices (Yadav et al., 2019), as shown in Figure 2.

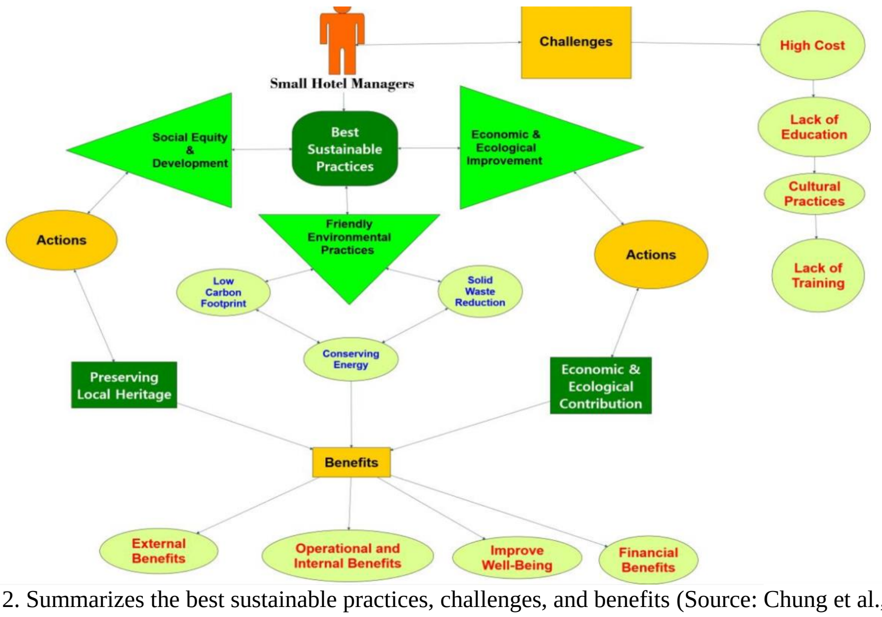

Figure 2. Summarizes the best sustainable practices, challenges, and benefits (Source: Chung et al., 2023)

According to numerous studies, adopting green hotel practices can help hotels become more profitable, sustain the environment, improve guest satisfaction and loyalty, and gain a competitive edge (De Freitas, 2018; Agag and Colmekcioglu, 2020). Where a customer's choice of hotel is significantly influenced by sustainable practices. According to recent studies, certain environmental characteristics are viewed by hotel guests as "basic" parts of the service package (Teng et al., 2018). Because trust is a prerequisite for loyalty, hotel guests are less skeptical and more appreciative of sustainable practices when hotels set baseline expectations for what a green hotel offers (Patwary et al., 2023).

2. The Relationship between ESG Dimensions and Green Hotels

Environmental protection continues to receive attention from the general public as a result of people's growing awareness of the damage that various business activities are causing to the environment. Growing public concern is motivating the hotel industry to implement environmentally responsible management. A greater number of hotels are embracing the green movement to lower harmful emissions (Chua and Han, 2022; Astawa et al., 2022). A "green hotel" is a lodging establishment that uses eco-friendly practices to protect the environment and boost productivity. A growing number of consumers are choosing eco-friendly products over alternatives because they are aware of how their purchasing decisions have an impact on environmental problems (Bae, 2022). Where environmental worries have grown more pressing over the past few decades, Customers have recognized the effects of their purchasing decisions in the increasingly environmentally conscious market, which are closely linked to environmental issues (Ahmed et al., 2021). Therefore, environmentally conscious consumers are beginning to look for and buy eco-friendly products over alternatives, sometimes even paying more for such products (Abdou et al., 2022). Customers' demands for green businesses have been steadily growing in the lodging sector, which is consistent with this phenomenon. As a result of their awareness of the environmental harms caused by hotels (such as the emissions they emit into the air, water, and soil) and the resources they waste or deplete, such as the excessive use of non-durable goods, energy, and water, many tourists now seek out accommodations that adhere to environmentally friendly principles (Chen et al., 2022).

According to one study, the hospitality sector highlights the need for businesses to adopt sustainable business practices. As a result, hotel companies must act as leaders in the sustainable hospitality sector. Given the importance of the hotel industry to the tourism industry, academics, hoteliers, and legislators have given the sustainability of hotels a lot of attention (D'Acunto et al., 2023). where environmentally responsible business practices are essential in the hospitality sector because they encourage travel and offer a variety of amenities for entertainment, meetings, and other social gatherings (Silva, 2022).

Similar to how CSR was once the face of business, the term "ESG" recently achieved a certain level of "Vogue" status and is now regarded as the benchmark for initiatives to create a sustainable future. The process of becoming "ESG-compliant," however, must first be fully comprehended to be completed. In this context, the term "ESG" for hotels refers to three dimensions: environmental, social, and governance. It goes without saying that as the industrial sector continues to expand quickly, there is a growing need to make sure that this growth is sustainable. Fortunately, it is clear that following ESG objectives and standards is not only morally right, but also financially feasible and, before one may even realize it, "financially necessary" (Lau et al., 2021). For hospitality businesses, a strong focus on environmental, social, and governance (ESG) issues can be a significant competitive advantage, particularly for those who can articulate an engaging narrative about their ongoing ESG journey (Alreahi et al., 2023). Environmental considerations include corporate policies that address climate change as well as how an organization protects the environment. Social factors take into account how it interacts with its personnel, vendors, clients, and the communities in which it operates. In terms of governance, a company's management, executive compensation, audits, internal controls, and shareholder rights are all covered (Larsen, 2010). Environmental issues include things like corporate climate policies, energy use, waste, pollution, the preservation of natural resources, and how animals are treated. Additionally, a company's environmental risks can be evaluated using ESG factors, as can the way the company is addressing those risks (Abdou et al., 2022).

The interest in ethical environmental practices, sustainable tourism, social welfare, good corporate governance, and transparency among hotel guests, investors, owners, employees, and brands is rising globally. The hotel industry is being pushed to give decarbonization initiatives, good environmental stewardship, and responsible social policies and practices priority due to the rising expectations of guests and staff (Ding and Tseng, 2023). When compliance and risk managers, customers, and potential investors are now evaluating a potential target company's performance not only in terms of its financial performance but also in terms of how it operates, serves society, and impacts the environment, and how each of these elements affects the target company's performance as a whole, ESG practices have become crucial (Galeazzo et al., 2023). When evaluating a company's sustainability and ability to maximize shareholder profit, ESG may be a useful tool. The performance of a company is positively impacted by ESG ratings. ESG is prioritized by businesses, which results in higher levels of engagement, more significant competitive values, healthier balance sheets, and better leaders (Hashmi and Muff, 2017). Based on the TPB assumptions and the previously reviewed literature, the following hypotheses were put forth:

H1: The environmental dimension has an impact on making hotels greener.

H2: The social dimension has an impact on making hotels greener.

H3: The governance dimension has an impact on making hotels greener.

3. The Moderator's Role of Purchase Intention

The hospitality sector has the potential to save millions of dollars by going green because of its widespread visibility. Learning more about customers' preferences for eco-friendly consumption options is a crucial challenge for the hotel marketing industry (Wang et al., 2020). Numerous researchers in the hospitality and marketing fields concur that the secret to long-term business success is to increase customers' favorable pre- and post-purchase intent (AL-Abrrow et al., 2019). The development of efficient marketing and service strategies that encourage favorable purchasing intent requires a thorough understanding of the decision-making process used by green hotel marketers. Although the decision-making process for customers is extremely complex, it is generally accepted that understanding how they arrive at their decisions can help (Wang et al., 2023; Atshan et al., 2022). Organizations can create green initiatives and programs that are more effective and efficient by having a deeper understanding of green consumers (Jiang and Kim, 2015).

Travelers who care about the environment are more likely to make and stick to plans to stay at green hotels. Green policies, which are regarded as an essential component of a company's reputation, have an impact on customers' behavior

(Shimul et al., 2022). According to a study of 35,000 tourists, 79% of travelers think about eco-friendly hotel policies when booking a room. Beyond satisfying consumer demands, these practices value hoteliers' ability to compete in cutthroat markets. Hoteliers can cut costs by reducing waste and improving operational efficiency by implementing green initiatives (Patwary et al., 2022). These environmentally friendly initiatives can reduce energy use by 20–40% without affecting the hotel performance index. Researchers have up to now primarily concentrated on green lodging trends, green marketing techniques, and the behavioral intentions of visitors toward green practices (Wang et al., 2022). Customers are reminded to support eco-friendly hotels by being informed that their decision to spend money there will help to preserve the environment for future generations. As a result of an emotional connection to the natural world, staying in green hotels might also be necessary (Yarimoglu and Gunay, 2020). Therefore, it is crucial to consider consumers' values, intentions, and norms when analyzing the factors influencing their decision to stay in green hotels (Zhang et al., 2018). Similarly, " purchase intention" describes someone's willingness and propensity to engage in pro-environmental behavior, such as staying at green hotels (Suhartanto et al., 2021). Purchase intention has been linked to ESG and green hotels in addition to being a predictor of pro-environmental behavior (Dwivedi et al., 2022). Consequently, the following hypotheses were developed:

H 4: Purchase intention mediates the relationship between the Environmental dimensions and Green hotels.

H 5: Purchase intention mediates the relationship between the social dimensions and Green hotels.

H 6: Purchase intention mediates the relationship between the Governance dimensions and Green hotels.

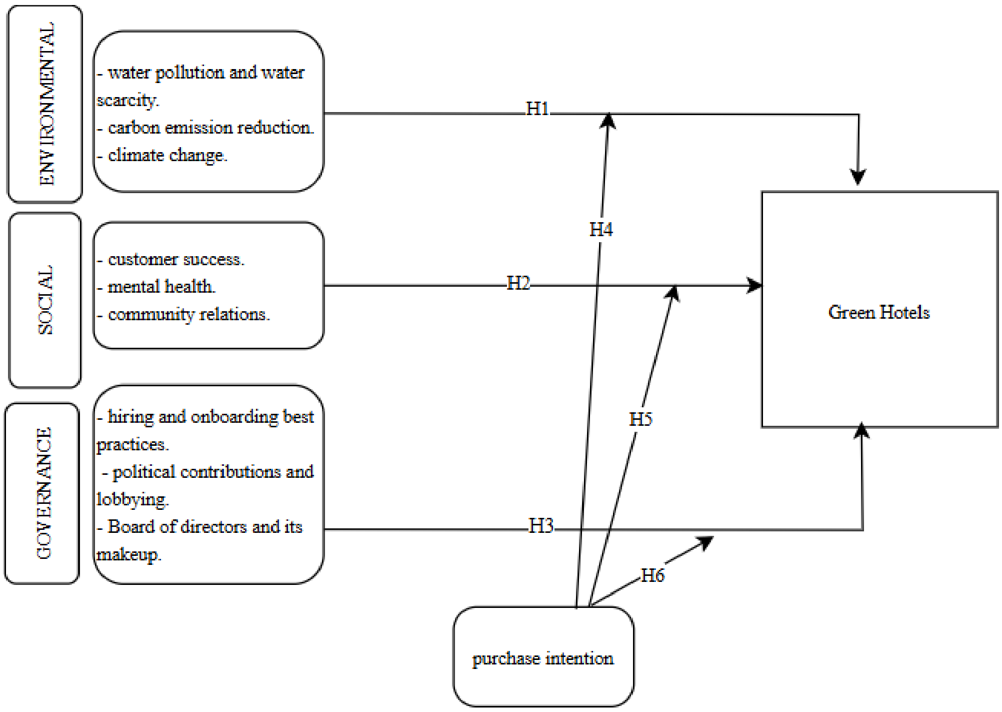

Figure 3. The conceptual framework for the study

METHODOLOGY

1. Design and Sample

In this study, we discovered 56 five-star hotels across Iraq. However, there are only 20 hotels listed which focus solely on green hotels and ESG practices. These twenty hotels were reduced to nine green hotels, Based on observations made during researcher field visits, these hotels were chosen because they incorporate green practices into their operations, as shown in (Table 1).

Table 1. Sample of Iraqi Green Hotels

Hotel Name	Star Ratings	Sample Size	Location
Divan Erbil Hotel	5.0	100	Erbil
Ramada by Wyndham Erbil Gulan Street	5.0	90	Erbil
Titanic Hotel & SPA	5.0	70	Sulaymaniyah
Babylon Rotana Hotel	5.0	110	Baghdad
Al-Mansour Hotel	5.0	55	Baghdad
Baghdad International Hotel	5.0	63	Baghdad
Basrah International Airport Hotel	5.0	44	Basrah
Grand Millennium Al Seef Basra	5.0	120	Basrah
Move npic Zenat al Hayat Hotel	5.0	74	Basrah
Total	-	726	-

These cover the nine samples collected under various conditions. All measuring components were taken from the relevant literature, except for a few minor wording changes to make them more understandable in the context of a green hotel. Each construct was rated on a Likert scale of 1 to 5, with 1 equaling "strongly disagree" and 5 equaling "strongly agree." The sources for the concepts and objects used in the study are listed in Table 2 located under the title (Questionnaire items and their source of adoption) in the index.

The sample included (726) people, it was made up of hospitality experts (like hotel managers), academics who study hospitality (like faculty members and students), and hotel guests. Participants in the focus groups discussed important beliefs and referents in addition to filling out an open-ended questionnaire that was created to collect the new set of items for belief constructs. The study sample was formed up of 31% females, 69% males, 15% bachelor's degree holders, 30% diploma holders, and the rest postgraduate degree holders. By analyzing the rate of variance, which was less than 50%, this study addressed a common problem of bias. This finding confirms that common method bias is not a concern.

Table 2. Questionnaire items and their source of adoption (Index)

Variables		Measuring Item	Source of Adoption
Environmental dimension	E1	hotels in Iraq offer issues related to climate change, such as the greenhouse effect and global warming, are a risk.	Sultana et al., (2017)
	E2	Hotels use effective waste management to reduce harmful wastes generated during production.	
	E3	Hotels make the most of their resources, such as water, energy, and materials, and seek out environmentally friendly options like solar power.	
Social dimension	S1	By giving money, goods, etc., hotels show that they care about upholding positive relationships with the government and the larger community (local, national, and international).	Sultana et al., (2017)
	S2	Hotels are concerned with upholding basic human rights principles (such as refraining from employing children or using forced or compulsory labor).	
	S3	By encouraging a healthy work-life balance, a family-friendly environment, and equal opportunities for all people, regardless of gender, age, ethnicity, or religion, hotels hope to increase employee productivity and loyalty.	
Governance dimension	G1	Hotels take the necessary actions to address the problem of bribery and corruption in the hotels.	Sultana et al., (2017)
	G2	The hotel ensures that each shareholder has equal rights and benefits.	
	G3	In their daily decision-making processes, hotels have developed and effectively communicated an appropriate vision and strategy.	
Green Hotels	GH1	Protecting the environment and mental health is a priority for green hotels.	Kim & Yun, (2022)
	GH2	Through the glass windows of green hotels, I can see various green objects and light, and the coffee shops of these hotels have potted plants with a variety of flowers and trees.	
	GH3	My principles and values are represented by green hotels. Recycling is also something I see as being crucial in green hotels.	
Purchase Intent	PI 1	I decided to invest money in this eco-friendly hotel because it effectively manages environmental pollution.	Cheng et al., (2022)
	PI 2	I might purchase this eco-friendly hotel due to concerns about the environment	
	PI 3	I am considering acquiring products and services from eco-friendly hotels.	

ANALYSIS AND RESULTS

1. Measurement Model

CFA was carried out for the following variables: ESG, GH, and PI. The fit indices for our model were: $\chi2$ = 600.97; df = 300; $\chi2$ /df = 1.944; CFI = 0.932; TLI = PNFI= 0.700; RMSEA = 0.070; and SRMR = 0.051. These outcomes were deemed satisfactory. For example, the RMSEA and SRMR values were less than 0.08 (Hooper et al., 2008; Jiang et al., 2002), but the PNFI value was greater than 0.50 (Hooper et al., 2008). Furthermore, the CFI value was greater than the recommended value of 0.90 (Marsh and Hocevar, 1985). Based on the CFA results, all standardized loadings were significant and greater than 0.70. The heterotrait-monotrait ratio of correlations (HTMT) criterion method was employed by the authors to test discriminant validity, as shown in Table 3.

Table 3. Measurement model results

Variables	Items	Standardized loading	t-value	Average variance extracted	Composite reliability
Environmental	E1	0.736	11.873	0.770	0.765
	E2	0.872	13.678		
	E3	0.800	11.209		
Social	S1	0.834	12.229	0.810	0.811
	S2	0.873	12.823		
	S3	0.881	13.780		
Governance	G1	0.791	11.657	0.764	0.845
	G2	0.811	11.920		
	G3	0.839	12.349		
Green Hotels	GH1	0.790	12.911	0.822	0.833
	GH2	0.822	13.515		
	GH3	0.807	13.890		
Purchase Intention	PI 1	0.865	12.481	0.801	0.900
	PI 2	0.796	11.490		
	PI 3	0.826	14.333		

The average variance extracted (AVE) value was calculated to confirm the convergent validity of the constructs. The AVE values were greater than the 0.50 threshold (Fornell and Larcker, 1981). The AVE values for ESG, GH, and PI were 0.770, 0.810, and 0.764, respectively. Overall, convergent validity was confirmed. Furthermore, we calculated the composite reliability (CR) for each variable. The results indicated that the CR values were greater than 0.60. The CR for ESG, GH, and PI were 0.765, 0.811, and 0.845, respectively. This implied that our research variables were reliable.

The findings of Table 3 demonstrate that all correlation matrix values for the HTMT method were less than 0.85. These findings demonstrate that discriminant validity is not a cause for concern. The structural model is put to the test in the second stage of the PLS-SEM analysis. The bootstrapping method with 5000 (one-tailed, 0.05; 83 case data) bootstrap re-sampling and bias-corrected confidence intervals were utilized to examine the significance of the path coefficients.

Table 4. Discriminant validity

Variables	1	2	3	4	5
1. Environmental					
2. social	0.432				
3. governance	0.311	0.300			
4. green hotels	0.305	0.180	0.410		
5. purchase intent	0.219	0.277	0.308	0.456	

2. Assessment of the structural model

In this study, the ESG of green hotels was investigated using the TPB theory. The structural equation model (SEM) analysis was created using the maximum likelihood estimation method, which was also used as an estimation method for the evaluation of the model and the procedure. Furthermore, SEM demonstrated high predictive power for environmental dimensions ($R2 = 0.844$), social dimensions ($R2 = 0.875$), governance dimensions ($R2 = 0.790$), and green hotels ($R2 = 0.800$). Table 5 displays the results, including t-values and standardized path coefficients. According to the path estimates, environmental had a significantly positive direct effect on green hotels (0.901, p 0.001), social had a significantly positive direct effect on green hotels (0.924, p 0.001), and governance had a significantly positive direct effect on green hotels (0.921, p 0.001). As a result, H1, H2, and H3 were all supported.

Table 5. The structural model results and hypotheses testing

Hypothesized Paths	Coefficients	t-Values
H1: E → GH	0.901	9.394 ***
H2: S→ GH	0.924	12.570 ***
H3: G → GH	0.921	9.666 ***
Explained variable: R^2 (E) = 0.844; R^2 (GH) = 0.800	R^2 (S) = 0.875	R^2 (G) = 0.790

3. The Moderating Effect on the Green Hotels (Purchase Intent)

To ascertain whether there was a moderating effect for purchase intent between ESG and green hotels in this study, an analysis was carried out. As a result, 726 responses were received from a total of 1000 respondents. the findings support the positive moderation impact of PI on E (Environmental), towards the GH at β (E)= 0.227, $p < 0.01$, which supports H4. Also, we find the positive moderation impact of PI on S (Social) towards the GH at β= 0.206 which supports H5. In addition, we find the positive moderation impact of PI on G (Governance), towards the GH at β= 209 which supports H6. as shown in Table (6).

Table 6. The result of the moderating effect

Hypothesized Paths	Beta (β)	T-Value	p-Value	Results of Hypotheses
Moderating effects				
H4: (PI ∗ E) → GH	0.227	4.763	0.000	Accepted
H5: (PI ∗ S) → GH	0.206	4.009	0.000	Accepted
H6: (PI ∗ G) → GH	0.209	3.456	0.000	Accepted

RESULTS AND DISCUSSION

The current study's findings supported the first hypothesis by demonstrating a significant impact of environmental factors on green hotels (**0.901, p 0.001**). These findings were in line with those of a previous study (Yoong, 2022), which also produced similar findings. so, accepted the first hypothesis.

The second hypothesis was accepted because it had a positive impact on green hotels estimated at (**0.924, p 0.001**) in terms of social dimensions. This is in line with the study (Bae, 2022), which discovered that social factors contribute to hotels becoming greener. Regarding the effect of governance dimensions, the effect was relatively small, estimated at (**0.921, p 0.001**), and thus the third hypothesis is accepted, confirming the findings of the study (Chua and Han, 2022), which discovered that governance affects changing hotel policies toward green.

The moderating variable's purchase intention (PI) influence on the connections between the governance, social, and environmental aspects (ESG) of green hotels (GH) was significant and estimated at (**β= 0.227, 0.206, and 0.209**) respectively. Accepting these hypotheses (**H4, H5, and H6**) entails. This suggests that purchase intent has a significant impact on changing customers' attitudes toward green hotels, which is consistent with the study (Wang et al., 2023) that found Consumer purchasing intentions are influenced by their attitudes toward the environment. One factor that significantly influences consumer intentions to purchase green products and services is intention.

1. Theoretical Implications

In the hospitality industry, a customer's desire to continue using a hotel's services is a deciding factor because hotels regardless of their quality or level of service, must deal directly with guests (Chung et al., 2024). In response to the growing demand for ESG, we applied a model that combines ESG and green hotels, giving the mediating variable purchase intent a lot of weight, and we attempted to explain the relationships between these variables.

This study expanded on previous ESG-based studies on green hotels, by incorporating additional variables, such as purchase intent. The study's conclusions offer insightful information, add to the body of already-existing knowledge, and advance our knowledge of how visitors evaluate the level of service provided by green hotels based on governance, social, and environmental practices. This study backed up the significance of hotel-staying preferences among consumers. Purchaser intent is used to influence individuals' internal decisions regarding whether or not to engage in a behavior. Therefore, the findings should be of particular interest to researchers from highly collectivist societies because, in these societies, consumer purchase decisions are influenced by those who are close to them, which then affects behavior and intention (Fuchs et al., 2024) where the results demonstrated that people who are enthusiastic about green hotels or have enjoyed their stay there can spread this sentiment to others. This heightens a person's sense of responsibility and increases their propensity to book green hotels (Yoong, 2022).

2. Social Implications

Numerous implications of green hotels are highlighted by recent research findings. Customer experiences at green hotels offer information on the purchasing intentions of consumers about favorable perceptions of green hotel services (Chen et al., 2022). Regarding the practitioners, the visitors noted that the hotels that incorporate ESG variables into their work offer a distinctive level of service because they concentrate on multiple factors at once (Ding and Tseng, 2023). By enhancing key services offered by hotels, such as their rooms, food, locations, experiences, services, and staff, these variables can assist hoteliers in developing their business strategies. Further, the research has provided marketers in the hospitality industry with suggestions for developing a variety of green customer acquisition strategies. Consequently, will help hospitality marketers forecast customer behavior and create plans for implementing and growing green initiatives in their goods and services (Legrand and Matthew-Bolofinde, 2022). Marketers should launch enough awareness campaigns to inform consumers of the potential effects of their choice, as ESG and purchase intent influence whether a customer decides to stay in a green hotel. In addition, Environmental sustainability is without a doubt regarded as one of the most important issues in the world, particularly in the hospitality sector (Bae et al., 2023). Therefore, by promoting and implementing sustainable hotel practices, the hospitality sector can significantly contribute to increasing consumer awareness and educating customers. To sum up, the current research is just a small effort to investigate how ESG influences green hotels and the moderating role of purchase intention.

3. Limitations and Future Research

The study had several limitations, firstly, the difficulty of gathering data, particularly from customers, as doing so necessitates being fully present in the hotel to get to know the customers, conduct interviews with them, and provide the questionnaire. Especially since some customers are afraid to express themselves completely freely, despite our assurances that the questionnaire contains no private information about the respondent. Secondly, because some people do not have a scientific understanding of the research variables, it takes a lot of time to explain each variable so that the customer can comprehend it and then respond to the questions. Future studies should compare green hotels that use ESG to non-green hotels, which would be a good step forward. Can also use control variables like green pricing, image, and environmental knowledge. When addressing green practices in hotels, it is advisable to concentrate on the organizational support variable because it is the most crucial factor in persuading hotels to adopt greener practices.

CONCLUSION

A hotel that adheres to ecologically effective programs and has established environmentally friendly services is referred to as a “green hotel,” to preserve the environment. Reduce the negative impact that their practices can have on the environment, and ensure that their benefits are increased by putting into place sustainable development programs and other environmentally friendly policies. The findings show that green hotels are becoming more widespread across the globe and are no longer just a local trend (Galati et al., 2023). The interest in green hotels is a result of the implementation of green environmental policies that help to preserve the environment.

Due to its contribution to sustainable development, the green hotel has received widespread recognition in the hospitality sector. Green hotels are a crucial component in promoting environmentally friendly practices and luring domestic and international guests. This paper was successful in demonstrating how green hotels play proactive transformational leadership roles by focusing on enhancing not only the environmental aspects that ensure that the services and products offered in hotels are of the highest quality but also the social and governmental aspects that give hotels their distinctive characteristics and ensure their sustainability (Tan, 2023). Where The hospitality industry, which is following the global trend in ESG, is aware of the need for ESG for sustainable hospitality. Furthermore, For hotels to create more effective and efficient green programs, it is essential to better understand customer desire for and participation in green activities. This study is one of the few that has looked at environmental, social, and governance factors as they relate to green hotels. Green hotels become more durable by managing ESG issues.

So, superior ESG-performing hotel companies take on a more risk-averse and defensive investing stance during times of crisis. To outperform the competition and satisfy customers, hotel executives, and managers must further and more thoroughly integrate ESG into operations and management strategies. In terms of customer purchase intent for green hotels, it had a significant impact on the use of green hotels that consider the environment and whose improvements include major solutions to major issues. So, The study also looked into customer purchase intent as a moderator variable in the relationship between ESG and green hotels.

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THE ANTECEDENTS OF AFFECTIVE COMMITMENT THROUGH COHESIVENESS ORGANIZATIONAL CULTURE IN THE HOTEL INDUSTRY: JOB SATISFACTION AS A MEDIATOR

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Abstract: This study aims to explore the direct impact of cohesiveness organizational culture (COC) on both employee job satisfaction (JS) and employee affective commitment (AC) within the hotel industry, as well as the indirect impact of (COC) on (AC) through its effect on (JS). A quantitative research methodology was employed, and self-administered surveys were utilized and distributed to a randomly selected sample of employees. Data were collected from 438of hospitality sector employees. The structural equation modelling (PLS-SEM V.4) was used to examine the interrelationships between variables and to examine the research hypotheses. The SEM results showed that (COC) has a positive impact on (AC) and (JS), and (JS) has a positive and significant impact on (AC), Moreover, (JS) partially mediates the relationship between (COC) and (AC). These findings offer valuable insights for organizational leaders and HR practitioners, in order to create a more committed and motivated workforce, leading to improved organizational performance and reduced turnover rates.

Keywords: Cohesiveness Organizational Culture, affective commitment, job satisfaction, hotel industry

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INTRODUCTION

Human resources are pivotal in securing the enduring prosperity of businesses within the hospitality industry. Nowadays, there's a pressing need to cultivate an organizational culture conducive to effective human resource management. Fostering a supportive organizational culture is paramount for sustaining a competitive edge in the market. It's crucial to establish an organizational culture that fosters maximum support and ongoing enhancement within the firm. The long-term advancement of an organization hinges on its cultural framework, given its substantial impact on employee dedication, cohesiveness, commitment, and retention within the firm (Arifin, 2015; Reidhead, 2020).

When an organization offers flexibility, it creates a cohesive work environment where employees can enjoy both unity and independence without experiencing any burdens. Since hospitality industry is recognized as a labor intensive industry, the success of a hotel largely relies on its employees, it's essential to cultivate a culture that enables them to work with wholehearted commitment and dedication (Braithwaite et al., 2017). Organizational culture forms an integral aspect of the overarching organizational structure. It acts as a catalyst for promoting teamwork, nurturing member relationships, fostering professional development, and facilitating communication across diverse groups (Watanabe, 2024).

According to Kontoghiorghes (2016), organizational culture comprises a blend of values, beliefs, work methodologies, and relationships that distinguish one company from another, such as organizational cohesiveness. Cohesion, as defined by Corey (1992) and Bravo et al. (2019), represents the collective strength of team members' commitment to their team and maintain enthusiasm for collaborating together. Research by Clark et al. (2009) characterizes cohesion as the emotional and mental force that inspires employees to remain within a group, forging strong bonds among teammates. It stands out as the most influential factor in group dynamics, continually evolving as a dynamic process. Teams with high cohesion, as noted by Keller (1986), demonstrate increased support among members, fostering collaboration towards shared objectives.

Job satisfaction stems from employees' perceptions of the significance of their job performance and its impact on work outcomes (Siswanto and Yuliana, 2022). It reflects individuals' emotional response to their job and is manifested through a positive attitude toward their job and the elements within their work environment (Alamir et al., 2019; Banks et al., 2016; Siswanto and Yuliana, 2022). In this context, Hartika et al (2022) emphasized the crucial importance of

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effectively managing employees, highlighting them as valuable assets for any company. One of the things that must be the main attention to the company is job satisfaction with its employees, because employees who do not feel comfortable at work, may struggle to unleash their full potential and consequently find it difficult to concentrate and fully engage with their work. For that reason, monitoring job satisfaction is imperative for every organization as it influences absenteeism, employee turnover, morale, grievances, and other critical organizational issues (Alamir et al., 2019; Banks et al., 2016; Siswanto and Yuliana, 2022; Mickson et al., 2020; Sim and Lee, 2018). Affective commitment is emotional engagement with a company's values and goals and an employee's identification with the company (Dick and Metcalfe, 2001). It refers to the emotional bond an employee forms with the organization. Consequently, they feel deeply connected to the organization's objectives and are inclined to remain an integral part of it (Adekola, 2012). Budur (2022) pointed out that the affective commitment denotes the emotional connection and sense of affiliation individuals foster with their organization.

It involves a profound attachment characterized by loyalty, identification, and enthusiasm towards the organization's objectives and principles (Harrison et al., 2022). Employees displaying high levels of affective commitment are motivated by a genuine passion for their work and a strong inclination to contribute to the organization's success (Meredith et al., 2023). Lahmar et al. (2023) suggest that AC nurtures a sense of mutual concern and reciprocity between employees and their organization, leading to increased job satisfaction, motivation, and ultimately, improved organizational performance.

Scholarly literature has highlighted a scarcity of studies investigating the correlation between organizational culture and affective commitment within the Gulf region, particularly with limited focus on Saudi Arabia. This research aims to fill this gap by specifically exploring these dynamics within the context of Saudi Arabian hotels. By doing so, it seeks to enrich the existing body of knowledge. This study endeavors to examine whether a cohesive organizational culture can predict affective commitment among hotel employees and whether job satisfaction serves as a mediator in this relationship. Such exploration may deepen our comprehension of the factors driving engagement among hotel employees, thereby facilitating the improvement of working conditions.

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

1. Social exchange theory

Social exchange theory (SET) stands as one of the foremost influential conceptual frameworks in comprehending workplace behavior (Cropanzano and Mitchell, 2005). This research is theoretically underpinned by social exchange theory, which provides a theoretical framework for understanding various organizational interactions, posits that human relationships are formed by the exchange of resources, which can include tangible rewards and intangible rewards, such as respect and support. These relationships encompass interactions between employers and employees, among coworkers, and between employees and supervisors, and according to SET, the exchanges within a team—such as support, information, and emotional backing - contribute to these bonds. When team members feel that their contributions are valued and reciprocated, they are more likely to develop strong connections with one another. High cohesiveness can enhance collaboration, improve communication (Clydesdale, 2020). According to this theory, when individuals are treated well, they feel compelled to reciprocate such treatment, and they perceive a positive exchange environment, they are more likely to embrace and contribute to a positive organizational culture. Additionally, the theory suggests that satisfied employees are more likely to remain with the organization, and will show fully engage with their work, reflecting a reciprocal exchange of positive feelings, and suggests that creating a fair and equitable work environment can enhance job satisfaction, leading to increased motivation and productivity (Kartika and Purba, 2018). Which we can understand from that Social Exchange Theory provides a useful framework for understanding how the dynamics of exchange within an organization affect cohesiveness, culture, and job satisfaction.

2. Cohesiveness Organizational Culture and affective commitment

Organizational culture stands out as a crucial element contributing to heightened employee commitment, especially during a scarcity of skilled workers, where commitment serves as a significant indicator of enhanced loyalty and retention. Nevertheless, there exists a scarcity of research delving into the global perspective of the correlation between cohesiveness organizational culture and affective commitment (Dunger, 2023). Sutan Ardani (2017) carried out a study exploring the relationship between organizational culture, cohevision team and organizational commitment within Bank Negara Indonesia. The results revealed that organizational culture had a direct and positive impact on organizational commitment. Lee et al. (2018) further examined the relationship between organizational culture and affective commitment among employees working in three high-technology companies in China. The result of the study indicated that, organizational culture significantly impacts affective commitment. In addition, Dunger (2023) investigate the relationship between team cohesion as one of the organizational cultural dimensions and organizational commitment among employees from nine industries in Germany, and affirmed that cohesion culture positively and significantly influence organizational commitment. This raises the question of whether this relationship may exist in another industry, such as the hospitality industry. Accordingly, the following hypothesis was proposed:

H1: COC has a positive and direct effect on AC

3. Cohesiveness Organizational Culture and job satisfaction

Many studies have linked organizational culture to job satisfaction. Zumrah and Boyle (2015) posit that a positive company culture can enhance employee engagement and satisfaction. Schuster et al. (2016) further assert that satisfied employees within an organization's culture are motivated to go the extra mile, improving business performance compared to competitors. This assertion is supported by Mas-Machuca et al. (2016), who affirm in their study that a positive organizational culture is closely associated with heightened employee satisfaction. Furthermore, Belias et al. (2015) have established a link between organizational culture and employee satisfaction, proposing that job satisfaction mirrors organizational culture, as satisfaction across different work aspects correlates with organizational elements. Additional studies, such as those by Avram et al. (2015), have similarly shown significant connections between job satisfaction and corporate culture. Research by Tran (2021) explored the relationship between organizational culture and job satisfaction among employees across various sector organizations in Vietnam. The findings suggest that adhocracy culture positively influences job satisfaction, whereas clan and market cultures have negligible predictive power on job satisfaction. In another study, Pawirosumarto et al. (2017) analyzed the influence of organizational culture on job satisfaction within Parador Hotels and Resorts, Indonesia. The findings reveal a positive and notable correlation between organizational culture and job satisfaction. Moreover, Li and Tresirichod (2024) explored the relationship between organizational culture, job performance, and job satisfaction of employees in the food industry of private enterprises in Sichuan, and proved that organizational culture has a positive impact on both employee job performance and job satisfaction and significantly affects job satisfaction through job performance. Conversely, Bigliardi et al. (2012) asserted that a bureaucratic organizational culture adversely affects job satisfaction, whereas innovative or supportive organizational cultures yield positive effects. This finding holds true for all workers within the research and development functions of pharmaceutical companies. In a direct study of the effect of group cohesion on job satisfaction, Iskandar (2019) proved that there is direct effect of group cohesiveness on job satisfaction among employees on human resource development agency of Ministry of Home Affairs in Indonesia. This raises the question whether the culture of cohesion in hotels can have a positive or negative impact on employees. Therefore, it would be proposed that:

H2: COC has a positive and direct effect on JS

4. Job satisfaction and affective commitment

With a reflective view of the organizational and administrative literature, there's a consistent link between job satisfaction and organizational commitment. While research suggests that job satisfaction can predict organizational commitment, it's unclear whether improving job satisfaction leads to greater organizational commitment or if higher levels of commitment come before increased job satisfaction (Billingsley and Cross, 1992). Lima and Allida (2021) delved into this relationship in a study focused on employees of a specific higher educational institution in Northwest Haiti. Their results unveiled a strong, positive connection between job satisfaction and affective commitment. Research conducted in Malaysia revealed that among 10 job-related factors, satisfaction with salary was the only one found to have a noteworthy positive correlation with affective commitment among employees in Sarawak's tourism industry (Lew, 2007). Furthermore, Chordiya et al. (2017) expanded on this by investigating the link between job satisfaction and affective organizational commitment across four states in the US and in India. Their findings indicated that job satisfaction significantly bolsters affective organizational commitment in both countries. This research represents the first attempt to explore the mediating role of job satisfaction in the relationship between cohesive organizational culture and affective commitment. While previous research has established links between organizational culture and commitment, the specific pathway through job satisfaction remains underexplored. By investigating how a cohesive culture influences employees' job satisfaction, which in turn strengthens their emotional attachment to the organization, this research aims to fill a critical gap in understanding the dynamics that drive affective commitment in the workplace. These discussions can be formulated into the following hypotheses:

H3: JS has a positive and direct effect on AC

H4: JS mediates the relationship between COC and AC

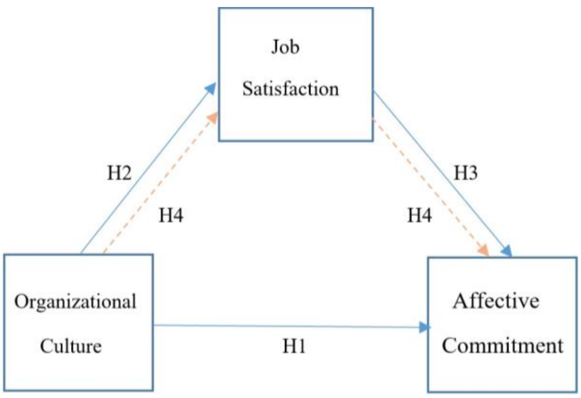

Figure 1. Research Conceptual Framework

METHODOLOGY

1. Measurement model and scale development

The study's survey was divided into three distinct sections. The initial part provided an overview of the research objectives and the necessary guidelines for completing the survey. The second part focused on gathering information about the demographic characteristics of the participants. The third part of the study involved investigating various aspects. A 5-point Likert scale was employed, with a rating of 1 indicating "strongly disagree" and a rating of 5 representing "strongly agree". In relation to the Cohesiveness organizational culture (COC) scale, five items were utilized, which were developed by Bavik (2016). Additionally, the affective commitment (AC) scale, consisting of five items, was adopted from Meyer et al. (2002). The job satisfaction (JS) scale, adapted from Meyer et al. (2002), employed four items. The reliability of the measurements used in this study was checked to make sure they were consistent. They did this using a statistical method and got results that showed good reliability (around 0.8 or higher). To ensure the survey's consistency and user-friendliness, it underwent evaluation by university professors and hospitality experts. Finally, to ensure the survey accurately captured the intended concepts, they looked at how people responded and made some adjustments to the wording and order of the questions based on that feedback.

2. Research sample and data collection method

Data has been collected from deluxe hotels in Saudi Arabia, specifically in Alhasa. The reason for selecting this sector is due to the labor-intensive nature of the hotel industry, which heavily relies on human resources for various service-oriented functions. This reliance is particularly influenced by factors such as employees' cohesiveness organizational culture (COC), their satisfaction (JS), and their affective commitment (AC). The participants for this study were selected using a convenience sampling technique, based on their availability and willingness to participate. The data collection process began in September 2023 and lasted for two months. A total of 500 surveys were distributed, out of which 438 were completed, resulting in an impressive response rate of (87.6%). It is worth noting that there were no missing data in the completed surveys. The study's sample size of 438 valid responses followed Nunnally's (Nunnally and Bernstein, 1994) guideline, which recommends a ratio of 1:10 between the number of items in the measurement instrument and the sample size. Considering that the survey consisted of 14 items, a sample size of at least 140 participants was deemed appropriate. Among the 438 valid responses, it was observed that (77.1%) of the respondents identified as male, totaling 337 employees, while (23.9%) identified as female, totaling 101 employees. The majority of respondents, accounting for (83.9%), fell within the age range of 26 to over 40 years. In terms of educational level, a significant proportion of respondents (70.2%) possessed a bachelor's degree. Additionally, a considerable proportion of respondents (72.6%) had 1-5 years of experience, as shown in Table (1).

Table 1. Students' Profile *(*N= 438)

		Freq.	**%**
Gender	Male	337	77.1
	Female	101	23.9
Age	20 to25 Years	70	16.1
	26 to 40 Years	283	64.5
	Over 40 Years	85	19.4
Educational Level	Diploma Degree	103	23.5
	Bachelor Degree	308	70.2
	Post-graduate Degree	27	6.3
Work Experience	Less than 1 Year	50	11.3
	From 1-5 Years	318	72.6
	Over 5 Years	70	16.1

Table 2. Measurement Mode

Scale Variables and Items	**Outer Loading**	**α**	**CR**	**AVE**	**VIF**
Cohesiveness Organizational Culture (COC)		0.881	0.841	0.652	
The hotel provides a warm and welcoming atmosphere, reminiscent of a close-knit family.	0.862				1.562
In the workplace, my colleagues prioritize directness and honesty when engaging with one another.	0.969				2.311
In times of high workload, we support each other.	0.985				2.351
The act of working in a team instills a sense of certainty in my job.	0.881				1.085
The hotel fosters a welcoming and amicable atmosphere for its employees.	0.863				1.069
Affective Commitment (AC)		0.873	0.922	0.686	
I genuinely empathize with the challenges this hotel is experiencing.	0.806				1.898
My hotel evokes a deep sense of belonging within me.	0.830				1.678
- I have a profound emotional bond with this hotel.	0.798				1.681
The hotel makes me feel like I am a valued member of their family.	0.820				1.988
My role in this hotel feels uniquely tailored to me.	0.802				1.752
Job Satisfaction (JS)		0.941	0.883	0.752	
I am pleased with the work that I do	0.816				2.136
I am content with how my colleagues and superiors treat me.	0.814				1.125
I am fulfilled by the level of success I have attained in my work.	0.904				2.283
My work brings me a positive and fulfilling feeling.	0.796				1.220

The responses provided by the employees exhibited a broad spectrum of average scores, signifying a significant level of diversity in their answers. The standard deviation (SD) values further accentuated the extent of variation in their responses. These findings suggest that the responses were not tightly clustered together (Tabachnick et al., 2019).

Additionally, the statistical data exhibited skewness and kurtosis values that fell within the acceptable range of -2 to +2, indicating a normal distribution. This adherence to the criteria established by Nunnally and Bernstein (1994) suggested that the data distribution followed the anticipated pattern of a normal distribution. It is also noteworthy that all the measurement scale items in the study had Variance Inflation Factor (VIF) values below 5. This observation indicates that there are no concerns regarding multicollinearity, as shown in Table 2.

3. Data analysis methods

In this study, the analysis phase utilized smart partial least squares (Smart-PLS) software, which is tailored for handling latent factors not directly observable, representing a nonparametric approach. Version 4 of the Smart-PLS software was employed for data analysis. Widely acknowledged in the social sciences, Smart-PLS is esteemed for its capacity to yield dependable results, particularly in exploring relationships among multiple variables. It is especially suited for studies emphasizing the prediction of dependent variables rather than confirming an existing conceptual model. Following a methodology advocated by Leguina (2015), the research analysis involved a two-phase process. The initial phase concentrated on validating convergent and discriminant validity, while the subsequent stage was dedicated solely to scrutinizing the hypotheses outlined in the research.

RESULTS

1. Assessment of the measurement model

The assessment of the conceptual research model's convergent and discriminant validity, along with the scale's reliability, followed established guidelines outlined by Hair et al. (2021) and Kline (2023). These guidelines encompassed evaluating composite reliability (C.R) scores, internal consistency (α) scores, and measures of convergent and discriminant validity. Convergent validity was assessed using several criteria, including composite reliability (C.R) scores, outer loadings, and average variance extracted (AVE) values. The findings presented in Table 2 indicated that all values exceeded the recommended minimum thresholds of C.R greater than 0.7 and AVE greater than 0.5. These results suggest excellent internal consistency reliability for the scales employed in the study. Moreover, all outer loadings were above 0.708 and statistically significant, aligning with the criteria established by Hair et al. (2021). Thus, these outcomes, as outlined in Table 2, confirm the reliability and validity of the measures utilized in the research, supporting the conclusion of satisfactory convergent validity for the examined research constructs. The current study utilized various methods to evaluate discriminant validity, including cross-loadings, the Fornell-Larcker criterion (1981), and Heterotrait-Monotrait (HTMT) proportions. The results, presented in Table (3), consistently showed that each latent variable's outer-loadings exceeded their cross-loadings, indicating stronger associations with their intended constructs rather than with others. Additionally, in Table 4, the AVE scores' diagonal values surpassed the correlations between variables, indicating a lack of expected conceptual associations with other measures and further supporting evidence of discriminant validity. The study successfully achieved discriminant validity, with HTMT ratios below 0.90, aligning with Leguina's (2015) criteria (refer to Table-4). This outcome suggests minimal overlap among the examined constructs, thereby providing a robust foundation for the study's conclusions.

