GeoJournal of Tourism and Geosites

Year XVI

2023 / no. 3

vol. 49

Editura Universității din Oradea

GTG

GeoJournal of Tourism and Geosites

Oradea University Press

ISSN 2065-1198, E-ISSN 2065-0817

The Journal is issued under aegis and with financial support of:

University of Oradea, Romania
Department of Geography, Tourism and Territorial Planning
Territorial Studies and Analysis Centre
1 University St., 410087, Oradea, Romania

Gdansk University of Physical Education and Sport, Poland
Faculty of Tourism and Recreation
ul. Kazimierza Górskiego 1, 80-336 Gdańsk, Poland

GTG
GeoJournal of Tourism and Geosites

Year XVI, no. 3, vol. 49

Oradea - Gdańsk
2023

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INDEX COPERNICUS: http://journals.indexcopernicus.com/karta.php?action=masterlist&id=3947
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Review accredited by **C.N.C.S.I.S.,** "**C**" Categoryhttp://vechi.cncsis.ro/cenaposs/2008/Arhiva/reviste_cat_C_08.pdf

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Price of journal:

Individual	10 €
Institutional	15 €
Annual subscription	20 €

Address of the Editorial Office:
University of Oradea Department of Geography,
Tourism and Territorial PlanningTerritorial Studies and Analysis Centre 1 Universităţii St.,
410087, Oradea, Romania, Phone/fax: +40 259 408 475 e-mail: gtg.uoradea@yahoo.com

On line version:
http://gtg.webhost.uoradea.ro

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ISSN 2065-1198, E-ISSN 2065-0817

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DOI 10.30892/gtg.49301-1085

THE IMPACT OF AIRCRAFT CABIN DIGITALIZATION ON IMPROVING PASSENGER EXPERIENCE IN EGYPTAIR

Yasmine E. HAMZA*
Helwan University, Department of Tourism Studies, Faculty of Tourism and Hotel Management, Cairo, Egypt, e-mail: yasmine.essam@fth.helwan.edu.eg

Hala TAWFIK
Helwan University, Department of Tourism Studies, Faculty of Tourism and Hotel Management, Cairo, Egypt, e-mail: Halatawfik12@gmail.com

Dalia SOLIMAN
Helwan University, Department of Tourism Studies, Faculty of Tourism and Hotel Management, Cairo, Egypt, e-mail: dalia.mohamed@fth.helwan.edu.eg

Citation: Hamza, Y.E., Tawfik, H., & Soliman, D. (2023). THE IMPACT OF AIRCRAFT CABIN DIGITALIZATION ON IMPROVING PASSENGER EXPERIENCE IN EGYPTAIR. *GeoJournal of Tourism and Geosites*, 49(3), 849–857. https://doi.org/10.30892/gtg.49301-1085

Abstract: This study aims to investigate the impact of aircraft cabin digitalization (smart electronically dimmable windows, intelligent seats, smart overhead bins, radio-frequency identification tags for luggage tracking, futuristic intelligent seats, and inflight virtual reality) on improving the inflight passenger experience in EgyptAir, as well as measuring passengers' interest in using digital cabins. Furthermore, exploring passengers' intention to pay to use digital services, including futuristic intelligent seats, inflight virtual reality, and radio frequency identification tags for tracking luggage. To meet the research goals, a structured survey was designed and distributed among Egyptian frequent travelers in EgyptAir. A total of 311 complete surveys were collected and analyzed. Results indicated the high interest of Egyptian passengers in using the digital aircraft cabins in EgyptAir due to its significant impact on improving their inflight experience. Furthermore, analyses revealed the high intention of Egyptian passengers to pay to use inflight virtual reality and futuristic intelligent seats. However, they showed a moderate intention to pay to use radio frequency identification tags for tracking luggage.

Key words: digital cabins, passenger experience, inflight, frequent travelers, EgyptAir

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INTRODUCTION

With the rapidly increasing competition in air transportation, it becomes essential for airlines to adopt various digital trends in the aircraft cabin to provide passengers with a more entertaining experience during flight (Gaspar, 2015). Commercial airlines can address the industry's challenging competition intensity by employing digitalization. As digitalization provides commercial airlines with insight into their competitive environment as well as the needs of their customers (IATA,2020). Digitalization, according to Kraus et al. (2021), is the readjustment or new investments in technology and business models to more efficiently engage digital consumers at every contact point in the customer experience lifecycle. Moreover, Parviainen et al. (2017) stated that “digitalization" refers to the changes associated with the application of digital technology in all aspects of human society. It is also able to turn existing products or services into digital variants, thus offering advantages over tangible products. Digitalization is changing the expectations of passengers around the world. The rapid development of technology has led to a significant change in the behavior of humans, organizations, and the structure of the market. The effective use of mobile devices and the Internet of Things (IoT) brings a good opportunity to enhance an airline's performance and facilitate customer interactions in terms of buying and consuming products or services (Osmundsen et al., 2018). Passengers' travel experiences can be enhanced by introducing new digital services. The use of digital services in airlines is an important factor that contributes significantly to improving passenger evaluations of the airline and maintaining loyalty (Heiets et al., 2022). Al-Gharaibeh and Ariffin (2021) highlighted that the higher the passenger's satisfaction with the airline's services, the more intention they have to fly again with this airline.

In line with this, Parviainen et al. (2017) emphasized that ignoring digitalization could negatively impact the airline by causing it to lose its competitive advantage in highly competitive markets. With the emergence of digitalization, a large number of passengers seek more control over their flights through automated and personalized options (Halpern et al., 2021). Therefore, allowing passengers to control their personal and immediate space during flight is an essential aspect of the aircraft cabin to provide the passenger with an entertaining experience. Design improvements such as personal light controls, temperature controls, and seat controls need to be integrated into the aircraft cabin interior to improve the inflight passenger experience (Bouwens, 2018a). Despite the potential benefits connected aircraft cabins

* Corresponding author

can bring to both airlines and passengers, limited research has been conducted to study digitalization in the aircraft cabin in the context of EgyptAir. Moreover, there is a lack of analysis of the passenger interest and acceptance of digitalization in the aircraft cabin in EgyptAir. Egypt Air's competitors are increasingly embracing digital services in aircraft cabins to improve passenger experiences. Thus, investigating how digitalization can be used to improve EgyptAir's aircraft cabin service is critical to gaining a competitive advantage and improving the passenger experience.

According to IATA (2020), it is now more important for airlines to employ digitalization to gain a sustainable competitive advantage in highly competitive markets. Moreover, Heiets et al. (2022) highlighted that airlines should conduct studies to identify what types of digital technology will be accepted and preferred by passengers. Therefore, the current study contributes to measuring passenger interest and acceptance of using digital aircraft cabins in EgyptAir, as well as investigating to which extent digital aircraft cabins will contribute to improving passengers' in-flight experience. Previous studies that investigated the impact of innovative technology on the passenger experience were limited to a specific technology trend. La et al. (2021) conducted a study to investigate how passengers value inflight entertainment systems when they travel and their impact on improving their inflight experience. In addition, Williamson et al. (2019) explored passengers' attitudes toward the social acceptability of VR during air travel. Moreover, Bouwens et al. (2018b) investigated the effect of in-seat exercise on the comfort perception of airplane passengers. However, our research examines the impact of various innovative technologies (smart electronically dimmable windows, intelligent seats, smart overhead bins, radio-frequency identification tags for tracking luggage, Zero-Touch inflight entertainment screens with 4K clarity, and inflight virtual reality) on improving the passenger experience Decision-makers in EgyptAir may be reluctant to take broader steps towards investing in digitalization for fear of not achieving profits in turn. Therefore, this study investigated passengers' willingness to pay extra prices to experience (futuristic intelligent seats, inflight virtual reality, and radio frequency identification tags for tracking luggage). The study applied to frequent Egyptian travelers in EgyptAir.

LITERATURE REVIEW

1. Passengers' perception of digitalization in the airline industry

The emergence of digitalization has resulted in a significant change in consumer behavior (Berschik et al., 2022). Therefore, identifying passengers' needs and preferences has become essential to meet their expectations and enhancing their satisfaction in the future (Hassan and Salem, 2021). A study has been conducted by Shiwakoti et al. (2022) to evaluate Chinese passengers' attitudes and satisfaction with digital services provided by airlines. The results reveal that the majority of Chinese passengers showed a high interest in using airline technology, including artificial intelligence and the Internet of Things. due to their roles in enhancing passengers' confidence in airlines and service quality while traveling.

Moreover, the previous study by Heiets et al. (2022) to measure passengers' attitudes toward digitalization in the airline industry found that the majority of passengers perceived digital technology as an important factor in enhancing their experience. They showed a high interest in using digital services such as online and self-service check-in for their luggage, due to their time saving and convenience. The results of the study also revealed that the majority of passengers, especially frequent fliers, prefer to access their flight information via their mobile phones and flight information display systems. Another study was conducted by Halpern et al. (2021) to identify passenger preferences for using digital technologies at airports in Norway. The findings of the study showed that passengers have a high-interest level in using digital technologies at Norway airports including an infrared camera and facial recognition because they improve the speed of identity verification for passengers, allowing for faster and more convenient boarding passengers also show a high interest in using mobile payment applications because it's a more secure method of payment than using a credit card.

2. Aircraft cabin digitalization

The cabin interior is the most important factor in the passenger's choice of an airline. There is a strong correlation between aircraft interior comfort and the passenger's intention to fly again with the same airline (Kökény et al., 2022). In the digital cabin, everything on board, from engine performance to the inflight entertainment system, is connected and monitored in real time. The connected cabin is an integrated system developed by Airbus made up of sensors and displays that track passengers' flight experiences. It provides real-time links between passengers and cabin crew with core cabin components such as the galley, lavatory, meal trolleys, seats, and overhead bins to provide passengers with a more personalized environment and improve passenger interaction with cabin components (Airbus, 2022). By employing digital cabins, passengers can control their environments, such as lighting, window shades, seat movement, and climate, directly from their smartphones and personal devices (Ninnemann et al., 2022) Therefore, it is proposed that:

H1: passengers' interest in using the digital aircraft cabin has a significant impact on improving their inflight experience.

2.1. Smart Electronically Dimmable Windows (SEDWs)

Aircraft windows are a primary path for heat, noise, glare, and other environmental elements. These unwanted elements cause passengers discomfort. Additionally, aircraft windows sometimes block the view, preventing passengers from enjoying the scenic beauty. As a result, Boeing began to use smart electronically dimmable windows, which allow passengers to control the amount of light coming into the aircraft cabin at the touch of a button to preserve views and reduce unwanted glare while preserving the view (Zakirullin, 2022). By employing SEDWS, passengers don't have to manually push the window shade up or down aboard the new A350; instead, they can adjust their window shade setting with the touch of a button (Boeing, 2021). Thus, it is proposed that:

H1a: Passengers' interest in using smart electronically dimmable windows has a significant impact on improving their inflight experiences

2.2. Futuristic intelligent seats

It allows passengers to monitor and control their seat conditions by using their phones to improve the in-flight passenger experience on short- to mid-haul flights. The intelligent seat cover is connected to a series of sensors that detect both the passengers' bodies and the conditions of their seats, including temperature, seat tension, pressure, and movement, all of which can be monitored and controlled by passengers via the Layer's Move app on their phones. In addition, the seat automatically adjusts itself during flight based on the passenger's weight, size, and movement by passing a current through the conductive yarn to change the seat tension. It also addresses the issue of "legroom rage" in economy class seats caused by passengers unnecessarily reclining on a shorter flight by adjusting the seat back position (Layer Design, 2021). Therefore, it is suggested that:

H1b: Passengers' interest in using futuristic intelligent seats has a significant impact on improving their inflight experience.

2.3. Smart overhead bins

The most common reason for passenger boarding delays is the storage of carry-on luggage in overhead bins. The time it takes to find a suitable space will increase boarding time. Passengers with many pieces of luggage require significantly more time to store everything. In some cases, they may have to move to other rows to find available space (Nugroho and Asrol,2022). Moreover, Garg (2017) stated that time spent by passengers looking for available overhead bin storage space for carry-on baggage during the boarding process leads to inconvenience for passengers and can result in delayed departure. Cao et al. (2023) clarified that delays have a significant impact on passenger satisfaction. Moreover, Luo et al. (2021) highlighted that the boarding time is crucial since it impacts the efficiency of the aircraft as well as passenger satisfaction. Therefore, airlines and aircraft manufacturers have tried a variety of approaches to address boarding delays. Airlines, for example, have altered the size and shape of overhead bin storage space to make it more usable, but due to space constraints, this option has been found ineffective in reducing boarding time. As a result, there is a need for an improved system that aids in speeding up the aircraft boarding process (Garg, 2017). Airbus introduced system aids in boarding by providing a clear visual indication of whether space is available in each overhead luggage storage bin. Even if the overhead luggage storage bin is closed, such an indication is visible from a distance. Airbus installed a green, yellow, and red light system that informs passengers of the amount of space remaining in each bin. A red light indicates that the storage is full, a green light indicates that there is enough space for luggage, and a yellow light indicates that there is only space in the bin for small items such as coats. Passengers using this system can quickly move down an aircraft aisle to an available bin without having to open each closed bin to check for available space (Tiu et al., 2016). Thus, the following hypothesis arises:

H1c: Passengers' interest in using Smart overhead bins has a significant impact on improving their inflight experience

2.4. Inflight entertainment systems

2.4.1. Zero-Touch inflight entertainment screens with 4k clarity

By implementing Zero-Touch technology, passengers can pair their electronic devices with their seat-back inflight entertainment screen by connecting to Wi-Fi and scanning a QR code displayed on the screen. They can then use their electronic devices to navigate and enjoy the airline's inflight entertainment system options. For example, Qatar Airways introduced the 100% Zero-Touch technology Oryx One in-flight entertainment system across its B777, A350, B787-8, A320, and A321 fleets. Qatar Airways is the first airline in Europe, the Middle East, and North Africa to apply this technology in business and economy class. This has come as part of the airline's latest COVID-19 safety measures to limit the spread of infection on board (Qatar Airways, 2021). So the following hypothesis is proposed:

H1d: Passengers' interest in using zero-touch inflight entertainment screens with 4k clarity has a significant impact on improving their inflight experience.

2.4.2. In-flight virtual reality (VR)

Laukkanen et al. (2022) defined VR as a method of immersing people or any object in a world that can be manipulated without the risk or fear of reality. The applications of virtual reality in the aviation industry are numerous and diverse and are now being used to improve commercial aircraft, aviation training, component design, and many other uses (Moerland-Masic et al., 2022). VR is a great opportunity for airlines to improve passenger experiences and overcome a fear of flying. There are many existing trials by airlines to apply inflight VR inside the cabin to improve the passenger experience (Iberia, 2022). For example, SunExpress, a Turkish-German airline, provided 15 in-flight VR devices on all flights departing from Antalya, Turkey, to vacation destinations across Europe. Passengers showed high satisfaction with VR. They perceived it as very entertaining (SunExpress, 2019). Furthermore, Alaska Airlines tested VR for first-class passengers with short films aimed to make customers feel like they are in a private movie theatre rather than a closed cabin (Alaska Airlines, 2018). Moreover, Iberia, the Spanish flag carrier, was seeking advanced products and services to improve the passenger experience and distinguish itself in a highly competitive market. Therefore, it decided to apply an inflight VR solution to its flights in business and economy class for a six-month trial period on routes between Madrid, New York, Miami, and Tel Aviv (Iberia and Inflight VR, 2021). Initial feedback revealed a high level of customer satisfaction and a similarly high level of usability for travelers. The number of times passengers used the device was likewise consistently high. So, Iberia and Inflight VR pushed to the next level, which included equipping the full business class with virtual reality (Miller, 2019). Therefore, it is proposed that:

H1e: passengers' interest in using virtual reality has a significant impact on improving their inflight experience

2.5. Radiofrequency identification tag (RFID) for tracking luggage

Mishandled baggage is a common factor that leads to a terrible passenger experience (IATA, 2019). To address this issue, IATA (2018) described radio frequency identification tags (RFID) as an emerging technology that could benefit the airline industry by reducing the number of lost luggage. It will have a positive impact in terms of better customer service, reduced costs, enhancement of the current system, and reduced labor and human error. The consequences of airline baggage-handling issues could negatively impact carriers' ability to compete. However, being the first to market with an RFID tagging system gives the airline a competitive advantage in terms of service and cost savings (Ushakov et al., 2022). Electronic baggage tags are a form of RFID that can receive and transmit data, typically via Bluetooth, allowing travelers to track their luggage via a mobile phone app (Manabe et al., 2022). Delta Air Lines is the first airline to show that RFID could be a low-cost solution to the problem of lost luggage. Passengers who fly with Delta Airlines and use the Delta Mob app will receive notifications when the bags are loaded onto the aircraft. If a passenger's luggage is accidentally placed on the wrong flight, Delta can quickly locate it anywhere in its system by using belt loaders that will give baggage the green light when the bag is being loaded on the correct aircraft or red when the bag requires additional handling (Wan et al., 2022). Therefore, the following hypothesis is proposed:

H1f Passengers' interest in using the radiofrequency identification tag for tracking luggage has a significant impact on improving their inflight experience.

MATERIALS AND METHODS

1. Study procedures and study sample

Digitalization is changing the expectations of passengers around the world. Therefore, airlines must ensure that their products and services are tailored and delivered to passengers according to their preferences to improve their travel experience (Sahu et al., 2018). This study aims to evaluate passengers' interest in using digital services in EgyptAir's aircraft cabin and investigates the impact of adopting digital cabins on improving their in-flight experience. The flowchart of our research steps is shown in Figure 1. The target population of our study is Egyptian frequent travelers in EgyptAir.

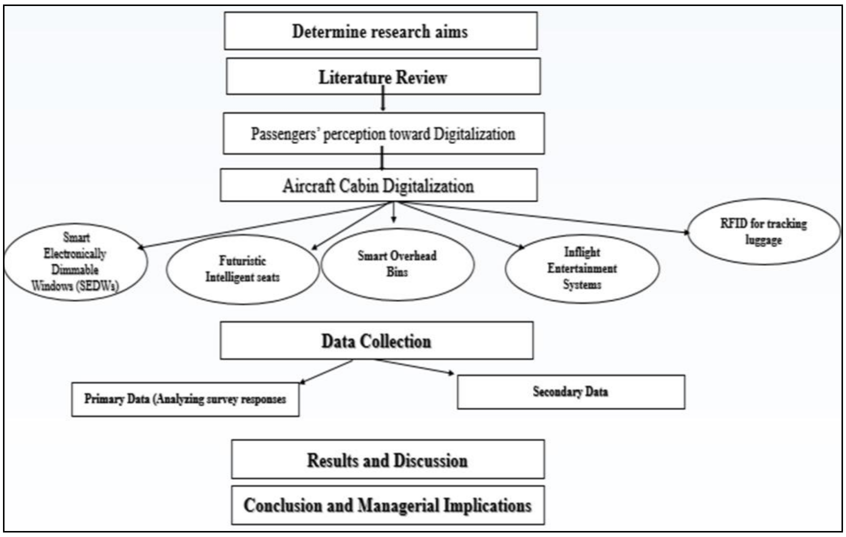

Figure 1. Research flow chart (Source: developed by authors)

The reason for selecting this sample is that they have experienced various digital trends every time they travel (Suwannakul, 2020). Therefore, we could obtain credible evaluations, accurate and realistic results for the study.The study employs a "selected sample" technique. An online survey was developed on Google Forms, and a relevant link was distributed to frequent travelers on social media platforms. The participants were informed about the survey outline, the study aims, and the research scope. The survey was originally written in English and then translated into Arabic to allow Egyptian travelers to answer in their native language; however, the survey was distributed in both English and Arabic versions. A total of 311 complete surveys were collected during the period between March and May 2022.

2. The study instrument

The survey scale used in the study is selected from previously published articles (Shiwakoti et al., 2022; Heiets et al., 2022; Ninnemann et al., 2022; Efthymiou et al., 2021; Ahmadpour et al., 2016). The survey is divided into four main parts. The first part was concerned with the demographic characteristics of the respondents (3 items), including the participants' age, gender, and type of class. The second part was concerned with evaluating passengers' interest in using the digital aircraft cabin. Respondents are asked to rate their level of interest in using five digital services in the aircraft cabin, including smart electronically dimmable windows (3 items), futuristic intelligent seats (3 items), smart overhead bins (3 items), radio frequency identification tags for tracking luggage (3 items), and inflight entertainment system (5 items).

Displayed images with a brief description of each digital service are attached to the survey. The third part of the survey included two questions aimed at evaluating passengers' overall perceptions toward digitalizing aircraft cabins and their impact on improving their inflight experience. Finally, the fourth part of the survey is concerned with estimating passengers' willingness to pay extra prices to experience inflight virtual reality, futuristic intelligent seats, and radio frequency identification tags for tracking luggage. The survey is designed based on closed-ended questions, and 5-point Likert-type scales are used for responses (1 = disagree to 5 = completely agree).

3. Statistical analysis

Various statistical tools were used to analyze the data collected from respondents. First, the study employs descriptive statistical analysis to cover a holistic overview of the sample and variables. Second, convergent validity and reliability test was conducted to measure the consistency and reliability of all items mentioned in the survey. Third, a simple linear regression analysis was conducted to test the hypotheses. The data were analyzed by using SPSS version 26.

RESULTS AND DISCUSSION

Demographic analysis

The survey showed that a majority of the respondents to this study are aged between 18-30 years old (55%) and that most of them are males (53.1%). In terms of the type of class, most of the respondents traveled in economy class (71.7%), 25% traveled in both business and economy class, and (2.9%) traveled in business class (Figure 2).

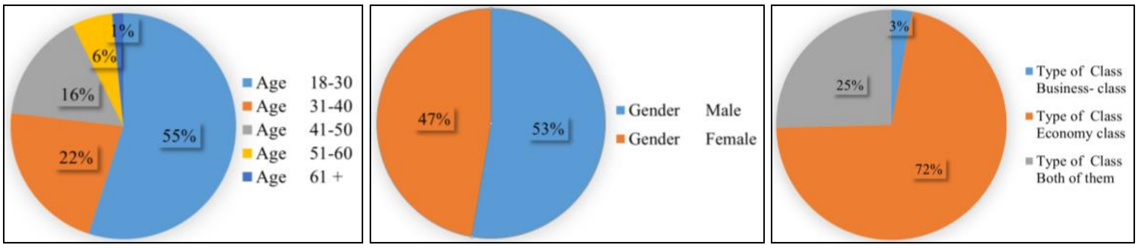

Figure 2. Sociodemographic characteristics of the sample

Convergent validity and reliability test

According to Shrestha (2021), convergent validity is used to measure the level of correlation between multiple indicators of the same construct that are in agreement. Convergent validity is confirmed when the average variance extracted (AVE) and Cronbach's alpha is greater than 0.5 and the values of composite reliability (CR) is higher than 0.7.

As a result, for the convergent validity of the survey items (table1), the average variance extracted > 0.5, the composite reliability, and Cronbach's alpha > 0.7 for all Items; Thus, it can be inferred that the convergent validity is accepted and all survey items have higher reliability.

Table 1. Analysis of convergent validity and composite reliability for passengers' interest in using digital aircraft cabins Cα: Cronbach's Alpha; CR: Composite reliability; AVE: Average variance extracted

Constructs and Items	AVE >0.5	CR >0.7	Cα
Smart Dimmable window	0.54	0.83	.914
I'm interested in using smart dimmable windows during flights.			
Smart electronically dimmable windows will have a great influence on improving my inflight experience.			
Controlling the intensity and color of light coming into the aircraft cabin by using the smart electronic dimmable windows touch button will improve my travel experience.			
Intelligent seats	0.543	0.80	.842
I'm interested in using futuristic intelligent seats with sensors.			
The Futuristic intelligent seats with sensors will improve my inflight experience.			
I have the willingness to pay higher prices to use the futuristic intelligent seats.			
Smart overhead bins	0.51	0.834	.992
Smart overhead bins will make it faster for me to find available luggage space.			
Smart overhead bins will reduce congestion in the aisle and boarding time.			
I'm interested in using smart overhead bins.			
RFID for tracking luggage	0.5	0.814	.794
Using RFID for luggage handling will increase my confidence in the airline.			
I'm interested to use a radio frequency identification tag for tracking my luggage.			
I have the willingness to pay extra costs to use a radiofrequency identification tag.			
Inflight entertainment system	0.514	0.877	.912
I am interested in using Zero-Touch inflight entertainment with 4k Clarity.			
I am interested in using inflight Virtual Reality(VR).			
I'm strongly attracted to airlines that use Virtual reality (VR) on flights.			
Virtual Reality (VR) will distract me from a discomfort situation.			
I am interested in using Zero-Touch inflight entertainment screen with 4k Clarity.			

Passenger interest in using digital aircraft cabins

Descriptive statistics were used to measure passengers' interest levels in using digital aircraft cabins. Figure 3 shows the mean of each construct related to the study**.** Respondents' rate regarding their interest in using smart electronically dimmable windows (4.19), futuristic intelligent seats (4.23), smart overhead bins (4.13), radio frequency identification tags for tracking luggage (4.21), inflight entertainment systems with 4K clarity and zero-touch screens (4.08), and inflight virtual reality (3.99). In conclusion, the majority of respondents show a high approval rate regarding the use of digital aircraft cabins.

Passengers' overall perception toward aircraft cabin digitalization

Results in Table 2 reveal that the majority of passengers perceive aircraft cabin digitalization as an important factor in improving their inflight experience (4.09). They highlighted that they will be strongly attracted to airlines with digitalized aircraft cabins over airlines with traditional aircraft cabins (3.99). This indicates that airlines with digital aircraft cabins will gain a competitive advantage over airlines with traditional aircraft cabins.

Passengers' willingness to pay to experience digital services

Results reveal that passengers have a high intention to pay extra prices to use the futuristic intelligent seats (3.78), and inflight virtual reality (3.45). However, they showed a moderate rate of agreement regarding their willingness to pay to experience a radiofrequency identification tag to track their luggage (3.7) (Table 3).

Hypotheses testing

A simple linear regression analysis was used to test the hypotheses. Table 4 shows the value of the standardized coefficient, their significance level, and the support for the acceptance of the hypotheses.

The results show that passengers' interest in using digital cabins has a significant impact on improving their inflight experience. The value of the standardized coefficient is.828 at sig =.000. This indicates that digitalizing aircraft cabins will contribute to improving the inflight passenger experience. Therefore, hypothesis 1 is supported.

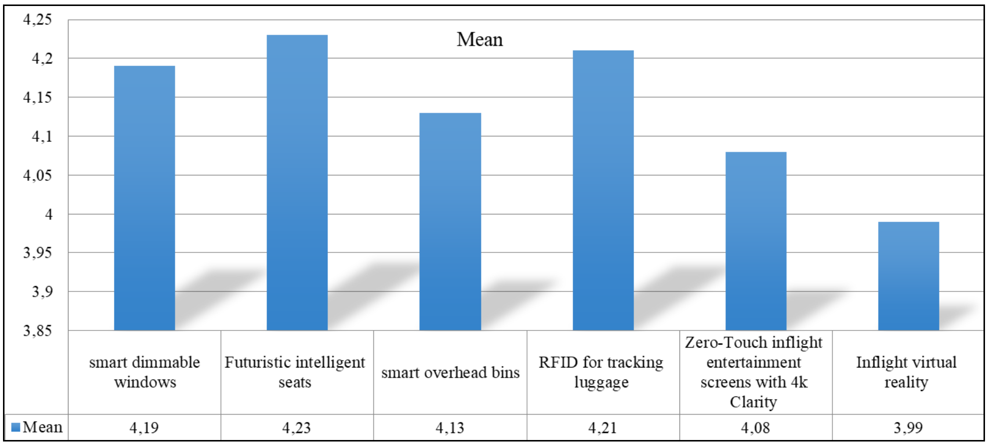

Figure 3. Participants' responses regarding their interest in using digital cabins

Table 2. Descriptive statistics of passengers' overall perception of digitalization

The Questions	Mean	Standard deviation
Digitalizing aircraft cabin components will improve my inflight experience.	4.09	0.79
I will be attracted to the airlines with digitalized aircraft cabins over airlines with traditional ones.	3.99	0.859

Table 3. Descriptive statistics of passengers' willingness to pay
extra prices for inflight VR, futuristic intelligent seats, and RFID for tracking luggage

Futuristic intelligent seats	Mean	Standard Deviation
I have the willingness to pay higher prices to experience the futuristic intelligent seats.	3.78	1.036
RFID for tracking luggage		
I have the willingness to pay extra costs to use a radiofrequency identification tag.	3.7	1.124
Inflight Virtual Reality		
I have the willingness to pay extra costs to experience inflight Virtual Reality (VR).	3.45	1.187

Table 4. Results of the simple linear regression analysis to test the hypotheses
PI: passenger interest; DC: digital cabin; PAX: passenger; SEDW: smart electronically dimmable window; IS: intelligent seats; SOB: smart overhead bin; RFID: Radio frequency identification tag; IFE: inflight entertainment; VR: virtual reality

Hypotheses	**Path directions**	**Standardized coefficient**	**Standard errors**	**T statistics**	**Sig**	**Result**
H1	PI in DC ⟶ improves PAX experience	.828	.035	25.954	.000	supported
H1a	PI in SEDW ⟶ improves PAX experience	.579	.046	12.468	.000	supported
H1b	PI in ISI ⟶ improves PAX experience	.604	.047	13.318	.000	supported
H1c	PI in the SOB ⟶ improves PAX experience	.632	.047	14.322	.000	supported
H1d	PI in RFID ⟶ improves PAX experience	.648	.045	14.961	.000	supported
H1e	PI in IFE screens ⟶ improves PAX experience	.614	.042	13.670	.000	supported
H1f	PI in VR ⟶ improves PAX experience	.581	.040	12.544	.000	supported

The results indicate that passengers' interest in using smart electronically dimmable windows has a significant impact on improving their inflight experience. The value of the standardized coefficient is .579 at sig=.000. This means that employing smart dimmable windows inside aircraft cabins will improve the inflight passenger experience. Therefore, hypothesis H1a is supported. Moreover, the data show that passengers' interest in using the futuristic intelligent seat has a significant impact on improving their inflight experience. The value of the standardized coefficient is .579 at sig=.000. Thus, hypothesis H1b is supported. The results also show that passengers' interest in using Smart overhead bins has a significant impact on improving their inflight experience. The value of the standardized coefficient is .632 at sig=.000. Accordingly, the findings support hypothesis H1c. Furthermore, the results show that passengers' interest in using the Zero-Touch inflight entertainment screens with 4k clarity has a significant impact on improving their inflight. As the value of the standardized coefficient is .614 at sig=.000. Therefore, Hypothesis H1e is supported. The findings also show that passengers' interest in using inflight virtual reality has a significant impact on improving their inflight experience. The value of the standardized coefficient is .581, at sig=.000. Hence, Hypothesis H1f is supported. This means that applying inflight VR will improve the inflight passenger experience. Finally, the data show that passengers' interest in using the radiofrequency identification tag for tracking luggage has a significant impact on improving their inflight experience The value of the standardized coefficient is .648 at sig=.000. Thus, hypothesis H1f is supported.

DISCUSSION

According to the findings of the study, Egyptian frequent travelers in EgyptAir are highly interested in using digital cabins, which include smart, electronically dimmable windows, intelligent seats, smart overhead bins, radio-frequency identification tags for luggage tracking, in-flight virtual reality, and Zero-Touch in-flight entertainment screen with 4K clarity. Aircraft cabin digitalization provides passengers with a more individualized and interactive experience by allowing them to control their own space during flight. As a result, their flight experience has improved. This finding supports previous research conducted by Straker and Wrigley (2016), who highlighted that providing passengers with efficient and convenient digital services improve their in-flight experience and increase their engagement with the airline. By employing smart electronically dimmable windows in EgyptAir, passengers can control window shades by using smart touch buttons on screens, while preserving the view outside.

This will provide passengers with a sense of comfort and enhance their in-flight experience. With the adoption of smart overhead bins, passengers are provided with a clear visual indication of available space in overhead bins, which makes the boarding process more efficient and reduces isle congestion. Digitalization has also provided an advantage for travelers by allowing them to track their luggage by using electronic bag tags, which contributes to reducing their stress from losing their luggage during travel. Hence, increasing passengers' confidence in the airline and providing them with an improved experience. Moreover, the advantage offered by intelligent seats contributes to providing passengers with a unique travel experience.

Since they can monitor and control their seat conditions by using their phones. As well as, it is a smart solution to the issue of “legroom” in economy class seats. Additionally, aircraft cabin digitalization has made it possible for the airline to offer more entertainment options such as inflight virtual reality and Zero-Touch in-flight entertainment screens with 4K clarity which provide passengers with a more entertaining experience. Due to all the above-mentioned benefits provided by digitalizing aircraft cabins, the majority of passengers in EgyptAir showed a high intention toward paying to experience digital services in the aircraft cabin. This result is consistent with (D'Cruz et al., 2014; Patel and D'Cruz, 2017; Umashankar et al., 2017) who found that passengers are willing to pay more for better service and comfort on flights. In other words, the higher the quality of service provided to customers, the more they are willing to pay to enjoy that service. These findings could be a courageous indication for EgyptAir to invest in installing smart technologies in aircraft cabins without feeling worried that these high costs will not bring profits in turn. To sum up, by implementing digital services onboard, the airline's performance could be improved, accordingly improving the inflight passenger experience and maintaining passengers' loyalty to the airline.

CONCLUSION AND FUTURE IMPLICATIONS

This study adds to previous literature by providing a comprehensive and clear analysis of how aircraft cabin digitalization impacts passengers’ in-flight experience in EgyptAir and their interest level in using digital cabins in EgyptAir. The study also contributes to exploring the willingness of Egyptian frequent travelers in EgyptAir to pay to use virtual reality, futuristic intelligent seats, and radiofrequency identification tags for tracking luggage. The study findings provide several managerial implications that have the potential to improve the inflight passenger experience in Egypt Air. The study concluded that the majority of passengers in EgyptAir showed a high interest in using digital aircraft cabins and their influence on improving their inflight experience. Thus, decision-makers in EgyptAir should take broader steps towards digitalizing aircraft cabins to attract more passengers and gain a competitive advantage among global airlines. EgyptAir's decision-makers must understand the critical role of digitalization in improving passenger experience and increasing market share. Intense market competition and competitive pressure are major drivers of digitalization. Innovative technology can help the company increase its market share and achieve a competitive advantage. There is also potential to establish new business models, which might result in a variety of great benefits. Providers who principally deliver to overseas markets with more developed economies may discover that digitalization is a necessary prerequisite to staying in the market (Jorge and Di 2014). Based on our findings, smart electronically dimmable windows should be applied in Egypt Air's aircraft cabin to allow passengers to control the amount of light coming into the aircraft cabin while preserving the view outside. Additionally, smart overhead bins should be implemented to allow passengers to indicate the available space easier and faster and address the issue of boarding delays. Furthermore, economy-class seats can be replaced by intelligent seats since it will allow passengers to monitor and control their seat conditions by using their phones. In line with this, the majority of EgyptAir passengers expressed a willingness to pay a higher price to use intelligent seats and improve their seat comfort; this is an important finding that would encourage aircraft manufacturers to implement intelligent seats in aircraft cabins. While many airlines (i.e., Iberia, Alaska, and SunExpress) have succeeded in attracting a large number of passengers, maintaining their loyalty, and gaining a competitive advantage by employing inflight virtual reality, Egypt Air hasn't taken any steps to implement such technology in its aircraft. Passengers flying on these airlines have perceived inflight virtual reality as very entertaining and satisfying.

The findings of the study showed that the majority of passengers in EgyptAir are highly interested in using inflight virtual reality and have the willingness to pay extra prices to experience this technology; hence, EgyptAir should implement inflight virtual reality in its aircraft cabins to create a win-win situation for both the airline and the passenger. Regarding the inflight entertainment system, EgyptAir should introduce Zero-Touch IFE technology in its aircraft cabins. With Zero-Touch IFE, passengers will no longer need to touch the screen to select options; instead, they will control IFE from their cell phones by pairing their electronic devices with their seat-back IFE screen by connecting to Wi-Fi and scanning a QR code displayed on the screen. Furthermore, EgyptAir's in-flight entertainment screens can be improved by introducing 4K clarity IFE screens. EgyptAir can implement radio frequency identification tags for tracking luggage, but not as a priority since the majority of passengers showed a moderate agreement regarding their willingness to pay to use this technology. EgyptAir must adopt a digital culture, set a clear digital strategy, allocate a budget to implement these technologies, and renew its fleet with digital aircraft. Furthermore, EgyptAir needs to cooperate with some IT companies in the aerospace industry to develop their digital services. Passengers must be instructed on how to use these digital technologies on board. Hence, preflight safety instruction videos must be updated to instruct passengers on how to use digital technologies in aircraft cabins. We conclude that enabling passengers to control their personal space during the flight will positively influence their inflight experience, and this couldn't be attained without employing digitalization.

Limitations and Further Studies

Although the study provides theoretical and practical insights, several limitations should be noted. First, the study was limited to specific digital services in aircraft cabins that impact the inflight passenger experience (smart electronically dimmable windows, futuristic intelligent seats, smart overhead bins, radio frequency identification tags for tracking luggage, zero-touch inflight entertainment screens with 4K, and inflight virtual reality). Therefore, future research can investigate additional digital services inside the aircraft cabin that may influence the inflight passenger experience. Second, the population of this study was limited to Egyptian travelers who frequently fly with EgyptAir.

Thus, the results can't be generalized to travelers from other nationalities. Therefore, additional research needs to further investigate how passengers from different nationalities perceive digitalization inside the aircraft cabin. A structured survey can be conducted to target a mix of nationalities to obtain more comprehensive results. The majority of survey respondents in our study are from the youth segment, with ages ranging from 18 to 30 years. This indicates that the majority of passengers who are interested in using digitalization inside aircraft cabins are from the youth generation. In the future, it is suggested to have a balanced representative sample of the age group. Moreover, an extensive study can be conducted to examine the impact of passengers' age on perceiving digitalization in aircraft cabins. It would be remarkable to examine how passengers of various age segments value the role of digitalization in improving their in-flight experience.

Third, our research relied on the quantitative research method, while we did not use the qualitative research method. Therefore, we suggest using qualitative analysis in future research. For example, in-depth interviews with EgyptAir officials can be conducted to investigate the possibility of implementing digital aircraft cabins. Moreover, the observation method can be used to identify the latest technologies that have been applied in the EgyptAir fleet.

Author Contributions: Conceptualization, Y.E.H.; methodology, Y.E.H; software, Y.E.H; validation, Y.E.H and D.S.; formal analysis, Y.E.H and D.S.; investigation, D.S. and Y.E.H.; data curation, H.T. and Y.E.H.; writing - original draft preparation, Y.E.H. and H.T.; writing - review and editing, Y.E.H., D.S. and H.T.; visualization, Y.E.H.; supervision, H.T. and D.S.; project administration, H.T. and D.S. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 12.01.2023 Revised: 25.05.2023 Accepted: 11.06.2023 Available online: 10.07.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.858-865
DOI 10.30892/gtg.49302-1086

EVALUATION OF THE SUSTAINABILITY STATUS OF THE BANGSRING UNDERWATER WITH INDONESIA'S CORAL REEF ECOSYSTEM

Mochammad FATTAH*
Universitas Brawijaya, Department of Socio-Economy Fisheries and Marine, Faculty of Fisheries and Marine Science, Malang, Indonesia, e-mail: mochammadfattah@ub.ac.id

Candra Adi INTYAS
Universitas Brawijaya, Department of Socio-Economy Fisheries and Marine, Faculty of Fisheries and Marine Science, Malang, Indonesia, e-mail: candra.intyas@ub.ac.id

Hafida RUMINAR
Universitas Brawijaya, Agroecotechnology Study Program, Faculty of Agriculture, Malang, Indonesia, e-mail: hafidaruminar@ub.ac.id

Moh Erfan ARIF
Universitas Brawijaya, Department of Management, Faculty of Economics and Business, Malang, Indonesia, e-mail: erfan_arif@ub.ac.id

Citation: Fattah, M., Intyas, C.A., Ruminar, H., & Arif, M.E. (2023). EVALUATION OF THE SUSTAINABILITY STATUS OF THE BANGSRING UNDERWATER WITH INDONESIA'S CORAL REEF ECOSYSTEM. *GeoJournal of Tourism and Geosites*, 49(3), 858–865. https://doi.org/10.30892/gtg.49302-1086

Abstract: Bangsring underwater is a type of ecotourism where the main attractions are coral reef ecosystems and swimming with sharks. Management based on the idea of ecotourism has a positive effect on changes in coral reef areas. On the other hand, tourism activities can hurt coral reef ecosystems if tourists act in a destructive way. The purpose of this research is to evaluate the sustainability status (ecology, economy, social, technology, and law - Institutions aspects) of the Bangsring Underwater coral reef ecosystem, in Indonesia using the rapid appraisal for fisheries (Rapfish). The sampling technique used purposive sampling with MDS Rapecotourism data analysis. Bangsring underwater offers tourist attractions in the form of floating houses, swimming with sharks, snorkeling, diving, planting coral reefs, and feeding fish. The evaluation value of sustainability in the quite sustainable category is the social dimension of 67.08%, with priorities that can be considered for increasing the sustainability of the social dimension being the role of the community in the form of participation in ecotourism management. Meanwhile, the multidimensional evaluation of sustainability yields a value of 76.48% in the sustainable category. This indicates that ecological conditions and law enforcement efforts to protect the sustainability of coral reef ecosystems are going well. Bangsring underwater ecotourism development takes into account ecological sustainability and provides economic opportunities for the community.

Key words: attractions, bangsring underwater, coral reefs, ecotourism, sustainability

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INTRODUCTION

Tourism is a natural resource that has economic value. The tourism sector is an activity that has a strategic role in improving economic development and is proclaimed as one of the economic drivers of an area that has the potential for tourism. Tourism is one of the sectors that can absorb labour, so the government is trying to develop strategies and policies that can support the development of the tourism sector. The amazing natural potential can be used as a tourist attraction for the community. Management of a tourist area can generate a very high economic value (Lailatufa et al., 2019). Tourism development, particularly in Indonesia, is showing a positive trend. This positive trend is towards developing tourism with the concept of ecotourism (Kusumaa and Amirudin, 2019). Ecotourism is a sustainable tourism development concept that aims to conserve the environment (nature and culture) (Intyas et al., 2021). Ecotourism is becoming increasingly popular with increasing attention and awareness of the ecological environment (Xu et al., 2022). Ecotourism can function as education and awareness for tourists, local communities, and other stakeholders about the importance of environmental sustainability, the concept of preserving and conserving natural resources, the environment, and local culture (Butarbutar and Soemarno, 2012).

The potential for marine tourism, especially coral reef ecotourism in coastal areas, is carried out as an effort to strengthen existing marine tourism (Widhiatmoko et al., 2020). The beautiful and well-maintained coral reef ecosystem also has economic value as part of marine ecotourism (Intyas et al., 2023). About 30% of the world's coral reefs are valued in the tourism sector, with an estimated total value of nearly US$36 billion, or more than 9% of all coastal tourism value in the world's coral reef countries (Spalding et al., 2017). Indonesia has the best relative performance in conducting coral reef-based tourism among other countries in the region, followed sequentially by Papua New Guinea, Malaysia, the Philippines, Timor-Leste, and the Solomon Islands (Huang and Coelho, 2017). Marine ecotourism is not only a way to enjoy the coastal environment, but tourists can also help take care of the coastal environment so that the ecosystem stays healthy (Herison et

[*] Corresponding author

al., 2021). Bangsring Underwater is a marine tourism project with a coral reef ecosystem in Banyuwangi Regency, Indonesia, that is managed by a group of fishermen and started in 2008; it was inaugurated in 2014 with the concept of ecotourism. The condition of the coral reefs was still damaged before 2008 because fishermen still used bombs to catch fish. Coral reef ecosystem management from 2008–2020 resulted in an additional 3.5 ha of living coral reef area.

Table 1. Dimensions, attributes, and assessment scale for the sustainability of Bangsring underwater (Source: modification after Tjahjono et al., 2022)

No	Dimension	Attribute	Scoring scale
1	Ecology	Water brightness (%)	1 = 20-<50; 2 = 50-80; 3 = >80
2		Coral covers (%)	1 = 20-50; 2 = >50-75; 3 = >75
3		Types of reef fish (fish)	1 = 20-<50; 2 = 50-100; 3 = >100
4		Types of coral reefs (Species of corals)	1 = 4-7; 2 = 7-12; 3 = >12
5		Water current (cm/s)	1 = >30-50; 2 = >15-30; 3 = 0-15
6		Coral depth (m)	1 = >20-30; 2 = >15-20; 3 = 6-15
7		Cleanliness of coral reef ecotourism	1 = Dirty due to lack of trash cans (>1000m); 2 = Fairly clean because there are trash bins but they are far apart (500-1000m); 3 = Clean because the distance between trash bins is close (100-500m)
8		Arrangement of Bangsring Underwater ecotourism area Banyuwangi	1 = Unorganized; 2 = Moderately organized; 3 = Well organized
9		Bleaching coral	1 = Severe; 2 = Moderate; 3 = Did Not Occur
10	Economy	Tourists visit	1 = Low; 2 = Seasonally; 3 = High
11		Government budget in managing ecotourism	1 = None; 2 = Low; 3 = As needed
12		Empeloyment	1 = Low; 2 = Seasonally; 3 = High
13		Tourism market potential	1 = Local market; 2 = Local and national market; 3 = Local, national and international market
14		Area accessibility	1 = Difficult; 2 = Moderate; 3 = Easy
15		Community income after ecotourism	1 = Low income and high poverty rate; 2 = Adequate income and low poverty rate; 3 = High income and avoiding poverty line
16	Social	The level of conflict in the use of the area as an ecotourism site	1 = Many conflicts; 2 = Slight conflict; 3 = No conflict
17		Livelihoods before and after tourism	1 = Non-tourist work and does not switch to tourism; 2 = Non-tourist jobs that penetrate the tourism sector; 3 = Tourism workers who continue to develop tourism business
18		Community participation in ecotourism management	1 = Not participating in management; 2 = Participating but not active in management; 3 = Participate and be active in management
19		Coral reef rehabilitation	1 = Never; 2 = Rarely; 3 = Consistently
20		Community knowledge about coral reefs	1 = Don't know about coral reefs; 2 = Knowing but not taking part in preserving sustainability; 3 = Knowing and taking part in maintaining sustainability
21		Tourist and public awareness of sustainability	1 = Low; 2 = Moderate; 3 = High
22	Technology	Use of information technology for ecotourism promotion	1 = Unable; 2 = Able but less consistent in promotions; 3 = Able and consistent in promotions
23		Development of environmentally friendly ecotourism facilities	1 = Construction using concrete as raw material and changing the shape of the environment; 2 = Development using concrete as raw material but still considering the environment; 3 = Development using environmentally friendly raw materials
24		Availability and access to clean water	1 = >2km; 2 = 1-2km; 3 = <1km
25		Public facilities and infrastructure	1 = No public infrastructure is available; 2 = Public infrastructure facilities are available but not optimal; 3 = Availability of public infrastructure with comfortable conditions
26		Modes of transportation	1 = High rates without knowing the pattern of tourist trips and not helping tourism development; 2 = Affordable rates but do not know the pattern of tourist trips and can help develop tourism; 3 = Affordable rates by knowing travel patterns and helping tourism development
27		Telecommunications infrastructure	1 = There is no communication signal transmitter yet; 2 = There are communication signal transmitters with limited providers; 3 = There is a communication signal transmitter to access all providers
28	Law and Institutions	Availability of tourism services	1 = Few or 1-25 tourism services; 2 = Moderate or 26-50 tourism services; 3 = Many or > 50 tourism services
29		Availability of management regulations	1 = There is no coordination ; 2 = There is not optimal coordination between stakeholders; 3 = Established good coordination between stakeholders
30		Coordination between stakeholders	1 = There is no settings in management; 2 = There is not optimal settings in management; 3 = Established good settings in management
31		Occupational Safety and Health (OSH)	1 = There is no implementation of OSH for workers and visitors; 2 = There has been an implementation of OSH for workers and visitors, but it is not optimal; 3 = OSH has been implemented for workers and visitors with optimal conditions
32		Level of community compliance with regulations	1 = low; 2 = moderate; 3 = high
33		Local government commitment to managing ecotourism	1 = low; 2 = moderate; 3 = high

This sustainable condition provides opportunities for tourist attractions. The number of tourist visits in 2020 was 59,182 in April–June 2020, under lockdown due to the COVID-19 pandemic. In 2021, as many as 50,463 tourists visited because of Community Activities Restrictions Enforcement (PPKM) policies in April, Ramadan, and August. Whereas in 2022, until September, the number of tourist visits was 70,422 because government policies have allowed tourism activities.

Bangsring underwater provides tourist attractions in the form of floating houses, swimming with sharks, snorkeling, diving, planting coral reefs, and feeding fish (Sumarmi et al., 2022). Coral reef ecosystems are ecosystems that are vulnerable to changes in environmental conditions and have low resilience when environmental stress occurs (Wahyudi et al., 2021). Apart from providing economic benefits, tourism activities also have a negative impact on coral reef ecosystems. The most destructive behavior carried out by licensed tourists is stepping on corals, while those who are not licensed are holding corals. The impact is divided into three, namely the emergence of coral fractures, scratches on the surface of coral colonies, and the destruction of coral colonies (Muhidin et al., 2017). Sustainable marine ecotourism management must consider ecological aspects, which are objects of an activity, by involving social elements as tourism actors in management so that they can provide economic benefits (Koroy et al., 2017). Tourism is basically a mass industry.

Its products and services are aimed at enabling the regeneration of body and spirit, getting to know, and experiencing something new, interesting to as many people as possible. However, the present shows that, as in other sectors (for example the economy), it is necessary to apply elements of sustainability in tourism as well (Šambronská et al., 2023). The status of coral reef ecosystems in the Pangkajene and Kepulauan (PANGKEP) Regency using the rapfish analysis identified 41 types of threat to the status of coral reef ecosystems, based on five indices: economic (51.92), social (47.33), technological (47.26), legal and institutional (45.60), and ecological (37.65). The averaged cumulative index of coral reef ecosystem sustainability was 45.95, within a threshold denoting a “less sustainable” status (Haya and Fujii, 2020). The sustainability status of coral reef ecosystem management following the establishment of the KKPD Pulo Pasi Gusung is based on the ecological dimension included in the good category, the economic dimension included in the less sustainable category, the sociocultural dimension included in the quite sustainable category, the technological and infrastructure dimensions included in the less sustainable category, and then the legal and institutional dimensions included in the moderately sustainable category (Cahyani et al., 2018). The following are the main characteristics or crucial elements that affect the sustainability of coral reef ecosystem management in the East Bintan KKLD: coral reef condition, protected areas, community income, employment of the tourism workforce, accessibility of human resources, government policies, cooperation between stakeholders, community compliance, legal advice on environmental matters, and infrastructure for oversight (Adriman et al., 2012). Management sustainability status is a consideration in resource utilization so as to minimize damage. Sustainable management of the ecological dimension will have a positive impact on other dimensions, and conversely, unsustainable management of the ecological dimension will have a negative impact on other dimensions (Fattah et al., 2021). The purpose of this research is to evaluate the sustainability status (ecology, economy, social, technology, and law - Institutions aspects) of the Bangsring Underwater coral reef ecosystem, in Indonesia using the rapid appraisal for fisheries (Rapfish).

Table 2. Categories of sustainability status (Source: Pitcher and Preikshot, 2001)

Index Value	Category
0 – 25	unsustainable
>25 – 50	insufficient
>50 – 75	sufficient
>75 – 100	sustainable

MATERIALS AND METHODS

The research on evaluating the sustainability status of Bangsring Underwater in the Indonesian coral reef ecosystem used a sampling technique in the form of purposive sampling from managers, agencies, and community leaders. *Multi-Dimensional Scaling* (MDS) Rapecotourism Data Analysis refers to the Rapfish technique (rapid appraisal for fisheries), which aims to evaluate the sustainability of fishery resources by considering ecological, economic, social, technological, and legal and institutional dimensions. Dimensions, attributes, and a rating scale as an evaluationare presented in Table 1.The sustainability of Bangsring Underwater is assessed based on 5 dimensions using a questionnaire by experts, where each indicator from the 5 dimensions is given a score of 1 (poor) to 3 (good). Higher scores indicate Bangsring Underwater ecotourism is in good condition. The stages of analysis consist of (Kavanagh and Pitcher, 2004):

1. *Multi-Dimensional Scaling (*MDS*):* The ordination technique is analyzed by MDS to determine the position of the good and bad points.
2. *Monte Carlo* (MC): The Monte Carlo method evaluates how random error affects the estimate of the ordinate value.
3. *Leverage*: Leverage analysis to determine the sensitive attributes of each dimension of sustainability in increasing the measured index value, namely ecology, economics, social, and technological aspects, as well as legal and institutional aspects.

The *goodness of fit* in the MDS analysis is evaluated through the S-stress value and the coefficient of determination (R^2). A low S-stress value indicates good fit (Fauzi and Anna, 2005). The model is said to be good or almost good if the results of the analysis produce an S-stress value of less than 0.25 (S <0.25), and an R^2 close to 1 (100%) (Pitcher, 1999).
Further analysis was carried out with the *Rapfish software* tool to determine the results of the evaluation of the sustainability status of Bangsring Underwater with the Indonesian coral reef ecosystem, as shown in Table 2, which are grouped into four categories of sustainability status, namely: unsustainable, insufficient, sufficient, and sustainable.

RESULTS AND DISCUSSION

Bangsring Underwater (*Bunder*) is a tourism spot in Bangsring Village, Wongsorejo District, Banyuwangi Regency that helps protect coral reefs. The beauty of *Bunder* lies not on the beach but in a completely preserved underwater garden. Tourists can see many ornamental fish, such as Nemo; to see them, they can go snorkeling or diving. *Bunder* is also known as the Floating House; this house functions as a fish clinic and a shark breeding place (Ridla et al., 2021). The uniqueness of the Bangsring Underwater Ecotourism Area is located at the edge of Java Island near Bali Island and other small islands such as Tabuhan Island and Menjangan Island. This makes the Bangsring Underwater Ecotourism Area a strategic area with small island attractions that are still untouched. In addition, Bangsring Underwater Ecotourism has implemented ecotourism principles such as the conservation of sharks and coral reefs, as well as presenting underwater tourist attractions such as snorkeling and diving. This is unique for Bangsring Underwater Ecotourism when compared to other ecotourism.