Table 3. Cross-loadings Indicators

	EMA	GPI	CEP
COC-1	**0.862**	0.331	0.140
COC-2	**0.969**	0.294	0.135
COC-3	**0.985**	0.161	0.208
COC-4	**0.881**	0.139	0.131
COC-5	**0.863**	0.263	0.109
AC-1	0.363	**0.806**	0.188
AC-2	0.135	**0.830**	0.254
AC-3	0.121	**0.798**	0.139
AC-4	0.113	**0.820**	0.233
AC-5	0.132	**0.802**	0.186
JS-1	0.143	0.126	**0.816**
JS-2	0.110	0.212	**0.814**
JS-3	0.106	0.228	**0.904**
JS-4	0.232	0.138	**0.796**

Table 4. Evaluating the Discriminant Validity of Scales

	Fornell-Larcker			HTMT		
	COC	**JS**	**AC**	**COC**	**JS**	**AC**
1- COC	**0.735**					
2. AC	0.583	**0.773**		0.642		
3. JS	0.524	0.350	**0.819**	0.658	0.465	

Table 5. Estimates of structural parameters
(Note:*** $p < 0.001$, ** $p < 0.01$, and* $p < 0.05$)

Hypotheses		Beta (β)	*T- Statistics*	Results
H-1	**COC ->AC**	0.380***	3.584	Accepted
H-2	**COC ->JS**	0.692***	9.563	Accepted
H-3	**JS ->AC**	0.267*	2.325	Accepted
H-4	**COC ->JS->AC**	0.158*	2.193	Accepted

2. Hypotheses testing

To assess the research hypotheses, Smart-PLS v. 4 was employed. The obtained goodness-of-fit (GoF) value of 0.69 indicates a significant level of fit, meeting Chin's (1998) criteria. According to these standards, for a model to exhibit satisfactory fit, the R2 values associated with latent variables should exceed 0.10. In this study, the R2 values for JS and AC variables were remarkably strong, measuring at 0.568 and 0.643 respectively, exceeding the specified minimum standards. This confirms the model's consistency with the observed data. Furthermore, the analysis included assessment of the standardized root mean residual (SRMR) score, which ideally should be under 0.08, and the normed fit index (NFI) score, which ideally should surpass 0.90. In our analysis, both the SRMR (0.047) and NFI (0.976) values exceeded the recommended thresholds, further substantiating the adequacy of the model in fitting the data. Once the model's fit was confirmed, the beta value and t-statistics for the research hypotheses were estimated using Smart-PLS v. 4. The results, depicted in Table 5 and Figure 2, indicated that AC was positively and significantly influenced by COC (β=0.380; t-value = 3.584) and JS (β=0.267; t-value = 2.325). Furthermore, JS was positively and significantly impacted by COC (β=0.692; t-value = 9.563), validating hypotheses H1, H2, and H3. Regarding the indirect hypothesis, JS was found to partially mediate the relationship between COC and AC (β=0.158; t-value = 2.193), thus affirming hypothesis H-4.

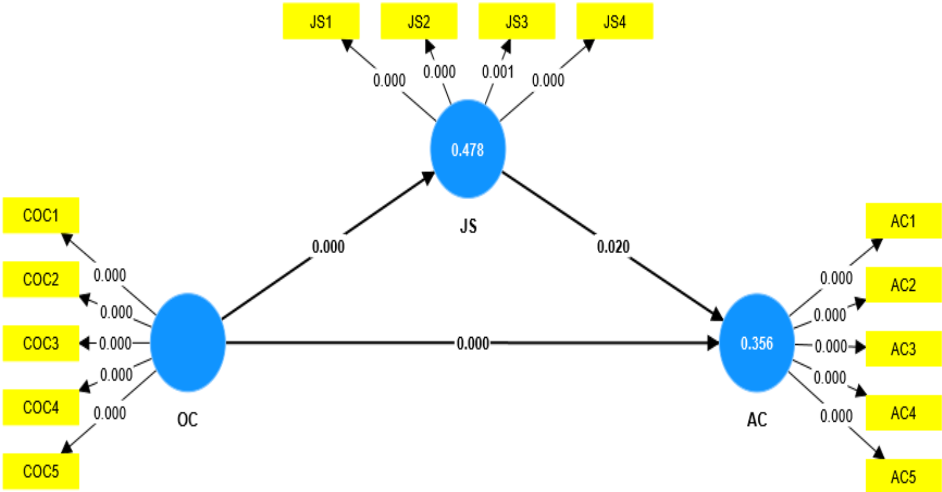

Figure 2. Research Final Model

DISCUSSION AND IMPLICATIONS

This study aims to investigate whether job satisfaction acts as a mediator in the relationship between affective commitment among hotel employees and a cohesive organizational culture. By enhancing the consciousness of the elements that motivate hotel employees to engage, this research could help to enhance their working environments. The results indicate that COC has a notable positive impact on AC, through signifying that employees who are committed to organizational change are more likely to exhibit a strong emotional attachment to the organization. This suggests that fostering a culture that emphasizes and supports organizational change can enhance employees' emotional bonds with the organization. This result in line with Sutan Ardani (2017), Lee et al. (2018), and Dunger (2023), Who have studied this relationship in many industries, not including the hospitality industry. Similarly, JS also shows a positive and significant influence on AC, reinforcing the idea that higher levels of job satisfaction lead to stronger affective commitment.

This is consistent with Chordiya et al. (2017), who proved the link between job satisfaction and affective organizational commitment across four states in the US and in India, and partially consistent with Lew Tek Yew (2007), who found that salary was the only factor to have a noteworthy positive correlation with affective commitment among employees in Sarawak's tourism industry in Malaysia. Moreover, the data indicate that COC significantly impacts JS. Consisting with the existing literature, this substantial relationship underscores the pivotal role of organizational change initiatives in shaping employees' job satisfaction in specific focus on deluxe Saudi Arabian hotels. When employees perceive that the organization is committed to change and improvement, their satisfaction with their job increases, which in turn can enhance their commitment to the organization. This result confirming the work of Pawirosumarto et al. (2017), who found reveal a positive and notable correlation between organizational culture and job satisfaction among employees within Parador Hotels and Resorts, Indonesia. In terms of examining the indirect effects, JS partially mediates the relationship between COC and AC. This mediation suggests that part of the reason why commitment to organizational change leads to affective commitment is through its impact on job satisfaction. This partial mediation highlights the dual pathways through which COC influences AC—both directly and indirectly via JS.

This study has significant implications for both scholars and practitioners. In terms of the theoretical implications, this study contributes to the theoretical understanding of organizational behavior drawing upon social exchange theory (SET) by elucidating the pathways of organizational culture that influence employee outcomes. The positive and significant relationships between COC, JS, and AC underscore the critical role of a supportive organizational culture in fostering job satisfaction and, consequently, affective commitment. This research extends the existing literature by highlighting the mediating role of job satisfaction, providing a more nuanced understanding of how organizational culture impacts employee commitment. From a practical perspective, the study's findings offer actionable insights for organizational leaders and HR practitioners. Enhancing organizational culture should be a strategic priority, as it significantly impacts both job satisfaction and affective commitment. Organizations should focus on fostering a positive and supportive culture to enhance employee satisfaction and commitment levels. This could be achieved through initiatives that promote employee engagement, recognition, and a sense of belonging. Additionally, understanding the mediating role of job satisfaction suggests that interventions aimed at improving job satisfaction will also indirectly bolster employees' affective commitment. By prioritizing these areas, organizations can create a more committed and motivated workforce, leading to improved organizational performance and reduced turnover rates.

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THE STATE OF TOURISM DEVELOPMENT IN TRANSFRONTIER CONSERVATION AREAS IN SOUTHERN AFRICA

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Abstract: This study adopts a cross-border approach to examining the state of tourism development within the context of Transfrontier conservation areas, based on three case study sites (Botswana, Zambia, and Zimbabwe). In-depth interviews conducted with 58 wildlife tourism stakeholders, including tourism businesses, conservation NGOs, community representatives, and governing authorities, demonstrate that while natural resources constitute the basis of the tourism economies, the level of development and ownership of tourism offerings differs significantly among the three destinations. Additionally, while international and regional tourists have been the dominant market for these destinations, there is a strong emergence of domestic tourists stemming from the post-pandemic era. The unbalanced scale of tourism development in the three destinations demonstrates that closer attention must be paid to tourism policies and practices that support the inclusion of local entrepreneurs in the tourism sector to generate a greater localised socioeconomic impact and align stakeholder interests.

Keywords: wildlife tourism, Kavango-Zambezi Transfrontier Conservation Area, Southern Africa, communities

* * * * * *

INTRODUCTION

Globally, there has been growth in transnational or transboundary management of natural and heritage resources (Adie and Amore, 2021; Mason et al., 2020). Adie and Amore (2021) provide examples of heritage tourism management, including the Silk Roads: Chang'an-Tianshan Corridor, which spans regions in China, Kazakhstan, and Kyrgyzstan; The Architectural Work of Le Corbusier, a landmark of the Modern Movement with sites in Argentina, Belgium, France, Germany, India, Japan, and Switzerland; and Sangha Trinational, a natural site shared by Cameroon, the Central African Republic, and the Congo. Similarly, a growing number of countries have begun collaborating in the protection of natural resources, with Linell et al. (2019) emphasising that the scale and complexity of current environmental concerns demand equally substantial interventions and governance responses. In Sub-Saharan Africa, the establishment of these protected areas marks an important milestone and a rethinking of conservation, poverty reduction, and regional peace and cooperation (Stoldt et al., 2020). Certainly, Transfrontier conservation areas are not only tasked with protecting unique and diverse wildlife and landscapes but also bear the responsibility of supporting the livelihoods of communities within these areas (Tichaawa and Lekgau, 2020). Owing to the spaces they occupy and the actors involved (both human and non-human), Transfrontier conservation areas hold great potential for sustainable tourism development (Stone, 2024). In this regard, tourism is positioned as a strategy for poverty alleviation by providing alternative sources of livelihoods, supporting conservation efforts, and increasing tourist arrivals in the countries of the Transfrontier conservation areas, thereby boosting their national economies (Chiutsi and Saarinen, 2019; Stone, 2024).

Research into Transfrontier conservation areas is arguably lacking, particularly in Southern Africa. Existing studies have evaluated the attainment of community inclusion in the management of Transfrontier conservation areas (for example, Chiutsi and Saarinen, 2017, 2019; Lekgau and Tichaawa, 2019), efforts to integrate regional peace and cooperation in the Southern African Development Community (SADC) region (Linell et al., 2019; Ramutsindela, 2007), the efficacy of conservation efforts in addressing current and emerging challenges (Nieman and Botha, 2023; Imbwae et al., 2023), and the opportunities and challenges of wildlife tourism for host communities (Lekgau and Tichaawa, 2024, 2022). Broadly, these studies have revealed the considerable potential of Transfrontier conservation areas for regional cooperation and conservation, which requires further harmonisation of policy and practice.

However, the myriad of stakeholders involved in these large, complex systems often marginalises communities, raising important questions about the inclusivity and sustainability of both the Transfrontier conservation areas and the

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conservation efforts themselves. Moreover, conservation initiatives are further hampered by the human dynamics within these ecosystems, exacerbated by limited participation and, consequently, limited benefits derived from these protected areas. In recognising the complex nature of the Transfrontier conservation areas system and the actor dynamics involved, the current study focuses on one facet of this relationship: the current nature of tourism development in this context. This study aims to examine the nature and dynamics of tourism development within a Transfrontier Conservation Area in Southern Africa, serving as a foundation for emerging research and policy development focused on sustainable tourism in these protected spaces. The research centres on the Kavango Zambezi Transfrontier Conservation Area (KAZA), which encompasses a combination of protected areas, wildlife corridors, and wildlife management areas across parts of Angola, Botswana, Namibia, Zambia, and Zimbabwe. KAZA is regarded as the most ambitious protected area in the world, owing to its scale and objectives, which include conservation, community development, tourism growth, and regional cooperation (Stoldt et al., 2020; Nieman and Botha, 2023).

Specifically, this study considers three wildlife tourism destinations within these countries: Kasane (Botswana), Livingstone (Zambia), and Hwange (Zimbabwe). The selection of these three distinct wildlife destinations was intentional, aimed at addressing the cross-border nature essential for this type of research and providing multiple case studies that inform the study's objectives and outcomes. Based on the results gleaned from the data collected, we argue that if Transfrontier conservation areas like KAZA are to achieve a sustainable and meaningful impact on the natural environment, host communities, and regional development, they must be viewed as integrated systems.

Moreover, the representative components within these systems must be examined to attain a more comprehensive understanding of their inner workings. The contribution of this study lies in the insights provided regarding the embedding of sustainability and resilience within the system. Consequently, an exploration of the existing tourism dynamics within this context becomes imperative.

LITERATURE REVIEW

Transfrontier parks development in Southern Africa

Transfrontier conservation areas are global initiatives that involve collaboration between neighbouring countries to manage and conserve shared natural resources, particularly wildlife and ecosystems (Bhatasara et al., 2013; Buscher, 2013). These areas are also referred to as peace parks, as they promote regional peace and stability through joint conservation efforts. The development of Transfrontier conservation areas is rooted in the understanding that ecosystems do not adhere to political borders; thus, effective conservation requires a coordinated approach (Bhatasara et al., 2013; Buscher, 2013; Stone, 2024).

Figure 1. Map of transfrontier conservation areas in Southern Africa (Source: Author)

Transfrontier conservation areas aim to create large, interconnected landscapes that facilitate the free movement of wildlife across borders, promoting genetic diversity and healthier populations (Chitakira et al., 2018). These areas often involve the establishment of protected zones, wildlife corridors, and sustainable development areas (Stone, 2024).

In these biodiverse regions, countries pool resources, share knowledge, and address common conservation challenges. In Southern Africa, the development of Transfrontier conservation areas is supported by legislative and policy frameworks established by the Southern African Development Community (SADC), which have provided an enabling environment for nations in the region (Stone, 2024). Notably, Transfrontier conservation areas emerged concurrently with the transition to democracy in countries such as Namibia (1990) and South Africa (1994). Ramutsindela (2007) found that these conservation areas did not arise in isolation but were rooted in pre-existing activities related to shared natural resource management in Southern Africa.

This suggests a historical foundation for Transfrontier conservation areas that predates their formal establishment. There are ten Transfrontier conservation areas in Southern Africa, encompassing countries such as South Africa, Botswana, Namibia, Angola, Zimbabwe, Zambia, Mozambique, Malawi, Lesotho, and Eswatini, as illustrated in Figure 1 above. Generally, these Transfrontier conservation areas are guided by three broad goals: to protect biodiversity, to foster rural economic development through sustainable use of natural resources (such as wildlife tourism), and to promote regional cooperation in wildlife conservation and tourism development.

Wildlife tourism and sustainable community livelihoods

Wildlife tourism is positioned to support and act as an intermediary between conservation and socioeconomic goals. This sector represents one of the largest forms of tourism in Sub-Saharan Africa, with various reports indicating that wildlife tourism is a dominant factor in international arrivals to the region (Jones et al., 2023; Lekgau and Tichaawa, 2022). Indeed, several African nations have developed their tourism industries by leveraging the diversity and abundance of natural resources and landscapes. As a result of the substantial economic benefits, wildlife tourism has been utilised as a means of fostering economic growth for impoverished communities in the region (Stone and Nyaupane, 2018). Snyman and Bricker (2021) elaborate on the significance of tourism as a source of economic relief for the poor, highlighting that tourism spending occurs where goods and services are produced.

This enables communities near protected areas to generate revenue through their entrepreneurial ventures. Additionally, the cultural and wildlife richness often present in rural regions, where both impoverished communities and protected areas are situated, adds considerable value to tourism (Tichaawa and Lekgau, 2020). Moreover, tourism is a labour-intensive industry that provides employment opportunities for a substantial number of residents (Lekgau and Tichaawa, 2020; Stone, 2024). Furthermore, these forms of tourism in Sub-Saharan Africa are frequently characterised by community-led conservation initiatives, which play a crucial role in utilising these two sectors for community development through benefit-sharing schemes and skills development (Stone and Nyaupane, 2018; Snyman and Bricker, 2021).

METHODOLOGY

Case study site: KAZA

The KAZA Transfrontier Conservation Area is the largest transboundary conservation area in the world, covering approximately 520,000 square kilometres (Nieman and Botha, 2024). This Transfrontier Conservation Area encompasses five Southern African countries: Angola, Botswana, Namibia, Zambia, and Zimbabwe (Figure 2).

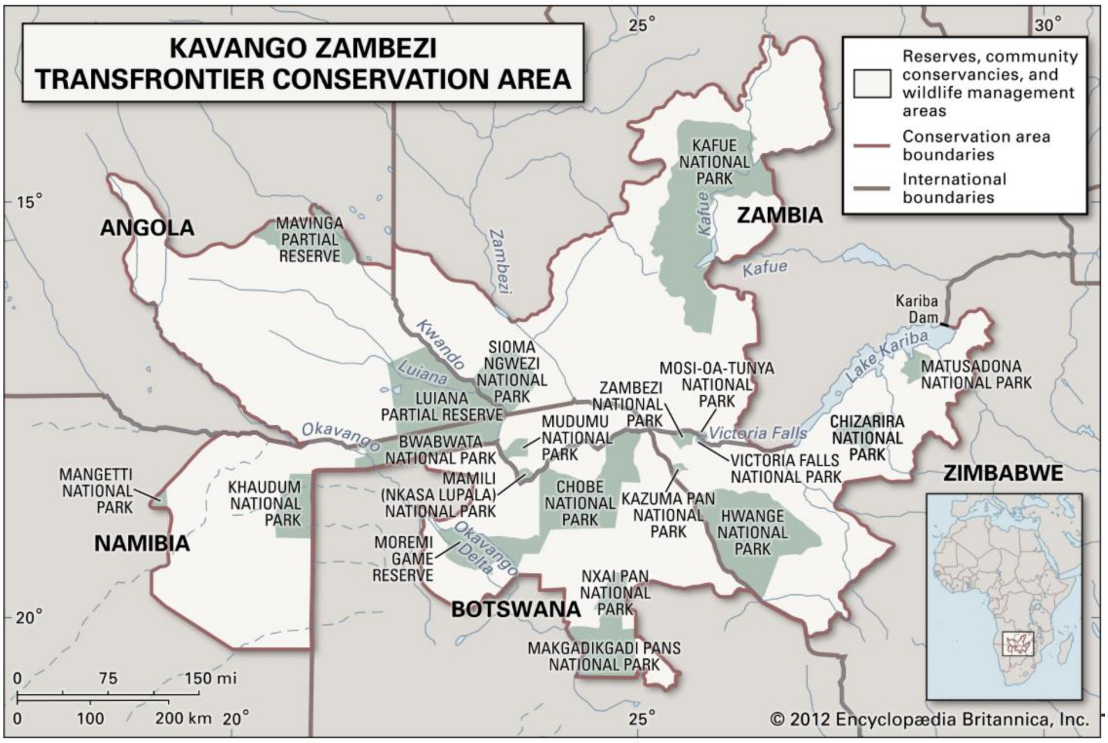

Figure 2. Map of the KAZA Transfrontier conservation area (Source: KAZA, 2024)

KAZA is situated in the Okavango and Zambezi river basins, which are home to a vast array of ecosystems, including wetlands, savannas, forests, and floodplains (Imbwae et al., 2023). The area is renowned for its rich biodiversity and is home to significant populations of wildlife, including elephants, lions, leopards, African wild dogs, and numerous bird species (Nieman and Botha, 2024). KAZA also serves as a critical corridor for wildlife migration, particularly for elephants, which move freely across borders within the conservation area. The shared ecosystems are one of the primary reasons for the establishment of KAZA, aimed at fostering cross-border collaboration among the member states to ensure sustainable management of wildlife, natural resources, and tourism (KAZA, 2020). Tourism plays a major role in KAZA, contributing significantly to the national economies of the five countries involved. This area encompasses iconic natural landmarks, such as the Okavango Delta in Botswana, Victoria Falls in Zambia and Zimbabwe, and several national parks, including Chobe (Botswana), Bwabwata (Namibia), and Kafue (Zambia). Beyond the economic benefits derived from tourism, which supports both local and national economies, tourism in these countries is promoted to bolster conservation efforts and enhance community livelihoods and development (KAZA, 2020). To explore the nature of tourism in this region, three case study areas were chosen for this study: Victoria Falls (on the Zambian side), Chobe National Park (in Botswana), and Hwange National Park (in Zimbabwe). The research also considers the dependent tourism industries in Livingstone, Kasane, and Hwange, respectively.

Research approach

The paper employed a qualitative research design, deemed essential for addressing the cross-border dynamics of the Transfrontier Conservation Area through the examination of three case study sites. This design necessitated an exploratory and inductive approach to assess the current state of development within the tourism industries. In-depth interviews were conducted with relevant local tourism and conservation stakeholders in the three case study areas. Additionally, interviews were held with community representatives, including local community leaders, community organisations, and community members employed in the tourism sector. In total, 58 interviews were conducted, as outlined in Table 1 below:

Table 1. Number of interviews conducted

Study sites	Key stakeholder	No. of participants
Kasane (Chobe National Park)	Tourism businesses (informal and formal)	12
	Community representatives	7
	Community trusts representatives	3
	Conservation agency representatives	2
	Tourism governing authority representatives	1
Livingstone (Victoria Falls)	Tourism businesses (informal and formal)	10
	Community representatives	4
	Conservation agency representatives	2
	Conservation governing authority representatives	2
Hwange (Hwange National Park)	Tourism businesses (informal and formal)	6
	Community representatives	5
	Community CAMPFIRE representatives	3
	Tourism governing authority representatives	1
Total		**58**

In the interviews, participants were asked questions to unpack the nature of tourism development in the destinations, including the various tourism experiences offered, common visitor markets, and collaborations and networks in the region. The data was recorded, transcribed verbatim and analysed with the assistance of the Atlas.ti version 24.1. The software enabled the line-by-line coding of the data as well as the grouping of the codes to form the themes used in this research. To ensure the anonymity of the participants involved in the study and presenting the findings, all the responses have a 'P', followed by a specific number (with no significant meaning), differentiating the participants from one another. Participants are only differentiated by country, where BW at the end of the participant code represents a 'Botswana' participant, while 'ZM' a Zambian participant and 'ZW' a Zimbabwean participant. Four major themes emerged in the results linked to the study objectives and are presented and discussed below.

RESULTS

Tourism offerings in the region

The first part of the study sought to unpack the tourism offerings in the region to determine the flow of tourist spending within the local economy. In the case of Kasane, participants explained that their wildlife tourism sector centred on the Zambezi River. Many of the Kasane participants agreed that Chobe National Park and the river constituted the two key tourism attractions and activities in this part of Botswana. For instance, an accommodation owner highlighted:

We don't have many activities in Kasane. So mostly they come for a game drive. And then a boat cruise, And then I would say they have to spend in their accommodation, their meals, maybe if they have to get something petrol to just navigate around Kasane. But mostly, it's just accommodation meals, a Game Drive, and a boat cruise. (P13BW)

The participants further explained that the river supports the tourism activities of Chobe National Park due to its attraction of various animal species. Other participants noted that the proximity of two key tourist attractions in the region, Chobe National Park and Victoria Falls, allows for day trips to Zimbabwe and/or Zambia. Additionally, some participants highlighted the opportunity to extend their trip to Maun, a popular tourism city in Botswana that features the Okavango Delta and the Moremi Game Reserve. Our main services [are] river cruises in the Chobe [National Park], and the size of the rivers. we also do Victoria Falls day trips. We'll do mobile safaris, normally from Kasane to Maun. I also [offer] game drives along the Chobe National Park. (P15BW)

Moreover, another major activity in Kasane is hunting tours. Participants explained that some parts of the Chobe district have been allocated to communities that have established hunting concessions, with one stating, "...and they are mostly dependent on hunting as their major cash injection; they even try to have community trust, and they do have hunting for particular seasons." (P1BW).

In Zambia, participants mentioned that there are several activities visitors can partake in. Indeed, while Victoria Falls serves as the main attraction in Livingstone, numerous tour operators offer a variety of tourist activities, such as micro flights, abseiling, bungee jumping, and boat cruises. The responses below illustrate this: When they [tourists] come here, in terms of activities, they [can] do different activities. Like in Livingston we have the [Victoria Falls] game park, we have also different activities like bungee jumping, [river] rafting. They even go and see lions and elephants. There's the Mukuni Big Five, that they can go and see and even walk with the lions. So different activities. (P22ZM)

Most of them are the likes of Victoria Falls. They do zipline, Abseil Zambia goes that, by the gorge. The game viewing and boat cruises. Some go to the devil's pool, some bungee jumping. (P25ZM)

In Zimbabwe, visits to Hwange National Park and hunting safaris comprise the tourist activities offered in the region. Similar to Botswana, some parts of Zimbabwe have been designated for hunting activities. However, hunting was not widely discussed in the interviews, suggesting that this form of tourism is disconnected from the local communities. Additionally, the findings indicate that village tours, along with visits to local markets, are common tourist activities in this area, as illustrated in the quotes below by community representatives:Tourists mostly spend money on doing activities, and if ever they get to do village visits, they buy baskets and sculptures, anything that can be held as a souvenir, but still portable enough for them to cross the borders with when going home. (P45ZM)

Well, the products and the products, firstly, that sorry, spend money on are the cultural arts effects designed by the local people, by the locals. Rather, let me say, the sculptures or some authentic souvenirs that represent the cultural authenticity of our area and the services that they get to spend money on, mostly in our area, are game drives, nature walks and also night trips, mostly when we talk about wildlife related activities, and also the services that they get to spend money on, also the services that we offer in our lodge, such As accommodation, and also meals such as breakfast, lunch, dinner, and also other related services within the organization. (P50ZW)

The following theme presented in the paper draws attention to the market structure of the three wildlife tourism destinations.

Structure of the tourism market

Participants were asked to specify who their primary markets were. In terms of outbound tourists, it is interesting to note that while international tourists were among the first to be highlighted by the majority of study participants across the three destinations, there appears to be a noticeable increase in the arrivals of regional tourists from neighbouring countries:

Mostly South Africans and Europeans, countries like Britain, Germany, sometimes a few Batswana. It depends on the seasons because they [Batswana] usually are not around since they will be at work. (P19BW)

You get people from Denmark, and the UK. We had some Americans the other week, and we've been getting quite a few people from South Africa as well, Kenya. I think that's… off the top of my head. (P25ZM)

They come from other countries or continents. So those would be Americans, Germans, Europe, as well Asians, but not so much. (P38ZW)

As seen above, the common source countries include the USA and a few European nations, South Africa, and very few Asian countries. Regarding South African tourists, one of the destination marketing managers in the region mentioned that these tourists are typically self-drive visitors: So now we are starting to see international tourists come back, the regional tourists like, South Africa is our number one market in terms of regional tourism, because we get so many South African self-drive tourists. And they love Chobe. The Afrikaaners, they have got 4x4s and they love to do off road driving, we have got a lot of off road driving. So the regional market is the South African market. (P2BW)

Notably, the participants mentioned that these tourists often visit within the KAZA countries, with one participant highlighting that "*they're also coming from Namibia, Zimbabwe, and Zambia. So there is an opportunity for foreign exchange*." (P11BW). It is important to note that most of the above responses were received from the larger hotel companies in the three destinations, and the multinational scope of these destinations allows them to market their facilities on a larger scale. For instance, some participants in Botswana mentioned that they have agents in their key source markets who promote their companies for them, stating, "*So like, us here, it is our main reservation office, which works with agents in different countries, starting with South Africa, Zimbabwe, and some in the UK*" (P4BW).

Furthermore, these companies can afford to attend regional and even international roadshows as part of their marketing activities. To exemplify, one participant underscored: We have BTO [Botswana Tourism Organisation], we have Africa's Eden because with BTO and Africa's Eden, they always do some road shows in these different countries such as SA [South Africa], Namibia, Zambia, [and] Zimbabwe. And then as a company, as an establishment, we also look at what roadshow can benefit us. Because BTO and Africa's Eden, they also organise European roadshows. There is one in Berlin, in Germany, that normally happens around February. There is also Australia, you know, those European roadshows, Belgium, as an establishment, that's where you decide where you are sending your representative to go and seek business. (P3BW)

Interestingly, in Zimbabwe, the findings further revealed that missionaries and researchers are a key market for Hwange.

And then they've also engaged in wildlife tourism through cultural exchange with the tourists that come to this area. And also is part of the benefits to the previous question. Some of these tourists include missionaries and donors. And once they come to these areas, they may leave sponsorships for underprivileged people or excellent individuals. (P38ZW)

All three destinations are experiencing promising growth in their domestic markets. For Kasane, some participants explained that government workers comprised their largest domestic market: For instance, an accommodation manager stated: The tourists visiting this community are mainly local tourists who are big on government business. A government constitutes about 80% of the occupancies. Then the other 20% is mainly leisure. (P17BW)

While in Livingstone, the domestic market primarily consists of leisure tourists, although the larger hotels do receive some business tourists for conferences. It is important to note that these two towns represent the highest concentration of tourist activities in their respective countries. For instance, participants in Livingstone mentioned that the town is the tourist hub of the country. Similarly, in both countries, the growth in these markets resulted from the previous pandemic, which encouraged more local travel. A representative from a tourism governing authority had the following to say on the matter:

Botswana was mostly dependent on international tourism. Now that the international tourists were no longer traveling, there was a big drive to push for domestic tourism. For the first time in my life, that was when I saw a lot of Batswana travelling, also because they were hungry to travel. they've been locked up. Kasane was just fully booked for two years, domestic tourists, they really did go a long way to resuscitating the tourism industry in this place. (P1BW)

Structure of the tourism sector

Another major theme emerging from the results relates to the structure of the tourism sectors in the three destinations, primarily considering the ownership of tourism products and services. Largely, this region appears to be dominated by large multinational companies. In Botswana and Zimbabwe, this dominance is primarily evident in the accommodation sector, while in Zambia, these businesses extend to the tour operators. For example, one tour operator from Zambia stated:

On that issue, it is mostly these big businesses operate [in Livingtone]. So, you would find that these big companies like Mukuni Big Five, The African Queen, [and] ourselves are the ones offering boat cruises (P26ZM)

Certainly, this has been a big concern in all destinations as it raises the concern of tourism leakages, where one governing authority representative and community representative in Botswana lamented:

These foreign-owned companies, so they take the money here, most of the money, [and] they take it back to their countries. And then for the locals, there isn’t that development that we were waiting for. Because a lot of the money is shipped out of the country, back to where these investors are coming from. (10BW)

The rich people are eating too much. Yeah, the small guys. And they can't grow if things are not corrected. (P20ZW)

Furthermore, some participants highlighted the dominance of bigger hotel groups which pose a severe challenge to smaller local accommodation providers, coupled with the fact these bigger accommodations have a prime location, by the Zambezi riverfront. One such a participant underscored:

And then the other challenge will be, for a small business like us to penetrate is a problem because we have those big hotels that are well established internationally and locally. But we are slowly and surely making it it's not that that much of a problem. But it's a challenge. Because you know, when you go online, you search for something that is well, that is already new, that is established, that is reputable, but we will get here ultimately. Yeah, to compete with them, and then their location like they are in the prime of the riverfront. So it gives them an added advantage. But yeah, we are fighting our own battles, we are competing on a different level and different market altogether. (P7BW)

While the majority of the accommodations in Kasane are owned by larger businesses not originating in Kasane (or even in Botswana in many cases), the tours and tour guide services are largely offered by local entrepreneurs. Furthermore, in the case of Kasane, there are three trusts: the Chobe Enclave Trust, Paleka, and Seboba (though the latter is not fully functioning). These trusts operate their own tourism ventures, such as lodges, and maintain partnerships with hunting safari operators that they manage for the benefit of the community. A representative of one of the community trusts explained:

Community Trust [are] members of the community - they're run by the community. They are chosen by the community, they elect the members right into those community trusts and they have campsites and lodges, and they can win quotas for trophy hunting and sell those to tourists, the hunters. The trophy hunters buy through the trusts. So, the trust generates income through the hotel and the quotas, those concessions. (P10BW)

In Livingstone, as most of the hotels and tour operators are foreign-owned businesses, the study found that locals often act as agents, some functioning as tour operators, while others operate as informal entrepreneurs selling arts and crafts. In the case of agents, this refers to small informal entrepreneurs who help find clients for the tour operators. The two quotes below elaborate on this group of stakeholders: A lot of activities are offered by most of these big companies and then the locals are more like the agents. Many agents don't really have the capacity to offer these activities, for instance, let's say the helicopter flights for helicopters, you know, an agent can't afford to buy a license. So instead what they do is just market it and then when they have tourists they bring them and collect money. (P30ZM)

In Livingstone, we have a lot of agents, small companies, who actually like for instance, they bring like we have Livingstone's adventures, which actually gives activities. We also have other agents who sell our activities and then they bring clients here when they bring the clients they collect commission. So basically, it's also giving younger people in small businesses business opportunities. (P31ZM)

Furthermore, informal trading is another prominent subsector of the tourism market. In fact, there is a designated place for many of the informal traders in Livingstone, a permanent structure funded by the World Bank. Unfortunately, this structure is located in the middle of town, where much of the activity and accommodation are situated at the edge of the town, closer to Victoria Falls. Some participants in this market contended that this arrangement has left informal entrepreneurs on the periphery of tourism development in the town, a concern further exacerbated by the bigger hotels beginning to sell similar souvenirs for their guests. In this case, an informal entrepreneur stressed: the people that benefit are people who own lodges and hotels. Before then it was okay because those guys only used to offer accommodation and hospitality but they never used to sell all these things but for now, we find that someone in the lodge put up a shop. And then they told them [tourists] to say you know if you shop outside here, its at your own risk. (P27ZM)

In the case of Zimbabwe, most of the locals are operating in the informal sector, as traders of arts and crafts souvenirs, as well as in restaurants. One community leader responded: Members of the community can provide tourism establishments with products and services like local crafts and arts which include traditional handicrafts, textures and artwork. We can also prove fried fruits, vegetables, fresh produce and ingredients. We can provide meat and dairy products, baked goods, traditional music, entertainment, local transportation services, accommodation services to name a few. (P53ZW)

Furthermore, Zimbabwe has CAMPFIRE, which is spearheading the local communities' involvement in wildlife tourism with the development of the community markets being a notable project to absorb the community into tourism ownership. Participants explained as follows: Then we have community-based projects, [which include the] development of community based campsites, crafts, market, etc. So the campsites actually help management and the community to interact because they work, they may act as an intermediate. Then also [the] development of crafts markets. These actually empower the local community. They have a sense of belonging because now they are selling their own projects. (P58ZW)

Networks between tourism stakeholders

The final theme of the research relates to the formal and informal (as well as direct and indirect) linkages between tourism stakeholders in the region. In all three destinations, the study found tourism businesses to have close direct relationships with local tourism and non-tourism suppliers. Speaking on the relationship with the tourism supplier, one accommodation manager described: We do give business, we don't offer activities, your game drives and boat cruises, we don't have such activities. So we partnered with a local tour operator. So when our guests come, we sometimes do offer them a complete package, including the activities and then we give a certain payout to those guys who are providing activities for us. (P10BW)

Additionally, some of the participants representing the accommodation subsector in this region alluded to their indirect support of informal tourism entrepreneurs offering crafts and art souvenirs for tourists. Generally, the findings point to formal and informal networks existing among accommodation and tourism suppliers, with some participants going further to mention that trust and service quality are key determinants in maintaining and growing these networks. Interestingly, one participant in Botswana contended that the difficulty in absorbing new informal tourism suppliers into the supply chain is hampered by the mismatch between international guest service expectations and service quality. To substantiate such views, the participant offered: Let me take an example of taxi drivers, they feel that sometimes they can go pick the clients, we try and bring into the industry but the service that they are providing… it doesn't meet the tourist satisfaction. (P13BW)

However, there appears to be an indirect and informal relationship between the tourism private sector stakeholders and the key attractions, primarily Chobe National Park and Victoria Falls. When describing this relationship, study participants explained it to be one-way, with accommodation providers supporting conservation in the attractions through the payment of levies and entrance fees. The management of these attractions is centred around, and to a substantial extent, not aligned with the wider decision-making processes of the region. Furthermore, there appears to be a direct relationship between the conservation authorities (government and conservation NGOs) and tourism businesses, as well as community representatives in Botswana and Zimbabwe. Notably, in Zambia, this is a major concern, as one conservation representative argued that while there is some collaboration between leading tourism businesses and conservation agencies, locally-led conservation agencies (which have closer ties to communities) are often on the periphery of tourism development in the region, which has implications for deriving mutually beneficial results from such relationships.

Finally, the participants further recognised the opportunities in the proximity of Chobe National Park and Victoria Falls (in both countries), as well as Victoria Falls and Hwange National Park, alongside Kasane and the Namibian cultural villages. One participant remarked, *"…we have access to four nations, now to three nations: Zimbabwe, Zambia, and Namibia…*" (P11BW). This has resulted in operators offering tours to multiple countries and establishing networks within those countries, with one tour operator expressing: I established relationships with some of the businesses [tour operators] across the KAZA region. I know some other operators [in Botswana], they have partnerships with other tour operators on the Zimbabwean side of Victoria Falls. Because for them to [be able] offer those complete packages like the Victoria Falls transfers, they must have a direct relationship with some of the activity providers on that side. (P13B)

The following section of this paper unpacks the results further and discusses the findings alongside relevant literature.

DISCUSSION

This current study sought to explore tourism development in selected towns within the KAZA Transfrontier Conservation Area. The findings showcase that natural attractions are the core products of wildlife tourism developments in these locales. Indeed, the natural diversity of Southern Africa is one of the region's greatest tourism assets, benefiting from the global interest in wildlife and environmental education, as well as the increasing disposable income and urbanisation (Rizzolo, 2023; Esparza-Huamanchumo et al., 2024). The dependence of the tourism sector on these natural assets—such as national parks and rivers, as well as other water sources—alongside the reliance of these destinations on tourism, makes them extremely vulnerable to climate-related changes that have already been notable and reported in the region (see

Mpolokang et al., 2022; Hambira et al., 2021; Dube et al., 2018). As such, more efforts are required in this region for climate adaptability and building destination resilience at both country and KAZA scales.

The matter of regional peace and tourism growth emerges strongly in the results. In relation to tourism growth, the findings suggest nuances in the visitor markets for these destinations. While international markets have traditionally been the dominant drivers of development in these areas, there has been a notable emergence of regional markets, primarily within the SADC region. Moreover, while South Africa constitutes a strong market for these destinations, the findings indicate growth in KAZA member states exploring partnerships with neighbouring countries. This trend may be linked to the economic recovery in certain sectors, as well as a renewed interest in African heritage and experiences, with one participant noting, "*Africans are back to their culture*" (P26ZM).

Furthermore, several studies affirm that the pandemic and subsequent travel restrictions have increased the desire for nature and outdoor experiences (Esparza-Huamanchumo et al., 2024; Jones et al., 2024), which these destinations are well-known for. Similarly, the growth in travel among KAZA residents within KAZA countries results from eased migration laws amongst these nations. This has facilitated tour operators in operating across multiple countries in the region and forming related partnerships that promote trade and provide much-needed economic boosts to local economies, which was one of the drivers behind such policy amendments (Ndebele, 2023).

The findings highlight several prevalent concerns regarding tourism development in the three destinations, notably the predominance of multinational businesses, which pose significant challenges to local entrepreneurs. This situation is unfortunately a common characteristic of tourism development in many destinations across Sub-Saharan Africa and extends to the wider Global South (Mbaiwa, 2017). It has prompted numerous calls to address the economic inequalities that persist in such settings in order to genuinely achieve local economic growth and development, as well as poverty alleviation (Saarinen et al., 2022). In nature-based settings, this includes concerted support for the conservation and protection of wildlife. Over a decade ago, Christie et al. (2013) identified economic leakages as one of the most frequently cited challenges to sustainable and inclusive tourism development in Africa. This concern remains relevant today and is further exacerbated in the case of Zambia, where multinational businesses have begun offering similar products to those of informal entrepreneurs. This raises critical questions about the extent to which informal tourism entrepreneurs are considered in tourism planning and development at the destination level, given that informality is central to local economies in the region (Makoni and Tichaawa, 2020). While tourism is positioned and promoted as contributing to conservation in nature-based settings (Dmitriyev et al., 2024) - by both funding conservation initiatives and providing an economic justification for stakeholders, particularly communities, to support conservation efforts and comply with conservation regulations - the findings cast doubt on the effectiveness of such contributions. There are significant gaps in creating an inclusive and sustainable sector that would engender support from local communities.

Contention among stakeholders is a common feature in Transfrontier Conservation Areas, as highlighted in studies by Lekgau and Tichaawa (2019, 2021) and Thakholi (2022). This study underscores the importance of representativeness and agency, with Botswana and Zimbabwe having state- and policy-supported community-based organisations involved in both tourism and conservation activities, thus establishing them as undeniable stakeholders in tourism development. While both community trusts and CAMPFIRE initiatives have faced criticism in previous studies - rightly questioning the transparency of benefit-sharing mechanisms and governance (Chiutsi and Saarinen, 2017; Shereni and Saarinen, 2020; Tchakatumba et al., 2019) - these organisations nonetheless provide the communities they represent with a presence among the myriad stakeholders within the sector. All these concerns suggest that efforts to harmonise policies among the five KAZA countries should also extend to harmonising tourism practices and policies, fostering a sustainable and inclusive tourism sector.

CONCLUSION AND IMPLICATIONS

Wildlife tourism thrives in areas rich in biodiversity and wilderness landscapes. Many destinations in Southern Africa have successfully leveraged their natural resources as tourism offerings. Understandably, the majority of recent studies examining wildlife tourism have focused on the environmental changes impacting this sector. By concentrating solely on the tourism industry in wildlife destinations within Transfrontier Conservation Areas, the study findings highlight the existing tourism dynamics in these locations. It was discovered that the tourism industries in the represented KAZA countries are predominantly dominated by foreign-owned companies, with local communities providing tourism-related services to complement the existing attractions and market structures.

The findings underscored the power imbalances between tourism stakeholders and, in some cases, between tourism and conservation stakeholders. While international tourists constitute the majority of visitors to the region, opportunities exist to grow local and regional visitor markets, as well as to foster linkages among tourism businesses within the region for greater economic impact. These dynamics have significant implications for achieving the broader goals of Transfrontier Conservation Areas, namely nature conservation, poverty alleviation, and local and regional growth and development. The study has several practical and theoretical implications. Firstly, the gradual transition in the growing regional and domestic markets necessitates greater attention to targeted marketing and product development.

Secondly, the uneven scale of tourism development in the three destinations indicates that closer scrutiny is required of tourism policies and practices (within the region) that support the inclusion of local entrepreneurs in the tourism sector. This inclusion is vital for generating a more pronounced localised socioeconomic impact and for aligning stakeholder interests. Thirdly, the study demonstrated the importance of community-based organisations—such as community trusts in Botswana and CAMPFIRE in Zimbabwe—in facilitating community involvement in the tourism landscape, particularly within more complex tourism systems.

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STRUCTURAL DISPARITIES OF HUMAN RESOURCES IN THE HOSPITALITY INDUSTRY IN ROMANIA

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Abstract: This study analyzes the structural disparities of human resources in Romania's hospitality industry during the period 2008–2023, offering a comprehensive perspective on employment dynamics, salary evolution, and productivity across different regions and gender categories. The research highlights the central importance of human resources in ensuring service quality and customer satisfaction, emphasizing the significant contribution of well-trained personnel to maintaining the sector's competitiveness. Although the industry was profoundly affected by the global economic crisis and the COVID-19 pandemic, it demonstrated remarkable resilience, quickly recovering losses and adapting to new economic and social conditions. The analysis reveals significant disparities between Romania's regions, influenced by economic, demographic, and infrastructural factors. Developed regions, such as Bucharest-Ilfov, North-West, and Center, experienced faster growth in employee numbers and salaries, supported by substantial investments and consistent demand for tourism services. In contrast, less developed areas, such as South-West Oltenia and North-East, recorded modest growth, constrained by deficient infrastructure and limited access to tourist markets. The upward trend in nominal net wages within the hospitality sector reflects a gradual professionalization of the workforce and an effort to attract and retain qualified employees. The COVID-19 pandemic caused an abrupt decline in employee numbers and productivity in 2020, but the sector demonstrated remarkable recovery capabilities. By 2023, both the number of employees and productivity levels had surpassed pre-pandemic values, underscoring the adaptability of hospitality companies through service diversification, the use of modern technologies, and the implementation of policies aimed at reducing employee turnover. The study also highlights the predominance of women in this industry, who accounted for over 60% of the workforce throughout the analyzed period. However, recent trends indicate a slight increase in male participation in roles associated with flexibility and physical effort, suggesting a gradual diversification of gender structure within the sector. Based on these findings, the paper recommends continued investments in professional training, retention policies such as creating attractive working conditions, and initiatives to promote diversity and inclusion in the workplace. Additionally, the importance of leveraging human resource analysis for crisis management and implementing adaptive strategies to support sustainable growth and long-term competitiveness is emphasized.

Keywords: human resources, hospitality industry, Romania, structural disparities, employment, productivity, salaries

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INTRODUCTION

The hospitality industry stands as a pivotal sector within the global economy, profoundly influencing consumer experiences through its reliance on human interaction to deliver high-quality services. At the heart of this industry lies human resources, which play an indispensable role in crafting, delivering, and sustaining memorable customer experiences. The meticulous analysis and study of these resources are paramount for the enduring success and sustainability of organizations operating within this domain. Human resources serve as the cornerstone of the hospitality industry due to the direct and continuous interaction between employees and customers. The caliber of services provided is intrinsically linked to the competencies, attitudes, and satisfaction levels of the workforce. In a sector that is inherently people-centric, employees transcend mere task execution; they shape brand perception, fostering customer loyalty and trust. Given that

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hospitality demands both adaptability and empathy, it is crucial to delve into the behaviors and needs of employees to uphold high service standards. One of the most significant outcomes of human resource analysis is the enhancement of service quality. By pinpointing training and professional development needs, companies can elevate employee skills, ranging from effective customer communication to adeptly handling challenging situations. A well-prepared and trained workforce directly contributes to customer satisfaction and, by extension, the success of the business.

Moreover, the productivity of the workforce is another critical aspect that benefits from thorough human resource analysis. Examining team dynamics and efficiency can lead to the implementation of optimal solutions, such as automating repetitive tasks or redistributing workloads more equitably. Employees who operate in a well-organized environment are more motivated and efficient, enabling companies to reduce operational costs.

Employee retention is another vital consideration in this sector. The hospitality industry is notorious for its high turnover rates, driven by factors such as stress, low wages, and limited advancement opportunities. Analyzing the factors that lead to employee attrition, such as working conditions or lack of recognition, helps in devising strategies to improve retention. Consequently, the costs associated with recruiting and training new employees can be significantly reduced.

Furthermore, human resource analysis plays a crucial role in promoting diversity and inclusion. As a globalized industry, hospitality benefits from multicultural teams that bring diverse perspectives and creative solutions. By fostering diversity and creating an inclusive environment, companies can develop teams that are better equipped to meet the varied needs of their clientele. The analysis of human resources in the hospitality industry is more than an operational process; it is a strategic imperative for the sustainable growth and success of this sector. In an industry centered around people, understanding the needs, behaviors, and motivations of employees is key to ensuring service quality and customer satisfaction. By investing in human resources, hospitality companies can build more resilient, innovative, and competitively positioned organizations for the future.

The Importance of Analyzing and Studying Human Resources in the Hospitality Industry

The hospitality industry is one of the economic sectors with the greatest impact on consumer experience, relying on human interaction to create high-quality services. Human resources are at the core of this industry, playing a fundamental role in creating, delivering, and maintaining memorable experiences for customers. The analysis and study of these resources is an essential process for the success and sustainability of organizations in this field. The direct and constant interaction between employees and customers makes human resources the main pillar of the hospitality industry. The quality of services is directly dependent on the competencies, attitude, and job satisfaction of employees. In a sector highly focused on people, employees not only perform tasks but also influence brand perception, generating customer loyalty and fidelity (Herman et al., 2023; Bógdał-Brzezińska et al., 2023). Since hospitality requires adaptability and empathy, it is essential to study employee behaviors and needs to maintain a high standard of services.

Improving service quality is a crucial aspect of any organization's success, and the analysis of human resources plays a central role in this process. It allows for the accurate identification of training and professional development needs, providing companies with the opportunity to optimize their human resources (Stupariu and Josan, 2014). By implementing appropriate training programs, employees can acquire essential skills such as effective communication with customers, proactive problem-solving, and managing difficult situations. Well-trained staff not only ensure a positive customer experience but also contribute to strengthening the company’s image in the market. This leads to increased customer loyalty, attraction of new opportunities, and enhanced competitiveness. Furthermore, employees who feel valued and supported in their professional development are more motivated, contributing to a more efficient work environment and better talent retention. In the long run, investing in employee training and development translates into tangible results: optimized processes, reduced costs associated with errors or conflicts, and a significant increase in organizational performance. Thus, human resource analysis becomes not only a diagnostic tool but also a driver of progress, aligning employees' individual goals with the company's strategic vision (Coyle and Dale, 1993; Campos-Soria et al., 2005; Keller and Bieger, 2007; Yasin and Yavas, 2008; Cai and Alaedini, 2018; Gaol et al., 2018; Bayad et al., 2021; Manohar et al., 2024).

Another major benefit of human resource analysis is the significant *increase in organizational productivity*. By studying team workflows and evaluating their efficiency, managers can identify both strengths and areas that need improvement. This information allows for the implementation of tailored solutions, such as automating repetitive tasks, using advanced technologies, or redistributing the workload evenly among employees. Automating repetitive processes not only frees up employees' time for tasks that require creativity and strategic thinking, but also helps reduce errors, thereby enhancing operational efficiency. At the same time, redistributing tasks ensures an equitable division of labor, preventing some employees from being overburdened and others from being underutilized. A well-organized and balanced work environment encourages employees to be more focused, motivated, and engaged in their tasks.

Moreover, streamlining workflows has a direct impact on operational costs. Reducing time lost on inefficient activities, lowering absenteeism rates, and improving the quality of final outcomes allow companies to save important resources, which can then be reinvested in development. In the long run, an optimized work environment supported by modern technology fosters innovation and competitiveness, turning increased productivity into a strategic advantage for the organization (Reich, 1997; Keller and Bieger, 2007; Lockyer, 2013; Benavides-Chicón and Ortega, 2014; Li, 2014; Sánchez-Ollero et al., 2015; Tveteraas and Falk, 2016; Szende et al., 2021).

Reducing employee turnover is a major challenge and an essential goal in the hospitality industry, known for its high employee departure rate. This trend is often driven by factors such as constant stress from interacting with diverse customers, perceived inadequate salaries, irregular work schedules, and a lack of clear career advancement opportunities.

These factors not only affect team stability but also compromise the continuity of services and the quality of the customer experience. Therefore, a thorough analysis of the causes behind employee turnover becomes a strategic priority. Factors such as working conditions, lack of recognition for employees' efforts, or a poorly defined organizational culture can be identified and addressed through specific strategies. For example, improving benefits packages, creating performance recognition programs, implementing clear career paths, and offering continuous training programs can significantly contribute to increasing employee loyalty. In addition to improving employee satisfaction and engagement, reducing turnover also brings significant financial advantages to companies. The direct and indirect costs associated with recruiting, integrating, and training new employees are considerable, and their high frequency can seriously impact an organization’s budget. An attractive work environment, where employees feel valued and have real opportunities for development, not only reduces these costs but also contributes to building a stable and experienced team capable of providing high-quality services to customers. In the long run, such strategies support the strengthening of the company’s reputation and provide a competitive advantage in the market (Davidson et al., 2010; Boella and Goss-Turner, 2012; Dusek et al., 2014; Bast, 2019; Boella and Goss-Turner, 2019; Jung et al., 2021; Al-Malood, 2023; Maqableh et al., 2023).

Human resource analysis plays a crucial role in *promoting diversity and inclusion*, fundamental aspects in a globalized industry like hospitality. Diversity, manifested through multicultural teams, brings a wide range of perspectives, experiences, and creative approaches that can significantly improve organizational performance. Employees from different backgrounds contribute to the development of innovative solutions and a better understanding of the diverse needs of customers, resulting in a more personalized and satisfying experience for them. Promoting diversity begins with a careful analysis of the workforce structure and recruitment practices. Identifying potential barriers in the hiring process, such as unconscious biases or lack of accessibility, enables companies to implement policies that attract and retain diverse talent. Additionally, training programs focused on diversity awareness and the development of intercultural competencies can enhance collaboration among employees and create a more harmonious work environment. Inclusion is complementary to diversity and involves creating an environment where all employees feel respected, valued, and supported in contributing to the organization’s success. Companies can encourage inclusion through clear anti-discrimination policies, adapting work schedules to individual needs, and offering benefits that cater to cultural diversity, such as time off for specific holidays or customized menus. In the long run, an organizational culture based on diversity and inclusion not only stimulates creativity and innovation but also strengthens the company’s reputation as a top employer. As a result, organizations can attract customers from diverse backgrounds, expand their consumer base, and respond more effectively to the demands of a constantly changing market. Diversity and inclusion thus become not just moral values but also essential strategic advantages for success in the hospitality industry (Madera, 2013; Suarez et al., 2015; Rhou and Singal, 2020; Bhutto et al., 2021; Gurinder et al., 2022; Legrand et al., 2022; Manoharan et al., 2023).

Human resource analysis involves exploring several essential dimensions that can significantly influence organizational performance. A fundamental aspect is the *evaluation of employees' qualifications and competencies*, which are critical for ensuring quality services. Identifying the current skill level of the staff provides a solid foundation for adjusting professional training programs to meet the increasingly complex and ever-changing demands of the industry. In addition to qualification levels, it is important to also analyze employees' adaptability to new technologies and processes. In a globalized economy marked by digitalization, professional training should include not only technical skills but also soft skills such as effective communication, critical thinking, and problem-solving. Such training contributes to the development of versatile teams capable of tackling challenges and creating added value for the organization. Furthermore, human resource analysis should include evaluating the level of employee engagement and motivation. A qualified but demotivated workforce can negatively impact organizational performance. Therefore, it is essential to identify the factors that influence job satisfaction and implement strategies that support the professional and personal development of employees (Balmuș-Andone, 2023). Another relevant aspect is managing diversity and promoting an inclusive environment. Intercultural competencies and sensitivity to the needs of a diverse workforce are crucial for creating a harmonious and high-performing work environment. At the same time, a focus on leadership development at all organizational levels can improve team coordination and alignment with strategic objectives. In the long run, a detailed and well-directed analysis of all these dimensions of human resources not only helps optimize internal processes but also contributes to positioning the organization as an industry leader. Companies that invest in employee skill development, motivation, and adaptation to market demands are better equipped to face competition and adapt to changes in the business environment (Slåtten and Mehmetoglu, 2011; William Angliss Institute of TAFE, 2012; Karatepe and Karadas, 2015; Goh and Lee, 2018; Boella and Goss-Turner, 2019; Pham et al., 2018; Nadda et al., 2022; Manglik, 2023).

Employee satisfaction is a crucial indicator of organizational performance, influencing not only internal productivity but also the quality of interactions with customers. Satisfied employees are more engaged, motivated, and dedicated to delivering high-quality services, which directly contributes to increasing customer loyalty and strengthening the company’s reputation. To ensure a high level of employee satisfaction, organizations must address several critical factors. First and foremost, competitive salaries are essential, providing employees with the sense that their work is valued and appropriately rewarded. Fringe benefits, such as health insurance, vacation vouchers, or access to personal and professional development programs, add value to the compensation package and improve employees' perception of the workplace. Another important aspect is work-life balance. Flexible working hours, the possibility to work from home, or support for managing personal situations help reduce stress and create a more relaxed work environment. Employees who feel they have more control over their schedules are more motivated and efficient, which positively impacts the organization’s performance. In addition to these tangible elements, a subtle yet extremely important factor is the atmosphere in the workplace. An organizational culture based on respect, collaboration, and recognition of merit encourages employees to actively engage and contribute to achieving common goals. Positive feedback, opportunities for advancement, and support from leaders are factors that significantly increase satisfaction and the sense of belonging. Employee satisfaction is more than just an indicator; it is a driver of performance and long-term success. An organization that invests in the well-being of its employees not only reduces turnover but also creates a stable, loyal, and dedicated team capable of achieving exceptional results (Power, 2016; Ažić, 2017; Burke and Hughes, 2018; Book et al., 2019; Șule et al., 2019; Heimerl et al., 2020; Ghani et al., 2022; Marco and Bruno, 2024).

Motivation and employee engagement are essential pillars of a successful organization. Analyzing employee motivation not only highlights the factors that drive them to perform at their best but also provides insights into measures that can be implemented to enhance their involvement and enthusiasm at work. A motivated team is a productive team, capable of overcoming challenges and contributing to the achievement of organizational goals. Non-financial rewards play a particularly important role in this process. While salary and material benefits are essential, studies show that recognition and appreciation of employees' performance have a profound impact on their motivation. A simple thank-you message, an excellence certificate, or an internal ceremony recognizing achievements can strengthen the feeling of value and belonging. These gestures, though seemingly small, create a positive organizational culture in which employees feel respected and valued. Opportunities for advancement are another key element in boosting motivation. Employees who see clear prospects for professional development are more willing to invest time and energy in their work. Mentorship programs, continuous training, and clear career paths are tools that not only motivate but also strengthen employee loyalty to the organization. Moreover, creating a work environment that encourages autonomy and initiative can significantly contribute to increasing motivation. Employees who feel involved in the decision-making process and have the opportunity to influence how they carry out their tasks are more engaged and creative. This type of environment fosters innovative thinking and promotes a deep sense of responsibility for the success of the organization. Employee motivation and engagement are not only management objectives but also strategic investments that directly influence the organization's performance. By implementing measures that meet employees' needs, organizations can build dedicated, resilient teams focused on excellence (Bulut and Culha, 2010; Niu, 2010; Raub and Robert, 2012; Riley, 2014; Meyer, 2016; Burke and Hughes, 2018; Koo et al., 2019; Șule et al., 2019).

The impact of technology on human resources is a particularly relevant aspect in the context of the rapid transformations in the organizational environment. The automation of processes and the implementation of modern technologies are revolutionizing the way daily activities are carried out, fundamentally changing the requirements for certain roles and competencies. This dynamic demands a strategic approach to ensure an effective transition and to fully capitalize on the benefits of technology (Stoica, 2021). One immediate effect of adopting advanced technologies is the reduction of repetitive and administrative tasks, which allows employees to focus on higher-value activities such as strategic decision-making, innovation, or improving customer relationships. However, to work efficiently alongside new technologies, employees need to be reskilled. Training programs that integrate digital and technological competencies are becoming essential. These programs not only support staff adaptation but also enhance employees' confidence in their ability to cope with changes. Furthermore, the use of technology in human resources, such as artificial intelligence for recruitment, performance management platforms, or data analysis applications, is radically transforming the HR function. HR is transitioning from an operational role to a strategic One, focused on predictions, planning, and continuous process improvement. Automation of tasks such as candidate selection, monitoring employee engagement, or managing administrative requests frees up time and resources for activities with a greater impact.

In addition to reskilling, it is important for organizations to focus on developing soft skills such as adaptability, problem-solving, and collaboration. These skills become critical in the context of a digitized work environment, where changes are frequent and collaboration between people and technologies is vital. Careful planning of the technological transition also involves transparent communication with employees. It is essential that they understand the benefits of new technologies, are involved in the change process, and receive ongoing support throughout the adaptation. An open and learning-oriented organizational culture is key to success in this process. The impact of technology on human resources is not only a challenge but also an opportunity to transform organizations in a profoundly positive way. Investments in reskilling, training, and adopting modern technologies prepare both employees and organizations for a future characterized by efficiency, innovation, and competitiveness (Law et al., 2014; Buhalis et al., 2019; Walker, 2021; Waluyo and Tan, 2022; Legrand et al., 2022; Valeri, 2023; Talukder et al., 2024).

Human resources analysis plays a crucial role in *adapting the hospitality industry to crises and rapid changes*, serving as a strategic tool for managing unexpected challenges. Recent events, such as the COVID-19 pandemic or other threaths in tourism (Wendt and Bógdał-Brzezińska, 2024), have highlighted the need for a flexible, resilient, and well-prepared workforce capable of handling unprecedented situations. In this context, human resources analysis becomes a key factor in the success of organizations, enabling them to anticipate and respond effectively to market changes. One of the major lessons from recent crises is the importance of workforce flexibility. Companies in the hospitality industry that invested in diversifying employee skills were able to quickly redistribute tasks and optimize available resources. Detailed analysis of staff skills and capabilities helps identify strengths and areas for improvement, thus facilitating the implementation of solutions tailored to crisis situations. Furthermore, human resources analysis allows companies to adjust their recruitment and retention strategies according to market conditions. During times of uncertainty, retaining key employees becomes a priority, and implementing policies that support their well-being, such as flexible working hours or offering psychological support, helps maintain a high level of engagement and loyalty. In addition, utilizing data generated by human resources analysis supports informed decision-making, such as identifying emerging trends in employee behavior or anticipating the impact of certain measures on organizational performance. With this information, companies can develop solid contingency plans, enabling them to respond quickly and effectively to new crises. Another essential aspect is adapting the organizational culture to new realities. Crises can create uncertainty and stress among employees, and a culture based on empathy, support, and open communication can significantly reduce anxiety and increase team resilience. Human resources analysis helps identify the cultural initiatives necessary to support employees during difficult times. Investing in human resources analysis is more than just a preventive measure; it is an essential strategy for adapting to rapid changes and maintaining long-term competitiveness. Companies that prioritize understanding and developing their human resources can build a solid foundation for successfully navigating future challenges while maintaining both stability and innovation (Hosie and Pforr, 2016; Brown et al., 2017; Breier et al., 2021; Foroudi et al., 2021; Ghaderi and Paraskevas, 2021; Wong et al., 2021; Kennell et al., 2022; Carvalho et al., 2024).

A satisfied and motivated team not only ensures better operational performance but also significantly contributes to *strengthening the company's positive image*, both among customers and in the labor market. Employees who feel valued and supported become true brand ambassadors, promoting it through their daily interactions, whether with clients or potential candidates for new positions. This positive reputation translates into attracting more customers and retaining existing Ones, thus strengthening the business's success foundation. In a highly competitive sector like hospitality or services, the company's image plays a crucial role in differentiating it from competitors. Customers not only seek quality services but also a positive experience, which is directly influenced by the attitude and involvement of employees.

A motivated team, performing its duties with enthusiasm and professionalism, can transform a simple service into a memorable experience for the customer. As a result, the company not only maintains loyal clients but also benefits from promotions through their recommendations. In the labor market, companies that invest in human resources analysis and development attract top talent more easily. An organization recognized for its positive work environment, development opportunities, and respect for employees becomes a desired employer, facilitating the recruitment of professionals capable of adding value. Additionally, staff retention improves significantly, reducing costs associated with employee turnover and providing long-term stability. In the current context, where sustainability is becoming increasingly important, companies that prioritize human resources development build a long-term competitive advantage. By creating a healthy, motivating, and inclusive work environment, they demonstrate a real commitment to the well-being of employees and the community, attracting not only clients and employees but also business partners and investors. This competitive advantage is not only economic but also reputational, reinforcing the company’s position in the market and ensuring its resilience in the face of change. A satisfied and motivated team is more than an operational element; it is a strategic asset that amplifies the company's success both with clients and in the labor market. By prioritizing human resources analysis and development, companies can build a strong brand and a sustainable competitive advantage, thus preparing for a prosperous future (de Grosbois, 2012; Martínez et al., 2014; Pantelidis, 2014; Camillo, 2015; Mmutle and Shonhe, 2017; Palacios-Florencio et al., 2018; Klein, 2022; Erum, 2024).

Human resources analysis in the hospitality industry is more than an operational process; it is an essential strategy for the success and sustainable growth of this sector. In a people-centered industry, understanding the needs, behaviors, and motivations of employees is key to ensuring service quality and customer satisfaction. By investing in human resources, hospitality companies can build more resilient, innovative organizations that are better positioned for the future.

METHODOLOGY

The study aims to identify the structural disparities of human resources in the hospitality industry in Romania. It also seeks to analyze the evolution of the number of employees, salaries, and productivity between 2008 and 2023. Another objective is to evaluate the impact of economic crises and the COVID-19 pandemic on the sector (Korinth and Wendt, 2021). Finally, the study proposes strategies to improve employee retention and promote diversity and inclusion.

The data were collected from official sources, such as the National Institute of Statistics (INS), government reports, and academic studies, covering the period 2008-2023. From the National Institute of Statistics, the following databases were used: FOM104F, Average number of employees by national economy activities (sections and divisions) CAEN Rev. 2, gender, macroregions, development regions, and counties; FOM106E, Average net monthly salary by national economy activities (sections and divisions) CAEN Rev. 2, gender, macroregions, development regions, and counties; and TUR105D, Overnight stays in tourist accommodation structures by type of structures, types of tourists, macroregions, development regions, and counties. The types of data analyzed include quantitative data on the number of employees, average monthly net salaries, productivity, and gender distribution. Descriptive analysis was used to present the evolution of human resources in the hospitality industry. Comparative analysis was used to compare data across different macroregions and counties, thus identifying regional disparities (Wendt and Bógdał-Brzezińska, 2018). Temporal analysis assessed long-term trends and annual fluctuations in the number of employees, salaries, and productivity. Regression models were also used to identify the factors driving fluctuations in human resources and productivity.

The impact of the global economic crisis (2008-2011) was analyzed to evaluate its effects on the number of employees and salaries. The impact of the COVID-19 pandemic (2020-2021) was also assessed to understand the declines in the number of employees and productivity in the hospitality industry . To improve employee retention, the study identifies measures such as improving working conditions, recognizing performance, and offering advancement opportunities. The promotion of diversity and inclusion is addressed by developing policies that encourage cultural diversity and creating an inclusive work environment. Training and professional development programs are also proposed to improve employee skills and enhance service quality. The results of the study were compared with other similar research to validate the conclusions. Industry experts were also involved to assess the relevance and applicability of the proposed strategies. Study limitations include the availability of complete and up-to-date data. Additionally, there are cautions regarding the generalization of conclusions at the national level, considering regional diversity.

HUMAN RESOURCES IN THE HOSPITALITY INDUSTRY

Human resources in the hospitality industry are often considered the foundation of success in this industry. Employees in hospitality are those who interact directly with tourists, creating lasting impressions through their professionalism, attitude, and interpersonal skills. The overall experience of a tourist is profoundly influenced by how they are treated and how well their expectations are met. In this sense, hospitality staff contribute not only to the efficient functioning of the business but also to the overall image of a tourist destination. The hospitality industry faces challenges related to the recruitment and retention of qualified personnel, as quality services depend on dedicated employees with excellent communication and adaptability skills. In this context, investments in training and development become essential. Well-trained employees are better able to anticipate customer needs, solve problems, and contribute to memorable experiences. In Romania, as in other countries, this sector faces a range of challenges regarding recruitment, retention, and training of staff.

Disparity in the Average Number of Employees in Romania's Hospitality Industry

Between 2008 and 2023, the data shows a variable evolution of human resources, characterized by both increases and decreases that reflect economic, social dynamics, and possible political interventions. In 2008, the human resource pool was 118,306 individuals, and by 2023, it had reached 201,989, which represents a significant cumulative increase of approximately 70.7% over the entire period. Year by year, we observe a decline in human resources between 2008 and 2011, with a sharp decrease in 2010 of 8.057%, which may reflect the effects of the global economic crisis on this sector. This period was followed by stabilization and gradual recovery, marking a significant increase starting in 2012. After 2015, a continuous increase in human resources is observed, peaking with large growth values in 2016 (12.986%) and 2017 (12.304%). The growth during this period can be explained by an increased interest in the hospitality field, a possible intensification of tourism and service activities, and improvements in working conditions or demand in this sector. Regarding the share of human resources at the national level, it has consistently increased, from 0.525% in 2008 to 0.923% in 2023, highlighting the growing importance of this sector in the national economy.

Starting from 2012, the share shows a clear upward trend, confirming that the hospitality and related services sector has gradually gained more relevance in the overall economic structure. The year 2020 marked a notable decrease both in terms of the number of employees and their share at the national level, most likely due to the restrictions imposed by the COVID-19 pandemic. This decrease was -9.303%, a significant reduction reflecting the pandemic's impact on the hospitality industry. After this decline in 2020, a gradual recovery is observed, with a moderate increase of 0.669% in 2021, followed by more accelerated growth of 9.137% in 2022 and 8.366% in 2023. This trend reflects both a recovery of the sector and a possible adaptation of human resources and hospitality activities to the new post-pandemic conditions. The growth in recent years also suggests a rebound in demand for tourist services and a potential expansion of accommodation and related service capacities (Figure 1).

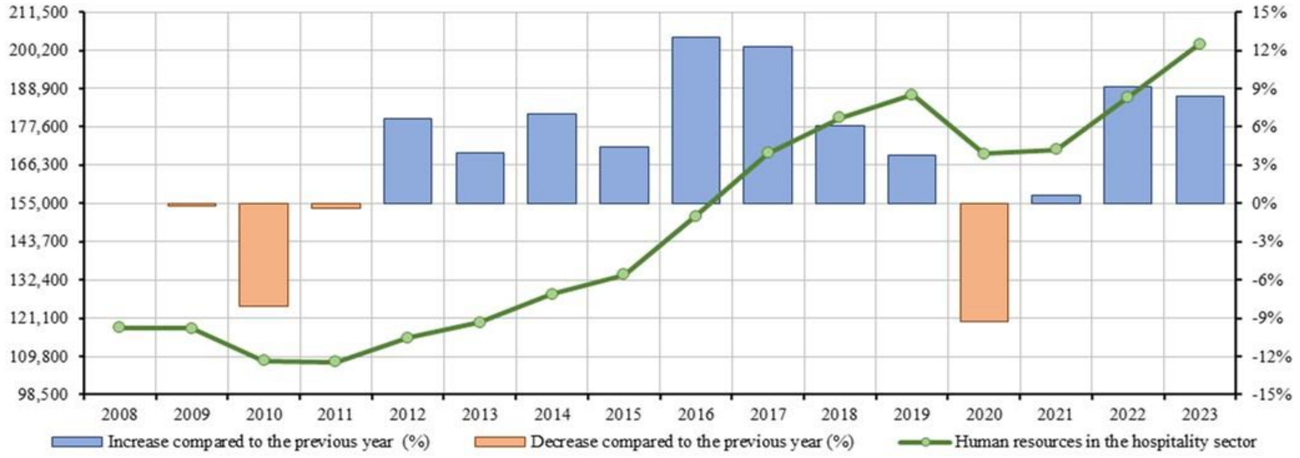

Figure 1. Human resources in Romania's hospitality industry from 2008 to 2023
(Data source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table)

The *North-West and Centre Regions* (Macroregion One) recorded a robust increase in the average number of employees in the hospitality industry, from 32,800 in 2008 to 56,938 in 2023 (+73.5%). This growth is primarily driven by cultural, mountain, and urban tourism, which has experienced accelerated development in the North-West and Centre regions. The North-West region stood out for the dynamic growth of Cluj County, which saw an increase of 96% (from 4,445 in 2008 to 8,717 in 2023). Cluj-Napoca, becoming an important academic and economic center, attracted tourists due to cultural events and modern hotel infrastructure. Other counties in the region, such as Bihor and Maramureș, benefited from spa, cultural tourism and transborder tourism (Wendt et al., 2021), with significant growth in resorts and historical destinations. The Centre region was the leader of the macroregion, with Brașov and Sibiu counties at the forefront. Brașov grew by 48% (from 6,745 to 10,007), driven by mountain tourism and the historic city. Sibiu recorded a 56% increase (from 3,316 to 5,183), solidifying its status as a European tourist hub. Smaller counties like Covasna and Harghita showed more modest growth, focusing on rural and spa tourism (Figure 2).

In the *North-East and South-East Regions* (Macroregion Two), the average number of employees in the hospitality industry increased significantly, from 28,310 in 2008 to 50,416 in 2023 (+78%), but regional disparities are evident. The North-East region was marked by the dynamism of Iași and Suceava counties, where the number of employees grew by 88% (Iași, from 3,425 to 6,456) and 98% (Suceava, from 2,861 to 5,688). Iași, as a university and cultural center, benefited from significant hotel investments. In Suceava, religious tourism and cultural heritage promotion had a major impact. In the South-East region, Constanța dominated with a 50% increase (from 8,879 to 13,356). The development of seaside tourism was crucial for the region, but seasonality remains a challenge, affecting employment stability. Counties like Brăila, Buzău, and Tulcea showed moderate increases due to the promotion of rural and eco-tourism.

The *South-Muntenia and Bucharest-Ilfov Regions* (Macroregion Three), the largest in terms of average number of employees, grew from 36,705 in 2008 to 59,183 in 2023 (+61%). The Bucharest-Ilfov region was the main driver of the macroregion, with a total of 40,024 employees in 2023. Bucharest, as the center of business tourism, attracted major investments in hotel and restaurant infrastructure. At the same time, Ilfov County grew by 101% (from 2,575 to 5,187), supported by the development of the metropolitan area. The South-Muntenia region showed steady growth, with Prahova and Argeș counties being the most dynamic. Prahova grew by 43% (from 4,059 to 5,836), thanks to mountain tourism and resorts like Sinaia and Bușteni. Argeș recorded a 76% increase (from 2,403 to 4,220), driven by recreational tourism and local investments (Figure 2).

Although contributing less in absolute terms, the *South-West Oltenia and West Regions* (Macroregion Four) saw a significant increase in the average number of employees in the hospitality industry, from 20,491 in 2008 to 35,452 in 2023 (+73%). In the South-West Oltenia region, Dolj County recorded the largest percentage increase (+135%, from 1,911 to 4,482), supported by infrastructure investments and diversification of the tourism offer. Vâlcea County, known for spa tourism, grew by 65% (from 2,895 to 4,789). The West region was dominated by Timiș County, which grew by 55% (from 5,001 to 7,762), thanks to its strategic location and economic development. Arad County also benefited from significant growth, linked to its location at the western border (Figure 2).

The evolution of the average number of employees in the hospitality industry highlights clear discrepancies between developed and less-developed regions. The Bucharest-Ilfov, North-West, and Centre regions benefited from massive investments and a steady flow of tourists, leading to rapid workforce growth. In contrast, regions dependent on seasonality, such as the South-East, and underdeveloped regions, such as South-West Oltenia and North-East, show slower growth, influenced by insufficient infrastructure and limited access to tourist markets (Figure 2).

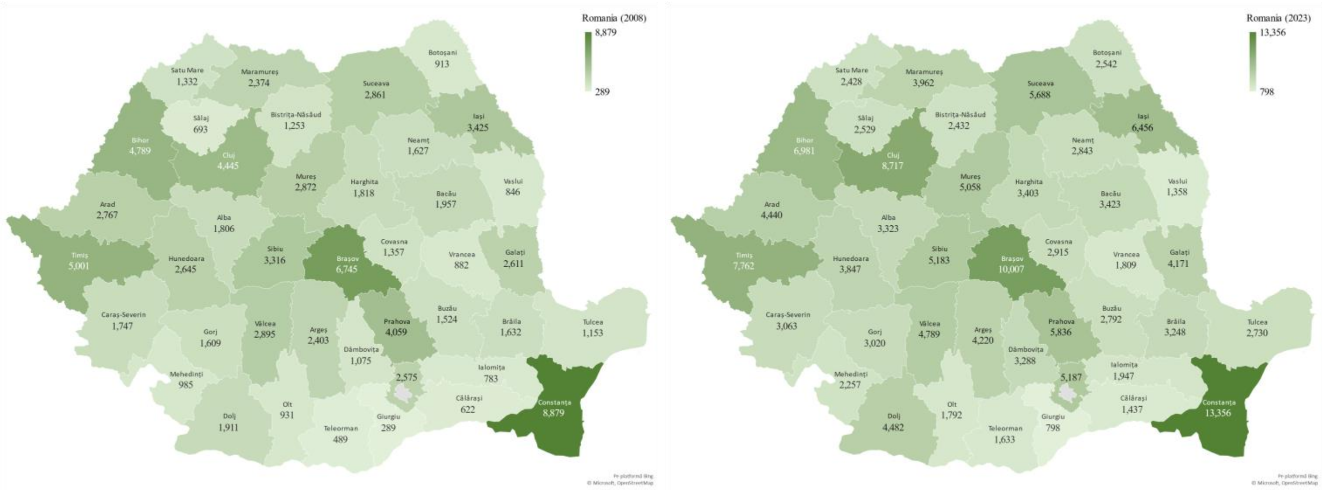

Figure 2. Human resources in the hospitality industry in Romania in 2008 (left) and 2023 (right)
(Data source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table)

The distribution of the workforce by gender remained relatively stable throughout the analyzed period, with women consistently representing the majority of employees, accounting for over 60%. However, both gender categories were affected by the COVID-19 pandemic, which caused a significant reduction in the number of employees in 2020 and 2021. The rapid recovery starting in 2022 led to a new historical peak in 2023.

Male employees. The average number of male employees in the hospitality industry in Romania increased from 43,735 in 2008 to 78,258 in 2023, representing a growth of 78.9%. The proportion of men among the total workforce fluctuated between 36.4% (in 2009) and 39.7% (in 2019). The highest percentage values for this category were recorded in 2018-2019, when the proportion of men approached 40%. The COVID-19 pandemic had a notable impact on the average number of male employees in Romania's hospitality industry. In 2020, the number dropped to 66,993, marking a decrease of 9.7% compared to 2019. However, the recovery was swift, and by 2023, the number of male employees reached a record high. This suggests a growing demand for roles traditionally associated with male employees, particularly those requiring flexibility or physical effort (Figure 3).

Female employees. The average number of female employees in the hospitality industry in Romania consistently represented the majority of the workforce, with a share of over 60% every year during the analyzed period. Their number grew from 74,571 in 2008 to 123,731 in 2023, recording an absolute increase of 65.9%. This predominance can be explained by the nature of the industry, which involves direct customer interaction and service activities, traditionally more associated with female employees. The COVID-19 pandemic also had a strong impact on this category. The average number of female employees in the hospitality industry in Romania decreased from 112,866 in 2019 to 102,662 in 2020, a reduction of 9%. However, the recovery was quick, and by 2023, women reached a new historic peak in the number of employees, thereby consolidating their dominant role in this sector (Figure 3).

Gender distribution. Over the 16 years analyzed, the proportion of women in the total workforce fluctuated between 60.3% (in 2019) and 63.6% (in 2009). Women consistently dominated the sector, reflecting a global trend in industries oriented toward personalized services. In contrast, the proportion of men never exceeded 40%, with the highest values recorded in the years before the pandemic, between 2018 and 2019. This stability in gender distribution indicates a clear structure in the hospitality workforce, with well-defined roles traditionally divided by gender. However, the faster growth in the number of male employees suggests a slow trend toward balancing gender participation in this sector (Figure 3).

Impact of the COVID-19 pandemic. The COVID-19 pandemic had a disruptive effect on the hospitality industry, significantly affecting both genders. In 2020, the average number of employees decreased by over 9% for both categories, reflecting economic losses and restrictions imposed on tourism, restaurant, and other service activities. However, the sector demonstrated remarkable recovery capacity. By 2023, both men and women had surpassed pre-pandemic levels, reaching new historical highs. This recovery highlights the resilience of the industry and its adaptability to post-crisis economic conditions. The ability of businesses to innovate, diversify their services, and respond to changing customer needs played a crucial role in this successful rebound (Figure 3).

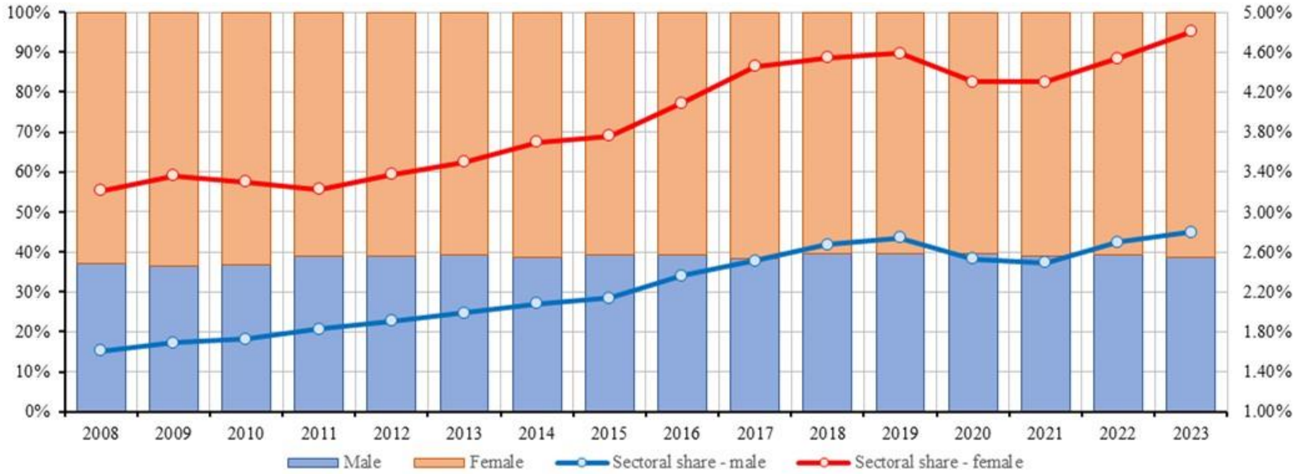

Figure 3. Human resources in the hospitality industry by gender in Romania from 2008 to 2023
(Data source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table)

In 2023, 38.7% of the employees in Romania's hospitality industry were men, and 61.3% were women, reflecting a significantly higher presence of women in this industry. Analyzing data by macroregions and counties reveals substantial differences in the distribution of employees, both in terms of gender proportions and the general structure of the industry.

In *Macroregion One*, which includes the North-West and Centre Regions, the employee structure is quite uniform in terms of women's predominance. Women make up 62.0% of the total workforce, with regional distribution varying between 57.5% (Cluj) and 75.7% (Sălaj). The North-West region, which includes counties such as Bihor and Cluj, stands out with a proportion of approximately 65-70% women, indicating a strong tendency to hire women in the industry, particularly in more economically developed counties. In Bihor, the county with the most women employed in this region (65.7% women), there is a high proportion of women working in hospitality, which may reflect a significant concentration of tourism in this area. However, in counties such as Sălaj, where the proportion of women reaches 75.7%, we can deduce a stronger orientation towards hiring women in the sector, possibly due to more region-specific requirements. In the Centre region, women represent the majority (59.1%), and in counties like Sibiu and Brașov, which are renowned for their mountain and cultural tourism, the proportion of women is significant, reaching 52-47%. These counties attract a large number of tourists, and this may favor a hospitality industry focused on high-quality services, requiring a diverse workforce, but with a slight tendency to hire women, likely due to flexibility requirements in working hours and hospitality (Figure 4).

In *Macroregion Two*, which includes the North-East and South-East Regions, a similar distribution is observed, with women comprising 66.5% of the total workforce in the industry. The North-East region is characterized by a slightly higher predominance of women, with counties like Suceava (62.9%) and Iași (62.0%). However, the county of Neamț, with 73.9% women, stands out with an even higher concentration of female employees, suggesting an increasing demand for female labor in the industry, likely due to regional characteristics of tourism, such as cultural and leisure tourism. In the South-East region, the proportion of women remains high (67.7%), and counties such as Constanța, with 67.1% women, reflect the fact that coastal tourism generally favors the employment of a female workforce due to the diversity of jobs in hospitality (hotels, restaurants, travel agencies). This region, being a top tourist destination, may generate a higher demand for women in the hospitality industry, as well as a trend toward seasonal jobs, which are often more accessible to women (Figure 4).

In *Macroregion Three*, which includes the South-Muntenia and Bucharest-Ilfov Regions, there is a more balanced distribution between men and women, especially in Bucharest, where the number of men and women is nearly equal (48.6% and 51.4%). Bucharest and Ilfov benefit from a high concentration of hotels, restaurants, and travel agencies, which can provide more employment opportunities for both sexes. In the South-Muntenia region, in counties like Giurgiu and Călărași, women represent a significant proportion, indicating a possible direction similar to more developed regions regarding the employment of women in tourism services, including reception and management positions (Figure 4).

In *Macroregion Four*, the employee structure in the hospitality industry reflects an interesting regional diversity. In the South-West Oltenia Region, women make up 64.8% of the total workforce, and counties like Vâlcea (66.8%) and Dolj (58.6%) highlight a higher proportion of women, indicating a strong trend in health and wellness tourism, particularly in the resorts along the Olt River and in counties along the Danube. In the West Region, counties such as Timiș and Arad are dominated by women (63.3% and 51.3%), reflecting a strong orientation toward business and event tourism services, as well as a dynamic tourism infrastructure that requires a large workforce, including women, in the hospitality industry . This region benefits from rapid economic development and a demand for diverse tourism s ervices, especially in business meetings and cultural tourism (Figure 4).

Analyzing data nationwide, it is observed that in 2023, women dominate Romania's hospitality industry , with an average of 61.3% of the total workforce. This reflects a general trend in the industry to hire more women, particularly in regions with more developed tourism and in hospitality and reception roles. However, there are notable exceptions in some counties where men represent a significant proportion, especially in more industrialized regions or those with specialized tourism, such as business or mountain tourism. This diversity in employee structure can be attributed to both the characteristics of the local tourism market and regional specifics of labor force requirements in the hospitality industry.

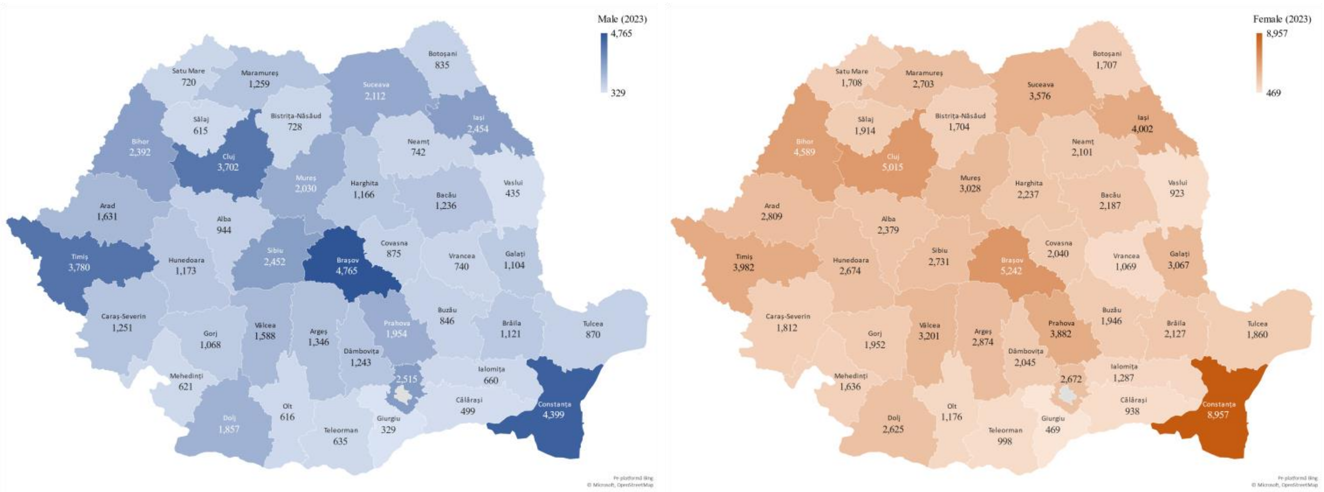

Figure 4. Human resources in the hospitality industry in Romania in 2023 by gender: male (left) and female (right)
(Data source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table)

Disparity in the average monthly net nominal wage of human resources in the hospitality industry in Romania

Between 2008 and 2023, the average monthly net nominal wage in Romania's hospitality industry showed a consistent upward trend, with significant growth, especially between 2014 and 2023. Wages in the sector evolved notably compared to the national average, reflecting both an adaptation to economic conditions and the development of the tourism and hospitality industry , which experienced significant expansion during these ye ars. This analysis aims to highlight both the general trends in sector wages and their relationship with the national average wage to better understand how the economic and social situation of employees in the hospitality industry has changed. Additionally, the increasing wages in this sector may also indicate a rising demand for skilled labor and a shift towards attracting and retaining more qualified professionals. This trend suggests that the hospitality industry is gradually evolving towards a more professionalized workforce, with greater emphasis on employee expertise and specialized training.

From 2008 to 2023, the wage trend in the hospitality industry was One of consistent growth. Starting from an average wage of 773 lei in 2008, it reached 2,570 lei in 2023, representing an increase of nearly 3.3 times. This growth aligns with the general development of Romania’s economy but also reflects a significant rise in demand for tourism and hospitality services starting in 2014. Wages began rising faster from 2014, as the economy recovered post-crisis, and the number of tourists visiting Romania increased. Thus, the hospitality industry benefited from an accelerated wage growth, reflecting not only improving economic conditions but also greater recognition of the sector's importance in the national economy (Figure 5).

Between 2009 and 2014, the wage increase in the hospitality industry was slower, with a slight decrease in the average wage in 2009, from 799 lei in 2008 to 786 lei. This coincided with the global economic crisis, which significantly impacted Romania's economy and reduced the demand for tourism and hospitality services. The average wage continued to grow modestly between 2010 and 2013, and this rate of growth was much slower compared to the years that followed. In addition, in 2020, due to the impact of the COVID-19 pandemic, wages in the sector saw relative stagnation, with only a modest increase of 36 lei compared to the previous year, and the share of wages in the hospitality industry compared to the national average dropped to 54.8%, the lowest level during the analyzed period. This stagnation reflects the devastating economic effects of the pandemic, which affected Romania's tourism sector and led to a decrease in demand for hospitality services (Figure 5). Starting in 2021, the hospitality industry experienced a rapid recovery, with a significant increase in wages, signaling that the sector began to stabilize and recover. The average wage in this sector increased by nearly 300 lei in 2021 and 2022, and in 2023, the increase was even more pronounced, with a rise of 689 lei compared to 2022. This reflects both the recovery of the economy and government measures to support tourism and hospitality, as well as the gradual return to high demand for tourism services following the lifting of pandemic restrictions. In this context, the hospitality industry saw significant revitalization, and employees in the sector experienced important wage increases (Figure 5).

A significant aspect of the evolution of wages in the hospitality industry is their relationship with the national average wage. The share of wages in the hospitality industry compared to the national average wage fluctuated throughout the 2008-2023 period but generally remained within a relatively constant range, varying between 54.8% and 60.9%. In 2008, wages in the hospitality industry represented 59.1% of the national average wage, and this share slightly decreased in the following years, reaching a low of 54.8% in 2020, in the context of the economic crisis and the pandemic. However, starting in 2021, the share of wages in the hospitality industry began to rise slightly, reaching 58.3% in 2023, suggesting a strong recovery and better alignment of this sector with the rest of the national economy. These wage increases may reflect not only an improvement in economic conditions but also a trend toward attracting and retaining the workforce in the hospitality industry , which has become increasingly important as tourism continued to develop (Figure 5).