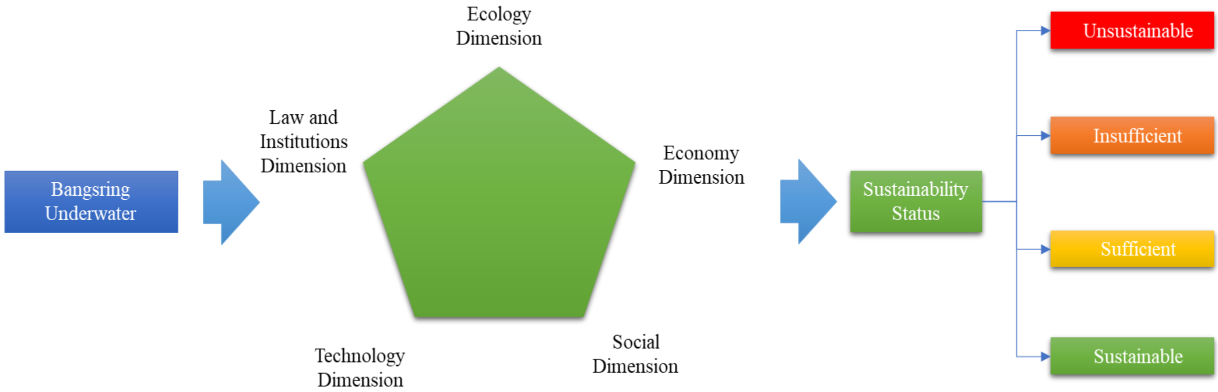

Figure 1. Research methodology (Source: Authors)

An alternative way to manage that is good for the environment is to use the ecotourism model in the form of ecotourism products or attractions that work together. Bangsring Underwater Ecotourism is a type of marine ecotourism that focuses on education and gives the ecotourism community more power. Education in *Bunder* ecotourism includes education on transplantation on coral reefs, introduction to fish apartment, planting fir using coconut waste, reading gardens, introduction to shark clinics, planting corals, and various kinds of ornamental fish. Empowerment of fishermen and the surrounding community, namely many fishermen who work as ecotourism officers and tour guides, work together to use the services of fishing boats to cross the islands of Tabuhan and Menjangan Island, open food stalls, and engage in other economic activities. Ecotourism products at *Bunder* Ecotourism include floating houses, snorkeling, diving, shark clinics, fish apartments, marine education and ecotourism supporting vehicles, namely banana boats, speed boats, canoes and paddles, and jet skis (Aini et al., 2018). The amount of waste that is found on the surface of Bangsring beach and its surroundings is the result of the mistakes of tourists who still do not have the awareness to dispose of waste responsibly and still often use single-use plastics This is a concern because if the waste problem is left unchecked, it will damage the Bangsring underwater environment and the ecosystems that exist in the Bangsring Sea. The amount of waste that has accumulated in the coastal area of Bangsring is generated by the remnants of tourist activities that leave trash in the form of food and drink wrappers, plastic bottles, cigarette butts, paper, and food scraps (Ningrum and Rohman, 2020).

The multidimensional results of Rapecotourism sustainability based on ecology, economy, social issues, technology, and law and institutions produce a value of 76.48% (Figure 2). This shows that underwater ecotourism is in the sustainable category. The results of the study (Ekawati et al., 2020) explained that the decrease in the area of coral reefs from 2005 to 2008 was 1.22 ha. This decline also occurs in dead coral reef ecosystems. The area of living coral reef ecosystems has increased by 2.4 hectares from 2011 to 2020. This can be caused by an increase in efforts to preserve coral reefs in Bangsring Village. In 2014, the people of Bangsring Village jointly built a 'Floating House' and designated Bangsring Beach as an ecotourism area. After six years of determining the area, the total area of living coral reef ecosystems in this area until the end of September 2020 reached 6.1 ha. The ecological dimension that is taken into consideration in sustainability when developing Bangsring underwater ecotourism is ocean water current (Figure 4). Tourists carrying out snorkeling or diving activities need sea water current that are not too strong so as to be comfortable while traveling. The beauty of coral reefs is no less interesting and is presented through snorkeling and diving activity to see the coral reefs on the seabed. Snorkeling and diving activities will be provided by a guide who will guide and direct visitors in viewing and documenting coral reefs.

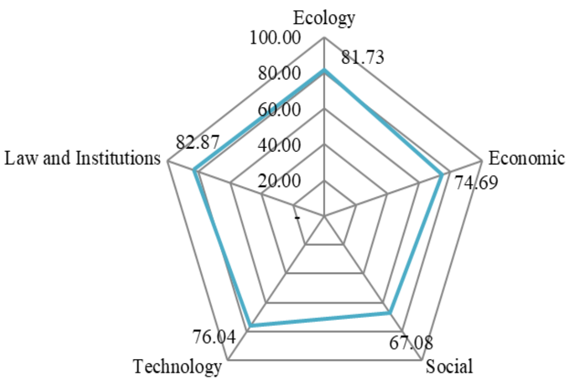

Figure 2. Sustainability based on Multidimensional

The coral reefs presented are found in several spots around the Floating House, Tabuhan Island, and Menjangan Island. Coral reefs in Bangsring Underwater Ecotourism are still very well maintained and growing well. This is a good impact from conservation activities, which are the principles of the Bangsring Underwater Ecotourism Manager. According to the results of the study (Aprillita and Luthfi, 2019), the water current speed in Bangsring Underwater is not fast (between 0.01 and 0.19 m/s) and tends to head south but greatly affects the growth of coral reefs.

Tabuhan Island (Figure 3A) presents a view of white sand with a row of mountains beside it, plus the water depth is not that deep and is clear, which is very suitable as a snorkeling spot. On this island, there are shallow waters and deep waters, so it can be an option for visitors to choose snorkeling and diving activities. Tabuhan Island is an uninhabited island, so it is perfect for visitors who want a private beach. To get to Tabuhan Island, use an island-crossing boat, and it takes about 15 to 25 minutes, depending on the speed of the boat, wave conditions, and wind. Menjangan Island is one of the exotic islands that offers the beauty of a small island decorated with rocks and the presence of deer (*menjangan*).

This is a very interesting spot to visit. To get to Menjangan Island, it takes an average of about 40 to 45 minutes. Visitors to this island can enjoy its beauty by snorkeling, diving, and viewing deer (*menjangan*). Bangsring Beach (Figure 3B) presents views of the sunrise and the splendor of Bali Island. Along the Bangsring Beach line, sea pine trees are arranged, which make Bangsring Beach cool and shady. Even though Bangsring Beach has black sand, this beach is very clean and has water with a level of clarity and brightness that is ideal for snorkeling and diving activities. The following is a picture of the attractiveness of natural beauty from several spots in the Bangsring Underwater Ecotourism.

Figure 3. (A) Tabuhan Island dan (B) Bangsring Beach (Source: Authors, 2022)

The sustainability of Bangsring ecotourism in the economic dimension needs to consider employment absorption (Figure 5). A regional economy when there are tourism activities has a significant impact on the diversity of jobs, so there are increased job opportunities. The existence of Bangsring Underwater Ecotourism can be felt by the community, especially by the people who are in the area. Communities around ecotourism used to make a living as ornamental fish fishermen before ecotourism existed. They survive only by relying on the catch of ornamental fish. They catch ornamental fish by diving and using bombs. Apart from that, some of them also work odd jobs, such as being construction workers, to supplement their income. However, after this ecotourism, they can work as guides, ecotourism managers, counter keepers, boat renters, land transportation drivers, stall traders, and so on. Indirectly, the existence of ecotourism increases the diversity of employment opportunities. In addition, research (Sumarmi et al., 2022) explains that coral reef ecotourism activities generate business opportunities that are also open to the people of Bangsring. Managers set up stalls managed by residents around the Bangsring Underwater area. The stalls provide food, drinks, toys, and swimwear.

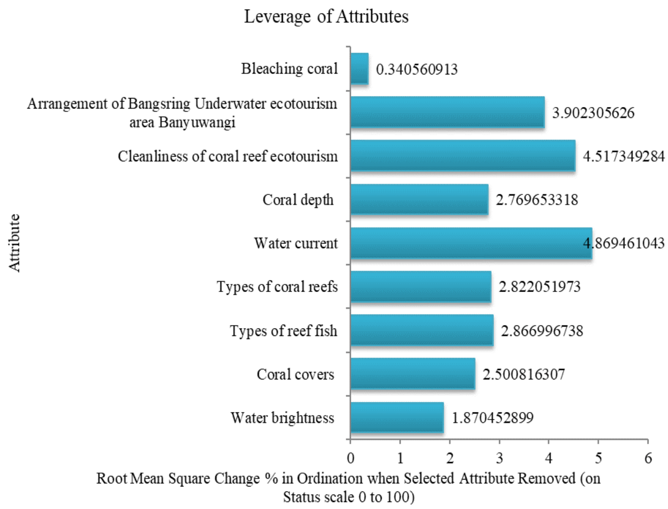

Figure 4. Ecology Leverage

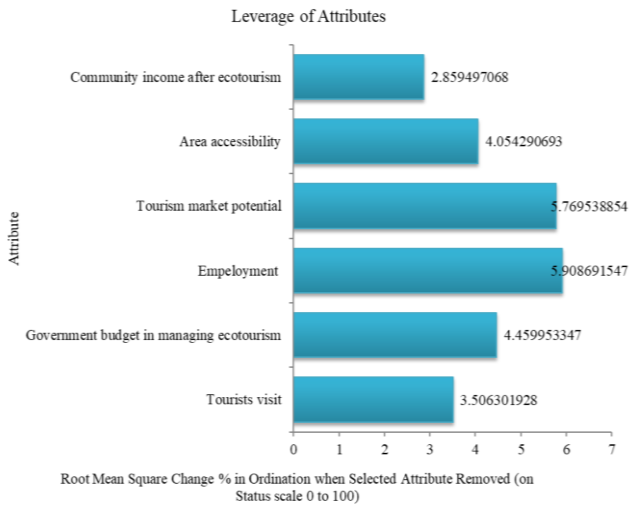

Figure 5. Economic Leverage

The role of the community in managing ecotourism (Figure 6) is an important way to help underwater ecotourism in Bangsring stay around for a long time. This community involvement supports a sense of belonging to ecotourism so that it makes efforts to preserve coral reef ecosystems. The impact of ecotourism is not only felt economically but also socially. This can be seen in the change in mindset and habits from fishermen who prioritize their own income regardless of environmental sustainability to people who are very concerned about the sustainability of marine biota. This ecotourism education is also felt by ecotourism managers, especially in foreign languages. This is done by apprentice students and *KKN* in the field of ecotourism. The Bangsring Underwater Ecotourism Manager is also aware that the presence of ecotourism visitors will have a negative impact, namely the waste problem. The waste in question is inorganic waste, namely plastic. Therefore, ecotourism managers turn waste processing equipment into gasoline to use as boat fuel. Every five kilograms of plastic waste will produce one liter of gasoline. The results of the study (Purwanti et al., 2020), explain that an intensive negotiation approach in each institution that intersects with the existence of coastal ecosystems and FGD activities for all management institutions can change behavior and views in sustainable management of coastal ecosystems and can reduce management conflicts. The key to maintaining the remaining ecosystem area for conservation activities is to involve community groups or communities in managing coastal ecosystems. (Brewer and Moon, 2015) add that co-management has gained significant traction in small-scale fisheries as part of solutions to address economic inefficiencies, unsustainable harvesting, and unequal distribution of profits derived from fisheries, yielding some promising results.

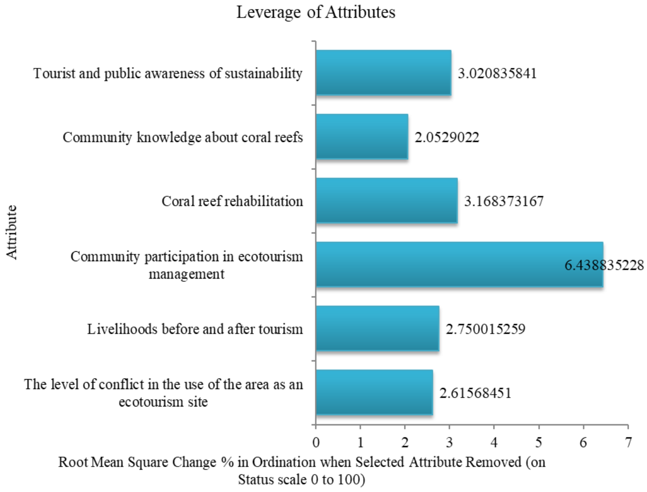

Figure 6. Social Leverage

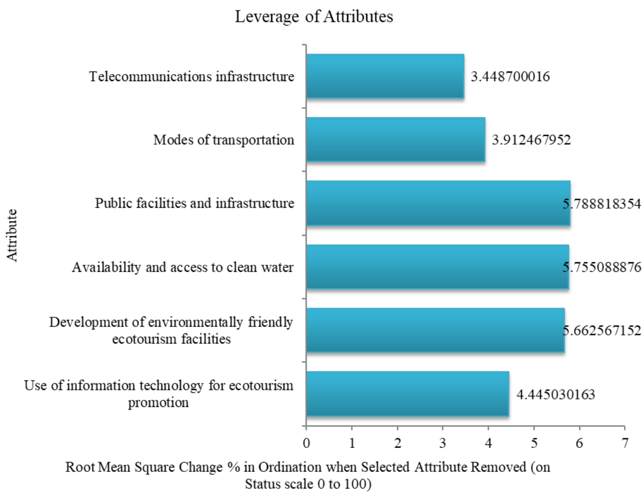

Figure 7. Technology Leverage

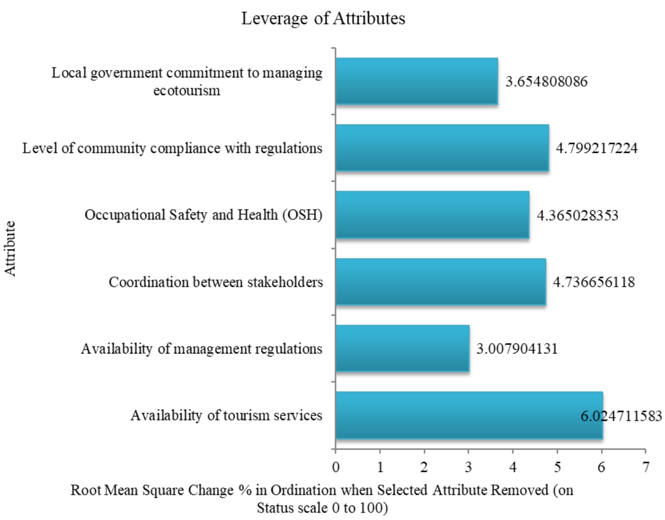

Figure 8. Law and Institutions Leverage

Figure 7 shows that the public facilities and infrastructure in Bangsring underwater ecotourism make it easy for tourists to feel at home. Facilities that meet the standards will provide satisfaction for tourist visits so that they will have the possibility to visit again. The available facilities and infrastructure include prayer rooms, toilets, gazebos, reading houses, storage of goods, food stalls and souvenirs, counters, docks, ferry boats, boats to islands, water sources, electricity sources, and ride facilities. Bangsring Underwater Ecotourism has provided adequate accommodation facilities as a place for visitors to stay in the form of homestays. The homestays provided by Bangsring Underwater Ecotourism consist of three types: family rooms, nemo homestays, and bunker homestays. The results of the study (Hanafi et al., 2021), state that tourists' perceptions of underwater sports facilities in Bangsring Village, Banyuwangi Regency, include: (1) sources of information and visiting purposes have a good percentage of 85%. (2) Underwater sports tourism facilities and infrastructure have a good percentage of 89%. (3) The uniqueness of the underwater sports vehicle in Bangsring village has a very good percentage of 91.4%. (4) Types of tourist services have a fairly good percentage of 84%. (5) Management of tourist attractions has a pretty good percentage too, with 87.5%. Based on the results of the data analysis in this study, it can be concluded that the perception of tourists about underwater sports, especially snorkeling and diving in Bangsring Village, Banyuwangi Regency, as a whole, can be said to be positive.

Figure 8 shows how easy it is for tourists to choose tourism services, which is a chance to make Bangsring underwater ecotourism more sustainable. More and more available tourism services provide an alternative for tourists to choose quality tourism services at competitive prices. Accessibility is an indication of the level of affordability of a tourist attraction and is a driving factor for market potential. The accessibility of Bangsring Underwater Ecotourism is assessed based on the availability, distance, and conditions of transportation access. Bangsring Underwater Ecotourism can be reached by train from the nearest station, namely Ketapang Banyuwangi Station, with a distance of 12 km; by bus from the nearest terminal, Kapuran Bus Terminal, with a distance of 9.9 km; or by boat from the nearest port, namely Ketapang Harbor, with a distance of 12 km. The condition of the road to Bangsring Underwater Ecotourism is easy to access because it is close to the highway, namely Jalan Raya Banyuwangi Situbondo, so that it has good road conditions and is easily accessible by two-wheeled and four-wheeled vehicles. To go to Bangsring Underwater Ecotourism (*BUNDER*) you have to pass Jalan Pantai Mutiara Pulau Tabuhan for 1.5 km on a small paved road. It's just that buses and other large four-wheeled vehicles can only get to the outside parking lot with a distance of about 30 m and can be reached on foot. According to (Sumarmi et al., 2022), tourists coming from outside Banyuwangi Regency can reach the location through the following transportation options: planes, trains, ferries (ships), and intercity buses. (Utami et al., 2022) stakeholders are expected to synergize with each other in managing activities in ecotourism. Apart from exploiting their economic potential, the community and the private sector are also expected to participate in maintaining compliance with regulations to preserve the coastal ecosystem. The government should monitor and enforce regulations related to ecotourism and support the development of ecotourism so that its benefits are sustainable.

Table 3. Comparison of Multidimensional Scaling with *MonteCarlo* and *Goodness of Fit* for Underwater Bansring Sustainability

Dimension	MDS	MC	MDS-MC Difference	R^2	Stress
Ecology	81.73	81.01	0.719	0.949	0.136
Economy	74.69	74.62	0.069	0.948	0.144
Social	67.08	66.54	0.545	0.947	0.152
Technology	76.04	75.47	0.573	0.949	0.145
Law and Institutions	82.87	82.47	0.396	0.950	0.141

Monte Carlo analysis to evaluate the effect of errors on the MDS ordination process (Kavanagh and Pitcher, 2004). The low difference between the MDS and MC values results in an indication that the MDS score has a high level of confidence due to a minimum of errors in understanding or procedures for indicators, and variations in scoring (Fattah et al., 2021). Ecological, economic, social, technological as well as legal and institutional dimensions produce a difference between MDS and Monte Carlo that is not too large so that this value indicates that the calculation results are good (Table 3).

The S-Stress value, which is calculated from the S value, shows how well the *Multidimensional Scaling Rapfish* analysis works. Low S-Stress values indicate high accuracy (*goodness of fit*). A good model is indicated by an S-Stress value that is less than 0.25 (<25%) with a coefficient of determination (R^2) close to 1.0 or 100% (Purwanti et al., 2021). Based on the calculation of determination (R^2) in Table 3, it shows that the 5 dimensions produce an average of 0.95 or 95%, which is close to 100%, and the average stress value is 0.14 or below 0.25, so the model is declared good or has a high accuracy.

CONCLUSION

Bangsring underwater provides tourist attractions that are environmentally friendly so as to minimize damage to coral reef ecosystems, in the form of floating houses, swimming with sharks, snorkeling, diving, planting coral reefs, and feeding fish. The multidimensional sustainability status of Bangsring underwater is in the sustainable category because it produces a value of 76.48%. The social dimension is the main concern in increasing sustainability, with the priority of community participation in managing Bansring underwater ecotourism.

Managers should evaluate physical parameters for snorkeling and diving and maintain facilities and infrastructure on a regular basis, managers should develop tour packages with the concept of ecotourism with tour service providers, and managers should develop tourist attractions that involve the participation of the surrounding community.

Author Contributions: Conceptualization, M.F. and C.I.; methodology, M.F. and C.I.; software, M.F. and E.A.; validation, H.R. and E.A.; formal analysis, M.F. and C.I.; investigation, H.R. and E.A.; data curation, H.R. and C.I.; writing - original draft preparation, M.F. and C.I.; writing - review and editing, M.F. and H.R.; visualization, M.F. and E.A.; supervision, E.A.; project administration, H.R. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The authors would like to thank the Institute for Research and Community Service (LPPM), Universitas Brawijaya, for providing financial support through Hibah Penelitian Strategis (HPS) in 2022 and for the Management of the Bangsring Underwater.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 20.03.2023 Revised: 17.05.2023 Accepted: 16.06.2023 Available online: 18.07.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.866-874
DOI 10.30892/gtg.49303-1087

ASSESSMENT OF THE RESOURCE POTENTIAL OF THE BITTER - SALTY SULFIDE LAKES OF THE NORTH KAZAKHSTAN REGION FOR THE DEVELOPMENT OF ECOLOGICAL AND BALNEOLOGICAL TOURISM

Pavel S. DMITRIYEV
North Kazakhstan Kozybayev University, Faculty of Geography and Ecology, Petropavlovsk, Kazakhstan, e-mail: dmitriev_pavel@mail.ru

Ivan A. FOMIN*
North Kazakhstan Kozybayev University, Faculty of Geography and Ecology, Petropavlovsk, Kazakhstan, e-mail: iafomin@mail.ru

Irina M. DMITRIYEVA
Regional Multidisciplinary Hospital, Neurological Department, Petropavlovsk, Kazakhstan, e-mail: imdmitriyeva@mail.ru

Zharas G. BERDENOV
L.N. Gumilyov Eurasian National University, Faculty of Natural Sciences, Astana, Kazakhstan, e-mail: berdenov-z@mail.ru

Saltanat M. ISMAGULOVA
North Kazakhstan Kozybayev University, Faculty of Geography and Ecology, Petropavlovsk, Kazakhstan, e-mail: saltamalikova@mail.ru

Nurlan K. SMAGULOV
Karaganda Buketov University, Research Park For Biotechnology And Environmental Monitoring Non-Profit Joint Stock Company, Karaganda, Kazakhstan, e-mail: msmagulov@yandex.ru

Yerlan A. ABDRAKHMANOV
North Kazakhstan Kozybayev University, Faculty of Geography and Ecology, Petropavlovsk, Kazakhstan, e-mail: aea19991@gmail.com

Citation: Dmitriyev, P.S., Fomin, I.A., Dmitriyeva, I.M., Berdenov, Z.G., Ismagulova, S.M., Smagulov, N.K., & Abdrakhmanov, Y.A. (2023). ASSESSMENT OF THE RESOURCE POTENTIAL OF THE BITTER - SALTY SULFIDE LAKES OF THE NORTH KAZAKHSTAN REGION FOR THE DEVELOPMENT OF ECOLOGICAL AND BALNEOLOGICAL TOURISM. *GeoJournal of Tourism and Geosites*, 49(3), 866–874. https://doi.org/10.30892/gtg.49303-1087

Abstract: To consider the resource potential of bitter-salty sulfide lakes for the development of ecological and balneological tourism in the territory of the North Kazakhstan region of the Republic of Kazakhstan. Field studies, a sociological survey were conducted, methods of statistical and mathematical processing were used. The cartographic method made it possible to visualize the studied material. Bitter-salty lakes contain sulfide mud, which is a unique natural resource. Mud can be used in combination with salt water to create the foundations of ecological and health tourism in the North Kazakhstan region. Research has revealed the most promising lakes of the region. The analysis of the obtained field research data and cartographic material made it possible to assess the resource potential of the lakes. These data were confirmed by the results of a sociological survey, which confirms the possibility of developing the tourism industry on the basis of unique local bitter-salty lakes. The cartographic material created in the course of the study visually demonstrates the prospects and possible problems of the development of the health tourism industry in the territory of the studied region. The resources of bitter-salty sulfide lakes have sufficient potential for the development of tourism in the North Kazakhstan region. The bitter-salty lakes of the North Kazakhstan region selected on the basis of a comprehensive score have criteria confirming their resource potential. This assessment shows the possibility of developing health and ecological tourism in the region. The border position of the region makes it possible to develop not only internal, but also external tourism.

Key words: bitter-salty lakes, sulfide mud, ecological and balneological tourism, tourism industry, resource potential, sociological survey

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INTRODUCTION

Today, one of the relevant directions for the development of the tourism industry in Kazakhstan is the study of natural resource potential (Semochkina, 2012; Dmitriyev et al., 2021 b; Mendybayev et al., 2015; Yegemberdiyeva et al., 2020; Atasoy et al., 2022). The natural resource potential includes those necessary environmental qualities that contribute to the creation and development of tourist routes in various regions (Smykova, 2015; Abubakirova et al., 2016; Tiberghien, 2019; Wendt, 2020). The natural resources of the regions of Kazakhstan, as well as artificially created objects of a cultural, environmental nature, serve as a powerful basis for the possible development of tourism (Zhidkoblinova, 2013; Zhakupov et

* Corresponding author

al., 2015; Ozgeldinova et al., 2017; Saparov et al., 2017; Bancerova and Kasimova, 2018; Chlachula, 2019, 2020; Dmitriyev et al., 2021 b; Agybetova et al., 2021). The natural resources of the North Kazakhstan region contribute to the formation of a variety of recreational facilities, which in turn give the region a tourism potential. At the moment, tourism and recreation in the study area are at the stage of formation (Wendt and Bógdał-Brzezińska, 2018; Dmitriyev et al., 2022; Agybetova et al., 2023).

The climatic conditions of the region have formed a diverse natural ecosystem throughout the territory, thereby creating an attractive basis for the formation of recreational, health-improving, excursion, and tourist systems. This is of social, environmental and economic importance for the development of the districts of the region (Kantarci, 2007; Syzdykbayeva et al., 2019; Ismagulova et al., 2020; Dmitriyev et al., 2022; Syzdykova et al., 2022 Torres-Pruñonosa et al., 2022).

There are several thousand lakes of various typologies on the territory of the region. Among them, bitter-salty ones are distinguished, having a degree of salinity of more than 50 %. In terms of the development of health and balneological tourism, the most interesting are the bitter-salty sulfide lakes with a layer of mud bottom sediments. These lakes and silt bottom sediments are formed due to the waters and sediments of the miocene-oligocene, as well as interplastic waters of the eocene-oligocene sediments of the geological past of the territory of the period of the chegan formation (Litovskij, 2017). The clays of the chegan formation are bottom sediments of the former sea that covered the territory of the North Kazakhstan region about 40 million years ago. They provide a constant constant of the water-salt balance of lakes and the accumulation of relatively homogeneous clay-silt sediments and concentrated brine waters in them. High evaporation and low precipitation contribute to the formation of salts in lakes and silt deposits, as well as an increase in the concentration of other elements contained. Anaerobic decomposition of organic residues is accompanied by the formation of hydrogen sulfide and increased alkalinity of sludge mixtures. Silt deposits have different levels of power, which are represented by finely dispersed lake mud, they have balneological, health and tourist significance (Vodopyanova, 1985; Beletskaya, 1987; Solodovnikov, 2016; Dunets et al., 2019).

There are carbonate or soda, sulfide (bitter-salty), chloride (salty) lakes (GOST 13273-88, 1988; Miheeva and Trebuhov, 1987). The study of the typology of water bodies suggests the presence of bitter-salty lakes, including sulfide mud, on the territory of the studied region. Materials of research of lakes of the North Kazakhstan region confirm the possibility of practical use of such places of occurrence of therapeutic mud. The composition of sulfide mud includes mineral and organic bottom sediments. Such deposits are mainly characteristic of bitter-salty, sulfide-containing lakes.

Studies have revealed that the black color of such mud is due to the content of hydrogen sulfide and iron compounds. Also, this type of dirt is called inorganic. This is due to the fact that the content of organic substances in them is less than 10%. It should be noted that their composition includes acids, pigment, immunostimulating substances. They are able to penetrate through the epidermis and have a special therapeutic effect. Also in the composition of this therapeutic complex contains lipids, which are the product of blue-green algae. Mud has not only therapeutic, but also adsorbing and bactericidal properties. These properties depend on the features of the mineral composition and the degree of mineralization of the lake. The high degree of mineralization of the reservoir significantly reduces the growth of pathogenic microflora, which is the causative agent of infectious diseases. Sulfide silt mud differs significantly from sapropel mud in thermal properties and surpasses them in the content of iron sulfides and in the degree of mineralization (Solodovnikov, 2016).

There is a high balneological potential of sulfide mud, which is manifested in the prevention and treatment of diseases of the musculoskeletal system, neuromuscular system (Fioravanti et al., 2017). Mud has high rehabilitation properties after injuries and complications. The listed properties make it possible to use mud as a natural balneological resource both in recreational conditions and in medical institutions. Scientists from near and far abroad are studying this issue (Vojnova et al., 2015; Vladimirskij and Fil'cagina, 2018; Cepilov et al., 2018; Yang et al., 2018; Kan et al., 2019).

The study of the tourism and recreational potential of lake ecosystems in Kazakhstan has been extensively developed in the Western and Southern regions of Kazakhstan (Akhmedenov, 2020; Akhmedenov and Idrisova, 2021; Berdenov et al., 2021; Tokpanov et al., 2021). The study of the natural and recreational potential of bitter-salty lakes will contribute to the development of ecological and balneological tourism.

MATERIALS AND METHODS OF RESEARCH

The work carried out field studies including the study of morphometry, observation. A sociological survey was used, methods of statistical processing and mathematical analysis, geoinformation mapping were applied. The sociological survey allowed to give a subjective assessment of the availability of information and awareness of the population of the region on the use of mud of bitter-salty lakes. To assess the natural and recreational potential of bitter-salty sulfide lakes, a complex quality indicator calculated by the weighted average calculation method was used.

In the first stage, a retrospective analysis of the lake database was carried out and field studies were carried out, including morphometric studies and observation of lake sites. At the second stage, a sociological survey was conducted. The sociological survey provided a subjective assessment of the availability of information and awareness of the population of the region on the use of bitter-saline lake mud. Statistical methods and mathematical analysis were used to process the results.

At the third stage, the natural recreational potential of the bitter-saline lakes was assessed, a complex quality indicator calculated by the weighted average calculation method was used.

$$k = \sum k_i \sum a_i$$ (1) Fomin et al., 2020:89

where ki- the indicator of the i-that property of the object, points; ai — the weighting coefficient of the indicators ki, the fraction of one (∑ai = l). Based on this methodology and the available scientific materials and the results of a sociological survey, the weighting coefficients were calculated, which made it possible to assess the properties of bitter-salty sulfide lakes in order to calculate their potential (Table 1). Using the proposed methods, data characterizing the natural and recreational potential of bitter-salty sulfide lakes were studied. This made it possible to identify the most promising lakes for the development of ecological and health tourism in the territory of the North Kazakhstan region of the Republic of Kazakhstan (Semochkina, 2012; Baryshnikov et al., 2019; Dmitriyev et al., 2022; Niyazova et al., 2022). Geo-information mapping techniques have enabled the visualisation of the location of the region's bitter-salty lakes.

RESULTS AND THEIR DISCUSSION

Conducted field studies have revealed a number of features of natural and recreational resources of lakes. In particular, beaches on such water bodies are mostly undeveloped, devoid of infrastructure. Primary communications and high-quality highways have not been carried out to them. The paths to many lakes are impassable both by car and on foot (Ismagulova et al., 2020; Dmitriyev et al., 2021 a). To get a complete picture of the relevance of the problem, as well as to identify the awareness of the population, a sociological survey was used (Ignatov, 2011). The questionnaire consists of 10 questions, 493 respondents took part in the survey. The survey was conducted on an electronic resource.

The method used revealed that the population of the North Kazakhstan region more often visits foreign countries for health tourism. Respondents are not informed about the location and possibilities of bitter-salty lakes in the territory of the North Kazakhstan region. The results of the questionnaire on public awareness of bitter-salty lakes and mud treatment allowed us to draw a number of conclusions.

1. Respondents are aware of the possibility of using mud for medicinal purposes, mud treatment, which is confirmed by the results of 80% of the respondents positively.
2. At the same time, 41% of respondents do not know about the availability of local sulfide mud resources, which indicates poor awareness of the population.
3. The population knows little about the locations of bitter-salty lakes in the region, this was noted in 25% of respondents.
4. The possibility of using mud resources is confirmed by a high interest in mud treatment, which was revealed in 44% of respondents.

The analysis of the questionnaire allowed us to draw conclusions that many residents of the North Kazakhstan region are absolutely unaware of the balneological properties of mud of local origin. At the same time, it is noted that previous generations actively used the therapeutic mud of sulfide lakes. There are many such lakes in the region, but not all of them are suitable for organizing recreational areas. Nevertheless, reservoirs have been identified that can be used for recreational and balneological purposes. The properties of lakes for the use of their resource potential in the tourism industry are identified and evaluated. Thus, there is a need to inform the population on the dissemination of scientific information about the availability and possibilities of using mud treatment on the bitter-salty lakes of the North Kazakhstan region.

When studying the available information and scientific materials, bitter-salty lakes with an area of more than 100 hectares were identified, representing prospects for the development of recreation. It was found that there are practically no modern studies of the bitter-salty lakes of the North Kazakhstan region. In addition, a number of lakes have undergone morphological regressive changes as a result of natural and anthropogenic transformation. They have lost the necessary natural resource potential and have not been selected for evaluation.

The analysis of the resource potential of the bitter-salty lakes allowed us to identify the most affordable options. The identified lakes, one way or another, are located near settlements. Some of them are visited by the local population and visitors. At the same time, the resource potential of some of the lakes is little studied and unknown even to the local population. Therefore, there is a need for scientific substantiation of the natural and recreational potential of the bitter-salty lakes, work on the creation and implementation of a plan for the improvement of these territories. This is a necessary condition for the development of ecological and health tourism in the region (Dirin et al., 2017; Stoyashcheva, and Golovin, 2020).

There are a large number of bitter-salty lakes on the territory of the region. Based on the research and the conducted sociological survey, the properties and values of their qualitative characteristics were determined, the weighting coefficient of the indicator was revealed (ai). The assessment of the properties characterizing the resource potential of lakes and their ranking depending on the degree of significance was carried out. In order to identify the most promising lakes, criteria have been identified to assess their resource potential. An assessment of the level of natural and recreational potential of each lake was given, based on a modified complex quality indicator obtained by weighted average calculation, according to 8 criteria, according to a 5-point system (Table 1). Recreational properties of bitter-salty lakes are determined by a number of criteria. The criteria are assigned numbers. I – Ecological condition of the area. II – The nature of the landscape. III – The area of the water area. IV - Availability of highways. V - Availability of fresh water sources. VI – Structural features of the lake bottom. VII - The width of the available coastal area. VIII – Level of improvement.

The degree of significance of the properties of the bitter-salty lake is represented by the coefficient of their weight (ai). This allowed us to identify the most significant properties. The presence of fresh water sources – allows you to fulfill a number of conditions for conducting water hygiene procedures, the coefficient is 0.17. The width of the accessible coastal area allows you to place a larger amount of recreational infrastructure on the beach, the coefficient is 0.17. The coefficient is 0.15, belongs to the level of improvement. Landscaping affects the further development of recreational infrastructure in the coastal zone of the lake and in nearby settlements. 0.13 each have two properties.

This is the ecological state of the area, which determines the favorability of the ecological background of the recreational zone and the structural features of the bottom that affect the creation of water recreations. The volume of the resource depends on the width of the shallow water, on the thickness of the mud. Less significant properties that characterize the features and diversity of the landscape, as well as the presence of highways, increasing the level of accessibility and attractiveness. They have coefficients of 0.1 and 0.11, respectively. The area of the water area, as it turned out, has the smallest coefficient of 0.05, that is, it has the minimum value among all obtained.

Table 1. Assessment of the properties of the bitter-salty lake (Source: the authors' own calculations)

The property of the bitter-salty lake	Quantitative characteristic of the parameter of the object property indicator (ki), point					The weighting coefficient of the indicator (ai)
	1	2	3	4	5	
I	Availability of industrial objects	The presence of a network of rural settlements, the presence of dump sites	Large area of agricultural land	The predominance of protected natural areas	A large number of unique protected areas	0.13
II	Insufficient expressiveness of the terrain	Monotonous terrain	Expressive terrain	Picturesque views of the terrain	Unique scenic views of the terrain	0.1
III	25-30 km²	30-35 km²	35-40 km²	40-45 km²	More than 45 km²	0.05
IV	Lack of roads with good coverage	Insufficient development of the transport network	Availability of roads of regional significance	Availability of roads of national significance	Good development of the transport network	0.11
V	Complete absence of unleavened water	Availability of natural sources of unleavened water	Use of local groundwater	Availability of unleavened industrial water sources	Availability of sewer communications	0.17
VI	Gentle shallow water with a width of more than 100 m.	Shallow water turning into a steep slope	Heterogeneous bottom relief, alternation of shallow water and depth	Shallow water gradually turning into depth	Uniform comfortable lowering of the depth	0.13
VII	Absence of a coastal area	The coastal area with heterogeneous soil has significant irregularities. Weeds	The coastal area is less than 25 m. The landscape is heterogeneous and has minor irregularities. Weeds	The coastal area is less than 25 m. The landscape is uniform. Weeds	The coastal area is more than 25 m. The landscape is uniform. It has no weeds.	0.17
VIII	Minor improvements	Beach improvement	Availability of food outlets	Availability of light campsites	Capital structures	0.15

The analysis of Table 1 allows us to conclude that among the main properties characterizing the recreational facilities of the region, much attention is paid to the availability of fresh water sources and the width of the accessible coastal area. The degree of improvement of the water body is also important. The area of the water area according to the results of the study is a secondary property that characterizes the bitter-salty lakes of the studied region.

Based on the information network analysis, the most promising reservoirs are identified on the basis of the administrative-territorial division of the North Kazakhstan region ***. Among them:

Lakes of Zhambyl district – Gor'ko-Solyonoe, Gor'koe Mirnoe, Gor'koe Presnovskoe, Solyonoe.

Lakes of the Kyzylzhar district: Akush, Siverga.

Lakes of Magzhan Zhumabayev district: Kel'tesor, Solyonoe.

Lakes of Mamlyut district: Mengiser, Stanovoe.

Lakes of Timiryazev district: Alpash.

Lakes of Tayynsha district: Zhamantuz (T), Kalibek, Kishkenesor.

Lakes of Ualikhanov district: Zhamantuz (U), Siletyteniz, Teke.

Lakes of Akzhar district: Kishikaroj, Ul'kenkaroj.

Lakes of Yesil district – Zhamankol'.

I would like to note that most of the bitter-salty lakes are located on the territory of Zhambyl district. This is explained by the geological past of the territory of the studied region (Vodopyanova, 1985; Beletskaya, 1987).

The analysis of a comprehensive assessment of the recreational potential of bitter-salty lakes allows us to identify the most significant and promising lakes for further research and use as balneological and recreational resources (Table 2). This analysis, combined with the study of accessible bitter-salty lakes, is necessary for the possible development of ecological and health tourism in the territory of the North Kazakhstan region.

The analysis of Table 2 allows us to conclude that all the bitter-salty lakes of the North Kazakhstan region have recreational potential. Lakes with a coefficient of recreational potential from 1 to 2 predominate. A smaller coefficient - 1, received lakes Siverga (Kyzylzhar district), Solyonoe (Magzhan Zhumabayev district). The highest recreational potential was noted at the lakes: Mengiser and Stanovoe (Mamlyut district) 3.43 and 2.91, respectively. These lakes are widely known to the population not only of the North Kazakhstan region, but also beyond its borders, including the near abroad. In particular, Lake Mengiser is one of the visiting cards of ecological and balneological tourism of the studied region.

Table 2. Comprehensive assessment of the recreational potential of the bitter-salty lakes of the North Kazakhstan region (Source: the authors' own calculations)

№	Lakes	Administrative regions ***	I	II	III	IV	V	VI	VII	VIII	Result k, with (ai)
1	Gor'ko-Solyonoe	Zhambyl district	1	1	2	2	1	1	2	1	1.33
2	Gor'koe Mirnoe	Zhambyl district	3	1	2	3	2	2	2	2	2.135
3	Gor'koe Presnovskoe	Zhambyl district	4	1	1	3	2	2	2	1	2.06
4	Solyonoe (Z)	Zhambyl district	1	1	1	1	1	2	2	1	1.3
5	Akush	Kyzylzhar district	2	1	1	2	2	1	2	1	1.57
6	Siverga	Kyzylzhar district	1	1	1	1	1	1	1	1	1
7	Kel'tesor	Magzhan Zhumabayev district	2	1	2	2	1	1	1	1	1.285
8	Solyonoe (M)	Magzhan Zhumabayev district	1	1	1	1	1	1	1	1	1
9	Mengiser	Mamlyut district	3	3	3	3	3	5	4	3	3.43
10	Stanovoe	Mamlyut district	3	2	1	3	2	5	4	2	2.91
11	Alpash	Timiryazev district	1	1	2	1	1	1	2	1	1.22
12	Zhamantuz (T)	Tayynsha district	2	2	2	3	2	2	2	1	1.96
13	Kishkenesor	Tayynsha district	2	2	2	3	2	2	2	1	1.96
14	Kalibek	Tayynsha district	2	2	5	3	2	3	2	1	2.24
15	Zhamantuz (U)	Ualikhanov district	2	2	1	3	2	3	3	1	2.21
16	Siletyteniz	Ualikhanov district	1	2	5	2	1	4	2	1	1.97
17	Teke	Ualikhanov district	1	2	4	3	1	3	2	1	1.9
18	Kishikaroj	Akzhar district	2	2	4	3	1	2	2	1	1.895
19	Ul'kenkaroj	Akzhar district	2	2	4	3	1	2	2	1	1.895
20	Zhamankol'	Yesil district	3	2	2	3	1	2	2	1	1.92

A comprehensive assessment of the recreational potential of the bitter-salty lakes of the North Kazakhstan region made it possible to graphically reflect the obtained coefficient and rank the lakes (Figure 1).

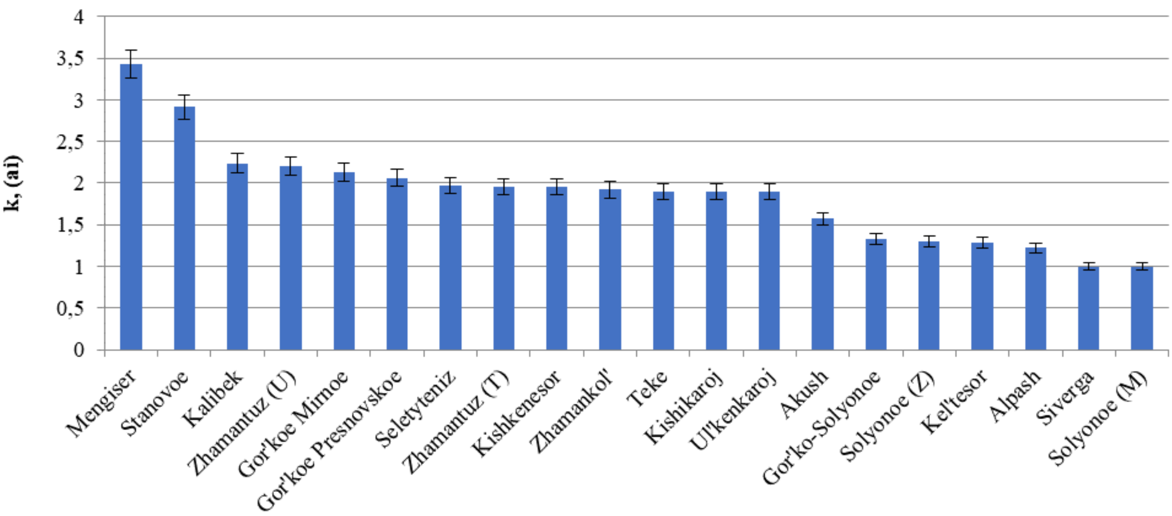


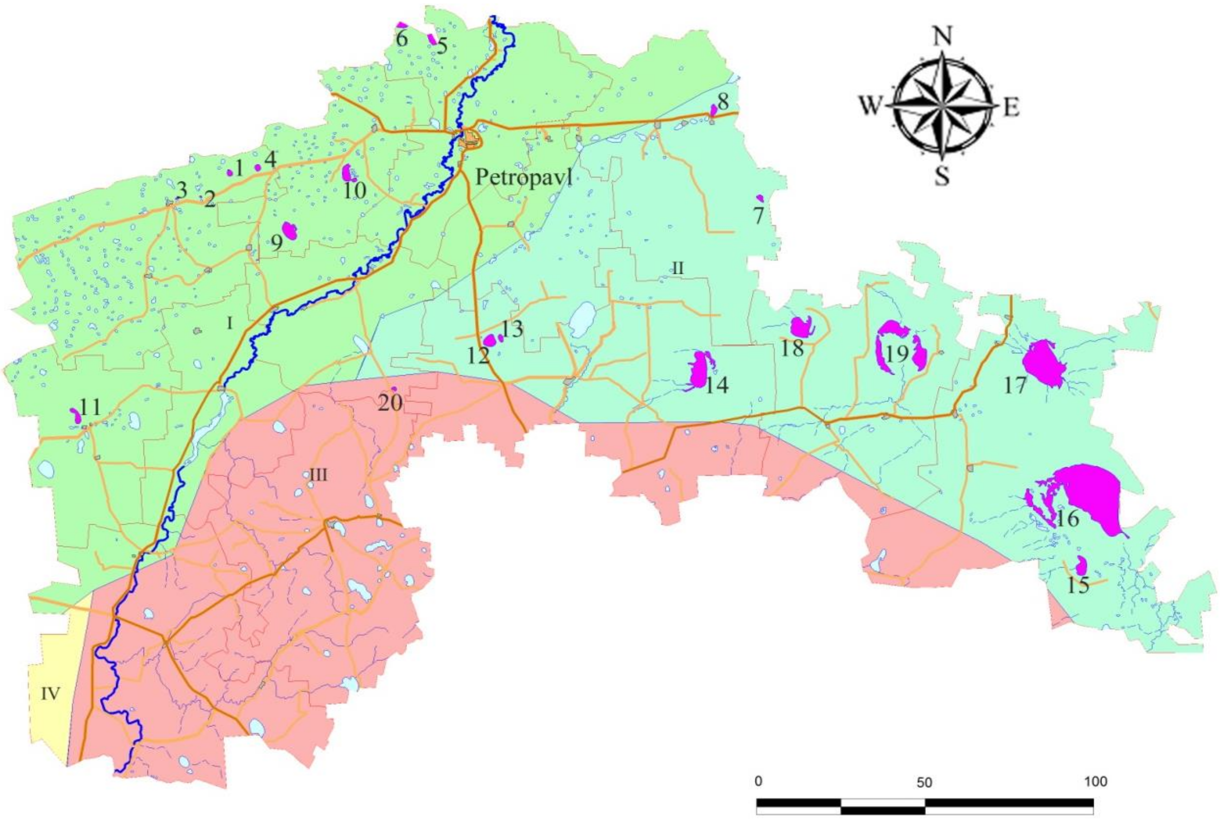
Figure 1. The level of recreational potential of the bitter-salty lakes of the North Kazakhstan region (k), taking into account the margin of error with relative errors (Source: based on the authors' calculations)

Based on the analysis of Figure 1, it can be concluded that the resource potential of most of the bitter-salty lakes of the North Kazakhstan region is quite high. This will significantly accelerate the development of ecological and health tourism. The natural and recreational potential of the lakes will ensure the interest of interested persons and the population, will contribute to the growth of tourist facilities, infrastructure development.

A feature characteristic of almost all lakes is the lack of a sufficiently developed infrastructure. At the same time, the presence of highways is noted, which increases the level of accessibility and attractiveness (Kazakhstan: Roads quality, 2021). In recent years, the quality of roads has been improving, this ensures the traffic flow from neighboring regions and from the regional center, which is a kind of transport hub (Dmitriyev et al., 2021 a). The results of the study made it possible to create a cartographic scheme that visually reflects the spatial placement of bitter-salty lakes. The development of the transport network in the territory of the North Kazakhstan region is one of the factors confirming the resource potential of the lakes, Figure 2. It is noted that the bitter-salty lakes are confined to the steppe zones and plains of Northern Kazakhstan.

The analysis of Figure 2 allows us to conclude that the majority of bitter-salty lakes are located on the territory of Zhambyl, Tayynsha, Ualikhanov districts. Lakes of Mamlut and Kyzylzhar districts have prospects for the development of inbound health tourism. A number of administrative districts of the region on their territory do not have bitter-salty lakes with sufficient recreational potential. These are the districts of Akkayyn, Yesil, Ayyrtau, Shal akyn.

This figure illustrates a well-branched road network, which is one of the main criteria for the development of the tourism industry (Kazakhstan: Roads quality, 2021) The location of most of the identified bitter-salt lakes in the region is confined to the accumulative plains of the Priesil'e, accumulative and stratal denudation plains. This is due to the geological past of the territory of the region under study (Vodopyanova, 1985; Beletskaya, 1987). As a result of the study, the lakes that are most known to the population of the region, with the highest natural and recreational potential, were identified. This indicates their attractiveness and possible prospects for development as objects for ecological, health and balneological tourism. In addition, these lakes will be interesting as a base of practices for the formation of environmental education among students of schools, colleges, universities (Dmitriyev et al., 2021a; Dmitriyev et al., 2021b; Dmitriyev et al., 2022).



Legend

- Bitter-salty lakes
1 Gor'ko-Solyonoe, Zhambyl district
2 Gor'koe Mirnoe, Zhambyl district
3 Gor'koe Presnovskoe, Zhambyl district
4 Solyonoe, Zhambyl district
5 Akush, Kyzylzhar district
6 Siverga, Kyzylzhar district
7 Kel'tesor, Magzhan Zhumabayev district
8 Solyonoe, Magzhan Zhumabayev district
9 Mengiser, Mamlyut district
10 Stanovoe, Mamlyut district
11 Alpash, Timiryazev district
12 Zhamantuz (T), Tayynsha district
13 Kishkenesor, Tayynsha district
14 Kalibek, Tayynsha district
15 Zhamantuz (U), Ualikhanov district
16 Siletyteniz, Ualikhanov district
17 Teke, Ualikhanov district
18 Kishikaroj, Akzhar district
19 Ul'kenkaroj, Akzhar district
20 Zhamankol', Yesil district

I Accumulative plains of Priesilla
II Accumulative and reservoir denudation plains
III The basement plains of the Kokshetau upland (small hills, low mountains)
IV Canteens and stepped denudation plateaus
Roads of national significance
Roads of regional significance

Figure 2. Layout of the allocated bitter-salty lakes on the territory of the region (Source: own elaboration)

CONCLUSION

On the territory of the North Kazakhstan region there are a large number of bitter-salty sulfide lakes with a sufficiently high natural and recreational potential. Therapeutic mud of bitter-salty lakes is one of the best natural remedies used for preventive and therapeutic purposes. Mud has high rehabilitation properties. There is a huge range of their applications: treatment of skin diseases, diseases of the nervous and musculoskeletal systems, treatment of respiratory diseases, cardiovascular system, etc. It is possible to use mud as a natural balneological resource directly in recreational conditions, and in medical institutions (Vojnova et al., 2015; Vladimirskij and Fil'cagina, 2018; Cepilov et al., 2018; Akhmedenov, 2020; Tokpanov et al., 2021). The results of a sociological survey of the population confirm the relevance and necessity of conducting comprehensive studies of promising bitter-salty lakes.

The conducted research allowed to identify and evaluate the resource potential of the lakes of the studied region. It was revealed that most of the bitter-salty lakes of the North Kazakhstan region are not landscaped, have not been investigated, and have no infrastructure. In this regard, it is necessary to study the natural and recreational potential, as well as to create conditions for recreation and treatment on the lakes of the North Kazakhstan region. The creation of recreational areas will be an impetus for the development of health and balneological tourism in the region. This will attract investment and increase the number of jobs employed in the tourism industry. Also, it will create interest in the nature management of lakes, which can lead to even more intensive development of recreational areas. The development of the territories of the bitter-salty lakes will contribute to the development of both domestic and international ecological and health tourism.

It was revealed that a number of bitter-salty lakes are characterized by sufficient study, are popular with the population of the city and the region, as well as with tourists. This is due to the unique qualitative and quantitative indicators of mud and waters of bitter-salty lakes, accessibility, development of the road network. The most promising lakes, according to the results of the conducted research, are such lakes as Mengiser and Stanovoe of the Mamlyut district of the North Kazakhstan region. They are unique not only as recreational, balneological objects, but also as objects for educational tourism. The identified bitter-salty lakes will contribute to further scientific substantiation of their use for the development of the tourism industry in the territory of the North Kazakhstan region.

The research was funded by the Committee on Science of the Ministry of Science and Higher Education of the Republic of Kazakhstan within the framework of a scientific project (Grant No. AP14869273) on the topic "Development of innovative methods for obtaining environmentally friendly fertilizers based on the rational use of organomineral accumulations of lakes", and on the basis of a contract for the implementation of scientific, scientific and technical projects under grant financing No. 236/30-22-24 from 18.10.2022.

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Article history: Received: 30.03.2023 Revised: 02.05.2023 Accepted: 19.06.2023 Available online: 18.07.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.875-884
DOI 10.30892/gtg.49304-1088

ANNOUNCEMENT OF THE SUSTAINABLE DEVELOPMENT REPORT OF VIETNAMESE HOTEL ENTERPRISES

Tuan Anh LE
Faculty of Accounting, Duy Tan University, Da Nang City, Vietnam, e-mail: latuan0507@gmail.com

Tram Nguyen Thi HUYEN*
Faculty of Economics, HCMC University of Technology and Education, Ho Chi Minh City, Vietnam, e-mail: tramnth@hcmute.edu.vn

Quyen Ngo Thi HANH
Faculty of Foreign Languages, Ho Chi Minh University of Banking, Ho Chi Minh City, Vietnam, e-mail: ngohanhquyen2020@gmail.com

Kien Cao PHUOC
Department of Planning and Finance, Thu Duc College of Technology, Ho Chi Minh City, Vietnam, e-mail: kiencp@tdc.edu.vn

Citation: Le, T.A., Huyen, T.N.T., Hanh, Q.N.T., & Phuoc, K.C. (2023). ANNOUNCEMENT OF THE SUSTAINABLE DEVELOPMENT REPORT OF VIETNAMESE HOTEL ENTERPRISES. *GeoJournal of Tourism and Geosites*, 49(3), 875–884. https://doi.org/10.30892/gtg.49304-1088

Abstract: The purpose of this study is to examine the factors affecting the publication of sustainability reports from the perspective of managers at 4-5 star hotels in Vietnam. Issues of corporate size, profitability, legal regulation, corporate governance and technology of the company were mentioned as factors that may affect the publication of the report on sustainable development. The author has synthesized the relevant background theory as well as previous outstanding studies on the issue of publishing sustainable development reports. SPSS 20 software was used to test the relationship between the factors affecting the publication of the Sustainable Development Report based on the manager's point of view. The results of the study show that the factors of business size, profitability, and legal regulations all affect the publication of sustainable development reports at 4-5 star hotels in Vietnam. A new finding of this study is that the two factors of corporate governance and the company's technology combine into a public governance factor based on technology and it is the technology that has the strongest influence on the publication of the Sustainable Development Report. The study once again confirms the relationship between the factors affecting the publication of the Sustainable Development Report and is a document to help researchers understand better in the research context in Vietnam, one of the leading countries in the world developing countries and have limited access to and use of secondary data.