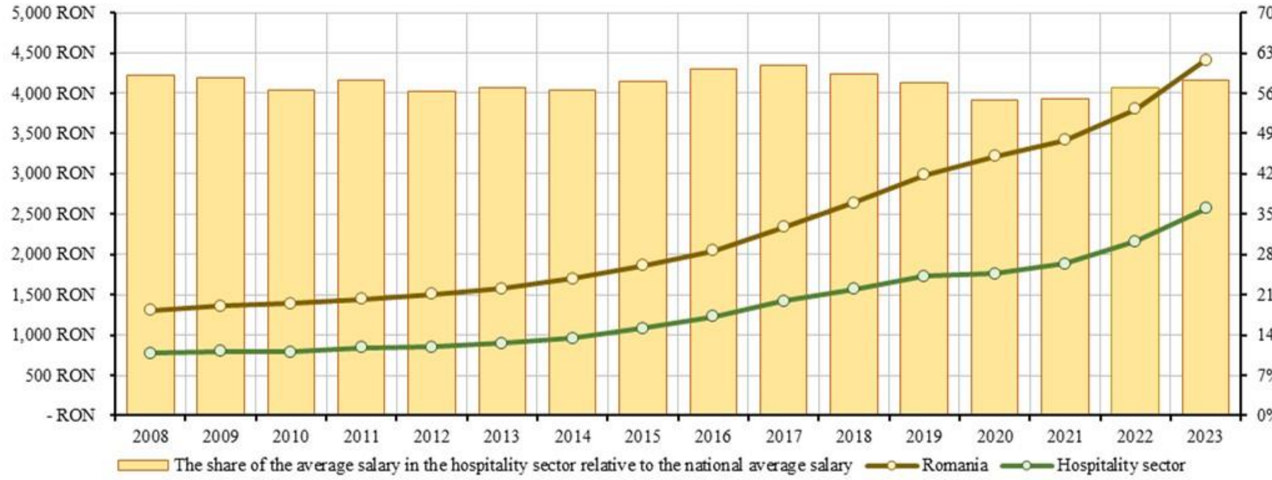

Figure 5. The average nominal net monthly wage of the human resources in the hospitality industry in Romania (2008-2023)
(Data source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table)

Analyzing the data regarding the average nominal net monthly wage of human resources in the hospitality industry in *Macroregion One* from 2008 to 2023, a general upward trend in wages can be observed, with notable fluctuations at different time intervals. In the early years of the period, between 2008 and 2012, wages in Macroregion One increased steadily, from 668 lei in 2008 to 806 lei in 2012. This period was marked by moderate growth, reflecting economic stabilization but also national economic challenges. From 2013 to 2016, wages continued to rise significantly, reaching 1,015 lei in 2016, and in the following years, from 2017 to 2020, there was a period of accelerated growth. By 2020, the wage reached 1,675 lei, and in 2023, it had reached 2,543 lei. The substantial increases from 2016 to 2023 reflect the continuous expansion of the hospitality industry in the context of a post-crisis stabilized economy and the development of tourism and related services. Wages increased by approximately 53% between 2016 and 2023, indicating both an increase in labor demand and improved working conditions and competitiveness within the sector. Within Macroregion One, there is also significant regional diversification regarding wages. For example, in the North-West Region, wages have generally been higher than in the Center Region, with notable differences in certain counties. In Cluj County, wages saw a significant rise, reaching 2,848 lei in 2023, while counties such as Bihor and Maramureș also experienced steady wage increases, reaching 2,474 lei in Bihor and 2,104 lei in Maramureș in 2023 (Figure 6).

Analyzing the data on the average nominal net monthly wage of human resources in the hospitality industry in Macroregion Two from 2008 to 2023, a constant upward trend is observed, with some interspersed fluctuations, especially during the economic crisis period and the years immediately following. From 2008 to 2012, the wage in Macroregion Two grew moderately, from 694 lei in 2008 to 800 lei in 2012. This slower growth can be attributed to the impact of the global economic crisis in 2008-2009, which affected the hospitality industry , as well as other internal economic factors. Although wages continued to rise after 2012, the increases were relatively constant until 2015, when the wage reached 965 lei. After this period, from 2015 to 2023, wages experienced an accelerated rise, reaching 2,395 lei in 2023, reflecting a significant expansion of the hospitality industry and an improvement in overall economic conditions. Within the regions of Macroregion Two, the data suggest significant differences between areas. In the North-East Region, wages increased steadily from 638 lei in 2008 to 2,301 lei in 2023, with remarkable increases in the counties of Bacău and Iași, which recorded the highest values, reaching 2,316 lei in Bacău and 2,439 lei in Iași. Additionally, Suceava and Vaslui saw an upward trajectory, with wages of

2,263 lei and 2,097 lei in 2023, respectively. In the South-East Region, wages followed a similar growth trend. For example, Constanța County had the highest wages in the region, reaching 2,610 lei in 2023. Other counties, such as Galați and Buzău, recorded constant increases in wages, reaching 2,406 lei in Galați and 2,263 lei in Buzău. Additionally, Tulcea and Vrancea also saw significant increases, with wages of 2,203 lei in Tulcea and 2,503 lei in Vrancea in 2023 (Figure 6).

Analyzing the data regarding the average nominal net monthly wage of human resources in the hospitality industry in Macroregion Three from 2008 to 2023, a constant increase in wages is observed, with some fluctuations during the economic crisis period, followed by a recovery and continuous wage expansion in recent years. Starting from 2008, the average wage in Macroregion Three was 977 lei, and in the following years, it experienced moderate growth, reaching 1,086 lei in 2012. After this period, from 2013, a more pronounced increase was observed, with values exceeding the 1,200 lei threshold in 2014 and continuing to rise significantly in the following years. Wages reached 2,889 lei in 2023, representing a considerable increase compared to the initial values. This growth can be attributed both to the economic development of the hospitality industry and the improvement of general labor market conditions.

Within the regions that make up Macroregion Three, there is significant diversity in wage development. In the South-Muntenia Region, wages started at 731 lei in 2008 and showed steady growth, reaching 2,468 lei in 2023. Among the counties in this region, Argeș saw the highest growth, with wages reaching 2,607 lei in 2023, reflecting sustainable economic development. Călărași County, although starting with a lower wage (572 lei in 2008), experienced a significant increase to 2,191 lei in 2023, indicating considerable improvement in the economic conditions of this area. The Bucharest-Ilfov Region recorded the highest wage values in Macroregion Three, with a steady rise from 1,066 lei in 2008 to 3,091 lei in 2023. This region, with a high concentration of economic and tourist activities, saw remarkable wage increases, particularly in Bucharest and Ilfov County. In Bucharest Municipality, wages grew from 1,083 lei in 2008 to 3,100 lei in 2023, reflecting both the growth of the hospitality industry and the economic and tourist appeal of the capital. Ilfov County also saw consistent increases, with wages reaching 3,032 lei in 2023 (Figure 6).

Analyzing the data on the average nominal net monthly wage in the hospitality industry in Macroregion Four between 2008 and 2023, a trend of steady growth is observed, with some fluctuations over the period. This evolution reflects the economic dynamics of the region and the hospitality industry , as well as the impact of various economic and social events. In 2008, the average wage in Macroregion Four was 683 lei, and over the years, growth was evident, with a slight acceleration after 2012. By 2023, the average wage had reached 2,326 lei, indicating significant growth. This increase can be explained by the development of the tourism and hospitality industry , alongside the improvement of working conditions and wages in general within this region. In the regions that make up Macroregion Four, there are significant variations in wage evolution. In the South-West Oltenia Region, for example, the average wage grew from 667 lei in 2008 to 2,293 lei in 2023, representing consistent growth. This region saw relatively steady increases, with a significant jump starting in 2013 when wages exceeded 1,200 lei. Dolj County in this region had notable performance, with wages rising from 652 lei in 2008 to 2,298 lei in 2023, reflecting the improvement in economic conditions and tourism infrastructure. Additionally, Mehedinți County saw remarkable growth, with wages increasing from 575 lei in 2008 to 2,124 lei in 2023. In the West Region, wage growth was also significant, with an increase from 694 lei in 2008 to 2,354 lei in 2023. The counties in this region, such as Arad, Timiș, and Hunedoara, had positive wage evolution, with Arad recording the largest increase, reaching 2,443 lei in 2023, compared to 641 lei in 2008. Timiș County, with its tradition of tourism and infrastructure development, had a solid wage evolution, reaching 2,473 lei in 2023 (Figure 6).

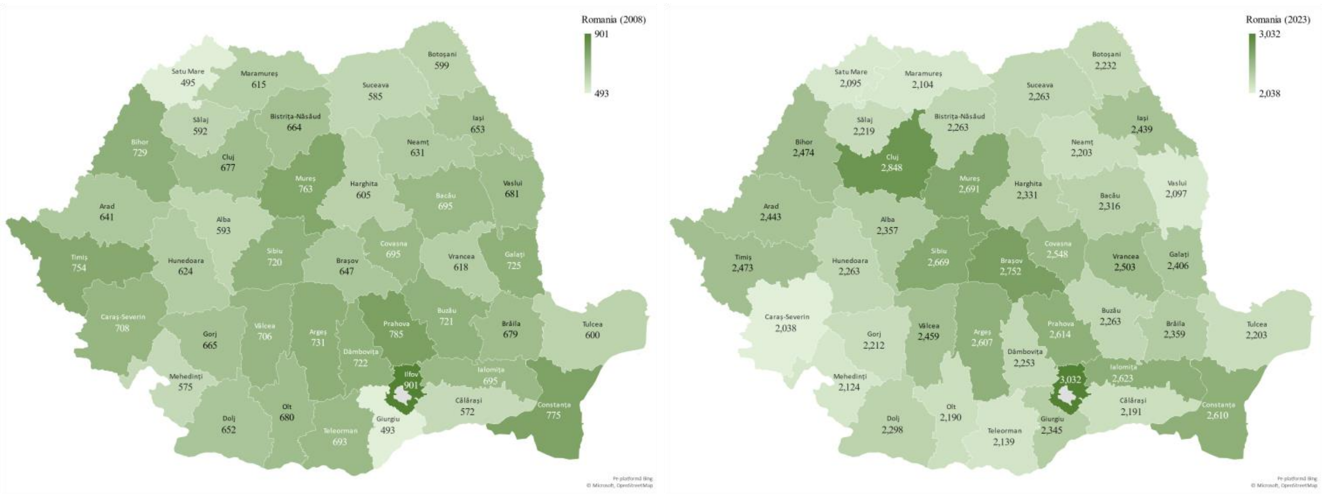

Figure 6. The average monthly net nominal wage of human resources in the hospitality industry in Romania in 2008 (left) and 2023 (right) (Data source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table)

In 2023, the hospitality industry in Romania continued to show interesting differences between the average monthly net salaries of male and female human resources, with significant regional particularities. At the national level, the average monthly net wage for men was 2,329 lei, while for women it was 2,324 lei, indicating a relatively small difference of only 1%. This suggests a general trend of salary balance between the Two genders, even though the distribution of wages varies significantly depending on the region and the job structure within the hospitality industry .

In the South-West Oltenia Region, salary differences between men and women are evident, with women earning an average monthly net salary of 2,309 lei, higher than that of men (2,264 lei). This situation may be attributed to a higher number of women employed in administrative or management positions in hotels, restaurants, and other hospitality units in the region, roles that are often better paid. Moreover, regions such as Dolj recorded a higher average wage for women (2,370 lei), compared to men (2,196 lei), suggesting a possible concentration of better-paying jobs for women in certain sectors of the hospitality industry, such as luxury tourism or high-quality services (Figure 7).

Conversely, in other regions of the country, men earned higher average salaries than women. For example, in Arad County, the average salary for men was 2,542 lei, compared to 2,385 lei for women. This type of difference may reflect a higher presence of men in better-paid positions, such as management roles in large hotel units or in the food service sector, which may involve more responsibilities and specific requirements. Additionally, counties with a large number of large accommodation units, especially in high-traffic tourist areas, may favor higher salaries for men, considering their job structures, which tend to focus more on leadership and coordination positions (Figure 7).

On the other hand, in the Bucharest-Ilfov Region, which includes the capital, hospitality industry wages were generally higher compared to the rest of the country, with minimal gender wage differences. In Bucharest, for example, men earned an average of 3,082 lei, while women earned 3,116 lei, with a difference of only 1%. This wage balance may reflect a more diversified and better-paid hospitality industry in the capital, where there is a higher concentration of luxury accommodation units and restaurants, offering both men and women equal opportunities to occupy management positions or other higher-paying roles (Figure 7).

At the national level, Romania's hospitality industry continues to display a balanced wage structure between men and women, although regional differences and job structures significantly influence average salaries. This suggests that in certain regions, women benefit from better salary opportunities, while in others, men are favored by the job structure in this sector. Economic, demographic, and market factors, such as the type of available jobs, the tourist structure of regions, and the specific requirements of the hospitality industry, continue to play an important role in shaping these wage differences.

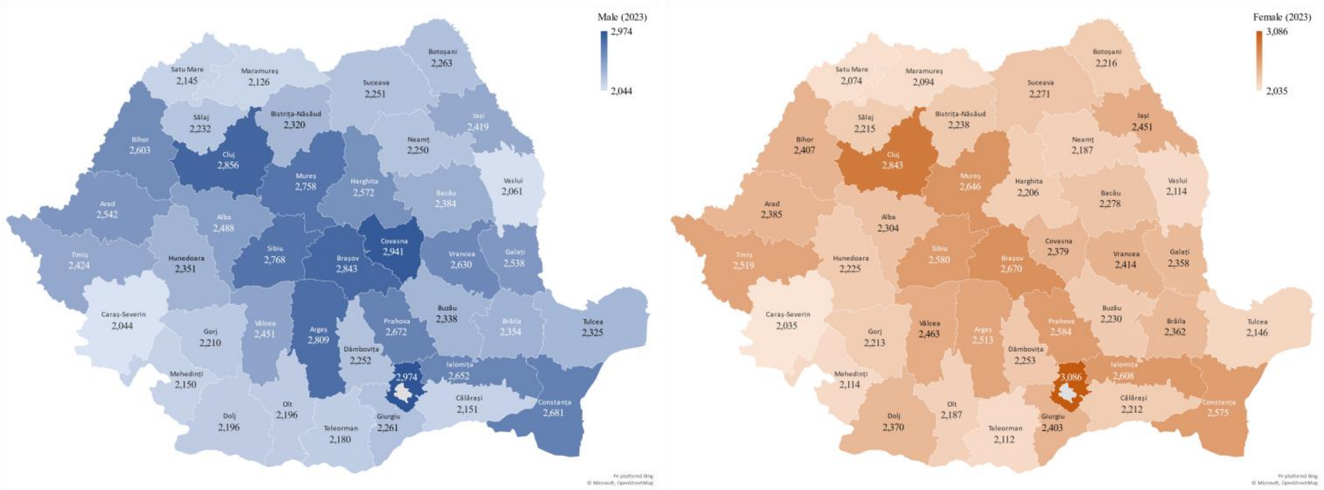

Figure 7. The average monthly net nominal wage of male (left) and female (right) human resources in the hospitality industry in Romania in 2023 (Data source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table)

The disparity in human resource productivity in the hospitality industry in Romania

Tourism productivity per employee in the hospitality industry in Romania can be defined as the ratio between the total number of overnight stays by tourists in Romania and the total number of employees in the hospitality industry during the same period. This measure reflects the efficiency with which employees in the hospitality industry contribute to generating tourism revenue. The general formula for calculating tourism productivity per employee in the hospitality industry is:

$$\text{Tourism productivity per employee} = \frac{\text{Total number of overnight stays}}{\text{Average number of employees in the hospitality industry}}$$

This value can provide important insights into:

1. *Hospitality industry efficiency*: if the ratio is higher, it means that each employee contributes to a greater number of overnight stays, indicating higher productivity.

2. *Comparing different regions or periods*: it can be used to compare sector performance between different counties, regions, or time periods.

3. *Economic trends*: an increase or decrease in this indicator can signal changes in tourist demand or the operational efficiency of accommodation units.

By analyzing data related to human resource productivity in the hospitality industry in Romania between 2008 and 2023, we calculate and interpret its evolution using the productivity formula (total number of overnight stays / average number of employees). This allows us to observe how the sector has responded to economic fluctuations and external changes, such as economic crises and the COVID-19 pandemic.

In 2008, human resource productivity in Romania's hospitality industry was 175, and in 2009, it significantly dropped to 147, a decrease of approximately 16.2%. This reflects the impact of the global financial crisis, which led to a decline in the number of tourists and a less efficient use of labor. In 2010, human resource productivity in Romania's hospitality industry remained relatively constant at 148, showing a slight increase of 0.76% compared to the previous year, indicating that the sector was beginning to recover partially (Figure 8).

Between 2011 and 2013, human resource productivity in Romania's hospitality industry fluctuated slightly. In 2011, it increased by 12.46%, reaching 166, suggesting a recovery in tourism. However, in 2012 and 2013, productivity decreased again, reaching 166 (a slight drop) and 162 (a 2.8% decrease), which could be attributed to an economic stagnation and an increase in the number of employees relative to the number of overnight stays (Figure 8).

In 2014, human resource productivity in Romania's hospitality industry slightly dropped to 158, but in 2015, it saw a significant increase of 11.1%, reaching 176, reflecting an increase in tourism demand and a better correlation between the number of employees and tourism activity. This increase was followed by a slight drop in 2016, with a figure of 168, and another 5.2% decrease in 2017, when productivity reached 160. These fluctuations might indicate market instability and a relative increase in the number of employees without a proportional increase in tourism demand (Figure 8).

In 2020, due to the COVID-19 pandemic, human resource productivity in Romania's hospitality industry dramatically dropped to 86, a decrease of almost 46.6% compared to 2019. This reflects severe restrictions in tourism, the closure of accommodation units, and a massive decline in the number of tourists, which significantly reduced the number of overnight stays, despite the large number of employees (Figure 8).

After 2020, human resource productivity in Romania's hospitality industry began to recover significantly. In 2021, it increased by almost 55%, reaching 133, and in 2022 and 2023, productivity continued to rise, reaching 145 and 147, with growth rates of 8.94% and 1.31%, respectively. This recovery is significant, suggesting that the hospitality industry managed to adapt to the new market conditions, reduce costs, and optimize the use of human resources in the context of health safety requirements and post-pandemic changes in tourist behavior (Figure 8).

The analysis of data from 2008 to 2023 shows that human resource productivity in Romania's hospitality industry has been volatile, heavily influenced by global economic crises and the COVID-19 pandemic. However, the significant recovery in the last Two years suggests a positive adaptation of Romania's hospitality industry , with higher human resource productivity and a better correlation between the number of employees and the demands of the tourism market.

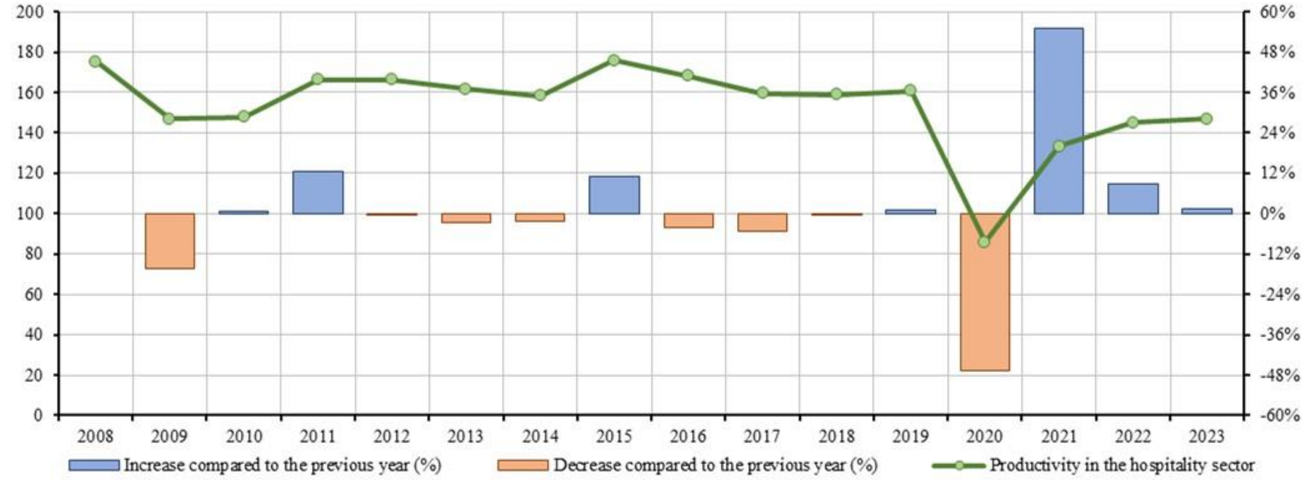

Figure 8. The productivity of human resources in the hospitality sector in Romania from 2008 to 2023
(Data source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table)

Analyzing human resource productivity in the hospitality industry in Macroregion One during the period 2008-2023, we can observe significant fluctuations across its component regions, as well as general trends of increase and decrease that reflect both economic and social changes, as well as specific factors for each region. In 2008, Macroregion One recorded a productivity of 173, and over the years, productivity showed an upward trend, reaching its peak in 2015, with a value of 209. This increase can be attributed to a period of expansion in the tourism sector, marked by growing demand for accommodation services and better utilization of human resources in the sector. After 2015, productivity began to slightly decline in 2016, reaching 196, but remained relatively stable until 2019, with values around 190. In 2020, a year marked by the COVID-19 pandemic, productivity in Macroregion One dropped dramatically, reaching 98. This reflects the severe impact of travel restrictions and social distancing measures on the tourism sector, which directly affected the number of overnight stays. However, after this sharp decline, productivity began to recover, reaching 162 in 2021, and continued to rise slightly in 2022 and 2023, reaching 177 and 180, respectively. These increases in recent years suggest a recovery of the tourism sector in the context of relaxed restrictions and the gradual return of tourism demand. When analyzing the regions within Macroregion One, we observe notable differences in terms of productivity. For example, Bihor County consistently had high productivity, reaching 236 in 2008 and maintaining a relatively stable trend until 2019, when it recorded 227. Even in 2020, despite the pandemic, Bihor recorded a productivity of 118, significantly higher than the regional average. On the other hand, Bistrița-Năsăud and Sălaj counties experienced much higher fluctuations, with extremely low productivity in certain periods. For instance, in 2020, Bistrița-Năsăud recorded a dramatic decrease in productivity, reaching 45, while Sălaj dropped to 20, reflecting the severe impact of the pandemic on tourism in these counties. After 2020, both counties began to recover slightly, reaching values of 79 and 32 in 2023, respectively. In contrast, Brașov County had constant and relatively high productivity throughout the analyzed period, reaching a peak of 319 in 2015 and continuing to remain above the regional average until 2023, with a value of 293. This is likely due to high tourism demand in Brașov, a county with significant tourist appeal, and good management of human resources (Figure 9).

Analyzing human resource productivity in the hospitality industry in Macroregion Two during the period 2008-2023, we observe a variable trend that reflects both economic and social conditions and the regional specificities of the tourism sector in this area. In 2008, Macroregion Two recorded a productivity of 247, One of the highest values during the analyzed period. Over the years, productivity showed significant fluctuations, reaching a minimum of 130 in 2020, due to the impact of the COVID-19 pandemic, similar to the trends observed in other regions of the country. After this sharp decline, productivity began to recover in 2021, reaching 188, and continued to increase until 2023, reaching 180. This suggests a gradual recovery of the tourism sector as restrictions were lifted and tourism activities resumed.

Throughout the 2008-2023 period, the North-East Region, which includes Bacău, Botoșani, Iași, Neamț, Suceava, and Vaslui counties, had significantly lower productivity compared to the regional average. For example, in 2008, the region's productivity was 144, and by 2023, it had decreased to 131, with larger fluctuations over the years. Botoșani County recorded the lowest values throughout the entire period, with a low of 20 in 2020, reflecting the severe negative impact of the pandemic on tourism in this less touristy area. In contrast, Suceava experienced positive growth, with increased productivity in most years, reaching 207 in 2023, reflecting a more active and better-adapted tourism sector.

In the South-East Region, which includes Brăila, Buzău, Constanța, Galați, Tulcea, and Vrancea counties, productivity had a more stable trend, but with significant differences between counties. For example, Constanța, a county with significant tourist offerings, recorded remarkable productivity, especially during 2008-2019, reaching a peak of 500 in 2008 and maintaining relatively high values until 2019. Even in 2020, despite the pandemic's impact, Constanța managed to maintain a productivity of 318, suggesting greater resilience in the tourism sector of this region, especially due to its tourist potential and attractions on the Romanian coast. Additionally, Brașov, a county with an important tourism offer, and Vrancea also had notable fluctuations, with significant drops in 2020 (from 87 in 2019 to 38 in 2020 for Brașov) and gradual recoveries in the following years (Figure 9).

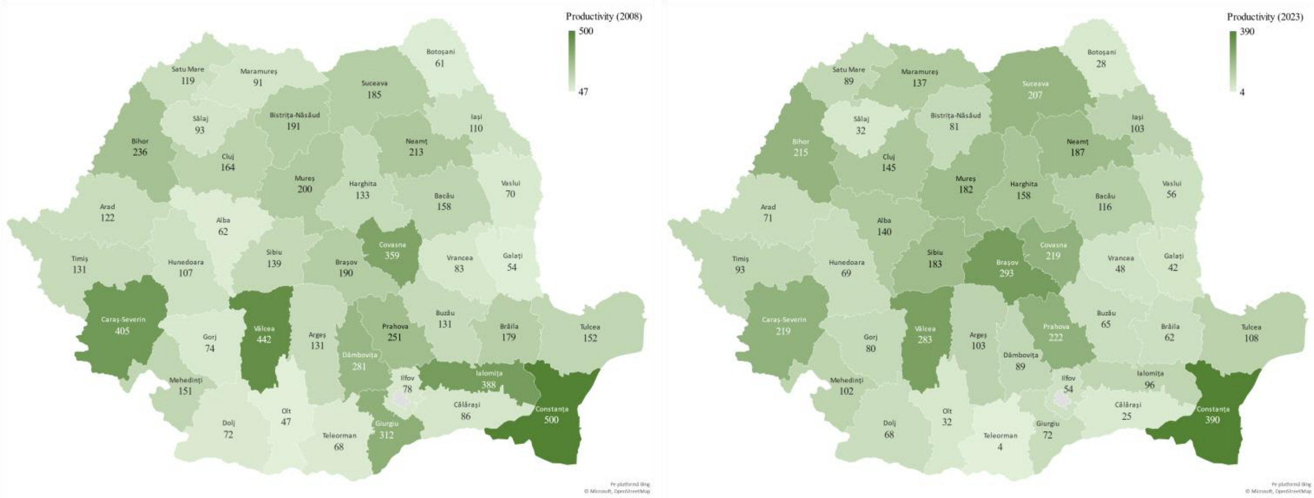

Figure 9. Human resource productivity in the hospitality industry in Romania in 2008 (left) and 2023 (right)
(Data source: http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table)

Analyzing human resource productivity in the hospitality industry in Macroregion Three during the period 2008-2023, a significant evolution is observed, largely influenced by the economic and social conditions of this region, with notable variations between different counties and regions that make it up. In 2008, Macroregion Three recorded a productivity of 118, and in the following years, it had a relatively stable trend, reaching a peak of 119 in 2015. After this point, productivity began to decrease, reaching 43 in 2020, when the COVID-19 pandemic had a significant impact on the hospitality industry . This decline clearly reflects the decrease in tourism activities across the region, as well as nationwide. Subsequently, starting in 2021, productivity began to recover gradually, reaching 105 in 2023, though it did not reach the levels prior to the pandemic. The South-Muntenia Region, which includes Argeș, Călărași, Dâmbovița, Giurgiu, Ialomița, Prahova, and Teleorman counties, had relatively higher productivity compared to the regional average. For example, in 2008, the productivity of this region was 218, and in 2019, it reached a peak of 277, suggesting a period of expansion in the tourism sector and demand for hospitality services. However, like in other regions, 2020 was a critical year, with a significant drop in productivity, reaching 69. After this sharp decline, productivity saw continuous growth, reaching 105 in 2023, but without returning to pre-pandemic levels. Within the South-Muntenia Region, counties had varying performances. For instance, Giurgiu recorded One of the highest productivity levels in the region in 2008, with 312, but suffered a drastic decline in 2020, dropping to 17, reflecting the near-total collapse of tourism in this area. In contrast, Prahova, a county with high tourist potential due to mountain resorts and mountain attractions, recorded relatively constant productivity from 2008-2019, peaking at 251 in 2018. After a decline in 2020, Prahova's productivity increased slightly in 2021 and continued to stay at higher values in 2023, reaching 222. In the Bucharest-Ilfov Region, productivity showed a similar evolution. Bucharest recorded high productivity values, starting with 82 in 2008 and reaching a peak of 106 in 2015. After a significant drop in 2020, Bucharest began to regain its productivity, reaching 104 in 2023, suggesting a recovery in urban tourism and demand for hospitality services in the capital. Additionally, Ilfov recorded a continuous decline in productivity from 2008-2020, from 78 in 2008 to 22 in 2020, but began to increase slightly in 2021, reaching 54 in 2023, indicating a moderate recovery of tourism in this county (Figure 9).

Analyzing human resource productivity in the hospitality industry in Macroregion Four during the period 2008-2023, a varied evolution is noted between the counties of this region, with significant differences in economic and tourism performance. Overall, Macroregion Four recorded a productivity of 181 in 2008, with a slight decline in the following years, reaching 155 in 2011, and starting with 2020, due to the impact of the pandemic, productivity dropped sharply to 77. After this severe decline, from 2021-2023, the sector began a recovery, reaching 118 in 2023, indicating that the hospitality industry is starting to recover from the global health crisis. In the South-West Oltenia Region, counties had distinct evolutions. In general, the region recorded higher productivity compared to the regional average. In 2008, it was 208, and in 2015, it reached a peak of 205, suggesting a period of expansion in the hospitality industry .

However, the 2020 pandemic severely affected this sector, and productivity dropped to 88 in 2020. After this point, the region began to recover, with a productivity of 134 in 2023, but not reaching the pre-pandemic levels. This suggests a moderate recovery of tourism and hospitality activities in Oltenia. At the county level in the South-West Oltenia Region, large differences can be observed. For example, Dolj had low productivity from 2008-2010, with values below 80, and in 2020, it reached the minimum value of 28. However, after this point, Dolj recorded a recovery, reaching 62 in 2023. Similarly, Mehedinți had a productivity decrease in 2020, but after that, it returned to 46 in 2023. The West Region, consisting of Arad, Caraș-Severin, Hunedoara, and Timiș counties, had relatively high productivity values throughout the analyzed period, with a peak of 201 in 2008 and relatively constant growth until 2015, reaching a value of 205. After 2015, productivity decreased slightly, reaching 110 in 2020. Like other regions, the West Region saw a major decline in productivity in 2020, but it started to recover in 2021, reaching 119 in 2023 (Figure 9).

CONCLUSION

A detailed study of human resources in the hospitality industry in Romania, conducted over a 15-year period, from 2008 to 2023, provides a deep perspective on the evolution and dynamics of this sector, which is essential for the national economy. The analysis revealed a significant increase in the number of employees, from 118,306 in 2008 to 201,989 in 2023, marking a cumulative growth of approximately 70.7%. This positive development highlights the growing importance of the hospitality industry in Romania's economy, despite fluctuations caused by economic crises and the COVID-19 pandemic.

A crucial aspect identified in the study is the regional disparity in human resource distribution. Macroregions One, Two, Three, and Four experienced varied growth, influenced by factors such as the development of cultural, mountain, and urban tourism. For example, Macroregion One benefited from robust growth due to cultural and urban tourism in Cluj and Brașov counties, while Macroregion Two was marked by the dynamism of Iași and Suceava counties, where religious and cultural tourism had a major impact. These disparities highlight the need for regionally adapted policies to stimulate uniform development of the hospitality industry .The gender distribution of human resources shows a predominance of women in this sector, with women representing over 60% of the total employees throughout the analyzed period. This trend reflects the specifics of the hospitality industry, which involves direct customer interaction and service activities, traditionally associated more frequently with female employees. However, the COVID-19 pandemic significantly affected both genders, but the rapid recovery starting in 2022 led to a new historic peak in 2023, emphasizing the sector's resilience.

The evolution of the average net monthly nominal wage in the hospitality industry was marked by a steady increase, from 773 lei in 2008 to 2,570 lei in 2023. This increase of nearly 3.3 times reflects not only Romania's overall economic development but also a heightened recognition of the importance of this sector. However, there are significant disparities between macroregions and counties, with higher wages in developed tourist areas such as Bucharest-Ilfov and Constanța. These wage differences highlight the need for balancing measures to ensure a more uniform distribution of economic benefits within the sector. Human resource productivity, measured by the number of overnight stays per employee, fluctuated significantly over the analyzed period, influenced by economic crises and the COVID-19 pandemic. For example, in 2020, productivity drastically dropped to 86, reflecting the severe impact of the pandemic on tourism. However, the significant recovery in the last Two years suggests a positive adaptation of Romania's hospitality industry , with higher productivity and a better correlation between the number of employees and the demands of the tourism market.

Another important aspect highlighted by the study is the impact of economic crises and the pandemic on the hospitality industry . The global economic crisis from 2008 to 2011 had a significant negative effect on the number of employees and wages, reflecting the sector's vulnerability to global economic fluctuations. The COVID-19 pandemic had an even more severe impact, causing dramatic decreases in employee numbers and productivity in 2020.

However, the sector demonstrated a remarkable recovery capacity, with a rapid rebound starting in 2021, underscoring the resilience and adaptability of the hospitality industry. The study also emphasizes the importance of continuous investment in employee training and professional development to maintain competitiveness and service quality. Companies in the hospitality industry need to identify training needs and develop training programs that enhance employee skills, from effective communication with clients to handling difficult situations. A well-trained and prepared staff directly contributes to customer satisfaction and, implicitly, to business success.

Additionally, the study highlights the need for effective strategies to improve employee retention. The hospitality industry is known for its high employee turnover, caused by stress, low wages, or lack of advancement opportunities. Analyzing the factors that lead to employee departures, such as working conditions or lack of recognition, helps implement strategies that improve retention. The costs associated with recruiting and training new employees can thus be significantly reduced.

Promoting diversity and inclusion is another essential aspect emphasized by the study. The globalized hospitality industry benefits from multicultural teams that bring different perspectives and creative solutions. By encouraging diversity and creating an inclusive environment, companies can develop teams better suited to the varied needs of customers. Diversity and inclusion not only improve organizational performance but also contribute to creating a positive image of the company in the job market and in front of clients.

The study underscores the importance of a strategic approach to managing human resources in the hospitality industry . Investments in employee training and development, implementing effective retention strategies, and promoting diversity and inclusion are essential to maintaining competitiveness and service quality. By understanding the evolving dynamics of human resources, hospitality organizations can better navigate future challenges and opportunities, thus building a sustainable competitive advantage. In an industry centered on people, understanding employees' needs, behaviors, and motivations is key to ensuring service quality and customer satisfaction. By investing in human resources, hospitality companies can build more resilient, innovative, and better-positioned organizations for the future.

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INFORMATION PROVISION OF TOURISM AND ECONOMY IN AZERBAIJAN AND ITS BIBLIOMETRIC ANALYSIS

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Abstract: Tourism is travel for pleasure, and the commercial activity of providing and supporting such travel. Tourism can be domestic (within the traveller's own country) or international, and international tourism has both incoming and outgoing implications on a country's balance of payments. The economy of Azerbaijan has gone through different stages of rapid growth, stability, and crisis. In general, the economy of Azerbaijan, besides field-wise classification, can be divided into three categories: 1. recession period, covering 1992–1995, right after Azerbaijan restored its independence after the USSR collapsed, 2. recovery, from 1996 to 1997, mainly because of increased oil sales, potential oil contracts, partners, and pipelines, 3. boom, from 1998 till 2008, and finally, an economic fall, starting from 2009. After Azerbaijan became independent following the collapse of the Soviet Union, the country started to pursue its sovereign economic policy. For a newly independent country with an economy mainly based on the oil and gas industry, it was quite demanding to keep its say in the world of economy giants. The key objectives of the new and independent economic policy were the establishment of the economic system built on the principles of several types of property, including private property, unlike the Soviet times, integration into the global economy and transition to the market economy. The study of document flow is the most important condition for evaluating the current situation, trends and development prospects in a certain field. The scientific information obtained with the help of the conducted research is successfully applied in various evaluation processes, which in turn allows to accurately determine the development of a certain scientific direction. Among the types of activities carried out in the direction of building an information society in the Republic of Azerbaijan, the organization and management of library-bibliography and information work, the use of modern technologies along with traditional work methods in providing information to readers has become a priority direction of our state's policy in the field of library work. The main goal of the article is to conduct a comprehensive study of the document flow in the field of tourism and economy and to support the information provision of specialists working in this field in the future. One of the priority directions for modern librarianship and bibliography is the study of information resources in the field of tourism and economy, the determination of the location of these information resources, the study of the current state of the flow of documents in this field, the bibliometric analysis of fundamental scientific works created in the field of tourism and economy, library- based on the analysis of the current state of information systems, it consists in determining the directions for improving the information provision of different groups of the population. Research methods: special library science, historical, structural-functional analysis, systematic approach, generalization, sociological, statistical analysis and comparative analysis methods were used in the research process. The main conclusion of the article is to achieve the development of information demand and document flow in the field of tourism and economy as a result of the elimination of existing problems in this field. Mentioning certain proposals referring to the works of local and foreign authors is one of the points that attract the main attention in the article.

Keywords: Library, document flow, information service, tourism, economy, bibliometric analysis

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INTRODUCTION

The success of Azerbaijan was reflected in the reports of international organizations. Moreover, Azerbaijan is ranked 51 in the Global Competitiveness Report for 2009-2010, which is above other CIS countries. Furthermore, even in the current economic situation Standard & Poor's increased the Azerbaijani rating's forecast from "stable" to "positive". Dominant tasks of next stage will be sustaining of macroeconomic stability and economic growth. Within these purposes, provision of qualifying economic growth is priority. Aiming to these tasks, expanding of diversification of the economy, the government wants to minimize dependence from oil sector, to transit to innovative economy, promote intensive production in agriculture, developing of economy in clusters. Moreover, comprehensive measure will go on in order to strength energy, food and ecological security. Improving business environment, establishing economic areas and industrial zones, advice and information providing, strengthening government support to entrepreneurship and developing business relationship, development of entrepreneurship and regions will accelerate (Bibliography of publications of the Academy of Sciences of the Azerbaijan SSR, 1984). Citation analysis is a commonly used bibliometric method which is based on

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constructing the citation graph, a network or graph representation of the citations between documents. Many research fields use bibliometric methods to explore the impact of their field, the impact of a set of researchers, the impact of a particular paper, or to identify particularly impactful papers within a specific field of research. Bibliometrics tools have been commonly integrated in descriptive linguistics, the development of thesauri, and evaluation of reader usage.

Beyond specialized scientific use, popular web search engines, such as the pagerank algorithm implemented by Google have been largely shaped by bibliometrics methods and concepts. The emergence of the Web and the open science movement has gradually transformed the definition and the purpose of "bibliometrics." In the 2010s historical proprietary infrastructures for citation data such as the Web of Science or Scopus have been challenged by new initiatives in favor of open citation data. The Leiden Manifesto for Research Metrics (2015) open a wide debate on the use and transparency of metrics. The recent methodological shifts of the field are highlighted by the repositionning of some key journals, with the Journal of Infometrics becoming Quantitative Science Studies in 2019 (Kochak, 2016: 107).

As the main structure in the study of document flow, we can note that the study of documentary information sources depends on their functional and content relationship. The author, type, and thematic structure of the flow are separated. It also depends on the sign of the carrier, distribution methods, circulation, volume of documents, etc.

Structural relations can also be separated according to signs. During the bibliographic activity, the structure of the document flow research is considered according to thematic, type-type, geographical, language, publisher, organization, and author characteristics. Bibliography of document flow assessment and analysis during bibliographic service allows facilitating the selection and search of publications. It shows which authors and author collectives, enterprises, companies, and countries should be given special attention.

The study of document flow in the field of economy becomes the object of scientific research in the following areas:

• compilation of a list of actual thematic problems;

• identification of authors and collective authors directly related to the development of the field;

• assessment of the development speed of the document flow in certain scientific directions;

• determination of the level of development of individual scientific activity of individual scientists, scientific organizations and enterprises engaged in the development of a certain problem;

• assessment of the role of specific specialists, research groups and organizations in solving scientific problems;

• forecasting the development trends of the studied area (Ismayilov and Rayeva, 2021: 14)

The flow of documents in the field of economics reflects scientific research works, the results of methodical and experimental studies, and the conclusions of information activities. Depending on the nature of the processing of the information it reflects, the flow of documents in the field of library-bibliography is divided into two groups:

1. Primary documents
2. Secondary documents.

Since bibliometrics is one of the main issues investigated in the article, let us first explain the meaning of this word. The rapid development of information technologies, the existence of electronic versions of published publications, the emergence of the "big science" claim, the globalization environment, the creation of large-scale databases, along with the expansion of information processing capabilities, the application of soft computing in various directions, etc. factors led to the emergence of the science of bibliometrics. Bibliometrics is a science that arose as a result of the application of mathematical and statistical methods to bibliography, and was born from the combination of the terms "biblio" (book) and "meter" (measurement). Bibliometrics is a statistical analysis of books, articles and other publications, and is a scientific direction that measures the activity of a researcher, a collection of articles, a research direction or an institute.

Also note that some authors have written about the role of e-marketing in tourism (Ploadaksorn et al., 2023: 1401), e-marketing in the economy and tourism industry (Kaur, 2017), tourist behaviors (Armutcu et al., 2023), different types of tourism (Komeil, 2021) etc. issues were interpreted in a complex way. In modern times, one of the main factors affecting the development of document flow in the field of tourism has been the increase in travel (Mohammad, 2024: 978). Let's also note that the creation of scientific literature on the field of tourism indicates the fundamental development of this field (Esparza-Huamanchumo et al., 2024: 955).

LITERATURE REVIEW

Toursim and economy is a science that studies the use of limited opportunities to meet people's needs and the relationships that arise in various parties in economic activity (Imrani et al., 2024). If we approach the article in the historical context, we can note that Nasireddin Tusi has a special place in the history of economic thought of medieval Azerbaijan. His interpretation of economic issues in his famous work "Akhlagi Nasiri" and his "Tractice on State Finance" give grounds to consider him a professional economist. Being the first economist of Azerbaijan, N. Tusi (1201-1274) defined the subject of economic science. N. Tusi (1201-1274) expressed the entrepreneurial moral very well in his works. He wrote: "In order to obtain income, it is necessary to fulfill three conditions: first, not to allow oppression; the second - not to allow shame; the third is not to allow humiliation". Also, the genius Azerbaijani thinker Nizami Ganjavi occupies an important place in the development of the economic thought of Azerbaijan.

Nizami Ganjavi was not indifferent to the socio-economic relations and contradictions of his time and reflected his tourism and economic views in his works. Humanism and democracy formed the basis of the economic ideas of the great thinker. Socio-economic structure of the Ganjavi community, labor, division of labor, wealth and its sources, distribution, consumption, exchange, trade, price, money, etc. has put forward valuable opinions on issues. According to Ganjavi's teaching about work and wealth, work is the main source of increasing material and spiritual wealth. Nizami shows that labor is an activity that is unique to man, he saw the difference and superiority of man from other living things in his work and work (Ismayilov and Khalafova, 2023: 225).

In the 19th century, most of the books on economy in the Azerbaijani language were printed in Tbilisi. For example, in 1841, a book called "Laws of planting paint" was published in Arzanovlar publishing house in Tbilisi. In 1870, the book "Legislative decision" printed by stone printing method contained issues about the rules of working the serfs and the amount of taxes to be given to landlords. Apart from these, 6 books were published in the Azerbaijani language in Tbilisi during the years 1885-1900 about the feeding of the cocoon worm and cotton cultivation (Ismayilov and Khalafova, 2022 a: 24).

The book "Historical, geographical and economic Azerbaijan" by Y.V. Chamenzaminli, published in Istanbul in 1921, is among the valuable books of its time due to its importance. The information given in the book about our country's geography, economic and natural resources, provinces, and various production areas has retained its importance even today. Considering this importance, the book was published again in 1993 (Ismayilov and Khalafova, 2022 b: 198).

During the 1930s and 1940s, among the literature-published on the science of economics, books on political economy had a special place. In the 1930s and 1940s, K. Marx's works "Wages, Price and Profit", "Wages, Prices and Profits", "Wage Labor and Capital", "Criticism of Political Economy", F. Engels' "Family, Private Property" and the origin of the state", K. Kautsky's books "Karl Marx's economic theory" were published with high circulation. In the Azerbaijani language, 27 books on council economy, political economy, world economic crisis, and economic policy were published in "Azernashr" and "Azerfiraneshr", and four were published in Tbilisi. In 1930-1933, 13 books on finance, revenue, tax, savings and loan funds, and budgeting, and one book on agriculture and farming were published in Azerbaijan.

Based on the "Annual Azerbaijan bibliography" published by the Azerbaijan Book Chamber since 1961, it can be stated that in 1960, 109 books were published in Azerbaijani and 43 in Russian on economic sciences and various fields of economy. In total, 194,623 copies of books, booklets and brochures were published in 46 titles on planning, accounting, management organization, economic sciences, world economy, national economy, finance, trade, labor organization, forestry, horticulture, animal husbandry and other economic fields. During that year, 34 people received a candidate of science degree in economics, 3 people received a doctor of science degree, 1 person received a doctor of science degree in the field of agricultural sciences, and 17 people received a candidate of science degree (Ismayilov, 2022:39).