Key words: hotel, 4-5 stars, announcement, sustainable development report, manager's point of view

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INTRODUCTION

In developing countries, there is ample research evidence that they are lagging behind in reporting on sustainable development. In commenting on trends in sustainable development reporting from 1996 to 2005, Milne and Gray (2007) conclude that sustainable development reporting is a phenomenon in developing countries such as China, Egypt, Bangladesh, Kenya and Chile. GRI (2016) notes that sustainable development reporting has increased rapidly in developing countries, but this is mainly related to countries in Asia, a trend that has received less attention than in the Americas. Latin, Caribbean, and African. However, Wokeck (2019) argues that the gap is still large, because access to issues related to sustainable development reporting is limited to large enterprises in developing countries while this rate is slower in many other developing countries and especially less developed countries. Challenges for sustainable development reporting in developing countries include resource constraints and capacity gaps, including lack of strategic direction from management, limited data collection, capacity writing internal reports, as well as external support from service providers and guidance bodies with expertise in sustainable development reporting (De Villiers, 2003; Belal and Cooper, 2011; Matta et al., 2019). The author realizes that companies doing business in the hotel sector need to soon publish sustainable development reports to meet the development in the current period.

Much scholarly effort has been made to further clarify the determinants of sustainable development reporting in developing countries (Belal and Momin, 2009; Fifka, 2013; Dienes et al., 2016; Hahn and Kuhnen, 2013; Ali et al., 2017). Such research efforts have used either a quantitative approach (Liu and Anbumozhi, 2009; Baje et al., 2020) or a qualitative approach (De Villiers, 2003; Matta et al., 2019). Quantitative studies mainly perform content analysis of most annual reports, on the basis of indexes published on the Sustainable Development Report to determine the volume and extent of the publication of the Sustainable Development Report. Khan et al., 2013; Wuttichindanon, 2017;

* Corresponding author

Mudiyanselage, 2018) and used determinants based on secondary data such as firm size as a proxy for legitimacy. In contrast, qualitative studies, using questionnaires and interviews, directly explore managers' motivations for sustainable development reporting (Belal and Owen, 2007; Joudeh et al., 2018). Despite academic and practical efforts, challenges in sustainable development reporting still exist and developing countries continue to lag behind developed countries in sustainable development reporting. According to the Vietnam National Administration of Tourism, by the end of June 2022, the whole country has 2,415 international travel businesses and 1,060 domestic travel businesses.

Vietnam currently has about 33,330 tourist accommodation establishments with 667,000 rooms, including 215 5-star hotels with 72,000 rooms, 334 4-star hotels with 45,000 rooms. According to the Vietnam National Administration of Tourism, from the beginning of 2022 until now, Vietnam has continuously been in the group of destinations with the highest growth in the world, with a growth rate of 50%-75%. Search volume for tourist accommodation establishments in Vietnam in July 2022 reached 100 points, 5.9 times higher than at the beginning of March 2022 (17 points). Compared to the same period in 2021, the number of searches from international markets about Vietnam's tourism in July 2022 increased by more than 1,200%. The top 10 most searched countries for tourism in Vietnam are the US, Australia, Singapore, India, Japan, Korea, UK, Malaysia, Germany and Thailand.

Therefore, a critical analysis and recommendation is needed on how both academic and practical research can contribute to effectively addressing the challenges of sustainable development reporting in developing countries. The author finds that the approach based on the manager's point of view will partly overcome the limitations in Vietnam's hotel businesses.

LITERATURE REVIEW AND RESEARCH HYPOTHESES

Jones et al. (2016) stated that the hotel industry is increasingly interested in sustainability reporting. However, through the research results, Jones et al. (2016) made some observations: business owners will publish sustainability reports if required by management agencies; Most of the published information related to sustainability reports is unreliable because the source is not transparent and there are no specific guidelines for the publication of sustainability reports in the guest business hotel. Pérez and Del Bosque (2014) conducted a study on the relationship between sustainability reporting and stakeholder management theory in 170 hotel companies in Spain. Through finding out more content related to sustainable development at these hotels. The finding was made that there is a need to develop the provision of information on sustainability reports based on stakeholder management theory. Stakeholders all have a need to capture this information, so it is important to comply with the principles of standard disclosure and ensure accuracy. Medrado and Jackson (2016) conducted a study on the disclosure of non-financial information for hotel companies, the results showed that the disclosure of information on sustainability reports is still in its infancy. Pommier and Engel (2021) further extended this study to a broader geographic range and include more subjects, but the results were unchanged. Jones et al. (2017) considered the challenges facing the sustainability goals of business enterprises in the hotel and tourism industry. Based on the Sustainable Development Goals set by the United Nations published in 2015, the article has set out 17 strategic goals that enterprises in the industry need to achieve. The results show that, to meet these sustainable development goals, business owners must be the pioneers in strategic planning, building a sustainable development information reporting process to ensure benefits. harmonization of stakeholders. However, there is concern that sustainable development will be dominated by stable economic growth in the hotel and tourism business. Halmi and Poldrugovac (2022) conducted a study on the degree of harmonization of environmental and social information on sustainability reporting in the hotel industry. The results show that the harmonization of information when publishing will be more appropriate if there are standard and oriented guidelines for the implementation of sustainability reports in the hotel industry. Jankovic and Krivacic (2014) conducted an analysis of the level of assurance in providing information on sustainability reports of hotel businesses. The results show that the level of provision of sustainability reporting information in the hotel sector is lower than in other industries based on GRI standard information. From there, recommendations are made to improve the reliability of information on sustainability reports of hotel businesses.

An overview study on the perception of business leaders on the issue of sustainable development reporting in developing countries was presented by Tauringana (2020). This study takes an approach using a review of research papers based on the management's perception of the determinants of the Sustainable Development Report. The impact of GRI's efforts in increasing the adoption of sustainable development reporting is made possible through both theoretical research and descriptive analysis of data obtained from the GRI database between 2014 and 2019 related to involving 107 developing countries. Tauringana (2020) calls for the application of management perception research based on critical analysis of both management perception on the determinants of sustainable development reporting research and assessing the impact of GRI efforts to increase quality and quantity of sustainable development reports in developing countries. This is also a study that supports the assessment of managers' perceptions of the application and publication of the Sustainable Development Report instead of the use of quantitative and secondary data to assess the problem. The research results indicate that factors such as training, legislation, issuance of guidelines, stakeholder pressure, awareness campaigns, market and public pressure were identified as some of the factors that in the publication of the sustainable development report. Assessment of the impact of GRI efforts shows that they have had a limited impact on increasing publication of sustainable development reports in developing countries. Necessary research to apply management perception research on the issue of sustainable development report publication in developing countries is identified as urgent.

Through the typical studies summarized by the author in chronological order and the views on the publication of sustainable development reports, it can be seen that more and more studies demonstrate the close connection between the issue of sustainable development and the design of sustainable development. accounting in enterprises in particular and the economy in general, but also gradually formed the views of managers who take advantage of the information provided on the sustainable development report to distort information to serve personal interests. as well as your business. From the initial preliminary research on sustainable development in terms of including 3 factors (Economics, society and environment) to the perspective with the tendency to expand 5 factors (Economics, governance, society, ethics and the environment). Moreover, the trend of researching the perceptions of managers on the issue of publishing sustainable development reports has been agreed by many researchers as well as managers at enterprises. The findings of Tauringana (2020) contribute to the call to make academic research more relevant to policy formulation. In particular, the research proposal needed to inform the application of evidence-based practice research is perceived by regulators to address the challenges of sustainable development reporting in developing countries. In addition to the trend of using secondary data to indirectly measure the influence of factors on the publication of sustainable development reports, there have been studies that have proposed methods of investigation through in-depth interview techniques with respondents that company managers as well as stakeholders to explore the factors that really influence the publication of sustainable development reports (De Villiers, 1999; De Villiers, 2003; Mitchell and Hill, 2009; Belal and Momin,2009); Tauringana (2020), in particular there are studies showing the necessity of this technique for developing countries (Tauringana, 2020).

Agency theory

Agency theory can explain why managers voluntarily disclose information (Chow and Wong-Boren, 1987; Cooke, 1989; Firth, 1980). Managers, knowing that shareholders will seek to control their behavior through association and monitoring activities, may have an incentive to try to convince shareholders that they are acting in the best possible way. Prioritization and disclosure is one means of achieving this. Therefore, the manager's point of view plays a very important role in the publicity and transparency of information on the Sustainable Development Report. Agency theory predicts that costs will vary with different firm characteristics, such as firm size, operating leverage, and listing status (Ball and Foster, 1982). For example, agency theory would suggest that highly leveraged firms disclose more information to satisfy the needs of creditors and trustees of investments in the company. Through greater disclosure, companies try to reduce the cost of capital. This argument can also be related to firm size if larger firms use multiple sources of debt, as it provides a tax advantage (Ahmed and Courtis, 1999). Agency theory suggests that various firm characteristics, such as firm size, assets to total investment, and liabilities, are positively correlated with voluntary disclosure. It is one theory that could explain why we use these variables to explain disclosure on the Sustainable Development Report, suggesting that a company would only disclose this type of information when it considers that it is in the best interests of the company to disclose this information of disclosure outweighs its costs.

Signaling Theory

Signaling theory allows the company to engage with stakeholders more effectively and interpret from management's favor to achieve all five EGSEE dimensions of sustainability and investor response for the disclosure of information on sustained performance (Grinblatt and Hwang, 1989). Signaling theory suggests that firms can attempt to signal "good news" through the use of mandatory financial reporting and voluntary reporting on CSR/ESG unsustainable performance. However, the expected association between a company's non-financial CSR/ESG sustainability reporting and the use of these signals through the required financial statements is not really possible. Healy and Palepu (2001) argue that voluntary reporting by companies can serve as a supplement to expected future financial information of a positive nature. Alternatively, these signaling mechanisms could be alternative, suggesting a negative relationship between the probability of voluntary disclosure and the use of this information (Grinblatt and Hwang, 1989).

However, businesses with good sustainability performance are motivated to signal their high sustainability performance through voluntary CSR/ESG sustainability disclosure (Lys et al., 2015). Information signaling theory shows that firms with highly sustainable financial and non-financial activities tend to disclose higher performance and produce CSR/ESG sustainability reports in addition to reporting. required financial statements. The signaling theory holds that asymmetric information between firms and investors leads to adverse investor selection. To avoid this situation, businesses voluntarily disclose information and give positive signals to the market. According to this theory, the larger the firm, the greater the information imbalance (Guthrie and Parker, 1989). In addition, companies with higher profits will tend to disclose more information to provide positive signals to investors about growth prospects, which will positively affect their stock prices enterprise. The signaling theory partly explains that the larger the enterprise size, the more attention should be paid to the publication of the Sustainable Development Report.

Legitimacy Theory

The next theory used to explain that enterprises voluntarily disclose information related to sustainable development reports is the legalization theory. Through the use of these resources by enterprises, their products can be products of good quality, which can bring benefits to enterprises and consumers; At the same time, the results of the process of using resources are wastes that affect the environment. Enterprises are only allowed to operate and survive when the expected level of benefits to society is higher than the costs that it incurs (Mathews, 1993). That enterprise will have difficulty in using those resources to continue operating if the enterprise violates social agreements. Enterprises are forced to suspend operations on the basis of compliance with the law, or are restricted from providing labor resources; or simply, consumers will reduce the need to use the products and services provided by that enterprise once the enterprise violates the expectations set by society, this leads to the enterprise at a disadvantage. The theory of legitimacy defined by Dowling and Pfeffer (1975) states that a company can exist when its value system matches the value system of the larger social system in which it is located. Inheriting and developing the theory of legalization, Guthrie and Parker (1989) argue that the theory of legalization is related to the power of society. They believe that businesses doing business in society must sign a social contract that managers agree to perform. The terms of this contract can be specified in legal terms or not, depending on the wishes of the social community.

Stakeholder Theory

The theory of stakeholders can partly be used to explain the case of enterprises voluntarily disclosing information related to the Sustainable Development Report. Stakeholders here are said to be an individual or group of people, who have an influence on the business objectives of the enterprise or are influenced by that goal of the enterprise. Neu et al. (1998) have shown that enterprises comply with full and transparent disclosure of information about the impact of business activities on the environment and society at the request of shareholders (business holders). and law enforcement rather than because of pressure from environmental activists. This partly shows that the characteristics of the business lines of petroleum trading companies play a role in the publication of sustainable development reports at these companies. Also according to the study of Islam and Deegan (2008), enterprises operating in the garment industry of Bangladesh had to comply with social disclosure requirements at the request of European customers if they wanted customers to continue using the product. Their products, namely to change working conditions for production workers at factories,not to use child labor in garment production activities. These are typical examples when Enterprises that want to survive and develop must comply with the principles set forth by the stakeholders.

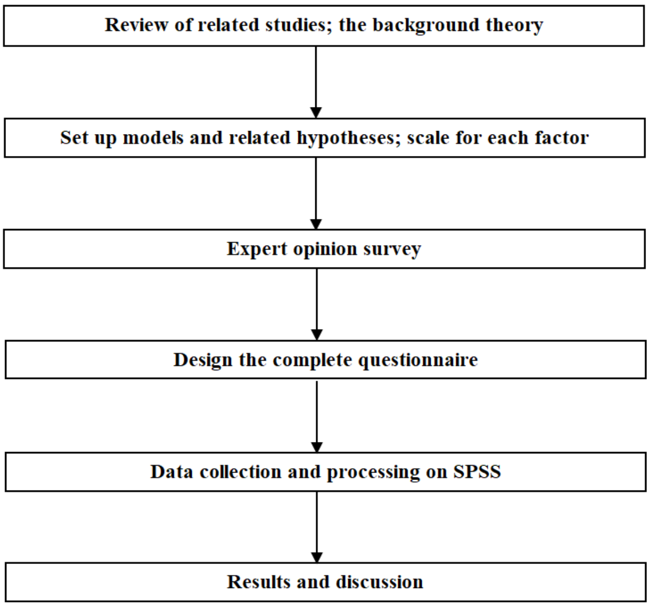

Figure 1. Research process (Source: suggested by the author)

H1: Firm size (SIZE) affects (+) the disclosure of sustainable development information of hotel businesses in Vietnam.

H2: Profitability (PROF) affects (+) the disclosure of sustainable development information of hotel businesses in Vietnam.

H3: Legal regulations (LEGA) affect (+) the disclosure of sustainable development information of hotel businesses in Vietnam.

H4: Company administration (ADMI) affects (+) the disclosure of sustainable development information of hotel businesses in Vietnam.

H5: Company technology (TECH) affects (+) the disclosure of sustainable development information of hotel businesses in Vietnam.

METHODOLOGY

In order to achieve the stated research objectives, the mixed research method was used by the author in the study. In the qualitative research method, the author chooses the case method with in-depth expert interview technique as the main method combined with the synthesis of research documents from which to build a theoretical model; Besides, through the use of quantitative methods, in order to confirm the research results within the research scope. This is a mixed study design. This is an inevitable trend that is supported by researchers, because when using a mixed method including qualitative research and quantitative research, it will complement each other because each method has limitations. own advantages and disadvantages. Using the mixed method will avoid more limited research results.

Qualitative research in the form of document research, reference and selection of relevant typical studies, followed by setting up a research model and finally designing a preliminary survey questionnaire. After determining the research objectives are the factors affecting the publication of indicators related to sustainable development in hotel businesses based on the manager's point of view. To accomplish this goal, the author first summarizes previous theories and research related to the establishment and disclosure of information related to sustainable development. The main data sources for use are scientific articles, research works, theses, master's theses, theses published in prestigious international and Vietnamese scientific journals, sets of indicators, institutional framework related to sustainable development in the world and in Vietnam. From the results of this step, the author identifies the factors that affect the establishment and disclosure of indicators related to sustainable development. These factors may not be suitable for specific characteristics in the research context and the research subjects are hotel businesses in Vietnam. Therefore, the author needs to take a next step to consider the addition or deletion of factors through discussion with experts to ensure that the factors affecting the establishment and disclosure of information are related to each other. related to sustainable development in accordance with the characteristics of hotel businesses in Vietnam. Formal research, assessing the impact of factors. After the above preliminary survey, the entire scale is adjusted. At this step, the author can remove some observed variables if they are not suitable, or can also remove the measurement variables for the research concepts, but each research concept will not guarantee the measurement if there are only 2 observed variables. The result of this process will be the final completed survey questionnaire

The official survey sheet continues to be sent to managers from the head of department and above, chief accountant, board of directors, chairman of the members' council, related to data collection and report making and provision of information. provide information related to sustainable development of hotel businesses in Vietnam. The survey period is from May to October 2022. The number of questionnaires sent to the units is 300 votes. After receiving the survey sheets from the surveyed subjects, the data is also cleaned on the Excel spreadsheet (removing faulty and incorrect answer sheets). The cleaned data will be entered into the SPSS 20 software to conduct the official scale evaluation. The author conducts regression testing to assess whether the hypotheses in the model are accepted or rejected on the basis of 215 research samples. The obtained results are a model to evaluate the impact of factors affecting information disclosure on related indicators on sustainable development reports in hotel businesses in Vietnam.

Table 1. Reliability according to Cronbach's Alpha coefficient (Resource: The authors collected)

Factor	Abbreviation	Number of observations	Observation is eliminated	Cronbach'sAlpha
Firm size	SIZE	4		0.822
Profitability	PROF	4	PROF5	0.818
Legal regulations	LEGA	3	LEGA4,LEGA5	0.799
Company administration	ADMI	3	ADMI4	0.808
Company technology	TECH	2	TECH1, TECH3	0.772
Disclosure of sustainable development information	DISC	3		0.852

Table 2. EFA factor exploratory analysis of independent factors (Resource: The authors collected)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.836
Bartlett's Test of Sphericity	Approx. Chi-Square	1421,379
	df	136
	Sig.	.000

Structure Matrix	Component			
	1	2	3	4
SIZE3	.808			
SIZE1	.806			
SIZE2	.780			
SIZE4	.772			
PROF4		.848		
PROF2		.796		
PROF3		.786		
PROF1		.748		
ADTE2			.829	
ADTE1			.817	
ADTE3			.815	
ADTE4			.611	
ADTE5			.591	
LEGA1				.842
LEGA3				.835
LEGA2				.812

Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5.106	30.038	30.038	5.106	30.038	30.038	3.668
2	2.354	13.849	43.886	2.354	13.849	43.886	3.507
3	1.804	10.613	54.499	1.804	10.613	54.499	3.758
4	1.587	9.336	63.835	1.587	9.336	63.835	3.280
5	.851	5.007	68.842				
6	.663	3.897	72.739				
7	.602	3.540	76.279				
8	.537	3.160	79.439				
9	.522	3.068	82.507				
10	.464	2.729	85.236				
11	.435	2.557	87.793				
12	.425	2.498	90.292				
13	.354	2.083	94.674				
14	.328	1.932	96.606				
15	.299	1.759	98.365				
16	.278	1.635	100.000				

Extraction Method: Principal Component Analysis

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance

DISCUSSIONS AND RESULT

Based on the results from data processing on SPSS 20 software, it shows that 136 respondents are male and 79 respondents are female. The number of respondents mainly with university degree is 147 people and post-graduate is 68 people. Checking the reliability of this factor scale by Cronbach Alpha coefficient, the results are as shown in Table 1. Most of the total correlation coefficients of all observed variables are greater than 0.3 and the Cronbach Alpha coefficients of all the observed variables are greater than 0.3. All observed variables are greater than 0.6, thereby ensuring the reliability of the scale.

Exploratory factor analysis of independent variables

The scale is measured by 22 observed variables, after checking the reliability level by Cronbach's Alpha, the group found that there are 6 variables that do not guarantee reliability, so these variables are excluded from the scale. Through 2 times of processing, the results are obtained as in Table 2, in which corporate governance and company technology are grouped into 1 variable and renamed as Technology-Based Corporate Governance (ADTE). Based on Table 2, the KMO value is 0.836 > 0.5 and the Sig value of Bartlett's test is 0.000 < 0.05, showing that the variables are correlated with each other, so the model is suitable for inclusion in exploratory factor analysis.

The extracted factors all have Eigenvalue values greater than 1 and the breakpoint when extracting factors at the 4th factor has an Eigenvalue of 1.587 > 1. The sum of extracted variances of 4 factors is 63.835 % > 50% of this. shows the ability to use these 4 components to explain 63.835% of the variation of the observed variables. Based on the factor rotation matrix when running EFA, the remaining 16 variables are extracted into 4 factors.

Exploratory factor analysis of dependent variable

The results of exploratory factor analysis EFA with KMO equal to 0.729 > 0.5 and Bartlett's test has 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 influence on the publication of sustainable development reports into a key factor with an Eigenvalue of 2.315 and a total variance of 77.177% >50%.

Table 3. EFA factor exploratory analysis of factors (Resource: The authors collected)

KMO and Bartlett's Test			**Communalities**		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.729		Initial	Extraction
Bartlett's Test of Sphericity	Approx. Chi-Square	278,980	DISC1	1,000	.797
	df	3	DISC2	1,000	.749
	Sig.	.000	DISC3	1,000	.769
			Extraction Method: Principal Component Analysis		

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.315	77.177	77.177	2.315	77.177	77.177
2	.377	12.580	89.757			
3	.307	10.243	100.000			
Extraction Method: Principal Component Analysis						

Rebuild the scale after testing EFA

According to the Rotation Factor Matrix, the model has formed 4 new factors (Component). Summarize each new factor (scale). There are 03 factors that are quite similar to the original hypothetical scale and 1 new factor is the technology-based corporate governance factor, which is newly formed on the basis of the company's corporate governance and technology factors. The author rebuilds a new scale consisting of 4 groups of new factors as follows:

SIZE: Firm size
PROF: Profitability
LEGA: Legal Regulations
ADTE: Corporate governance based on technology factors
And the dependent factor is the publication of the Sustainable Development Report (DISC).

The results of regression model analysis

After extracting the factors from the exploratory factor analysis, we conduct regression analysis to determine the factors affecting the publication of the Sustainable Development Report. Regression analysis will be performed with 4 independent factors: SIZE, PROF, LEGA and ADTE; The dependent variable is DISC.

The multivariable linear regression equation of this study has the form:

Overall regression function:

$DISC=\beta_0 + \beta_1 SIZE + \beta_2 PROF + \beta_3 LEGA + \beta_4 ADTE + U_i$

+ Firm size:

For businesses with a large number of employees as well as a large market share, it is necessary to disclose information on the sustainability report. Besides, the increasing size of assets and revenue also affects the announcement

+ Profitability:

In the current context of global integration, it is imperative that large corporations and corporations in general and 4-5 star hotel businesses in particular have to disclose more information about the influence of production activities business on the environment, society as well as its impact on stakeholders towards sustainable development.

+ Legal Regulations:

The hotel businesses in Vietnam themselves have not had to comply with strict legal regulations on the issue of publishing sustainability reports, except for those listed on the stock market. It is really necessary to improve the legal basis and regulations on the disclosure of sustainable development information for these businesses, which will create better habits for businesses.

+ Corporate governance based on technology factors:

This is a new factor that the authors discovered based on the test results of the model. Today, the continuous development of technology will have a great impact on the corporate governance of managers. These factors combined will bring more advantages to governance when publishing announcements in the sustainability report.The regression model will find out the independent factors that have an impact on the dependent factor. At the same time, the model also describes the level of impact, thereby helping us to predict the value of the dependent factor. According to Table 4, the explanatory level of the model: Adjusted R Square = 0.550, so about 55% of the publication of sustainable development reports at hotels is influenced by the independent factors of the model, the confidence level is above 99 % (F test, sig < 0.05).

Table 4. Results of regression model analysis (Resource: The authors collected)

Model Summary[b]					
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**
1	.748[a]	.559	.550	.67047218	2.040
a. Predictors: (Constant), LEGA, PROF, SIZE, ADTE					
b. Dependent Variable: DISC					

Coefficientsa

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2,955E-018	,046		,000	1,000		
SIZE	,257	,051	,257	5,040	,000	,809	1,236
PROF	,169	,051	,169	3,322	,001	,810	1,235
ADTE	,309	,054	,309	5,701	,000	,716	1,396
LEGA	,300	,052	,300	5,776	,000	,779	1,283
a. Dependent Variable: DISC							

Table 5. Results of ANOVA analysis (Resource: The authors collected)

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	119.598	4	29.900	66.512	.000[b]
	Residual	94.402	210	.450		
	Total	214.000	214			
a. Dependent Variable: DISC						
b. Predictors: (Constant), LEGA, PROF, SIZE, ADTE						

Regression results show that 4 independent factors from LEGA, PROF, SIZE, ADTE are statistically significant, sig < 0.05 is satisfactory, so it will be kept in the research model. Based on the results of the above table, ANOVA has Sig = 0.000 < 0.05, so we reject the H0 hypothesis and accept the H1 hypothesis. That is, the model exists. In other words, at the 5% level of significance, it can be concluded that the publication of sustainable development reports at 4-5 star hotels in Vietnam is influenced by at least 1 of the remaining 4 factors.

The size of the Vietnamese hotel business positively affects the presentation and disclosure of sustainable development information in the accounting reporting system. This result is completely consistent with the research results of authors such as Belkaoui and Karpik, 1989; Tagesson et al. (2009); Said et al. (2009); Dilling (2010); Dibia and Onwuchekwa (2015); Tauringana (2020). In fact, it is easy to explain that because hotel companies in Vietnam are all companies that will be subjected to stronger pressure from stakeholders such as investors, customers, agencies, etc. industry functions as well as environmental protection organizations in the course of their operations, and as a result, these large companies will report a wide range of information relevant to society, economy and environment and thus meet the needs of visitors, especially international visitors. This latter aspect has a particular impact on the quantity and quality of the information disclosed. According to Giner (1995), one of the main reasons for hotel managers to disclose information is to send signals to current and future investors and creditors, in order to maintain maintain good relationships with capital providers and thus obtain financing with better conditions especially in the post-Covid-19 era. We find that the results of the study are consistent with most previous studies that have concluded that firm size has a positive effect on the amount of financial and non-financial information disclosed (Trotman and Bradley, 1981; Belkaoui and Karpik, 1989; Patten, 1991; Deegan and Gordon, 1996; Hackston and Milne, 1996; Craven and Marston, 1999; Giner et al., 2003; Oyelere et al., 2003; Marston and Polei, 2004; Bonsón and Escobar, 2004; Gul and Leung, 2004; Prencipe, 2004; Serrano-Cinca et al., 2007; Prado Lorenzo et al., 2009; García Sánchez et al., 2011).

Profitability has a positive effect on the presentation and disclosure of sustainability information in the accounting reporting system of hotel companies in Vietnam. This result is completely consistent with the research results of authors such as (Lang and Lundholm, 1993; Dilling, 2010). In fact, currently information about sustainable development also affects decisions (Anh-Tuan et al., 2022). Therefore, in order to attract investment capital, many companies choose to disclose more information about their company's sustainable development, and hotel companies in Vietnam do not. is out of this exception, especially the post-Covid-19 situation. Besides, with the desire to expand the market or create a better image of the company in the eyes of the public, consumers and stakeholders are also one of the reasons for these companies to publish development information more sustainable.

Legal regulations positively affect the presentation and disclosure of sustainable development information in the Vietnamese corporate accounting reporting system in general and hotel companies in Vietnam in particular. This result is completely consistent with the research results of authors (Belkaoui and Karpik, 1989; De Villiers, 2003; Tuan et al., 2019; Tauringana, 2020). In fact, in Vietnam at present, there is no document that requires Vietnamese enterprises to present and disclose information on sustainable development separately on the Sustainable Development Report. There should be a "stricter" regulation for businesses whose activities have a great impact on the environment and threaten society.

This hypothesis is consistent with the research results that the author has studied and referred to when assessing the factors affecting the disclosure of information for sustainable development in the form of environmental reports or social responsibility reports Trotman and Bradley (1981); Craswell and Taylor (1992); Jennifer Ho and Taylor (2007); Branco and Rodrigues (2008); Gamerschlag et al. (2011); José V. Frias-Aceituno, et al., 2012. Read More Furthermore, Gul and Leung (2004) reported a positive effect of profitability on the amount of voluntary information disclosed, by multinational companies listed on the New York Stock Exchange and by multinational companies. This is not an exception for Vietnamese hotel companies, if they want to increase profits in their business, the transparency of information on the Sustainable Development Report is almost something that companies need to do. Besides, through the results of this study, in addition to directly affecting the publication of the Sustainable Development Report, it can be seen that this study has continued to show that the factors influence on disclosure of information. The sustainable development report is greatly influenced by the research concepts mentioned in the author's article

CONCLUSION

Research results have shown that there are 4 factors affecting the publication of sustainable development reports in 4-5 star hotel enterprises based on the views of managers in Vietnam in the following order: (1) Corporate governance based on technology factors; (2) Legal regulations; (3) Firm size and (4) profitability. The results once again confirm the relationship between these factors to the publication of the Sustainable Development Report. Although there are some limitations in terms of research sample size and the number of factors included in the model, on the basis of secondary research data investigated, it has partly helped State administrative managers as well as administrators. It is very urgent for hotel management and other stakeholders to grasp the issue of publishing sustainable development reports at these units.

Author Contributions: Conceptualization, Le, A.T. and Huyen,T.N.T.; methodology, Le, A.T. and Hanh, Q.N.T.; software, Le, A.T. and Phuoc, K.C.; validation, , Le, A.T. and Huyen,T.N.T.; formal analysis, Le, A.T. and Hanh, Q.N.T.; investigation, Le, A.T. and Phuoc, K.C.; data curation, Le, A.T. and Phuoc, K.C; writing - original draft preparation, Le, A.T. and Huyen,T.N.T.; writing - review and editing, Le, A.T. and Huyen,T.N.T.; visualization, Le, A.T. and Hanh, Q.N.T.; supervision, Le, A.T; project administration, Le, A.T. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 20.03.2023 Revised: 17.06.2023 Accepted: 19.07.2023 Available online: 18.08.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.885-892
DOI 10.30892/gtg.49305-1089

RESEARCH ON THE MOTIVATIONS AND INTENTIONS OF POTENTIAL CRUISE PASSENGERS IN TURKEY

Sercan ARAS [*]
Necmettin Erbakan University, Tourism Management, Faculty of Tourism, Konya, Turkey, e-mail: arassercan1@gmail.com

Citation: Aras, S. (2023). RESEARCH ON THE MOTIVATIONS AND INTENTIONS OF POTENTIAL CRUISE PASSENGERS IN TURKEY. *GeoJournal of Tourism and Geosites*, 49(3), 885–892. https://doi.org/10.30892/gtg.49305-1089

Abstract: The study aims to explain the relationship between the motivations and intentions and to evaluate the differences according to their demographic characteristics. A quantitative research method was used in the study, and a questionnaire was used as a data collection technique. The research was conducted in Turkey and the data obtained from 253 questionnaires were analyzed. In conclusion, the research found that there is a positive and significant relationship between learning/discovery & thrill, which is one of the motivation dimensions, and intention. Furthermore, it was concluded that people between the ages of 46-65 have a higher intention to go on a cruise compared to people aged 25 and younger. The results obtained from this study can contribute to the advertising, promotion, marketing, and sales processes of cruise agencies in the Turkish cruise tourism market.

Key words: Cruise, motivation, intention, tourism, Cruise passengers, tourism marketing.

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INTRODUCTION

Although the cruise ship offers all elements of maritime transport together, it also has all characteristics of tourism activities such as accommodation, entertainment, luxury services, and security (Jugović, 2020). Currently, cruises are increasingly being viewed as floating resorts. Cruise tourism has become a type of tourism with a dynamic growth rate in the last 30 years, with the demand created primarily in the North American region, then in Europe, and in recent years in the region of Australia and New Zealand (Akgül, 2018). The average annual growth rate in the number of worldwide cruise passengers from 1980 to 2008 was approximately 8.4% (Brida, 2010). The increase in the number of cruise passengers between 2009 and 2019 was approximately 66% (CLIA, 2019). At these rates, the cruise industry is the fastest-growing segment in the travel industry worldwide. Although the number of people travelling by cruise was 29.7 million in 2019, it decreased to 5.8 million in 2020 (Statista, 2021). Due to the COVID-19 pandemic that has occurred around the world since 2019, there has been a great decrease in the demand for cruise tourism, as in all types of tourism.

In the world cruise market, the Mediterranean is the most visited destination in Europe and the second region in the world after the Caribbean (Aras, 2021). Most cruise travellers come from North America, Germany, and the United Kingdom. Italy, Spain, and Greece are the countries most visited on cruise travel in the Mediterranean (Kovacic and Silveira, 2020). Turkey, which constitutes the research area, has an important potential in terms of cruise tourism. Turkey, which has a coast to the Black Sea, the Aegean Sea, and the Mediterranean, is home to interesting ports and historical and natural beauty (Sezer, 2014). Although the number of cruise passengers arriving in Turkey was 581,848 in 2003, this number increased to 2,260,000 in 2013. In 2013, the number of cruise tourists in the world was 21.3 million. The number of cruise tourists visiting Turkey was approximately 10% of this number in the same period. The cruise tourism industry in Turkey has experienced a significant decline, especially after 2016. The number of cruise passengers visiting Turkey in 2016 decreased to 620,000, to 301,000 in 2017, and to 210,000 in 2018 (General Directorate of Maritime Affairs, 2021).

While the cruise tourism industry continues to develop around the world, Tor Kadıoğlu (2020) stated that the reasons for this decline in Turkey are terrorist incidents and events in Iraq and Syria. Furthermore, Turkey's political tensions with European countries and the United States were also effective in this decline. Cruise tourism, which was already on the decline in 2020 and 2021, came to a standstill in Turkey due to the COVID-19 pandemic. Despite these negatives, the aim is to rapidly increase the number of cruise tourists visiting Turkey by re-establishing the image of a safe country after the disappearance of the effects of the pandemic and improving relations with Western countries.

Turkey is one of the most populous countries in Europe, with a population of approximately 84 million, and a developing country. This situation makes Turkey viewed as a potential tourist-generating country. Before the pandemic, the number of Turkish tourists travelling abroad in 2019 was approximately 9.65 million (TURKSTAT, 2020).

Previous research on motivations and intentions in cruise tourism has generally been on customers who have taken a cruise tour. In order to increase the number of cruise tourists, it is important for marketing to investigate the motivation and intentions of potential cruise passengers. Erdil (2004) stated that businesses carry out marketing activities according to the characteristics of potential consumers' perceptions. This study aims to measure the relationship between the motivations and intentions of potential cruise passengers in Turkey and to determine differences according to their demographic characteristics. Understanding the perceptions and reactions of people towards cruise tourism in Turkey is

[*] Corresponding author

critical for cruise companies in the marketing and sales process. There have been limited studies on cruise tourism in Turkey before. The fact that no study has been conducted on differences in motivations and intentions of potential cruise consumers according to demographic groups means that this study fills an important gap.

LITERATURE REVIEW

Cruise Tourism

Cruise tourism is unrivalled because it integrates elements from all tourism sectors, including transportation, accommodation, food and beverages, tourist attractions, and travel agencies (Brida, 2010). The number of cruise ports is increasing day by day. This type of tourism, which has great returns for regions and countries, is in high demand from consumers who abandon the sea-sand-sun-orientated tourism approach and seek alternative types of tourism (Tor Kadıoğlu, 2020). Observations of the literature have shown that studies have been carried out on different topics related to cruise tourism, which has a multidisciplinary structure. The focus of research on cruise tourism has been on the economic effects of cruise tourism. Additionally, environment, sustainability, sociocultural impact, perception of cruise tourists, satisfaction, and behavioural intention are also topics widely studied related to cruise tourism. Papathanassis and Beckmann (2011) stated that despite studies on different topics, business, management, and economics focus more than on other disciplines such as sociology, psychology, sustainability, geography, engineering, and technology. Vaya et al. (2018) in their research on the economic impact of cruise tourism, estimated the direct spending on the Catalonia region to be 442.5 million euros.

Expenditures made by ship passengers constituted 71.4% of total expenditures, expenditures made by shipping companies accounted for 27.4% and expenditures by crew accounted for 1.2%. Ji and Mazzarella (2007) presented the unique features of the cruise inventory and discussed how revenue management practices could be adapted to the cruise inventory. According to the simulations they created using real reservation data, they concluded that an average of 4.2% to 6.3% increase in revenue was achieved. Vega Munoz et al. (2020) revealed that the number of publications from 1980 to 2018 increased significantly due to the bibliometric analysis of research on cruise tourism.

Motivation

Motivation is one of the fundamental concepts of human behaviour (Bayih and Singh, 2020). It is the drive to satisfy people's physiological and psychological needs. Motivational research questions the causes of human behaviour, how it occurs, and how these behaviours can be directed. The main purpose of the theories developed to explain the phenomenon of motivation is to predict human behaviour (Fodness, 1994). Motivation for individuals is considered an internal factor that activates, directs, or integrates their behaviour (Han and Hyun, 2019). Travel motivation should be considered when promoting destinations and segmenting target markets because motivation drives people and is therefore very important when choosing a destination (Sancho Esper and Rateike, 2010). Travel motivation has become one of the most important aspects of tourism research, as it is recognized as the key to understanding tourist behaviour at the heart of the tourism structure (Rehman and Alnuznah, 2022). The motivation to travel is the first step that initiates tourists' decision-making processes and purchasing behaviour approach (Aydın and Sezerel, 2017). Push-pull means that there are sociopsychological reasons that encourage people to travel and specific characteristics that draw people to a specific destination (Whyte, 2017). Since the desire to travel often precedes destination choice, internal sociopsychological push factors can be considered as the ancestors of pull factors at external destinations (Whyte, 2017).

Push factors can be considered as internal forces that determine whether tourists are travelling or not. This motivates tourists to travel to meet their needs and expectations. On the contrary, the pull factor can be regarded as an external force that determines the decision of the tourist to travel. The characteristics of the destination, attractions, nature, local culture, prices, services, climate, etc. These qualities can be used for the destination preferences of tourists (Thiumsak and Ruangkanjanases, 2016). Uysal and Jurowski (1994), in their study of questioning the interrelationship between push and pull factors for a good trip, found eight motivational factors, including four push factors (family togetherness, sports, cultural experience, and escape) and four pull factors (Entertainment/resort, outdoor/nature, heritage/culture, and rural/inexpensive). Some studies have been conducted on the travel motivations of domestic tourists in Turkey. Kılıçlar and Aldoğan Şenol (2019) found 6 pull factors and 5 push factors in their research on the motivation to travel of senior tourists. While the pull factors include the dimensions of ‘historical and cultural attractions, natural attractions and local foods, transportation and activities, local people, economic conditions, and infrastructure, hygiene, and security’; the push factors include the dimensions of ‘acquiring knowledge, relaxation, adventure and excitement, friendship and escape’. Although different factors are related to motivation in the literature, it is generally seen that the push factors consist of discovery, escape, novelty, social esteem, relaxation, and learning, while the pull factors consist of cultural values, nature, and natural attractions, recreational activities, convenience, and shopping opportunities (Aydın and Sezerel, 2017).

Few studies have looked at the motivation factors for cruise travellers. Fan et al. (2015) determined five factors in their study on potential Chinese cruise consumers. Hung and Petrick (2011) developed the scale to measure tourists’ motivation to travel in the cruise tourism market: self-esteem and social recognition; escape and relaxation; learning, discovery, and thrill; and bonding factors. Qu and Ping (1999), due to their research on the Hong Kong cruise tourism market, determined that the main travel motivation factors are ‘escape from normal life, social gathering, and beautiful environment and scenery.’ Jones (2011) investigated the motivations for cruise travel of 306 North American tourists by grouping them as first-time and repeat passengers. ‘Physical and mental relaxation’, ‘escaping from daily routine’, and ‘exploring new places/things’ have been identified as the main motivation factors for first and repeat tourists. Van der Merwe et al. (2011) found cruise travel motivation factors (time usage, destination attractiveness, escapism, relaxation, and personal dependency) in their research of tourists visiting five ports in South Africa. Andriotis and Agiomirgianakis (2010) investigated cruise ships' motivations, satisfaction, and probability of re-visiting the Hera port and recommending it to their relatives. Data were collected from 164 cruise passengers through the questionnaire. As a result of the analysis of the data, 6 motivational dimensions were found, including ‘exploration’, ‘escape’, ‘socialization and shopping’, ‘time and cost’, ‘entertainment’, and ‘novelty’.

Intention

Intention can be defined as the tendency to react positively or negatively to purchasing behavior (Wiastuti et al., 2022). Many research results and models indicate that travel intentions are not a simple construction. Many researchers believe that travel intentions are complex concepts that include many factors (He and Luo, 2020). According to Eagly and Chaiken (1993), the intention is to motivate a person to try performing a behaviour and to plan it consciously. The personal attitude toward intentions is one of the important psychological phenomena that must be associated with behaviour (Lee and Green, 1991). Future-oriented intentions are said to be a strong predictor of behaviour (Huang, 2009). Most previous studies were conducted to measure the effects of different variables on intention. Research on cruise passengers by Petrick (2004) found that quality influences intention. The results of research on Chinese visiting Australia by Huang et al. (2015) showed that satisfaction with the guided tour experience directly affects behaviour intention. Meng et al. (2011) revealed that both the perceived value and satisfaction of Taiwanese cruise tourists play an important role in perceived post-purchase intentions. Tsai and Bui (2021) revealed that social media users’ word of mouth significantly affects consumers' purchase intention. In many studies in the literature, although different variables (quality, satisfaction, value, etc.) have generally been found to have a direct effect on intention, for some variables the situation was the opposite. Ahn (2019) analyzed data from 292 cruise tourists in the United States, supporting the evidence that the corporate social responsibility signal influences customers' positive evaluation and identification with a cruise brand, but no direct impact on behavioural intentions was observed.

Motivation and Intention

Although the number of empirical studies on the relationship between motivation and intention is quite limited, this relationship has been suggested in some attitudinal and marketing studies (Li and Cai, 2012). Mohaidin et al. (2017) showed that travel motivation is a driving force that drives individuals' intention to travel or revisit a destination. Hsu and Huang (2012) revealed that motivation has a direct effect on both attitude and intention to visit the destination. Soliman (2021) showed that travel motivation significantly and positively affects tourists' attitudes and revisit intentions. This is the result with the greatest direct effect on the intention to revisit among all structures examined in the study. Yoon and Uysal (2005) demonstrated that both push and pull factors that act as tourist motivations have a significant impact on destination loyalty, as measured by revisit intention and word-of-mouth recommendation probability. He and Luo (2020) in a study, which investigated the motivation, satisfaction, and revisit intentions of skiers, found that pull motivations affect revisit intention. Hung and Petrick (2011) found a significant relationship between motivation and intention to go on a cruise, but behavioural intention and motivation dimensions were not tested.

MATERIALS AND METHODS

The flowchart of the research methods is shown in Figure 1. Before designing the questionnaire to be used in the research, the scales used in previous studies in the literature were investigated. Then, the questionnaire was designed in accordance with the purpose of the research and the data collection process was started. Finally, the analysis of the obtained data was carried out.

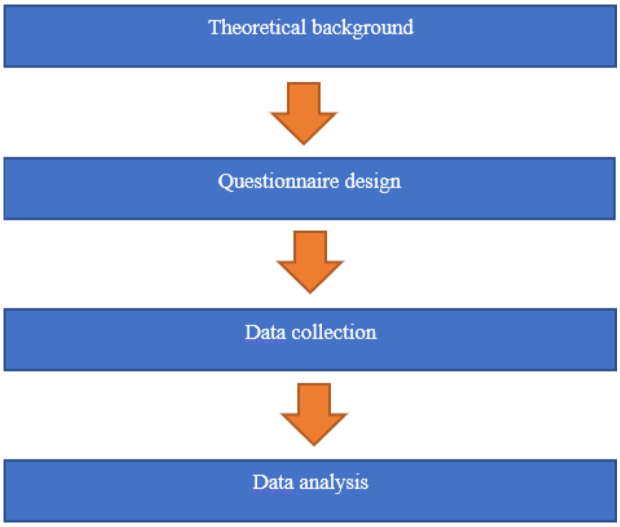

Figure 1. Flowchart of the research methods
(Source: compiled by authors)

Questionnaire design

The quantitative research method was used in the study. The questionnaire technique was preferred as the data collection method. The questionnaire had two parts. The first part focused on the motivations and intentions of potential cruisers. Items related to the motivation scale (Fan et al., 2015; Hung and Petrick, 2011; Qu and Ping, 1999) and all intention items (Lam and Hsu, 2006; Fan et al., 2015; Hung and Petrick, 2011) were adapted from previous literature research. The first part of the questionnaire contained 25 motivational and intentional items. All scale elements were measured using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The second part contains demographic characteristics, including gender, age, family size, level of education, and income. First, the questionnaire was prepared in English and then translated into Turkish by the author who is fluent in both languages.

Sampling

The questionnaire form was distributed to seven different regions of Turkey between August 2021 and March 2022 to measure the motivations and intentions of potential cruisers. The convenience sampling method, one of the non-probability sampling methods, was used in the study. The questionnaire was administered face-to-face. People who had never been on any cruise tour before were excluded from the investigation. Therefore, respondents were first asked whether they had ever been on a cruise tour before. The survey was conducted according to the responses of the people to this question. The convenience sampling method was used.

Data analysis

Although 271 questionnaires were collected, some were not suitable for analysis. 18 questionnaires were excluded from the analysis due to a straight-line problem and more than 5% of missing values. After this stage, the remaining 253 questionnaires were prepared for analysis. The data obtained from the participants within the scope of the study were analyzed through the Statistical Package for the Social Sciences (SPSS). Data were subjected to screening before analysis. First, missing data were identified and substituted with the appropriate method. Consequently, in accordance with the procedure suggested by Hair et al. (2014), the mean substitution method was used to replace the missing data. Reliability tests were performed using Cronbach’s alpha to understand the internal consistency. In the study, frequency analysis, factor analysis, independent sample t-test, variance analysis, and regression analysis were used.

RESULTS AND DISCUSSION

The profile of potential cruise passengers who volunteered to participate in the study is presented in Table 1. Frequency analysis was performed to determine the distribution of the data according to demographic characteristics. According to the findings, 55.3% were female and 44.7% male. Considering the findings on the ages of the participants, 40.3% were younger than 25 years, 37.2% were between 26 and 35 years old, 13.8% were between 36 and 45 years and 8.7% were 46-65 years old. Many respondents were young, and it can be explained by the young population of Turkey. The respondents usually had three-person (22.5%), four-person (22.9%), and five-person (23.3%) families. Most of the respondents had a university degree (53.8%) and 26.9% of the respondents had a post-graduate degree or above. Considering the income ranges prepared for the annual household average income, it was determined that the respondents were generally in the middle-income groups.

Table 1. Demographic profile of the respondents

Variables	Category	Frequency	Percentage (%)
Gender	Female	140	55.3
	Male	113	44.7
	Total	**253**	**100**
Age	≤25	102	40.3
	26-35	94	37.2
	36-45	35	13.8
	46-65	22	8.7
	Total	**253**	**100**
Family Size	1 Person	5	2.0
	2 Persons	34	13.4
	3 Persons	57	22.5
	4 Persons	58	22.9
	5 Persons	59	23.3
	6 Persons or above	40	15.8
	Total	**253**	**100**
Education	Secondary school or below	18	7.1
	High school	31	12.3
	University degree	136	53.8
	Postgraduate or above	68	26.9
	Total	**253**	**100**
Total Household Annual Income	Below 50,000 TL	10	4.0
	50,000-99,999 TL	31	12.3
	100,000-149,999 TL	38	15.0
	150,000-199,999 TL	51	20.2
	200,000-249,999 TL	62	24.5
	250,000-299,999 TL	31	12.3
	300,000 TL or above	30	11.9
	Total	**253**	**100**

Table 2. Importance of the motivation of respondents

Motivation	n	Mean	Std. Deviation
Enjoy the beautiful environment and scenery	253	6.15	1.320
Experience attractive routes and destinations	253	6.04	1.421
See and experience new cultures	253	6.23	1.327
Visit different places in one trip	253	5.87	1.665
Travel to a place where friends or relatives have not visited before	253	5.73	1.675
Discover new things	253	6.40	1.059
Taste foods and beverages from different cultures	253	5.92	1.524
Experience a new type of transport	253	6.12	1.351
Relieve stress	253	6.22	1.299
Enjoy luxury services	253	5.83	1.549
Seek new excitement	253	6.15	1.377
Accompany family members who wish to join a cruise	253	5.24	1.928
Escape from the routine of daily life and workload	253	6.11	1.405
Provide spiritual purification and moral enlightenment.	253	5.83	1.622
Enjoy cruise activities and facilities (swimming pool, bar, fitness, etc.)	253	5.60	1.760
Take photos of exotic places for social media posts	253	5.29	1.915
Spend time with family	253	5.68	1.709
Enjoy the entertainment and shows	253	5.87	1.554
Meet different people and make new contacts	253	5.74	1.590
Tell others about the places visited and the journey after the trip	253	5.61	1.743
Enjoy SPA	253	5.51	1.774
Visit friends or relatives who live in countries on the cruise's route	253	4.83	2.195
Enjoy health and exercise	253	5.55	1.180
Have a casino experience	253	3.33	2.382
Show off friends/relatives	253	4.83	2.172

Using descriptive statistics, the mean values of each item were determined on the motivation and intention scales. The item with the highest mean motivation value was ‘Discover new things’ (M=6.40), followed by ‘See and experience new cultures’ (M=6.23), ‘Relieve stress’ (M=6.22), ‘Enjoy the beautiful environment and scenery’ (M = 6.15), ‘Seek new excitement’ (M=6.15), and ‘Experience a new type of transport’ (M=6.12). The lowest motivation score was ‘Have a casino experience’ (M=3.33). Gambling in public is prohibited by Turkish lawmakers. Furthermore, the fact that most of the society in Turkey is made up of Muslims and that gambling is forbidden in Islam explains this result. Due to social pressure, participants may have skewed their answers, giving a lower score for ‘Enjoy the Casino Experience’ (Fan et al., 2015).

The item with the highest mean score for the intention to cruise was ‘I would like to go on a cruise in the future’ (M = 5.61), followed by ‘I will recommend the cruise to others’ (M=5.10) and ‘I am going to encourage friends and family to take a cruise’. (M = 4.84) and ‘I am interested in cruise ship travel’ (M=4.64). The item ‘I am planning to go on a cruise in the next three years’ was found to have the lowest mean score for the intention of the cruise.

Table 3. Importance of the intention of the respondents

Intention	n	Mean	Std. Deviation
I am interested in cruise ship travel	253	4.64	2.036
I would like to go on a cruise in the future	253	5.61	1.736
I will recommend the cruise to others	253	5.10	1.887
I am going to encourage friends and family to take a cruise	253	4.84	1.886
I am planning to go on a cruise in the next three years	253	3.86	2.159

Table 4. Factor analysis of respondents’ motivation

Motivation	Factor loading	Eigen-value	% of variance	Alpha
Learning/discovery & thrill (Mean= 6.04)		**10.394**	**45.19**	**0.89**
Enjoy the beautiful environment and scenery	0.797			
Experience attractive routes and destinations	0.782			
See and experience new cultures	0.813			
Travel to places where friends and family have never visited before	0.521			
Discover new things	0.739			
Taste foods and beverages from different cultures	0.660			
Experience a new type of transport	0.630			
Meet different people and make new contacts	0.525			
Enjoyment (Mean = 5.68)		**2.500**	**10.87**	**0.90**
Visit different places in one trip	0.598			
Enjoy cruise activities and facilities (swimming pool, bar, fitness, etc.)	0.699			
Enjoy the entertainment and shows	0.670			
Enjoy SPA	0.837			
Enjoy health and exercise	0.842			
Relaxation and Escape (Mean = 6.08)		**1.404**	**6.10**	**0.89**
Relieve stress	0.761			
Seek new excitement	0.757			
Escape from the routine of daily life and workload	0.774			
Provide spiritual purification and moral enlightenment.	0.699			
Social/Esteem Need (Mean = 5.24)		**1.226**	**5.33**	**0.84**
Take photos of exotic places to show friends	0.780			
Tell others about the places visited and the journey after the trip	0.716			
Show off friends/relatives	0.690			
Family/Relatives (Mean = 5.25)		**1.013**	**4.41**	**0.79**
Accompany family members who wish to join a cruise	0.774			
Spend time with family	0.759			
Visit friends or relatives who live in countries on the cruise's route	0.767			
Total variance explained			**71.90**	

In order to group items belonging to the motivation scale with similar measurement properties, factor analyses were applied. Varimax rotation was carried out. The item ‘Enjoy luxury services’ was excluded from the analysis because its factor load was less than 0.50. After this item was removed, the second round of analysis was conducted. The item ‘have a casino experience’ was discarded due to cross-loading. The results of the factor analysis performed are presented in Table 4. According to the findings, 23 items were grouped into five factors. These factors were called ‘learning/discovery & thrill’, ‘enjoyment’, ‘escape and relaxation’, ‘social / esteem needs’, and ‘family/relatives’. Two of these factors constitute a pull factor (learning/discovery & thrill and enjoyment) and three push factors (escape and relaxation, social/esteem need, and family/relatives). The factor loading scores of all items were higher than 0,05. The factors had an eigenvalue greater than 1 and a Cronbach alpha of 0.7 or higher. In the research, a linear regression analysis was performed using SPSS to determine the relationship between motivation and intention. In the analysis, while the dependent variable was the intention, the motivation factors were defined as independent variables. According to the analysis results, learning/discovery&thrill (Beta=0.646, $p<0.001$), one of the motivation factors, affected “intention” significantly and positively. Enjoyment, escape and relaxation, social/esteem need, and family/relatives were insignificant.

Table 5. Multivariate regression analysis ANOVA test

Model		Sum of squares	df	Mean Square	F	Sig.
1	Regression	221.051	5	44.210	26.734	<.001
	Residual	408.473	247	1.654		
	Total	629.525	252			

Table 6. Multivariate regression analysis

Model	R	R^2	Adjusted R^2	Standard Error	Durbin-Watson
1	0.593	0.351	0.338	1.285	1.932

Table 7. Multivariate regression analysis (Coefficients)

				Collinearity Statistics	
Variables	**B**	**t**	**p**	**Tolerance**	**VIF**
Constant	0.484	-1.006	0.315		
Discovery	0.646	6.136	**<.001**	0.515	1.942
Enjoyment	0.083	0.990	0.323	0.440	2.271
Escape	-0.007	-0.069	0.945	0.463	2.162
Social esteem	0.125	1.922	0.056	0.534	1.873
Family	0.050	0.818	0.414	0.636	1.573

Table 8. Differences between the demographic characteristics of participants and motivation and intention

Variables	Education	n	Mean	Std. Deviation	F	p
Family/ Relatives	A. Secondary school or below	18	6.17	1.004	5,04	0,002
	B. High school	31	5.23	1.566		
	C. University degree	136	5.42	1.673		
	D. Postgraduate or above	68	4.71	1.626		
Intention	**Age**					
	A. ≤25	102	4.44	1.513	3,94	0,009
	B. 26-35	94	4.93	1.658		
	C. 36-45	35	4.86	1.030		
	D. 46-65	22	5.59	1.580		

To determine the differences between motivation and intention and demographic characteristics of the respondents, t-tests and ANOVA were conducted. It was found that there was a significant difference between "family/relatives", which is one of the motivation factors, and the education level of the participants. No differences were found between demographic characteristics and motivation factors other than education level. However, as a result of variance analysis (ANOVA), it was concluded that there was a significant difference between intention and demographic characteristics, age. People aged 46-65 who participated in the survey have a higher intention to go on a cruise compared to participants younger than 25 years of age. This study aimed to determine how the motivations and intentions of potential cruise consumers differ in terms of their demographic characteristics. In the study, the relationship between the motivations for cruise tourism of the respondents and their intentions was also investigated. As a result of the factor analysis, five dimensions of motivation (learning/discovery & thrill; enjoyment; relaxation and escape; social/esteem need; and family/relatives) were found. In earlier studies on participants' motivations for cruise tourism, it was observed that different dimensions could occur.

Due to the research conducted by Han and Hyun (2019) on cruise passengers in the US, 4 different dimensions of travel motivation (self-esteem and social recognition; escape and relaxation; learning/discovery & thrill; and bonding) were revealed. Research on motivation in different regions and markets, the cultural characteristics of the societies in which the research is conducted, and the dynamic nature of motivation may lead to different results. When the results of the regression analysis were evaluated, it was seen that there was a positive and significant relationship between the motivation dimensions ‘learning/discovery & thrill’ and ‘intention’. Overall, it has been observed that the willingness of potential cruise passengers in Turkey to explore new places, learn and experience this excitement can increase their intention to go on a cruise tour. In their research on outbound Chinese tourists, Li and Cai (2012) found that the novelty dimension of motivation directly affects behavioural intention. The items in the novelty dimension in Li and Cai's study and the items in the learning/discovery & thrill dimensions in my study have expressions close to each other. Therefore, it can be said that the results of the two studies are similar. In addition, Hung and Petrick (2011) also proved that motivation influences intention in their studies in which they take motivation. On the other hand, a partial effect between motivation and intention was also seen in the study by Fan et al. (2015). In their research on potential cruise tourists in China, a relationship was found between the dimensions of "relaxation and family" and "enjoyment" and intention. Furthermore, the relationship between motivation dimensions and intention in this study, Fan et al. (2015), differed from the study.

No differences were found between motivation factors and gender, age, income, and family size. On the other hand, it was determined that there was a significant difference between education level and family/relatives, and participants with low educational levels for family and relatives had a significantly higher mean value than people with high educational levels. This result is directly related to the family structure of Turks. In their research, Yavuz and Özmete (2012) revealed that as the level of education of people in Turkey increases, the problems they experienced with their families increase more.

A significant difference was found between the ages of the respondents and the intention. According to this result, it was observed that participants between the ages of 46-65 had a higher intention to go on a cruise than participants aged 25 and under. This result in the research supports the CLIA 2022 report. According to CLIA (2022), the average age of cruisers between 2018 and 2020 was 47.6 years. Additionally, this result was not a surprise, due to reasons such as the efforts of people aged 25 and younger to have a good career and not yet have enough financial strength (Doğan and Akçalı, 2021). The results of the study provide important data for cruise agencies and operators in their advertising, promotion, marketing, and sales processes in the Turkish cruise market. Family packages can be offered to potential cruise customers with low education levels. Since consumers between the ages of 46-65 have more cruise travel intentions, it is thought that marketing efforts aimed at the wishes and expectations of this age group may increase sales. Focussing on attractions such as discovering new places, recognizing different cultures, tasting local foods, and experiencing a beautiful environment and scenery to encourage consum.

CONCLUSION

Cruise tourism is a growing sector in Turkey as well as in the world (Aras, 2022). Turkey is a potential market for cruise tourism due to reasons such as being a developing country, its population, and the increase in the number of participants in tourism every year. Consequently, this study has attempted to measure the motivations and intentions of potential cruise consumers in Turkey and to define the differences according to the demographic characteristics of the participants. It can be said that this study is a pioneering study that aims to explain the motivations and intentions of potential cruise consumers in Turkey. The study's results will contribute to cruise tourism policymakers, cruise industry representatives, and cruise tourism researchers by providing data on the motivations and intentions of potential cruise consumers in Turkey. The research results can provide a theoretical basis and reference recommendations for the development of cruise tourism in destinations and strategic marketing of cruise travel.

Like many other studies, this research had a few limitations, which in turn provided future research opportunities. Although Turkey's relatively young population is a factor, the high number of young participants is among the limitations of the study. The main reason for this is the convenience sampling method used in the collection of research data. In future studies, the demographics of the sample could be more appropriate.

Author Contributions: Conceptualization, S.A.; methodology, S.A.; software, S.A.; validation, S.A.; formal analysis, S.A.; investigation, S.A.; data curation, S.A.; writing - original draft preparation, S.A.; writing - review and editing, S.A.; visualization, S.A.; supervision, S.A.; project administration, S.A. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The author thanks the responsible reviewers and editors for their constructive feedback.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 20.04.2023 Revised: 12.06.2023 Accepted: 20.07.2023 Available online: 18.08.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.893-900
DOI 10.30892/gtg.49306-1090

THE ROLE OF TOURISM MANAGEMENT FOR SUSTAINABLE TOURISM DEVELOPMENT IN NATURE RESERVES IN HUNGARY

Zsuzsanna IVANCSÓNÉ HORVÁTH
Széchenyi István University, Faculty of Business, Department of Tourism and Hospitality, Győr, Hungary, e-mail: ivancso.zsuzsa@sze.hu

Marcell KUPI
Széchenyi István University, Faculty of Business, Department of Tourism and Hospitality, Győr, Hungary, e-mail: kupi.marcell@sze.hu

Eva HAPP*
Széchenyi István University, Faculty of Business, Department of Tourism and Hospitality, Győr, Hungary, e-mail: happ.eva@sze.hu

Citation: Ivancsóné Horváth, Z., Kupi, M., & Happ, E. (2023). THE ROLE OF TOURISM MANAGEMENT FOR SUSTAINABLE TOURISM DEVELOPMENT IN NATURE RESERVES IN HUNGARY. *GeoJournal of Tourism and Geosites*, 49(3), 893–900. https://doi.org/10.30892/gtg.49306-1090

Abstract: The aim of the research is to reveal the opinion of regional professionals involved in the management of sustainable tourism and its three pillars. Through the results of 27 in-depth interviews with decision-makers and NGOs, we have explored the perceptions of the economic, environmental and social factors, both positive and negative, and the importance of each factor. The analysis of the results clearly shows a difference of opinion between decision-makers and NGOs. The negative impacts of tourism were highlighted by respondents, mainly in terms of the impact on the natural and economic environment, however, the positive impacts were more prominent. The research showed that the impacts on social environment were perceived more positively by respondents, and NGOs did not emphasise negative impacts in this category. The study shows that the role of tourism management in nature conservation areas is necessary and important for sustainable tourism development. The research clearly demonstrates that sustainability is an important issue in tourism. The results of the research also show that decision-makers are not familiar with the concept of sustainability, its precise content and their preparation and knowledge are insufficient to make the right decisions on the subject. The research shows that there is a shortage of professionals with expertise in tourism management, which makes it difficult to implement coordinated tourism development in the area under study.

Key words: sustainability, management, development, economic, social, environmental factors

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INTRODUCTION

Tourism is one of the leading sectors of the world economy. It is very important for governments to enhance the economic, social and environmental benefits of tourism and to manage its negative impacts (Vargáné Csobán and Bauerné Gáthy, 2009). Strategic planning is also essential to meet the long-term requirements of sustainability. The emergence of the COVID-19 pandemic has significantly transformed tourism. After the general closures of the countries, a greater proportion of people chose domestic destinations for their travels, where they could relax in relative safety, avoiding mass tourism. Natural attractions and the types of tourism that can be linked to them - such as water tourism, cycle tourism, angling tourism, nature tourism and ecotourism - have been valorised during this period.

Although tourism can be an economic solution for local communities, it can also be an ecological threat to the environment (Filipiak et al., 2020). Thus, „proposals - using terms such as sustainable development, sustainable tourism, responsible tourism and ecotourism - to address these problems are being put forward in increasing numbers." (Happ, 2014:90) The role of tourism can go well beyond travelling itself, helping to develop transport and other infrastructure and, overall, contributing to improving the quality of life of local people (Molnar and Stanciulescu, 2011). The Szigetköz is Hungary's largest island and Europe's largest inland delta, located between the Danube and the Moson-Danube.

Nowadays, the area is less explored by tourists and tourism is poorly organised. The development of tourism would be desirable for the people living there, but this can only be done in a sustainable way, bearing in mind the importance of nature conservation as well. In this study, we investigated the perception of the currently unorganised tourism and its sustainable development in the area by local decision-makers and NGOs, who are active in the nature reserve. The analysis was based on structured in-depth interviews with mayors and some of the key NGOs in the area. The questions were addressed in relation to the three pillars of sustainability - social, economic and environmental factors - keeping in mind the tourism potential of the municipalities and the organisation of tourism. The analysis of the questionnaire provided partly qualitative and partly quantitative results. Respondents also outlined specific problems and suggestions for solutions.

1. Literature review - Sustainable tourism

The idea of sustainable development first appeared in the 1970s. It was recognised that the three pillars of

* Corresponding author

sustainable development (environment, society and economy) were interlinked and effective action can only be taken if considering them together (Happ, 2014:91). It was first attempted in the 1990s to define sustainable tourism. The first definition emphasises the optimal use of environmental resources, ensuring basic ecological processes and contributing to the preservation of natural heritage (WTO, 2004; Valánszki et al., 2017; Molnar and Stanciulescu, 2018). However, there is no single, universally accepted definition of sustainable tourism. According to Happ (2014:92), sustainable tourism comprehensively addresses the issue of sustainability in the economic, natural and cultural environment. However, the most important objective is economic sustainability, which can only be achieved if people pay attention to the sustainability of the other two pillars (nature, society) as well.

Sustainable tourism is a new approach to tourism development that focuses on the preservation of the ecological environment, the protection of cultural heritage, the promotion of community economies and social development (Chang et al., 2020). This model requires careful consideration of the impacts on ecology, culture and society in all aspects of tourism planning, management and operation to achieve a harmonious balance between tourism development, ecological conservation, cultural heritage preservation and community development (Sheller, 2021; Kim et al., 2019; Cheng et al., 2023).

Today, sustainability is becoming increasingly important in all areas of the economy. According to the European Tourism Indicator System (ETIS), published by the European Union in 2016, the competitiveness of the tourism sector is closely linked to its sustainability, as the quality of tourist destinations is strongly influenced by their natural and cultural environment and the attitudes of the local community.

In her paper, Happ (2014) has collected concepts that are often used synonymously with sustainability, but are quite different from it. One of these is ecotourism, which is very often identified with sustainable tourism or responsible tourism, but although these concepts are related, they are not entirely identical. Ecotourism is the type of environmentally friendly travel that is most concerned with reducing or even eliminating the negative impacts of tourism and maximising the positive environmental impacts (Dombay and Magyari-Sáska, 2008). Instead of sustainable tourism, sometimes the term soft/gentle tourism is used as well, which aims to protect the environment (which includes ecotourism), preserve social and cultural values and harmonise these with tourism. Responsible tourism is perhaps the least widely used concept (for the time being). It is rather an emerging concept of how tourism operators can play their part in taking responsibility for the environment. The most important difference between responsible tourism and the other two concepts is that it focuses on society as well, in addition to the economic and natural environment (Happ, 2014).

The sustainable nature of tourism has several components: responsible use of natural resources, consideration of the environmental impact of tourism activities (e.g. waste generation, negative impact on water, soil and biodiversity, etc.), use of renewable energy sources, protection of cultural heritage, preservation of the natural and cultural integrity of tourist destinations, quality and sustainability of jobs created in the sector, local economic impacts and, last but not least, the quality of hospitality. Territorial tourism development aims at the complex development of an important administrative or territorial area in territorial development terms. In addition to the direct and indirect economic benefits generated and induced by tourism, it aims to plan for, identify, measure, communicate and influence the direct and indirect impacts on society and the environment in the most favourable way possible.

In September 2015, the 193 member states of the United Nations adopted a new integrated sustainable development framework, the 2030 Agenda (officially known as Transforming our world: The 2030 Agenda for Sustainable Development), which sets out a vision for ending poverty, tackling inequality and protecting the Earth's environment (The 2030 Agenda). One of the main features of the new framework is that it adopts a broader approach to sustainable development programmes, setting goals and targets for each country and regions, unlike previous development cooperation plans. At the heart of the Agenda, there are Sustainable Development Goals (SDGs), which apply to all nations and leave no-one behind.

The Agenda contains a total of 17 goals, 169 sub-goals and more than 230 indicators, which aim to measure and monitor several aspects of sustainable development until 2030 (Happ and Bolla, 2022). In order to ensure that sustainable tourism is not just an empty, generic term, it is necessary to measure and assess economic, social and natural changes in a specific area from time to time. Many organisations have tried to define a system of indicators for it (Hughes, 2002).

In 2004, the United Nations World Tourism Organisation (UNWTO) published a paper on the Indicators of Sustainable Development for Tourism Destinations (UNWTO, 2004). The Global Sustainable Tourism Council (GSTC), established in 2010, aims to create and manage minimum sustainability standards that contribute to the objectives of the UN 2030 Agenda. The European Tourism Indicators System (ETIS), launched by the European Commission in 2016, is based on self-assessment through data collection, monitoring and analysis. Its aim is to provide a comparable method to help destinations to monitor the sustainable development of their tourism in a measurable way. The system consists of a set of basic and optional indicators. To date, the GSTC, which brings together representatives of specialised UN organisations, major tourism companies, national tourism organisations and the service sector, has developed two sets of criteria for hotels and tour operators on the one hand, and tourist destinations on the other. The latter defines priority areas along four axes, each of which is associated with measurable indicators (GSTC Destination Criteria, 2019).

- Effective, sustainable tourism management,
- Maximising economic benefits and minimising negative impacts on the host community,
- Maximising positive impacts and minimising negative impacts on the cultural values of the host community and visitors,
- Maximising positive impacts and minimising negative impacts on the environment

The acknowledgement and monitoring of these indicators is an essential task for decision-makers. Choosing the right indicators will draw attention to the problem in time (Sustainable, 2000). This is a particularly important task at a site that is largely consists of a nature conservation area and where tourism activities and opportunities are still only present scattered.

2. Szigetköz as a tourist destination

Szigetköz is the western gateway to Hungary for inbound tourism and could be a key area for active domestic tourism. However, it is currently under-explored in terms of tourism, which is very positive from a nature conservation point of view, but the development of tourism in a sustainable way would be necessary to improve the potentials of the people living in the area. Several studies have described tourism as a breakthrough for economically underdeveloped regions (Ryglová, 2007; Vargáné Csobán, 2010; Ivancsó-Horváth and Ercsey, 2016), especially in view of the fact that the 11 tourism areas defined in 2020 for Hungary, include the main settlements of the Győr-Pannonhalma region. The development of tourism in Szigetköz is desirable, as it is currently very poorly organised. However, development should only and exclusively move in the direction of sustainable tourism, which is only possible through conscious planning, as the positive impact of tourism on the economy can entail negative environmental and social impacts. A key issue for tourism development is to determine the carrying capacity of the area (i.e. the level of tourism that can be accepted) and to ensure sustainability. It is also important to inform and educate stakeholders, including tourists (Vargáné Csobán, 2010). In the case of Szigetköz, this is an indicator twice as important, because the area is a nature reserve.

Smart world can be the solution for a more sustainable tourism in the Szigetköz. In our opinion, sustainable ecotourism is the only way forward (Szabó et al., 2017; Raffay, 2017; Raffay and Márton, 2018). Szigetköz is becoming more and more popular among tourists - speaking about either cycling, water or other types of tourism. Active tourism has similar objectives to ecotourism, but while ecotourism is a site-specific tourism product (i.e. it is defined by the natural features of the area visited), active tourism is activity-specific (i.e. it is defined by the activities carried out by the tourist). Active tourism requires active physical and mental participation, regardless of the destination visited. Thus, while ecotourism can only be described in 'undisturbed natural environments', participation in active tourism is also possible in natural environments, just as in the middle of the 'urban jungle' (Happ, 2019).

The entire territory of the Szigetköz is protected, and in some places it even has strictly protected nature reserves, and therefore tourism development should place great emphasis on sustainability and its measurability, as tourism can pose risks to nature conservation. However, with appropriate regulations these risks can be minimised. The principles of sustainable tourism are summarised in the Handbook of Good Practice on Sustainable Tourism in Protected Areas (2018):

1. Refers to travel to destinations with natural values.
2. Minimises interference: in general, tourism causes damage.
3. Develops environmental awareness: sustainable tourism is a learning experience for tourists and residents of the communities concerned.
4. Provides direct financial revenues for conservation: sustainable tourism should financially support environmental protection, research and education.
5. Provides income for local people: it involves stakeholders, including local and indigenous communities, ensuring their participation in tourism planning, development and operations.
6. Respects local culture: sustainable tourism respects local cultures and has minimal impact on both the natural environment and the population of the host country.

Ongoing monitoring ensures that sustainability issues are identified in a timely manner and appropriate interventions can be made. Sustainable tourism is a challenge for tourists, local communities, businesses and other stakeholders alike. However, if properly managed, it generates direct income for local citizens and supports conservation and environmental efforts.
Monitoring should define the purpose of the observation, the needed information, the location, timing, duration as well as the possible repetition of the monitoring (Figure1). The survey of opinions and attitudes can be directed at tourists, local decision-makers, residents, businesses, or other organisations. The study of spatial distribution can be used to analyse the movement of tourists, to identify spatial preferences, recreational use of areas, trails. In addition to knowing the opinion of tourists and local communities, an important objective is to influence the behaviour of visitors and to expand the tourist space used. Once the trails and service needs have been identified, a unified Szigetköz-wide tourism application can be developed, which will also help to promote sustainability along all three pillars.

RESEARCH METHODS

In our work, we first conducted a literature review and then primary research, during which we used qualitative research, structured interviews to analyse the opinions of local decision-makers and major NGOs on sustainable tourism, considering that the study focuses on a kind of baseline, since - as previously described - tourism is currently still on a very low level in the area and only organised scattered.

The survey was conducted in the summer of 2021. In the territorial delimitation of the Szigetköz, 26 municipalities were defined (the administrative area of the 26 municipalities is about 50 748 hectares, with a population of almost 40 000 inhabitants). 17 mayors responded to our structured interview. This is equivalent to a 65% response rate.

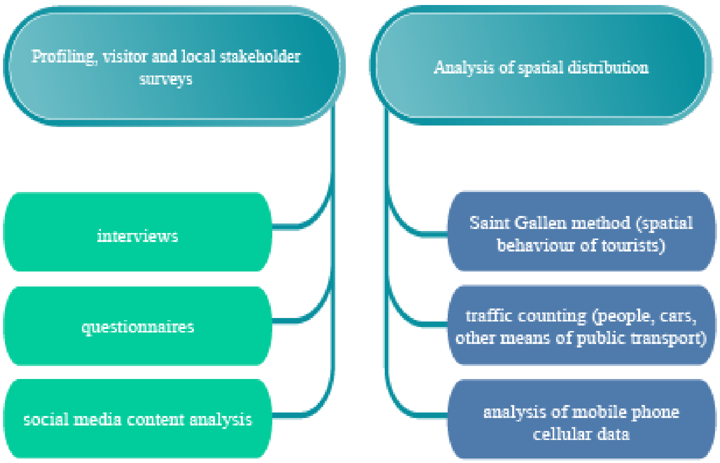


Figure 1. Possible monitoring methods (Source: Authors illustration)

Table 1. In-depth interview questions by topic (Source: Authors illustration)

Research of the settlement	Pontetial development of tourism types	Health tourism, ecotourism, rural tourism, equestrian tourism
	Presence of a tourism professional/expertise	Employment, tourism development plan, tenders, development concepts
Identifying problems	Territorrial delimitation	Economic, social, environmental
Sustainability	Interpretation presence	Projects implemented, working groups, infrastructure
Economy	Infrastructure, income situation, black economy, traditional economy	
Social	Seasonality of employment, living standards, services	
Environmental	Natural and built environment, flora and fauna, infrastructure	
Cooperation	Relations between NGOs and local authorities	

In addition to the mayors, 10 representatives of major NGOs, who are active in the area (nature conservation, water sports, fishing, tourism, education), responded to our request. The analysis was based on 27 structured in-depth interviews with mayors and NGO leaders. In part of the questions, there were stern differences in the answers of the two groups of respondents, so the answers are presented in a split format. The questions were formulated in relation to the three pillars of sustainability - social, economic and environmental factors - and the tourism potential of the municipalities and the organisation of tourism (Table 1).The analysis of the questionnaire provided partly qualitative and partly quantitative results. Respondents also outlined specific problems and suggestions for solutions. The questions were asked separately to assess opinions on economic, environmental and social factors, both positive and negative, and the importance of each factor. We used 7 point scales for the measurement. Descriptive statistics were used for analysis (Figure 2).

RESULTS

The analysis of in-depth interviews shows that, although all respondents consider tourism and tourism development to be really important at the moment, and that the development plans of the municipalities include plans for tourism development and sustainability, none of the municipalities specifically employs a tourism professional and 60% do not even plan to employ a professional in the future. The employment of a tourism professional would be justified by the fact that all but one of the responding municipalities either currently have a tourism tender running or have participated in one lately. The respondents would like to see developments in tourism and other areas, which are in line with the expectations of local residents and the natural environment; which are not damaging to the environment; and which can be economically sustainable.

Sustainability of tourism is considered important, but most respondents only associated sustainability with renewable energy and selective waste collection.

Respondents were also asked to assess the economic, social and environmental dimensions of their own municipality and its immediate surroundings, and to say what problems they see. On the economic dimension, most respondents mentioned the lack of accommodation, restaurants and joint programmes with other municipalities. Lack of cell service in economic areas is a serious economic handicap as well. Several people mentioned the need for a unified image design and a unified tourism application presenting the area. In the social dimension, difficulties with medical care was mentioned, as well as either the lack of tourists or too many tourists in certain areas. In the environmental dimension, waste disposal and management, and the poor state of cycle paths were mentioned by almost all mayors. In some places, water pollution from industrial sites is also a problem. All of the mayors have tried to solve these problems, but with one or two exceptions, they have not succeeded in making a difference, only small steps have been taken. Some of these are infrastructure improvements: solar panels, green space maintenance, selective waste collection, community garbage collection, tree planting, or e-bike charging stations. All of the responding municipalities have a wastewater network, municipal and selective waste collection, but waste treatment is only provided in two of them. Waste collection is organised at the excursion sites, but littering was described as a very serious problem, which they are currently unable to deal with. However, all but one of the public buildings are equipped with solar panels.Our questions focused on the positive and negative economic, environmental and socio-cultural impact of tourism as well. These factors were examined not only in the case of mayors, but also in the case of local NGOs, which provided an opportunity to compare opinions. We calculated the means and variances of the factors measured on a scale of 1-7. In the ranking of averages, the different dimensions were treated separately in order to obtain a more comprehensive picture of the specificities of each area.

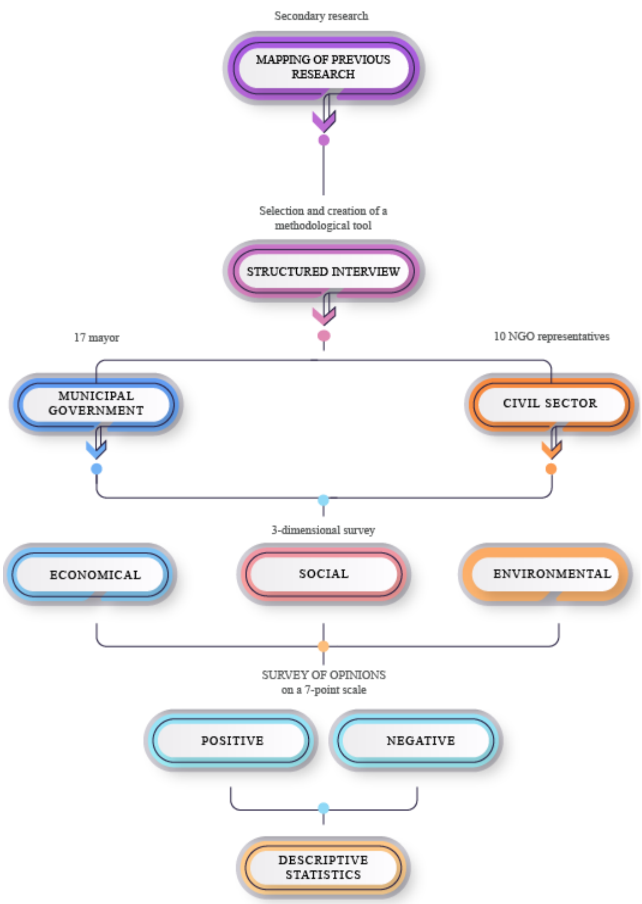


Figure 2. Flowchart of our research (Source: Authors illustration)

Results of the analysis of the economic dimension

First, we looked at the positive economic dimensions of tourism. The mean value of the responses given by the representatives of the municipalities shows that the municipalities' leadership focuses primarily on reducing the disparities in territorial development ($\bar{x}$ = 5,21; δ = 0,91) and on economic restructuring ($\bar{x}$ = 4,00; δ = 1,69). The strength of the response to reducing the disparities in territorial development is so consistent that the variance is the lowest. For NGOs, other factors have more priority. For them, job creation ($\bar{x}$ = 5,89; δ = 1,05) and income generation ($\bar{x}$ = 5,67; δ = 1,22) are the most important factors. This is understandable, as they approach the economic dimension from a different angle, prioritising the problems of the ordinary people more, while local authorities focus on problems at a regional level.

As regards to the potential negative economic impacts of tourism (Figure 3), we can also see a diversity of approaches between the different stakeholders. The responses from local authorities show that they prioritise the impact of inflation ($\bar{x}$ = 4,29; δ = 1,98), the cost of remedying the negative effects ($\bar{x}$ = 4,36; δ = 2,21) and the disappearance of traditional economic activities ($\bar{x}$ = 4,21; δ = 2,04). In contrast, the civil sector expressed a dominant concern about the emergence of seasonal employment ($\bar{x}$ = 5,22; δ = 1,72) and the cost of removing harmful impacts ($\bar{x}$ = 4,88; δ = 2,10).

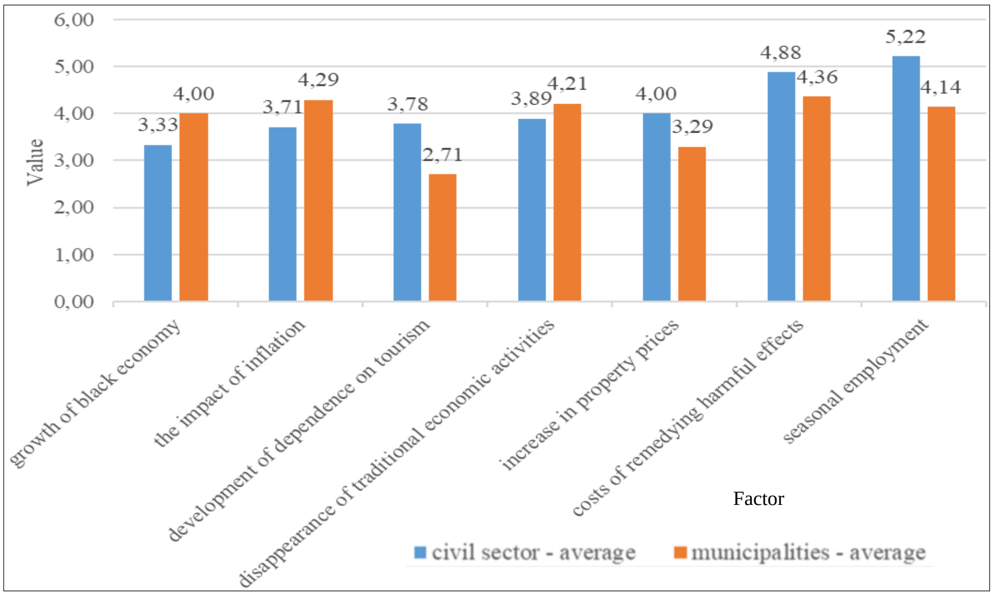
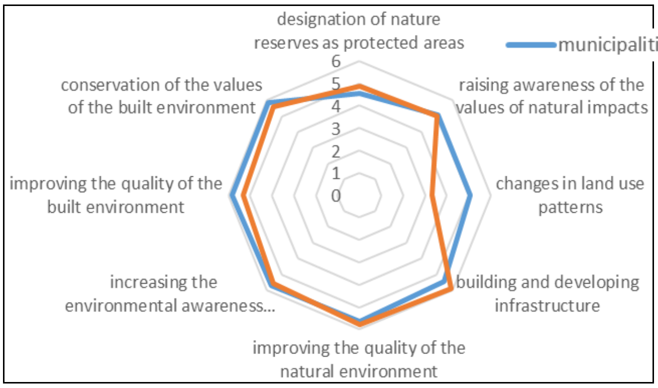


Figure 3. Perception of each negative economic factor (Source: Authors illustration)

Results of the analysis of the environmental dimension

Taking into account the positive environmental impacts that tourism may create or enhance (Figure 4), there is greater agreement between the two parties. The averages closely tied to each other, with minimal differences, highlighting important factors such as preserving the values of the built environment, building and developing infrastructure, or improving the quality of the natural environment. However, there is less emphasis (also with a consensus) on the designation of natural areas as protected areas, which scores below 5.00 for all stakeholders. Even more striking is the one factor that breaks the understanding: on the local government side, the sample saw a strong potential for change in land use patterns ($\bar{x}$ = 5,06; δ = 1,76), while the sample of NGOs and businesses rated it much lower ($\bar{x}$ = 3,33; δ = 1,22).



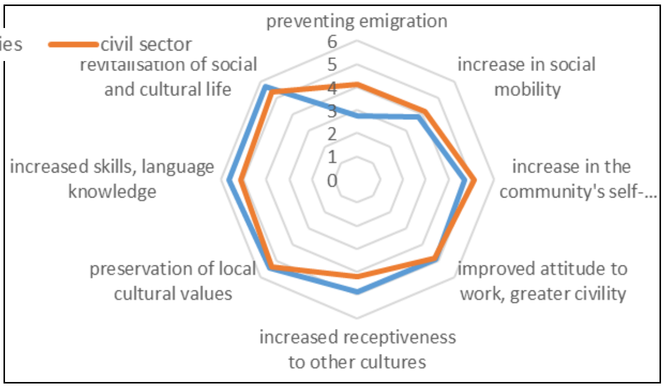


Figure 4. Perception of each positive environmental factor

Figure 5. Perception of each positive social factor(Source: Authors)

However, the perception of negative potential is less similar. On some issues, civilians are more concerned. These factors include increased waste production and littering ($\bar{x}$ = 6,00; δ = 0,86), and damage to flora and fauna ($\bar{x}$ = 5,44; δ =

1,13). Municipalities also think that it would be worthwhile to monitor the potentially increased waste problem ($\bar{x}$ = 5,31; δ = 1,70), but visual pollution was identified as the second most serious among potential problems ($\bar{x}$ = 4,88; δ = 1,63).

Also measured on the dimension of environmental factors, we investigated the importance that respondents attach to the creation of tourism brands that guarantee high quality and environmentally friendly services in order to achieve sustainable tourism. Municipalities seem to be more keen to introduce these labels. The responses show a difference of about one and a half mean values: on the municipal side, the difference is $\bar{x}$ = 6,06; δ = 1,88, while on the civilian side it is $\bar{x}$ = 4,63; δ = 1,68.

There is also a large difference in the extent to which respondents believe that sustainable tourism requires the influence of formal regulations, ordinances and standards on tourists. The representatives of local authorities gave an average score of 5.75 (δ = 1.80), despite the fact that the additional work for this solution would be primarily carried out by them. The civil sector rated the importance of the issue lower ($\bar{x}$ = 4,55; δ = 1,74).

Results of the analysis of the social dimension

The results of the average analysis of the positive social impacts of tourism show that respondents are optimistic about these factors and would like to count on almost all positive benefits, such as preventing emigration and increasing social mobility, an increase in the community's self-esteem in relation to their place of residence, an improvement in attitudes to work, a strengthening of civility, the preservation of local cultural values, the upgrading of skills and language knowledge, and a revitalisation of social and cultural life. In the case of social issues, NGOs are more optimistic about the potential positive effects. This is demonstrated by the fact that the average score for each factor is higher than 4.00 and that there is not much variation between their responses. On the other hand, local governments assigned significantly lower values to factors like increasing social mobility ($\bar{x}$ = 3,80; δ = 2,21) and preventing emigration ($\bar{x}$ = 2,75; δ = 2,40).

The responses are the most unanimous in the case of preserving local cultural values and improving attitudes to work. Although these do not represent the highest averages, the difference between the two is markedly low. As can be seen on Figure 5, the upgrading of skills and language knowledge is an expectation from tourism development that is important for both municipalities and civilians. Speaking of the negative factors, the differences were significantly lower (Figure 6). It is reassuring to note that in the case of tourism development, operators assigned particularly low averages to the negative factors (below 3.80). This alone shows that they have positive expectations for tourism.

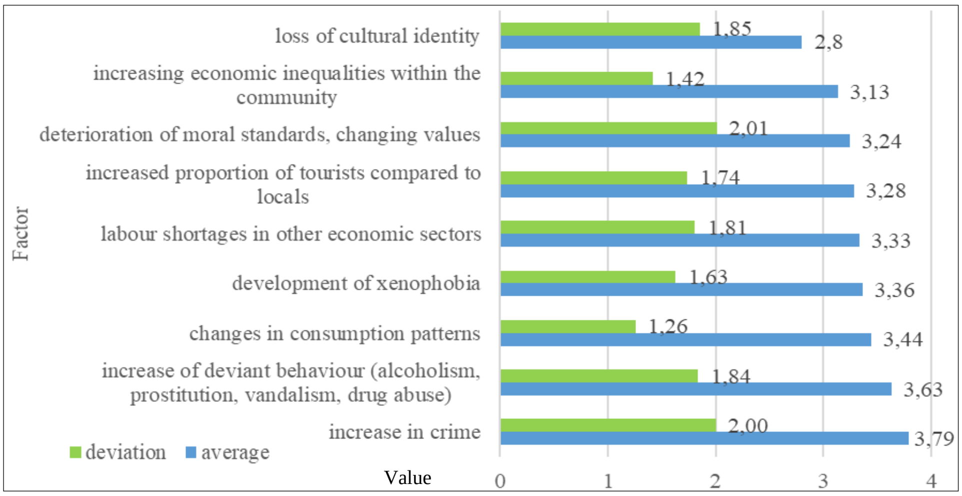


Figure 6. Perception of each negative social factor (Source: Authors illustration)

The social question - on the importance of consultation with local stakeholders and NGOs for the development of sustainable tourism - was answered with a mean value of 6.38 (δ = 1.05) by the local government, while NGOs rated it at 5.00 (δ = 1.80). A slight difference was found in the answers on the importance of cooperation between tourism businesses, local residents and municipalities at local level for the development of sustainable tourism. In this case, an overall mean of 6.88 (and δ = 0.35) was obtained from municipal leaders, while an overall mean of 6.33 (and δ = 0.87) from civil leaders.

Respondents had the unanimous opinion that tourism development, despite its negative effects, is important.

Issues raised by respondents

After the scaling questions, we also asked an open-ended question from respondents, to describe any problems, which had not been mentioned before, but they considered important and needed to be improved. Here, more specific information emerged that stakeholders would investigate and develop to take tourism to a higher level, but some people mentioned elements that had been investigated previously.

These were: lack of a coherent image design; tackling the problem of littering; water pollution; poor quality of the cycle paths; lack of cell service; lack of restaurants and accommodations; lack of marinas, slipways; construction and marking of hiking trails; lack of a visitor centre; lack of a uniform tourist app for Szigetköz; drastic increase in prices; many foreign settlers; definition of territorial 'carrying capacity' for different modes of transport; lack of medical practices

DISCUSSION

Sustainability has become a central issue in all sectors, including tourism, in recent years. Based on current trends in tourism, it is clear that the demand for sustainable tourism, linked to protected natural values, has increased dramatically (Borzán and Szekeres, 2021). The issue of sustainability is particularly important in an area where tourism can be a breakthrough for the population, but development can only be achieved in harmony with nature. In our work, we investigated the opinions on sustainable tourism development in the Szigetköz, an unexplored area with great potential for ecotourism, by interviewing the mayors of the municipalities and the leaders of major NGOs (in the fields of nature conservation, water sports, fishing, tourism, education). The sustainable development of tourism is a vital issue in the region, as nowadays, in addition to tourism, commuting to the two major cities of Győr and Mosonmagyaróvár and the proximity of the border to Austria provide jobs for a large part of the local population. Our research reveals that municipalities lack the professional staff and specific knowledge to manage tourism development in an effective, professional and coordinated way.

The results of the in-depth interviews show how respondents from municipalities and NGOs, who are involved in tourism, perceive each of these issues. The positive and negative aspects of the economic, environmental and social factors are summarised in a graph (Figure 7), which also shows the differences of opinion between decision-makers and NGOs. For social factors, the negative factors scored so low that it was only worth mentioning two factors by decision-makers.

Figure 7. Highlighting and comparing the main positive and negative elements for the different respondents Source: Authors illustration based on interviews

Respondents were unanimous in their opinion that tourism, despite its negative effects, is important to develop.

Our secondary and primary research results clearly show that the role of tourism management is necessary and important for sustainable tourism development in nature conservation areas such as the Szigetköz.

CONCLUSION

Our work clearly shows that, although sustainability is an important issue in all industries, including tourism, decision-makers are not sufficiently prepared and knowledgeable to make decisions related to sustainability, and most of them do not even know the exact meaning of sustainability. It was also found that, although there is a great potential for tourism development in the Szigetköz, there are no professionals trained in tourism management in the municipalities, making it difficult to develop tourism in a coordinated and professional way in the 26 municipalities of the Szigetköz. The limitation of the research is that the mayors are less informed about tourism and sustainability based on the in-depth interviews. This may be a limitation not only for the research, but also for sustainable tourism development. In terms of future research directions, it is important to also examine the public's opinion on tourism development directions with a focus on sustainability.

Author Contributions: Conceptualization, ZS.I.H. and E.H.; methodology, ZS.I.H. and E.H.; software, ZS.I.H. and M.K.; validation, ZS.I.H. and M.K.; formal analysis, ZS.I.H. and M.K.; investigation, ZS.I.H., M.K. and E.H.; data curation, ZS.I.H. and M.K.; writing - original draft preparation, ZS.I.H. and E.H.; writing - review and editing, Zs.I.H. and E.H.; visualization, M.K.; supervision, E.H. project administration, E.H. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 20.04.2023 Revised: 25.06.2023 Accepted: 31.07.2023 Available online: 01.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.901-910
DOI 10.30892/gtg.49307-1091

EVALUATION OF QUARANTINE PROGRAM: LESSON FROM HOTELS IN INDONESIA

Septi Fahmi CHOIRISA*
Faculty of Business, Universitas Multimedia Nusantara, Tangerang, Indonesia, e-mail: septi.choirisa@umn.ac.id

Shariff HARUN
Faculty of Business and Management, Universiti Teknologi MARA,
Puncak Alam Campus, Selangor, Malaysia, e-mail:shariffharun@uitm.edu.my

Nosica RIZKALLA
Faculty of Business, Universitas Multimedia Nusantara, Tangerang, Indonesia, e-mail: nosica.rizkalla@umn.ac.id

Citation: Choirisa, S.F., Harun, S., & Rizkalla, N. (2023). EVALUATION OF QUARANTINE PROGRAM: LESSON FROM HOTELS IN INDONESIA. *GeoJournal of Tourism and Geosites*, 49(3), 901–910. https://doi.org/10.30892/gtg.49307-1091

Abstract: International travelers had to quarantine upon arrival at a designated hotel in Indonesia during the pandemic to prevent the spread of the coronavirus. This study aims to investigate the hotel quarantine program in Indonesia from management perspectives in crisis circumstances. A qualitative methodology was applied with data triangulation collected from 11 top-level managers, operations, and management from official quarantine hotels in the second quarter of 2022. In-depth interviews were conducted to explore the antecedents behind hotel management and evaluate the repatriation quarantine program through the crisis management lens framework. The findings enhance the concept of crisis management framework in a particular program employed during a pandemic. Three related phases emerged from data analysis in crisis prevention and planning, strategic implementation, and evaluation were discussed. This study reveals the suggestions for hotel managers and the government for a future sustainable strategy. This study is the first paper to address the hotel quarantine program evaluation in Indonesia. This study contributes to enriching the hotel industry's crisis management framework. Pertinent recommendations for hotel management and government are provided to cope with this crisis.

Key words: hotel industry, quarantine, Indonesia, Covid-19 pandemic, Crisis Management Framework

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INTRODUCTION

The World Health Organization (WHO) published the first situation report on 2019-nCoV on January 21, 2020 (WHO, 2020a), updated its assessment of the outbreak as a public health emergency of global concern on January 31, 2020 (WHO, 2020b), and declared to be a pandemic on March 11, 2020 (WHO, 2020c). On September 20, 2020, Indonesia announced the most significant deaths among Southeast Asian nations, with 9,553 fatalities (Ulfiana, 2020). This is connected to several health-related issues, such as comorbidities and biochemical factors (Heriana et al., 2022). This led to the highest position in Southeast Asia for the number of reported cases (Djalante et al., 2020). As of June 2022, the Official National Disaster Management Authority requires proof of valid health insurance for all international arrivals to track the development of the situation regarding the spread of Covid-19 in various countries. Coping with that situation, mandatory quarantine is a requirement for foreigners and Indonesian nationals who travel internationally (Loasana, 2021).

Quarantine is performed at suggested locations approved by the Ministry of Health at their own expense, except for Indonesian Migrant Workers, Indonesian students who study abroad, and government employees who return from overseas activities. Hotel quarantine programs have appeared as a result of the Covid-19 pandemic. The announcement follows a national uproar over the substantial expenses associated with hotel quarantines (Nugraha, 2021). The Covid-19 task force claimed that 16,500 available hotel rooms had been converted into quarantine facilities, and these rooms are 70% booked. Prior to the quarantine program, the Covid-19 pandemic hardly impacted the hotel industry due to travel restrictions and border closures. The consequences of a pandemic on hotel operations were destructive. This industry has lost millions in revenue; 75 million jobs and USD 2.1 trillion in annual revenue are at risk (WTTC, 2022). The average revenue per available room (RevPAR) decreased by about 90% in 2020 (Courtney, 2020).

Implementing the quarantine program in hotels in Indonesia has had some benefits and challenges for hotel management. One of the benefits is that hotels in Indonesia were relieved and survived the middle of a catastrophe as a mandatory program by the government for international travelers (Choirisa et al., 2023). However, there were several issues with internal hotel management during the program, such as human resources capacity in handling quarantine clients as a result of major laid-off at the beginning of Covid-19 (Choirisa, 2022). In addition, employees need to deal with guest boredom as negative emotions and moods experienced by the hotel guests during quarantine (Pratt and Tolkach, 2022). On the other side, hotel management subsequently needs to provide unusual service delivery in order to meet the government requirement for quarantine hotels such as frequent guest facilities sanitation and ensuring guest safety to protect them from the spread of the virus. Strategic crisis management is implemented in businesses to mitigate

* Corresponding author

adverse consequences (Bilic, et al., 2017). Therefore, this study outlines those gaps and challenges, posing evaluations for the quarantine program. By identifying strategic responses used by the hotel industry and exploring the level of knowledge and readiness of Indonesian hoteliers for crisis management, this study brings contributions to practice.

LITERATURE REVIEW

1. Crisis Management Framework

A crisis is described as a situation that has a potentially long-term effect on an organization which possibly interferes with the ability to operate normally (Malhotra and Venkatesh, 2009) and jeopardizes its fundamental principles, including its subjective sense of self and existential base (Pauchant and Mitroff, 1992) due to natural crises, civil conflicts, technology failures, and pandemics (Cushnahan, 2003; Tse, 2006). Crisis management is a helpful tool for managers to run a successful organization, and it notably helps to keep the business surviving (Ribaric, 2010). Therefore, crisis management entails all actions that must be appropriately organized before a crisis occurs to handle and immediately and effectively (Yu et al., 2008). Crisis management became one of the popular topics in the hotel industry, particularly in unpredictable circumstances such as epidemics, plagues, or pandemics. Previous studies on managing epidemic crises have emphasized the adverse effects on the tourism sector and suggested that additional research be done to comprehend the various facets of an epidemic crisis.

A study in Ghana looked at how small and medium-sized hospitality and tourism operators (SMTHEs) handle crises. The pandemic had a significant impact on SMHTOs, including unexpected cancellations of reservations, the depletion of emergency funds, and declines in revenue, as well as other problems like layoffs and failures to pay taxes (Dayour, et al., 2020). Several studies have been conducted to evaluate the ability of hotels to deal with Covid-19 effectively with the crisis management strategy (Le et al., 2021; Lai and Wong, 2020; Choirisa and Situmorang, 2021). In addition, some impacts that negatively affected such as hotel room rates and occupancy rates decrease (Kim et al., 2018) in line with a decreased demand for hotel rooms (Song et al., 2011). This could lead to economic crises and deter tourism because of the high economic uncertainty (Olivia et al., 2020). Recognizing that a crisis has various stages, including pre, during, and post, may help academics and practitioners better grasp crisis management techniques (Ritchie, 2004). The pre-disaster step seeks to create a state of readiness prior to a triggering event (Carmeli and Schaubroeck, 2008). The purpose of post-disaster research is to effectively handle future crises by conducting a critical analysis of lessons learned. However, the aim of the study at the crisis management stage is to create emergency and contingency management (Sawalha et al., 2013). According to a number of studies on crisis management techniques at various stages, most studies were conducted after the crisis. Because it was undertaken during the COVID-19 crisis, this study has good value for hospitality research.

2. Quarantine in Indonesia for International Travelers

Governments respond to the COVID-19 crisis by managing pandemics and implementing quarantine and border controls. The Covid-19 literature highlights quarantine's efficiency in stopping infection transmission (Chiew et al., 2020). Facility-based quarantine is believed to be more successful than at-home quarantine (Chen et al., 2020). To ensure international travelers are not infected with the virus, the Indonesian government mandates that repatriated individuals submit to Covid-19 testing before and after quarantine. They will be treated at a hospital if their test results are positive. To prevent the spread of Covid-19, the Indonesian government has put quarantine restrictions in place for those repatriated. In several dedicated hotels, international travelers must isolate their first 14 days in Indonesia with a minimum of 1 dose of vaccinations under strict quarantine conditions. Hotels must adhere to stringent health precautions during this time, which includes physical distance, self-protection such as wearing face masks or face shield, and hygiene such as washing hands (Quarantinehotelsjakarta, 2020). Emerging literature primarily focuses on the Covid-19 pandemic's effect on the hotel industry, either from the customer's insight or the management's strategy. Meanwhile, in the medical literature, isolation and quarantine in response to the emergence of the infectious virus have long been discussed (Dincer and Gocer, 2021). This is because quarantine constrains people's freedom of movement and raises moral concerns about restricting people's rights (Upshur, 2003). Moreover, mental health has raised concerns from the medical literature about its effectiveness and ethical issues (Brookes et al., 2020). A study investigated the quarantine programs impacted by multiple negative and positive opinions that affected their well-being (Dincer and Gocer, 2021) and Indonesian hotel employees were having the intention to leave due to their mental health issues in handling quarantine guests (Choirisa, 2023).

The mandatory Covid-19 quarantine has also had an effect, such as emotional suffering (Xin et al., 2020) and negative emotions (Pratt and Tolkach, 2022). However, facility-based quarantine is believed to be more successful than at-home quarantine (Chen et al., 2020) in effectively stopping the spread of infection (Chiew et al., 2020). Le and Phi (2021) conducted a study refining a pandemic crisis management framework in the hotel sector based on global news media. This study has revealed effective management practices in hotels globally, which involved, transformational emergencies, business innovation, services changes, adverse effects, strategies for recovery, health and safety measures, and government policies. Nevertheless, hotels need to adjust their operations to the crisis management practice as hotels tend to delay system maintenance and push employees to take unpaid leave (Lai and Wong, 2020). The literature study identifies hotel quarantine as a strategy to cope with the pandemic, which impacts the hotel business as an accommodation provider. However, there are few studies on quarantine programs from the business accommodation insight and how they handled the unpredictable situation during the program. Therefore, this study focuses on evaluating the quarantine program implemented in designated hotels in Indonesia, specifically from a management perspective. By examining the quarantine program through the crisis management framework, the study seeks to provide insights and recommendations for improving its management and addressing any identified challenges or issues.

RESEARCH METHODOLOGY

This study employed a qualitative method with a semi-structured interview approach in 2022 through an online meeting. Table 1 summarized the demographic profile of the respondents. A total of 11 participants were middle managers to director level from international and local chain hotels in Indonesia. To seek comprehensive insight, both management and operations were involved. All participants were at the official quarantine hotels, managed by Indonesian Hotel & Restaurant Association or PHRI (Persatuan Hotel dan Restaurant Indonesia). Neither the participant's information nor the hotel names were revealed during the data analysis as a protective measurement of the hotel's reputation.

Table 1. Demographic profile of participants (Source: Author Data)

Participants	Gender	Educational Background	Years of Service	Position	Hotel Chain
P1	M	Bachelor	31	General Manager	Local Chain Hotel
P2	M	Bachelor	15	Regional Director of Revenue	Local Chain Hotel
P3	M	Master	11	Front Office Manager	International Chain Hotel
P4	F	Bachelor	15	Human Resource Manager	International Chain Hotel
P5	M	Bachelor	22	Director of Room	Local Chain Hotel
P6	M	Bachelor	20	Food & Beverages Manager	International Chain Hotel
P7	M	Master	20	Director of Revenue & E-Commerce	Local Chain Hotel
P8	M	Bachelor	20	Director of Sales	International Chain Hotel
P9	M	Bachelor	15	Executive Chef	International Chain Hotel
P10	M	Bachelor	14	Duty Manager	International Chain Hotel
P11	M	Bachelor	25	Executive Assistant Manager	Local Chain Hotel

The participants for this study were from the operation and management manager levels. In order to enrich the study result, diverse departments were involved in obtaining insight. Participants were experts in their field, as depicted in Table 1. Their experience was more than a decade. The operational managers were duty managers and front office managers as a service counter in room handling and director of rooms as an overall service environment in room and security. Moreover, the food and beverage manager and executive chef represented the food and beverages department as an insight into production, service delivery, and management planning. At the management level, the regional director of revenue and director of sales sought a strategy for business development to generate income. On the other side, human resources managers support the human sources aspect of the business while general managers and executive assistant managers examine from the holistic view as decision-makers. A study found that the manager the role of a decision-maker significantly impacts contingency planning and crisis management (Giousmpasoglou et al., 2021).

As of case study, this research is fitting for data triangulation. The data involves using multiple sources, methods, or observations to confirm findings while enhancing the validity and dependability of this study. This method aims to reduce bias, reinforce the evidence, and strengthen confidence in findings (Bryman, 2001). This study had a range of sources such as interviews with various informants in different situations or contexts (Patton, 1999). Lincoln and Guba's (1985) stated that credibility, transferability, dependability, and confirmability criteria were used to assure the research quality and reliability. Several interviews, observations, and document findings were combined to achieve credibility. Then, to provide industry databases that could be used in various industrial-research situations, transferability was maintained by continuously comparing the results with individual circumstances. Reliability was attained by keeping all recordings, notes, and other documentation for assessment and auditing purposes. Confirmability was attained by ensuring that the researchers prevented their biases or theoretical perspectives from compromising the research's total integrity (Situmorang and Japutra, 2024).

Furthermore, to boost data dependability, secondary data for this study was obtained from various sources, including research studies, government publications, Covid-19 data, and quarantine hotel information highlighting mandatory quarantine services for more than 15 months of the program. Then, the analysis procedure is divided into several stages. Before analyzing the data from multiple participants, the researcher compiled the transcript, coded the data to find the outcomes of interviews grouped according to the research question's theme, and analyzed the results based on the preset themes (Bryman, 2016) as can be seen in Figure 1 for the research methodology flowchart.

The research questions were developed from the crisis management framework consisting of the following sections:

1. Proactive pre-crisis planning

At this stage, the respondents were asked about the hotel situation during Covid-19 and how the hotel employed the quarantine program.

2. Strategic Implementation

This stage was questioning hotel strategic implementation with challenges and opportunities.

3. Evaluation & Feedback

In the evaluation stage, the participants were asked about their suggestions based on their experience in providing a quarantine program.