According to the information reflected in the "Annual Azerbaijan Bibliography", only in 1969, 1375 copies of 33 numbers per year in the Azerbaijani language with the series "Oil production industry", "Machine building", "Chemistry and oil refining", "Light industry" and in Russian per year 650 copies of the magazine, including 13 numbers, were printed. 5181454 in 9 names, including 53 numbers in socio-economic sciences, planning, accounting, management organization, economy, economic sciences, political economy, history of economic sciences, political and economic situation of foreign countries, finance, labor, trade and agriculture. magazine, collection and bulletin were published with copy circulation (Stich et al., 2022).

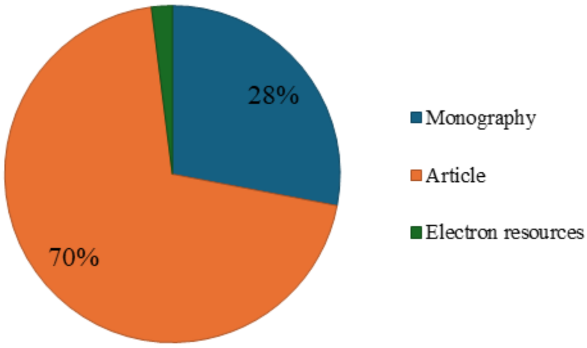

Figure 1. Statistics of documents in the field of tourism and economy
in the National Library's collection (Sources: Developed by the authors)

If we look at the statistics of documents related to tourism and economics in the National Library's collection, we can note that monographs account for 28 percent, articles for 70 percent, and electronic resources for 2 percent (Figure 1). Also note that the National Library has 26,109 books, 9,701 articles, 210 electronic resources on tourism and economy, world economy, business, finance, banking, money and its circulation, marketing, entrepreneurship, trade and international trade, management, accounting, auditing, and agricultural production. 24020 monographs, 1230 dissertations, 1974 legislative documents, 302 statistical documents, 173 name dictionaries, 119 name encyclopedias, 172 scientific works, 96 reviews, 88 bibliographic indexes, 21 query indexes, 13 catalogues, 638 resources, 1063 annotations, abstracts, summaries, There are 3 recordings, 3 audio books (Ismayilov, 2022), 26,839 of them are Azerbaijani, 8,464 Russian, 347 English, 1,088 German, 1,050 Old German, 41 Turkish, 1 Persian, 1 Uzbek, 1 Spanish, 1 is in Vietnamese.

Also, 27,989 of them are in Azerbaijan, 6,336 in Russia, 217 in Kyrgyzstan, 26 in Uzbekistan, 24 in Kazakhstan, 1 in Turkmenistan, 122 in Ukraine, 107 in Belarus, 17 in Moldova, 119 in Georgia, 136 in England, 224 in the USA, 70 in Germany, 35 in Turkey, 2 in Bulgaria, 1 in Sweden, 1 in Croatia, 1 in Portugal, 14 in Austria, 2 - were published in Japan, 25 in Colombia, and 66 in other countries. The library subscribes to 22 periodicals on economics, 5 on business, 4 on finance, 1 on entrepreneurship, 3 on audit, and 61 on agriculture. During the month, 250-300 businessmen, bank employees, people studying in this field, with inquiries related to banks, business, accounting, auditing, money, credit, finance, management, marketing and other areas of the economy, read literature in Azerbaijani and foreign languages and abroad. they apply to the library for published journals. Economics, finance, business, management, etc. There are about 1000 literature related to the fields, 3 economic dictionaries, 5-volume economic encyclopedia.

RESEARCH METHODS

Statistical analysis method

Analyzing on the basis of comparative analysis and systematic approach methods, referring to local and foreign authors, general systematization was carried out in the article. The importance of examining the history of the creation of primary document-information resources in the field of tourism and economy, the general characteristics of the flow of documents and information in this field, and the development trends; the need to study the nature of the information demand of tourism and economy experts (Yodkhayan and Muneenam, 2023).

Study of traditional information resources and electronic resources in the field of tourism and economy. It should also be noted that there are scientific educational institutions and research centers in the field of economy in Azerbaijan. The scientific journals produced by these institutions also play an important role in the formation of the document flow on tourism and economy. In this regard, the Institute of Economics of the Ministry of Science and Education, Baku State University, ADA, Azerbaijan Tourism and Management University have special services. As an example, we can mention that the international journal "Tourism and Hospitality Studies", which is the main scientific publication of the Azerbaijan University of Tourism and Management, is registered in the Ministry of Justice of the Republic of Azerbaijan with No. According to the decision of May 16, 2014 (protocol No. 07-R) "List of recommended publications for publication of the main results of dissertations in the Republic of Azerbaijan" on Economic Sciences, Historical Sciences and Art Studies (6219.01-Culturology and its general issues; 6220.01-Museology) included in In the multi-profile scientific journal "Tourism and Hospitality Studies", preference is given to articles devoted to the problems of the modern development of the tourism sector and the theoretical and practical problems of its interaction with socio-economic development. The journal also publishes original articles on other problems of socio-economic development.

The magazine has the right to publish special issues serving the development of tourism in our republic. The magazine is published once a quarter. Articles in Azerbaijani, Turkish, English, and Russian languages are accepted for "Tourism and Hospitality Studies" magazine from all over the world.

RESULTS

The diagram above shows the statistical indicators of general articles on "Economy" in "Tourism and Hospitality" magazine for the years 2000-2018. As can be seen from the diagram above, in the mentioned journal, 8 in the field of economics in 2000, 4 in 2001, 9 in 2002, 2 in 2003, 9 in 2004, 8 in 2005, 8 in 2006 6, 15 in 2007, 13 in 2008, 2 in 2009, 9 in 2010, 4 in 2011, 8 in 2012, 6 in 2013, 7 in 2014, 6 articles were published in 2015, 4 in 2016, 8 in 2017, and 6 in 2018 (Figure 2).

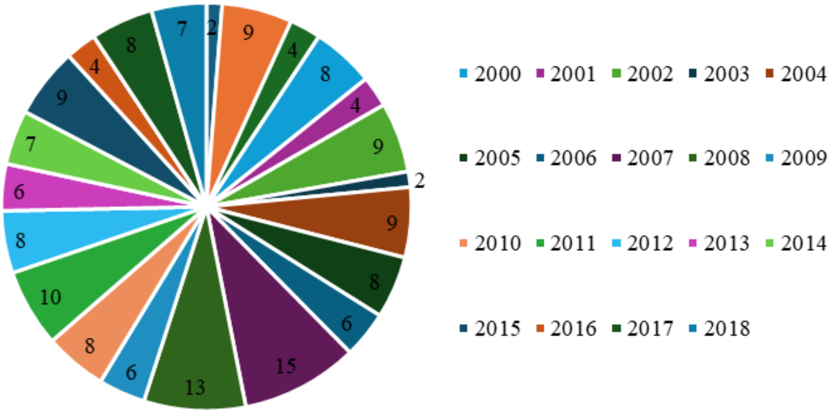

Figure 2. Statistical indicators of general articles on "Economy" in "Tourism and Hospitality" magazine (2000-2018) (Sources: Developed by the authors)

If we look at the general statistics by year, between 2000 and 2018, a four-fold dynamic increase in the number of articles is observed. This is one of the main manifestations of the flow of documents and the creation of new studies in that field (Kochak, 2016). In general, the fund of the National Library of Azerbaijan named after M.F. Akhundov increased from 4465442 copies to 4598936 copies in the period from 2010 to 2023, economic literature increased from 273478 copies to 290983 copies, technical, agricultural and forestry literature increased from 1104010 copies to 1121337 copies (Table 1).

It should also be noted that the information about the literature published in the Azerbaijani language on economics can be obtained from the general bibliographic indicators of ANAS MEK. Literature on economics is reflected in the section "Economy" given in the index "Bibliography of publications of the Academy of Sciences of the Azerbaijan SSR", published in 1984 and covering the years 1923-1945. In the publication of the indicator for the years 1945-1959, the section entitled "Economics, statistics, economic geography" contains 161 books and magazine articles published on economics. In the "Annual" editions of the Academy's publications published in the following years, the literature on economics is described in the section called "Institute of Economics". In the 6th book of the 3rd volume of the bibliography of EA publications of the Azerbaijan SSR covering the period of 1960-1965, there is a bibliographic description of 279 books on economics, including 87 books in Azerbaijani and 182 books in Russian (Kochak, 2016).

Table.1.Statistics of document flow in the field of tourism and economy in the National library's collection by years (Statistical analysis method 2010-2022) (Sources: Developed by the authors)

Year	Number
2010	60
2011	112
2012	117
2013	136
2014	120
2015	83
2016	85
2017	56
2018	100
2019	86
2020	63
2021	97
2022	62
2023	78

In order to interpret the main advantages of the study in general, the following hypotheses are put forward.

- **Hypothesis 1:** Libraries have an important role in the creation and formation of document flow in the field of economics;
- **Hypothesis 2:** Since the field of economics is constantly developing, the research and study of information technologies in this field is one of the important factors;
- **Hypothesis 3:** When conducting research in the field of economics, a comparative analysis of local and foreign literature created in this field is mandatory.

To study the features of the modern tourism and economy system, it is necessary to describe its structural model and analyze the changes occurring in the system. In fact, the structural model of the tourism and economy is an expression of its essence. The structure of the tourism and economy is a complex socio-economic system, which manifests itself as a dialectical unity of quantitative and qualitative relations between different sectors of the economy.

When humanity moves from one stage of development to another, the number of sectors of the tourism and economy increases and their importance also changes. Summarizing the areas of the new economy, they divide them into three sectors: the ICT production sector, the ICT-using sector, and the non-ICT-using sector. Some researchers, applying a more precise approach, combine the fields of information tourism and economy into seven groups as follows (Ismayilov and Khalafova, 2022 b: 23)

1) Production of ICT products;
2) production of ICT services;
3) production areas where ICT is used;
4) services through ICT;
5) production areas where ICT is not used;
6) service areas where ICT is not used;
7) Other areas where ICT is not used (Kochak, 2014).

The ICT sector, based on innovation, has now become one of the largest segments of the global economy. According to World Bank research, the ICT sector's share in GDP is one of the qualitative characteristics of the country's economy. When this indicator is within 5-10%, that country is classified as an "efficient tourism and economy.

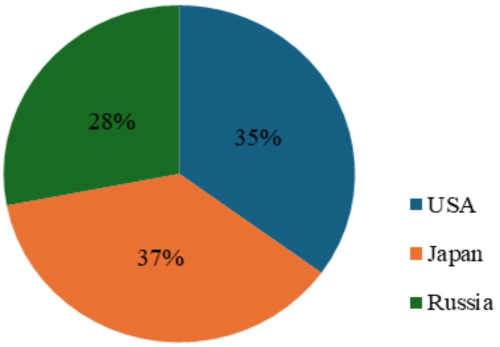

Figure 3. The ICT sector, based on innovation, has now become one of the largest segments of the global tourism and economy (Sources: Developed by the authors)

As can be seen from the graph above, according to the latest data, the contribution of the ICT sector in the GDP in the United States was 35%, in Japan it was 37%, and in Russia it was 28%. For the formation and development of information tourism and economy, the development of human capital, innovation activity, the high level of development of advanced information and telecommunication infrastructure, the ICT sector, including the high-tech sector and the sphere of services are among the main issues. For this, investing in education and scientific research, expanding the export of high-tech products, general computer literacy of the population, the possibility of effective and safe information exchange, training of personnel, development of e-commerce, state support and legal-normative base are among the important conditions. In the country, the implementation of the tourism and economy by the industrial method, the development of the ICT sector, ICT infrastructure, human capital and the sphere of services, e-commerce, etc.

The successful implementation of the e-government project in the country, which plays an important role in its development, suggests that in the near future the country will have the ability to compete with developed countries in this field as well as in other fields (Gasimli, 2023).

CONCLUSION

The area researched in the article is of special relevance due to its content and degree of significance. In the context of the flow of documents, the increasing volume of scientific information in libraries makes the implementation of bibliometric research more urgent. Their implementation requires special knowledge, competent use of new technologies and information resources. The combination of bibliometric methods with modern technical tools and information resources makes it possible to expand the possibilities of research conducted in libraries, to structure document arrays and to guide them in their increasing flow.

Prospects for the application of bibliometric methods are related to the development of new information technologies and the implementation of information support of science. Bibliometrics is a developing part of library and information science research: currently, not only digital library technologies, but also the creation and management of library collections with the application of bibliometrics are very relevant in libraries. The rapid growth of interest in bibliometrics in libraries, especially in academic libraries, is due to the increasing use of bibliometric methods for research evaluation by universities, states, research leaders, information professionals, librarians and researchers.

We consider it appropriate to consider the following proposals in the future in the course of general investigations:

• Libraries providing information on economics should constantly bring traditional and electronic bibliographic resources to the attention of the readership;

• Virtual service methods for the readership related to this field should be organized in the library and information institutions of the Republic and should be implemented promptly;

• Organizing the development of all library networks in interaction, which includes the mass of documents in the field of economy;

• The automation of library processes should be accelerated, and the inclusion of all relevant documents on the economy in the electronic catalog should be implemented;

• In order to characterize the practical skills of representatives operating in the field of economics in the process of independent search, processing and analysis of professionally important information, to determine the levels of mediation of libraries in meeting their current information needs and future business activities, questionnaire surveys should be regularly conducted among readers in the leading library and information institutions of the republic (Ismayilov and Gasimli, 2023: 2467).

The modern essence of the internationalization and integration of national tourism and economy in the world is determined by the International Division of Labor (IDL) (Kerdpitak, 2022: 78). Thus, the total indicator of world countries' production volume in the world market is defined on the IDL level. The international economic integration means the free motion of production factors and goods among countries (Ahmadli, 2023). With the international integration, Azerbaijan Republic becomes politically independent and mutually dependent by economy. The regional economic connections of Azerbaijan Republic reveal the importance of geographic position. To note, the main feature of foreign tourism and economy relations of Azerbaijan Republic is admission to the international, regional, and local tourism and economy organizations, and being integrated to these organizations in all fields of social life.

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SUSTAINABLE URBAN DEVELOPMENT IN HISTORIC TOWNS: A CASE STUDY OF JERASH, JORDAN

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Abstract: The research explores the complexities and challenges of preserving and developing historic towns, focusing on sustainable urban development in Jerash. The study emphasizes the significance of maintaining and restoring historic buildings and urban spaces to yield benefits in aesthetics, tourism, local economy, and property values. It highlights the urgency of integrating conservation measures into development strategies to promote cultural heritage planning, adaptive reuse, and overall revitalization. The rapid urbanization in Jordan has led to increased pressure on historic resources, necessitating the preservation of cultural heritage as essential capital. The study outlines the importance of sustainable urban development in historic towns, considering the diverse values they offer, including architectural accomplishments, historical significance, economic return, environmental quality, and social functions. A case study of Jerash illustrates the historic and cultural significance of the town, showcasing its unique urban setting with Roman architectural remains and a rich history spanning over 6500 years. The research discusses current urban development initiatives in Jerash, addressing the challenges posed by socioeconomic factors, population growth, and the transformation from a colonial to a tourist urban economy. The study underscores the need for an integrated approach to sustainable urban development that balances growth and conservation, leveraging the town's cultural, social, and physical components. The research provides strategies for sustainable urban development, focusing on the preservation and conservation of cultural heritage, innovative urban planning and design approaches, community engagement, and participation. Through comprehensive analysis and evaluation, the research aims to contribute valuable insights for future urban development projects in historic towns, ensuring their sustainability and continued significance as cultural and historical treasures.

Keywords: Sustainable urban development, Historic town, Cultural heritage preservation, Adaptive reuse, Urban planning, Heritage tourism, Architectural heritage, Jerash, Jordan

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INTRODUCTION

The complexities of preserving and developing historic towns present numerous challenges that have attracted widespread attention. This topic has been extensively explored through a variety of mediums, including scholarly works and analyses, with a particular focus on renowned international sites affiliated with UNESCO. Despite the attention given to sustainable development, it remains a subject of debate, especially in the context of historic areas. While there are organizations dedicated to sustainable tourism strategies, few have delved into the quantification of urban sustainability. There is a widespread agreement on the importance of restoring, preserving, and effectively maintaining historic buildings and urban spaces, as these efforts yield significant benefits in terms of aesthetics, tourism, local economy, and property values. However, the precise measurement of these benefits remains an aspect that requires further exploration and universal recognition (Labadi et al., 2021; De Luca, et al., 2020; Petti et al., 2020; Lin, 2020).

Urbanization in many areas of the world today is experiencing an exceptional surge, surpassing all previous rates, thus emerging as a paramount global concern and an undeniable phenomenon. It is an undeniable truth that urbanization will persist as one of the most influential and transformative processes shaping human development. This necessitates the imperative revitalization of towns and urban centers, ultimately contributing to the holistic urban and regional policy

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framework. The significance of architectural heritage is now increasingly acknowledged, particularly in instances where the preservation and refurbishment of urban areas possess immense potential for the promotion and celebration of cultural values closely associated with them. Consequently, an urgent and indispensable requirement for development strategies is the integration of conservation measures, thus resulting in a heightened awareness and professionalization within the realms of cultural heritage planning, adaptive re-use, and overall revitalization endeavors. The rapidly accelerating urbanization in numerous parts of the world today has witnessed an unprecedented surge, surpassing all previous rates, thus emerging as a paramount global concern and an undeniable phenomenon of immense magnitude.

It is an undeniable truth that urbanization will continue to persist and endure as one of the most influential and transformative processes, decisively shaping and molding the trajectory of human development across the planet. This engenders the dire and compelling necessity for the revitalization and rejuvenation of towns and urban centers, ultimately contributing substantially to the holistic urban and regional policy framework that underpins prosperity and progress. The profound and far-reaching significance of architectural heritage is now increasingly acknowledged and embraced, particularly in unequivocal instances where the preservation and refurbishment of urban areas possess immense and untapped potential for the promotion, preservation, and vibrant celebration of cultural values deeply intertwined with them. Consequently, an urgent and indispensable requirement for development strategies, policies, and plans is the cohesive, seamless, and effective integration and implementation of comprehensive conservation measures and practices, aimed at fostering a heightened and enlightened awareness, understanding, and professionalization within the evolving and dynamic realms of cultural heritage planning, adaptive re-use, sustainable development, and overall revitalization endeavours, forming an intricate tapestry interwoven with collective progress and societal advancement (Jawabreh et al.,2024; Jaber et al., 2023; Obeidat and Alourd, 2024; Little, 2022).

BACKGROUND OF THE STUDY

The continued growth of the local population, tourist flows, and economic activities, as well as the increasing housing demands around old towns and historic sites, have led to increased pressure on historic resources. Sustainable development in developing states requires preserving the tangible and intangible forms of the resource of cultural heritage-alongside other natural resources and therefore maintaining these resources as important capital. The preservation of cultural heritage is of great social, economic, and cultural importance and has been emphasized in several international conferences and conventions, such as the Urban ICOMOS, which proposes that appropriate preservation policies be initiated, taking into account the historical and cultural aspects of old towns. Moreover, the principles of the Conservation Ethics Charter of Abathabba played an important role in the formulation of land-use procedures or methods of sustainable tourism and conservation. It is vital to proceed with the appropriate planning support, enact a sufficient protection state, and provide awareness and competent stewardship to ensure the sustainability and viability of diverse urban settlements and preserve the quality of life for their inhabitants and tourists (Al Fahmawee and Jawabreh, 2022a).

The rapid urban growth and expansion towards the periphery of old towns in developing countries is causing land-use changes, increased environmental degradation, social instability, and economic discrepancies, especially around the invaluable old quarters and historic sites which constitute the development's diversities and the urban charm. Therefore, it is essential to consider the preservation of old towns as an essential factor for the current and future welfare of cities. Urban development in historic towns has been explored in terms of urban growth and morphological change, preservation and conservation, and sustainable development. It is necessary to assess their physical and functional properties and to provide strategies for sustainable urban development without threatening the universal cultural value that these sites possess.

Importance of Sustainable Urban Development in Historic Towns

In the process of working towards this balanced urban fabric, synergistic opportunities arise where the contribution of one value supports the realization of another. A proactive outlook is required in identifying where these opportunities exist and designing measures to exploit them. The opportunities may be short-term or have long-term payouts through complementary categories of physical, social, or economic benefits. These measures demonstrate that diversity in the historic towns is their strength, and that historic urban conservation should not be viewed as solely an expensive, complicated, and minor alternative to conventional urban renewal. The historic towns should be considered a positive and legitimate response to the challenge of creating a more attractive and quality urban setting compatible with the current and evolving needs of our contemporary lives, and indeed, economies.

Although administrative, urban design, or physical measures can initiate the process, the making of an urban environment in this manner requires a shared vision among its population - an understanding and commitment to the public benefits of the historic environment. Different localized solutions will be appropriate depending on the physical condition of the historic towns, the economic base of the community, and its current state of development. The historic towns provide numerous values to arriving at this shared vision. The values include architectural and engineering accomplishments, historic significance, economic return, environmental quality, and social functions. Calls for the application of any one of these perspectives in improving the situation in a particular historic town but suggests that it is essential to consider the contribution of all the values in re-establishing its economic, social, and environmental balance. Such a multifaceted approach ensures that all actors who have a stake in the future of the historic towns are included in the decision-making and implementation phases of the problem-solving enterprise.

Historic towns comprise a significant part of a city's identity and are an esteemed source of national and global heritage. In the historic towns of developing countries, the urban population is increasing mainly because of the inflow of rural migrants (Jawabreh and Fahmawee, 2024). The existing infrastructure in many of these towns is deteriorating, and in the absence of resources to improve the infrastructure, the living condition deteriorates. Urban historians are concerned about these survival strategies implemented in the historic towns. Over time, these may impact the unique urban form, build form, and patina negatively. Sustainable development offers a new perspective on the problem of identifying new methods of urban development that will halt the degradation of the rich cultural and historical heritage. However, the concept of sustainability depends on the local context and should allow each inhabitant of the town to be able to live happily with the benefits of the downtown (Güneralp et al., 2020; Yue et al., 2021; Knowles et al., 2020).

2. Historic towns and urban development

People's awareness of the significance of their heritage and the need to conserve and use it as a resource plays a key role in assisting sustainable urban development. Many heritage towns have the structure and constitute a unique framework in which to initiate sustainable urban development initiatives that empower the community and improve the quality of life. However, modern trends in urban development and a lack of control and management place heritage sites and their social and economic activities at risk. Heritage sites can contribute positively to the investment climate and the surrounding city, but in many cases, these qualities are not realized because of analyses and a poor understanding of the values. Historic towns may need particular types of activities and non-monetary resources that are often downgraded when the main emphasis is on attracting commercially driven culture, tourism, and entertainment establishments.

Given the unique characteristics of historic towns, the interaction between urban form and functions, and the relationship between the town and its physical setting, sustainable development in such towns depends on an integrated approach that highlights the intrinsic significance of its cultural, social, and physical components. The main challenge is to integrate the historical, cultural, and recreational functions along with the conservation of architectural, archaeological, and cultural resources with modern functions through sustainable urban development using environmentally friendly technology, materials, and development approaches. This integration depends on a host of factors that vary from case to case and will be discussed in the methodologies and results section. The balance between growth and conservation also depends on the specific nature of the town, its resources, the community needs and resources, the state of institutions, planning and management, the existing development rules, and the legal and economic tools available for interventions (Petti et al., 2020; Labadi et al., 2021; Rodrigues and Franco, 2020; Sesana et al., 2020; Sáez de Cámara et al., 2021).

2.1. Definition and Characteristics of Historic Towns.

The rapid population growth and economic development of Jordan over the past three decades have significantly contributed to the expansion of urbanization and the development of the contemporary city. This remarkable achievement has been made possible through the expansion of areas comprising the historic towns, which, at times, overlap with the existing historic towns or are positioned adjacent to them. It is essential to acknowledge that the concept of historic towns holds immense value, particularly in countries that bear testament to ancient human development (Al Fahmawee and Jawabreh, 2022b). These historical towns possess an unparalleled significance due to their rich historical, cultural, and architectural heritage. They serve as vital conduits for the demonstration of traditional systems and values, making them pillars of great importance. The historic urban landscape is not solely characterized by architectural marvels; it also carries a profound intellectual meaning, stemming from the fusion of culture and urban structure. Such places are not mere authentic testaments of the various stages of development but hold symbolic status in representing this progress. They serve as the source of inspiration for successful contemporary experiences, bridging the gap between the past and the future, thereby emphasizing the unity of place. It is imperative that the international community directs its attention towards the preservation, rehabilitation, and care of these precious historic towns. Nevertheless, in order to effectively carry out such endeavors, it is paramount to recognize and understand the economic, social, and cultural values that these areas continue to uphold. By doing so, we can ensure that all efforts in preserving these towns are aligned with their inherent worth and significance. These towns serve as living testaments to our history, culture, and architectural brilliance, and it is our collective responsibility to safeguard and cherish them for generations to come (Alsubeh and Helmi, 2024; Elessawy, 2021; Al Shogoor and Almhadeen, 2021; Jawarneh, 2021; Alwedyan, 2023; Cividino et al., 2020; Al-Hadidi et al., 2023; Soliman, 2021; Aldeek and Mistarihi, 2020).

2.2. Challenges and Opportunities for Urban Development in Historic Towns

Sustainable conservation-based development can guarantee the continued accessibility and availability of these urban and architectural characteristics for the future while enabling the contemporary use and the dressing functions of historic towns. Revitalizing the urban fabric of heritage towns is an innovative way to preserve the uniqueness of the historic city core through urban governance (Jawabreh et al., 2023). Today, historic town centers are endangered by rapid urbanization and pressure of economic development primarily due to population growth, changes in communication systems, increases in tourism levels, and other urbanization-related problems.

The urban development processes in historic towns in the developing world have been significantly influenced by the recent transformation from colonial to "tourist" urban economy. This transformation, which involves adapting the built environment of historic towns for modern tourist activities, has a profound impact on the social function and economic activities of these towns. Moreover, it creates dissension among the town population, who question the benefits and consequences of such development. This controversy revolves around the authenticity of historic towns, a factor that is highly susceptible to change during this transition. An example that highlights these issues is Jerash, a town with a unique composition. Unlike other heritage towns that primarily consist of government-owned public buildings or business housing, Jerash boasts a significant number of long-term city inhabitants who own historic houses. This distinct characteristic sets Jerash apart and makes it an excellent case study for exploring the complexities of urban development in historic towns. To further investigate the impact of urban development on historic towns, this case study involved the collaboration of Algerian and Thai experts. Their expertise contributed valuable insight into the challenges and opportunities present in Jerash, shedding light on the broader challenges faced by historic towns in the developing world. The findings of this study have far-reaching implications and provide invaluable knowledge for future urban development projects in similar contexts (Lichtenberger and Raja, 2020; El Faouri and Sibley, 2022; Abukarki et al., 2023; Gharaibeh et al., 2020; Brughmans et al., 2021).

CASE STUDY: JERASH, JORDAN

Although Jerash was established on the historic site, the ancient city maintains its unique urban setting, made up of Hadrian's Gate as shown in Figure 1, colonnaded cardos with side streets that reveal the substantial remains of architectural types that marked the Roman cities Figure 2, including a cathedral, an oval forum, a large hippodrome that housed a chariot race, two theatres, as well as many temples, public buildings, and churches, in addition to huge stretches of the protective city wall as it clear in Figure 3. The 100 m wide south-to-north running Cardo Maximus is the main access of the site still used by vehicles. The physical structure is in good condition and the city is preserved, leaving the columns and the open pavements without any kind of pollution or visual intrusion.

Figure 1. Hadrian's Gate, Jerash. Source: Author, photo taken in Jerash, April 2024

Figure 2. Entrance to the Hippodrome at the Roman Ruins (left); Corinthian Columns Ancient Roman Road (Right)

Located in north-western Jordan, Jerash has a rich history of over 6,500 years, starting as a prehistoric settlement, followed by the ancient city of Gerasa, a mostly unexcavated medieval and Ottoman town until becoming 'Jerash', a Jordanian town in 1878. The ancient city of Gerasa reached its peak in the 2nd century AD, with an area of about 800,000 m2 protected by city walls, and a population of around 14,000, most of whom lived in the south-eastern parts of the city. Gerasa contributed significantly to architecture and to an extent urban planning, and its Roman urban fabric still exists, making Jerash unique in the Levant.

Figure 3. North Roman Theatre, Jerash (left); Forum (Oval Plaza) in Jerash, Jordan (Right)

1. Historical and Cultural Significance of Jerash

The ceremony was attended by HRH Prince Leka of Albania; HRH Princess Elia, President of the Albania Heritage Association; Jacques Meleux, UNESCO Representative for Jordan; Rafee' Naber, Director of the German-Jordanian University; Prof. Abdelmohsen Onouz, an architect from Jordan University; and other officials. The ceremony was the accompaniment to another UNESCO-sponsored program, which neither the guests nor most of the residents of the town had previously known about. Even for the researchers who had spent productive years together at the site, the Jerash conference revealed new fields of research to investigate side by side, as in a mine of potsherds or one's elegant solution to the development of civic space. These finds became a reassuring frame of reference at the most fragile original tissue of reporting. They also returned to the present with reinforced respect that helped us through the toughest moments. Based on these reports, we dedicated a book to our Iraqi companions out there, in Italian and Arabic (Jawabreh, 2020; Hotaj, 2023).

The ancient city of Jerash has gained world fame for the remarkably well-preserved urban fabric and architectural remains of both Roman and Byzantine periods, as well as a strong local tradition of cultural activities, mainly in the form of cultural festivals (festivals of art, music, folklore, and many others). The site is a live symbol of Jordanian heritage, a magnet for economic investment, and a priceless source of learning for scholars and visitors alike. The site has also provided a base for sustainable development projects, both supporting the tourist economy and providing benefits for the surrounding community. These community projects complement the visitor experience, reconnecting the local population with their past.

2. Current Urban Development Initiatives in Jerash

In Jerash, the developmental pressure on the historic town, amplified by socioeconomic factors, and the growth of the population primarily associated with the conflicts of the West Bank will complicate the living standards of the locals and arrive at tangible deterioration, while the future of the town and the broader international world may go in a different direction. The city of Jerash is rising with a dual identity split between the excellent Roman Archeological Site and its consistent Arab identity; Palestine also contributes significant elements of identity. Currently, there are many initiatives in the Jerash Urban Development Action Plan project, some of which originate from the department of Urban Design and Planning at the University of Jordan. Some of the initiatives link the city's destinations to the strategy of urban advanced systems, while others connect the social preferences of the urban society to the city environment. Although some of the implemented initiatives show significant advances in development, various factors are discussed (Evans, 2022; Adam-Bradford et al., 2023; Jedi and Al-Jawari, 2023). The urban development of the historic town of Jerash, Jordan, echoes the general urban development of historic towns in Jordan. New districts are developed, mainly to the south and east of the ancient city, in response to urban trends but with little or no correlation to the historic urban fabric. Technical strife and deteriorating qualities for dwellers are evident. Peri-urban development patterns are also recognizable. Tourist activities, income, labor, and trade are particularly oriented towards the archaeological site, while the living conditions and environment are left to deteriorate. Urban stakeholders in Jerash undertake different urban development programs through scientific research, initiatives, educational programs, workshops, and legislation. These initiatives investigate the relationship of urban fabric to the community and seek appropriate development tools. Palestinian figures in Jerash attempt to understand the influence of Palestinian social identity deriving from the relationship between the exile population and the town. Despite the progress that exists, the pragmatic consolidation of these initiatives remains elusive (Lichtenberger and Raja, 2020; Lichtenberger et al., 2021; Romanowska et al., 2021; Makhadmeh et al., 2020).

PRINCIPLES OF SUSTAINABLE URBAN DEVELOPMENT

This development is to be considered as a multidimensional process because it is based on layers which are attributable to a historical and social evolution over time. The physical substance is an integral part of this process and urban condition cannot be merely designed then constructed, but is acquired through a time condition. The living urban environment is the ultimate goal and the investment in the creation of the environmental setting best conducive to endogenous and investor growth must be guaranteed. This process generates a selected city environment, which reflects a number of potential added values. These are capable of generating economic return and social benefit and reflect the uniqueness of a cultural capital. It is the safeguard and production, optimization of these values that offers the appropriate alternative to the mass housing and industrial production phenomena typical of a generalized building policy.

The characteristics of such a development method have been summarized in a variety of process guides, principles, or guidelines. Many of them are concerned with conservation and the surface area, but the method involves much beyond this. The integration of conservation and surface area regeneration are also needed and are the means to the end, which is urban development. Urban historic areas are part of a living habitat, which is subject to continual change and maintenance. These areas have survived the ages through the adaptation of both their physical substance and their social structure. In order to guarantee their permanent survival into the future, the evolution of these aspects should be planned in the most efficient and effective way. Multiplication of valuable urban situations can only be achieved through a self-developing process where private initiative and decision-making can effectively participate.

1. Environmental Sustainability

Environmental sustainability should be considered the utmost priority when it comes to updating the city's buildings to a significantly higher standard of structural, thermal, and acoustic performance. This can be achieved by introducing a plethora of innovative and energy-intensive materials, which, when used alongside traditional materials, can synergistically enhance their efficiency. It is crucial to acknowledge that residential buildings, along with their time-honored construction techniques and systems, play a pivotal role in shaping the city's overall environmental performance. By intertwining history and knowledge, these buildings serve as the cornerstone for the efficient utilization of public spaces and the creation of a compact, interconnected urban environment (Jawabreh and Fahmawee, 2023). In the context of residential buildings with a historical significance, it becomes apparent that they hold the key to unlocking immense energy savings in comparison to modern, low-energy, or passive housing. Consequently, by preserving and revitalizing these historic structures, we can tap into their inherent potential for reducing primary energy consumption and foster an environmentally conscious approach to housing design. Expanding upon this concept of sustainable building practices, it becomes evident that there is a pressing need to redefine our approach to construction.

By embracing innovative materials and cutting-edge technologies, we can revolutionize the way buildings interact with their surroundings. From energy-efficient facades to state-of-the-art insulation systems, every facet of a building's design should be meticulously crafted to optimize performance and minimize environmental impact. Moreover, the significance of public spaces cannot be overlooked in the pursuit of environmental sustainability. These spaces act as communal meeting points, fostering a sense of unity and belonging within the urban fabric. By emphasizing the importance of well-designed public spaces, we can create environments that promote social interaction, physical wellness, and mental rejuvenation. Parks, gardens, and pedestrian-friendly zones play a vital role in curbing pollution and promoting alternative modes of transportation, thus achieving a harmonious blend of nature and urban life. In conclusion, the quest for environmental sustainability necessitates an all-encompassing approach that encompasses both the preservation of historic residential buildings and the integration of modern techniques and materials. By revamping our cities' architectural heritage and embracing forward-thinking design principles, we can forge a path towards a greener, more resilient future. Through conscious decision-making and a commitment to holistic planning, we have the potential to shape a sustainable urban landscape that not only stands the test of time but preserves our planet for generations to come.

Historic sites are essentially green, as they provide a preindustrial way of life and society and constitute a unique approach to architectural design. The challenge in the approach to sustainability in the historic town is how to maintain the balance between preserving the heritage of the site and meeting the basic conditions for human comfort in a rapidly changing visible environment (Al Dein, 2021). Economic, social, and environmental goals are all related to the drive for sustainability in historic sites in regard to urban development. In the historic and ancient cities, the major substance of their environmental identity is based on the preservation of the common buildings that are still used in everyday life. These buildings, with their intricate and timeless designs, serve as a testament to the ingenuity and creativity of past societies. They stand proudly, their walls whispering stories of generations long gone, while continuing to provide shelter and utility to the present inhabitants. Most of the historic building techniques are environmentally friendly by using easily obtainable local materials and providing natural thermal, acoustic, and aesthetic qualities. The wise builders of old took advantage of the resources available in their surroundings, minimizing the need for long-distance transportation and reducing the environmental impact. Their knowledge of sustainable construction methods is an invaluable legacy that we must embrace and further develop. Furthermore, the beauty and artistry of historical architecture contribute significantly to the overall goals of sustainable resource management. By preserving and enhancing these decorative elements, we not only maintain a connection to our cultural heritage but also promote a sense of pride and identity within the community. These ornate details, whether it be delicate carvings, vibrant murals, or elegant engravings, serve as a constant reminder of the past while adding a touch of magnificence to the present (Al Dein, 2022). In conclusion, historic sites hold immense potential for sustainability, encompassing various aspects such as social, economic, and environmental considerations. The intricate balance between preserving historical significance and adapting to contemporary needs is a crucial challenge that requires careful planning and collaboration. By cherishing the architectural marvels of the past, we can build a sustainable future that respects our heritage and ensures a harmonious coexistence with nature (Kolejka et al., 2020; Rastrick, 2021; De Ligt, 2023; Reeves et al., 2020; Cruz et al., 2022).

2. Social Inclusivity and Equity

Urban development in locations with rich cultural heritage and historical assets has recently gained increased recognition as a fundamental element in redefining not only urban character but also the overall urban development performance and identity. This study assesses the applicability of the multiple basic criteria required for the creation of a successful City-Cluster in Jordan by focusing on the city of Jerash, the capital of a cultural-economic City-Cluster. The list of the multiple objectives required for forming a successful City-Cluster includes both the economic and social behavior of the urban residents of comparable cities, as well as the specific characteristics of Jordanian cities interacting with the urban tourists visiting these cities. The applied methodology makes use of several economic, cultural, and tourism indicators devised for Jordanian cities based on data licensed by the Department of Statistics."

"The state of well-being characterized by fair access, along with equal opportunities for all, the protection and impartial support of rights, as well as the utilization of the capabilities of each individual, are the diversified dimensions of equity and social inclusivity that UR possesses as an essential element of both the socially inclusive and just city. The heritage and cultural uniqueness, and strong bonds of place existing in UR, create opportunities to build upon social inclusivity through the stimulation of equitable places for children, equal gender opportunities, and immigrant social and economic integration. Case studies on former socialist and/or developing countries have indicated the incompatibility of economic inefficiency with the maintenance of both historical and building heritage, and strong social cohesive structures. Therefore, the simultaneous accomplishment of the socially just and efficient city is considered difficult due to the wealth differences originating from the socialist legacy.

3. Economic Viability

As defined by the Centers for Heritage Economics and Development, heritage can be considered as an essential asset for community development, providing a broad social, cultural and economic value. For example, heritage attraction can form the basis of a successful sustainable economic development strategy. It can help generate revenue to support heritage preservation and stimulate new opportunities for economic growth, including the encouragement of handicrafts production, accessory services, and new businesses such as restaurants and hotels. It can act as a catalyst for revitalizing and, in some cases, can act as the reason for upgrading areas of the city. At the same time, the economic reconversion of a semi-abandoned area can improve its level of security. The term 'economic viability' refers to the financial feasibility of development that can be self-supporting, able to generate sufficient funds to pay for the recurrent maintenance and operational costs and, if applicable, for the future costs of conservation. Sustainable development most often aims to increase the economic return from all activities, both to offer the resources necessary for funding maintenance and to improve the quality of life of the recipients of the service. Therefore, the management of urban centers cannot fail to consider the value of all the elements which contribute to the formation of the overall urban offer.

STRATEGIES FOR SUSTAINABLE URBAN DEVELOPMENT IN HISTORIC TOWNS

The image of the modern city is seen as a field for large expenditures, income-generating tourist and cultural events, festivals and fairs, a playground for pleasure and the cultural market, a place suitable for leisure for tourists and visitors from nearby cities, and as a space for rich hotel and restaurant companies. Consequently, the concern for the historic city should care very much for this image and see it as a condition and guarantee of the sustainable survival of the city, as well as a sign of the freedom of the city. The city must be able not only to adapt but constantly re-adapt through the profit reinvestment of economic activities and the satisfaction of the needs of modern society (Ragheb et al., 2022; Al Fahmawee et al., 2023) .This paper specifies several strategies for achieving sustainable urban development and conservation in the context of the old city of Jerash, Jordan. The study offers a new image of the city as an expanding tourist destination, as the dependent, predominantly agricultural economy passes through inevitable modern transformation. The various strategies outlined in the paper are formulated to diffuse and absorb urban expansion, to provide for infrastructure requirements and development, and to integrate conservation activities into the market process. All the strategies are integrated into a single composite development plan including priorities, time frame, and costing.

1. Preservation and Conservation of Cultural Heritage for Ensuring Long-term Cultural Legacy

One of the most common perceptions among the residents of Jerash is the utilization of old houses and the preservation of its cultural heritage. These perceptions are consistent with their attitudes toward engaging in these activities and expending time and money to enhance these programs. By preserving the old town and its cultural heritage, the local community also retains its traditions and memories. The local community, hence, maintains and preserves the cultural value of the place. Residents of these historic areas play an important role in the preservation of the place and, as inhabitants, become part of its heritage. Residents, who are considered the most asset of the city, are at the core of the sustainability of the city. Residents' attachment to their place and place identity establishes the heritage and culture of that place. Development that emphasizes the quality of community life over short-term financial gains and results in a total renewal of the look and spirit of the city should, therefore, be pursued in the preservation of historic towns.

Preservation and conservation of the cultural heritage in historic towns are effective tools for maintaining the distinctiveness and diversity of place, sustaining the local community, anchoring memory and identity, providing continuity with the past, and nurturing the spirit of place. In today's rapidly evolving world, where modernization tends to overshadow historical significance, the need for preservation becomes even more crucial. By safeguarding the architectural marvels, traditional craftsmanship, and cultural traditions, these historic towns serve as living witnesses of our shared history. Preservation, in its multifaceted approach, provides an opportunity to accommodate change in a way that is harmonious with existing attributes of a historic town. The aim is not to stagnate progress, but rather to seamlessly integrate modern developments while ensuring the preservation of the town's unique character. Through careful restoration and adaptive reuse, historical buildings can be repurposed to serve contemporary needs without compromising their original integrity. Sustainable heritage management plays a pivotal role in this endeavor, aiming to satisfy the requirements of the present society without jeopardizing the ability of future generations to do so. Balancing the needs of the present with the responsibility towards the future calls for diligent decision-making. From the selection of the most appropriate interventions for preservation to the consideration of materials, techniques, and available resources, every step must be taken with deep thought and foresight. Although restoration is often regarded as the most dramatic act of preservation, there exist numerous other forms of conservation that are equally indispensable. Maintenance, documentation, and education play vital roles in ensuring the continuing existence of these historic towns. Maintenance practices, such as regular inspections, repairs, and infrastructural improvements, help prevent the deterioration of buildings and ensure their long-term survival. Documentation, through comprehensive records and archives, preserves the history and knowledge associated with these sites, allowing future generations to understand and appreciate their significance. Education, both for locals and visitors, fosters a sense of pride and awareness, encouraging the ongoing preservation efforts. The significance of historic towns goes far beyond their physical structures – they are repositories of memories, stories, and traditions that connect us to our roots. By expanding our cultural horizons and invoking a sense of belonging, these towns become catalysts for social cohesion and sustainable development. Each brick, cobblestone, and mural hold a piece of history that deserves our utmost care. Through a comprehensive approach to preservation and conservation, we can ensure that these cultural treasures continue to thrive, enriching our lives and inspiring future generations (Knippschild and Zöllter, 2021; Sardaro et al., 2021; Fabbricatti et al., 2020).

2. Innovative Urban Planning and Design Approaches

When creating such guidelines or solving a particular urban regeneration problem, the designer tries to understand the past: the factors that conditioned the formation and development of the traditional city, then relate it to the present and to future needs and possibilities. Successful historical cities have always exhibited a high degree of unity between the local environment - ecological factors - and the man-made or artificial environment - planimetric, architectural and cultural elements - reinforced by a consistent and from both historical and functional points of view harmonious urban environment fabric. This unity makes these cities rich in human satisfaction and social harmony. It implies that each detail functions in relationship to the others and as a part of a whole, thereby creating a harmonious ensemble that contributes to the quality of life of the surrounding population.

Today, cities need urban management strategies and urban design guidelines that benefit from both traditional local wisdom and modern knowledge. This is to strengthen the historical city identity while developing its economy and to fulfill the contemporary humankind's needs. One way to enrich a city's traditional wisdom is by learning from its local practices, evolving coherent planning principles, guidelines, and regulations that frame development according to both traditional design solutions and present needs. Another way is to employ the new micro-level design rules, flexible design tools, and management strategies offered by computer-based planning and information systems. These, among other tools, help in restoring a particular plot, a public space, or a larger urban area, from exploring before the design starts. Urban architecture, seeking the joyful life of the urban environment, helps introduce innovative solutions regarding building use, courtyards, lighting, and ventilation systems, using passive solar and other renewable energy resources (Lima et al., 2020; Oliver et al., 2021; Russo and Cirella, 2020).

COMMUNITY ENGAGEMENT AND PARTICIPATION

It is essential for the physical and social continuance and development of the town such that principles of engagement and involvement are embedded in planning strategies and practice; it is equally important for the economic benefits of tourist visitation, for conservation, renewal, and reuse of buildings, and for the upgrading of community facilities. Promoting participation, advocacy, and support is a necessary beginning. The HJSHS staff has sought to encourage the town's 16,000 inhabitants to be more directly involved in managing change in Jerash by adopting at the national level the Burra principles relating to engagement and cooperation.