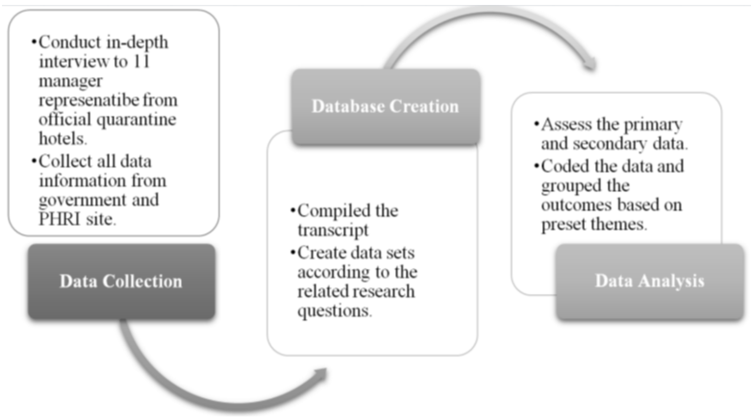

Figure 1. Research Methodology Flowchart (Source: Author)

FINDING AND DISCUSSION

Given the data set, each data had analyzed to the central discussion theme based on the research topics. The findings are based on the crisis management framework by Ritchie (2004). This study provides the strategy in hotel management during Covid-19 which was obtained from in-depth interviews. In the following sections, the documentation and observation were after the findings data to explore these results about the crisis management framework.

1. Hotel Quarantine Flow

In the third quarter of 2021, the Indonesian government made a mandatory regulation for international travellers who enter Indonesia to be accommodated in appointed hotels in Indonesia and gradually opened its borders to tourism in 2021. Institutions involved in this program namely the National Agency for Disaster Countermeasure, Military Regional Command, The Ministry of Health in Indonesia, the Indonesian Covid-19 task force with The Indonesian Hotels and Restaurants Association (PHRI), worked together as the Covid-19 task force team facilitating international travellers who required mandatory quarantine. The government has designated 15 hotels in Jakarta and surrounding areas, where the largest airport is located. As depicted in Figure 2 hotels that want to be certified as an official hotel were required to register to PHRI such as being a member of PHRI and holding a Cleanliness, Health, Safety, and Environment Sustainability (CHSE) certification. Then, a site visit inspection will be conducted by the PHRI together with the Ministry of Health, assisted by the local police and then the local military to ensure that hotels or facilities met their minimum safety and hygiene protocols. If the hotel passed the assessment, they will be informed to follow the regulations of the program such as different entrance areas if there were any regular guests, the hotel must provide accommodation for nurses, doctors, and an Indonesian national military hired to monitor and make a decision if there were positive case found in a hotel.

"The office hotel must hire twenty-four hours doctors and nurses and provide their accommodation to regularly check guests' PCR test results from the airport within three days and seven days after". (P5)

The hotel must also adhere to requirements that the hotel has two separate lobbies for regular guests and guests who will carry out quarantine repatriation. Additionally, the hotel must create its health protocol, starting with the elevator facility, employee facilities, and all public areas that must be equipped with standards or (Standard Operating Procedure) SOPs from the Indonesian Ministry of Health and the Task Force of the Republic of Indonesia.

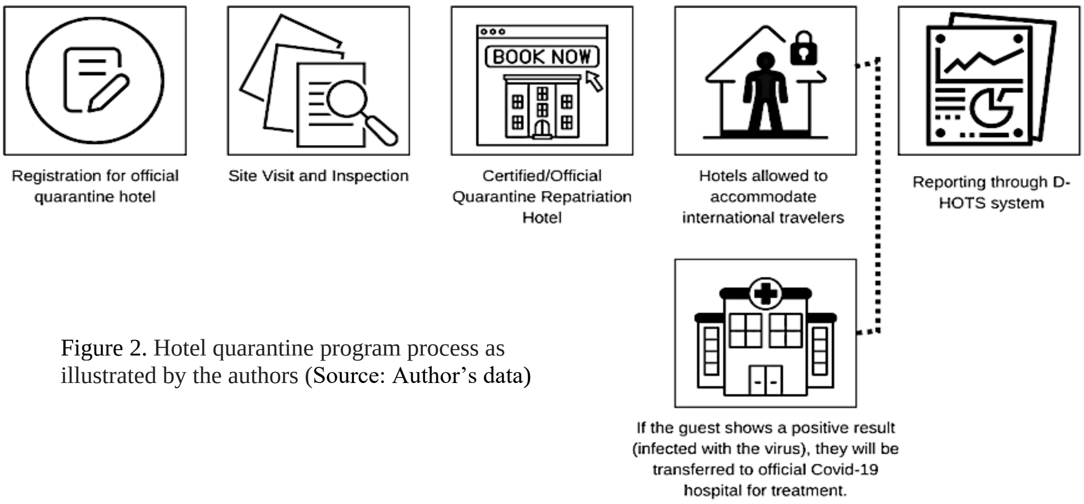

Figure 2. Hotel quarantine program process as illustrated by the authors (Source: Author's data)

Table 2. Quarantine Hotel Requirements (Source: Author Data)

Hotel Facilities	Requirement
Lobby	Different Lobby access between regular and quarantine guest
Room	Internet; In-Room Entertainment; Regular Disinfectant; Balcony space (plus point)
Check-in Counter	Acrylic Divider; Hand Sanitizer; Visible social distancing sign
Public Area	Visible Social Distancing Sign; Maximum Capacity Arrangement
Lift/Elevator	Different Lift to cater to regular and quarantine guest; Maximum Capacity Arrangement
Food & Beverages	Serve in-house full meals

All participants mentioned that all public areas must provide hand sanitizers, and the main area and rooms are disinfected every three hours and several other health protocols. However, if the hotel found a positive case, then the hotel must empty the room for three days. Moreover, hotels need easy access to the local hospital within 5 minutes. Back and forth to the local hospital that can support if there is a positive case for Covid found within the repatriation guest. Meanwhile, the PHRI set the hotel's rate range policy based on the hotel's star to avoid a price war among the hotel's competition. In order to prevent the five-star hotel from stealing the business from four or three-star hotels, the government has strict regulations that hotels have to comply with while registering their hotel as a quarantined hotel in a price range for different hotel stars. Many participants agreed to follow their obligations, and Participant 11, as the decision-maker, felt convenient with how government policy protected their competition in a crisis.

"Quarantine rate decided by PHRI is a very good policy, this regulation protects both customers and hotel competition". (P11)

In addition, the quarantine hotel program impact hotel's social environment by having contactless service. Given the devastating effects of Covid-19 on the hotel industry, transformation service is considered a responsive solution. The priorities of hotel management have changed due to the adaptation of the new standard service for the quarantine program. Safety and hygiene became the new priority to provide a safe environment for guests and employees through contactless service (Bonfanti, 2021). Therefore, hotel management must carefully plan the quarantine program's concept and system to meet the government requirement to stop the spread of Covid-19. Once hotels pass the assessment, they will be listed as the official hotels on the Indonesian quarantine website managed by PHRI. Then, hotels were allowed to accommodate quarantine guests with conditions if positive cases were found during the isolation. The guest must be allocated to the dedicated hospital for Covid-19. Then, for the data to be in sync with the Covid-19 case, hotel management must constantly report and update the guest's PCR test results per the DHOTS system.

2. Crisis Management Framework in Quarantine Program

Based on the findings, this analysis developed a crisis management framework for the hotel industry in a quarantine program. The analysis is presented through the following phases: crisis prevention and planning, strategic implementation, and evaluation and feedback. This study revealed how hotels employed the quarantine program. Participants claimed they faced many challenges in the new normal servicescape. However, the opportunity earned while conducting the quarantine program was revenue and word-of-mouth. As soon as the quarantine program was released, hotel occupancy rose substantially, helping the industry survive the pandemic catastrophe. In addition, guests who enjoyed their stay were more likely to spread the word about it in their community, which benefited the hotel's reputation. As a result, despite the challenges encountered during its implementation, this quarantine has successfully supported the hospitality sector. The findings for each phase of the crisis management framework from management insight are discussed in the following sections. The crisis management framework by Ritchie (2004) was not focused on hospitality themes. However, this study found several phase similarities between the framework and findings. Although these findings revealed, different strategies and techniques used in hotels, prevention and planning through business scanning and risk analysis were found. The data successfully identify the action for planning in a crisis in the following descriptions:

2.1. Phase 1: Pre-event and early symptom

The most popular hotel crisis preparedness strategy is the saving cost, especially in the early symptom and pre-event phases (Le and Phi, 2021). Many participants claimed that as the first experience in a pandemic, hotel management had no clue to decide the initial stage of an unpredictable situation. Although they utilized crisis planning, such as saving resources in human resources and assets, the situation remained uncontrollable. Participants 1 & 11, as decision-makers, mentioned that hotel management analyzed the risk in different possibilities as the circumstances were unusual. The highest risk for them before joining the quarantine program was closing the operations. However, the hotel underlined the importance of brand image for its sustainability. Hotel management predicted that the trust could sharply decrease once they joined the quarantine program. It would be difficult for them to return to regular business as their facilities have been affected by the potential spread of the virus from the quarantine program. Nonetheless, the business demand could have been more critically slow. This becomes the most significant consideration in remaining business to survive.

"Was a quite delicate situation. We also know how to make a deal with Covid-19. but the board of directors only gives the option to join the quarantine program for the property which was suffering from the revenue" (P7)

This phase is mandatory to ensure that hotels consider other possibilities to unfortunate their business or alter their risk to opportunity in generating revenue. The majority of hotels failed to analyze their business and identify a new target market prior to the development of the quarantine program. When the quarantine program began, however, many hotels were able to assess their commercial risk and begin looking for new businesses to help them manage their financial and management risk. Hotels in this phase considered international travelers as a top priority to boost their occupancy. Hotels diversified their business by expanding their service to special packages such as entertainment or food and beverages product. This tactic strategy was effective in attracting travelers from abroad who require quarantine hotels.

2.2. Phase 2: Emergency

This phase is when the pandemic became apparent such as booking cancellations and an increase in Covid-19. Most hotels rapidly implemented a defensive or survival strategy through cost-cutting, namely laid-off or closed operations. In this phase, hotel management also planned to save resources, as they short their income; one of the participants from an international hotel chain had to close their hotel temporarily since the pandemic was announced due to zero demand. On the other side, not only local chain hotels but also international hotels decided to use varied strategies to release working capital, increase operational effectiveness, and delay non-critical renovations (Israeli et al., 2011). Some hotels utilize their resources effectively, such as closing floors to maximize guest rooms in dedicated floors and avoiding hiring new employees. To overcome this situation, when the government allocates several hotels to be the official at this phase with strict rules and requirements. The effect of the emergency phase the hotel management was in employee surveillance to ensure the health protection of stakeholders.

"Every hotel registered as the official quarantine hotel, the staff cannot go home for about two weeks or one month. They are willing to do that instead of being layoff." (P4).

Local or International chains owned by established and sustained companies might experience a different impact from an independent hotel with zero support from their corporate. As a result, it is crucial for hotel management to prepare sufficient financing or stock before a crisis to be able to cover operating expenses like wages and utilities. In the meantime, All participants mentioned CHSE (Cleanliness, Health, Safety, and Environment Sustainability). This was established in accordance with the Minister of Health's Decree on Health Protocols in Public Places and Facilities in the Context of Covid-19 Prevention and Control in December 2021. More than half of tourists visiting Indonesia tend to choose hotels that implement complete health protocols. It is believed that hotels that have implemented the CHSE concept will have a higher occupancy rate (Mediana, 2022). Moreover, to be able to join the quarantine program, the official hotel was required to be registered as a member of The Indonesian Hotels and Restaurants Association.

“We register to PHRI and then PHRI conducted the audit to ensure that our hotels or facilities met their requirements because this is a special need for the repatriation”. (P11)

As the hospitality industry is prone to government changes, hotel management must consider basic certifications such as hygiene and sanitation, quality management systems, and health and safety management systems. Hence, the hotel was fully equipped with appropriate certification whenever the regulation transformed. In addition, networking in the hotel industry is subsequently critical. The quarantine program is dedicated only to the Indonesian Hotels and Restaurants Association members. Therefore, expanding networking in a related field is necessary to have an early opportunity.

2.3. Phase 3: Crisis

Most countries implemented a lockdown or border restriction strategy throughout the crisis. It was managed in different levels, lobbies, and facilities to ensure particular service. Two options offered to hotel management were service transformation and closure, which left them with low power (Le and Phi, 2021). Most respondents revealed that operations-maintained efficiencies, such as cutting the cost of manning, closing facilities, wage reduction, and being laid off. Meanwhile, some hotels registered their hotel as the official quarantine hotel with market diversification. They open quarantine hotels for a specific maximum occupancy or room number; others they sell for regular guests.

"The first wave of Covid-19, our hotel occupancy, is challenging. It was only five per cent at that time; even when another hotel collapsed, they had to reduce their employees. Fortunately, our hotel did not because we joined this repatriation program, our occupancy increased, and we gained more revenue from the quarantine program."

In addition, most participants mentioned the cost reduction primarily from manning and salary reduction. Firstly, they terminate the daily workers and part-timers. Then, it escalates to the contract status of workers. Some hotels wait until their time contract limit ends, and some forcibly shut the contract. In different strategies, some hotels with backup financial sources from their company could only provide basic salaries without service charges for permanent staff. However, hotels must cut their permanent employee's basic salary for low financial sources. For instance, the manager level will be reduced to 60% while the associate level will be around 40%.

"We have to limit persons to work at our hotel, but we have many guests to be handled. Thus, we need to hire daily workers to substitute staff who have been laid off at the beginning of the pandemic." (P3)

Hotels need to reduce their costs effectively to protect their capital. Although the quarantine program required complex services that might affect to hotel’s operation costs such as the budget for hygiene and sanitation, hotels must effectively cut their biggest expenditures. Most hotels were forced to lay off their employees and close several floors to maximize their electricity and water costs. However, hotels should consider the negative side of cost reduction in operations quality. Similarly, previous research comparing hotel business between the early and pandemic stages found that hotels have a tendency to delay office and system maintenance and push employees to take unpaid breaks (furloughs) (Lai and Wong, 2020). This is because wage costs expense roughly 50% of operating costs (Mandelbaum, 2017). By executing the highest expense, hotels can effectively reduce operating costs during a crisis. In addition, with few sources left to support its operations, hotel management had to maintain their performances. The capacity adjustment was the strategy to overcome the circumstances as a tactical strategy in labor capacity. *Short-term capacity management* is defined as the implementation procedures or prerequisites for implementing the strategic plan, emphasizing relatively brief periods and specific operations (Pullman and Rodgers, 2010). After evaluating the quarantine program, hotel managers considered cross-support systems among departments. Employees employed during the quarantine program must be willing to be placed in other departments and maximize their capacity.

"Particularly in Food and Beverage Department, to fulfil a different service scheme for quarantine guests, other employees were placed to help the kitchen or service team in food preparation or room delivery services." (P1)

"I burned out for quite some time because of the workload, which was not aligned with our sources. A quarantine repatriation business is a business that requires a labour-intense which is with the minimal sources." (P8)

"We often skip our meal, our meal break, and then that becomes a common thing which is not good at all. Long of our shift is normalized during that past two years" (P8)

“In Food and Beverages Department, we hired more people to call all quarantine guests and delivered their food for full-day packages as they were only allowed to consume the hotel’s food. We hire more people in the kitchen to cook and prepare the food.

The hotel was expected to perform at its optimal level despite challenges with internal operations, although employees were afraid of being exposed to Covid-19 (Teng et al., 2019). Hotels were responding to crises by altering their resource capacity in order to deal with these circumstances. Hotel personnel must be willing to adjust their workload and working hours as necessary. Employees were required to assist the other departments in the quarantine program in order to provide hotel services. To meet the service ratio, employees frequently put in more time at the workplace than is standard. By utilizing this short-term strategy, they successfully matched capacity adjustment to demand. These techniques have an immense success potential to improve guest experience immediately (Adenso-Diáz et al., 2002; Klassen and Rohleder, 2002).

2.4. Phase 4: Recovery

This phase is when travel demand swiftly recovers and bounces back as the number of cases declines and governments relax their travel restrictions. Participants 3, 6 & 9, as decision-makers in hotel daily operational service, mentioned that service automation and innovation were the strategies learned from the quarantine program. Many hotels encountered difficulties accommodating all guest needs during the quarantine program. Hotel managers should consider anticipating their operations through service automation. In addition, for the Covid-19 pandemic case, hotel employees were asked to avoid direct service to their guests. Thus, service automation can be a solution. For instance, hotels can use technology as a tool for guests to choose their menu, eliminating the need for receptions to phone each guest individually daily to inquire about their meal choices. The automation service may optimize manual procedures to enhance hotel operations and guest experiences. In the quarantine program generally, the DHOTS was an innovation made for the quarantine program by the government and Indonesian Hotel & Restaurant Association. DHOTS applications system is an innovation to help hotels connect to the appointed department in government that helps its program to run synchronized. As soon as an international traveler enters Indonesia for the first time until the completion of the quarantine program, this technology can connect all the institutions to track and record their movements. However, there needs to be internal hotel management innovation to ensure communication workflow runs smoothly among departments since the quarantine program requires strong communication among related staff. Thus, hotel managements need to employ technology that supports operation teams in integrating their operational services. The official hotel in quarantine program might impact its reputation or brand image due to accommodating potential positive guests. Some hotels were concerned about regular or loyal guests' perspectives in facilitating international guests. People can assume there is a significant possibility of virus transmission even though quarantine hotels have rigorous procedures to tackle a positive guest during their program. Therefore, hotels must develop an effective marketing strategy to share the hotel's optimal implementation in suppressing the spread of Covid-19.

2.5. Phase 5: Resolutions

The system may not return to normal after a crisis since several components will likely change. However, lessons learned from the program can be concluded as communication, transparency, and marketing for government and hotel management. Most of the respondents mentioned that communication is critical for this program. Since this program involved many institutions and companies, the information should be delivered internally at the initial stages if there are any critical issues, such as quarantine period changes or new implementation regulations, rather than informing the press at the first action.

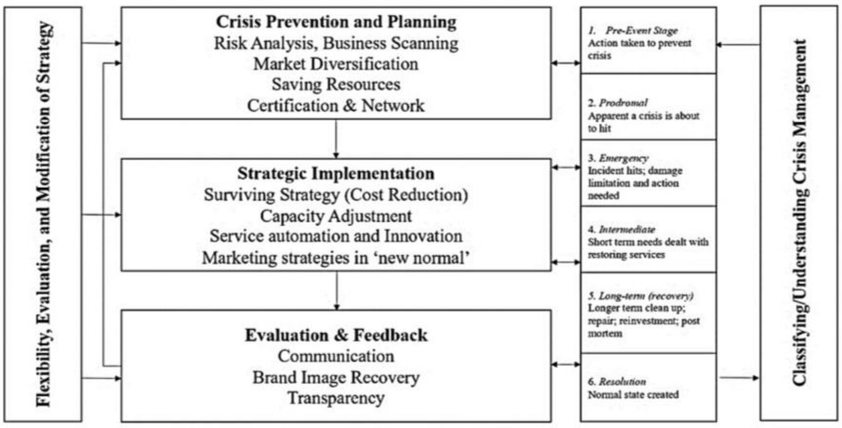

Figure 3. Crisis management practices in hotel quarantine program by Ritchie (2004) (Source: Author Data)

This is because all the decisions from the government will impact the operations, and in many cases, hotel management receives the news through the media, such as news articles, television, and social media, not from the internal organization involved. Many participants mentioned that their operations team faced challenges to inform sudden changes from the government in relation to their quarantine program.

"I would say the rules should be clear and not be launched at the last minute. Because it affects the guest's flight itinerary or the guest's schedule based on the experience, the regulation came very on short notice". (P4)

In the meantime, for the hotel management side, few participants said that marketing was a key to gaining the market trust by exposing the "New Normal".

"We need to get the regular business market by a marketing campaign to expose our hotel is clean from Covid-19, especially after the quarantine program lifted". (P8)

Transparent communication is vital to obtaining the success of a specific program. This quarantine program involved many institutions and companies, so synchronizing information is challenging. Therefore, internal communication must be active between the government, the Ministry of Health, airport staff, and hotels to avoid misleading information. The quarantine program was initially subject to a 14-day quarantine mandated by the government; this was later reduced to 8 days, five days, and three days as of December 2021 (Situmorang, 2021). The sudden information for international travelers was directly and indirectly related to hotel management in communication and the coordination nature of the quarantine task force and caused miscommunication among them. The Indonesian government could not fully comprehend how to handle COVID-19 because communication was problematic, particularly at the government level (Roziqin, 2021).

In addition, hotels are concerned about how people portray their brands, so a recovery strategy to gain market trust is necessary. Since people prefer to choose a hotel with less risk of health, the exposure by promoting hygiene, sanitation, and safety should be the hotel's priority. Social media as an online distribution channel could be an option to demonstrate the hotel's strategy to protect its customers. In the evaluation stage, the participants were asked about their suggestions based on their experience in providing a quarantine program. Both international and local chain hotels shared similar challenges and opportunities dealt with quarantine programs. Moreover, there are lessons learned from its program, which involved internal preparation and external communication. Furthermore, lessons must be feedback for the hotel's management even if the crisis has passed. *Crisis management* is a continuous process that involves a feedback loop returning to the pre-crisis stage once the crisis is ended. This enables hotel management to learn from past circumstances and develop a new strategy that helps the business perform better. In summary, the findings indicate that many organizations established various recap plans in light of the crisis, including plans to assess the situation, draw lessons from it, and enhance their operations as depicted in Figure 3. Some also engaged in increased marketing efforts and capacity maintenance plans. The hotel management also provides the evaluation of the quarantine program in order to enhance effective communication among stakeholders.

CONCLUSION

This study aimed to explore the hotel management insight who had experience in quarantine hotel operations. This study found that official quarantine hotels in Indonesia had prepared with proactive pre-crisis planning in risk analysis to strategic implementation and evaluation. The quarantine program provided by the government helped the hospitality industry to bounce back into business in unprecedented circumstances. After hotels registered as the official quarantine accommodation, hotel management applied their strategic implementation from pre-joining to the end of the quarantine program. At the beginning of the quarantine program, numerous hotels encountered several difficulties running the quarantine program to fulfilled the government safety and hygiene regulations during the required period of isolation. Because of low demand in business, hotels shifted their market to accommodate quarantine guests instead of retaining their existing segmentation.

Also, as suitable accommodations, hotels were equipped with the necessary certification to obtain the public's trust. Meanwhile, during the most challenging time in the middle of the quarantine program, hotels enforced capacity adjustment to their human resources while applying cost reduction to their operating expenses. The service automation was a lesson obtained to ensure that the quarantine procedures were performed successfully. Most official quarantine hotels need service automation to transform their servicescape and support critical departments in service delivery. Additionally, the innovative system was utilized to connect the external organizations participating in the government's quarantine-mandated program so they could monitor the movements of quarantine guests. Hotels also campaigned for their new regular facilities treatment during the pandemic to ensure the public acknowledged their preventive actions to deal with Covid-19 and guest safety as a primary priority. As the last stage in crisis management, hotel management evaluates communication and transparency between stakeholders as critical issues in the quarantine program.

Since the mandatory isolation days during the quarantine program fluctuated depending on the Covid-19 case, hotels as the accommodation facilitator need to communicate and directly interact with international guests to inform their isolation days that possibly be cut or extended. The urgent information spread to the media instead of the internal task force, which hugely impacted the quarantine operations, especially for hotels that experienced minim information for the update. Therefore, to develop an improved strategy for their future actions, the government should consider announcing crucial information or policy earlier to the primary organization involved in the quarantine program before announcing it to the media. In addition, to rejuvenate the hotel brand, official quarantine hotels were campaigning for the new standard strategy in seeking trust from the public as their prominent action to tackle their concern related to Covid-19.

1. Theoretical and Managerial Implications

The result of this study enriches the crisis management framework in the hospitality industry, particularly programs employed by collaboration between the government and the hotel industry. This study benefits hospitality studies in extending crisis management strategy in pandemic circumstances. The development of the current framework is the result of this study. In prior studies, certification, networking, and marketing were not included as early preventative strategies or as the new normal for the crisis stage. In the last phase of the crisis, brand image recovery was identified as a new practice. Transparency was after the government's suggestion to share the opportunity with the other suffering hotels. The hotel sector can cope with a crisis successfully and efficiently by understanding the strategic crisis management method. Hotel management can obtain a better overview of their operations and essential resources. They should focus on constructing structured structures to respond successfully, cultivating a responsive and adaptable culture, and enhancing managerial competencies as part of the management development process to handle future crises (Evan and Elphick, 2005). It concentrates on the crucial procedures of the various stages and can assist them in making the right decisions. Hotel managers can optimize their standard operating procedures in crises, such as handling contaminated covid guests.

Moreover, hotel management must consider employees' well-being when handling quarantine guests. Hotels can hire a professional service to provide counseling sessions for employees who feel burned out because of the complexity of stress brought on by their concern over losing their jobs and fear of Covid-19 (Choirisa et al., 2023). Importantly, as the quarantine program causes employees stressors, hotel managers should consider employing technology to help operate effectively. Therefore, one of the methods for reducing employee strain might be service automation in food-taking orders since all quarantine guests were offered full-day meals. Next, hotels can consider leveraging the servicescape by designing a self-check-in counter to limit human contact. The strategy applied could comprehend that hotels need crisis management and that survival may depend on planning and preparation. It is strongly recommended for hotel management develop a written crisis manual which should act as a guide with designated tasks and responsibilities.

2. Limitation and Future Studies

This study has several limitations. The respondents were from the official quarantine hotel in the capital city of Indonesia. Data could be obtained from richer empirical results from different perspectives from the stakeholders, such as the government and international travelers who experienced quarantine in Indonesia. In addition, this study was conducted nearly to the end of the quarantine program. Thus, it may impact the insight of the respondent's recovery phase. In addition, all respondents were at managerial levels and might have had different insight from an associate level which intensively works directly with quarantine guests. Thus, reviews from the management side cause a potential bias as a top-level employee. This study encourages future studies to cover further research from holistic stakeholders' perspectives to complement the management insight from the crisis framework. However, a study found that quarantine guests were satisfied with the quarantine program in Indonesia (Handani, 2022).

Furthermore, this study shows that hotels' survival ability during the pandemic depends primarily on government assistance and strategic alliances with other stakeholders. Therefore, more study is required to examine how hotel guests and governance affect hotel pandemic crisis management (Le et al., 2021). The crisis management for non-official quarantine hotels may vary, and future research could compare the differences between official and non-official hotels.

Author Contributions: Conceptualization, S.F.C., methodology and software, N.R., S.H.; validation, S.H.; formal analysis, S.F.C.; investigation, NR; data curation, S.F.C.; writing - original draft preparation, S.F.C., S.H., N.R.; writing - review and editing, N.R. and S.H.; visualization, S.H.; supervision, N.R.; project administration. All authors have read and agreed to the published version of the manuscript.

Funding: This research was supported by the Research and Innovation Centre at Universitas Multimedia Nusantara for internal research grant No. 010/PI/LPPM-UMN/III/2022.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The study data as a result of this study are available on request from the corresponding author. This data is unavailable to publish privacy and ethical restrictions reasons.

Acknowledgments: This study was fully supported by the Research and Innovation Centre at Universitas Multimedia Nusantara. The author wishes to thank all respondents involved in this study.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 24.04.2023 Revised: 02.07.2023 Accepted: 01.08.2023 Available online: 01.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.911-918
DOI 10.30892/gtg.49308-1092

A COMPARATIVE ANALYSIS OF THE CAREER PERCEPTIONS OF TOURISM AND HOSPITALITY STUDENTS BEFORE AND DURING THE COVID-19 PANDEMIC

Brigitte Medally ASPARRENT REVOLLAR
Universidad Privada del Norte, Faculty of Business, Administration and Tourist Services, Lima, Peru, e-mail: brigitteasparrentrevollar@hotmail.com

Raquel Elizabeth LEÓN TORRES
Universidad Privada del Norte, Faculty of Business, Administration and Tourist Services, Lima, Peru, e-mail: r.eliza93lt@gmail.com

Camilo Mauricio GRILLO TORRES
Corporación Universitaria de Asturias, Programa Mercadeo Digital, Bogotá, Colombia, e-mail: camilo.grillo@asturias.edu.co

Franklin CORDOVA BUIZA*
Universidad Privada del Norte, Research, Innovation and Social Responsibility Department, Lima, Peru;
Universidad Continental, Faculty of Business Sciences, Huancayo, Peru, e-mail: franklin.cordova@upn.edu.pe

Citation: Asparrent Revollar, B.M., León Torres, R.E., Grillo Torres, C.M., & Cordova Buiza, F. (2023). A COMPARATIVE ANALYSIS OF THE CAREER PERCEPTIONS OF TOURISM AND HOSPITALITY STUDENTS BEFORE AND DURING THE COVID-19 PANDEMIC. *GeoJournal of Tourism and Geosites*, 49(3), 911–918. https://doi.org/10.30892/gtg.49308-1092

Abstract: This study determined and compared the career perceptions of Tourism and Hospitality undergraduate students, before and during the COVID-19 pandemic, in an emerging economy country, the approach is mixed methods and simple purposive random sampling technique. Responses from 212 students enrolled in the year 2022-II were obtained for the quantitative analysis. The Wilcoxon Mann-Whitney test showed that the null hypothesis is rejected since the overall career perception was p = 0.000000159 and "p" is less than 0.05, so there is a significant difference in the career perception of students before and during the pandemic. For the qualitative part, through the interview guide, the results revealed that students perceive that the situation of the tourism industry has been severely affected; their career opportunities were entirely uncertain. Finally, it is proposed to implement a career opportunities program that caters to the desires and needs of the students to help them adapt to current events.

Key words: Covid-19 pandemic, Career Perception, Tourism Industry, Career Opportunities for Students, Career Opportunities for Students Program.

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INTRODUCTION

During the last decades, tourism has been considered a driver for socio-economic progress (World Tourism Organization, 2022). With the outbreak of the SARS-CoV-2 pandemic (COVID-19), a respiratory infectious disease, a severe socio-economic crisis was generated, which started in Wuhan (China) in December 2019 and spread to other countries in February of the following year, causing negative impacts of various kinds, transforming the lives of people around the world, including students and higher education institutions (HEIs) and the like (Aristovnik et al., 2020; Sá and Serpa, 2020; Aguiar-Quintana et al., 2021; Rahman et al., 2021).

Tourism in Peru fell very quickly. In 2019, 4.4 million international tourists arrived, and, in 2020, with the outbreak of the COVID-19 pandemic, 0.9 million arrived, making tourism one of the hardest-hit sectors (Ministry of Foreign Trade and Tourism, 2022). However, during this year, 2022, tourism will continue to reactivate, and the GDP contributed by the tourism sector is estimated at 2.5% (Expreso, 31.01.2022, 1). The pandemic affected university students emotionally, professionally, and occupationally (Aristovnik et al., 2020). Research showed that COVID-19 increased university students' concerns about their careers, challenging universities to develop knowledge and skills and build perceptions about their future careers, innovation, curriculum change, and implementation for effective learning and motivation to continue the tourism career (Mahmud et al., 2021; Wathelet et al., 2020). With all that has happened, undergraduates of Hospitality and Tourism at a private university in Northern Lima face the challenge of dealing with the consequences of this disease. Amid uncertainty about their professional career, Educational Institutions should provide adequate assistance so that future professionals can achieve their goals, being important to understand their perceptions towards the tourism industry (Anandhwanlert and Wattanasan, 2016). This study poses the following research question: What is the career perception of Hospitality and Tourism students before and during the COVID-19 pandemic?

Several theories have emerged regarding the career perception variable. Bordean and Sonea (2018) point out that perception alludes to being aware and comprehending something. They also mention that it is a process of organization and selection where students, through their interests, aim to achieve their professional goals in their future career choice. Menon

* Corresponding author

and Santha (2017) state that career perception is what a person longs for or desires regarding the career to achieve to develop in the future. It is related to an individual's goal to achieve the chosen profession. Every individual, at some point, will face the choice of a career, and then it will mark his or her entire life.

It is worth mentioning that many students do not decide to study Hospitality and Tourism because of factors such as unemployment, low salaries, unstable schedules, lack of guaranteed working conditions, and part-time and seasonal work (Mahmud et al., 2021; Chang and Tsé, 2015; Wu et al., 2014, Jiang and Tribu, 2009; Roney and Oztin, 2007). In its effect, qualified professionals are not working in the tourism industry due to the high turnover of staff and lack of trained employees, resulting in low job satisfaction and, consequently, less qualified staff (Anandhwanlert and Wattanasan, 2016; Cordova-Buiza et al., 2021). It is highlighted that quality in the tourism industry depends on attitudes; committed, motivated, and trained workforce; performance and behavior of employees, being key determinants for customer satisfaction and loyalty (Kusluvan and Kusluvan, 2000; López-Guzmán et al., 2019; Espinoza-Molin et al., 2022).

Masdonati et al. (2017) stated that it is necessary to understand the subjective reasons for a career change. There are five reasons: the desire to achieve better working conditions, dissatisfaction with their current situation, dealing with health problems, the search for personal growth, and the desire to have an occupation following the individual's vocation.

Giné (2009) points out that students' perception influences their preparation in school, as they grasp the theoretical teaching in a practical way in the work experience. The quality of education affects the perception of Tourism students and impacts their expectations, as well as the perception of job quality. Njoroge et al. (2015) stated that students should have purposes and objectives where schools will form their professional growth, such as self-knowledge that should be taught, thus achieving an increase in subsequent years (Novack et al., 1999; Gándara, 2004; Kunwar, 2018).

To support the career perception indicators, the researchers relied on different studies and identified five: availability of career opportunities, work environment, compensation and benefits, skills and competencies, professional growth, and personal development (Üngüren and Yigit, 2022; Benaraba et al., 2021; Ortiz and Coromina, 2021; Wathelet et al., 2020; Akosah et al., 2018; Seibert et al., 2016; Avey et al., 2010; Wakelin-Theron et al., 2018).

The availability of career or professional opportunities in the tourism industry by Rasheed et al. (2020) stated that they are employees' expectations regarding their job responsibilities related to their career preferences and priorities. Sheng (2020) mentioned that, in the United States, the hospitality industry was found to be highly affected as many employees were laid off due to the COVID-19 pandemic.

For Asefa et al. (2020), the work environment in a study conducted with waiters resulted in more than fifty percent having a higher perception of becoming infected during the pandemic, causing them stress. A negative professional event may cause unexpected changes, triggering a deliberate thought process. Social support from supervisors can mitigate the adverse effect of job stress. However, the arrival of the COVID-19 pandemic can be an opportunity to improve personal aspects and professional development (Zikic and Richarson, 2007; Riofrio-Carbajal et al., 2023; Seibert, 2013; Akkermans et al., 2020). Financial remuneration is among the most influential extrinsic and motivational factors when young people choose a profession (Ryan and Deci, 2000; Agarwala, 2008; Machuca-Vílchez, et al., 2023; Wüst and Leko, 2017). Njoroge et al. (2015) noted that students find common motivations such as salary and good working conditions. Likewise, Fuletti (2012) states that, in an organization, remunerations are one of the payments, and benefits are a desirable complement for any employee. In an economically unfavorable situation, it becomes difficult to adjust the payment to the collaborator, who must be recognized for the contribution made and thus perform effectively for the company's growth.

For Bordean and Sonea (2018), in the study of skills and competencies, where students were surveyed about their future career intentions, leadership skills are important, making them more likely to work as managers in the tourism industry. Their study identified the skills that predict future intentions within the tourism sector. They also point out that universities should consider the factors that generate satisfaction among students, such as study programs, strengthening of relations with companies, and professional internships. Likewise, universities should improve the learning process to help tourism students achieve their future business or management careers.

The development of skills should match the interest of the individual, and production should be enhanced to combine both the skills and interests of each collaborator (Nyamwange, 2016). Theron et al. (2018) concluded that tourism graduates lack soft skills, causing them to be neither employable nor efficient.

Cortés et al. (2017) started a curriculum in the Faculty of Medicine of the Autonomous University of Mexico, integrating the competencies from the first year of studies. Within the eight competencies is "personal development and growth." An instrument that evaluated the skills of medical students during their course of study in a practical way was created for their feedback. The study is relevant for all professional careers, such as Tourism, since it is related to the progress of the potentialities that the person can achieve. The study made it known that students should work with the professional help of their student house in their personal growth and development, being fundamental for professional formation. Nyamwange (2016) concluded that students' interest influences their career decision.

The study presents the following hypotheses of the study: **HO:** There is no significant difference in the career perception of Hospitality and Tourism students before and during the COVID-19 pandemic, and **H1:** There is a significant difference in the career perception of Hospitality and Tourism students before and during the COVID-19 pandemic.

MATERIALS AND METHODS

The research scope was descriptive, with a mixed approach and a non-experimental, cross-sectional design. For the quantitative approach, the type of sampling used was simple, random, and probabilistic. The survey technique was applied, and the instrument used was a questionnaire composed of 25 questions based on the Likert scale. On the other hand, an interview guide was used, and the sampling technique was intentional for the qualitative approach. Thus, five (05) students from the fifth to the tenth semester of the Hospitality and Tourism career, enrolled during the second semester of the academic year 2022-II, were selected. They are characterized by being student leaders, participating actively in competitions, and demonstrating good academic performance. They also openly expressed their opinions on topics of interest as participants of the Focus Group Discussion (FGD). The total population is 280 students. The sample consisted of 212 students (Figure 1 and Figure 2). This study provided the researchers with unbiased results, both objective and subjective.

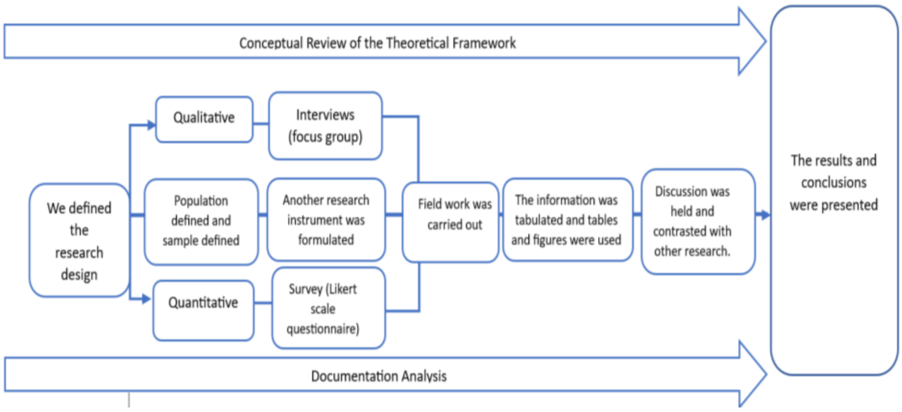

Figure 1. Flowchart of steps of the methodology used

The instrument consisted of two parts. The first part contains the demographic profile of the participants including: (1) Sex, (2) Age, and (3) Semester. The second part presents twenty-five (25) items on career perception, using a 5-point Likert scale, equivalent to 5 = Strongly Agree, 4 = Agree, 3 = Neither Agree nor Disagree, 2 = Disagree, and 1 = Strongly Disagree, where respondents were provided with indicators and statements to determine their career perception before and during the COVID-19 pandemic (Table 2). In addition, the Wilcoxon Mann-Whitney test was used to determine whether the null hypothesis was accepted or rejected. In the case of qualitative questions, a semi-structured interview guide was used in the Focus Group (FGD), validated by four expert professors of the Hospitality and Tourism career. The qualitative method allowed the researchers to gather different points of view and deeper perspectives to answer the research questions, such as students' perceptions about the situation of the tourism industry during the pandemic, their career opportunities during the pandemic, and students' proposals to help them pursue their career in the tourism industry.

The data collection required the application of the survey, conducted virtually through Google Forms and in person, in the classrooms of the Hospitality and Tourism career, at a private university in Northern Lima. For qualitative data, the interview was conducted virtually through Google Meet and applied to five preselected students for being student leaders with good academic performance. The information was collected through an audio recording.

For the analysis of quantitative data obtained from the questionnaire, the respective analysis was performed using SPSS Statistics (v 25). A descriptive analysis was performed using pivot tables and graphs from the results with alternatives on the Likert scale. For the inferential analysis, the normality test was evaluated before using any statistic for hypothesis testing, using the Kolmogrov-Smirnov test. Accordingly, the Wilcoxon Mann-Whitney test for non-parametric samples was used to determine whether the null hypothesis was accepted or rejected. Subsequently, the quantitative research questions were answered. It was shown that there is a significant difference in the career perception of students before and during the COVID-19 pandemic (Table 1). For the qualitative part, with the information collected through the online interview (google meet) and the audio recording, the researchers identified, codified, grouped, and then interpreted the main ideas.

RESULTS AND DISCUSSION

Quantitative Analysis

It consisted of 212 students of the Hospitality and Tourism career from a private university in Lima city. The survey results present quantitative data that are displayed in tables and figures. Figure 2 shows the sex of the 212 students surveyed, where 168 correspond to the female sex (79%) and 44 to the male sex (21%), so in the Hospitality and Tourism career, the female sex is predominant. Figure 3 shows the study semester of the 212 students surveyed. It can be seen that students in the eighth and ninth semesters are more predominant in answering the surveys.To answer question 2: What is the career perception of Hospitality and Tourism students before and during the COVID-19 pandemic in terms of the following indicators?

About the Availability of Career Opportunities

Figure 4 shows that, before the pandemic, the career perception of students is "agree" because tourism generates employment, while during the pandemic, the predominance is "neither agree nor disagree." This is reflected in the unemployment caused by the pandemic situation caused by COVID-19.

About the Work Environment

Figure 5 shows that before and during the COVID-19 pandemic, the career perception of students regarding the work environment is "agree." Despite the pandemic, students consider that, in tourism, there should be a good work environment, and they also think that they are competent and work professionally.

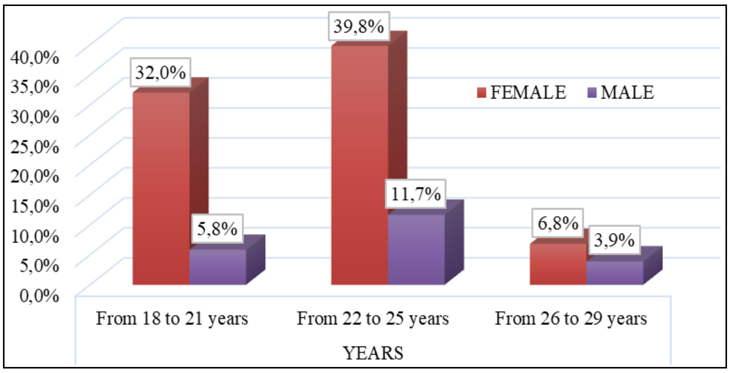

Figure 2. Sex of students

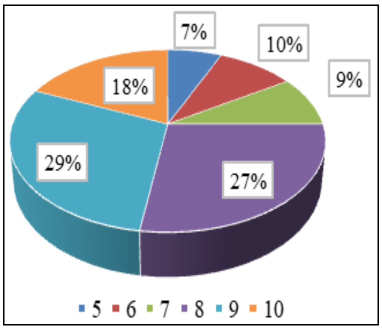

Figure 3. Study period

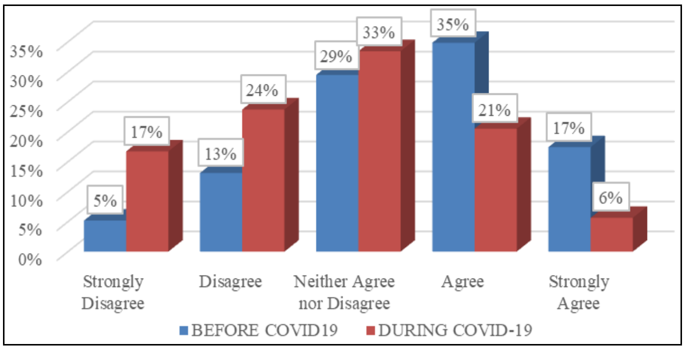

Figure 4. Availability of Career Opportunities

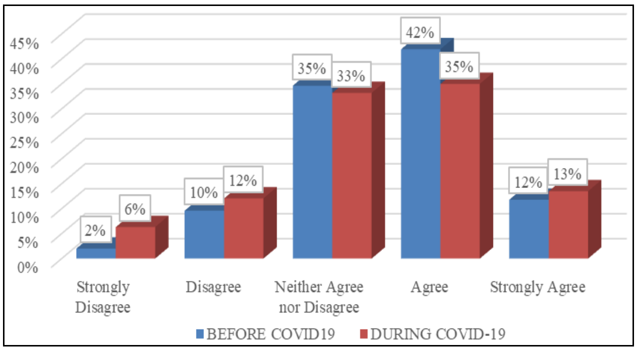

Figure 5. Work Environment

About Salaries and Benefits

Figure 6 shows that, before the COVID-19 pandemic, the career perception of students was "agree," while during the pandemic, the predominance was "neither agree nor disagree," which can be attributed to the unemployment situation and economic instability during COVID-19.

About the Skills and Competencies

Figure 7 shows that before and during the COVID-19 pandemic, the predominance was "agree." Students consider it important to have the skills and competencies needed in the tourism industry, which makes them adaptable in their chosen field.

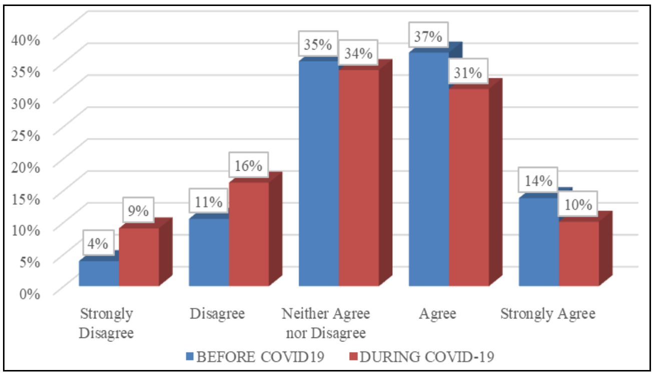

Figure 6. Salaries and Benefits

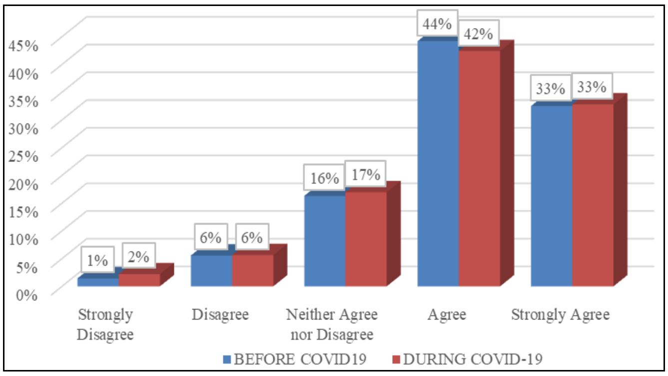

Figure 7. Skills and Competencies

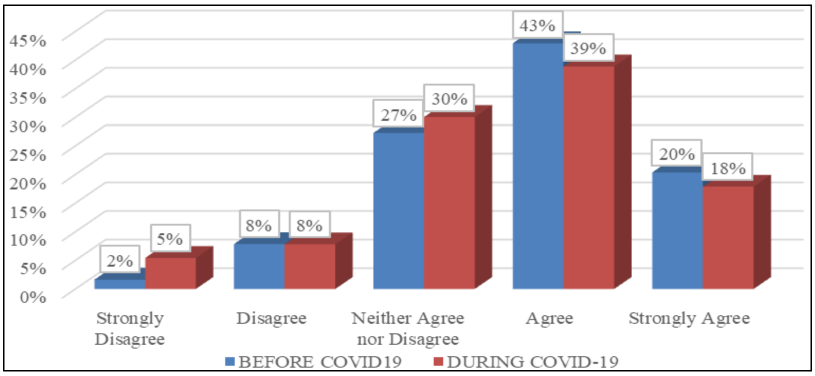

Figure 8. Professional Growth and Personal Development

About Professional Growth and Personal Development

Figure 8 shows that before and during the COVID-19 pandemic, the predominance was "agree." Students believe that the tourism industry helps their personal growth and development.

As shown in Table 1, the Wilcoxon Mann-Whitney test was used to compare the career perception of Hospitality and Tourism students and to answer question 3: Is there a significant difference in the career perception of students before and during the COVID-19 pandemic? It was found that there are changes in the career perceptions of Hospitality and Tourism students, and there is a significant difference between the two periods (before and during). Therefore, the null hypothesis is rejected, as **HO** means that there is no significant difference in the career perception of Hospitality and Tourism students before and during the COVID-19 pandemic because P > =0.05, and **H1** means that there is a significant difference in the career perception of Hospitality and Tourism students before and during the COVID-19 pandemic because P < 0.05.

Table 1. Significant difference in the career perceptionof students before and during the COVID-19 pandemic

		Mean	sd	z	*p*	Sig.
Availability of career opportunitie	Before	3.43	1.07	-7.531	.000	s
	During	2.69	1.13			
Work environment	Before	3.49	0.89	-2.170	.030	s
	During	3.34	1.06			
Salaries and benefits	Before	3.44	0.96	-4.864	.000	s
	During	3.15	1.08			
Skills and competencies	Before	3.98	0.92	-.057	.955	ns
	During	3.96	0.96			
Personal growth and development	Before	3.71	0.92	-1.946	.052	ns
	During	3.55	1.04			
Career perception	Before	**3.33**	**0.68**	**-5.242**	**.000**	**s**
	During	**3.6**	**0.64**			

Note: The Wilcoxon Mann-Whitney test for nonparametric related samples is applied

Table 2**.** Recollection of career perceptions of Hospitality and Tourism students before and during the COVID-19 Pandemic

Indicators	**Before Covid-19**			**During Covid 19**		
	mean	sd	iv	mean	sd	iv
There are many opportunities in the airline industry.	3.42	1.03	na,nd	2.71	1.11	na,nd
There are great opportunities in the cruise industry.	3.34	1.12	na,nd	2.67	1.11	na,nd
There are many opportunities with travel agencies.	3.7	1.05	a	2.8	1.15	na,nd
There are many opportunities in the event industry.	3.67	1.14	a	2.83	1.22	na,nd
There are greater opportunities in the government sector.	3.18	0.99	na,nd	2.74	1.05	na,nd
Availability of career opportunities	**3.43**	**1.07**	**na,nd**	**2.69**	**1.13**	**na,nd**
In the tourism sector, employee welfare is a primary concern of management.	3.47	0.96	na,nd	3.49	1.11	na,nd
Policies, including those related to employee welfare, are clearly understood and well implemented.	3.36	0.88	na,nd	3.3	1.05	na,nd
All employees are competent and work professionally.	3.68	0.92	a	3.42	1.02	na,nd
The physical environment is safe and healthy for workers.	3.55	0.81	a	3.34	1.1	na,nd
There is a harmonious working relationship between management and employees, on the one hand, and among all employees, on the other.	3.54	0.88	a	3.32	1.01	na,nd
Work environment	**3.49**	**0.89**	**na,nd**	**3.34**	**1.06**	**na,nd**
The tourism sector offers a higher salary package compared to other industries.	3.02	1.01	na,nd	2.74	1.02	na,nd
There are additional monetary benefits besides the base salary, such as allowances, bonuses, etc.	3.64	0.86	a	3.26	1.1	na,nd
There are also non-monetary benefits in addition to those provided by law, such as transportation service, health insurance, free travel, etc.	3.52	0.97	a	3.26	1.08	na,nd
The tourism sector can improve the quality of life of its workers due to higher salaries and many benefits.	3.63	1	a	3.3	1.11	na,nd
The tourism sector has many good benefits that other industries do not have.	3.48	0.95	na,nd	3.28	1.09	na,nd
Salaries and benefits	**3.44**	**0.96**	**na,nd**	**3.15**	**1.08**	**na,nd**
I believe I have the necessary skills that would match the demands of the tourism sector.	3.92	0.86	a	3.87	0.91	a
I can use my skills and abilities to work effectively in the tourism sector.	4.04	0.94	a	3.97	0.96	a
My personal values and character traits are appropriate for the tourism sector.	4.07	0.92	a	4.13	0.96	a
I know I have an advantage in the tourism sector with my skills and competencies.	3.94	0.95	a	3.99	0.95	a
I know that the tourism sector will provide opportunities to enhance my skills and competencies further.	4.06	0.91	a	3.94	1.01	a
Skills and competencies	**3.98**	**0.92**	**a**	**3.96**	**0.96**	**a**
The tourism sector offers various training programs for the professional growth of its workers.	3.7	0.94	a	3.54	1.07	a
The tourism sector provides more opportunities for career advancement.	3.69	0.87	a	3.46	1	na,nd
There is a career path strictly followed by the tourism sector.	3.54	0.92	a	3.46	1.03	na,nd
The tourism sector helps to develop the confidence to gain experience in the chosen field.	3.83	0.97	a	3.64	1.03	a
The tourism sector helps the professional and personal development of its workers.	3.87	0.91	a	3.7	1.07	a
Personal growth and development	**3.71**	**0.92**	**a**	**3.55**	**1.04**	**a**

Note: Standard deviation (sd), agree (a), neither agree nor disagree (na, nd). Table 2 shows a numerical summary of the overall average of the career perceptions of Hospitality and Tourism students before and during the COVID-19 pandemic, with the five indicators, respectively

Qualitative Analysis

Five university students aged between 19 and 26 years old were interviewed for the qualitative study. The study used the interview as an instrument to collect information regarding the students' expectations of a career in hospitality and tourism. For this purpose, three general questions were proposed, which covered 6 specific questions each. The triangulation method was used to decode the interviews by contrasting them with the quantitative analysis and previous studies (background). In terms of the student's perception of the situation of the tourism industry during the pandemic, it is highlighted that the closure of tourism businesses during the pandemic and the limitation of tourist trips also made it impossible for them to develop fieldwork courses, moving only to virtual class monitoring, and making the activities of courses that require guided tours impossible due to capacity issues and biosafety standards. Only one student mentioned that he did not feel affected because he stopped studying due to isolation issues. On the other hand, students mentioned that, due to the increase in unemployment and massive layoffs, they couldn't get jobs in their field, and it did not even allow them to get professional internships in the area. This uncertainty about the future of the industry and the lack of effective strategies by teachers to adapt to the current situation generate anxiety and concern in the students about their professional future in the area of administration and tourism and its economic reactivation.

DISCUSSION

Amid the COVID-19 pandemic, students are evaluated, specifically in the tourism and hospitality industry, as they witness the experience of this virus. As a consequence, this situation causes a loss of confidence and anxiety in a large number of students. Regarding the indicator “Career Opportunities” in the tourism industry, students before the pandemic "strongly agreed." It is inferred that they consider that the tourism sector provides them with opportunities to work in different areas of the tourism industry (airlines, cruises, travel agencies, event industry, etc.), which is corroborated by Anandhwanlert and Wattanasan (2016), who point out that tourism is a relevant economic industry that grows rapidly, and is a great generator of employment because it produces new job opportunities; it occupies an important place in the economy of countries because it contributes to the improvement of social development to minimize poverty and promotes peace.

During the COVID-19 pandemic, most students were "neither agree nor disagree." This means that their career perceptions regarding this indicator are uncertain due to the COVID-19 pandemic, leading to feelings of insecurity and may be very shocking for many of the students because the tourism sector was paralyzed. They agree with the study by Rahman et al. (2021), pointing out that the pandemic caused governments to apply measures to ensure their nation’s security through blockades and restrictions to prevent the spread of epidemics or infections. However, such excessively strict measures hurt the tourism industry, affecting the development of the economy and reducing the employment rate.

In the Work Environment indicator, both before and during the COVID-19 pandemic, students "agreed." This is reinforced by the research by Benaraba et al. (2021), indicating that a good work environment is a major motivator for employees to perform better and enjoy their professional careers. The indicator "Salaries and Benefits" before the COVID-19 pandemic is reflected as "agree," coinciding with the research by Fuletti (2012) and Njoroge et al. (2015), who state that good remuneration, benefits, and work environment are the main motivations for getting a job; while during the pandemic their opinion was "neither agree, nor disagree," coinciding with Aristovnick et al. (2020) and Akkermans et al. (2020). Students experienced boredom, frustration, and the COVID-19 pandemic resulted in job insecurity, emotional impact, loss of income, and increased anxiety. The Skills and Competencies indicator, both before and during the COVID-19 pandemic, is reflected as "agree," coinciding with the research by Bordean and Sonea (2018) since the student demonstrates an awareness of the skills and competencies required of a tourism industry collaborator. The result agrees with Benaraba et al. (2021), Nyamwange (2016), and Aristovnick et al. (2020), as the study demonstrates confidence on the part of the students about their skills and competencies. It is also highlighted that it is required to know their interests to strengthen their skills.

The Professional Growth and Personal Development indicator, before and during the COVID-19 pandemic, is manifested as "agree," coinciding with Masdonati et al. (2017), who affirms that there must be personal development to prevail in the tourism career. Likewise, the result of the indicator also agrees with Cortés et al. (2017), Nyamwange (2016), and Novack et al. (1999) since professional growth is encouraged, which is very important to work together with their study institutions. It should be noted that the results of the qualitative analysis are related to the descriptive analysis of both frequencies and percentages concerning the career perception of students regarding the situation of the tourism industry during the COVID-19 pandemic. All interviewees agreed that the pandemic had hurt the promotion of the tourism industry, which coincides with the research by Akkermans et al. (2020) and Benaraba et al. (2021), who point out that the crisis generated by the COVID-19 pandemic resulted in social isolation and restrictions that were carried out to prevent the spread of the disease in the world. In this way, governments took measures to counteract or block the pandemic by temporarily halting national and international flights, closing restaurants and entertainment venues, and canceling congresses, festivals, and fairs, among other restrictions, to reduce the spread of the disease. The pandemic affected millions who lost jobs, and unemployment rates rose dramatically. The results on the subject of career opportunities in tourism during the pandemic show credibility on the part of students that there are different areas in which they can develop or create their own business and also that there are not so many career opportunities in the tourism industry and public sector. This coincides with Sheng (2020), who mentions that the COVID-19 virus resulted in a decrease in career opportunities for future students in the tourism and hospitality industry. Njoroge et al. (2015) and Zikic and Richarson (2007) point out that external and internal influences determine students' decision to undertake or remain in the search for a career opportunity. It also agrees with the studies by Benaraba et al. (2021), Ryan and Deci (2000), Agarwala (2008), and Wüst and Leko Simić (2017), as they mention that remuneration influences the student and employee the most.

Akkermans et al. (2020) also noted that, with the outbreak of the COVID-19 pandemic, negative consequences include job insecurity, emotional impact due to social distancing, loss of income, and increased anxiety.

CONCLUSION

Finally, the general objective of the research was to determine and compare the career perceptions of Hospitality and Tourism students before and during the COVID-19 pandemic, Northern Lima, 2022. In the first specific objective, the situation of the tourism industry was revealed, where it was concluded that students were undoubtedly affected by the closure of tourism businesses, travel restrictions, increased unemployment, and anxiety about their future careers due to the COVID-19 pandemic. In the second specific objective, the career perceptions of students before and during the COVID-19 pandemic were determined in terms of the following indicators: Availability of career opportunities (before the COVID-19 pandemic, from the career perception of students, 35% "agreed," while during the pandemic, the predominance was 33% for "neither agree nor disagree"); work environment (before the pandemic COVID -19, from the career perception of students, 42% "agreed," while during the pandemic, the predominance was 35% "agree;" salaries and benefits (before the COVID-19 pandemic, the career perception of students was 37% "agree," while during the pandemic, the predominance was 34% "neither agree nor disagree;" skills and competencies (before and during the COVID-19 pandemic, the predominance was "agree," with 44% and 42%, respectively); professional growth and personal development (before and during the COVID-19 pandemic, the predominance was "agree," with 43% and 39%, respectively).

The third specific objective revealed a significant difference in students' career perceptions before and during the COVID-19 pandemic, so the null hypothesis was rejected. The fourth specific objective unveiled students' perceptions of their career opportunities in the tourism industry during this pandemic as full of uncertainties and indecision. Other interviewees observed an optimistic view. They considered alternative plans, such as a technical course or degree, establishing their own business, continuing their studies, and other opportunities unrelated to the tourism industry.

The fifth specific objective was to learn about the students' proposals to help them pursue their careers in the tourism industry. The students' proposals are considered very important to provide possible adequate solutions for their careers in the face of this pandemic situation. Among them are: the university should implement more job sites focused on the tourism industry to find more job opportunities in that sector; the labor market should be expanded for students of the hospitality and tourism career in both the public and private sectors; lectures, seminars, webinars, counseling or personal counseling on the tourism career perception due to the COVID-19 pandemic should be conducted. The university must expand its partnerships with national and international organizations and improve online learning tools.

Author Contributions: Conceptualization, B.A. and R.L.; methodology, F.C. and C.G.; software, B.A.; validation, F.C.; formal analysis, C.G.; investigation, F.C. and R.L.; data curation, B.A. and R.L.; writing - original draft preparation, B.A. and R.L.; writing - review and editing, F.C. and C.G.; visualization, C.G.; supervision, F.C.; project administration, B.A. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 26.04.2023 Revised: 12.07.2023 Accepted: 02.08.2023 Available online: 11.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.919-933
DOI 10.30892/gtg.49309-1093

THE ART OF HUMAN PARTICIPATION AGAINST ARTIFICIAL INTELLIGENCE WITH GEOSPATIAL INFORMATION SYSTEM IN THE TOURISM INDUSTRY

Mahdi FALLAH
Universitas Kharazmi Tehran, Geography and urban planning Department,
Faculty of Geographical Science, Tehran, Iran, e-mail: Mahdi.Fallah20@gmail.com

Tajeddin KARAMI*
Universitas Kharazmi Tehran, Geography and urban planning Department,
Faculty of Geographical Science, Tehran, Iran, e-mail: karamit@khu.ac.ir

Mousa Kamanroudi KOJOURI
Universitas Kharazmi Tehran, Geography and urban planning Department,
Faculty of Geographical Science, Tehran, Iran, e-mail: kamanroudi@khu.ac.ir

Citation: Fallah, M., Karami, T., & Kojouri, K.M. (2023). THE ART OF HUMAN PARTICIPATION AGAINST ARTIFICIAL INTELLIGENCE WITH GEOSPATIAL INFORMATION SYSTEM IN THE TOURISM INDUSTRY. *GeoJournal of Tourism and Geosites*, 49(3), 919–933. https://doi.org/10.30892/gtg.49309-1093

Abstract: The development of the tourism industry is very important for developing countries that are facing problems such as high unemployment rates, a distorted international image, limited foreign exchange resources, and a single-product economy, especially oil. Investing in this industry, which is considered a human art, is measured based on the public health of each country and will be the basis for tourists' decisions as a tourist destination. The purpose of this research is to investigate public decision-making in different temporal and spatial conditions based on psychological events. This fact is a must for the tourism industry of a society that must be managed. Then we challenge the artificial intelligence to realize that, entrusting rational decisions can replace human thinking. The methods of this study are based on NPGIS software, where decision-making methods and statistical sampling are determined together. Therefore, the study methods and a case example are presented just to know. Because it has transnational applications. The results show that: entrusting spatial decisions (space-time-place) to artificial intelligence is only possible if we consider the consequences. Finally, time and the criteria related to it show their key role. The fusion of space sciences with the tourism industry can be related to all the industrial and money-making sectors of a country. It seems easy to make an AI that works correctly once a day, but if it tries to do the same thing several times in a day, it becomes more prone to errors.

Key words: the art, tourist destination, geospatial technology, artificial intelligence, NPGIS

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INTRODUCTION

The history of tourism in Europe goes back to the pilgrimages of the Middle Ages. Pilgrims of the Canterbury Cathedral in England considered their trip a religious trip and considered it an experience on their day off. Pilgrims started activities that can still be seen today. Participation is a very practical subject whose importance is determined based on time. In fact, time is an effective factor in participation. The topic of time is one of the topics that have been discussed with different points of view. In my opinion, everyone looks at time as they think. What is the same for everyone may be too much for someone and too little for someone. Therefore, there is no time to judge because time itself is the judge. But this is also a kind of looking at time because there is no time when decisions are being made. In general, these are the people who judge, look, manage and make decisions in a way. This is when the issue of partnership comes up. Participation is a fascinating topic that accepts all perspectives. On the other hand, he may not accept or reject a point of view. But participation in which a point of view or thought can make it meaningful or impressionable doubles the attractiveness of participation.

Tourism is one of the most important industries because it can create jobs and economic development. Community-based and integrated sustainable ecotourism development can be implemented through improved management and human resources (Arinta et al., 2023). Decision-making with public participation are important as important components in all processes. Also, this component in the conditions of synchronizing with the occurrence of events and being aware of projects from the beginning to the end is the basis for compiling and writing this article, is placed. Today, in the comprehensive planning and development of cities, important and complex decisions are mandatory for every community and local government or municipality. In this regard, it should be said that making optimal decisions by integrating and combining a set of emerging phenomena such as geographic information system or GIS, which itself is a result of participation, has played a significant role in the flourishing of knowledge and information (Johnson et al., 2022; Valánszki et al., 2022). Living in a world without a desk might be tough, but managing a world without time seems remarkably disastrous. The idea that time does not exist is inconceivable to many: time must exist. Almost every experience we have tells us this (Baron et al., 2022).

* Corresponding author

In recent decades, "urbanization", "sustainable development" and "information and communication technology revolution", as the most important global trends, have played the greatest role in the life of human societies It can be said that the movement of cities towards sustainable development, as well as the increasing role of information and communication technology in decision-making and decisions related to urban management, has transformed the city administration system. If this discourse emphasized environmental, social and economic sustainability in the 1980s, in the 1990s, it emphasized the concept of a smart city, but today it has focused on "sustainable smart cities" (Silva, 2013).

In fact, open source urban governance is a new way to attract citizen participation. A participation that is referred to as electronic participation, remote democracy, information technology democracy, electronic consultation, web-based citizenship, online public administration, etc (Silva, 2013). The main part of urban activities is focused on collaborative development for planning, designing and implementing urban services based on electronic infrastructure, E-services involve change in services as well socio-technological change and relate to change in forms of participation (Wessels, 2010). Studies related to participation in place show that GIS plays an important role in this, which can be different at any time.

Regarding the collaborative geographic information system, it should be said that some authors use the abbreviation PPGIS in their studies and others use PGIS, but some researchers use these two terms together and instead of each other in different parts of a study, while there are some who differentiate between these two in nature. In confirmation of this issue, a study was conducted under the title of political rethinking, political rethinking after GIS or PGIS, which completely changes the nature of the discussion. Therefore, whether PGIS is correct or PPGIS just wastes its time and deals with a completely marginal matter, and we move away from the goal and make a system with this historical identity that was created to support the marginalized strata ineffective (Radil and Anderson, 2018; Dunn, 2007).Today, in the comprehensive planning and development of cities, important and complex decisions are mandatory for every community and local government or municipality. In this regard, it should be said that making optimal decisions by integrating and combining a set of emerging phenomena such as geographic information system or GIS, which itself is a result of participation, has played a significant role in the flourishing of knowledge and information (Johnson et al., 2022; Valánszki et al., 2022).

NPGIS was published for the first time by Mahdi Fallah in his scientific Doctoral Dissertation and then in a scientific journal (Fallah et al., 2022a). And then in another article It continued to develop (Fallah et al., 2022b). Having information in time and place is very important. Especially when this information is needed. Despite the incredible evolution of GIS in recent decades, it is important to consider how geographic information can be effective in the age of information technology.

Does the idea of a world in which facts mean nothing cause anxiety? Fear? Maybe even paranoia? Disinformation:The Nature of Facts and Lies in the Post-Truth Era cannot cure all the ills of a post-truth world, but by demonstrating how the emergence of digital technology into everyday life has knitted together a number of seemingly loosely related forces–historical, psychological, economic, and culture–to create the post-truth culture, Disinformation will help you better understand how we got to where we now are, see how we can move beyond a culture in which facts are too easily dismissed, and develop a few highly practical skills for separating truth from lies (Greene, 2022).The first step of the study in this direction is to identify the objective and the desired results from the collection of explicit spatial data, which is ideally done with the cooperation of stakeholders. Data collection is usually based on surveying web-based maps. Respondents fill out a survey individually with the help of a facilitator or a decision maker (Fagerholm et al., 2022).

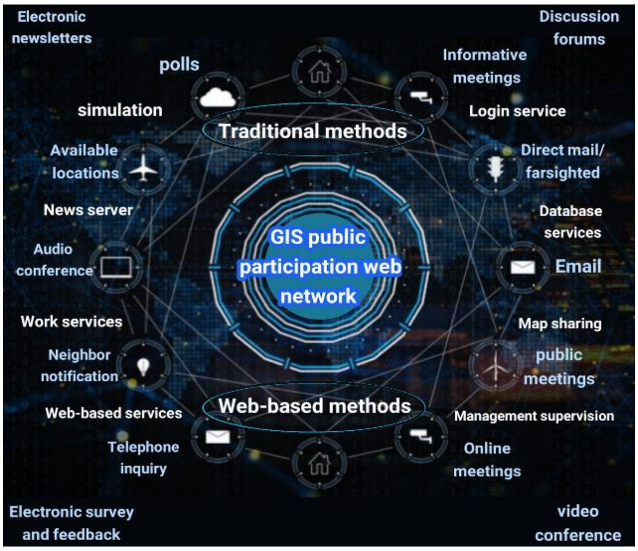

Figure 1. Combination of traditional and new web-based participation (Source: Research and findings of researchers, 2019-2022)

Public participation in the development of a large-scale or small-scale municipal plan has certain objectives, such as mechanizing the planning process, helping to transfer or disseminate ideas, and supporting the decision-making process. According to traditional methods, public participation in urban planning and management includes neighbor announcements, interviews, exhibitions, public meetings and focus group discussions, and public questions via telephone, e-mail, teleconference or public meetings (Lewenstein, 2022). Based on the opinion of the researchers, the success that is the result of planning, designing and deploying the spatial information system based on national participation is effective in increasing the level of public effectiveness. Provided that it is in sync with the support of such decision-making in the course of urban planning and management. This type of guidance mainly depends on the

Figure 2. It shows the main concept of modern geographic communication (Source: Research and findings of researchers, 2019-2022)

understanding of society, combination of traditional and new web-based participation is shown in Figure 1. In fact, this new type of information is made available from the location information technology along with the geographic information system for easy use by people. Now, these people include the public, developers, decision-making authorities and researchers in group decision-making processes, which, of course, brings with it special and noteworthy help.

Research questions and hypotheses

It should be said that according to the mentioned cases, not having a specific plan as well as environmental conditions are influential factors in participatory decision-making. Here some questions arise in the mind that need to be expressed.

1. Does geographical science interact with the tourism industry? 2. Is the continuation of the tourism industry possible with the emergence of artificial intelligence? 3- What is the determining criterion in collaborative decision-making? Based on these important questions, hypotheses are proposed by the researcher: 1. There is a relationship between geographical sciences and the tourism industry of a region. 2. It seems that artificial intelligence can replace the tourism industry in the coming decades and 3. There is a significant relationship between time factors and collaborative decision-making.

LITERATURE REVIEW

Research questions and hypotheses When it comes to participation, Arnstein (Arnstein, 1969) elementary ladder and her previous topics are not forgotten. Despite the incredible evolution of GIS in recent decades, the understanding of spatial information has not changed over time, with different GIS approaches applied and considering geographic features (such as neighborhoods, cities, and regions) would be considered foreign territory. Currently, however, limiting the term "place" to an external realm is meaningless, as 80% of people's daily lives are spent indoors (Teixeira et al., 2021). In the last decade, the use of collaborative geographic information system has been increasing in topics related to urban sciences. This system, which is based on other knowledge such as critical mapping, collaborative methods, Development-oriented and ideal cities are connected with optimal urban planning, civil governance, community development, resource management, environmental and natural hazards, reaching a smart city, etc. This approach, in addition to the need for a platform for civil and political interaction and participation, requires the ability of spatial information system specialists to guide its operation toward the main issues of local management, such as optimal service delivery, spatial justice, and politics (Indrajit et al., 2019; Prener, 2021). Accepting participation as a legitimate political approach and process, due to the belief in the role of people in the development process, has a great tendency to produce and use participation information, including participatory data and spatial information. This tendency provides the grounds for the use of extraordinary capacities that are the result of combining the capabilities of the geographic information system with innovations in the field of information and communication technology and new approaches based on electronic and online participation (Ghose, 2017; Anderson and Radil, 2019). Such efforts are also a growing part of policymaking in the GIS participation literature, which advocates the use of GIS to foster civic engagement and participation among population groups that have historically been marginalized in formal arenas of governance, refers to and considers political results to be more valid than social opinions (Anderson and Sternberg, 2013; Sternberg and Anderson, 2014). Therefore, this topic has become a suitable field for urban research in the field of participation and electronic governance. To solve any crisis, a series of solutions and detailed planning is needed. These solutions include: a set of operations that are carried out by government, private and public organizations in facing the crisis with the aim of reducing damage and waste, normalizing conditions and returning to the pre-crisis state.

Background Research

Evaluation of the collaborative mapping effort, as a proxy for spatial data quality, showed that the facilitated collaborative spatial information system process provides better map production results than individual surveys. The cooperative mapping effort in the sampling group is to facilitate the display of the largest dimensions. With the number of markers and the response time in the range of effort to produce a map that has been reported in other studies of this type of public contributions of participatory GIS (Brown, 2016). In a 2017 study in a developing country, participants were able to match place values and place preferences with current land uses, suggesting that a non-expert in Malaysia can interpret digital maps effectively. It is interesting to establish local knowledge about the place to bridge the knowledge gap with experts. The newness of PGIS as a participatory method can help stimulate public participation, but developing a stronger culture of participation in Malaysia for land use planning requires continuous effort over time (Zolkafli et al., 2017).

In 2019, Ushahidi projects the potential of dedicated maps for disaster response in a large city, and provides a comprehensive baseline model for municipalities as well as the international community to advance future emergencies and how, in times of crisis, Emergency, participatory geographic information system can easily help a major disaster and is discussed in many studies (Heinzelman and Carol, 2010; Morrow et al., 2014; Ushahidi H.P.E, 2011; Haiti Situation Report, 2019; Haiti Projects, 2019). For the above two examples, it should be mentioned that not taking into account the time of the incident, the weakness of crisis management, which has been emphasized many times by the responsible authorities, and the lack of complete and comprehensive familiarity with it, especially complete familiarity in the country's municipalities with the lack of a location database to obtain Optimum decisions cause things like damages, lack of a precise division of work between the members of the organization, lack of coordination between various devices for planning and making correct and quick decisions at the right time and on time, among these shortcomings in the country in the field of participation. Another important point is that, at the time of writing this treatise, in the summer of 2022, Haiti suffered a severe earthquake once again after about eleven years, which caused similar and even greater damages. The United States Geological Survey (USGS) announced on Saturday that an earthquake with a magnitude of 2.7 on the Richter scale occurred off the coast of Port-au-Prince, the capital of Haiti. The director of the Haitian Civil Defense Agency said, unfortunately, the death toll of the recent terrible earthquake was about 1500 people. According to this official, the aid is mostly concentrated in the southwestern regions of the country, which have suffered heavy losses due to the earthquake. About 7,000 people have been injured in the Haiti earthquake and many others are missing as the search for survivors continues. Since the earthquake, many have been sleeping outside their homes for fear of aftershocks, and many have no roofs. For many Haitians, this earthquake was a reminder of the 2010 magnitude 7 earthquake that killed more than 300,000 people. The earthquake 11 years ago caused one million and 500 thousand Haitian residents to become homeless (Weword, 2022). The problems that have arisen are similar to the previous calamities for which preparations were not considered, such as the release of waste by rescue organizations, which alone has caused many problems. In such cases, the importance of time should be taken into account. The effect of time is actually management on personal performance as well as people's well-being, and in its social expression, it is related to job performance, academic progress, and general health. Also, time management shows a moderate and negative relationship with personal stress or distress, which is related to people's health and not related to people's gender (Aeon et al., 2021). This research can be jointly investigated and developed in medical sciences, engineering sciences, and urban sciences.

STUDY ZONE

Nowadays, modeling and visualization of 3D models and programming for cities is a big challenge in computer and graphics software. Recently, 3D urban modeling has grown due to the advancement in applications along with the storm of information technology revolution. These technologies have become very important in representing large cities and performing various analyzes in the virtual environment of cities and in order to support urban decision-making (Badwi et al., 2022). It should be stated that the area studied in this research was only for the purpose of investigating this method to respond to the new participation based on the creation of a software and its use. Therefore, it can be checked in any area. Sari is the former capital of Iran (before Tehran), which is located in Mazandaran province in the north of Iran.

This city is one of the oldest cities in Iran with a historical background and has a moderate climate. is located at the coordinates of 36°33'48" north latitude and 53°03'36" east longitude and whose is 347/402 people (Urban sari with 6 thousand years old and historical memory, 2018) (Statistical yearbook of Iran: Population of cities of Iran 2018).

Figure 3 it shows A) the map of Iran, B) Mazandaran province, C) Sari city and C) Sari (The investigated area).

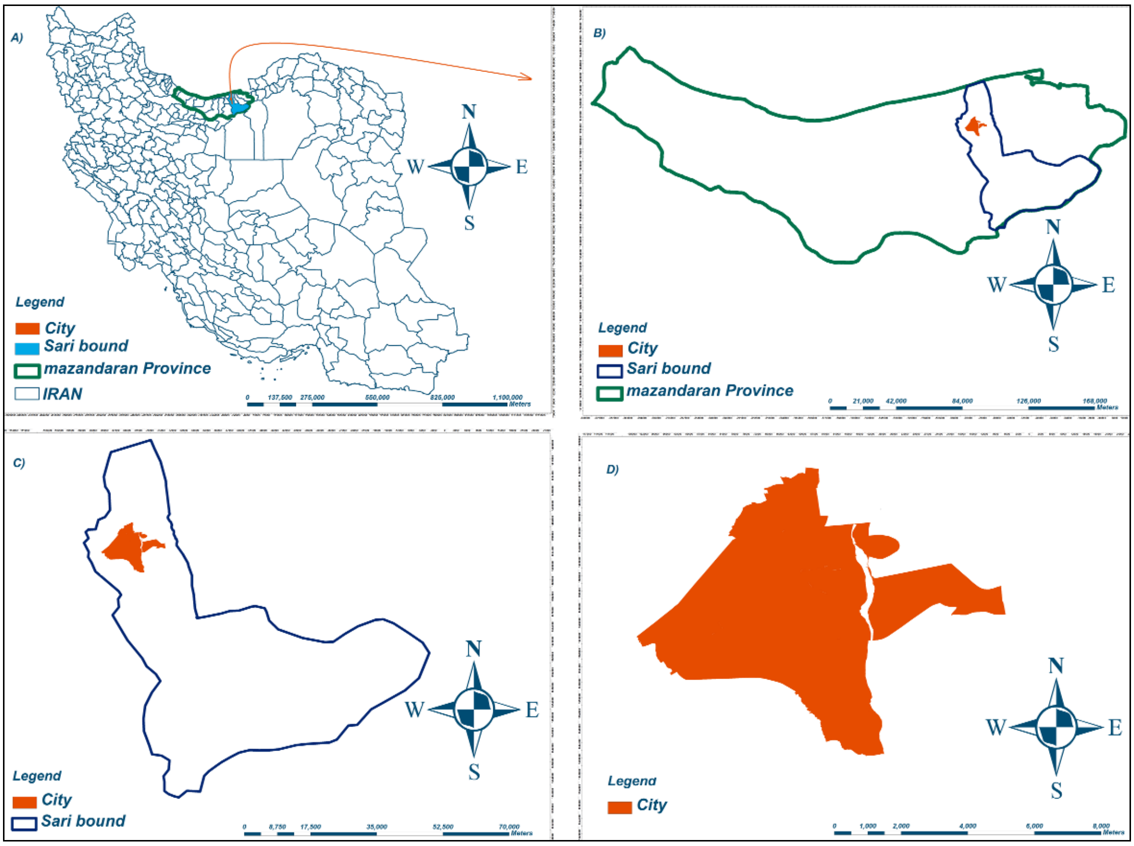

Figure 3. Location of Sari city in Iran (Source: Research and findings of researchers, 2019-2022)

METHODOLOGY

Data

Every day and night is divided into twenty-four hours, and the length of a day and night, for example, solar or astronomical, is not always twenty-four hours, and the length of the days of the year always increases or decreases by a few minutes. In the contract between the public, in order to prevent inconsistencies and anomalies, all days and nights are assumed to be twenty-four hours. Time measurements have occupied many people of knowledge and technology. Events and alternating movements during different times have been used as standard units of time. For example, we can refer to the movement of the sun in the sky, the phases of the moon, and the heartbeat or pulse. Currently, the standard unit of measurement of time is the second, which is defined based on the measurement of the range of electron jumps in the cesium atom, which is element 55 of the periodic table. Time has a high social importance and due to the limitation of time in a day and night and human life, it has a special economic and personal value (Builes, 2022; Malpass, 2021; McAllister, 2020).

Artificial intelligence is a subject that is widely used humans. And interesting thing is That most people are satisfied with this issue. Because Doing any activity in a faster time makes people happy. The desire to use it has increased dramatically these days. Artificial intelligence and software development based on participation have also been used in this project. Also, computer software has been used to rank the criteria and statistical scores, and almost the complex calculations that were supposed to be done by humans have been done by computer software easily and in a short period of time.

Artificial Intelligence: Technologies, Applications, and Challenges is an invaluable resource for readers to explore the utilization of Artificial Intelligence, applications, challenges, and its underlying technologies in different applications areas. Using a series of present and future applications, such as indoor-outdoor securities, graphic signal processing, robotic surgery, image processing, character recognition, augmented reality, object detection and tracking, intelligent traffic monitoring, emergency department medical imaging, and many more (Sharma and Garg, 2021). These processes were carried out based on the choices and reactions of the human brain in decisions and considering artificial intelligence, As stated, artificial intelligence based on human neural networks was designed in such a way that it can estimate decision-making processes for any type of spatial participation activity And its subsets are like a neural network. Brain activities that can always be edited in this new spatial system in a way. which can be seen in Figure 4 And the steps used in this case are shown and the stages of studying with artificial intelligence in Figure 5. In Fact, Artificial Intelligence offers comprehensive coverage of the most essential topics, including: Rise of the machines and communications to IoT (3G, 5G). Tools and Technologies of Artificial Intelligence Real-time applications of artificial intelligence using machine learning and deep learning. Challenging Issues and Novel Solutions for realistic applications Mining and tracking of motion based object data image processing and analysis into the unified framework to understand both IoT and Artificial Intelligence-based applications (Sharma and Garg, 2021).

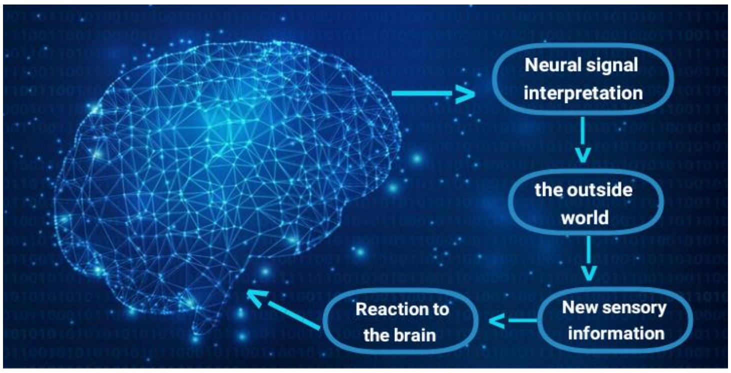

Figure 4. Human mind process based on artificial intelligence
(Source: Research and findings of researchers, 2019-2022)

Figure 5. Steps to use neural network
(Source: Research and findings of researchers, 2019-2022)

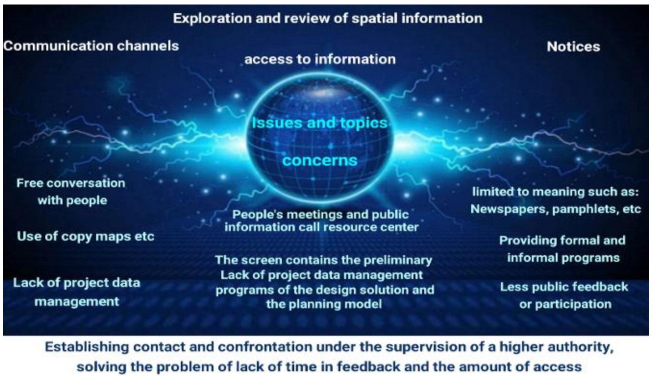

Figure 6. Combining the human mind with artificial intelligence in solving spatial concerns

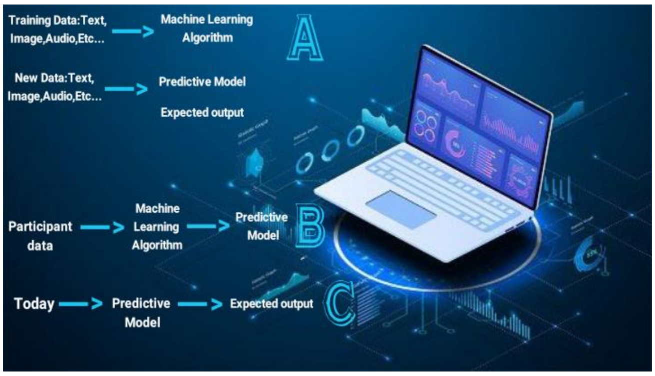

Figure 7. Making a software model of artificial intelligence
(Source: Research and findings of researchers, 2019-2022)

These processes, in which psychological factors are involved, are considered suitable based on observations, questions and answers, and past experiences along with locational factors in participation. This process includes the issues and concerns existing in the current methods of public participation in the planning process and the processes related to urban development based on the summary of the aforementioned studies along with solving the problem of lack of time by higher level officials, at the same time as emergence of the web occurs. This human mentality also shows the amount of feedback and the size of accesses. The lack of time here is considered a fundamental problem that the human mind tries to overcome these limitations with issues such as time management, stress reduction, etc. also The accesses that are established with the human mind and by making contact. It can be seen in Figure 6. For example, in Europe and America North, according to the laws of many municipalities and local governments, it is necessary to have a certain amount of public participation in decision-making processes. According to a survey, public participation relies on information, a public solution and its effective feedback through public meetings, which is still one of the most specific forms of public participation (Goreis and Voracek, 2019; Larrain and McCall, 2018; Lewenstein, 2022).

In artificial intelligence, countless situations can arise when we are faced with a large number of variables to solve problems. Due to human limitations in memory and processing power, direct programming would be nearly impossible. In these cases, using artificial intelligence and machine learning, the computer learns concepts from past data and can analyze and predict the future. When we want to teach a concept like participation to a computer, it does not mean that people of different ages and genders or different points of view are supposed to talk to each other and express their opinions on different issues. And at the same time, let's look at the horizon with memories of the past. If that were the case, probably no human would seek dialogue and participation in various matters, and there would never be any cooperation, and humans would talk alone and to themselves until their generation became extinct. Therefore, there was no relationship or marriage. In fact, computers are much more ignorant than we think. So we can only talk to the computer in binary or zero and one language. The intelligence that a machine shows in different situations is called artificial intelligence. Python programming language was used in NPGIS, which is a high-level language and close to human language. There are different algorithms in the field of artificial intelligence for machine learning. Figure 7 shows the common steps between all machine learning methods. In solving the problem, according to Figure 7, we first give the common state data of the past days (the so-called training data) to the machine learning algorithm. After learning the participation patterns from the data and training, the machine learning algorithm delivers us a predictive model. Now it is enough to give the characteristics of today's participants to the trained model. In the third step, the model tells us what will happen tomorrow. It prints (1) if collaboration was to be done and (0) if no collaboration was to be done, which is visible. A) Machine Learning line, B) Training stage from training data (dataset) and C) Prediction stage is shown.

METHODS

Network-oriented decision-making process

The ANP method is one of the multi-criteria decision-making methods in which criteria or sub-criteria or options (individuals and variables) are dependent. It should be said that the hierarchical method or AHP can be a special case of the network technique. If there is a problem in the calculation relationships of criteria or sub-criteria, this type of problem cannot be done through the AHP method because the problem goes out of the hierarchical mode and creates a network mode. So this problem must be solved through the ANP method. The process of network analysis is a comprehensive and powerful method for making accurate decisions using empirical information or personal judgments available to each decision maker and by providing a structure for organizing different criteria and evaluating the importance and preference of each of them over alternatives. That makes the decision making process easier. This method can be implemented in the software. Network analysis is implemented using Super Decisions software and is applied to various decisions including marketing, medical, political and urban, military, social and forecasting among many others, which is available in NPGIS software. This method is one of the compensatory methods (compensatory methods are techniques in which the weakness of an option in a specific criterion is compensated by the strength of another criterion. For example, suppose you intend to buy a house. The price of the house may be high, but the location of the house must be good, so the location index somehow compensates for the cost index, and the indices are independent or dependent on each other, which are two important features of this desirable model (Bayazit, 2006; Saaty, 2004).

To implement and implement the ANP method, the following steps must be implemented in order to properly form the implementation along with questionnaires and other software in line with the integration with the GIS software:

1) Creating a research network diagram: At this stage, the problem should be divided into criteria levels and sub-criteria and options, if any, and the relationships between them should be determined. A very important point at this stage is the existence of relationships between standards. These relationships can be specified in several ways. You can find out the relationships between standards by asking experts. Suppose a system consists of N clusters or N components, and the elements in each cluster influence or are influenced by all or some of the other elements in the cluster. Of course, this effectiveness should be checked according to the special feature that controls the interactions of the entire system (control criteria). Three types of clusters are shown in the figure below: source, destination and intermediary cluster. C1 represents the source cluster, C5 represents the destination cluster, and C2, C3, C4 are intermediate clusters. C2, C4 have loops that connect them to themselves. These rings represent internal dependencies and other connections (edges) represent external dependencies.

2) Forming the matrix of pairwise comparisons: In this step, the elements of each level are compared with other related elements at a higher level in a pairwise manner and matrices of pairwise comparisons are formed. Also, at the end, a pairwise comparison of internal relationships should be done. Of course, first the matrices should be explained to the residents as examples. Imagine that the problem has N clusters named C1, C2, ... CN and there are Ni elements in the ith cluster. Now if two clusters i and j are selected and all elements of i are paired with respect to the first element of j. The coupling matrix shown below is obtained. This matrix is a pairwise comparison of all elements of branch i with respect to the first element of branch j. These formulas can be seen in Figure 8, Figure 9, and Figure 10. It is mentioned twice that the NPGIS software has completed these steps. This ranking was done by 30 experts in geographic sciences due to its expert-oriented nature.

3) Calculating the inconsistency rate: In this step, we calculate the ANP inconsistency rate. If this rate is less than 0.1, it indicates the consistency of the matrix.

4) Forming the initial super matrix: Using the weight of the obtained pairwise comparisons, we form the initial super matrix. The primary supermatrix is the same weights obtained in step 2 from pairwise comparisons, which can be seen in formula (Saaty, 2004; Bayazit, 2006).

5) Creation of balanced supermatrix: After creating the initial supermatrix, the balanced supermatrix should be created. 6) Creating the limit supermatrix: The balanced supermatrix should be raised to the infinite power so that each row of it converges to a number. That number is the weight of that criterion or subcriterion or option and it is visible in formula.

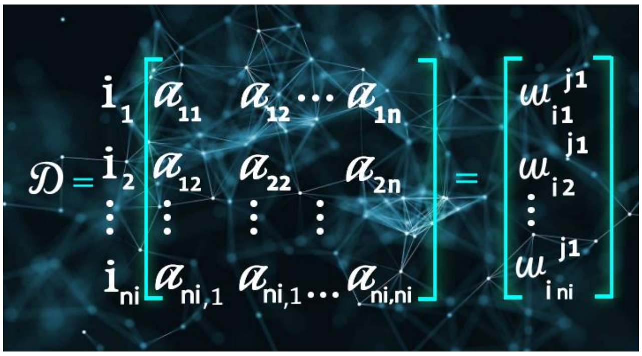

Figure 8. Prediction stage (Source: Research and findings of researchers 2019-2022; Bayazit, 2006; Saaty, 2004)

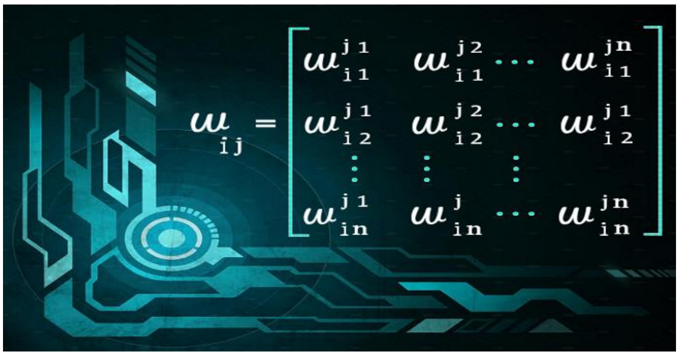

Figure 9. Prediction stage (Source: Research and findings of researchers 2019-2022; Bayazit, 2006; Saaty, 2004)

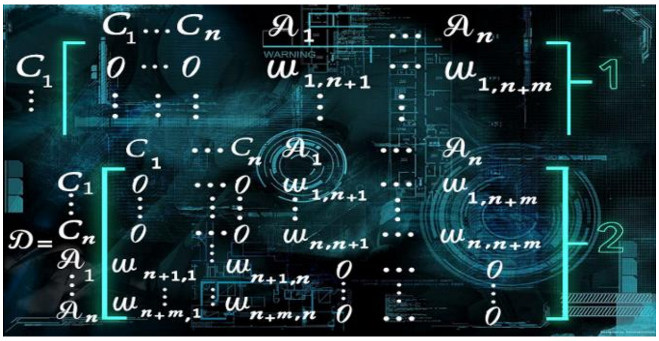

Figure 10. Prediction stage (Source: Research and findings of researchers 2019-2022; Bayazit, 2006; Saaty, 2004)

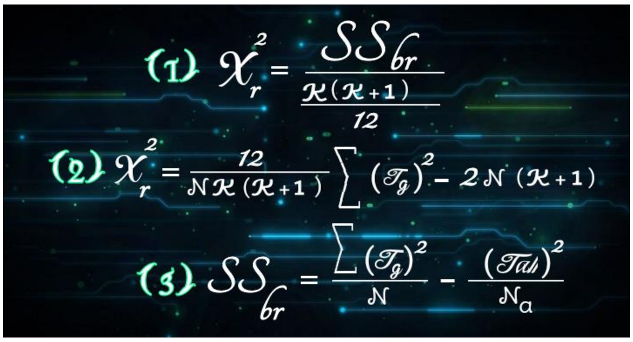

Figure 11. Statistical formulas (Cochran, 1977). for estimating the sample size (Source: Research and findings of researchers 2019-2022)

Statistical Analysis

Statistical analysis was performed on user performance data collected from pre-post web activity questionnaires and analytics software. Finally, all the data were sent to the Statistical Package for Social Sciences (SPSS) for statistical analysis, and the results were discussed. These steps are also available in NPGIS software. Following are the activities of statistical authorities that have been used in research and have tried in this way (Tabatabai et al., 2022; Choi et al., 2021). After the explanations and in the general question phase, matching with the statistical population of Sari city and the minimum sample size of 74/383, in other words 384 people, was done, which is shown below. In fact, since Milton Friedman first tested it in 1937, the experiment is named after him. This test does not need to know the distribution of variable values (Friedman, 1987; Friedman et al., 2010; Friedman, 1959). Calculation of Friedman's statistic, denoted by χ_r^2. In the first formula, SS_{br} is the sum of squares of ranks between distributions and k is the number of categories or distributions for which ranking is done. In the second formula, N is the number of subjects, k is the number of categories or distributions about which the ranking is done, and T_g is the sum of the ranks of the g-th group. In the third formula, N_a is the total number of ranks of all groups and T_{all} is the total number of ranks assigned to the subjects. The statistical value of this test is compared with the critical value obtained from the chi-square distribution table with k-1 degrees of freedom and at the desired confidence level, which is usually 95%. If χ_r^2 is greater than the critical value of the table, the null hypothesis is not confirmed and if the value is Sig. If the result is greater than 0.05, it does not create a significant difference between the groupsn (Krejcie and Morgan, 1970; Cochran, 1977). These levels are shown in Figure 11.

RESULTS AND DISCUSSION

Weighting based on the opinions of experts and stakeholders with the network analysis process

The final weight of the sub-criteria is obtained from the coefficient of the weight of each criterion in the weight of its sub-criteria. According to the results, the government cooperative GIS has won the first place with a weight of 0/342. Access technologies and tools with a weight of 0/188 have won the second place and transparency with a weight of 0/168 has won the third place, which shows the importance of the economic criterion in any process and its alignment with social factors can greatly optimize the expected results. Also The summary of the network analysis process and the activities that have been done for it can be seen in Figure 12. However, if these matters are placed in the hands of the powerful and beneficiaries or politicians and at a higher level than the public, it will multiply the intensity of achieving the goals in this process as shown in Table 1. The criteria were selected in three social, socio-economic, and socio-economic groups. The selections were made in such a way that it is consistent with the statistical ranking of the public, Also Weightings were done with Super decision 9.24 software. The method is available in NPGIS software. Also Its diagram is also in Figure 13.

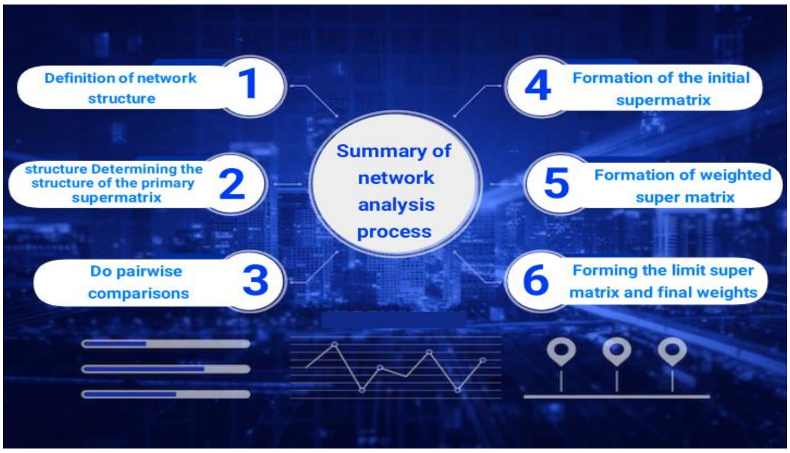

Figure 12. Network analysis process and its activities
(Source: Research and findings of researchers, 2019-2022)

Figure 13. Diagram of network analysis process in this study
(Source: Research and findings of researchers, 2019-2022)

Table 1. Final weight and ranking of sub-criteria (Source: Research and findings of researchers 2019-2022)

Criterion	Criterion weight	sub-criterion	Relative weight of the sub-criterion	Final Subcriterion weight	The final rank of the sub-criterion
Social	0/309	Strategic insight	0/117	0/0361	8
		transparency	0/543	0/1679	3
		Lawfulness	0/255	0/0788	4
		Responsiveness	0/085	0/0262	9
Sociol-Economic	0/109	Transportation	0/097	0/0107	10
		Urban infrastructures	0/333	0/0365	7
		Participation and location	0/570	0/0623	5
Economic - Social	0/582	Effectiveness and efficiency	0/089	0/0517	6
		accessibility tools&Technologies	0/323	0/1881	2
		GIS government partnership	0/588	0/3417	1

Statistical ranking of selected criteria with the priority of the general public

Analytical, superficial and statistical methods as well as software usability can be seen for this study in Figure 14.In addition, it shows the sequence of steps taken during the usability evaluation for an NPGIS prototype, which is used to measure the success or failure of the prototype based on the selected evaluation criteria. In this section, the ranking results of criteria based on Friedman's test are shown. The selection of criteria is based on previous experiences and studies as well as individual creativity of the researcher. Citizenship rights, Complications, Residue, Transportation, Timely activity, the traffic, participation, Cell phone, Time. The results of this test showed that the proposed factors have a significant difference at the 99% confidence level. The comparison of the average ratings showed that the time with an average of 5/97 is in the first place and the activity on time is in the second place with an average of 5/90 and the mobile option which is the same as the mobile smartphone and the result of the first and second options with a score of 5/97 is in the third place and Other factors were ranked next. The rating was done by computer software. Its results can be seen inTable 2. Also Weighting was done with SPSS 22.0 statistical software. These steps are available in NPGIS. And its diagram can be seen in Figure 15.

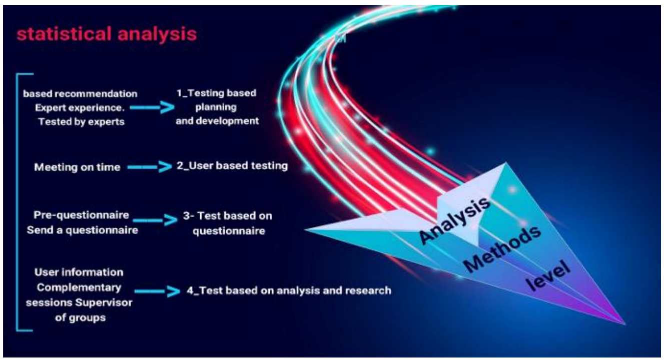

Figure 14. Steps of analysis, review and statistical evaluation
(Source: Research and findings of researchers, 2019-2022)

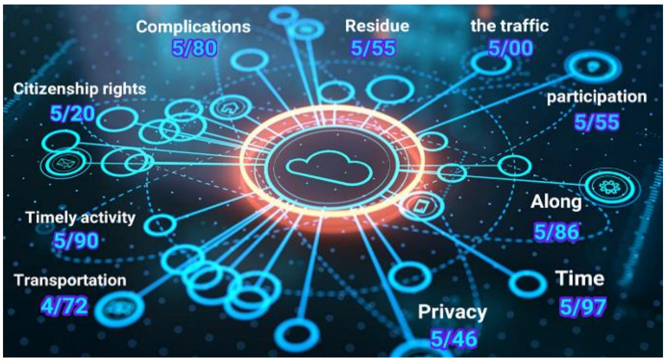

Figure 15. Statistical diagram of the study
(Source: Research and findings of researchers, 2019-2022)

Programming and creating open source software

It was explained in the previous sections, the priority of creating software with the help of artificial intelligence, in addition to statistical questionnaires, as well as ranking with network and hierarchical analysis simultaneously, are considered other innovations of this study. Artificial intelligence and the use of neural network machines and the importance of time play a significant role in this part. Python has been used for programming, an example of which can be seen in Figure 16. This image is one of the stages of making NPGIS software, which was selected for display based on discretion The main importance of the information related to the user's knowledge and work experience with webGIS programs, collaborative planning, education and general web surfing. This information makes it possible to interpret the corresponding responses and reactions from different participants and also helps to determine the limits on the complexity of the prototype program (Brunsdon and Comber, 2021) (Arribas et al., 2021). The last decade has seen increased computational intelligence to solve problems that lack a definite solution or are difficult to solve. The human biological neural network inspires artificial neural networks (ANNs), and research on neural networks has been accompanied by an understanding and study of the human brain's structure and learning function There is no requirement for a set of special rules to solve the problem in this computational The issue of time is one of the main criteria of NPGIS, was discussed for the first time by Mehdi Fallah, the researcher of this article, in his doctoral Dissertation. According to the researcher's opinion, which he has already stated in his articles, time is something that does not exist in reality and is created only on the basis of contracts between humans. According to the discretion of the creator of this environment, which includes open source software, it is possible to access it for the public and for all ages. Of course, this action is done according to the terms and conditions of each region or each place, which will indicate its flexible activity (Fallah et al., 2022a; Fallah et al., 2022b).

Figure 16. Steps of analysis, review and statistical evaluation
(Source: Research and findings of researchers, 2019-2022)

Table 2. Results of Friedman's rank test for criteria
(Source: Research and findings of researchers, 2019-2022)

	Dimensions	Average Rank	Rank	K square	df	Sig
Transportation	C_1	4/72	10	47/765	9	0/000
Timely activity	C_2	5/90	2			
Citizenship rights	C_3	5/20	8			
Complications	C_4	5/80	4			
Residue	C_5	5/55	5			
the traffic	C_6	5/00	9			
participation	C_7	5/55	5			
Cell phone	C_8	5/86	3			
Time	C_9	5/97	1			
Privacy	C_{10}	5/46	7			

Progress in awareness of participation in the order of the stages to this study

By reviewing similar fields in the communication resulting from collective participation, it was determined that the relationship between a common set of geographic information system prototypes and the level of public participation, which shows the exchange of information at different levels of participation, that is, the power of citizens and their non-participation and cases Such has been the case between the common people and the decision makers. In our relationship between the level of participation and the proposed information system, it was also found that this type of approach had the ability to expand after implementation and it was needed more than ever, which was ignored for any reason. Each level of public participation is directly related to one or more components of NPGIS, namely notification, GIS-based discussion forum, real-time map sharing, and virtual meeting environment. Finally, Figure 17 shows the role of participation proposals and increasing the level of participation at the local, national and transnational levels. This form has been proposed considering the spatial and temporal conditions of real-time.

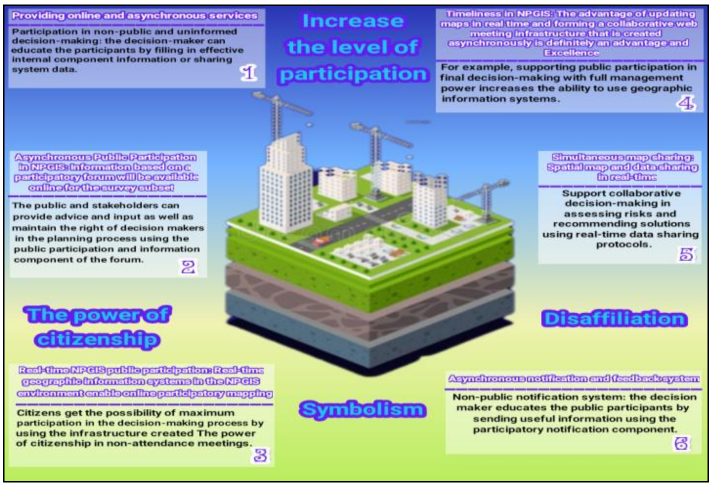

Figure 17. Increase the level of participation
(Source: Research and findings of researchers, 2019-2022)

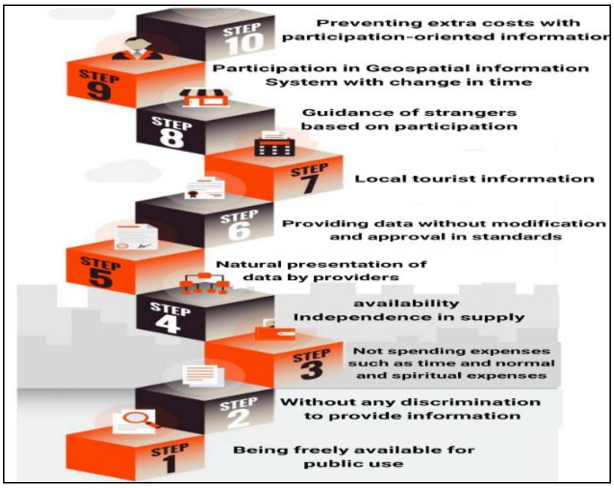

Figure 18. Participation-oriented information
at the national level for use in the tourism industry

Participation in tourism information

Tourism in the place .One of the important parts of spatial partnership is participation in tourism and the development of this industry. Consequently, cities with standard spaces and amenities can attract a large number of tourists. Because the space of cities should be attractive not only for its citizens but also for tourists and express the special identity and characteristics of that city. Recent years have been an exciting time for tourists interested in urban tourism. As a complementary process, branding the potentials of urban tourism endows the city with a distinct identity and contributes significantly to the competitiveness approach in cities, which is now referred to as the primary link in the economic structure. While the global coronavirus outbreak significantly reduced domestic and international tourism and posed a severe threat to the industry. tourists' sense of security and easy access to medical facilities. Therefore, the closer a location is to medical and health care facilities, When the potential of tourism in a region is greater, the risk of disease transmission is also increased. For example: the Covid-19 virus has been the most influential crisis that has affected countries, organizations and various economic sectors since the Second World War. Therefore, knowing which place has what risks is also a part of participation in the notification of the occurrence of risk, which is another important advantage of participation-oriented spatial information. (Uğur and Akbıyık, 2020; Bustomi and Avianto, 2021; Novy, 2019; Kamarudin et al., 2022; Shirshamsi et al., 2021).

The connection between spatial participation and the important topic of tourism

Tourism is one of the activities of attracting capital in countries, and it is necessary to have real-time information about it. To create infrastructure and develop tourism in many countries, traditional and old methods such as television and radio, books and even newspapers or catalogs are used, which are almost obsolete in modern societies today. Also, in terms of the depth of application and development of information technology in tourism management, it is far behind the general level of tourism. At the time of explosion of real-time information and modern technologies, which has turned the center of attention, as well as the emergence of the new generation of the Internet and new software, which the present study is also included in this category, They are very popular and known to the public.