In the context of Jerash, fostering strong community engagement and active participation in the management and development of the precious heritage resources becomes indispensable to ensure long-term sustainability. When the local residents exhibit profound sentiments, indomitable pride, and an unwavering civic responsibility towards preserving their heritage, their profound desire to safeguard and effectively utilize it within a contemporary framework can be transformed into reality. Facilitating urban development in collaboration with the local communities encompasses a myriad of vital elements, including seamless communication, active involvement, genuine concern, efficient organization, steadfast determination, and a deep understanding of the cultural significance of the heritage sites. This comprehensive approach assumes heightened significance in Jordan, as pointed out by Halbwachs, owing to the enduring importance of the local community and the remarkable consensus that has evolved among its members regarding the essence and evolutionary trajectory of the built environment. The preservation of Jerash's heritage goes beyond mere physical conservation and extends to the cultivation of a sense of ownership and pride among its inhabitants. The community's active participation and input in decision-making processes relating to the management and development of the heritage resources lead to a more inclusive and sustainable approach. Local residents' voices, knowledge, and traditions should be acknowledged, respected, and incorporated into the preservation strategies to ensure the continuity of Jerash's rich cultural legacy. Moreover, fostering strong community engagement also demands the establishment of collaborative platforms where local residents can actively contribute their ideas and expertise. These platforms can serve as spaces for dialogue, exchange of knowledge, and collective problem-solving, enabling the community to play a crucial role in shaping the future of the heritage resources. By involving the local residents in the decision-making process, the management authorities can tap into a wealth of indigenous wisdom, innovative solutions, and alternative perspectives that can enhance the sustainability and relevance of the heritage sites. Sustaining this active collaboration requires continuous and transparent communication channels between the various stakeholders involved.

Ensuring that all members of the community have access to relevant information, updates on ongoing projects, and opportunities to voice their concerns and suggestions is paramount. This open flow of communication fosters trust, fosters a sense of ownership, and enables the local residents to actively contribute to the preservation and development of their heritage. It is also vital to foster a genuine concern and empathy for the heritage sites among the local residents. Promoting education and awareness programs that highlight the historical, cultural, and economic value of these resources can help create a deep appreciation for their significance. By nurturing a sense of connection and attachment, the community becomes more motivated to actively engage in their preservation, propelling the sustainable development of Jerash forward. Efficient organization and coordination are crucial aspects of successful community engagement in heritage management. Establishing clear roles, responsibilities, and processes that allow for efficient decision-making and implementation of initiatives is essential. This involves working closely with local community leaders, cultural institutions, academic institutions, and relevant government bodies to create a robust framework that ensures the effective utilization and conservation of the heritage resources. Finally, steadfast determination and a long-term vision are essential to sustain community engagement and participation in the management and development of Jerash's precious heritage. This requires consistent efforts to engage the community, adapt and respond to their evolving needs and aspirations, and continuously evaluate and improve the strategies and approaches employed. By cultivating a resilient and adaptive approach, the long-term sustainability and relevance of Jerash's heritage can be safeguarded for future generations (Goussous and Al-Jaafreh2020; Al-Halbouni et al., 2022; Darabseh and Al-Jamra, 2023).

1. Importance of Community Involvement

Obsolete town centers may require radical interventions in order to ameliorate the quality of life for citizens and create a healthy, vibrant urban community. Special projects can bring citizens back into town by providing a viable living environment and a sense of community through cooperative work. Brasília, the capital of Brazil, is a good example of the heart of a modern city being turned into an urban desert. To develop and act efficiently, the Heart Institute of Brasília (HIB) project gave the community back its voice and developed initiatives to stimulate popular participation, receiving ultimately financial help from the population itself. Brasília is today a more democratic city with the community's joy and sufferings again taking place in its heart. Local tourism has also been strengthened. These examples are successful stories of community participation that have created the conditions for such places to survive as urban spaces and recover their original vitality and richness. One of the major elements for sustainability in historic towns is the involvement of the community in decision making. Historic districts have the potential to foster a strong sense of community, as they are already clearly defined areas surrounded by natural and cultural boundaries. Community support is essential for the implementation of any management strategy, and to ensure the political and financial sustainability of conservation activities. The involvement of the local community and its participation in the maintenance of historic urban centers is vital for their preservation. Although the participation of heritage buildings' owners in preservation and management is central for achieving urban conservation objectives, they do not actively participate unless they feel that they have an interest in it. Therefore, their involvement in the process is important from the start so as to recognize the issues at stake and to integrate them into the formation of the management process (AtKisson, 2021; Foster, 2020; Barton et al., 2021; Ratcliffe et al., 2021; Simon, 2023; Allam et al., 2022).

2. Tools and Techniques for Engaging Communities

By actively involving and engaging all segments and demographics of the population in the process of shaping the future physical transformations, the resulting overall vision and strategy for action are much more likely to be universally understood and embraced by individuals from diverse fields and backgrounds. This inclusive approach not only facilitates broader insights into the various cultural and social aspects that contribute to the community's identity, but also yields valuable information regarding the different significance and esteem attached by community members to their town's natural and cultural heritage. Moreover, the occurrence of unexpected and disruptive shock events can potentially expose certain neighborhoods to sudden risks and vulnerabilities. Without access to adequate information and rehabilitation techniques, the community itself might lack the necessary comprehension or financial means to restore the remaining structures or possess the collective expertise required to prevent widespread migration and the resulting deterioration of the neighborhood (Dunets et al., 2024).

Developing an effective and fruitful partnership between all interested parties and actively encouraging the local community to actively participate in the process of managing change in their surroundings requires the proficient utilization and integration of a diverse range of tools and techniques. These invaluable resources and methodologies, though typically employed at specific junctures of the management and development process, hold greater potential for success and long-term viability when they are thoughtfully combined and employed in unison. It is critical to acknowledge that residents may often find themselves lacking the necessary confidence or experience required to effectively articulate their opinions and desires. Furthermore, even when individuals are eager to contribute, an array of factors can greatly hinder their ability to do so, including but not limited to issues concerning literacy or a scarcity of free time. By recognizing and acknowledging these very real constraints, the development of a multitude of techniques has been cultivated with the explicit objective of mitigating and eliminating these barriers, ultimately fostering a more inclusive and participatory environment for all (Marion and Fixson, 2021; Bergmann et al., 2021; Shet et al., 2021).

POLICY AND GOVERNANCE FRAMEWORKS

The European Investment Bank places particular strength on private sector investment to help stimulate the economy. They also play a role in developing decentralization processes, and fiscal defense reforms are being developed to help the municipalities. Links with the Palestinian territories are also being fostered.

They also focus on long-term water supply, and water savings in agriculture and water demand management. During a series of subsequent conversations in which the consultant was not able to participate, the municipality embarked on the development of operational plans and visions for the town. The relevant ward was then divided into two other wards (South and North) so that the work could be completed more quickly.

The vision of the Greater Jerash Plan is underpinned by donor perspectives. In his presentation, the EU Head of Cooperation described the link between the current and previous EU assistance strategies in Greater Jerash and the country's national strategy, set out in the 10-year water strategy. The EU is currently implementing a €40 million strategy in Jordan, focusing largely on water supply and establishing a governorate investment program. In Jerash, it is focused on sewer, water supply, and collection. This is complemented by smaller projects, regular access to finance instruments, and €2.4 billion funding for a program to help businesses develop their business practices and improve environmental performance. Performance pays pensions program for municipal staff (Seeberg, 2022; Sandri et al., 2020).

1. National and Local Policies for Sustainable Urban Development

While a certain degree of centralization is essential, centralized responsibility, which has been excessively overvalued, is overly biased towards the strength of large peripheral municipalities and makes it too complicated to satisfy urban generalist needs. The national policy reorientation is needed more than a substantial system reform. The intensified, or potential, conflicts in the dual or ethnic cities are insecure, maybe neglected, with the attempt to completely observe changelessness as a primary condition in a short time by way of delaying or ignoring basic and necessary improvements.

For sustainable urban development in the city of Jerash and its historic character area, where the new town is also a part, a number of guidelines and policy recommendations at the national and local levels are presented. National policies and programs need to be formulated or implemented, which have a strategic goal backing the cooperative, rather than the competitive tendency of the specified, and are inclined towards consistent and balanced national development. The clearly specified fragments of the national policy, which have a generally high percentage of just allocation, are mostly the major achievements in terms of sustainable urban development, and do contribute significantly in helping the underprivileged and in maintaining a good life standard with dignity, when placed under moderate control of government intervention. They inform the verified success areas for sustainable urban development.

2. Role of Government and Stakeholders

The identification of the stakeholders may vary according to the level of planning. However, there should be groups and names that should not be excluded from the process. For example, local and central government, local head of municipalities, citizens, non-governmental organizations, stakeholders, national and international experts, external donors, and visitors. Three main categories of stakeholders were identified, as proposed by Ballantyne in where they were named as the municipal authorities, the developers' side (i.e. owners of the old houses), and the consumers' side.

The role of the government is vital, as it is the highest authority considered to plan and guide urban developments. However, stakeholder management, which is based on partnership and private-public partnership, is also of great importance and can never be replaced by the government. Both of them include the active participation of stakeholders in designing, implementation, and maintenance of different interventions like urban development projects.

Since these projects are not only technically passive, but they directly affect the economic and social conditions of the cities during development and after they are done. This management should also encompass local society, local people, and beneficiaries. Their continuous participation increases the empowerment of these people and makes them responsible towards their city, its potentials, and its history.

FINANCING SUSTAINABLE URBAN DEVELOPMENT

Experience shows that private funding from the owners of the historic buildings is usually brought in as loans and grants. Repayable loans are highly attractive to owners as they enable the necessary maintenance and conservation of these remarkable historic buildings to take place without any substantial capital outlay. Instead, these loans allow for the restoration and conservation costs to be spread out strategically over an extended period of time, ensuring a sustainable approach. In accordance with good practice in conservation schemes, it is stipulated that these loans would be utilized to cover upfront expenses, which include essential survey works and initial project design. Furthermore, these loans would only be issued for conservation works once the project has successfully obtained all necessary planning approvals and its costs have been precisely determined and fixed in a comprehensive lump sum contract that covers all major risks. Grants, on the other hand, play a vital role in covering specific building conservation costs that are not included in the loans. These grants typically exclude items such as public art and street improvements which cannot be claimed on the aforementioned loans. Therefore, grants serve as an essential financial resource for ensuring the comprehensive coverage of all conservation costs, ultimately contributing to the preservation of the historic buildings. It should also be noted that the same type of loans can be extended to businesses that are relocating within a conservation area or those that aspire to establish themselves within such an area. This initiative not only promotes the captivating aesthetics of the conservation area but also supports businesses in aligning their operations with the cultural heritage and historical significance of the surroundings (Lahn et al., 2023; El Faouri and Sibley, 2022; Powers, 2020; Waller, 2021; Belhaj Fraj et al., 2022).

Urban conservation strategies in historic towns like Jerash involve costs, particularly in preserving significant heritage buildings, infrastructure maintenance and upgrading, and landscaping and transportation improvement. Encouraging investment in conservation is crucial in the goal of sustainable urban development. This is also important in attracting developers who will restore dwellings in the older parts of the town. Public seed money is usually required to stimulate private sector investment. Possible methods of financing urban conservation can be achieved through the following approaches: national and foreign charity funds, lottery prizes, available interest-free or affordable loans, concessionary parking and tax breaks, and a waiver of routine planning charges (Al-Shomali, 2020; Alsubaie et al., 2024).

1. Public-Private Partnerships

The removal of a significant part of income from households occurs at a time when the operational costs of maintaining the solid waste disposal systems are escalating. As the population of the rich upper city grows, their ability to pay for essential services decreases. Therefore, the government has been trying to privatize the services in this area for the last 12 years. The government initially attempted to commercialize the garbage collection services, but it was not successful as the private sector was unable to make enough money to find it attractive. It was not until a continuous protest was launched by the city residents that things returned to the previous practice of the public sector providing the services within the city.

Jerash Municipality, in cooperation with the National Solid Waste Management Program, has addressed the issue of non-collection by providing waste containers to the potter community within their work area. The municipality also pays for the weighing of the waste and takes it to the sanitary landfill site. Discussions are currently taking place, again with the National Solid Waste Management Program, to provide a similar public-private partnership for the blacksmiths. It is apparent that through the use of public-private partnerships, the problem of getting low-income groups to contribute to the maintenance cost of the historic town can be addressed, thus enhancing their environment.

2. International Funding Mechanisms

Some of the recipients may not be able to meet these conditions and consequently miss the golden opportunity to receive the grant they desperately seek. In order to bridge this gap and provide a helping hand, various factors have been identified as priority categories that many donor agencies favor and wholeheartedly seek to support. These categories include, but are certainly not limited to, small enterprises, women's group projects, and activities specially designed for the youth. The aim of these agencies is not only to provide financial support but also to create abundant job opportunities for these subgroups through a well-funded and meticulously planned project. In addition to these paramount categories, a plethora of other activities may take place under the umbrella of the funded project. These activities are of utmost importance and can greatly contribute to the overall success and sustainability of the project. They range from organizing impactful exhibitions that showcase the achievements and progress made by these communities to hosting international congresses that bring together experts and stakeholders from around the globe to exchange knowledge and ideas. The comprehensive scope of these activities also extends to the creation of influential publications, such as brochures, maps, and books, that not only serve as informative resources but also help in raising awareness and garnering support for these causes. The reach of these funded projects goes beyond the boundaries of physical resources and embraces the potential offered by modern technology. This is evident through the emphasis placed on the utilization of the Information and Research Development Assistance Program (IRDAP) as a means to facilitate access to information and strengthen the capacity of the communities involved. Moreover, the importance of catering to the medical needs of these communities cannot be overlooked. Adequate medical assistance, including healthcare facilities and services, forms an integral part of these projects, ensuring the well-being and welfare of the people. Furthermore, recognizing the vital need for the availability of clean and accessible drinking water, projects may include initiatives for well drilling. By providing a reliable source of water, these projects not only improve the lives of the community members but also contribute to their overall development and progress. The spirit of charity is also upheld through various forms of assistance that extend a helping hand to those in need. These charitable endeavors, which may include financial aid and material support, play a significant role in transforming lives and fostering a sense of gratitude and empathy within the communities. While all these activities are undeniably crucial components of any funded project, it is worth highlighting that the sustainability and success of conservation projects primarily hinge upon the establishment of job opportunities. Creating meaningful employment opportunities for the community members serves as the cornerstone for their social and economic growth. This paves the way for various craftsmen, professionals, and consultants to enhance their technical capabilities and contribute actively to the development of their respective fields. In order to ensure that the benefits of these projects are widespread and enduring, it is imperative to strike the perfect balance between the participating local bodies, the experts involved, and the political authorities. This delicate equilibrium forms the foundation for the success and longevity of any project financed through grants. By nurturing effective cooperation and collaboration among these stakeholders, the community can thrive and flourish, showcasing the true strength and resilience that emerges when all parties work together towards a common goal. In conclusion, while meeting the conditions for receiving a grant may present challenges for some recipients, it is crucial to recognize the immense value and potential these projects hold. They not only serve as catalysts for change but also provide opportunities for growth, empowerment, and sustainable development. By prioritizing those in need, fostering inclusive practices, and maintaining essential partnerships, these funded projects can truly make a lasting and profound impact on the lives of the individuals, communities, and societies they touch.

International funding mechanisms are available with some organizations to heritage restoration and protection in general and in historic towns in particular. However, these mechanisms are not focused on urban interventions only. They can be utilized where the heritage of a given area is in danger due to financial or other constraints on the part of the national/local authorities. These mechanisms are designed to assist the local communities and/or municipalities to support the conservation, preservation, and restoration works. However, their criteria may hinder some of those local bodies to benefit from them. Such hindrance might occur when conservation principles, policies, and/or legislation governing the concerned cities/towns are either absent or nonfunctional. These problems arise as a result of struggling to meet those strict international standards that seem too sophisticated for both the municipalities and their political authorities. Moreover, some funding institutions do not directly fund the required interventions. Their funds are generally transferred in favor of certain conditions targeted by the concerned city or town in order to enjoy the grant (Theodora, 2020; Boniotti, 2023).

MEASURING SUCCESS AND IMPACT

The Amman Plan 2020 and the Old Towns Development Study, as well as numerous other surveys and studies, were thoroughly examined and analyzed in great detail during the extensive preparation of this study. It is crucial to highlight that these reports were not only extensively reviewed but also meticulously cross-referenced with other major reports to ensure a holistic understanding of the subject matter. Moreover, it is important to emphasize that the findings derived from these reports were in complete agreement with the conclusions drawn from numerous other comprehensive studies. In a concerted effort to ensure community involvement and effective decision-making, an all-encompassing and comprehensive public awareness program is proposed to be initiated at the early stages of the preparation phase. This program will be fundamental not only in spreading awareness but also in actively engaging the local community, enabling them to actively participate in the decision-making process. By fostering a collaborative environment, it is believed that the project will benefit immensely from the valuable insights and perspectives of the local community, resulting in a more inclusive and successful outcome. Furthermore, it is imperative to highlight the indispensability of specialist heritage expertise throughout the entire process. Given the intricate nature of the project, it is essential to have individuals with specialized knowledge and experience in various fields such as archaeology, architecture, justice, law, public relations, sociology, ecology, management, communication, and other relevant faculties. These experts will play a crucial role in overseeing and meticulously monitoring the preparation and implementation of the project, ensuring that it is executed with the utmost precision and adherence to the highest standards. In summary, the Amman Plan 2020, the Old Towns Development Study, as well as numerous other surveys and studies, constitute the foundation upon which this comprehensive study is built. It is imperative to recognize the immense value of these reports, which were extensively analyzed and harmonized with other major findings. Additionally, it is crucial to commence a comprehensive public awareness program early in the preparation phase to foster community involvement, thereby enabling a more inclusive decision-making process. Lastly, the indispensability of specialist heritage expertise cannot be overstated, as experts in various fields will play a vital role in overseeing and monitoring the project's preparation and implementation (Sharaf, 2023; Lawson, 2021; Daher, 2024).

The impact of carrying capacity in old quarters is beneficial through creating a living and sensitive place for its residents and visitors. It is an interactive process where both residents and visitors actively participate in creating a unique environment. Seen in this way, the jammed spaces become an asset rather than a liability. The attributes of congestion change dramatically when it is transformed from commercial traffic to people traffic. In order to ensure the success and viability of any proposed development, it is essential that careful consideration be given to market research and feasibility studies at the onset of the project.

1. Key Performance Indicators for Sustainable Urban Development

Since the primary objective pertained to UNESCO World Heritage Sites, we meticulously handpicked Key Performance Indicators (KPIs) that align with the functional urban dynamics essential for upholding the 'outstanding universal value' (OUV) of a world heritage. Therefore, we carefully examined and scrutinized various aspects of the cities, taking into account their historical significance, cultural diversity, architectural grandeur, and environmental sustainability. Nevertheless, the KPIs were consciously ranked or scored, and their outcomes were expounded upon in a broad manner to simplify the comparative evaluation of each town's performance. This comprehensive evaluation helped us to identify the areas where improvements were needed and the potential strategies that could be implemented to enhance the overall experience and preservation of these remarkable heritage sites. It is important to note that the emphasis placed on these KPIs and the resultant policies formulated are intricately intertwined with the unique characteristics and perspectives of the respective cities and stakeholders involved. We actively collaborated with local authorities, community representatives, and heritage experts to ensure that the devised policies were not only practical but also resonated with the aspirations and aspirations of the local communities. Through this collaborative effort, we aimed to strike a delicate balance between safeguarding the cultural and historical integrity of these sites while fostering sustainable development and inclusive growth. This approach acknowledges that heritage is not static; it is a living, breathing entity that must adapt to modern demands without compromising its essence. Therefore, we took into account the opinions and needs of the local communities, allowing them to actively participate in the decision-making process (Jawabreh et al., 2021).

By considering the nuanced perspectives and distinctive characteristics of each city, we aimed to create a framework that empowers local communities to take ownership of their heritage. This process of empowerment involves creating opportunities for economic growth, promoting cultural exchanges, and fostering a sense of pride and belonging among residents. Overall, our endeavor to select and evaluate KPIs, and develop corresponding policies, has been meticulously undertaken to ensure the sustainable preservation and promotion of UNESCO World Heritage Sites. We firmly believe that by prioritizing functional urban dynamics and involving all relevant stakeholders, we can guarantee the longevity and relevance of these globally recognized treasures for generations to come.

Wherever feasible and applicable, we prioritize the utilization of established norms and frameworks, such as social, economic, and environmental classifications, instead of relying on rigid thresholds. This approach aids in facilitating a comprehensive assessment and insightful interpretation of the data. The selection and development of the evaluation key performance indicators (KPIs) and sub-KPIs were meticulously conducted by the esteemed steering committee in close collaboration with statistical agencies, through extensive and thorough deliberations. It is crucial to note that this endeavor extends beyond a simple reliance on existing standards; rather, it necessitates a deep understanding of the underlying knowledge and perspectives of key stakeholders. Consequently, the design, coding, and acquisition of new data are imbued with enhanced value, particularly when applied within the intricate fabric of urban contexts.

Future sustainable urban development cannot only be based on discrete single (sub-index) indicators, but rather has to be seen in an integrated perspective of the urban interaction and urbanization where indicators are co-created among the different fields and actors in relation to their expressions and judgments about what is right and immoral. Therefore, when designing the ESI, we took an integrated approach, making use of data available on all levels and finding ways of merging and evaluating the data to obtain as coherent an estimation as possible (Perry et al., 2020).

A single Key Performance Indicator (KPI) alone cannot fully encompass and reflect the intricate dynamics and multifaceted nature of a town's social, economic, and environmental interaction, as well as its urban life. It is essential to recognize that the evaluation of a town's overall well-being and progress cannot solely rely on a singular metric. To illustrate this, let's explore a hypothetical scenario. Consider a town that excels in its environmental sustainability, achieving a high score on an environmental KPI. However, despite this achievement, the town experiences comparatively weak economic activities and a lower quality of life for its residents. These factors, such as limited economic opportunities and a lower quality of life, can negatively impact and restrict the potential for sustained environmental performance in the long run. This interrelation highlights the importance of considering a holistic approach when assessing a town's progress and development. Similarly, the same principle applies to social and economic performances. A town may demonstrate remarkable social achievements, but if it lacks in economic prosperity, it could face challenges in maintaining its social progress and further enhancing the quality of life for its inhabitants. The interconnectivity between these dimensions emphasizes the significance of comprehensively evaluating multiple aspects rather than relying solely on an individual measure. In summary, it is vital to understand that the complexity of a town's social, economic, and environmental interaction, along with its urban life, cannot be adequately captured by a single KPI. Evaluating and gauging progress necessitates a broader and more comprehensive assessment, considering the interdependencies and interplay between these diverse variables in order to gain a holistic understanding of a town's overall well-being and progress (Satterthwaite, 2021; Wijijayanti et al., 2020; McGranahan et al., 2021).

2. Monitoring and Evaluation Frameworks

The very particular nature of historic urban development created additional challenges and complexities that needed to be addressed. It was crucial to understand and analyze these intricacies in order to effectively plan and implement any urban changes. For example, during thorough interviews conducted for the Torino Case Study, it became evident that monitoring urban changes, both in physical and demographic aspects, was carried out systematically within the city center. A dedicated downtown "task force" had been established to oversee and monitor these changes, comprising relevant municipal bodies and organizations. However, it was noteworthy that this task force did not play a role in the decision-making process; instead, it actively participated in the various deductions derived from the monitoring efforts. Surprisingly, while there was significant investment, both public and private, being directed towards revitalizing the city's historic built environment, the state and future of cultural vitality were not currently being monitored. Given the substantial resources being channeled into the revitalization projects, this lack of cultural monitoring was indeed surprising. Thus, there arose a necessity to explore and develop robust monitoring and evaluation (M&E) frameworks for such endeavors. This paper will delve into the presentation and discussion of M&E frameworks specifically tailored for the Aqaba and Jerash projects. The primary focus will be on the latter, as it presents unique challenges and opportunities within its historic urban landscape. By examining the M&E frameworks, analyzing their effectiveness, and identifying areas for improvement, valuable insights can be gained to guide future urban revitalization efforts. Throughout the paper, various aspects of the M&E frameworks will be explored, including their methodologies, indicators, and data collection methods. Additionally, the paper will highlight the importance of measuring cultural vitality and its impact on the overall success of revitalization initiatives. By addressing this critical gap in monitoring, the paper aims to contribute to the development of more comprehensive and holistic approaches to urban revitalization (Cerreta et al., 2021; Bindi et al., 2022; Basile and Cavallo, 2020; Ferretti et al., 2022).

Monitoring and evaluation (M&E) of sustainable urban development is widely acknowledged as essential if the purpose of such interventions is genuine improvement and not merely reporting. However, while much literature has explored the nature and consequences of M&E and frameworks, there is little scholarly discussion of its development. Part of the reason for this discrepancy lies in the fact that most literature is concerned with evaluating national-level interventions, a context within which more generalizable and automatic monitoring and evaluation tries are possible. Most urban development efforts, however, take place at the urban scale - particularly those focused on sustainable development - and are characterized by a large plurality of potential interests, types of intervention, and complex local urban dynamics. In the case of historic towns, the challenges and complexities of monitoring and evaluating sustainable urban development are further intensified. Historic towns are unique in their challenges and requirements when it comes to monitoring and evaluating sustainable urban development. These towns possess a rich historical heritage and cultural significance, making them essential to preserve and protect. As such, any interventions or developments in these areas must be carefully assessed and monitored to ensure that they align with the principles of sustainable development and do not compromise the integrity of the historic fabric. One of the key features that distinguish monitoring and evaluation efforts in historic towns is the need for a nuanced approach. Unlike national-level interventions, which may have standardized frameworks and indicators, historic towns require tailor-made strategies that consider their specific context and unique characteristics (Dmitriyev et al., 2024). The diverse interests and stakeholders involved in these areas, ranging from local communities to heritage organizations, further complicate the process of monitoring and evaluation. In addition to the complex nature of historic towns, the dynamic urban dynamics of these areas pose additional challenges. Urban development in historic towns often involves a delicate balance between preserving the heritage and meeting the evolving needs of the community. This requires a comprehensive understanding of the local urban dynamics, including social, economic, and environmental factors. Effective monitoring and evaluation must account for these dynamic elements and adapt to the changing circumstances and needs of the town. Furthermore, the scale of interventions in historic towns can vary significantly. While some projects may focus on specific buildings or areas, others may encompass larger urban contexts. Monitoring and evaluating sustainable development in such diverse interventions requires a flexible and scalable approach. It is essential to develop monitoring and evaluation frameworks that allow for a comprehensive assessment of impact while accommodating the diverse nature of interventions in historic towns. Overall, monitoring and evaluating sustainable urban development in historic towns is a complex task that requires a thoughtful and context-specific approach. It necessitates considering the unique characteristics of these areas, the plurality of interests and stakeholders involved, the dynamic urban dynamics, and the varying scales of interventions. By developing tailored monitoring and evaluation strategies, we can ensure that the efforts in historic towns contribute to genuine improvement and sustainable development, while honoring their rich cultural heritage (Ali-Toudert et al., 2020; Neves et al., 2020; Giles-Corti et al., 2020; Labadi et al., 2021).

LESSONS LEARNED AND BEST PRACTICES

Furthermore, it might be that suggested potential solutions, including the rehabilitation of the historical town through heritage tourism promotion efforts or the organization of cultural events, only be of benefit in the short term but have negative effects on longer-term sustainable urban development. Substantial attention should thus be given to fostering small and medium-sized enterprises as a substantial strategy that contributes more effectively to sustainability, to the reinforcement of a heritage-for-development approach aimed at local community and stakeholders' involvement, and to supporting traditional crafts, particularly those that rely on traditional knowledge, which is very relevant to local identity. Any adaptive reuse strategy should be concerned with underprivileged areas and disadvantaged groups.

Taking into account the lessons learned from this analysis of Jerash, it can be deduced that planned interventions, based on an understanding of local identity and specific heritage values, and on extensive local communities' involvement and cooperation between national and local authorities, could be more effective. The adaptive reuse of historic buildings should reflect innovative strategies that safeguard local heritage and can be of benefit socially and economically, while at the same time guaranteeing equitable enjoyment for the whole of society. The prioritization of the requirements of the local population and of the host environment should be the point of orientation of heritage policies. The existence of strong and effective institutional coordination will also help in achieving integrated conservation at the level of historic towns. Networking between similar institutions at the national and interregional levels would also entail other related benefits and opportunities.

1. Case Studies of Successful Sustainable Urban Development Projects

Such successful interventions come from a wide variety of sources. Many of them are autonomous bottom-up local initiatives, where stakeholders have decided to design the future of their town center, have linked and/or got funding, and have shared the design and implementation of a plan of projects. Large projects providing the resettlement of endangered areas or the regeneration and transformation of existing constructions that no longer fully or partially satisfy users and town center species anymore come from national or EU programs. They were created by the municipalities under the supervision of technicians with high qualification and ethical responsibility at the local or national theoretical planning level. Vital engineering interventions and the innovative housing renovation and the integration of obsolete typological demands in the historic center come from top-down centralized national programs.

Among the many international educational programs aimed at the revitalization of historic town centers, there are many examples of small and large projects carried out in cooperation with local municipalities and national and international institutions. Some of these projects result in remarkable success and prove to be models to emulate. SBE Export, School of Building Environment at the South Bank University London, in 1996 under Professor John Worthington, published a survey of such projects in Europe. Also, Benerveneto, a UNESCO research program attempting to develop decision-support systems for urban conservation, has accumulated an interesting collection of the results of decades of research and practice in the important historic town in the world; San Gemini, in Italy, offers courses in the conservation of town centers. Differences, peculiarities, and level of understanding of the word sustainable by those who plan, carry out, and analyze the success or failure of the interventions are evident in these projects.

2. Key Takeaways and Recommendations

Hence, it is crucial to examine these interlinkages and relationships comprehensively when considering spatial planning for change and development in historic towns. Urban development should not ignore these root-out specific characteristics. It should find a way to enhance these unique features rather than force change that takes the areas from being authentic and living to artificial and dying. It should find a different way of "doing", by looking both at different people and different buildings, in different activities and different spaces. At the same time, new values of the past should add economic value to their owners, residents, and users. Land prices in the area should increase, and infrastructural qualities need to improve also.

This case study has demonstrated the complex interlinkages and relationships that are crucial in sustainable urban development in historic towns. Based on the historical town of Jerash, the case study shows how existing urban morphologies, fabric, residents, and businesses interlink in physical, economic, social, and environmental dimensions. It is demonstrated that the past, where the roots of the society are, are an asset for current residents. Thus, respect and protection of the past are paramount. At the same time, these should add value to these residents. Old areas should not be slums. They should provide decent living and working conditions to those living and working with them.

CONCLUSION

The story has not been without cost and has only been successful because of the active and practical engagement of the people who live in the core and the efforts of the Jordanian staff who work within the Department of Antiquities. Local people have been called upon to take up the responsibility for the care of their modern and ancient town, be tolerant of tourists, and in one key local initiative, take up the discipline of craft and support their traditional cultural heritage. However, a cliché is well known and too often true that every challenge has an opportunity, and Jerash's motivations and 'tourism transformation' were somewhat dated and never realistically practical for the 21st century and the interests of the community it served. The goalposts have now been moved from a functional management model based on the world of the early to mid-twentieth century to a transformational economic model that seeks to maintain and add to local well-being and prosperity by developing new educational and income-generating opportunities directly from heritage assets and the components that collectively build to create experiential value and terms of local quality.

The existing infrastructure of guided tours, the companies that operate them, the local road and street networks, and the souvenir shops that sell existing kinds of merchandise need to be redesigned, repurposed, or replaced by contemporary tourist needs of more experiential attractions and fresh journey opportunities that touch the heart and soul. Therefore, it is crucial to harness the potential of the local community, inviting them to actively participate and contribute to the sustainable growth of Jerash's tourism industry. To achieve this, comprehensive plans are being devised to revitalize the town's infrastructure to cater to the evolving demands of visitors. The traditional guided tours, although valuable, no longer suffice in providing the immersive experiences that today's tourists seek. Hence, a reimagining of these tours is necessary, focusing on creating captivating narratives and interactive engagements that not only showcase the historical significance of Jerash but also evoke a profound emotional connection with the visitors. Alongside this, the existing companies responsible for operating these tours must embrace innovation and adapt their services to ensure they remain relevant in the rapidly changing tourism landscape. Furthermore, the local road and street networks require a significant overhaul to accommodate the influx of tourists and facilitate seamless exploration of the town.

Upgrades to the existing infrastructure, including widened roads, improved signage, and enhanced connectivity, are imperative to ensure a smooth and enjoyable experience for both visitors and locals alike. In parallel, the souvenir shops that currently offer conventional merchandise must undergo a transformation. It is essential to reimagine these establishments as dynamic spaces that showcase the rich artistic heritage of Jerash. By supporting local artisans and craftsmen, the souvenir shops can become hubs of creativity, offering unique and authentic keepsakes that reflect the town's cultural essence. This shift towards promoting artisanal crafts not only revitalizes the local economy but also fosters a sense of pride and ownership among the community. By embracing these necessary changes, Jerash can position itself as a premier tourist destination that goes beyond a mere visit and instead immerses guests in an unforgettable journey through time. The newfound focus on experiential attractions, deeply rooted in the town's heritage, will captivate the imaginations of travelers, leaving a lasting impact on their hearts and souls. Ultimately, through this tourism transformation, Jerash aims to create a harmonious balance between preserving its rich history and embracing the opportunities presented by the 21st century, ensuring the well-being and prosperity of both its people and its timeless treasures.

Jerash, a city with a rich historical legacy, has faced numerous challenges over time. However, it has remained resilient in the face of modern urban growth and tourism. Efforts to protect its historical and archaeological sites have been successful, ensuring the preservation of its unique heritage. The collaborative work of academic institutions, the

Department of Antiquities, the Greater Jerash Municipality, and the local community has played a crucial role in safeguarding the city's core and sharing knowledge with the public. This educational endeavor highlights the beauty, complexity, and remarkable scale of Jerash's historical urban fabric.

1. Summary of Findings

The analysis of the relationship and contradictions between the statutory framework of the national law about urban development and the specific policy instruments for the Jerash area has been accomplished referring to the response to a list of five questions by Paul Fouracre to a so-called normative legal performance analysis. The large number of the different environmental, procedural and content regulations and very limited capability of local interest to bargain on them against the public interest constituted a relevant contradiction to achieve one of the main and fundamental cultural policy meaning: the social good and the equity approach. The relationship and contradictions identified between community development policies and the statutory and policy framework defined the selection criteria to inform the third important research step, the stakeholder analysis. Based on the literature and its practical applications, the list formulated by Sherry R. Arnstein on the level of citizen participation has been compared with the Jerash case policy tool and has brought to light the mentioned contradictions.

The central theme of this thesis is the study of the relationship and contradictions, formal and informal, between the municipal physical planning in heritage areas and, on the other side, the community living and welfare issues. The thesis started with the concept of a common cultural heritage and the challenges that a heritage place faces in the globalizing world, especially due to the tourist development policies undertaken with UNESCO recognitions. The most important and significant reflections of these policies is the Concepts of the Historic Urban Landscape (HUL), which focused mainly on the conservation within a broader sustainable development perspective. Within this framework, Jerash, one of the best-preserved Roman city planning in the world, has been chosen for the empirical research, which was carried out by a multidisciplinary team of researchers from the University of Florence and the University of Jordan during 2014.

2. Future Directions for Research and Practice

Methodological research: There is still limited knowledge about material and construction processes in traditional buildings. Filling the gap between natural sciences, history, and practical construction remains a challenge for researchers, the results of which could help improve conservation practices and possibly even contribute to sustainable construction technologies or materials beyond heritage uses. Such research needs to be inter- or trans-disciplinary. Gathering and translating knowledge from practice to scientific discourse is also a task heritage professionals should acknowledge.

Buildings and traditional materials decay: A long-term perspective is necessary to come to a well-informed decision on the 'heritage status' of a specific building, in order to maintain and protect it. Natural materials are sustainable to some extent in an appropriate context (integration, reciprocity, vertical direction), while industrial materials rarely fulfill this necessity. Heritage approaches, therefore, need to carefully consider material-oriented aspects. Some traditional techniques or materials may not be sustainable in a modern context, while some may be transferred from a heritage context to contemporary uses, e.g. hemp as insulation in modern construction. Contrary to empire-based logic, tradition is the transferring of knowledge and traditions are not sustainable if not constantly re-developed.

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'NURTURING WHO WE ARE': THE LOCAL BRANDING OF FOOD TOURISM IN MENORCA BIOSPHERE RESERVE (SPAIN)

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Abstract: This paper examines sustainable food tourism development within UNESCO Biosphere Reserves, based on the Menorca Biosphere Reserve brand and its producers, experience providers and restaurants. The paper explores how local culinary practices and sustainable business strategies contribute to placemaking, through community cohesion and destination branding. Drawing from a content and thematic analysis of 21 business narratives and social media storytelling, combined with a case study of La Casa del Gelato, this research identifies three key themes: heritage and tradition, environment and sustainability, and craftmanship and quality. Results demonstrate that food brands effectively serve to integrate local resources and sustainability principles, enhancing both the environmental and socioeconomic aspects of the region through the use of local ingredients, the creation of authentic customer experiences, and the implementation of eco-friendly practices. This paper provides theoretical insights into the study of the relations between food tourism and sustainable development and offers practical recommendations for small food businesses that aim to support sustainable tourism in protected areas.

Keywords: gastronomy, Mediterranean, placemaking, regional development, sustainable food tourism, food experience

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INTRODUCTION

Food plays a pivotal role in shaping the identity of a destination (Cordova-Buiza et al., 2024; Kim and Iwashita, 2016; Lin et al., 2011) and influencing the overall tourist experience (Martin et al., 2021; Quan and Wang, 2004). Food forms a crucial aspect of tourism placemaking (see Friedman, 2010; Lew, 2017), where culinary heritage and traditions are valorized to attract visitors seeking authentic experiences (see, for example, Everett, 2012; Fusté-Forné, 2022; Kőmíves et al., 2024; Park et al., 2023; Slocum, 2021). This process involves the protection and promotion of local food through events and markets, and the creation of food networks (Nilsson, 2016; Rachão et al., 2019), highlighting the strategic importance of local culinary infrastructure and the sustainable development of food tourism (Brozović et al., 2024; Ginés-Ariza et al., 2024). This infrastructure includes producers, experience providers, and restaurants that recognize the value of local food, and contribute to theeconomic, environmental, and social development of the place. In this sense, the collaboration among local food-based stakeholders is integral to achieving these objectives.

Hence, this paper focuses on local food-based stakeholders that are part of the culinary infrastructure of the Menorca Biosphere Reserve brand (MBRB), which includes products and services that establish a strong brand for creating a unique place-based identity and promoting the destination's attributes (Wilkinson et al., 2022) while preserving the unique character of the place (Smith, 2015) through sustainable tourism experiences (Zhang et al., 2019), that is, food experiences, in this case. The brand is promoted as "an emblem of sustainability that prioritises those local products and services that are based on criteria that favour the Menorcan environment, identity and culture" (MBRB, 2024a). In addition, the brand "guarantees that when you choose any brand-certified product or service, you are fostering positive impact on an environmental, cultural, social and economic level on the island of Menorca" (*ibid*). The research explores the practices of local food-based stakeholders that drive this sustainable food tourism development, and how, and why they also contribute to the protection and promotion of the environmental and cultural attributes of the destination and to the well-being of the local community.

Menorca is one of the Balearic Islands, an archipelago located in the western Mediterranean Sea. UNESCO declared Menorca a biosphere reserve in 1993, "in recognition of the high level of compatibility between the development of economic activities, the consumption of resources, and the conservation of heritage and landscapes on the island, a practice still maintained today at an exceptional level. Menorca is an intensely humanized territory, with an extremely rich tradition of rural landscapes. It is home to a remarkable diversity of Mediterranean habitats that host endemic plant and animal species exclusive to the island, some of which are in danger of extinction" (UNESCO, 2023).

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After the inclusion, in 2019, of the surrounding marine area (Figure 1), Menorca became the largest marine biosphere reserve in the Mediterranean (Menorca Preservation Foundation - MeP, 2024). Following UNESCO's Man and the Biosphere Program, launched in 1971 (UNESCO MAB, n.d.), the terrestrial and marine areas are each one organized in three main zones, according to their preservation interest. Thus, in case of the terrestrial area (Figure 1), the core area (the most important one) stands for 5% of the surface, followed by the buffer area (38.5%), and the transition area, which accounts for the remaining 56.5% of the surface, respectively (MBRB, 2024b). Environment, social welfare, tourism, culture and economy are the five guiding pillars considered by MBRB managers (MBRB, 2024c), all oriented towards building and preserving an equilibrium between economy, nature, and the cultural heritage, in line with the idea of "all-round sustainable tourism" (Clark and Chabrel, 2007; Ilbery et al., 2007). In this fashion, the island's vision on tourists (e.g., they are the main source of revenue for the island) deserves a special mention, tourists being considered an active part of it, same as the inhabitants (MBRB, 2024c). Thus, being kind to and aware of their impact on the environment, showing respect to the cultural heritage of the island, supporting the local products and enjoying the local customs, are some of the issues included in the 'ten commandments of travel', a decalogue meant to minimize the impact of tourists on the island (The Menorca Tourism Promotion Foundation, 2024). Therefore, while visiting the island, the tourists are automatically committed to and learn about the local culture and identity, the sense of community built in the island along its history, the environment and sustainable practices in place, becoming part of Menorca's Biosphere Reserve brand and its meanings (Botha, 2023).

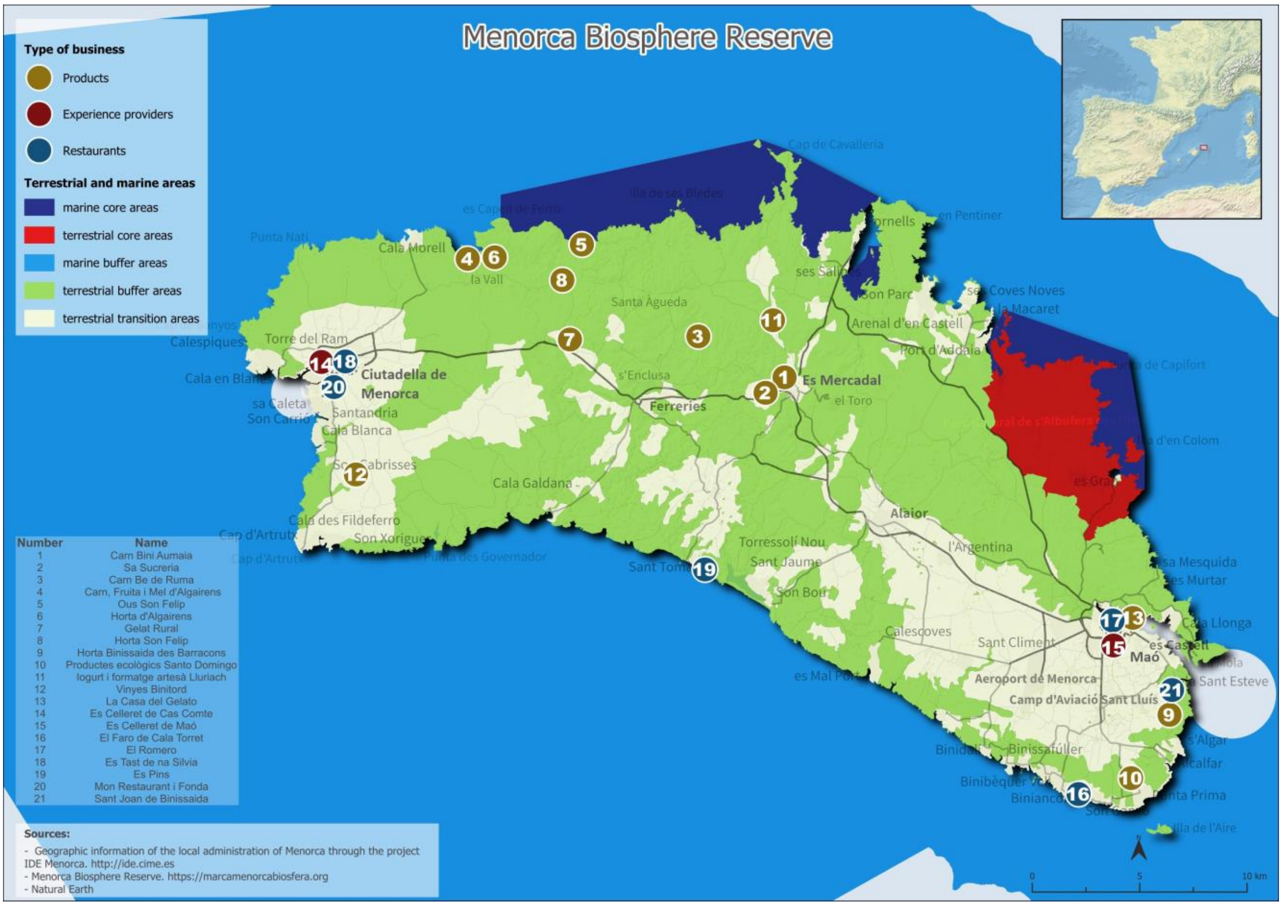

Figure 1. The map with the territorial location of the business types analyzed in the Menorca Biosphere Reserve (Source: Own source)

Schultz et al. (2018) investigated the meanings associated to the Biosphere Reserve concept that emerged from the field work analysis of eleven UNESCO Biosphere Reserves around the world (e.g., from Spain were included Menorca, La Palma and El Hierro), in period 2012-2015. The study found that the interpretation of the Biosphere Reserve concept, offered by the interviewed participants, was different in each location. This was explained, among others, by the local 'contexts with different histories, ecologies and politics' (p. 85) of the Biosphere Reserves analyzed (Botha, 2023).