Even now, the use of these tools and methods are very conventional and low-cost, unlike traditional methods, because they do not require extensive production such as printing and distribution of the latest updates and information. As a result, they will be able to answer many essential and specific tourism questions, such as which historical sites exist in a particular country and where they are located. Incorrect decisions can increase participants' confidence in negative results of any type of test. This trust is not enough to influence people and it may also affect people's health and belief (Uğur and Akbıyık, 2020; Novy, 2019; Mariakakis et al., 2022).

Urban tourism has developed into one of the most efficient and effective economic and recreational activities in the modern era since the late second half of the twentieth century. Although attention to urban tourism development is increasing, this paper indicates that no comprehensive study has yet combined the two subjects of tourism development and branding for spatial modeling (Moghaddam et al., 2022). Most respondents are interested in web development. However, some, not many, do not agree with this process. Some of the respondents disagreed and were interested in web development. Therefore, many respondents agreed the website was easier to access and friendly use for tourism (Chen et al., 2022). Tourism is one of the economic sectors that have the greatest impact on the economic and social context of nations, as its multiplier effect contributes to the growth of other sectors. It includes transportation, accommodation, food and beverage, entertainment, leisure, historical and cultural experiences, tourist attractions, shopping, and other amenities available to travelers in foreign countries (Kamarudin et al., 2022; Clark et al., 2022). Nowadays, new technologies play a significant role in the tourism industry. Digital technologies have created new bridges for communication between tourists and marketers. Tourists' perception affects the intention to use digital marketing tools and platforms. Also, information quality, system quality, service quality, and user satisfaction are significantly related to the intention to use digital marketing tools and platforms (Chamboko-Mpotaringa & Tichaawa, 2023).

The tourist industry is important for every society and one of the main points in the current research topic is national participant, which shows the importance of research even in this field. National participant in the tourism industry and the information that is made available have both public and private aspects in the countries Information such as the location of recreational places, holy places, historical places is such information that is obtained through the participation of foreign and domestic tourists of a country. In some cases there are places where only local residents can act as a proper guide to help tourists. In general, collaborative location information is important in most activities.

Figure 19. Different types of functional tourism
(Source: Research and findings of researchers, 2019-2022)

Figure 20. The false cycle of public accountability
(Source: Research and findings of researchers, 2019-2022)

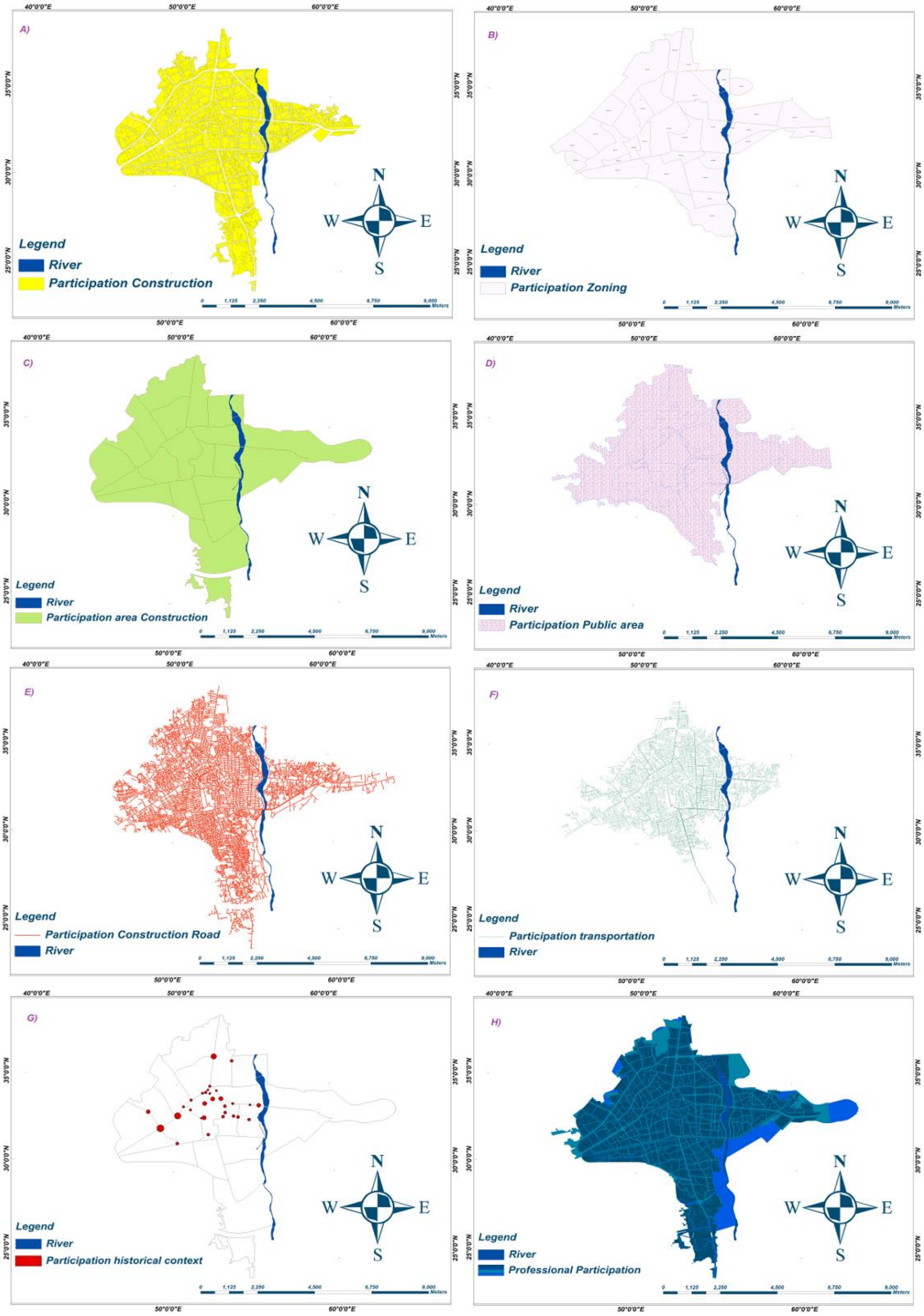

Figure 21. National participation (Source: Research and findings of researchers, 2019-2022)

Figure 18 shows Participation-oriented information at the national level for use in the tourism industry. There are different types of tourism, each of which can be used separately. But blessed is the place or area that has all these things, which can be seen in Figure 19. Using a systematic location system helps this activity and introduced in this study.

The importance of responding in real-time or synchronous

In a clear way, it should be mentioned that if we want to consider criteria for Participation of decision-making for urban planning in this study, we will face countless criteria. Accordingly, the time factor turned the center of attention to itself. It should be kept in mind that you cannot fight with technology and progress. Also, all criteria and topics have a common feature called time. However, the very big problem that experts are facing in 2022 is that everyone knows everything by using tools like Google and YouTube, and in the end, they do not become experts in any subject because they are only observers of generalities. Programs should be designed in such a way that they have the ability to talk in real time so that users can use topics aligned with real objects for geographic reference. Real-time conversation integration provides a powerful and flexible way to manage spatially referenced topics, Figure 20 is an example of the wrong cycle of establishing public contact with the municipal body, which leads to neglect. The reason for this topic is the response of the operator or the officials along with the delay and in some cases ignoring the issue. Reasons include traffic, being far from the location of the report, lack of facilities, and issues like that. The importance of studying in this section becomes clear, although other reasons have been mentioned in the previous sections. Therefore, answering at the right time or at the synchronous or real-time and any other title we put on it is not only important, but also necessary in some cases.

Participation

Participation in the form of public services

The value proposition of a great city is not limited to encouraging jobs, but creating opportunities for all city residents to reduce inequality and protect against harm. Opportunities should be equal for everyone. When a problem is solved in a short period of time, it actually benefits the whole city, and everyone does the right thing based on the time required, and like dominoes, the problems are solved. Based on the suggestions made with the general public and stakeholders, places were identified at the city level that could be very useful for medical activities and services. It can be seen in Figure 21.

As seen in Figure 21, participation is possible in any field and location activity. Especially when spatio-temporal software along with its environment provides this platform easily and makes it available to the public. The abundance of responses, even with a small number of participants, indicates an easy-to-use interface. This means that even the hands of those who do not have mass planning experience in routing will be able to create a new network of routes with confidence and without any doubts. Therefore, in addition to effective decision-making, the paths that are created in a place will be clear and realistic. A) participation in constructions, B) participation in zoning based on smaller and larger areas with relatively lower prices, C) cost construction based on participation, D) public participation in all areas, E) Participation in the construction of intra-city roads, F) Participation based on transportation, G) Participation based on historical areas around which the fabric of deterioration is also located, H) Participation of professionals who are all software experts.

All these maps are based on participation. In this usability section, the participants were asked to identify concerns related to planning and participation in the development of Sari city. This is the subject of investigation and how to respond to the moment and simultaneity created in this scenario. Evaluating the usability of the GIS map sharing system as a support tool for participation urban planning, which is a fictitious example and can be a justified and optimal participation basis. Therefore, a person who is active in this field was used. 15 municipal employees were selected to share the map and introduce it in an interactive work environment. Everyone's behavior and answers were observed and recorded using a computer and creating a questionnaire. The purpose of this study was to test the usability of the prototype by presenting a fictitious case study related to Sari Municipality for its planning and development based on the public accountability system. With the assumption that according to its regional reform plans, it was possible to make reforms in any place and region. Spatial data related to the corrections were prepared using software in the form of GIS files, which are uploaded to the computer as a web-based map layer so that it can be displayed as an open and public layer.

This issue has been extremely important that participation in any sector is possible and will improve the situation, especially if it is real-time. You can also see in Figure 22, A) and B) production of logical map is based on artificial logical intelligence in the software. It can be seen in the map C) and in the map D) it shows the three-dimensional calculations in the analyzes on the two-dimensional map, that the software has the ability to show the entire area in the zones where it is located, This is an add-on to GIS. which can instantly or in real time perform all the features for all kinds of services such as aid, tourist services, postal services, applying all opinions including people and officials, providing assistance in the fastest possible time, etc. which is a very new feature that revolutionizes the world of GIS, coding and programming. As mentioned before, due to the protection of personal privacy, more explanations are possible in this case. The final locations that can be seen in the Google image indicate what activity or help each area is closest to, which in turn is completely new. This area with dimensions of 36,423,900,000 square meters is located in UTM zone 39.

DISCUSSION

From the day when humans have access to food, they followed it and immediately understood that there are only two other things they need to live better, the first is the knowledge that is related to the inner child and the need to know, and the second is the issue of environmental health, which leads to individual or collective form and in a shared form. In fact, all three mentioned cases require the process of participation, and participation is a problem beyond the imagination of individual intelligence, because it requires collective intelligence. So humans need three things for survival, 1) food, 2) awareness and 3) environmental hygiene. By observing the above, the human being will no longer be considered a sick person and will only worry about his future, as the attitude of the future and the perception of each person about it are different. These reasons were always emphasized on the issue of time, because man has turned prediction or prevention into worry and in some cases obsession and mental stress. An example of that is the children of man, if they give him the things he wants and there is no talk of greed for money and material issues, there will be no more complaints. For example, in America, they say that equality and opportunity are the same, which means that everyone can become president with this kind of view. In the opinion of the researcher and in fact, these statements are not acceptable and are more likened to a joke, because in equality of opportunities, equality is established when all human beings have the same type of equality, such as having security, health, housing, Peace, food, clothing and the like and nothing else, in fact, the minimum should be provided to each person first so that all people can enjoy the kind of equality that was said and then the talk of equality comes. So Participation is one of the important ways to achieve equality in the true sense. Participating with artificial intelligence in map generation may be faster, but with logical decisions. That is, mental and psychological conditions are not measured, social criteria are not taken into account.

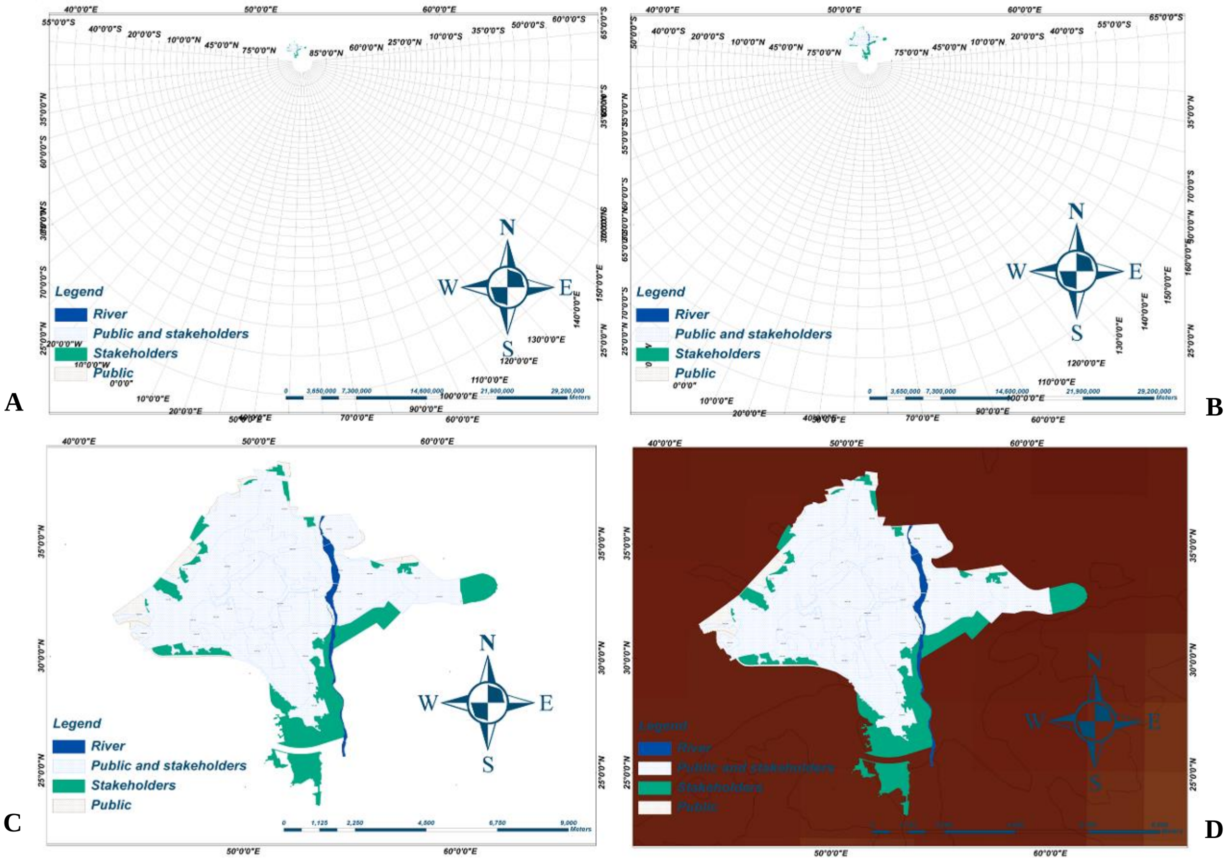

Figure 22. Location priorities in the final image of the study (Source: Research and findings of researchers, 2019-2022)

This case will probably cause many crises and have irreparable consequences. A question is raised at the end that has an interesting answer. Do humans care about the construction of a road, if the ants' nest is destroyed during the construction of the road? Artificial intelligence also has a similar view about humans. It is better for me to say that artificial intelligence only makes rational decisions to achieve its goals. Without him knowing what crises are created for the human race.

Testing Hypotheses and answering Questions

1) The first hypothesis is confirmed in line with the answer to the raised question. Because as seen in the results, the tourism industry is mixed with spatial sciences, especially geographical sciences.

2) In response to the second question, it should be said that artificial intelligence will not be able to examine the mental and psychological factors of people in very different conditions and provide a different version of it. Therefore, touristic places indicate the superiority of cities, and fortunately, the second hypothesis is rejected.

3) Regarding the third question, first of all, the hypothesis proposed in this research should be confirmed, because it is precisely this time factor that strongly affects people's decisions, behavior and answers.

CONCLUSIONS

The tourism have a special role in the process of urban development but As long as people do not benefit from mental and psychological health and are constantly involved with current events, they will suffer concrete mistakes in decisions in the same way. The results of this collaborative study have consciously interwoven all remote sensing sciences and pure GIS science in a completely specialized way. Of course, this was the topic that the researcher reached in the middle of the road. Because the main activity of this research was to introduce a new research using space-time-place and to invent software related to these features, the details of the study were not mentioned for different reasons, including the protection of personal works and privacy. which is considered natural.

As mentioned in the previous sections, these days the desire to use artificial intelligence has increased greatly. Because I think they don't know what they are facing. Doing any activity in a faster time makes people happy. But at what price? The loss of human relationships, the adjustment of the workforce and people's disappointment, the loss of human emotions and the use of logic and machine intelligence, which sometimes turns out to be wrong and may make people sacrifice their rational decisions. Can artificial intelligence take responsibility for these? Artificial intelligence is a subject that is widely used and developed by humans. Finally, I say this with my personal opinion so that it will be recorded in history: artificial intelligence is infinitely more dangerous than nuclear weapons.

Time was not lost in this study because according to the researcher there is no such thing as time. Time is a contractual matter between humans that has come into existence. But this study broke it down significantly and was able to moderate it significantly. Of course, based on the attention that people have to time. This was not found in other studies. People answered the questions based on personal opinions and views and participated in the participation.

In this study, for the first time both statistical analysis and ranking methods were used witch has not been seen in a research so far. When we talk about the future, we are talking about a possible process. History has shown that it is always unpredictable in nature. In fact, there is a gap and a trend between what is predicted and what happens, such as the future of global participation and the future of participation in the country, for example, Romania. Therefore, the future envisioned for the American continent from the end of the 21st century is definitely different from the future of the European and South African continents, and what is common is the existence of all three continents in the factor of time and, in other words, their imagining. It will be in the final moments of the 21st century. Based on the results obtained and due to the misleading nature of the issue of time, it cannot be managed, and people should not worry about time management, because they lose their focus. Therefore, they should manage their concentration and be focused in the moment. It is only in this way that you can use the time effectively and continue with the desired activity. This way will continue

Author Contributions: Conceptualization, M.F. and T.K.; methodology, M.F. and T.K.; software, M.F.; validation, M.F; formal analysis M.F; investigation, M.F.; data curation, M.F; writing - original draft preparation, M.F.; writing - review and editing, M.F. and M.K.K.; visualization, M.F. ; supervision, T.K.; project administration, M.F. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The Doctoral Dissertation from which this article was extracted was handed over on August 23, 2022 to the Supervisor Dr. Tajoddin Karmi, Assistant Professor of Faculty of Geographical Sciences and Department of Urban Planning, Kharazmi University has been delivered, I thank them..

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 15.02.2023 Revised: 02.03.2023 Accepted: 11.08.2023 Available online: 14.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.934-945
DOI 10.30892/gtg.49310-1094

THE POWER OF INTEGRATION TOWARDS SUSTAINABLE PERFORMANCE: A MODEL TO MINIMIZE TECHNOSTRESS AMONG FRONTLINE RESTAURANT EMPLOYEES BY COMBINING JOB AND EMPLOYEE RESOURCES

Mostafa A. HASSANIN
Mass Media Communication Department, College of Arts, King Faisal University, Al Ahsa, Saudi Arabia, e-mail: mahtaha@kfu.edu.sa

Amany E. SALEM *
Social Studies Department, College of Arts, King Faisal University, Al Ahsa 400, Saudi Arabia;Tourism Studies Department, Faculty of Tourism and Hotel Management, Helwan University, Cairo, Egypt, e-mail: asalem@kfu.edu.sa

Mohamed Y. HELAL
Hotel Management Department, Faculty of Tourism and Hotel Management, Helwan University, Cairo, Egypt; General Management Department, Institute of Management, Economics, and Finance, Kazan Federal University, e-mail: mykhelal@stud.kpfu.ru

Nabila N. ELSHAWARBI
Hotel Management Department, Faculty of Tourism and Hotel Management, Helwan University, Cairo, Egypt, e-mail: nabila.nabil@fth.helwan.edu.eg

Insaf S. AHMED
Geography Department College of Arts, King Faisal University, Al Ahsa, Saudi Arabia, e-mail: isahmed@kfu.edu.sa

Neveen MANSOUR
Hotel Management Department, Faculty of Tourism and Hotel Management, Helwan University, Cairo, Egypt, e-mail: neveen.mohamed@fth.helwan.edu.eg

Citation: Hassanin, M.A., Salem, A.E., Helal, M.Y., Elshawarbi, N.N., Ahmed, I.S., & Mansour, N. (2023). THE POWER OF INTEGRATION TOWARDS SUSTAINABLE PERFORMANCE: A MODEL TO MINIMIZE TECHNOSTRESS AMONG FRONTLINE RESTAURANT EMPLOYEES BY COMBINING JOB AND EMPLOYEE RESOURCES. *GeoJournal of Tourism and Geosites*, 49(3), 934–945. https://doi.org/10.30892/gtg.49310-1094

Abstract: To develop a model that integrates restaurant and employee resources to overcome technostress and achieve sustainable performance. This qualitative study is based on twenty-two semi-structured interviews with restaurant managers and frontline employees (FLEs) to comprehensively understand how restaurant resources and personnel can be employed to combat technostress and achieve sustainable performance. Restaurant FLEs experience technostress from multiple sources, including unclear work-life boundaries, complex new systems, job insecurity, and the frequent use of new technologies. In addition, restaurant managers and FLEs concur that integrating restaurant and FLE resources is an effective model for reducing technostress and achieving FLEs' sustainable performance. The study expands the JD-R model to address the challenges faced by FLEs in managing technology-induced job demands, offering a comprehensive solution that benefits restaurants and employees. This approach considers the role of both employers and employees in managing technostress, leading to a supportive work environment and improved sustainable performance.

Key words: technostress, JD-R model, social support, digital competencies, employee proactivity, job autonomy, sustainable performance

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INTRODUCTION

FLEs need to communicate with customers and coordinate activities with team members in real-time, all of which necessitate the use of technology (Christ-Brendemühl, 2022). While technology can improve workplace efficiency, it can also create interruptions and become overwhelming, leading to technostress (Wu et al., 2022). Technostress is a psychological problem caused by using technology, especially when it makes people feel overwhelmed, frustrated, or anxious (Högberg, 2021). Technostress can be caused by several factors, such as complicated user interfaces, unreliable systems, and an increased workload due to the use of technology.

De Keyser et al. (2019) view service systems as a combination of technologies, processes, and human actors, including customers and FLEs. The use of technology can negatively impact FLEs' work and lead to technostress, which reduces employee performance due to job demands and resource limitations (Tarafdar et al., 2014). Hence, this study's first motivation is to understand the challenge of technostress in the restaurant industry among FLEs.

* Corresponding author

Several studies have explored the impact of technology on employees in the hospitality industry (e.g., hotels and restaurants). Högberg (2021) found that technostressors such as work overload and changing algorithms create negative stressors among employees in an international hotel chain. Wu et al. (2022) studied the consequences of technostress among employees in smart hotels. They found that technostress negatively affects employee well-being and performance, with organizational learning having a countervailing moderating impact.

Christ-Brendemühl and Schaarschmidt (2020) investigated the impact of technology-induced job demands on FLE technostress, which reduces customer satisfaction and delight with the FLE. The study highlights the challenge of managing technology-induced job demands on the organizational frontlines. Christ-Brendemühl (2022) conducted a qualitative study to investigate the impact of digital technology on FLEs in the restaurant industry. The study found that FLEs agree that technology makes them more productive. However, unreliable or unintuitive systems and technology-induced role overload can evoke technostress and impair FLEs' well-being and job performance. However, limited research has been proposed on solutions for technostress among FLEs in the restaurant industry. Therefore, the second motivation of this study is to address the issue of technostress in the restaurant industry by developing a model that integrates restaurant and employee resources to achieve sustainable performance.

The job demand-resources (JD-R) model suggests that job demands and resources can significantly impact employee performance (Radic et al., 2020). Considering the JD-R model, the current study proposes that integrating restaurant resources with FLEs' resources can reduce technostress and maintain sustainable performance. Restaurant resources such as organizational support, supervisor support, co-worker support, and building employees' digital competencies can provide employees with the necessary resources to manage technology-induced job demands effectively. Organizational support is the help and resources the restaurant gives its staff members to improve their well-being, pleasure on the job, and performance (Sungu et al., 2019). Supervisor support refers to how much employees think their supervisor is friendly, helpful, and open to talking to them (Baqir et al., 2020). Co-worker support refers to the assistance and encouragement that employees provide one another in the workplace (Shin et al., 2021). Building employees' digital competencies refers to developing and improving employees' skills, knowledge, and abilities related to using digital technologies and tools in the restaurant (Daradkeh et al., 2023). Hence, the proposed restaurant resources can help reduce work overload, role ambiguity, and other technostressors negatively impacting employees' job performance.

Moreover, employee resources such as proactivity and autonomy can also be crucial in reducing technostress and maintaining sustainable employee performance. Employee proactivity is the degree to which employees take the initiative and engage in self-directed behavior to enhance their work environment or job performance (Demir et al., 2022). Proactivity can help employees anticipate and prevent potential stressors, while autonomy can help employees effectively manage their workload and responsibilities (Tuan, 2022b). Employee autonomy refers to the degree to which employees are independent and have decision-making authority at work (Spagnoli and Molinaro, 2020). By integrating restaurant resources with employees' resources, employers can create a supportive workplace that promotes sustainable employee performance, which means the ability of an employee to perform their job duties effectively and efficiently over a sustained period.

This current study uses a qualitative research approach through semi-structured interviews with restaurant managers and FLEs to comprehensively understand how restaurant and employee resources can combat technostress and achieve sustainable performance. The main three hypotheses questions of this study are as follows:

1. Do restaurants' resources, such as social support and building employees' digital competencies, play a crucial role in reducing technostress and maintaining sustainable employee performance?
2. Do employees' resources, such as proactivity and autonomy, play a crucial role in reducing technostress and maintaining sustainable employee performance?
3. Does the proposed model of integrating restaurant resources with employee resources improve employee sustainable performance?

Theoretically, the study extends the JD-R model by integrating restaurant resources with FLEs' resources to reduce technostress and maintain sustainable performance in the restaurant industry. The proposed model considers the challenges faced by FLEs in managing technology-induced job demands and provides a comprehensive solution that can benefit both employees and customers. Moreover, the study adds to the literature on technostress by proposing a model that provides a more holistic approach to managing technostress and considers the role of both employer and employee in managing technology-induced job demands. From a practical perspective, employers can create a supportive work environment that promotes sustainable employee performance by integrating restaurant resources with employees' resources. Moreover, employees can benefit from the model by accessing the necessary resources to manage technology-induced job demands effectively, reduce work overload and role ambiguity, and promote their well-being and job satisfaction.

LITERATURE REVIEW

1. Theoretical background

The JD-R model is a theoretical framework that explains how job demands and resources affect employee performance (Radic et al., 2020). According to the JD-R model, job demands refer to a job's physical, psychological, and social aspects that require sustained physical and mental effort and are associated with physiological and psychological costs (Pansini et al., 2023). On the other hand, job resources refer to those aspects of the job that are functional in achieving work goals and reducing job demands and are associated with motivation, engagement, and learning (Helal, 2022). The JD-R model proposes that high job demands, without sufficient resources, can lead to burnout, adverse health outcomes, and decreased job performance (Lee et al., 2019; Tantawy et al., 2016).

Conversely, high job resources can lead to engagement, well-being, and sustainable performance (Sarwar et al., 2020). Recent hospitality research shows that technostress can negatively affect employee well-being and performance (Christ-Brendemühl, 2022; Wu et al., 2022). Specifically, technostress leads to burnout, despondency, and dissatisfaction with work and peers (Pansini et al., 2023). However, it is also recognized that the overuse of modern technology in work environments cannot alleviate work overload but can lead to increased stress and dissatisfaction (Christ-Brendemühl, 2022). For instance, in a recent study of 454 employees in smart hotels in China, the authors used the JD-R model to investigate the impact of technostress on employee well-being and performance (Wu et al., 2022). The study found that technostress negatively affects employee well-being and performance and that organizational learning can counteract the adverse effects of technostress on employee well-being and performance. Therefore, our study adopts the JD-R model because it can explain various facets of technostress and identify potential job and employee resources that can mitigate the impact of technostress on FLEs and achieve sustainable performance.

2. Technostress

Technostress was first defined by Brod (1984) as the "modern disease of adaptation caused by an inability to cope with new computer technologies healthily." Technostress is a term used to describe the adverse effects of technology on individuals in the workplace, particularly in service industries where employees have to interact constantly with customers (Christ-Brendemühl, 2022; Pansini et al., 2023). The increasing use of technology in service businesses has led researchers to consider service systems as made up of technologies, processes, and human actors like customers and FLEs (Christ-Brendemühl, 2022; Christ-Brendemühl and Schaarschmidt, 2020). However, technology infusion comes with demands and complexities that can lead to technostress among FLEs. This stress arises when the demands of technology are perceived as incompatible with an individual's abilities and values, resulting in a psychological response that is perceived as stressful (Wu et al., 2022).

According to Tarafdar et al. (2007), technostress has five types of stressors (i.e., techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty). First, techno-overload is the simultaneous handling of different information flows from internal and external sources (Tuan, 2022a). Therefore, employees handle more information than before, which requires more efficient and faster work. Second, techno-invasion is considered the flexibility of technologies, i.e., the possibility to work at any time, which affects the work-life balance because employees feel that they are not free from technologies (Yasin et al., 2021). Third, the rapid advance of technologies makes them more complete, functional, and complex, generating techno-complexity in users (Hwang, 2021). Fourth, techno-insecurity occurs when employees are not confident in using technologies, leading them to think that they cannot cope with the tasks requested and that, in the future, they will be replaced by others (Fu et al., 2022). Finally, techno-uncertainty is the stress caused by rapid changes occurring in the market. This stress creates uncertainty among employees regarding what technologies they will face, eventually leading to frustration (Kim and Lee, 2021).

3. Conceptual development

3.1. Organizational resources

3.1.1. Social support and technostress

Social support is "information leading the person to believe that he or she is cared for and loved, esteemed, and a member of a network of mutual obligations" (Cobb, 1976). Social support also refers to the assistance and cares others provide, such as colleagues, supervisors, and family members (Alnazly et al., 2021). Research reported that hospitality employees who feel supported by their organization, supervisors, and colleagues are likelier to report higher job satisfaction, better mental health, and lower stress levels (Abbas et al., 2021). Additionally, work-based social support can help employees develop stronger relationships with their colleagues, improving teamwork, communication, and overall job performance (Slavković et al., 2021). Social support can be an effective inhibitor of technostress creators. Social support can reduce technostress creators' negative impact by providing employees with a sense of security and assistance when problems with digital technologies occur (Lanzl, 2023). This study concentrated on workplace social support (i.e., organizational, supervisor, and co-worker). Organizational support refers to the resources, policies, and practices an organization provides to support its employees' well-being, job satisfaction, and performance (Sungu et al., 2019). Organizational support can take many forms, such as providing training and development opportunities, offering flexible work arrangements, promoting work-life balance, and recognizing employees' contributions and achievements (Li et al., 2019). Perceived supervisor support refers to how employees believe their supervisors care about them and value their contributions to the organization (Gordon, 2020). Colleague support, also known as co-worker support, refers to the assistance and encouragement provided by one's colleagues or peers in the workplace (Shin et al., 2021).

Social support can be emotional, informational, or instrumental (Wright et al., 2021). Firstly, emotional social support is a type of social support that provides empathy, care, and understanding to individuals experiencing stress or emotional distress (Abbas et al., 2021). Examples of emotional social support include listening to someone's problems without judgment, providing encouragement and comfort, and expressing empathy and understanding. Emotional social support can help individuals cope with stressors by reducing feelings of isolation and loneliness, increasing self-esteem and confidence, and promoting a sense of belongingness. Secondly, informational social support is a type of social support that provides advice, guidance, and information to individuals who are experiencing stress or facing a problem (Jolly et al., 2020). Examples of informational social support include providing information about available resources and services, offering suggestions for problem-solving strategies, giving feedback on performance or work-related tasks, and sharing knowledge and expertise. Finally, instrumental social support is a type of social support that provides tangible resources or practical help to individuals who are experiencing stress or facing a problem (Canhilal et al., 2020). Technostress is a modern phenomenon that can negatively affect restaurant employees (Christ-Brendemühl and Schaarschmidt, 2020). However, research has shown that higher levels of perceived organizational support are associated with lower levels of technostress among employees. For example, a study by Tarafdar et al. (2014) found that employees who perceived higher levels of organizational support reported lower levels of technostress. Similarly, a study by Ragu-Nathan et al. (2008) found that social support from colleagues and supervisors was negatively related to technostress. Therefore, by increasing the role of organizational support, FLEs can feel more empowered and less techno stressed in their work.

Supervisor support refers to the assistance and encouragement supervisors provide employees to help them cope with work-related stress (Gordon, 2020). Supervisor support can take many forms, including providing employees with the necessary resources and training to use technology effectively, offering flexible work arrangements to help employees manage their workload and maintain work-life balance, and promoting a positive work culture that values employee well-being (Baqir et al., 2020). A study by Tarafdar et al. (2014) found that employees who perceived higher levels of supervisor support reported lower levels of technostress. Similarly, a study by Lanzl (2023) found that social support from supervisors was negatively related to technostress. Therefore, supervisor support can have a significant impact on reducing technostress among FLEs. When supervisors provide support and resources to help employees manage their workload and use of technology, it can reduce the negative impact of technology on their job performance.

Co-worker support refers to colleagues' assistance and encouragement to help employees cope with work-related stress (Shin et al., 2021). Co-worker support can take many forms, such as sharing tips and tricks for managing technology, providing emotional support and understanding when co-workers experience technostress, and collaborating on projects to reduce individual workload (Lanzl, 2023). When co-workers provide support and resources to help each other manage their workload and use of technology, it can reduce the negative impact of technology on their well-being and job performance. According to one study, co-worker support can significantly decrease technostress and the need for recovery while enhancing employee motivation (Hessari and Nategh, 2022). Additionally, social support has been found to increase end-user performance, reduce techno-exhaustion, and lower physiological arousal (Weinert et al., 2020). Therefore, employees who perceive high levels of co-worker support are more likely to feel connected and supported in the workplace, which can reduce their levels of technostress.

3.1.2. Building employees' digital competences and technostress

Digital competence refers to the knowledge, skills, attitudes, abilities, strategies, and awareness required to effectively use technologies and digital platforms to complete tasks, solve problems, communicate, create and share content, and build knowledge (Falloon, 2020). Demir et al. (2022) define digital competencies as employees' ability to use hospitality establishment technologies responsibly and effectively. Restaurants can provide employees with training programs, workshops, and other resources that emphasize the development of essential knowledge, skills, and attitudes regarding using technology in an organizational setting to build their digital competencies (Daradkeh et al., 2023).

Another definition of digital competencies of employees refers to their skills, knowledge, experience, and expertise that are essential for a successful digital transformation in an organization, including their orientation toward digital technology, adoption of digital technology, and expertise with digital technology (Daradkeh et al., 2023; Osmundsen, 2020). The digital technology orientation of employees refers to their inclination and capacity to use digital technology, as well as their general awareness and interest in digital technology, which can result in a digitally enabled work-life (Osmundsen, 2020). The adoption of digital technology by personnel refers to the use of digital technology in the workplace. It is the realization by employees that digital technology can add value to their work and tasks (Osmundsen, 2020). The digital technology expertise of personnel refers to their work-related knowledge and skills in digital technologies (Suarta et al., 2023).

Vieru et al. (2015) proposed a typology of three employee digital competency archetypes. These archetypes are derived from combinations of three major competence areas (i.e., technological, cognitive, and social) and their respective learning domains (i.e., skill, knowledge, and attitude). First, technologically savvy employees have advanced technical skills and knowledge but may lack social skills and attitudes (Guan et al., 2021). Second, digitally literate employees have high cognitive skills and knowledge but may lack technological skills and social attitudes (Cetindamar Kozanoglu and Abedin, 2020). Finally, socially competent employees have high social skills and attitudes but may lack technical skills and cognitive knowledge (Vieru et al., 2015).

The current study argues that providing training programs and resources to cultivate FLEs' digital competencies can help them feel more confident and competent when using technology (Daradkeh et al., 2023; Osmundsen, 2020). These FLEs' digital competencies, in turn, could reduce common technostress symptoms, such as anxiety or frustration associated with technology use. Therefore, by providing employees with the tools and knowledge to utilize technology effectively, they can feel more confident in their ability to perform their job duties and have sustained performance. Furthermore, developing social skills and attitudes toward using technology may help FLEs feel more connected and supported in their work environment, which can help reduce technostress (Vieru et al., 2015).

3.2. FLEs resources

3.2.1. Proactivity and technostress

Employee proactivity refers to an individual's disposition towards actively engaging in work-oriented activities, such as initiating change, seeking opportunities, and taking active steps to impact their work environment positively (Doan et al., 2021). This behavior is typically characterized by a willingness to go beyond job responsibilities, show initiative, exercise judgment, and confront situations head-on. Employees who exhibit proactive personality traits tend not to be affected by environmental constraints or changes; instead, they actively seek opportunities to display their ambition and take active steps to affect environmental changes (Zhao et al., 2013). A proactive personality is, therefore, a positive force in many areas, positively correlated with career success, proactive behavior, role breadth self-efficacy, flexible role orientation, and work performance (Bakker et al., 2012). Hence, we define employee proactivity as an individual's active rather than passive approach toward work. They seek and create opportunities, show initiative, take action, and persevere until they bring about change, leading to increased productivity and career success.

We propose that FLEs with proactive personalities may have an increased ability to withstand and cope with the negative impact of technostress. FLEs with proactive personalities tend to identify and act on opportunities, show initiative, take action, and persevere outwardly. According to Hung et al. (2015), two dimensions of the proactive personality (i.e., the transformation of situations and the confrontation of situations) play a crucial role in reducing the negative impact of technostress on productivity. Transformation of situations is one specific personality trait is the ability to transform situations, which is part of a proactive personality (Sumiyana and Sriwidharmanely, 2019).

This trait involves individuals actively seeking to create opportunities, influence their environment, and make changes to achieve their goals. Confrontation of situations is a specific dimension of proactive personality, which refers to an individual's tendency to actively address and overcome challenges and difficulties in their environment (Yi-Feng Chen et al., 2021). Employees with high confrontation of situations scores are determined to influence the environment rather than be influenced by it. They tend to confront stressful situations head-on and transform them into opportunities.

In the workplace, individuals with highly confrontational situations can better cope with technostress and communication overload, manage work requirements, and reduce their adverse impact. Therefore, the proactive personality is more of a stress reducer through removing obstacles.

3.2.2. Job autonomy and technostress

Job autonomy is the degree to which employees have control or choice over their work and their involvement in decision-making connected to their job activities (Spagnoli and Molinaro, 2020). It encompasses the freedom and independence to make decisions, act, and carry out tasks without excessive interference or supervision from managers or other authority figures. Employees with high levels of job autonomy have more flexibility and responsibility, leading to increased job satisfaction and motivation and, ultimately, better job performance (Lim et al., 2022). Job autonomy is often considered an essential aspect of job design and is an important determinant of employee behavior and outcomes in various work settings, including the restaurant industry (Ma et al., 2022). Job autonomy is an essential factor in the restaurant industry, as it can significantly impact job performance and employee satisfaction (Bhardwaj and Kalia, 2021).

Research has shown that when FLEs feel that they have a certain level of control over their work, it can activate their expression of prosocial motivation, which ultimately leads to better job performance (Hewagama et al., 2019), as job autonomy allows employees to take charge and be more proactive in suggesting and implementing improvements in their work environment. Autonomy is a feeling of control and choice (Ma et al., 2022). When employees express the desire for greater flexibility, what they want is autonomy. Hence, FLEs can manage stressful situations when they feel they have some control over how to respond. Therefore, if individuals have more autonomy and control over their work, they can set limits and respond to technostress in a way that suits them (Tarafdar et al., 2020). By managing their work-life balance, individuals can reduce the negative impact of technology on their well-being, making it possible to cope with technostress more effectively.

3.3. Sustainable performance, organizational and FLEs resources, and technostress

Sustainable employee performance refers to the exclusive efforts of employees to achieve personal and organizational sustainable growth over an extended period (Roscoe et al., 2019). Sustainable employee performance is an evolving concept that emerged from sustainability, which denotes an organization's ability to cultivate, raise, care for, and sustain (de Jonge and Peeters, 2019). Sustainable employee performance is critical for restaurants, ensuring employees' efforts align with their long-term goals, and it helps achieve greater workplace satisfaction, better retention rates, and sustained success (Cook, 2008). Restaurants prioritizing sustainable employee performance invest in measures that promote employee development, foster a positive workplace culture, and provide opportunities for employees to grow and enhance their skills (Min et al., 2020). Therefore, sustainable employee performance is an essential aspect of workforce management that emphasizes the importance of employee wellness and long-term restaurant success.

Organizational resources, such as social support and building employees' digital competencies, and personal resources, such as proactivity and autonomy, can enhance employees' ability to cope with technostress and raise their sustainable performance in several ways (Jolly et al., 2020). Social support from the restaurant can provide employees with resources to manage their workload and use technology (Abbas et al., 2021).

This support can include providing training and resources to help employees use technology more effectively, setting clear expectations and boundaries around technology use, and providing emotional support and understanding when employees experience technostress. By providing social support, restaurants can create a healthier and more productive work environment, leading to higher job satisfaction and sustainable performance (Gordon, 2020).

Building employees' digital competencies can also enhance their ability to cope with technostress (Golz et al., 2021). By providing training and resources to help employees use technology more effectively, restaurants can reduce the negative impact of technology on employees' well-being and job performance (Gordon, 2020; Tuan, 2022b). These competencies include time management training, digital literacy, and work-life balance. Personal resources, such as proactivity and autonomy, can also enhance employees' ability to cope with technostress and raise their sustainable performance. Proactivity and autonomy can help employees take control of their workload and use of technology, which can reduce the negative impact of technology on their well-being and job performance (Tuan, 2022a). Hence, combining organizational and personal resources can enhance restaurant employees' ability to cope with technostress and improve their sustainable performance. After considering the above theoretical bases and arguments, we propose the following model:

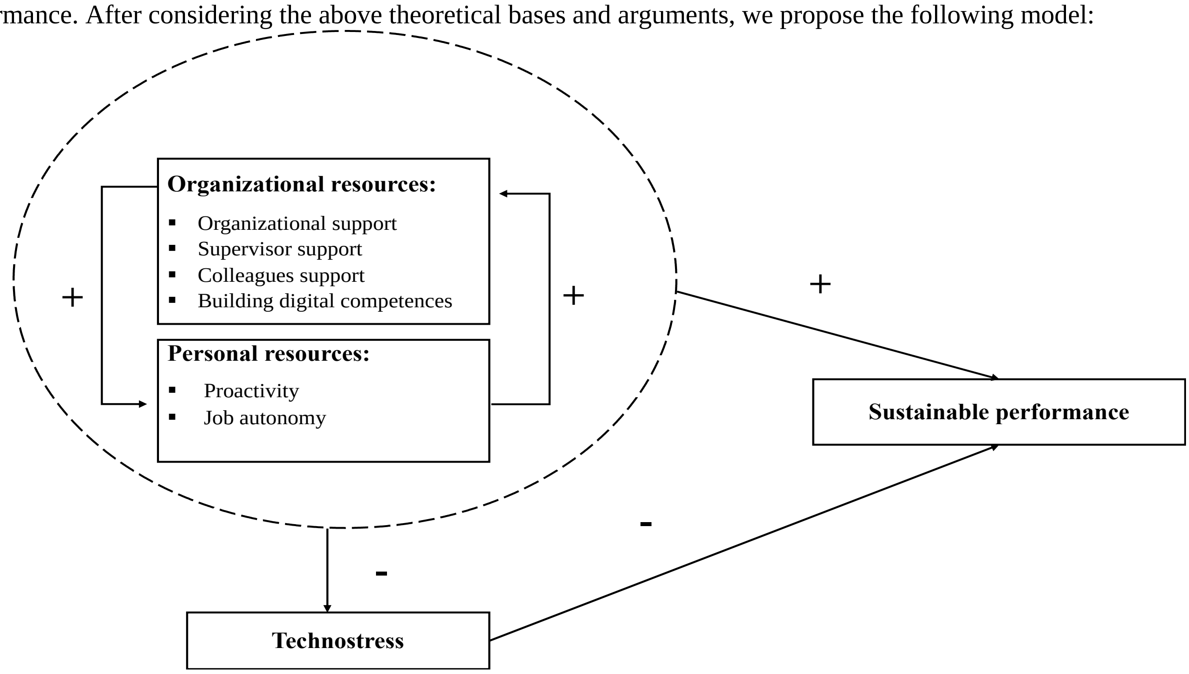

Figure 1. The conceptual model

MATERIALS AND METHODS

The current study collected data from restaurant managers and their FLEs using a qualitative approach. We employed semi-structured interviews, a style of interview that combines the benefits of open-ended and directed questions (Daradkeh et al., 2023). Participants were given more freedom in responding during semi-structured interviews, giving them more opportunities for inductive reasoning. The qualitative method (i.e., semi-structured interviews) was implemented through the following four stages: the selection of restaurant FLEs and managers, interview procedures, the generation of interview questions, and the analysis of the results.

1. Selection interviews

This study aims to create an integrated model that combines restaurant and FLEs resources to overcome technostress and improve sustainable performance. Initially, the research team attempted to obtain an official list of restaurants in Egypt to identify potential respondents. However, it was discovered that no such list exists. Instead, the team selected a group of restaurants that utilize digital technology in their customer service. The team then contacted 40 restaurant managers to inquire about the possibility of participating in the study. Of those contacted, 27 agreed to participate. The team then asked a preliminary question about technostress to ensure that the managers and FLEs were familiar with the phenomenon. This step resulted in 22 restaurants being selected for the study. Hence, we collected data from 15 restaurant managers and 12 FLEs through 22 semi-structured interviews.

2. Interview techniques

Table one provides data on the participants' demographic. There were ten restaurant managers and 12 employees who participated in the study. Of the restaurant managers, 70% were female, and 30% were male. Of the employees, 50% were female, and 50% were male. Regarding education, all participants had at least a high school degree, with the majority (83%) having a university degree and the remaining 17% having a post-graduate degree. Regarding the type of restaurant, 70% of the participants worked in an international chain, while the remaining 30% worked in a local chain. The interviews ranged from 60 to 90 minutes, with an average length of 69.5 minutes.

The most extended interview was conducted with a female employee who had a post-graduate degree and worked in an international chain and lasted for 90 minutes. The shortest interview was conducted with a male employee who had a high school degree and worked in a local chain and lasted 60 minutes. Overall, the data suggest that the study had a diverse group of participants in terms of work role, gender, education, and type of restaurant, which may provide valuable insights into the phenomenon of technostress in the restaurant industry.

3.3. Interview questions

The study interview form contains two parts: the first contains basic information about restaurant managers and FLEs, and the second contains interview questions. We prepared interview questions based on previous studies and the proposed model as follows:

- Could you explain what technostress is in your workplace?
- What are the types of stressors associated with technology, and how do they affect employees in the restaurant industry, particularly FLEs?
- How does social support, specifically workplace social support from organizational resources, supervisors, and colleagues, affect the level of technostress experienced by FLEs in the restaurant industry?
- What training programs and resources can be provided to FLEs in the restaurant industry to cultivate their digital competencies, and how can this help reduce technostress symptoms associated with technology use?
- What is the relationship between employee proactivity and the ability to cope with the negative impact of technostress among FLEs in the restaurant industry?
- How can job autonomy be utilized to reduce the negative impact of technostress on employees' well-being?
- How can restaurant managers invest in sustainable employee performance by providing organizational and enhancing employees' resources to enhance FLEs' ability to cope with technostress?

Table 1. Participants profile

Code	Work role	Gender	Education	International or local chain restaurant	Interview length
1.	Restaurant manager	Female	University degree	International	65 minutes
2.	Employee	Male	High school degree	International	60 minutes
3.	Employee	Female	University degree	International	75 minutes
4.	Employee	Female	University degree	International	65 minutes
5.	Restaurant manager	Female	University degree	International	75 minutes
6.	Employee	Female	University degree	International	65 minutes
7.	Employee	Male	University degree	Local	60 minutes
8.	Restaurant manager	Female	University degree	International	85 minutes
9.	Restaurant manager	Female	Post-graduate degree	International	60 minutes
10.	Employee	Male	University degree	International	65 minutes
11.	Restaurant manager	Female	University degree	Local	75 minutes
12.	Employee	Male	High school degree	International	65 minutes
13.	Employee	Female	Post-graduate degree	International	90 minutes
14.	Restaurant manager	Male	University degree	International	80 minutes
15.	Employee	Male	University degree	Local	60 minutes
16.	Restaurant manager	Male	University degree	International	65 minutes
17.	Restaurant manager	Male	Post-graduate degree	Local	75 minutes
18.	Employee	Female	University degree	International	65 minutes
19.	Employee	Male	University degree	International	65 minutes
20.	Restaurant manager	Male	Post-graduate degree	Local	75 minutes
21.	Restaurant manager	Male	University degree	Local	65 minutes
22.	Employee	Male	Post-graduate degree	Local	85 minutes

3.4. Interview analysis

The present study utilized the thematic analysis technique, a qualitative research method that identifies, analyzes, and reports patterns or themes within a dataset. This approach involves systematically organizing and coding data to identify patterns of meaning, which are then grouped into themes or categories. The thematic analysis process encompasses several stages: data familiarization, initial code generation, theme identification, theme review, definition and naming of themes, and reporting the results. In addition, the study framework served as a guide to identifying trends in the datasets, enabling a more in-depth analysis and facilitating coding grouping into prospective topics. Using tables at each stage of the process enhanced the researchers' ability to evaluate and identify the codes and themes and to switch between them to comprehend the fundamentals of each code and theme and their interrelationships. The findings of this analysis confirmed the suggested model that integrates restaurant and employee resources to overcome technostress and achieve sustainable performance.

RESULTS AND DISCUSSION

1. Overview of technostress in the restaurant industry

The interview results about the definition of technostress provided by the restaurant FLEs and managers suggest that technostress is a multifaceted phenomenon that can manifest in different ways depending on the specific context and technology used. One of the FLEs highlighted the overwhelming number of messages and communication received outside of official working hours as a significant source of technostress. This result suggests that blurring boundaries between work and personal life due to the constant availability of digital communication channels can increase stress and anxiety. This finding is consistent with the literature on techno-invasion as a source of technostress (Yasin et al., 2021). "Technostress for me is the overwhelming number of messages and communication I receive outside of official working hours from my managers or colleagues at work" (Respondent No. 2). Another FLE emphasizes the importance of proper training when using new systems to avoid experiencing psychological stress, known as technostress. This result suggests that the complexity and novelty of digital technologies can lead to feelings of uncertainty, anxiety, and frustration, which can negatively affect employees' sustainable performance. This finding is consistent with the literature on techno-complexity as a source of technostress (Fu et al., 2022). "When I use a new system without proper training, I experience psychological stress known as technostress" (Respondent No. 15).

One of the restaurant managers highlights the potential for modern technology to create job insecurity and negative feelings among FLEs, known as technostress. This result suggests that the constant fear of being replaced by automated systems or the pressure to learn and adapt to new technologies can lead to stress and anxiety. This finding is consistent with the literature on techno-insecurity as a source of technostress (Fu et al., 2022). "Modern technology can create job insecurity and lead to negative feelings, known as technostress for among FLEs" (Respondent No. 8). Another restaurant manager emphasizes the frequent use of new digital technologies in the work environment as a significant source of technostress. This finding suggests that the constant demand to use and learn new technologies can lead to fatigue and burnout, negatively affecting employees' sustainable performance. This finding is consistent with the literature on techno-overload as a source of technostress (Högberg, 2021). "Technostress is the stress and fatigue felt by the employee as a result of the frequent use of new digital technologies in the work environment" (Respondent No. 20). These interview results highlight the importance of understanding the specific sources of technostress in the restaurant industry to develop effective strategies to mitigate its adverse effects on employees' sustainable performance.

2. Technostress and organizational resources

The interview results suggest that social support and building employees' digital competencies are crucial in reducing technostress among FLEs in the restaurant industry. According to the participants of FLEs, social support is beneficial in managing the stress associated with technology usage. It fosters a sense of belonging and support, reduces feelings of isolation, and helps effectively utilize technology (Gordon, 2020). Additionally, participants emphasized that motivation, encouragement, and assistance from colleagues, managers, and supervisors can positively impact work performance and reduce technostress caused by work pressure. "We offer support and assistance to one another during busy or stressful times, creating a positive and collaborative work environment." (Respondents No. 3, 7, and 10). However, participants also noted that the level of social support varies depending on the type of management and the approach used to motivate and appreciate employees. Further, some participants highlighted that there is no adequate support to deal with technostress in our restaurant. "A new point-of-sale system or online ordering platform that is difficult to navigate without adequate training causes me tension" (Respondent No. 22). Therefore, all restaurant managers should promote a supportive and collaborative work environment to reduce feelings of isolation and tension caused by using technology (Lanzl, 2023).

Restaurant managers have similar opinions regarding the benefits of social support in managing technostress among FLEs. They recognized that providing social support can foster a positive work environment and improve work performance. Managers also highlighted that motivation, encouragement, and assistance from colleagues, managers, and supervisors could reduce technostress caused by work pressure (Min et al., 2020). However, managers have varying opinions on the level of social support that should be provided and the approach used to motivate and appreciate employees. They need to balance the need for social support with other organizational priorities and may have different ideas on how to motivate and appreciate employees effectively. "I see that successful managers should have different approaches to motivating and appreciating employees, such as offering flexible work arrangements, financial incentives, or training and development opportunities. Hence, it is essential for managers to strike a balance between social support and other organizational priorities while implementing effective employee motivation strategies" (Respondent No. 21).

According to the results of a study on building employees' digital competencies, continuous training on new technologies used in restaurants can provide several benefits. These include ease of use, time and effort savings, and reduced technostress (Kim and Lee, 2021). "On a permanent and continuous basis, we receive training on any new technology that is used in restaurants. This training helps to fully know the technology used, which provides ease of use, saves time and effort, and reduces technostress." (Respondent No. 4, 12, and 13). Employees who work to improve their digital competencies also report feeling less anxious and frustrated when using technology. "We are working to improve our digital competencies to reduce anxiety and frustration related to the use of technology and to have a work-life balance" (Respondent No. 6 and 18). To support employees in developing their digital skills and knowledge, the restaurant managers provide them with technical support from specialists and ongoing training on new technologies. "We support the FLEs with resources such as user manuals, online tutorials, workshops with technical support from specialists, and troubleshooting guides to assist employees in using technology more effectively and developing their digital skills and knowledge." (Respondent No. 1, 16, and 17).