In the same vein, Ivancsóné Horváth et al. (2023) analysed Hungarian nature reserves and found that decision-makers' lack of knowledge and familiarity with the concept of sustainability was often the main barrier to making right decisions on sustainable tourism development in these areas. Moreover, as suggested by Maxey (2007: 59), sustainability is a social and political construct. Hence, all stakeholders involved with Biosphere Reserves should be considered, as their perceptions, practices, and experiences, could contribute to enlarging the 'standards around the Biosphere Reserve concept's definition' (Schultz et al., 2018: 76), leading to specific implementations of sustainability solutions (Botha, 2023; Issakov et al., 2023; Kratzer, 2018). In this line, while previous research has explored the relationships between land resources and tourism in Menorca (Marcos-Valls et al., 2020; Pérez-López, 2013), there is a lack of studies that build on the relationships between food and tourism in the context of the Menorca Biosphere Reserve, and its contribution to the "all-round sustainability" (Sims, 2009). Biospheres and nature reserves, as protected landscape, are a source of sustainable development in tourism (Bokova, 2017; Ivancsóné Horváth et al., 2023).

In this sense, previous research has scarcely analysed the role of food experiences in protected areas, where few examples have focused on geoparks (Fusté-Forné, 2023) and national parks (Hjalager and Johansen, 2013). Also, Weber et al. (2023) have published to date the only study of the Swabian Alb Biosphere Reserve, in Germany, with the objective of exploring the value of regional food for sustainable development through the regional brand 'Albgemacht'. The aim of this study is to explore how local communities define their place in the architecture of the destination and, as a result, how the destination plays a role towards a sustainable tourism development, from the perspective of local food-based stakeholders (Kalenjuk Pivarski et al., 2023; Stalmirska, 2024). This is a new contribution to theory and research based on the case of the Menorca Biosphere Reserve brand as a placemaking strategy, which is also in line with recent tourism research (see, for example, Muñiz-Martinez and Florek, 2023; Yu and Spencer, 2023) which has a growing focus on food. After the introduction and theoretical context of the paper, we describe the materials and methods, and analyse the results. Later, we present the discussion and conclusions, the theoretical and practical implications, and the limitations and future research.

MATERIALS AND METHODS

The methodology adopted in this study is qualitative and comprises two main phases. The first, it is based on a content and thematic analysis of the digital businesses narratives of the stakeholders involved in the Menorca Biosphere Reserve brand. More precisely, we focus on the websites (Baggio, 2003; Lee, 2020) of 21 businesses (producers, experience providers, and restaurants), included in the Menorca Biosphere Reserve brand (Table 1), to identify how these food-based stakeholders present their products and services, their marketing strategies, and their approach to food tourism in a protected area. Related to other indicators, although the information was not available in all cases, a dominant feature of the businesses analysed is their small size (with 0-10 or less than 25 employees) and the limited society juridical form, with few cases of civil societies or community of goods (Empresite, 2024). In addition, the analysis of their social media storytelling allows understanding how the businesses use social media to promote their identity and highlight the sustainability aspects of their food products and services. As explored in previous research, on one hand, social media provide a valuable platform for stakeholders to communicate their brands' values, which are especially relevant for local food businesses (Fusté-Forné and Filimon, 2021), and on the other, also serve to build a destination branding (Hunter, 2012; Lund et al., 2018). In particular, the analysis includes the 300 posts published since the businesses opened their accounts on Instagram until July 1, 2024. Therefore, the study relies on the analysis of the images published in two steps (Hunter, 2015), that is, a content analysis, to classify the images based on the topics they portray, followed by a semiotic analysis, to discuss the meanings embedded in the topics and identify broader themes (Michael and Fusté-Forné, 2022; Wegerer and Volo, 2021). Findings are presented in the results section.

Table 1. List of producers, experience providers, and restaurants in the Menorca Biosphere Reserve brand (Source: Own source)

First phase: Type of business	**Name of the business (specialization)**
Products	1. Carn Bini Aumaia (meat)
	2. Sa Sucreria (pastries)
	3. Carn Be de Ruma (meat)
	4. Carn, Fruita i Mel d'Algaiarens (meat, fruits and honey)
	5. Ous Son Felip (eggs)
	6. Horta d'Alagaiarens (vegetable farm)
	7. Gelat Rural (ice-cream)
	8. Horta Son Felip (vegetable farm)
	9. Horta Binissaida des Barracons (vegetable farm)
	10. Productes ecològics Santo Domingo (ecologic products)
	11. Iogurt i formatge artesà Lluriach (yogurt and cheese)
	12. Vinyes Binitord (vineyard)
	13. La Casa del Gelato (ice-cream)
Experience providers	14. Es Celleret de Cas Comte (cellar and typical Menorcan products)
	15. Es Celleret de Maó (cellar and typical Menorcan products)
Restaurants	16. El Faro de Cala Torret
	17. El Romero
	18. Es Tast de na Sílvia
	20. Mon Restaurant i Fonda
	19. Es Pins
	21. Sant Joan de Binissaida
Second phase: La Casa del Gelato – The interview	
1. When and how/why was the business founded?	
2. How would you define your business' identity? Which are your business' values?	
3. How is your business influenced by being part of a Biosphere Reserve? Which elements of the environment have a greater influence? Why?	
4. Are you developing a sustainable product? Why? What relationship do you have with the producers/restaurants/agents in the area? And with the landscape?	
5. What does participate in the Menorca Biosphere Reserve brand bring to you? What is the collaboration between the participants like? Does it contribute to local sustainable development and has an economic, environmental and social impact?	
6. What are the elements of your brand that make you authentic? How do you help protect this identity? How do you promote yourself?	

In Figure 1 we observe the map of the island of Menorca with the land and sea area of the Menorca Biosphere Reserve, and the territorial distribution of the products' provider businesses included in Table 1. For those located either in or close to the terrestrial buffer areas, for example, special requirements apply to ensure the preservation of the natural resources and environment (e.g., soil, biodiversity, landscapes, etc.). The restaurants are also shown in Figure 1, and they are mainly located in the terrestrial transition areas, which endured more transformations and where urban centers are usually concentrated terrains. The second phase of the methodology involves a case study (Botha, 2023; Yazan, 2015) with one of the producers (La Casa del Gelato), a small-size business, with the focus on an in-depth interview with the owner and the analysis of its social media narrative on Instagram, rather than data saturation (Botha, 2023; Mandal, 2018). The interview was performed in May 2024, in Spanish, and was recorded, prior consent.

The owner was informed about the guiding ethics (e.g., preservation of personal identity) and her permission to cite excerpts of the interview was granted. Given that no pilot interview was run, the interviewer first explained the goal and coverage of the study to ensure she was knowledgeable about and had a clear understanding of the issues to be discussed. The duration was an hour. The interview, which is useful to capture in-depth details from the participants (Bryman, 2012) to explore the narratives attached to a particular topic (Holstein and Gubrium, 2016), aimed to gather detailed information on the perspectives of the relationship between food and tourism, the contribution to sustainable tourism development, and the challenges faced in the context of a Biosphere Reserve. The questions included in the interview are given in Table 1, and the methodology steps in Figure 2.

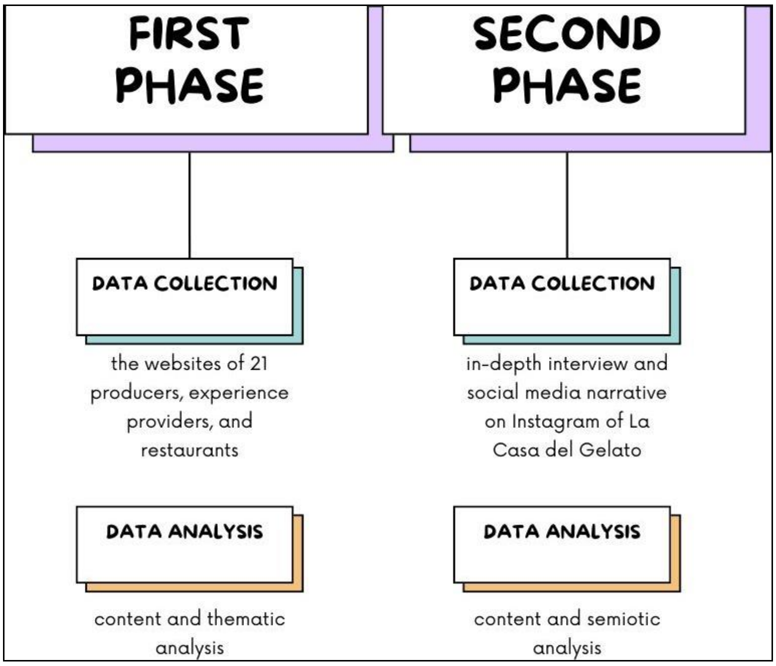

Figure 2. The methodology steps (Source: Own source)

The combination of the content and thematic analysis of the websites of all the businesses that conform the brand, with a case study, which includes an in-depth interview and its social media analysis, provide all together a more robust understanding of the role of sustainable food tourism and food culture in the Menorca Biosphere Reserve. Figure 2 shows the methodology steps for the two phases. In this fashion, the themes, illustrated with textual examples in the next section, reflect how Menorcan businesses integrate tradition, sustainability, and quality into their narratives, and highlight their commitment to preserve the cultural heritage, the environment, and further enhance the artisanal excellence of the place. This approach is also observed for La Casa del Gelato and it is enhanced through the quotes from the interview with the owner, and the visual storytelling strategy of her business on Instagram, which revolves around three recurrent topics: raw food, people with ice-cream, and informative posters. Each topic is analyzed below, with a connection to the broader themes of tradition, sustainability, and quality, which emerged from the analysis.

RESULTS

This section is divided into three sections that explore the place-based narratives of Menorcan businesses that participate in the Menorca Biosphere Reserve, and La Casa del Gelato' storytelling, based on its identity and its digital marketing strategy.

Place-based narratives of Menorcan businesses. Heritage and tradition

The business narratives highlight the importance of both the preservation and the transmission of culinary and cultural traditions across generations. This reflects a profound respect for historical legacies and a focus on keeping ancient techniques and recipes alive. The companies emphasize their family and local roots and present themselves as guardians of Menorca's cultural heritage. For example, Sa Sucreria emphasizes the intergenerational transmission of recipes and artisanal techniques that have defined the identity of their products over the years. "An ancestral recipe passed down through generations has made our 'ensaimadas' (Menorcan artisanal pastries, with a flat snail-shape, made with sugar, flour, eggs, lardy fermented dough and covered with powdered sugar), a reference for taste, quality, and tradition. Located in Es Mercadal, a small town in the center of the Island of Menorca, Sa Sucreria is recognized for the quality of its sweets. Since 1875, five generations of master artisans endorse and give name to the best representation of Menorcan pastry products" (Sa Sucreria, 2024). In a similar line, Mon Restaurant i Fonda reveals that "The return to the original is a commitment that goes beyond the kitchen; it is a pledge to recover a gastronomic and architectural legacy" (Mon Restaurant i Fonda, 2024), which illustrates how the restaurant is committed not only to traditional cuisine but also to the recovery of historical architectural elements, which are a source of authentic experiences for the visitors.

Environment and sustainability

This theme highlights the companies' commitment to sustainable practices and respect for the natural environment. The narratives reflect a focus on regenerative agriculture, efficient use of natural resources and biodiversity protection. The businesses present themselves as models of sustainability, which seek to harmonize their economic activities with environmental conservation. For example, Horta Binissaida des Barracons: "At Binissaida, we follow the principles of regenerative agriculture and permaculture exemplarily: an edible forest, an orchard of fruit trees and vegetables, mobile chicken coops, or an olive grove designed with keyline design are some of the components of this agroecological system. Maintaining a living soil, stimulating high biodiversity both cultivated and wild, working with adapted species, or making efficient use of rainwater are the premises on which this innovative farm model is based, aspiring to be an example in Menorca" (Agro Xerxa, 2024). This narrative shows a strong approach to sustainability, incorporating various agroecological practices to maintain soil health and biodiversity.

Ous Son Felip is another producer that emphasizes the scale and scope of the company's commitment to sustainability through the balance between agricultural production and environmental conservation: "Over 1000 hectares of centuries-old forests, organic and regenerative agriculture, farm animals, and a sustainable project aim to create a balanced ecosystem and pay homage to Menorca as a Biosphere Reserve" (Son Felip, 2024).

Craftsmanship and quality

Menorcan companies also focus on the superior quality of their products and dedication to artisanal and handmade offerings. This reflects a commitment to excellence, where each product is made with care and attention to detail. Creativity and innovation also play an important role to offer unique products that highlight the potential of local ingredients. Vinyes Binitord say that "We strive for excellence in making the best wine. We are creative and do things in the calm that settles on the island" (Binitord, 2024). The company emphasizes its pursuit of excellence based on local products which are shaped by the tranquility of Menorca. This passion for ingredients of quality and culinary creativity is also manifested by other businesses such as the restaurant El Romero: "Fish and vegetables, sea cuisine, or plant-based cuisine, it doesn't matter; we are excited by the quality of the ingredients and all the potential they can express on the plate" (El Romero, 2024).

La Casa del Gelato's personal storytelling. Heritage and tradition

The narrative of La Casa del Gelato also emphasizes a deep-rooted connection to tradition and cultural heritage. The owner, originally from Italy, moved to Menorca seeking a change in life and driven by a desire to create an authentic, family-oriented business. This decision shows the importance of personal history and familial roots, which are central to the identity of La Casa del Gelato. The respect for tradition is evident in their commitment to preserving traditional gelato-making methods and rejecting artificial flavors. The owner remarks that "We removed all artificial flavors to dedicate ourselves to classic, traditional gelato because we come from a culture where food and gastronomy are very important" and emphasizes the abundance of quality raw materials available on the island: "Menorca offered this in abundance". This respect for tradition is also reflected in the owner's deep connection to the land, inherited from her farming background which highlights the intrinsic value of respecting and nurturing the earth. "My contact with the land comes from when I was born. I'm a farmers' daughter. My father used to say, 'everything starts with the land'... the land is where our food, our strength, our roots come from, and we must respect it. And Menorca fits perfectly with this".

Environment and sustainability

La Casa del Gelato's engagement with environmental stewardship is another defining aspect of their business model. The owner's early adoption of organic farming practices demonstrates a long-term vision for sustainable development: "We were among the first in the late '90s and early 2000s to take care of organic farms because we understood then and understand now that everything starts with the land". This aligns with the broader philosophy of treating the land well to yield the best results, and it reinforces the interconnectedness of sustainable practices with high-quality produce.

This focus on local sourcing and seasonal ingredients further emphasizes sustainability. The business uses local fruits, a strategy which contributes to the reduction of transportation emissions and supports the local economy: "First we start with the raw materials, all the fruits that I transform into gelato are those of each season, they are fruits from Menorca". This practice ensures fresh and high-quality ingredients, while also minimizing the environmental impact. The narrative also highlights the benefits of operating in a small, protected territory like Menorca, which facilitates a close cooperation among the local producers: "Our raw material is km0, and this reduces transport costs, and we all help and know each other, we live in a small place". This business philosophy also fosters a collaborative environment where sustainable practices are more easily implemented and maintained.

Craftsmanship and quality

La Casa del Gelato's commitment to quality is not just about sourcing the best ingredients but also about attention to detail in the production process. The owner's focus on a single product, 'gelato', allows for a deep expertise on its quality: "I sell only gelato; I want people to try the best gelato on the island". The relationship with local producers and the careful selection of ingredients are crucial elements of their craftsmanship, as mentioned above. The owner emphasizes the importance of using local milk, renowned for its quality, to ensure the authenticity of their gelato and also the value of the food chain from land to table: "It is a product of quality, starting with the milk from Menorca, which is considered one of the best in Europe. This must be valued; we have it here. If I go to Madrid and change the milk, it will not be the same". This shows the importance of local resources in maintaining the product's integrity. Moreover, the narrative reflects a broader philosophy of sustainability that goes beyond the mere product to include packaging and waste management. In this sense, she highlights the use of eco-friendly packaging, such as cardboard containers and compostable materials (for example, rice straws), and the need to educate customers about the importance of eco-friendly practices.

La Casa del Gelato's visual storytelling on Instagram. Raw food

The posts featuring raw food, such as pears, lemons, peaches, and oranges, highlight the origin of La Casa del Gelato's ingredients, also explored above. This visual representation reinforces brand's commitment to using high-quality, local, and seasonal produce, a practice aligned with the theme of environment and sustainability. Based on the communication of raw ingredients, the brand emphasizes its dedication to ensure the authenticity and the natural origin of its products. In this sense, these images visually communicate the connection between the land and the final product, reinforcing the idea that quality starts with the best ingredients. The colors of the fruits (for example, the yellow of the lemons, the orange of the peaches, and the orange or/and the green of the pears) symbolize freshness and health, and also emphasize the aesthetic quality of the produce. The recurring portrayal of raw food visually narrates La Casa del Gelato's commitment to using local and seasonal ingredients. This not only highlights sustainable business practices but also connects back to the owner's heritage and respect for the land, as expressed in the interview: "We understand that everything starts with the land". The fruits symbolize the starting point of their product journey, linking the raw materials to the final products.

People with ice-cream

The images of hands holding ice-cream serve to humanize the brand, creating a direct connection with the consumers. These posts acknowledge the delight and experience of enjoying gelato, aligning with the theme of craftsmanship and quality. The moment of consumption conveys the product's appeal and the satisfaction it brings to customers. The hands holding ice-cream emphasize the human side of the brand, and the variety of the backgrounds, often featuring the shop's environment (located in front of the sea), to emphasize the connection to Menorca and its unique environment. These images strengthen the narrative of La Casa del Gelato's commitment to delivering a high-quality, and enjoyable product. They reflect the owner's focus on creating positive customer experiences, where the visual portrayal of happy customers enjoying the product enhances the brand's image as a provider of authentic, high-quality gelato. For an experience product, like gelato, not only the taste and hence, the quality of the ingredients is important but also, the experiential attributes (e.g., color, shape) of the gelato can be used as a marketing strategy to create a "compelling experience for the consumers" (Brakus et al., 2014).

Informative posters

Posts featuring posters with information about new product releases, festivities, or brand promotions are also relevant for the brand's communication strategy. These posts not only inform but also engage the audience, to create a sense of community and involvement. They align with the themes of environment and sustainability, and heritage and tradition. They aim to highlight local culture and sustainable practices. In particular, the content about new products or events emphasizes both the innovation and the tradition, showing brand's commitment to evolving while staying true to its roots. Announcements of festive events connect the brand to local culture and community activities. These posts highlight the brand's active role in the community and its efforts to educate customers about sustainability: "Educating the customer is important to complete the sustainability approach", as the owner states.

DISCUSSION

The products, experience providers, and restaurants that have adhered to the Menorca Biosphere Reserve brand and, in particular, the case of La Casa del Gelato, a business affiliated to the brand, they all provide insights into the role of small businesses in promoting sustainable tourism within UNESCO Biosphere Reserves. The results can be summarized along three main lines, given hereafter.

First, the emphasis on local and seasonal ingredients aligns with previous research findings that show the role of culinary heritage and local food practices in shaping destination management and marketing (Andersson et al., 2017; Björk and Kauppinen-Räisänen, 2016; Stalmirska, 2024). Based on the raw food pictured in their Instagram posts and the emphasis on the quality of the local produce, La Casa del Gelato exemplifies how businesses can leverage local resources to create a unique and appealing product that supports both environmental sustainability (Hjalager and Johansen, 2013) and local economies (Giampiccoli and Kalis, 2012) in protected areas. The commitment to using Menorcan milk and seasonal fruits reveals the importance of km0 practices, which foster a deeper connection between the business and the local community (Noguer-Juncà and Fusté-Forné, 2023) and informs the broader goals of UNESCO Biosphere Reserves, to balance conservation with sustainable development through tourism (Bokova, 2017).

Second, the visual storytelling that highlights people enjoying ice-cream reflects the concept of placemaking, where the interaction between tourists and local products enhances the sense of place (Kastenholz et al., 2016; Sims, 2009; Tsai, 2016). The personal touch in the interviews, where the owner discusses the connection to the land and the commitment to traditional methods, reinforces the authenticity of the experience offered, in line with the topics identified as part of the content and thematic analysis. This also aligns with previous studies that highlight the significance of authenticity in tourism placemaking (Cassel, 2019; Lew, 2019; Mou et al., 2024). The idea that “a gelato is more than just a gelato” encapsulates the business’s philosophy that every product is a representation of its values and connection to heritage and tradition, environment and sustainability, and craftmanship and quality.

Third, the sustainability practices used by the businesses, in general, and by La Casa del Gelato, in particular, stand as a platform to promote an eco-friendly behavior among customers. This is critical in the context of Biosphere Reserves, where maintaining the ecological balance while promoting a sustainable use of the local natural resources (UNESCO, 2023), is a very pressing goal. The business’s involvement in local ecological farming and the emphasis on the cooperation with the local community, also reflects a model of community-based placemaking, where local stakeholders work together to enhance the destination’s sustainability (Roxas et al., 2020). This cooperation is crucial in island territories like Menorca, where they are more vulnerable to impacts of tourism (Arbulú et al., 2021).

CONCLUSION

This paper presents a new and timely approach to how the unexplored relationships between food, tourism, and destination placemaking in UNESCO Biosphere Reserves are informing a sustainable tourism development strategy (Lew, 2019; Marsden, 2013) and tourist experiences (Esau and Senese, 2022; Fusté-Forné, 2022). In this sense, the analysis of the businesses’ social media narratives reveals a holistic approach to sustainable food tourism within the Menorca Biosphere Reserve. Results highlight the importance of having a good knowledge and understanding of the diversity of the local culinary heritage, and the historical and cultural connections of each business involved. The integration of high-quality local ingredients, the emphasis on offering authentic customer experiences (Sims, 2009), and the active promotion of sustainable practices, also illustrate how small businesses, in particular, can contribute to the broader goals of sustainable tourism and community cohesion, as a source of ‘nurturing who we are’. Results also show the need for a close collaboration between the local stakeholders in the food sector (Everett and Slocum, 2013; Roy et al., 2017), and between them and the destination’s managers, to ensure sustainable tourism development (Cortese et al., 2021; Ivancsóné Horváth et al., 2023; Noguer-Juncà et al., 2021) from a broader perspective, which encompass more stages of the value chain, such as packaging and waste management. All in all, sustainable food tourism practices, and the high quality of the tourist experiences provided, are rooted in the symbiosis of the local food businesses, whatever the nature of their activity (producers, experience providers, restaurants), with the Biosphere Reserve.

Theoretical and practical implications

This study reinforces the importance of food tourism in placemaking and destination branding and highlights how local and authentic culinary practices are a foundation for sustainable tourism development. It adds to the existing literature based on a case study that demonstrates the practical application of the relationships between sustainable tourism, community involvement, and environmental stewardship. For practitioners, this study also offers a story line of how small businesses can effectively contribute to sustainable tourism in a Biosphere Reserve.

The narratives’ emphasis on local ingredients and sustainability practices through which the businesses care about culture and nature, can serve other businesses in similar contexts. Furthermore, the use of visual storytelling on social media as a tool for engaging customers and promoting brand values is an effective strategy that can be widely adopted, especially in the food sector where there is potential to adopt and implement social media marketing strategies (Pucci et al., 2019) to increase food knowledge of current and potential customers (Platania and Spadoni, 2018) and inform the development of (food) tourism (Duarte et al., 2013). Findings also add to existing literature on sustainable food geographies, showing that food stakeholders have an important role in achieving “all-round sustainability” in tourism destinations and, in particular, in Biosphere Reserves. As gatekeepers of local culinary heritage, food-based stakeholders can actively participate in the construction of a sustainable food cultural capital of a destination.

As for tourists, local food experiences can be used as part of their ‘learning for sustainability’ (Schultz et al., 2018) process at a tourist destination, with positive effects for them and the local community (Sims, 2009).

Limitations and future research

One limitation of this study is its focus on a single brand (in particular, the food sector of the brand), which may not fully capture the diversity of approaches to sustainable tourism within the Menorca Biosphere Reserve. In addition, while the case study of La Casa del Gelato provides a specific approach to the identity of one of the businesses which reinforces the results, this may also introduce biases related to their own self. Future research could expand on this study based on a larger sample of businesses (beyond the food sector) within the Menorca Biosphere Reserve or other UNESCO Biosphere Reserves. Comparative studies could provide a broader understanding of how and why different geographical contexts influence the implementation of sustainable tourism practices. In addition, longitudinal studies could examine the long-term impacts of these practices on local people, places and practices.

Future research could also explore the relationship between food producers and consumers (tourists) to assess consumers’ satisfaction and how they can contribute to a brand’s placemaking and loyalty. Moreover, research on food tourism and/or food-based stakeholders within a Biosphere Reserve could also be analyzed using theoretical frameworks such as the protection motivation theory (Rogers, 1975), suitable for sustainability studies in Biosphere Reserves (Botha, 2023). The analysis could help identify, for example, the predictors of food sustainability-oriented behavior in a Biosphere Reserve. Finally, future research could investigate the "experiential attributes" (Brakus et al., 2014) of food products and how they contribute to promote the local identity, culture and sustainability of the place.

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CULTURE, RITUALS AND NATURE: EXPERIENCES OF MYSTICAL TOURISM IN NORTHERN PERU

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Abstract: This study explored cultural tourist experiences of Andean rituals on Peru's northern coast using ethnographic methods. Data were collected through semi-structured interviews with 65 participants, field notes, and observations of interactions among shamans, patients, and lagoons. Findings show tourists seek authentic cultural experiences, spiritual healing, and personal fulfilment. Shamans act as intermediaries, fostering faith in deities and lagoons. Locals recognize both the benefits (e.g., increased tourism) and challenges (e.g., scammers, lack of municipal organization) of mystical tourism. The study concludes that traditional shamanic rituals enhance perceptions of authenticity and emotional impact, with the natural landscape enriching the sensory experience.

Keywords: cultural tourism, sacred sites, lagoons, shamanism, cultural heritage

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INTRODUCTION

Cultural and natural heritage significantly impacts tourist experiences, particularly in mystical and spiritual destinations. Natural diversity and cultural expressions attract visitors seeking authenticity and a sacred connection, shaping their perception of value (Dmitriyev et al., 2024; Ezenagu et al., 2022). The natural environment, rich in flora and fauna and tied to local rituals, enhances the authenticity and emotional impact of mystical tourism (Mohammad, 2024; Mu et al., 2019).

Academic studies have explored Andean shamanism, including the use of ritual objects, hallucinogens, and the influence of Christian syncretism on these practices (Joralemon, 1984, 1993; Norman, 2011; Oseguera, 2008; Polia, 1995; Prayag et al., 2016). However, research on tourist experiences during shamanic rituals is lacking.

This study aims to analyze cultural experiences in shamanic rituals in Huancabamba, focusing on meanings of rituals, mystical tourism perceptions, the role of the shamans, and the role of natural resources in mystical tourism.

Meaning of Rituals

Meaning involves attributing interpretation or value to words, phrases, or events (Lederack, 1995; Real Academia Española, 2022). The meaning emerges from the interaction between objects/events and individuals within specific contexts, not solely from either element (Bachler, 2018; Collins, 2004; Millan-Anaya et al., 2024).

Hobson et al. (2018) note that in rituals there is a high symbolic value in objects and acts, allowing participants to represent abstract concepts and create personal meaning. Studies show that social meaning in shamanic rituals is shaped by shared beliefs, values, and the emotional and physical challenges faced by tourists (Aulet and Vidal, 2018; Moufahim and Lichrou, 2019; Scheyvens et al., 2021; Singh, 2009; Wu, 2018). Travelling to mystical and distant destinations can mean something sacred and transform tourists' beliefs (Sharma and Timothy, 2023; Shih et al., 2009) . Meaning also arises from cultural expressions that connect with history and identity (Legare and Nielsen, 2020; Shan, 2021). But, there is a risk of

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folklorization, where increased tourism leads to rituals becoming staged rather than authentic (Davidov, 2010). All this broad perspective allows us to examine how tourists attribute meaning to mystical rituals in Huancabamba.

The role of the shaman in participant's experience

In Peru, shamans play an important role in mystical tourism, serving as cosmic mediators and healers for both physical and spiritual ailments (Chiappe, 1989; Flor-Henry et al., 2017; Rock and Baynes, 2005). They possess extensive knowledge of Andean traditions and psychoactive plants like "Ayahuasca" or "San Pedro", which facilitate trance and spirit communication (Caballero, 2022; Daldoss, 2019). This deep connection with medicinal plants, nature and spirits inhabiting it, is passed to the shaman from generation to generation (Ivanescu and Berentzen, 2020; Politi et al., 2021) and attracts tourists seeking genuine experiences (Kowalewski, 2016; Olsen, 2002; Soulard et al., 2021). Some studies suggest tourists may adapt their beliefs after participating in shamanic rituals and also help interpret rituals, enhancing tourists' emotional and spiritual experiences (Kim et al., 2013; Luna, 1984; Yu and Na, 2022).

It is important to understand the perception that tourists have about the shaman’s role in Huancabambino shamanic rituals, especially in a context where there is evidence that these rituals work in curing diseases (Greene, 1998; Wood et al., 2016), but at the same time there are concerns about authenticity and the presence of false shamans who deceive tourists (Comercio y Justicia, 2023; El Mundo, 2018; Homan, 2011; Simon and Casserly, 2020).

The legitimacy of shamans significantly impacts the perceived authenticity and effectiveness of rituals (Chhabra et al., 2003). Therefore, examining the shaman’s role is key to grasping the complexity and impact of these practices.

Perception of the local population about mystical tourism

Tourists seek culturally rich experiences, and local communities play a key role in preserving and presenting these traditions (Brabec, 2014; Harvey, 2002; Yang, 2012). Shamans, viewed as spiritual leaders with unique healing abilities, are influenced by local beliefs and customs (Polyakova, 2021).

The perception of a shamanic ritual is also influenced by the way the shaman presents it. Goffman (1956) analyzes how people are constantly managing the impression they generate toward others through social roles. In relation to shamanism, a shaman is assuming his role carefully, wearing different clothes, and applying specific rituals and behaviors that “embody the shaman.” This “performance” aims to create an astonishing and credible experience for the local community, and is what attracts tourists (King, 2017). Understanding interactions between shamans and locals helps gauge the authenticity of these rituals. Studying the resident and tourist perceptions can reveal how shamanic practices contribute to social cohesion and cultural identity (Nunkoo and Gursoy, 2012; Cordova-Buiza and Serruto-Perea, 2024).

The local attitudes towards shamanism like touristic attraction, might also reflect concerns about commercialization and authenticity (Chen, 2024; Ochoa, 2002; Sotomayor et al., 2019). These perceptions impact the promotion and integration of mystical tourism into local offers (DeSoucey et al., 2019; Marcher et al., 2022).

Role of natural resources in mystical tourism

Natural sites from Peru, including mountains, waterfalls, and forests, are considered sacred by local communities and are scenarios to shamanic rituals and gratitude ceremonies to “Mother Nature” for community physical-spiritual healing (Sarrazin, 2022). For instance, Cuzco’s Inti Raimi festival is celebrated at Sacsayhuaman (3.700 meters above sea level), an Inca fortress rich in flora and fauna, where sacred rituals honor the Sun God and Pachamama, attracting visitors from all over the world. The shamans use the natural environment as part of their ritual language, making "space speak" (Hill, 2007). In adition, natural elements like lakes and hills hold sacred significance, shaping tourists' experiences, even more so when the rituals are executed in natural spaces with impressive geomor-phological and hydrographic characteristics (Breidenbach, 1975). Thus, understanding the role of natural resources in these practices allow us to know its spiritual and cultural significance of both residents and tourist.

MATERIALS AND METHODS

This study, was conducted in the high Andean region of Piura (in the highlands of northern Peru) in Huancabamba's "Las Huaringas" lagoons, focused on the Laguna Negra and Shimbe because both are more frequently visited by tourists. Using qualitative methods and ethnographic design (Dodgson, 2017) it explored the deep cultural and social meanings attributed to these mystical tourism practices. In December 2023, 65 semi-structured interviews were conducted, each lasting 60 to 80 minutes, with an average of 70 minutes. Atlas.ti software systematized the codes and categories. Thematic analysis was used to identify and interpret patterns in the data, revealing detailed and emerging insights (Braun and Clarke, 2006).

Participant observation is a central technique in ethnography that involves the researcher's immersion in the daily life of the community. This study, it was carried out as follows: a) Participation in Rituals: The researcher participated in four rituals, which began at 9:30 pm and concluded at 4:30 am the following day, including flowering baths and healing ceremonies, to firsthand understand the practices and the meaning attributed to these experiences b) Observation of Interactions: The interaction between shamans and participants was observed, documenting the ritual procedures and the responses of the participants. The field notes from Laguna Negra and Shimbe are the result of the general observation of groups of shamans and their patients participating in mystical rituals around the lagoons. We observed four rituals performed by shamans from 10 a.m. to 5 p.m., which included: flowering rituals (2), love rituals (1), and healing rituals (2). Participant observation, conducted during a healing and flowering ritual, allowed us immerse in the shaman-patient interaction. To protect the identity of the participants, all quotes had a code: R (residents), S (shaman), LG (government), PTD (public transport drivers), or T (tourist). Data collection ended upon reaching saturation, with information being consistent and comprehensive. After transcribing and axial coding, responses were analyzed, and triangulation of field observations and interviews ensured the findings' credibility (Table 1).

Table 1. Key agents interviewed

Group of interviewees	Number of interviews
Laguna Negra (black lagoon)	
Tourist before the ritual	10
Tourist from Trujillo city	4
Shaman from Trujillo	1
Shamans from Iquitos, Dominican Republic, Colombia, and Spain	4
Shamans from Huancabamba	7
Residents	10
Health ritual participants	2
Laguna Shimbe (Shimbe lagoon)	
Tourists	6
Tourist in flowering rituals	5
Shaman from Huancabamba	1
Key informants	
Local governments	4
Public transport drivers	4
Restaurant owners	2
Hotels owners	2
Jaladores	3
Total	65

Table 1 presents a summary of the interviews conducted in three settings: Laguna Negra, Laguna Shimbe and Huancabamba city. Different groups were interviewed, including tourists, shamans from various regions, local residents, participants in health rituals and key informants. Figure 1 represents the qualitative analysis process of the interviews, field observation and literature review, through triangulation of information. Figure 2 shows us a panoramic photo from Huancabamba, the city has a rural landscape surrounded by hills. This city is located at 1970 meters above sea level, is a valley whit economic activities such as livestock farming, agro-industry, and mystical tourism. 'Las Huaringas' is a Cultural Landscape with 14 lagoons known for their magical and healing powers (Cristobal, 1991). Located in Huancabamba and Ayabaca, it spans 15,859.9677 hectares (Ministerio de Cultura, 2019). Laguna Negra, situated 25 km from Huancabamba in Selva Andina village, has a depth of 3.50 meters, a temperature of 5 to 7 °C, and a humid and cloudy weather (Ministerio de Comercio Exterior y Turismo, 2023). Laguna Shimbe situated 38.5 km from Huancabamba, in Huar Huar village, the lagoon is at 3.818 meters above sea level and it is considered one of the largest among all 14 lagoons (Ministerio de Cultura, 2017).

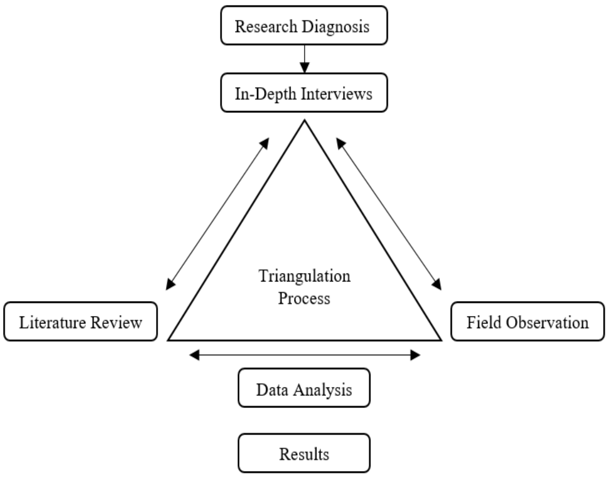

Figure 1. Qualitative analysis process

Figure 2. Huancabamba city (Source: Enriquez, 2018)

RESULTS

1. Meaning of Rituals

Four meanings of rituals were identified among participants: Experiencing cultural authenticity, hoping for healing, fulfilling personal needs, and believing in the shaman. Participants engaged in rituals to experience cultural authenticity, which, for the locals, meant a tradition passed through generations: “Healing in Huancabamba has always occurred. This place is known by people and they come from everywhere for the lagoons healing power and for the shamans, who are known for curing diseases, curing harm, or warding off envy” (R-8).

For tourists, the epitome of cultural authenticity was their conversion into believers after participating in health rituals, in which they drink potions, such as Huachuma (made with the hallucinogenic cactus San Pedro) and are "levantados" (raised) by the healer while evoking spiritual deities from surrounding hills, lagoons, and Catholic saints. Figure 3 shows us a group of tourists are participating in a flowering rituals drinking San Pedro and asking to the god and nature for their personal needs. In most cases, tourists' change to believers was attributed to shaman's ability to diagnose or cure an ailment, as these participants stated: Yet, it seems that the infusion of customs (e.g., immersion in the lagoon) with the combined use of local ingredients (e.g., herbs) and cultural instruments (e.g., rattle, swords) also played a significant role in changing tourists to believers: "I went to the lagoon with the shaman and with faith in God, I have bathed in the very freezing water. They used swords, shells, the Huachuma, and some tobacco is mixed and inhaled through the nose out of respect for the lagoon (...)" (T-21).

Participating tourists also stated that the presence of various shamans attending patients and groups of tourists around Laguna Negra made the experience more authentic, and therefore, with greater value toward mystical cultural expressions in each ritual: "Here, you feel something different, magical (...) you can breathe another atmosphere, the entire lagoon is full of shamans practicing their rituals. Shamans invoke the lagoon, the hills, and God" (T-18).

Hoping for healing emerged from participants and locals alike, those people who seek these rituals to recover from physical ("We come from Ayabaca for health reasons" – T-4) or spiritual suffering ("May God give us life and happiness for all my family. We did a cleanse, for a terrible thing that I had" T-2).

Such healing hope was even found among those who had not found a cure in a specialist doctor, as the next participant stated: "We went to a doctor for treatment of some red spots on my body, but so far, I have not been cured. I came here to meet with a shaman who was recommended to me" (T-14). Other people assigned more holistic healing meaning to these rituals, just seeking to enhance their spirit due to the current decay or intrinsic lethargy.

(a) Ritual: Chants and invocations in Shimbe lagoon **b)** Altar (*mesa*) offerings: swords - concoctions in Shimbe lagoon

Figure 3. The Flowering Ritual. (a) Chants and Invocations by the shaman (b) Swords and concoctions can be seen as inputs for ritual in the lagoon

Fulfilling personal needs was another meaning that participants assigned to rituals, which meant the achievement of a diversity of goals and desires. They are usually requested through "flowering baths" in Laguna Negra, in the morning, and in the healer's house, performed from 9 p.m. to 4 a.m. next day. Some participants explained how they go through that experience for economic and prosperous reasons: "I own several pharmacies. I have come for a flourishing bath because I want to expand as a nationwide pharmacy" (T-7). "The shaman began to cleanse us; at night we drink San Pedro (Huachuma) so that good things come out of you" (T-8).

Altogether, the three identified meanings (experiencing cultural authenticity, hoping for healing, fulfilling personal needs) gravitated around the faith participants hold in the rituals, which was in line with their own beliefs. That is, their meanings were intertwined with the value they assigned to the rituals, the scenarios, and the symbolic elements combined. Yet, such faith did not emerge from sacred attribution of ritual or magical-religious deities, but rather from believing in shaman who was a catalyst for fulfilling the participants' desires or needs. Some participants commented: "The shaman uses images of saints, swords, sacred stones, flowers, Saint Peter (…) I have faith in God and I trust the shaman too" (T-28).

2. Perceptions of Mystical Tourism

Interviewees were deeply knowledgeable of shamanism practices in Huancabamba. They explained diverse types of rituals (e.g., "People come to have flowering baths, they come because they have an illness, for a healing altar (mesa). There are many who come because they have money problems…"-R-8). They mention in detail all the ingredients (e.g., "they use tobacco, shells, Florida water, white flowers, they also mix herbs to make their remedies…" R-10) and the utensils shamans use (e.g., "They put the altar [mesa] with swords, saint images, the Huachuma is given to you in a recipient, in some cases you have to breathe through your nose"-R-3). Three themes emerged, starting how the locals perceived, regardless they believe or not in shamanism, on mystical tourism in Huancabamba: Recognizing mystical powers, the fear for scammers, and the regret of lenient administration.

Figure 4 shows us that Recognizing mystical powers alludes to the fact that although there are a mix of cultural and natural attractions in Huancabamba (e.g., Citan waterfall, Temple of the Jaguars) with the capacity to attract tourists and stimulate local economy, tourists are strongly driven by local mysticism of lagoons. Locals expressed concern about scammers posing as shamans to exploit tourists' physical or spiritual needs, undermining the authenticity of ancestral practices. They also lamented the lenient administration of tourism and informal transportation systems, which has grown to meet the rising demand from mystical and recreational tourists, impacting the area's traditional use. This participant said: “There are scammers because tourists come to Huancabamba from all over and we always see them in hotels (…)” (R-13).

Figure 4. Visitors to Laguna Negra (a) Tourists in a flowering bath (b) Ascending to Laguna Negra: Mystical tourists going for a health ritual

3. The Role of Natural Resources for Mystical Tourism

Laguna Negra: The nearest village to Laguna Negra is Selva Andina, residents are primarily engaged in agriculture and livestock farming. Upon prior arrangement, locals offer accommodation in their homes, although these are not adapted to tourism. You can rent a horse or go hiking, the tour will be 3 hours. Additionally, locals sell 'seguros' (small bottles with water and flowers) that they present as charms for luck in work, love, etc. Figure 5 shows us the surrounding natural landscape of Laguna Negra, characterized by its volcanic soil, circled by mountains, often rainy and foggy conditions, is an additional attraction factor that adds to local mystic environment, likewise, access is uphill, only by hiking or horseback riding, and upon reaching the lagoon, it creates a great visual impression of the landscape.

Figure 5. (a) Tourists practicing rituals in Laguna Negra. (b) The flowering bath in Laguna Negra

Figure 6. a) Visitors in flowering ritual in Shimbe Lagoon. b) Visitors in bath ritual in Shimbe lagoon

Figure 6 shows us the Laguna Shimbe: This place it´s downhill location offers a view of its vast size and natural surroundings, though it has limited visitor services and is mainly used for short stays and shamanic rituals. The lagoon is notable for rituals such as flowering and cleansing, addressing ailments believed to result from witchcraft or envy (a group of 6 tourists and 5 individuals with a shaman was identified). Visitors often witness shamans performing these rituals, utilizing the lagoon's power, surrounding mountains, and natural energies. Participants also believe in the shaman’s ability to invoke and harness spiritual forces. The ritual concluded with all participants submerged seven times in the lagoon at 3.818 meters above sea level, for a few minutes. Thus, visitors participated in chants and offerings to nature, fostering a sort of community bond between participants, nature, and the shaman.

The Table 2 classifies the lagoons according to the type of ritual carried out in each one, detailing their specific purposes and objectives for the participants, according the shamans said.

Huancabamba's lagoons are central to shamanic rituals due to their natural beauty and isolation, offering a sense of an untouched destination despite high visitor traffic. Their biodiversity and medicinal plants enhance their role as sacred sites. Shamans use the lagoons for "flowering," and purification. The local Andean worldview, including beliefs in protective spirits and guardian mountains, underscores the lagoons' significance in mystical tourism. Additionally, the lagoons have a strong attraction power, primarily in the northern region of Peru, and are renowned among shamans at a national and international level. A shaman commented: "I'm a shaman from Spain... the lagoons are very powerful. (S-11)

Table 2. Specific use of each lagoon

Name of the lagoon	Type of ritual
Laguna Negra	Rituals to cure illnesses, ward off envy, keep away evil, and flowering.
Laguna Shimbe	Rituals for luck or love.
Laguna El Rey	Rituals to improve in business, to win over a person, and other motives.
Laguna Millionaria	Rituals for someone who wants to have more money.

4. The Role of the Shaman

Our research reveals that shamanic rituals are deeply embedded in Huancabamba, with residents believing in shamans' powers to heal, change destinies, and attract prosperity and love. The shamans are seen as physical-spiritual healers, herbalists, and diviners. The shaman role as a physical-spiritual healer is a belief reinforced by the use of medicinal plants, which are believed to offer more than physical healing.

Figure 7 sows us the rituals often begin with visits to specific lagoons chosen by the shaman, reinforcing tourists' perceptions of their spiritual connection with nature. Local stories, such as one about a shaman curing an unconscious man, highlight the profound trust in these practices: "My uncle was unconscious, strapped and lost for a week in Huancabamba. When he was found, he was brought to the expert [shaman] and he cured him" (R-1).

Figure 7. Ingestion of potions prepared by the shaman in Shimbe laggon

Shamans in Huancabamba, as physical-spiritual healers, employ four main procedures: 1) Invocation of Christian figures, including St. Cyprian, the Virgin Mary, and Jesus Christ, we note the integration of Christianism culture with local Indigenous beliefs. 2) Invocation of natural forces, such as lagoons and hills, this reflects the Andean world view of nature as a source of spiritual energy. 3) Evocation of pre-Christian ancestors, here we find the connection with the pre-Hispanic past. 4) Use of symbolic utensils on the "mesa" (shaman’s altar), including palmwood staffs, swords, pre-Columbian artifacts, Catholic saints' images, and cactus San Pedro.

Rituals were performed from 9 p.m. to 4 or 5 a.m. to enhance the connection to the spirit world, it was created a mystical atmosphere with objects like dissected animals, pre-Hispanic ceramics, and Catholic saints' images. Participants believe in the shaman’s ability to protect against spiritual attacks, improve luck, and provide well-being. Rituals are seen as mystical, divinatory, and therapeutic experiences, leaving lasting impressions on tourists and encouraging repeat visits. The fragment of a ritual ceremony “By the sign of the cross and of the Father, the Son and the Holy Spirit, I ask permission from my Father God… to awaken my plain hills, healers, and livestock with my my strengths, my powers… (…)” (S-1).

Shamans, use local medicinal plants to treat ailments, provide post-ritual health advice, and offer “good-luck charms” for ongoing spiritual protection. One key ritual, flowering, involves giving participants herbs and detailed instructions, encouraging them to return to Huancabamba for continued spiritual work. In the role of herbalist, it is also worth mentioning San Pedro, a cactus considered sacred for shamans, and is the main ingredient to induce into a state of trance in the shaman and enhance its mystical power. The shamans mentioned the importance of using this plant in their rituals to reach a deep spiritual level and connect with the spirit world, and to be able to “see” in the ritual how to help their patients: “I take San Pedro because without it, I wouldn´t perform the ritual and help my patients” (S-1).

Both, shamans, and patients confirmed the importance of San Pedro, indicating that it is fundamental to the shamanic experience. The shaman uses other specific herbs according to the disease to be treated, combining them with San Pedro and other ingredients to create medicinal concoctions. One shaman explained: "Every disease has its specific medicinal herb. We cook [boil] San Pedro, aguardiente, lime, sugar cane, white rose…" (S-7).

Regarding the role of diviner, interviewees stated that shamans are able to access temporal dimensions-past, present, and future-of their patients. Through the ritualistic consumption of San Pedro (Echinopsis pachanoi), shamans are able to enter into an altered state of consciousness that allows them to obtain revealing visions about the lives of his patients. The ability to “see” beyond the conventional limits of perception is during rituals, in which the shaman interprets images or symbols that appear in his trance to predict or prevent remarkable events in the life of participants. Here we have a testimony:

“The shaman described her house, he told her that in the backyard she had a capulin tree [Prunus serotina]. Under that tree there was 'a burial', with things buried like her hair, other things...a relative of her was causing her 'harm' [the shaman told her] (...) (R-10)”.

The accuracy of these visions and the resolution of the conflict, which resulted in the return of the patient with three cows as an offering of gratitude, underline the shaman’s role not only as a spiritual intermediary but as an effective protector in the community.

DISCUSSION

Regarding the meanings participants assign to the mystical rituals in Huancabamba, these arise from a powerful desire that intertwines cultural reasons (authentic experience), spiritual reasons (belief in the power of the shaman), and utilitarian reasons (health or personal purposes). Participants deeply value the cultural authenticity of shamanic rituals, seeing them as both a traditional practice for locals and an authentic experience for tourists. This authenticity is expressed through active participation in rituals involving elements like Huachuma potions, swords, and images of saints, which help represent cultural concepts (Lederack, 1995). These findings align with theories that meaning emerges from the interaction between individuals and their contexts, highlighting the role of symbolic elements (Bachler, 2018; Collins, 2004; Hobson et al., 2018).

Participating in rituals for beneficial purposes, that is, with the hope of a physical or spiritual cure, or obtaining personal or business improvement, reinforces the magical-religious belief of overcoming lost causes (e.g., curing the incurable) or improbable outcomes (e.g., becoming rich). Testimonials indicate that shamanic rituals are perceived as effective in curing ailments, whether physical or spiritual, which aligns with prior studies highlighting the emotional and spiritual impact of rituals (Aulet and Vidal, 2018; Moufahim and Lichrou, 2019; Scheyvens et al., 2021; Sharma and Timothy, 2023; Shih et al., 2009; Singh, 2009; Wu, 2018). The shaman's ability to diagnose and treat illnesses is considered a key factor in changing tourists into believers, reinforcing the symbolic and therapeutic significance of the rituals (Legare and Nielsen, 2020). The diversity of rituals adapted to the participants' needs highlights the adaptability of these practices. However, this also leads to an analysis of the authenticity and possible instrumentalization of rituals to meet commercial expectations, which can erode their cultural and symbolic value, turning them into tourist attractions with high demonstrative value. This process, known as "folklorization," strips rituals of their original context and reduces them to superficial spectacles (Davidov, 2010), potentially distorting the meaning of rituals and traditional beliefs and practices.

Belief in the shaman's power as a spiritual mediator contributes to the participants' elaboration of meaning. Unlike faith in deities or spiritual entities, trust in the shaman is based on their knowledge and perceived ability to channel energy and heal physical and spiritual ailments. This dynamic reflects a shift in the elaboration of meaning, where the shaman becomes a central figure mediating the spiritual and cultural experience. This finding could be seen as a deviation from sacred meaning towards a relationship of interpersonal trust, aligning with the theory that ritual meaning is elaborated through the interaction between the individual and their context (Bachler, 2018).

About the perception of the local population and tourists about shamanism in Huancabamba. The interviewee showed a deep knowledge of shamanic practices, recognizing various types of rituals, and the ingredients and utensils used. This detailed understanding underscores the deep cultural roots and significance of shamanism in Huancabamba. However, concerns prevail about how to keep the integrity of shamanic traditions amidst significant challenges such as: the increasing commercialization of rituals, beliefs, and attitudes towards shamanism, and the lack of local tourism management.

Concerning commercialization, the perception is both acceptance and rejection. On one hand, there is a general acknowledgment that shamanism has considerably boosted the local economy, providing economic income to various sectors such as transportation and hospitality. As one respondent noted, "Shamanism generates income for the district. I know that shamanism helps the economy of many families" (R-4). On the other hand, this commercialization could encourage the perception that shamanism is more of a business than an authentic spiritual practice (DeSoucey et al., 2019; Goffman, 1956; Ochoa, 2002; Sotomayor et al., 2019). Additionally, the progressive influx of tourists may have incentivized some shamans to commercialize the rituals, taking advantage of the fascination and attraction that tourists feel for authentic cultural expressions (Brabec, 2014; Harvey, 2002; King, 2017; Yang, 2012). This shift from a sacred practice to a commercial one increases the risk of eroding the cultural and spiritual essence of shamanism, making it crucial to address this issue to preserve the authenticity and value of the traditions while still benefiting the community economically.

Regarding the beliefs and attitudes of the local population and tourists towards shamanism, some recognize and value the mystical powers and the inherited gift of the [true] shamans to help them "recharge their energies" and be mediators of their physical or spiritual desires and needs (Polyakova, 2021; Rock and Baynes, 2005), others are skeptical and see many shamans as scammers (Comercio y Justicia, 2023; El Mundo, 2018; Homan, 2011; Simon and Casserly, 2020). One resident commented, "I don't believe in shamans, they are frauds, they tell you what you want to hear, nothing more. I believe in the medicinal plants they use, and also the lagoons because they are healing" (R-4). Some studies reveal that improper shamanism practices (e.g., wrong use of herbs) can exacerbate the health conditions of patients, and produce a bad experience affecting the reputation of the mystical tourist destination (Kowalewski, 2016; Olsen, 2002; Soulard et al., 2021). This shows us an increasingly discordant local reality about the credibility of the shamanic practices, which could affect social cohesion and the sense of belonging to these ancestral practices (Chen, 2024; Nunkoo and Gursoy, 2012).

On the other hand, the lack of management and regulation of tourism in Huancabamba emerged as a significant concern among the respondents. The lenient municipal administration has allowed the proliferation of informal transportation services contributing to the disorder affecting both residents and tourists, as a resident indicated: "The local administration doesn't pay much attention, very little, you don't see tourism management" (R-2). The risk of scams and bad practices around shamanism may increase due to the growing demand for mystical tourism in the district, further increasing the gap between those who accept and reject these practices and making local tourism management more difficult (DeSoucey et al., 2019; Marcher et al., 2022). About the role of the lagoons in shamanic rituals, the results obtained from the research reveal a series of fundamental aspects that highlight the importance of these natural resources in mystical and ritualistic tourism in Huancabamba. These places are not only appreciated for their natural beauty and their ability to attract tourists but also for their profound spiritual and cultural significance reflected in the shamanic rituals.

Laguna Negra is the most visited and serves as an example of how the natural environment and the local community can influence visitors' perceptions and experiences. The inhabitants of Selva Andina offer horse rental or trekking services to the lagoon and the sale of "seguros" (amulets made with natural herbs), adding an element of authenticity and mysticism to the tourist experience. Visitor testimonies highlight the emotional and spiritual connection they feel when interacting with the landscape, which is essential for the appeal of mystical tourism (DeSoucey et al., 2019) .

The analysis of the environment of Laguna Negra shows that, despite the increase in tourist activity, the area has maintained its rural character, which reinforces its appeal as a mystical destination. The combination of volcanic soil, native vegetation, and climatic conditions such as rain and fog create the right environment for rituals and spiritual tourism. Participants in the rituals describe transformative experiences, attributing personal and spiritual changes to their interaction with the lagoon and the natural environment (Breidenbach, 1975). These effects on the participant's life are known by the shaman, who includes the natural environment in his ritual language, making it a powerful source of motivation to trigger the desired change in the participant's current situation (Sarrazin, 2022). Laguna Shimbe, offers a different experience due to its downhill access and larger size. Observing from an elevated position allows visitors to appreciate its magnitude and the surrounding landscape. Laguna Shimbe is farther from the populated center of Huar, making it a location for short stays. Additionally, the lower influx of visitors (due to its remoteness) makes it an ideal and more "mystical" setting for the practice of shamanic rituals, such as flower baths and spiritual cleansing.

Rituals at Laguna Shimbe and Laguna Negra involve water immersion, potions, and chants, with shamans invoking both supernatural entities and Catholic saints. This blend of rituals, lagoons, and natural settings attracts visitors for both tourism and mystical-religious reasons. The rituals highlight belief in natural energies, enhancing the lagoons' sacred perception (Ôkawa, 2020; Singh, 2009). Participants often report relief and purification, indicating a positive impact on their emotional well-being. Regarding to the role of the shaman, the results show us widespread belief in his supernatural power and led us identify three primary roles that they fulfill: physical-spiritual healer, herbalist, and diviner.

The shaman is primarily seen as a physical and spiritual healer. The practice of using medicinal plants according to the specific type of ritual is a fundamental part of his role. The perception that plants have healing properties that go beyond the physical and that only the shaman is able to understand thanks to the gift passed down from his ancestors (Ivanescu and Berentzen, 2020; Politi et al., 2021) reinforces his position in the community. A significant testimony from a local resident illustrates this dynamic: "They give us recommendations to cure our ailments along with remedies [medicinal drinks] and if for some reason the results are not as expected, it is because something is not being done correctly" (T-17).

This aspect of the shaman's role helps to understand the high demand for his rituals not only from residents but also from tourists seeking authentic experiences of spiritual healing (Chiappe, 1989; Kowalewski, 2016; Olsen, 2002; Rock and Baynes, 2005; Soulard et al., 2021). The shaman's connection to sacred lagoons and other natural elements is seen as a manifestation of his power and spiritual knowledge.

The shaman also plays the role of an herbalist, demonstrating a deep knowledge of local medicinal plants and their applications. This knowledge is essential for healing rituals and is highly valued by participants. A prominent example is the use of the San Pedro cactus, considered sacred and fundamental for inducing trance states in the shaman and his patients, enhancing his healing and divination abilities (Caballero, 2022; Daldoss, 2019). A shaman commented: "I drank San Pedro because without it I could not perform the ritual and help my patients" (S-1).

This use of plants not only strengthens the perceived effectiveness of the rituals but also enhances the authenticity of the experience for tourists, who see in these practices a genuine connection with ancestral wisdom, adapting ancient traditions to their own belief system (Kim et al., 2013; Luna, 1984; Yu and Na, 2022). The shaman's role as a diviner is another vital dimension of his practice. Shamans are considered capable of accessing temporal and spiritual dimensions that are beyond normal reach, providing visions and predictions about their patients' past, present, and future. This aspect is essential for identifying and fix adverse situations, such as bad influences or spiritual attacks.

The shaman's ability to "see" beyond the perceptible is highly valued by both residents and tourists, who seek guidance and solutions to their problems through these practices (Greene, 1998; Wood et al., 2016). However, this role as a diviner is unfavorable for the shaman when his predictions do not come true, which would lead to a loss of trust from his patients, significantly affecting the entire travel experience (Simon and Casserly, 2020), especially with the presence of fake shamans (Comercio y Justicia, 2023; El Mundo, 2018; Homan, 2011; Simon and Casserly, 2020).

We highlight that within the roles played by the shaman, elements of Christianity were integrated transversally with local indigenous beliefs. The invocation of Christian saints, along with natural forces and pre-Christian ancestors, displays a syncretism that enriches shamanic practice and makes it more accessible and meaningful to participants (Joralemon, 1993; Oseguera, 2008; Polia, 1995; Prayag et al., 2016). This cultural mix not only preserves local traditions, but also adapts and revitalizes them to the current context. The ritual environment's symbolism likely boosts the perceived effectiveness of shamanic rituals. Objects like chontas, swords, huacos, Catholic saint images, and plants such as San Pedro create a mystical atmosphere that enrich the participant's experience and reinforce the shaman's authority (Hobson et al., 2018).

CONCLUSION

Shamanic rituals in Huancabamba hold a profound significance for both tourists and residents. Tourists seek an authentic and transformative experience that allows them to connect with their cultural and spiritual roots, trusting the shaman as the mediator of their desires. The rituals represent a path to physical and spiritual healing and an opportunity to meet personal and emotional needs (e.g., curing an illness, revitalizing energies, improving business). Additionally, participants attribute great value to the symbolic and traditional elements present in Huancabamba's rituals, which reinforce their perception of authenticity and faith in mystical power.

Regarding perceptions of mystical tourism in Huancabamba, on one hand, locals recognize the economic and social benefits brought by the influx of tourists interested in shamanic rituals, promoting local development and providing a significant source of in-come. However, challenges are also perceived, such as the lack of municipal organization, the informal transportation system, and the presence of scammers who exploit tourists by commercializing this ancestral practice. The sustainability of mystical tourism depends on addressing these challenges and ensuring that the practices remain authentic and respectful of local traditions.

The Laguna Negra and Shimbe, played a fundamental role in the mystical tourism experience in Huancabamba. These lagoons are considered sacred and has spiritual and healing meaning. The impressive natural landscape, and the presence of medicinal plants contributed to the sensory and the spiritual experience of the visitors. The connection with nature was an essential component of Huancabamba's rituals, and the natural resources act as catalysts for personal transformation and healing, attracting hundreds of tourists and visitors. Regarding the role of the shaman, he is a central figure in the mystical tourism of Huancabamba. His knowledge and skills in performing physical-spiritual healing rituals, using medicinal plants, and interpreting spiritual signs are highly valued by the participants and is fundamental to the success of the rituals. The shaman is as a mediator between the physical and spiritual worlds (shamans emphasize the importance of San Pedro cactus in this function), guiding tourists through transformative experiences.

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EXPLORING INTRA-CITY TRANSPORTATION SYSTEM AS A CATALYST FOR SUSTAINABLE TOURISM DEVELOPMENT IN CALABAR, NIGERIA

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Abstract: This research explores the role of intra-city transportation systems as a catalyst for sustainable tourism development in Calabar, Nigeria. Three key tourism sites, Aqua-vista Resort, Marina Resort, and Orange Resort were selected as indicators of tourism development. Data was collected using questionnaires. Findings reveal that mini buses, tricycles, and commercial buses serve as major drivers of sustainable tourism development. Improved accessibility to tourist attractions and enhanced tourist mobility were identified as significant impacts of these transportation systems. Furthermore, intra-city transportation boosts government revenue, creates employment opportunities, and stimulates business growth. Integration with tourism services and increased access to

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culinary and cultural experiences were also notable influences on tourist mobility. However, challenges such as high transportation costs and inefficient traffic management were identified. The study's hypothesis test shows a positive correlation between transportation systems and tourism development. This research underscores the importance of intra-city transportation development as a critical component for sustaining tourism growth and offers insights for stakeholders in tourism planning and management.

Keywords: Calabar, catalyst, tourism development, sustainable tourism development, intra-city transportation

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INTRODUCTION

Intra-city transportation systems are crucial for the effective development of tourism in urban areas, as they greatly impact the efficiency and accessibility of travel within a city Mohammadpour and Mehrjou (2023). Efficient transportation networks facilitate the movement of visitors, enhancing their overall experience and supporting the goals of sustainable tourism development (Zientara et al., 2024). Well-structured public transit systems, including buses, trains, and bike-sharing programs, are vital for tourists to access various attractions and amenities (Fusté-Forné and Michael, 2023). Cities with advanced transportation infrastructures, such as Paris and Tokyo, provide seamless travel experiences that boost visitor satisfaction and encourage longer stays (Fan et al., 2022). Sustainable tourism development seeks to balance environmental impacts with economic and social benefits (Buhalis et al., 2023). Effective intra-city transportation systems contribute to this balance by reducing dependence on private vehicles, thus lowering traffic congestion and emissions (Šaparnienė et al., 2022; Shezi, 2023). Cities like Copenhagen, for instance, have successfully implemented bike-sharing programs and pedestrian-friendly infrastructure to promote eco-friendly travel options for tourists (Jordi-Sánchez et al., 2022). However, tourism development is a vital aspect of economic growth and regional development, and it can be evaluated through various indicators that reflect the effectiveness, sustainability, and overall impact of tourism activities within a destination (Göktaş and Çetin, 2023; Baloch et al., 2023). Tourism development encompasses a wide range of tourism infrastructure such as transportation, accommodation, and tourism facilities, whose access is significantly facilitated by intra-city transportation (Nazneen et al., 2021). Accordingly, tourism development indicators, such as tourist attractions and recreational facilities, are crucial for attracting visitors and encouraging longer stays (Agyeiwaah, 2020).

Intra-city transportation systems play a crucial role in the sustainable development of urban tourism worldwide. These systems facilitate access to tourist destinations, improve mobility for visitors, and generate important socio-economic benefits such as employment and revenue generation. Intra-city transportation, which encompasses buses, trams, taxis, subways, and ridesharing services, is vital for urban mobility, and its impact on tourism is undeniable (Moghaddam et al., 2022). The availability and efficiency of these systems significantly affect tourists' ability to explore destinations, enhancing their overall satisfaction and increasing the likelihood of repeat visits (Hernández et al., 2021). Cities such as Singapore and Copenhagen have established advanced public transportation networks that contribute to sustainable urban tourism by providing eco-friendly transit options (Alshammari et al., 2022; Gulc and Budna, 2024). These systems not only ease mobility for tourists but also promote environmentally responsible travel behaviors, offering visitors a more authentic local experience (Rześny-Cieplińska., 2023; Pagoni and Papatheodorou, 2024). Moreover, the development of public transportation infrastructure frequently results in job creation within the transport sector, fueling economic growth (Ntramah et al., 2023; Herawatie et al., 2024). The impact of efficient transport systems on promoting business growth by increasing tourist access to underdeveloped areas further broadens tourism's reach (Samunderu, 2023). Similarly, efficient intra-city transportation systems in Caribbean countries like Trinidad and Tobago, Honduras, and Barbados have enhanced tourism development by improving access to urban areas (Jaiswal et al., 2022; Weng et al., 2024). These systems, which consist of buses, taxis, and ride-sharing services, reduce travel time and costs for tourists, contributing to a better travel experience and supporting environmental conservation efforts (Yi et al., 2020; Rastegar and Becken, 2024). In West Africa, the expansion and modernization intra-city transportation system are seen as critical elements for advancing tourism development and promoting sustainability (Ahijo, 2022; Salisu et al., 2022). Moreover, regional collaboration between West African countries can foster the creation of integrated transportation networks that connect major cities and tourist destinations across borders.

Moreover, regional collaboration between West African countries can foster the creation of integrated transportation networks that connect major cities and tourist destinations across borders (Joseph, 2023; Bénichou, 2023; Samunderu, 2023). In South Africa, cities such as Johannesburg, Cape Town, and Pretoria offer a variety of transportation options, including the Gautrain, MyCiTi Bus, and Rea Vaya Bus Rapid Transit systems. These intra-city transportation systems improve tourist access to attractions sites, enhance mobility, and contribute to local economic growth by creating jobs (Okyere-Manu, 2023; Tavakkolimoghaddam et al., 2022; Van der Berg and du Plessis, 2022). These developments increase the region's competitiveness as a tourism destination and create new opportunities for sustainable tourism growth (Kouskoura et al., 2024).

Furthermore, cities like Accra, Lagos, and Dakar, significant progress is being made in developing intra-city transportation systems to support sustainable tourism (Brugulat-Panés et al., 2023; Lartey and Glaser, 2024). Again, the Lagos BRT system and Accra's planned light rail project are key advancements, providing tourists with affordable access to major destinations, while boosting access to tourist attractions, local businesses and economic growth (Harber, 2023; Aderibigbe and Olajide, 2023). These systems enhance urban mobility and support nearby retail and hospitality sectors by promoting foot traffic around transportation hubs (Tardivo, 2021). Intra-city transportation networks are essential for the sustainable tourism and encompassing buses, trams, metro systems, and ride-sharing services, offer tourists diverse ways to explore cities, enhancing their travel experiences (Adeola and Evans, 2020; Pašalić et al., 2023). More so, ride-sharing services and mobility platforms also increase travel flexibility, highlighting the importance of transportation in tourism development (Mitropoulos et al., 2023). Despite these advancements, challenges such as inadequate infrastructure and limited transportation options hinder tourists' ability to access key attractions in most West Africa cities (Florido-Benítez, 2024; Rowland and Nnamdi, 2024; Ajayi et al., 2021). In contrast, inadequate transportation systems can result in congestion and reduced accessibility, negatively affecting the tourism experience (Van et al., 2023). Addressing these issues through investments in transportation infrastructure such as expanded bus routes and metro systems can reduce barriers to access and promote inclusive tourism development by addressing socioeconomic disparities in urban mobility (Korah et al., 2024; Ukachukwu et al., 2024). Furthermore, research indicates that a reliable and efficient intra-city transportation system contributes to positive visitor experiences by enabling seamless travel between tourist attractions and accommodation facilities (Adi et al., 2022). Conversely, inadequate transportation services, characterized by congestion, delays, and unreliable schedules, can detract from overall tourist satisfaction and discourage repeat visits (Mohammed et al., 2022).

Several studies, both globally and regionally, have examined the role of intra-city transportation in sustainable tourism development, particularly in cities with significant tourism potential (Akanmu et al., 2022; Osunkoya, 2021; Okosun et al., 2023). These studies consistently highlight intra-city transportation as a crucial means of moving people between tourist locations (Tsoulfas et al., 2023). Moreover, research emphasizes that efficient intra-city transportation system enhances tourism development and facilitates the smooth flow of goods and services within a city (Salisu et al., 2024; Olawole, 2021). Again, other scholars further observe that a tourism destination becomes viable with a well-developed intra-city transportation network (Lenshie et al., 2022). Additionally, research reveals that such systems help regulate the number of visitors at tourist sites (Zhou et al., 2024; Salisu et al., 2023). Empirical findings agree that tourism development cannot thrive effectively without the presence of robust intra-city transportation (Olatunji et al., 2023; Okosun et al., 2023). However, despite numerous studies on intra-city transportation, none have specifically focused on its role as a catalyst for sustainable tourism development in Calabar, Nigeria. This study aims to assess the catalytic impact of intra-city transportation on sustainable tourism development with specific reference to evaluating the various transportation systems, their influence on tourism development, their socio-economic benefits, and their effect on tourist mobility. Additionally, the study identifies challenges associated with intra-city transportation in facilitating tourism development. Its findings are valuable for the government, tourism operators, and residents, offering insights into how improved intra-city transportation system can drive economic growth, enhance tourist experiences, and improve the quality of life for local communities. By addressing these needs, Calabar can achieve sustainable tourism development and strengthen its position as a leading tourist destination in Nigeria.

Conceptual framework: The growth pole theory

The growth pole theory, first proposed by François Perroux in 1950, was created to examine the spatial relationships between emerging centers and their surrounding areas (Rauhut and Humer, 2020). Over time, the theory has expanded to encompass various ideas about the dynamics of growth poles, though a unified understanding of the development process remains elusive. Moseley in 1974 described growth poles as typically being firms or industries that drive growth and change, with these influences being transmitted through the flow of inputs and outputs (Hillbom, 2024). Additionally, Moseley in 1974 identified four distinct growth patterns in hypothetical regions, as illustrated in Figure 1, 2, 3, 4.

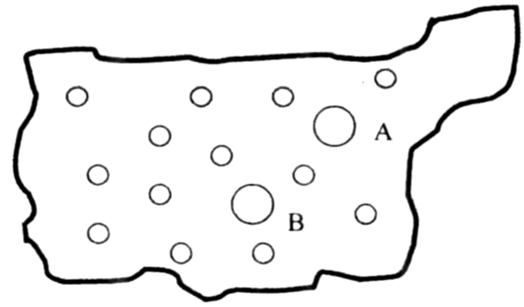

Figure 1. Location on the development surface isoclines show the level of development in different location

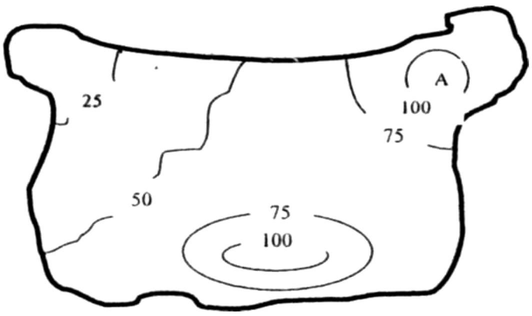

Figure 2. Central Place. The function size of the circle indicates the number of functions (Source: Moseley, 1974)

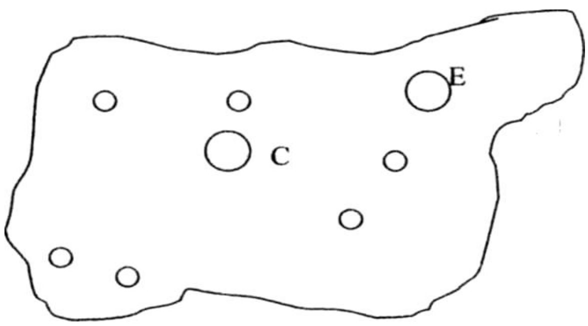

Figure 3. The population growth rate size of the circle indicates the population growth rate (Source: Moseley, 1974)

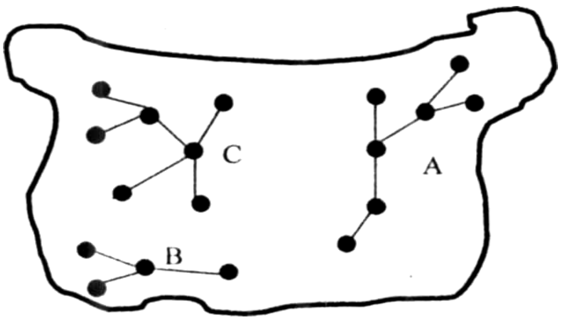

Figure 4. Model location. Lines indicate predominant flows (Source: Moseley, 1974)

The illustration above shows towns A, B, C, D, and E as growth centers that have expanded due to population increases. The urban industrial growth pole strategy, influenced by Perroux's growth analysis, is further developed (Benedek, 2022). Benedek described a regional growth pole as "a set of expanding industries located in an urban area that stimulates further economic development throughout its zone of influence". He highlighted that the essence of the growth pole theory lies in the interaction of economic processes and the structural changes they induce.

These changes are evident in the rise and decline of industries and their broader economic impacts. Perroux's concept of growth poles pertains to leading and dynamic industries that interact closely with other economic sectors. Darwent identified three key characteristics of industries within the growth pole hypothesis: their high interaction with similar firms, their dominant nature, and their significant size (Malizia et al., 2020). Such industries typically show output levels above the average and drive substantial growth rates, influencing other sectors and the overall economy.

Moseley's 1974 work on regional growth patterns assumes that transportation networks, economic activities, and geographic constraints drive spatial development, shaping distinct growth patterns in regions. However, the fundamental assumptions of Moseley’s framework are as follows: Firstly, the development of intra-city transportation systems, such as roads, railways, and bus networks, is a key driver of regional growth. Regions with advanced transportation systems are expected to grow more rapidly, particularly in areas well-connected to central hubs or significant nodes, which leads to distinct growth patterns. Secondly, regional growth is believed to follow predictable patterns, including central growth around a core, peripheral growth extending outward from central areas, linear growth along major transportation routes, and nodal growth around key points. These patterns reflect the interaction between transportation infrastructure and land use, suggesting that the spatial distribution of population and economic activities can be systematically categorized.

Lastly, urbanization and industrialization drive the need for better infrastructure and transportation systems, influencing regional growth. Economic activities, such as commerce and industry, also impact growth, with concentrated economic areas attracting more development. Although not explicitly stated, it is assumed that government policy, urban planning, and zoning regulations shape regional growth, guiding the expansion of regions() .

Additionally, physical geography, including mountains, rivers, and coastlines, constrains or directs growth, resulting in specific patterns based on the natural environment. These assumptions underpin Moseley’s framework for analyzing how regions develop through the interplay of transportation, economic factors and geography.

These assumptions underpin Moseley’s conceptualization of regional growth and allow for the analysis of how different regions develop based on transportation, geography, and economic factors. In this research, Moseley’s framework illustrates how urbanization and city growth can accelerate economic activities, such as developing transportation networks to improve access to tourism sites. It also demonstrates the link between intra-city transportation and tourism development as a catalyst for sustainable tourism in the study area.

RESEARCH METHODOLOGY

The study design explores the survey research design with the aim of collecting qualitative and quantitative data to establish the relationships that exist among variables (Sy Jr and Gempes, 2023).

Methods of data collection: This study was conducted in the Calabar Municipality, focusing on areas associated with tourism development. The primary instrument for data collection was a questionnaire. A total of one hundred and fifty questionnaires were distributed to residents near key tourism development indicators, with the assistance of a field assistant. The questionnaires were administered randomly to these residents within the tourism development areas.

Population of the study: The population of study consists of three resorts which are the Aqua-vista resort, marina resort and orange resort. These three resorts constitute the tourism development indicators used for the study. More so, the resident around the tourism development also constitutes the population of the study.

Sampling technique: The random sampling technique was adopted for selecting the population of the study and also used in questionnaire administration. The rational for using the sampling technique is to allow every member selected for this study equal opportunity of being selected for the study.

Sample size: A sampled size of one hundred fifty respondents was used for the study of which fifty respondents were drawn from each of the tourism development indicators which include the Aqua-vista resort, Marina resort and Orangeresort

Hypothesis: One hypothesis was stated in this research work thus: There is no significant relationship between various intra-city transportation systems and the impact of intra-city transportation on tourism development in the study area.

Technique of data analysis: This hypothesis can be tested using Pearson's Product Moment Correlation formula, as outlined by Pearson (1896), which is mathematically expressed as follows:

$$r = \frac{N\sum xy-(x)}{\sqrt{[(N\sum x^2)(\sum x)2]}\,[(N\sum Y^2)-(\sum Y^2)]}$$

Where: r = Correlation Coefficient; X = Number of tourist arrivals; Y^2 = Numberof hotels in each successive year; N = Number of variables; $\sum$ = Summation; $\sum x$ = Sum of X (independent variable); $\sum y$ = Sum of Y (dependent variable).

RESULT AND DISCUSSION

The intra-city transportation system

The results obtained from the study of various intra-city transportation systems in the area revealed that mini buses, accounting for 20 percent, and tricycles, with a value of 17.33 percent, were the major modes of intra-city transport. Additionally, the study indicated that commercial buses and taxis constituted 15 percent and 12.70 percent, respectively, of the intra-city transportation. Furthermore, other intra-city transportation systems such as ride-hailing services, water taxis, and bus rapid transit were also present, with values of 8 percent, 3.33 percent, and 2.70 percent, respectively. In most Nigerian cities, these intra-city transportation systems have contributed significantly to the growth of tourism. Besides this, intra-city transportation systems provide a means for individuals to move from one place to another within a destination (Table 1).

Table 1. The various intra-city transportation system **(**Source: Authors fieldwork, 2024)

S/No	various transportation system	Frequency	Percentage
1	Commercial buses	23	15.33
2	mini buses	30	20.00
3	motor cycles	3	2.00
4	Tricycles	26	17.33
5	Taxis	19	12.70
6	Rideservices	12	8.00
7	Bus rapid transit	4	2.70
8	Water taxis (ferries)	5	3.33
9	Walking	7	5.00
10	Any other (specify)	5	3.33
	Total	150	100

Table 2. Impact of intra-city transportation on tourism development (Source: Authors fieldwork, 2024)

S/No	Impact of intra-city transportation	Frequency	Percentage
1	Accessibility to tourist attractions	31	20.70
2	Enhanced mobility for tourist	26	17.33
3	Expansion of tourist market	11	7.33
4	Support for tourism services	21	14.00
5	Facilities of cultural exchange	9	6.00
6	Promotion of culinary tourism	12	7.00
7	Support for exerts and festivals	15	10.00
8	Influence on travel behavior	12	8.00
9	Promotion of urban exploration	13	9.00
10	Any other (specify)	2	1.33
	Total	150	100

Impact of intra-city transportation system on tourism development

The impact of intra-city transportation systems on tourism development in the study area revealed that accessibility to tourist attractions and enhanced mobility for tourists, with values of 20.70 percent and 17.33 percent respectively, were the major impacts. The study also indicated other factors, such as support for tourism services 14 percent, support for events and festivals 10 percent, and promotion of urban exploration 9 percent. Furthermore, the study highlighted the influence on travel behavior at 8 percent, promotion of culinary tourism at 7 percent, and exploration of the tourist market at 7.33 percent as additional impacts of intra-city transportation systems on tourism development (Table 2) (Figure 5).

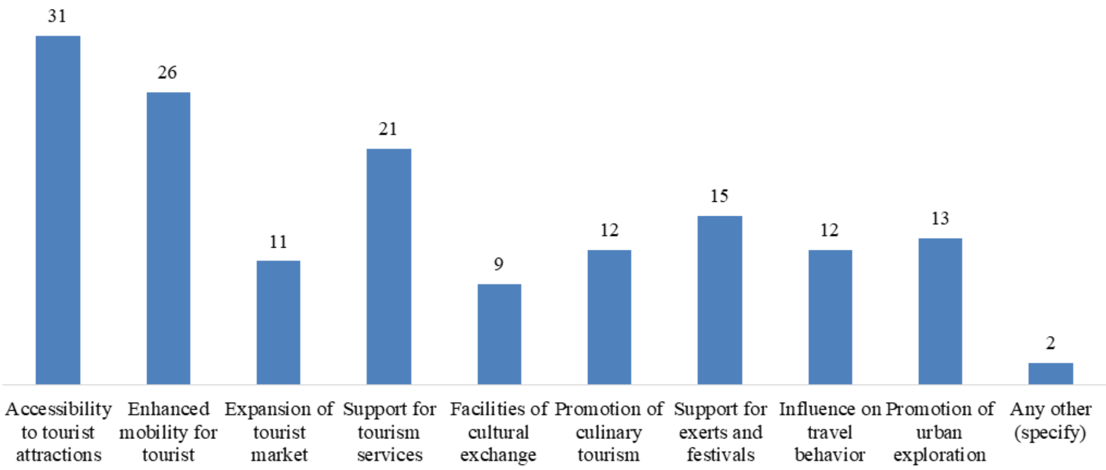

Figure 5. Impact of intra-city transportation on tourism development (Source: Authors fieldwork, 2024)

The results from the stated hypothesis, examining the relationship between various intra-city transportation systems and their impact on tourism development, revealed a positive correlation between the two variables. The analysis showed a mean value of 43.17 for the various intra-city transportation systems andthe results from the stated hypothesis, examining the relationship between various intra-city transportation systems and their impact on tourism development, revealed a positive correlation between the two variables. The analysis showed a mean value of 43.17 for the various intra-city transportation systems and a standard deviation of 44.416 in the descriptive output. Meanwhile, the impact of intra-city transportation on tourism development indicated a mean score of 42.16 with a standard deviation of 18.352. Furthermore, the correlation coefficient between these two variables was found to be 0.180, with an associated p-value of 0.756. This result indicates a positive correlation between various intra-city transportation systems and their impact on tourism development. Given the existence of this positive correlation, the null hypothesis is rejected, and the alternative hypothesis is accepted (Table 3).

Table 3. Statistical analysis of hypothesis one (Source: Statistical output, 2024)

		Intra-city transportation	**Impact on tourism development**
Intra-city transportation	Pearson Correlation Sig.(2-tailled)	1	.190
	N	11	.865
Impact on tourism development	Pearson Correlation	.190	11
			1
	Sig. (2-tailed)	.865	
	N	11	11

Socio-economic benefits of intra-city transportation system in tourism development

The socio-economic benefits of intra-city transportation systems in tourism development were highlighted by several key factors in the study area. An increase in government revenue, accounting for 32 percent, the creation of employment opportunities at 14.70 percent, and the stimulation of business growth at 15.33 percent were identified as major socio-economic benefits. Additionally, 14 percent, 11.33 percent, and 9.33 percent of respondents reported that increased infrastructure development, reduced traffic congestion, and increased investment opportunities, respectively, were significant benefits of intra-city transportation systems in tourism development. Other socio-economic benefits included enhanced socio-cultural integration 5 percent, increased productivity 4 percent, and poverty reduction 3 percent (Table 4).

Table 4. Socio-economic benefits of intra-city transportation system in tourism development (Source: Authors fieldwork, 2024)

S/No	Socio-economic benefits	Frequency	Percentage
1	Increase in government revenue	33	32.00
2	Enhances socio-cultural integration	7	5.00
3	Reduction in traffic congestion	17	11.33
4	Increase in infrastructure development	21	14.00
5	Stimulate the growth of business	23	15.33
6	Enhances poverty reduction	4	3.00
7	Increase in investment opportunities	14	9.33
8	Increase in employment	22	14.70
9	Increase productivity	6	4.00
10	Any other (specify)	3	2.00
	Total	150	100

Table 5. Influence of intra-city transportation system on mobility of tourist (Source: Authors fieldwork, 2024)

S/No	Influence of intra-city transportation	Frequency	Percentage
1	Accessibility to tourist attractions	21	14.00
2	Convenience	15	10.00
3	Affordability	12	8.00
4	Safely	11	7.33
5	Local experience	13	9.00
6	Flexibility	9	6.00
7	Information access	10	7.00
8	Integration with tourism services	31	20.70
9	Exploration of culinary	26	17.33
10	Any other (specify)	2	1.33
	Total	150	100

Influence of intra-city transportation system on mobility of tourist

The influence of intra-city transportation on tourist mobility in the study area is significant, with major impacts including integration with tourism services 20.70 percent, exploration of the culinary scene 17.33 percent and accessibility to tourist attractions 14 percent. Additionally, the study found that local experiences 10 percent, convenience 9 percent, and affordability 8 percent were important factors influenced by intra-city transportation systems in tourist mobility.

Furthermore, the data indicated that safety, information access, and flexibility also play roles in how intra-city transportation systems affect the mobility of tourists in the study area (Table 5) (Figure 6).

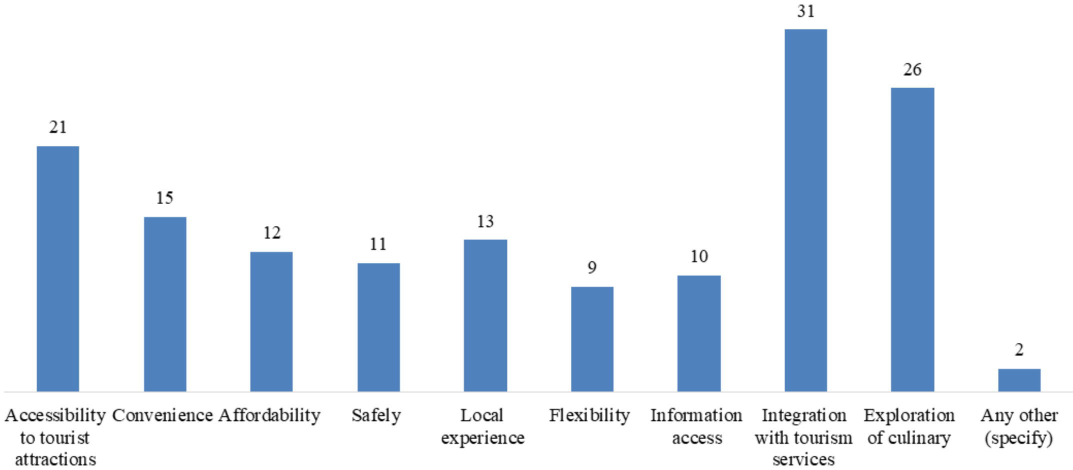

Figure 6. Influence of intra-city transportation system on the mobility of tourists (Source: Authors fieldwork, 2024)

Challenges of intra-city transportation system in tourism development

The challenges associated with intra-city transportation systems in the study area include several key issues. High transportation costs 20 percent, inefficient traffic management 17.33 percent and limited accessibility 12.70 percent were identified as major challenges impacting tourism development. Additionally, safety and security concerns were noted by 15.33 percent of respondents as significant obstacles. Other challenges, though less prominent, include traffic congestion 8 percent, lack of integration 3.33 percent, and limited accessibility 2.70 percent (Table 6).

Table 6. Challenges of intra-city transportation system in tourism development (Source: Authors fieldwork, 2024)

S/No	Challenges of intra-city transportation	Frequency	Percentage
1	Traffic congestion	12	8.00
2	Poor road conditions	3	2.00
3	Inadequate public transit system	19	12.70
4	Informant transport sector	5	3.33
5	Lack integration	7	5.00
6	Safety and security concerns	23	15.33
7	Limited accessibility	4	2.70
8	High cost of transportation	26	17.33
9	Inefficient traffic management	30	20.50
10	Any other (specify)	5	3.33
	Total	150	100

DISCUSSION OF FINDINGS

The data from this research highlights that intra-city transportation systems are crucial for sustainable tourism development (Park et al., 2021; Adeola and Evans, 2020). The findings indicate that various types of intra-city transportation systems contribute to sustainable tourism development (Mitropoulos et al., 2023; Narayanan and Antoniou, 2023). These observations align with previous empirical studies and are further supported by additional research (Ajayi et al., 2021; Seng et al., 2023). The study also reveals that mini buses and tricycles are major types of intra-city transportation used in the study area (Rasheed, 2022, 2019; Almaghlouth et al., 2024), consistent with the findings of Ukachukwu et al. (2024) and confirmed by Rasheed (2022) and Deka et al. (2023). Moreover, commercial buses and taxis are also prevalent in the area, aligning with related studies. Additionally, other intra-city transportation options, such as ride-hailing services, water taxis, and bus rapid transit, play a role in enhancing sustainable tourism development (Deng et al., 2021). The research further shows that accessibility to tourist attractions and improved mobility for tourists are key impacts of intra-city transportation systems on tourism development in the study area (Yi et al., 2020; Tsoi and Loo, 2021).

The study findings reveal that increased government revenue and job creation are major socio-economic benefits of intra-city transportation systems for tourism development (George, 2021; Jones et al., 2023). These findings are consistent with who observed significant socio-economic impacts of intra-city transportation systems on tourism destinations (Adela, 2019), further supports this by highlighting the benefits of such systems in their empirical research (Mangane, 2021). Additionally, the study identifies high transportation costs, inefficient traffic management, limited accessibility, and inadequate public transit systems as major challenges facing intra-city transportation in the study area (Tavakkolimoghaddam et al., 2022). These challenges are in line with findings from the Lagos Metropolitan Area Transport Authority (Paul and McSharry, 2021; Mitropoulos et al., 2023), and are further validated by Aderibigbe and Olajide, 2023). The analysis of the tested hypothesis shows a positive correlation between the variables under investigation.

CONCLUSION

Intra-city transportation systems play a pivotal role in the development of tourist destinations. This study investigated the influence of intra-city transportation on sustainable tourism development in Calabar, Nigeria, focusing on three key tourism sites: Aqua-vista Resort, Marina Resort, and Orange Resort. Using questionnaires for data collection, the findings revealed that mini buses, tricycles, and commercial buses are the primary modes of transportation that contribute significantly to tourism development in the area. Key impacts of these transportation systems include improved accessibility to tourist attractions and enhanced mobility for tourists, both of which are crucial for sustainable tourism.

The study also highlighted several socio-economic benefits resulting from effective intra-city transportation systems, such as increased government revenue, job creation, and the stimulation of business growth, all of which bolster sustainable tourism development especially as it relate to the tourism development indicators in the study area.

Furthermore, the integration of transportation services with tourism offerings, including access to local culinary experiences, greatly enhances tourist mobility and satisfaction. Despite these benefits, challenges such as high transportation costs and poor traffic management were identified as obstacles to maximizing the full potential of intra-city transportation in promoting tourism. The hypothesis test confirmed a positive correlation between intra-city transportation systems and their impact on tourism development. These findings underscore the need for improved transportation infrastructure and policies to sustain tourism growth. By addressing these challenges, stakeholders in tourism and urban planning can leverage intra-city transportation systems as a vital tool for driving sustainable tourism development in Calabar.

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