3. Technostress, FLEs' resources, and the sustainable performance

The responses of the restaurant FLEs varied according to whether the employee was still proactive or had lost their proactivity. Highly proactive employees strongly desire to learn new technologies, develop digital skills, and disclose technology-related issues with restaurant customers or themselves (Ma et al., 2022). These employees are likely to identify opportunities to use technology to enhance their work and take action to resolve any technical challenges that they encounter (Sumiyana and Sriwidharmanely, 2019). For example, a highly proactive employee could suggest a new system to improve efficiency, pick up a new POS system's features quickly, or utilize modern customer service applications to gain more positive reviews (Doeim et al., 2022). Contrariwise, some FLEs reported that their managers were unreceptive to their opinions, causing them to lose their sense of initiative. These non-proactive employees do not take the initiative to identify potential problems or opportunities to address technology-related problems (Bakker et al., 2012). This behavior is due to lacking motivation, confidence, and support. "I identified an issue with a touchscreen system, but no one listened to me or provided the necessary resources to address the issue" (Respondent No. 13). Restaurant managers highlighted that when FLEs proactively identify and address potential technology-related problems, it can lead to a more efficient and productive workflow. They can adapt to the new technology smoothly, identifying the promising aspects, and developing solutions to potential issues, so it helps the restaurant implement the technology more effectively (Demir et al., 2022). "Proactive employees can also encourage other employees to follow their example, creating a work culture of taking the initiative and problem-solving." (Respondents No. 5 and 14). This positive and proactive work culture can contribute to the restaurant's overall success, leading to a more productive and efficient workforce (Doan et al., 2021).

The responses of FLEs regarding autonomy in the workplace are varied. Some employees responded that they have autonomy in their businesses, but the degree of autonomy varies depending on the manager. Some managers encourage employees to find creative solutions to technology-related problems and make decisions that improve their productivity. "The manager always informs us that every employee has their own opinion and is part of the restaurant's family. In addition, the manager provides an environment in which we can learn and feel empowered, as well as a constantly expanding mentality." (Respondents No. 19 and 22). Therefore, such a manager reduces technostress in the workplace, boosts the performance of FLEs, and ultimately contributes to the restaurant's success (Hewagama et al., 2019). In contrast, some employees responded that there are fixed rules and procedures that only restaurant managers can alter.

On the one hand, restaurant managers emphasized that they have a high degree of autonomy among FLEs, which permits them to work and manage their duties independently, preventing them from feeling threatened by technology. They can aid in the creation of more efficient workflows and prevent them from feeling constrained, thereby reducing technostress (Tarafdar et al., 2020). "A reasonable amount of autonomy enabled the FLE to suggest a change in the order of how certain tasks are performed within the POS system to improve the process and reduce stress." (Respondents No. 9 and 11). On the other hand, some managers affirmed that there is not an abundance of autonomy in the tasks of the FLEs, as a strict system defines the responsibilities of every employee in the restaurant. Therefore, restaurant managers should strive to balance the need for efficient workflows with providing enough autonomy to FLEs to manage their duties and reduce technostress.

Based on the interviewees' answers, the restaurant could achieve sustainable performance by managing technostress among its FLEs. The study identifies various sources of technostress and provides effective mitigation strategies that target the specific sources of technostress. Social support, adequate digital training, and proactive initiatives such as fostering a problem-solving and initiative-taking work environment can reduce technostress among FLEs, promote digital competencies, and increase restaurant efficiency and productivity. Finally, the study highlights the importance of FLE autonomy in reducing technostress, and restaurant managers should encourage FLEs to share their thoughts on using technology.

CONCLUSIONS AND IMPLICATIONS

1. Theoretical implications

The study has significant theoretical implications because it proposes a model that integrates restaurant resources with FLEs' resources to manage technostress and maintain sustainable performance, thereby filling a research gap. First, the model of this study extends the JD-R model by providing a more comprehensive approach to managing technostress and by considering both the employer and employee roles. The proposed model integrates restaurant and employee resources and considers the difficulties employees face in coping with technology-induced job demands, such as role overload and ambiguity, which can contribute to technostress. This model applies to the restaurant and other service industries in which technology plays a crucial role in job performance. Second, the current study expands the existing literature on technostress by providing a more nuanced understanding of the specific sources of technostress FLEs that the restaurant industry encounters. Identifying various sources of technostress, such as techno-invasion, techno-complexity, techno-insecurity, and techno-overload, provides employers and employees with a more comprehensive approach to managing technostress. This identification can lead to effective mitigation strategies that target the specific sources of technostress and enhance employees' job performance (Gordon, 2020).

Third, the study's results highlighted the importance of social support in mitigating technostress among FLEs in the restaurant industry. Social support reduces technostress by providing FLEs with a sense of belonging and encouragement and reducing feelings of isolation (Sungu et al., 2019). In addition, social support assists FLEs in learning new technologies and acquiring digital skills, allowing them to feel more in control of their roles and less overwhelmed by technology (Weinert et al., 2020). Therefore, restaurant managers should provide FLEs with social support to reduce their technostress. This support can be accomplished by fostering an environment where FLEs feel comfortable asking inquiries, requesting assistance, and providing FLEs with training and resources on new technologies. Fourth, the study emphasizes the significance of providing FLEs with adequate digital training when implementing new systems to prevent technostress. The complexity and novelty of digital technologies can result in feelings of nervousness, anxiety, and frustration at work (Fu et al., 2022). Therefore, restaurant managers should consider implementing continuous training on new technologies and providing ongoing technical support to resolve technology-related issues, thereby promoting digital competencies among employees and reducing technostress (Kim and Lee, 2021).

Fifth, the study found that proactive FLEs are more likely to identify opportunities to use technology to enhance their work and to take action to address any technical obstacles they encounter. Non-proactive employees, on the other hand, do not identify potential problems or opportunities to address technology-related issues. It is essential to recognize that proactivity can be fostered in employees by fostering a problem-solving and initiative-taking work environment, which can increase restaurant efficiency and productivity (Demir et al., 2022). The study's final theoretical implication is the role of FLE autonomy in reducing technostress. The study found that a few employees have autonomy at work, enabling them to work and manage their responsibilities independently, preventing them from feeling threatened by technology, and contributing to developing more efficient procedures. On the other hand, employees without more autonomy responded that only restaurant managers could alter established rules and procedures and share their ideas. Therefore, restaurant managers should give FLEs more autonomy by encouraging them to share their thoughts on using technology (Spagnoli and Molinaro, 2020).

2. Managerial implications

The current study has several managerial implications for restaurant managers and FLEs. The responses of FLEs and restaurant managers revealed various forms of technostress, including techno-invasion, techno-complexity, techno-insecurity, and techno-overload. Therefore, restaurant managers can reduce these technostressors among their FLEs by implementing the practices recommended by the study model. First, restaurant managers can implement a variety of social support practices. These practices include giving employees access to training materials and technical support (Kim and Lee, 2021), fostering a learning culture (Weinert et al., 2020), do not disturb the FLEs with calls and messages during rest time or outside working hours (Yasin et al., 2021), and supporting new technology users (Weinert et al., 2020). A supervisor can provide support by providing clear instructions and expectations for using technology, providing regular feedback and encouragement, and being available to answer queries and solve problems (Min et al., 2020). Creating a supportive and collaborative environment where employees feel secure asking for assistance, sharing tips for using technology effectively, and being patient and understanding with struggling people can provide co-worker support (Shin et al., 2021). Thus, restaurants can foster a positive and supportive environment, enhancing sustainable performance.

Second, restaurant managers should improve FLEs' digital competencies by offering proper digital training while introducing new technologies to avoid techno-complexity. Three kinds of training could be utilized in training practices (Falloon, 2020). Typically, a manager or superintendent provides on-the-job training, which consists of hands-on instruction on how to use particular technologies. FLE can access online training at their own pace, which includes videos, interactive exercises, and assessments. Blended learning, which incorporates on-the-job training and online learning, enhances the learning experience (Kim and Lee, 2021).

Finally, restaurant managers should promote proactive and autonomous behavior among FLEs. FLEs will feel more in control and less burdened by technology if they are empowered to make decisions regarding their technology use (Hewagama et al., 2019). Additionally, managers ought to listen to the feedback of FLEs regarding technology to identify areas for improvement and support (Abbas et al., 2021). By fostering proactivity and autonomy among FLEs, restaurant managers can foster a positive and productive work environment, reduce technostress, enhance sustainable performance, and provide superior customer service (Alshreef et al., 2023; Tarafdar et al., 2020).

FLEs can demonstrate proactivity and autonomy by asking questions when uncertain about new technology, taking the initiative to enhance technology use in the restaurant, approaching technology creatively, and sharing their knowledge with co-workers (Yi-Feng Chen et al., 2021). By adhering to these recommendations, FLEs can gain control over their technology use and reduce the adverse effects of technostress.

3. Limitations and further research

Although this study gives valuable insights into the problem of technostress among FLEs in the restaurant business and proposes a solution, some limitations must be addressed. First, the study was conducted in a particular geographical area (i.e., Egypt) and may not apply to other contexts. Consequently, future research should investigate the applicability of the proposed model to various regions and cultures. Second, the study relied on self-reported data from FLEs, which may be biased and not reflect their actual experiences. Future research could combine self-reported data with objective measures of technostress, such as physiological indicators and performance metrics.

In addition, the focus of this study was limited to integrating restaurant and FLEs resources to combat technostress and enhance sustainable performance. Future research could investigate the role of additional factors, such as individual differences, employment demands, and organizational culture, in the emergence of technostress and the maintenance of employee performance. Lastly, this study did not investigate the potential impact of the COVID-19 pandemic on technostress and employee performance. Future research could investigate the pandemic's impact on the restaurant industry's use of technology and its effects on employee well-being and job performance.

Author Contributions: Conceptualization, M.A.H., M.Y.H. and A.E.S.; methodology, A.E.S., I.S.A. and A.E.S.; software, M.Y.H., M.A.H. and N.N.E.; validation, A.E.S., I.S.A. and N.N.E.; formal analysis, M.Y.H., N.M. and M.A.H.; investigation, A.E.S., I.S.A. and N.N.E.; resources, N.N.E., A.E.S. and M.Y.H.; data curation, I.S.A., N.M. and M.Y.H.; writing—original draft preparation, M.A.H., N.N.E. and N.M.; writing—review and editing, N.N.E., A.E.S. and M.Y.H.; visualization, N.M., M.A.H. and I.S.A.; supervision, I.S.A., N.N.E. and N.M.; project administration, M.Y.H., I.S.A. and M.A.H.; funding acquisition, . All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: This work was supported through the Annual Funding track by the Deanship of Scientific Research, Vice Presidency for Graduate Studies and Scientific Research, King Faisal University, Saudi Arabia [Project No. 3528].

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 31.03.2023 Revised: 22.06.2023 Accepted: 11.07.2023 Available online: 14.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.946-961
DOI 10.30892/gtg.49311-1095

POTENTIAL OF INTERNATIONAL COOPERATION OF UKRAINE IN THE GEOECONOMIC SPACE OF THE TOURIST INDUSTRY

Sergiy M. TSVILIY*
Department of Tourism, Hotel and Restaurant Business, National University "Zaporizhzhia Polytechnic", Zaporizhzhia, Ukraine, e-mail: sergiy_tsviliy@pltch-sci.com

Viktoriia O. OGLOBLINA
Department of Information Economics, Entrepreneurship and Finance, Engineering Institute of Zaporizhzhia National University, Zaporizhzhia, Ukraine, e-mail: viktoriia_ogloblina@pltch-sci.com

Valentina S. DEMKO
Department of Economics and Business, Dmytro Motornyi Tavria State Agrotechnological University, Zaporizhzhia, Ukraine, e-mail: valentina_demko@sci-academy.cc

Anatolii A. PAVLIUK
Department of Tourism and Hotel and Restaurant Business, Bohdan Khmelnytsky National University of Cherkasy, Ukraine, e-mail: anatolii_pavliuk@edu.cn.ua

Mykola M. PISETSKYI
Department of Tourism and Hotel and Restaurant Business, Bohdan Khmelnytsky National University of Cherkasy, Cherkasy, Ukraine, e-mail: mykola_pisetskyi@edu.cn.ua

Citation: Tsviliy, S.M., Ogloblina, V.O., Demko, V.S., Pavliuk, A.A., & Pisetskyi, M.M. (2023). POTENTIAL OF INTERNATIONAL COOPERATION OF UKRAINE IN THE GEOECONOMIC SPACE OF THE TOURIST INDUSTRY. *GeoJournal of Tourism and Geosites*, 49(3), 946–961. https://doi.org/10.30892/gtg.49311-1095

Abstract: The article defines the dominant criteria for the functional symbiosis of macro-regional and local-regional systems with a large number of producers of tourism products. A macroeconomic model was developed for calculating the integrated index of international cooperation of the country in the European geoeconomic space of the tourism industry based on standardized variable indicators. A detailed analysis of the development of the tourism industry in Ukraine was carried out, with the determination of the scope of tourist flows in the pre-war period and during the war period. The forecast dynamics of the development of the potential of international cooperation of Ukraine in the geo-economic space of macro-regional systems of Europe are provided.

Key words: tourism industry, international cooperation, geoeconomics, international tourist market, tourist products

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INTRODUCTION

The assessment of the potential of Ukraine's international cooperation in the geo-economic space of the tourism industry remains an actual and still insufficiently developed direction since the main problem of its assessment remains the spread of international terrorism, forced migration of the population due to hostilities, the growth of socially dangerous diseases, the general deterioration of the ecological situation. A significant increase in the negative factors affecting the intensification of the development of the tourism industry in Ukraine is further deepened due to significant losses on a worldwide scale. This is the result of the annual introduction of preventive measures to overcome the coronavirus pandemic and the uncertainty of the further situation regarding the worldwide lockdown, the closure of borders, the restriction of international destinations on the entry of tourists, the slowdown of international flights, the reduction of citizens' costs for geotourism within world-famous recreations (Lajçi et al., 2022).

Every global conflict, leadership clash and global problems can be linked to one common direction, i.e., travelling that affect the freedom of movement that lies at the centre of every geopolitical crisis. Besides, the current military conflict testifies to the impossibility of full and rapid restoration of geotourism in the occupied territories of the country, despite significant progress in solving acute territorial problems, which are inextricably linked with measures of economic, informational, social and political influence. However, the current situation in the state should be considered not only to be a problem, but also an opportunity to develop the potential of Ukraine's international cooperation with the functioning local-regional systems and their integration into the economic space of countries with an economically and socially stable environment. This would ensure attracting investment, formation of new cross-border communications, development of tourism infrastructure based on new generation digital technologies and creation of new jobs.

* Corresponding author

The modern development of tourism, which is based on such elements as massiveness, integration, socio-economic nature, has significantly influenced the dynamics of the tourist flow market and caused it to be considered as a socio-economic phenomenon of macro-regional and global significance (Chen, 2004). Revival of the tourism industry in Ukraine, which would be successfully integrated into international tourist destinations, is one of the leading directions of structural restructuring of the country's economy. It is on the basis of the formation of the national market of competitive tourist services that new mechanisms of international integration can be created with the transition to the macro-regional level of priority through global economic ties in the period of unity of the general system of international cooperation (Matsuka, 2018).

The importance of national management structures and state sovereignty is gradually increasing, under the influence of supranational regional economic organizations, which have a significant position in the strategic global hierarchy and are increasingly occupying the geo-economic space, which forms the foreign economic doctrine of international cooperation in the tourism industry. At the same time, the geoeconomic space of the tourism industry through the system of economic attributes extends beyond national borders and blurs the boundary between the internal and external spheres of the subjects of tourism activity, between the internal and external policies of the state, stimulating international cooperation in the process of economizing the life of society, on the basis of financial - economic instruments. In turn, the economization of the potential of international cooperation in the tourism industry is a transformative source of foreign economic relations of the state with the outside world, which depend on supranational economic organizations of the tourism industry and their integration into the zone of new prosperity. At the same time, regional integration is considered as an important intermediate condition for the creation of an optimal geo-economic space of the tourism industry. The unity of the world system presupposes the formation of an international tourism structure based on globalism, which determines the inevitability of full integration in the transition from a large number of states, national economies, tourist destinations and cultures to a single unified tourist space with single ethnic and traditional-cultural borders. Therefore, it is quite logical that the potential of Ukraine's international cooperation in the geoeconomic space of the tourism industry is not just a growing interdependence in the world, it is the absence of cross-border barriers on the way to the development of international economic relations, regionalization of the economy and intensification of cooperation (Çinaj et al., 2022).

Significant strengthening of the influence of cultural diplomacy, as a determining factor in the modification of international relations, in shaping the image of the tourism industry of the country outside its borders, ensures interaction in all areas of tourism business and promotes the development of national interests on the world stage, adapts the geo-economic space and activates the development processes of the economy of any state. The study of the theory and methodology of globalization, as well as the development of international cooperation in the market of tourist services, is devoted to the scientific developments of such scientists as: Farsari (2012), Gee and Fayos-Solá (1997), Kalinina (2006), Kokkranikal et al. (2011), Kozmenko (2015), Liubytseva (2002), Marti et al. (2007), McCabe et al. (2012), Prem (2000), Pompl and Lavery (1993), Trusova et al. (2020a, 2020b), who strengthened methodological provisions in the context of awareness of global competition for tourist products and identified international economic processes that transformed the structure of the provision of tourist services with added value, based on the principles of sustainable growth of the tourism sector of the national economy. The study of geopolitics as a science and its impact on the development of the tourism industry, as part of the security of international cooperation between countries, was carried out by such scientists as Bondarenko (2022), Mirela (2016), Smal (2007), Tkachuk (2019), Vegesh et al. (2017, 2020). They developed the conceptual provisions of the unity and interconnection of the world, determined the priority and supremacy of social and universal values over class and narrowly selfish national values. Moreover, they substantiated the intermediate provisions on the freedom of movement of tourists and formed the principles of socio-economic choice of territories in the plane of communicative interaction of macro-regional tourism systems. Furthermore, the problems of the development of the tourism industry are discussed in the works of scientists, in particular, Boukas and Ziakas (2014), Causevic and Lynch (2013), Chen (2004), Hall et al. (2006), Ivaniš (2011), Kamkhaji (2016), Trusova et al. (2020a; 2020b; 2020c) who studied the spatial determinant capable of expanding the scale of tourism potential in a cross-border regional destination.

The aim of the research is to determine the dominant criteria for the functional symbiosis of macro-regional and local-regional systems with a large number of producers of tourism products, which are able to unite into a single economic model, restore the activity of the tourism industry in crisis conditions of development and stimulate the potential of international cooperation of Ukraine in the geoeconomic space.

METHODS AND MATERIALS

As a phenomenon of global order, the tourism industry becomes a geopolitical phenomenon. In the process of political interactions between states, there is a direct or indirect impact on the state of the global tourism industry. The normalization of the political situation is the key to strengthening the position of the state in the international arena and its integration into the world economy. The volume and geography of the international tourist flow is largely due to the traveller's view of the safety of a certain destination. Accordingly, the geopolitical landscape of the modern world is changing rapidly. These changes are clearly reflected in the tourism industry, which is vulnerable to such changes. Constant monitoring and analysis of geopolitical trends is important since a sharp negative change in the global geopolitical situation can completely destroy the tourism industry in any country (Matušíková et al., 2023). Geopolitical factors affecting the current and future position of the state in the world system of international relations and its development can manifest themselves in different ways. Firstly, they can help stabilize the situation in the event of increased international cooperation and interaction. States in similar geopolitical conditions have similar or close national interests, which leads to the strengthening of their cooperation, including in the sphere of strengthening military security. Such collective cooperation contributes to sustainable development at both regional and global levels. Secondly, geopolitical factors can lead to competition between states. An important role in this process is played by territorial arguments, geopolitical contradictions, the desire to put another state at a disadvantage in the international arena. Such actions and situations can lead to a state of confrontation and have a destabilizing effect on regional and world processes (Marti-Ciriguián et al., 2017). The geopolitical factor in the tourism industry is the impact of certain political events (wars, coups, terrorist attacks) on tourism. Negative actions of states, such as aggression, imposition of sanctions, tightening of the visa regime, political coups and terrorist actions of terrorist organizations immediately affect the tourism industry. This leads to a decrease in tourist flows and large losses. In addition, certain geopolitical factors, such as military conflict or annexation of national territory, can completely destroy the tourist infrastructure and make a certain part of the country suitable for tourist purposes, etc. (Lajçi et al., 2022).

Geopolitics in the modern era is one of the basic concepts of the theory of international relations, characterizing the position of states or blocks of states in relation to the location of territorial-spatial objects, specific historical forms and regional, continental and global international processes. Spatial features include territory area, length of state borders, climate, topography, flora and fauna, hydrological features, etc. Geopolitics is usually defined as a theory that justifies and practices an approach to public policy and is characterized by geo-economic, political, military and other factors aimed at ensuring the vital interests of the country's tourism industry (Kinczel and Müller, 2022). At the same time, geo-economic transformations in the tourism industry can be at the stage of significant changes associated with the socio-economic development of any country. The tourism industry is a highly profitable inter-industry complex that ensures a high level of employment, social welfare and quality of life of the population. The desire to get the maximum benefit from the tourism industry, in the spatial synergy of regions with cultural and historical differences and the transport, communication, resort and entertainment infrastructure located in them, the asymmetry of recreational resources, etc., allows to revive the potential of international cooperation of the country, taking into account the polarizing aspects of the geo-economic space, which in the conditions of globalization, reaches significant scales and is considered as an independent sphere of foreign economic relations with a significant change in its structure (Trusova et al., 2020a).

Geoeconomic space (GES) as a functional and organizational environment of the tourism industry is manifested in the form of interaction of traditional and cultural processes of the development of international cooperation of the state at different hierarchical levels, which are distributed between local-regional and macro-regional systems. Accordingly, at different levels of functioning, the main components of the GES are the territorial (spatial), demographic, socio-economic, administrative, cultural and religious spheres of society's life. From the standpoint of a systemic approach, the geoeconomic space of the tourism industry is a socio-geographical system that, according to the law of transformation of quantitative changes into qualitative ones, forms the values of the potential of international cooperation of the state in the world hierarchy, ensuring the qualitative transformation of territories by mobilizing a significant amount of resources (Honcharenko et al., 2017). At the same time, the spatial expansion of the tourism industry stimulates the intensive development of transport, advanced information technologies and promotes the development of communications between different countries and regions of the world in the geo-economic space, forming the potential of international cooperation, as a certain organic unity of the economic model, in which there are internal connections between the compound elements of local-regional and macro-regional systems (Kalinina, 2006; Liubytseva, 2002). It should be noted that local-regional systems in the tourism industry are formed at the junction of three separate subsystems, namely: nature; population; production and provision of services. They contain such components as natural resources; recreants (formal temporary social group), tourists and labour resources (maintenance of the local-regional system in a separate territory); logistics, energy and information facilities (Trusova et al., 2020c). Accordingly, when forming a reproducible model of the potential of international cooperation, it is necessary to isolate the indicators of the tourist local-regional system and determine its magnitude (Figure 1).

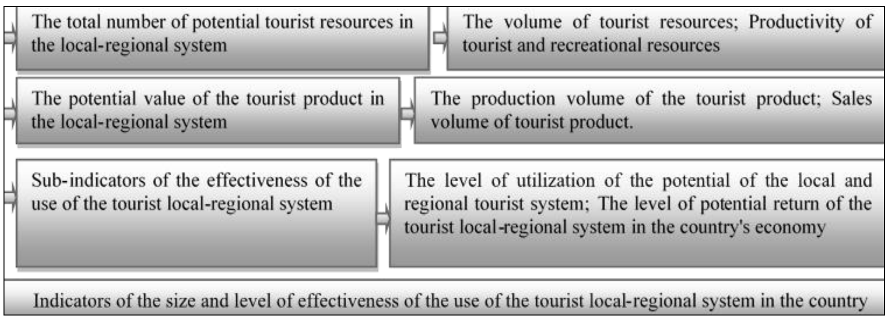


Figure 1. Indicators of the magnitude and level of efficiency of travel local-regional system in the country's economy (Source: authors)

In order to comprehensively assess the potential of the tourist local-regional system in the country for a reproducible model of the potential of international cooperation, an integrated level of its effective use was proposed, which is represented by the formula (1) (Selin, 1999):

$$EP = a_1 \times C_m + a_2 \times P_{npa} + a_3 \times Z_m + a_4 \times I_m \tag{1}$$

where, EP – an integrated level of efficiency of using the local-regional tourism system in the country; C_m – the level of potential of tourist (historical and cultural) objects in the local-regional system; P_{npa} – the potential level of natural protected areas in the tourist local-regional system of the country; Z_m– the level of potential of natural conditions in the tourist local-regional system of the country; I_m – the level of potential of tourism infrastructure in the local-regional system of the country; $a_1 - a_4$ – a weighting factor of potentials. The potential level of tourist (historical and cultural) objects in the local-regional system of the country is calculated by the formula (2) (Selin, 1999):

$$C_m = \frac{M_i \times (1+B)}{H} \tag{2}$$

where, C_m – the level of potential of tourist (historical and cultural) objects in the local-regional system; M_i – the number of accommodation facilities in tourist local-regional administrative centres; B – the localization coefficient (determines the concentration of tourist facilities and their distance from administrative centres - historical and cultural facilities); H– the number of objects located in the administrative centres of the tourist local-regional system of the country.

The more objects of historical and cultural heritage are concentrated on the territory, the greater the level of development of tourist infrastructure in the local-regional system of the country. At the same time, the level of localization of historical and cultural heritage objects (calculated by direct conversion) is determined by the correlation with the density of their distribution in the tourist local-regional system of the country. For its evaluation, the gradation of historical and cultural heritage objects is recommended, which takes into account their placement in relations to other tourism and recreation objects: up to 15km – 7 points; from 15to 20 km – 6 points; from 20 to 50km – 5 points; from 50 to 200km – 4 points; more than 200km - 3 points. The determination of the localization coefficient can be carried out in several ways. At the first stage, the distance to the administrative centre is determined and the number of objects of historical and cultural heritage in the region is calculated. Then each object is awarded a score of the corresponding gradation. At the last stage, the average value from the total score is determined, which is divided by the maximum score. To determine the level of localization, a graphic structure of the placement of tourist (historical and cultural) objects is proposed with the determination of the distances between them and their cluster. The minimum distance to and from administrative centres in the local-regional system of a country with a developed tourist infrastructure is estimated at 6-7 points (Figure 2).

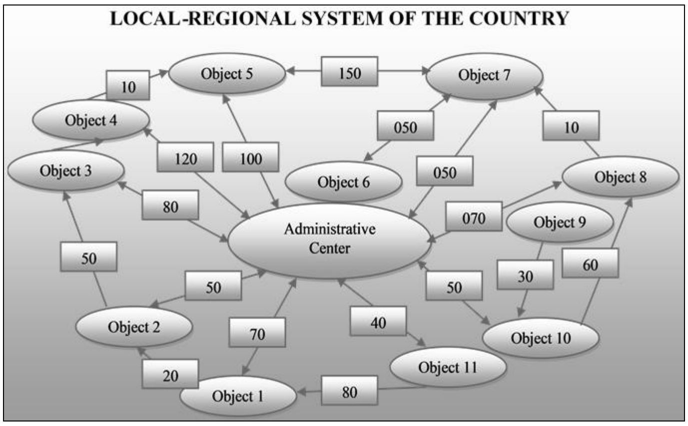


Figure 2. The gradation of placement of tourist (historical and cultural) objects in the administrative centers of the local-regional system of the country (Source: compiled by the authors)

Two-sided arrows represent access routes (both to and from the object), one-sided means the specified route only after visiting the previous object. Thus, formula (2) is corrected and the integral potential level of historical and cultural objects is determined according to formula (3) (Cunha, 2005):

$$C_m = C_1 \times a + C_2 \times a + C_3 \times a \tag{3}$$

where, C_1 – architectural monuments; C_2 – historical monuments; C_3 – archaeological monuments; a – the weighting factor (limit from 3 to 7 points, based on the priority of the resource).

Depending on the integral indicator (C_m) the relative tourist (historical-cultural) sub-indicator (C_s), is calculated, which reflects the potential of tourist (historical-cultural) objects in the local-regional system of the country in relation to the territory of the state as a whole and is calculated by the formula (4), Cunha, 2005:

$$C_s = \frac{C}{C_{\max}} \tag{4}$$

where, C – the level of potential of the tourist (historical and cultural) object in the local-regional system of the country under study; C_{max} – the maximum potential level of tourist (historical and cultural) object in the state.

For the efficient use of the tourist local-regional system of the country, the presence of the potential of natural protected areas is an important component, which is estimated by the formula (5) (Cunha, 2005):

$$P_{npa} = a \times Y + a \times L + a \times L_n + a \times L_m + a \times M_n + a \times M_t \tag{5}$$

where, P_{npa} – the level of natural protected areas potential in the tourist local-regional system of the country; Y – a national park; L - a landscape park; L_n – a landscape park of national significance; L_m – a landscape park of local importance; M_n – natural monuments of national importance; M_t – natural monuments of local importance; a – the weighting factor ($1 \le a \le 2$). The remoteness of natural protected areas requires reducing the risks of visiting them in cases of injuries, exacerbations of diseases, accidents. Therefore, we consider it necessary to add a point estimate of the distance to the nearest administrative centre in the tourist local-regional system of the country to the potential indicator, namely: from 20 km – 9 points; from 20 to 50 km – 8 points; from 50 km to 100 km – 7 points; more than 100 km – 6 points. Accordingly, formula (5) is corrected and will have the form of the formula (6) (Cunha, 2005):

$$P_{npa} = a_1 \times Y \times r_1 + a_2 \times L \times r_2 + a_3 \times L_n \times r_3 + a_4 \times L_m \times r_4 + a_5 \times M_n \times r_5 + a_6 \times M_t \times r_6 \quad (6)$$

where, r – the correction factor of the distance to the nearest settlement (along the roads), which is calculated using the formula (7) (Cunha, 2005):

$$r = \frac{r_i}{r_{\max}} \quad (7)$$

To determine (r) by the direct calculation, the number of protected areas in the tourist local-regional system of the country is determined, then each object is assigned a gradation score. The data are summed up and their average value is determined, which is divided by the maximum score – 9 points. Depending on the integral indicator (^{Pnpa}), the level of potential of natural reserves in the territory (P^r_{npa}) is calculated, which reflects the effectiveness of using the tourist local-regional system to the general territory of the state as a whole and is calculated by formula (8) (Cunha, 2005):

$$P^r_{npa} = \frac{P_i}{P_{\max}} \quad (8)$$

where, P_{max} – the maximum level of potential of natural reserves in the state.

The modern geoeconomic space of the tourism industry requires the development of a methodology for assessing the potential of international cooperation of one country with a certain level of effective use of local-regional systems and macro-regional systems of other countries, by measuring their functional symbiosis in the tourism market, which unites a large number of producers of tourism products with real and potential buyers, in the ever-growing process of tourist trips, which have a direct impact on the geoeconomics of any country (Carlisle et al., 2016; Sklyarenko and Khanova, 2018).

At the same time, an effective way of assessing the functional relationships between the spheres of activity of the subjects of the international market, which ensure the synergy of the constant factors of the geoeconomic space of the tourism industry, is the forecasting of the expected result. In this case, forecasting is based on the method of extrapolation of market trends and indicators (Chen, 2004). The accuracy and reliability of the forecast depends on the multifactorial nature and size of the sample of indicators over time. The use of multifactorial analysis allows to carry out a geoeconomic analysis of factors that affect the quality of the result of international cooperation in functioning local-regional and macro-regional systems of the tourism industry (Farsari, 2012). From the point of view of development, the effectiveness of the functioning of the country's international cooperation potential in the European geo-economic space of the tourism industry is proposed to be carried out according to the formula of the growth rates of the final product, the calculation algorithm of which is integrated in European countries and allows to determine geo-economic indicators (Gee and Fayos-Solá, 1997; Hall et al., 2006) (Figure 3).

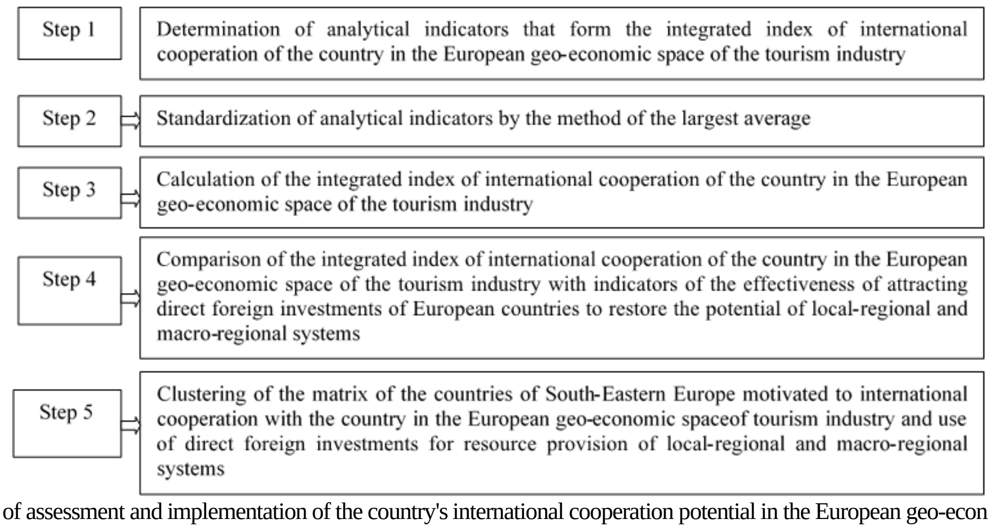


Figure 3. Stages of assessment and implementation of the country's international cooperation potential in the European geo-economic space of the tourism industry (Source: developed by the authors according to Gee and Fayos-Solá, 1997; Hall et al., 2006; Honcharenko and Skliarenko, 2017)

The macroeconomic model for calculating the integrated index of international cooperation of the country in the European geo-economic space of the tourism industry is proposed to be calculated as the average value of eleven standardized variable indicators characterizing the degree of resource provision of local-regional and macro-regional systems, the scale of the spheres of activity of tourism business entities on the international market of services, investment attractiveness of the tourist sector, the level of trade in tourist products by forms of integration (9) (Carlisle et al., 2016; Honcharenko and Skliarenko, 2017):

$$I_{TIIC} = \frac{\overline{FGEE} + \overline{ICFR} + \overline{TI} + \overline{BTF} + \overline{NCR} + \overline{DFI_{dlrs}} + \overline{ITE_{uges}} + \overline{TR^{ti}_{SB}} + \overline{GRP^{fd}_{AI}} + \overline{ETS_{GRP}} + \overline{LC}}{11} \quad (9)$$

where, I_{TIIC} – is the integrated index of international cooperation of the country in the European geo-economic space of the tourism industry; $\overline{FGEE}$ – standardized average for the level of favorable geo-economic environment; $\overline{ICFR}$ –

standardized average for the level of development of international cooperation in the field of travel; $\overline{TI}$ – standardized average for the level of development of tourist infrastructure; $\overline{BTF}$ – standardized average for the level of bilateral tourist flows; $\overline{NCR}$ – standardized average for the level of natural and cultural resources; $\overline{DFI_{dlrs}}$ – standardized average by the level of inflow of direct foreign investments for the development of local and regional systems; $\overline{ITE_{uges}}$ – is the standardized average by the level of intensity of income growth of the subjects of tourism activity in the unified geoeconomic space; $\overline{TR_{SB}^{ti}}$ – standardized average by the level of tax revenues from the tourism industry in the state budget of the country; $\overline{GRP_{AI}^{fd}}$ – standardized average by share of GRP volume per capita when foreign direct investment is attracted; $\overline{ETS_{GRP}}$ – standardized average by the share of export of tourist services in the GRP of the country; $\overline{LC}$ – is the standardized average by the level of labour cost growth in the tourism industry. The scale of the potential of international cooperation of the country, which provides resources for the geoeconomic space of the tourism industry and restores the potential of local-regional and macro-regional systems in the spheres of service for tourists and vacationers, is determined by formula (10) (Carlisle et al., 2016; Honcharenko and Skliarenko, 2017; Trusova et al., 2023a):

$$R_y = \mu + q_1 r_1 + q_k r_k \tag{10}$$

where, R_y – is the scale of the country's international cooperation potential (national income) in the restoration of the tourism industry, million USD; μ – rates of increase in the dynamics of tourist visits in local-regional and macro-regional systems, %; q_1 – parameter of the level of labour intensity of the tourist and recreational zoning destination; r_1 – growth of labor productivity in the destination of tourist and recreational zoning when serving tourists and vacationers of local-regional and macro-regional systems; q_k – a parameter of the capital intensity of the tourist and recreational zoning destination; r_k – increase in return on investment in the destination of tourist and recreational zoning when serving tourists and vacationers of local-regional and macro-regional systems.

In the geo-economic space, the scale of providing the country's tourism industry with direct foreign investment is determined at the level of tourism firms, taking into account the variable "trade costs" (Kokkranikal et al., 2011). That is, the distance is calculated between the variables that are the "income differential per worker" and that is the control variable for the difference between the factor proportions and the GDP of the host country. This control variable is focused only on horizontal direct investments and is a determining factor of the presence of subjects of the international market of tourist services in the local-regional and macro-regional systems of the host country (Kamkhaji, 2016; Matsuka, 2018).

At the same time, the model of international cooperation of the country in the tourism industry forms the following variables: the index of similarity of countries in terms of size, the geographical distance between partners and the limit of "geoeconomic space" between countries for a given value of GDP. The last variable is added to account for the "market" aspect of foreign direct investment (FDI). That is, when investors produce tourism products abroad for sale in the host market of another country, they thereby increase their share of the international market. Additional variables (common language, common border, or preferential trade agreements) can reduce the costs of going abroad, but at the same time can be introduced into the "trade costs" by means of dummy variables (Kozmenko, 2015; Prem, 2000). From the standpoint of the dynamics of the increase in attracting foreign direct investment and the similarity of countries in the production of tourist products, the economic model of international cooperation is evaluated with the help of bilateral tourist flows (United Nations Statistics Division, 2008). Therefore, the general form of the gravity equation will have the form of the formula (11) (Kozmenko, 2015; Sedarati et al., 2018; United Nations Statistics Division, 2008):

$$InY_{ij} = \alpha + \beta_1 SUMGDP_{ij} + \beta_2 SIMSIZE_{ij} + \beta_3 RELENDOW_{ij} + \beta_4 DIST_{ij} + \sum \gamma_k D_{kij} + \varepsilon_{ij} \tag{11}$$

where, Y_{ij} – is the value of FDI or exports from the *i-th* country (home country) to the *j-th* country (host country);

$$SUMGDP_{ij} = In(GDP_i + GDP_j) \tag{12}$$

$$SIMSIZE_{ij} = In\left[1 - \left(\frac{GDP_i}{GDP_i + GDP_j}\right)^2 - \left(\frac{GDP_j}{GDP_i + GDP_j}\right)^2\right] \tag{13}$$

$$RELENDOW_{ij} = \left(In\frac{GDP_i}{Pop_i} - In\frac{GDP_j}{Pop_j}\right) \tag{14}$$

where, $DIST_{ij}$ – is the relative distance between countries *i* and *j*. Following Kozmenko's approach (2015), it is suggested to use not absolute values, but the logarithm of the actual distance, divided by the average distance of the foreign direct investment (FDI) investing country from its partners, weighted by the shares of the latter in world GDP. This correction prevents the gravity model from producing biased results: biased downward for distant countries and upward for nearby countries. D_{kij} – are dummy variables (mostly country factors) used when appropriate, and ε_{ij} – is the usual error term. The model of the country's international cooperation in the tourism industry is the level of partner production of tourist products abroad. It is expected that the variable "geo-economic space" ($SUMGDP$) will positively affect the level of FDI and exports.

The size similarity index (*SIMSIZE*) takes a value between 0 (log of a number near zero) in case of perfect dissimilarity and – 0.69 (log of 0.5) for perfect similarity. Similarity in size should have a positive effect on exports: countries similar in size will trade more, as predicted by the theory of Helmpan and Krugman (cited in Gee and Fayos-Solá, 1997); there will be an increase in the level of profitability, trade will have an intra-industry character. The variable (*RELENDOW*) is measured between countries by the difference in GDP per capita. Better variables might be: GDP per worker, ratio of capital (gross fixed capital formation) over the working population or skilled tourism workers in total employment.

The negative coefficient in the export equation is a sign that intra-industry trade in tourism products prevails. For FDI, there is a similarity of the variable growth algorithm: vertical FDI (equivalent to inter-industry trade in the tourism industry) occurs when countries differ greatly in the composition of factors, and, at the same time, show a positive coefficient; horizontal FDI is determined by the similarity in the composition of factors of countries that show a negative coefficient. As for the distance between countries, the impact on exports may be negative, due to increased transport costs. On the other hand, tourism companies can invest abroad, and at the same time not export, given the high costs of trade.

However, this variable may also have a negative coefficient in the equation with FDI, since the operating costs of foreign tourism companies may increase and are dependent on the headquarters of the tourism company (Kozmenko, 2015; Sedarati et al., 2018; United Nations Statistics Division, 2008). A typical geoeconomic environment will be characterized by several important changes affecting the integration of countries into international cooperation of other countries for the recovery of the tourism industry, at different levels of development (Boukas and Ziakas, 2014; Ivaniš, 2011; Tourist streams 1999-2020, 2023): 1. Reduction of tariffs (cancellation of tariffs and adoption of a common external tariff, in the case of a customs union); 2. Reduction of non-tariff barriers (*NTBs*) under the Single Market Program (*SMP*); 3. Potentially greater exchange rate stability, according to the European Monetary System (*ECS*); 4. Greater efficiency in the allocation of resources due to increased competition. The first two effects can be called “commercial changes” because they are directly related to trade policies in the international market of tourism services; the third – with “monetary integration”, and the fourth – with “market integration” (Liubytseva, 2002; Sedarati et al., 2018; Trusova et al., 2020b).

Analysing the impact of commercial changes, it is worth considering the main difference between members and non-members of the integrated local-regional system and the macro-regional zone ($IS_{LRZ+MRZ}$). On the one hand, we have the fact that reducing the cost of trade in tourism products will directly benefit exports. Assuming the tariff-jump argument holds (which should actually be tested first), we would expect a reduction in FDI from members $IS_{LRZ+MRZ}$ in relation to exports. That is, export should become more profitable as a service area of the international market of tourist services within $IS_{LRZ+MRZ}$. On the other hand, only in the case of a customs union, the situation may be opposite for non-members. The trade diversion effect of creating $IS_{LRZ+MRZ}$ encourages exporters to invest in $IS_{LRZ+MRZ}$, to avoid tariffs and gain access to a larger tourism market that will eventually be tariff-free (Kozmenko, 2015; Trusova et al., 2020b).

RESULTS

The radical transformation of international economic relations and structural globalization changes increase the need to restore the tourism industry in Ukraine as a catalyst for developing the potential of international cooperation in the geo-economic space. At the same time, the territorial unevenness of its rise in the country, in comparison with other states of the world, is naturally observed (Trusova et al., 2022). This is explained by the protracted period of the pandemic in the world and the deployment of military operations on the territory of Ukraine, which caused a low level of activity of manufacturers of tourist products and the provision of a set of offers in travel and recreation destinations. In addition, this led to an increase in internal crisis processes and the inability to diversify tourism and recreation processes, due to the reasons, challenges and threats in the country (Trusova et al., 2023a). According to the assessment of international tourism organizations, Ukraine, which is in a “stressful” wartime period, is trying to restore the model of further development of the tourism industry, which has partially lost international connections in the service market, thus complicating the timeliness of restoring the resource component in the field of tourist services and vacationers in the international arena, increased investment risks and weakened the position of the national tourism industry (UNWTO Tourism Dashboard, 2023).

Despite the losses suffered by the tourism industry of Ukraine due to the war, for the first six months of 2022, the amount of tourist tax amounted to 2.39 million USD, which is almost 28.8% more compared to 2021 (in 2021 year, the budget received 1.86 million USD). The city of Kyiv and 4 regions were included in the TOP-5 leaders in terms of paying the tourist tax. The city of Kyiv replenished its budget by more than 545 thousand USD. The largest increase in budget revenues in 2022, compared to 2021, was recorded in Lviv region – in 1.93 times (to the budgets of the communities of this region 528 thousand USD). In Ivano-Frankivsk region, the amount of the tourist tax increased by 76.4% and amounted to 252.98 thousand USD. Zakarpattia region increased the budget for the development of the tourism industry by 236.69 thousand USD, which is 1.4 times more than in 2021. Kyiv region paid 125.34 thousand USD to the budget in six months of 2022, which is 23% less than in the first half of 2021 (The amount of taxes of the subjects of tourist activity, 2023), (Figures 4 and 5).

The largest increase in revenues to the budget from the tourist tax for the first half of 2022 was recorded in seven Western regions of the country – Lviv (+192.7%), Ivano-Frankivsk (76.4%), Zakarpattia (107.9%), Ternopil (+145.4%), Khmelnytskyi (+116.5%), Kropyvnytskyi (+105%) and Chernivtsi (+103%) regions. However, if in four months of 2022, the amount of taxes from the tourism industry had a growing trend to the level of 65%, then in the next two months of 2022, the amount of the tourist tax decreased to the level of 28.8%. Such an increase is proof that the majority of Ukrainians, fleeing from bombings and not wanting to be under occupation, were forced to leave their homes in the eastern and southern regions of the country in the first months of the war, and stay in safer Western regions. In general, due to military actions on the territory of Ukraine, receipts to the state budget of the tourism industry for the two quarters of 2022 decreased by almost 26% compared to the same period of 2021 (The amount of taxes of the subjects of tourist activity, 2023).

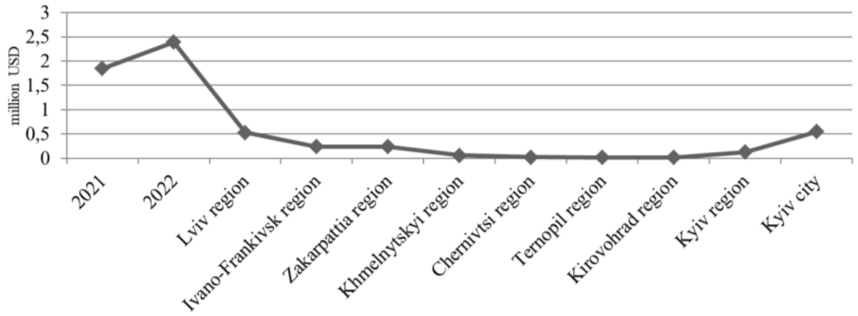


Figure 4. Volume of tourist tax in Ukraine for 2021-2022, million USD

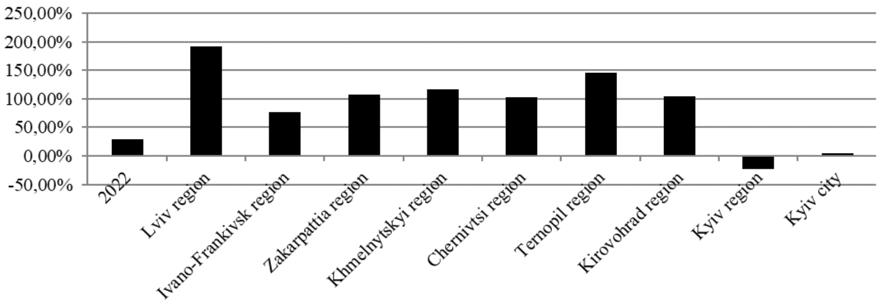


Figure 5. Growth rate (decline) volume of tourist tax in Ukraine in 2022 p. compared to 2021, %

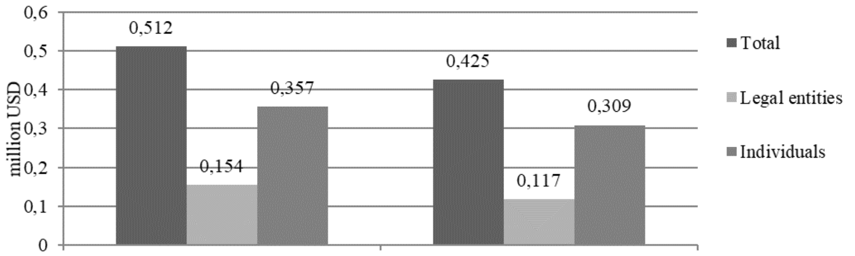


Figure 6. Amount of taxes from the tourism industry in Ukraine for 2021-2022, million USD

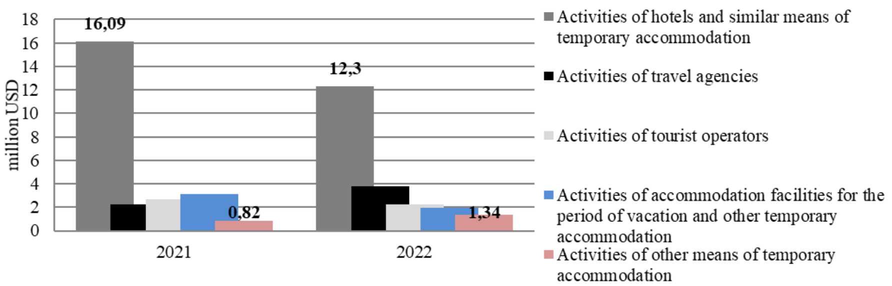


Figure 7. The amount of taxes of the subjects of tourist activity in Ukraine, million USD
Source: built by the authors according to data from The amount of taxes of the subjects of tourist activity (2023)

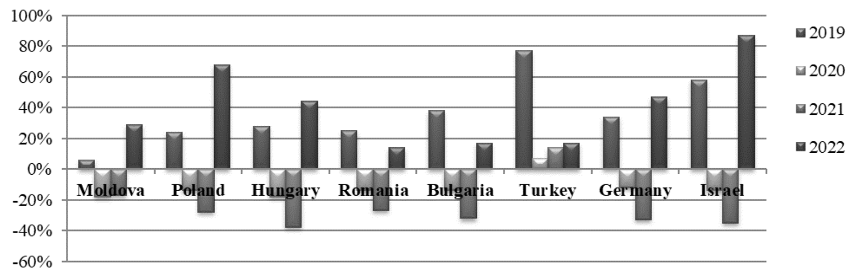


Figure 8. The pace of services provision by entities of the tourism industry of Ukraine on the international market for 2020-2022, %
Source: built by the authors according to International tourism, expenditures (2023); International tourism, expenditures for passenger transport items (2023); International tourism, expenditures for travel items (2023); International tourism, receipts (2023); The Travel & Tourism Competitiveness Report (2021); United Nations Statistics Division (2008);Tourist portal of Ukraine (2023); Tourist streams 1999-2020 (2023)

During the first six months of 2022, representatives of the tourism industry of Ukraine paid 25.7% less taxes than in 2021. The total number of taxpayers engaged in tourism activities during this period decreased by 17%, while of this, legal entities – by 24.5%, individuals – by 13.5%. The largest share of revenues to the state budget is paid by hotels and sanatoriums – almost 12.3 million USD, but its level is 30% less than the indicator of 2021 (The amount of taxes of the subjects of tourist activity, 2023) (Figure 6). In 2022, there was an increase in the tax paid (by 39%) from the activities of boarding houses and dormitories, which were used as temporary housing for people who were forced to leave their homes due to hostilities. At the same time, the share of paid tax from the activities of tourist bases, campsites, children's recreation camps decreased by 59% (paid 1.95 million USD) compared to 2021. The increase in income was recorded from the activities of travel agencies, which increased the revenue part of the budget by 41%. At the same time, there was a decline in taxes paid from the activities of tourist operators in relation to the level of 2021 by 21% (or by 2.22 million USD).

The largest amount of tax paid for the first half of 2022 was made by Ivano-Frankivsk (63%), Lviv (51%) and Kyiv (16%) regions. In relation to 2021, taxes in Kyiv and Odesa region decreased by 34% and 82.3% respectively (The amount of taxes of the subjects of tourist activity, 2023), (Figure 7). In 2021, the country saw a gradual recovery of tourist flows, by rethinking tourist routes and increasing the level of trips around the world. The increase in the number of visitors to Ukraine amounted to 9% (1.5 million people from various countries were accepted) compared to the second half of 2020. However, this indicator is 75% less than the level of 2019. In 2019, the number of foreign guests in the country was almost 6 million. A significant increase in tourists took place in the II quarter of 2021, their number 4.0 times exceeded the same period in 2020 and reached 3.4 million people (Tourist portal of Ukraine, 2023; Tourist streams 1999-2020, 2023).

In 2021, the number of tourists to Ukraine from Saudi Arabia increased 40 times and amounted to 14 thousand people, while in 2020, only 350 citizens came to the country. From the USA, the increase was +69.6% (the number of tourists 34 thousand people), from Israel, the increase at the level of 26% was provided by 26.6 thousand tourists; the number of tourists from Armenia increased by 100% (7 thousand people), the number of tourists from Georgia increased by almost 40% (15.5 thousand people) and by 67% from Azerbaijan (16 thousand people). Moldova (368 thousand people), Romania (109 thousand people) and Turkey (93 thousand people) remain an attractive market of tourist services for Ukrainian tourists (Tourist portal of Ukraine, 2023; Tourist streams 1999-2020, 2023).

Among the foreigners visiting Ukraine – 70% are Europeans (in 2021, their number decreased by 10%), 24% in relation to 2020, representatives of the countries of the Asian region (by 8% more than in 2020), 2.8% of citizens from North America and only 1.7% of citizens from the African continent. In six months of 2021, the tourist flow of Ukrainians abroad increased by 15% (5.7 million people) compared to 2020. The priority tourist route for Ukrainians is Turkey (774 thousand people) and Egypt (increase by 88%, up to 705 thousand people). tourist centres for Ukrainians are the Dominican Republic (increase in 2.4 times). Among other countries: Qatar (11.5 thousand people), Maldives (10 thousand visitors, equal to the number of Ukrainians in France), Tanzania (7 thousand visitors), Sri Lanka (2.5 thousand visitors) etc. (Tourist portal of Ukraine, 2023; Tourist streams 1999-2020, 2023).

In the new tourist reality of 2021, not only the cost of the tour and certain preferences, but also quarantine restrictions, rules for entering the country, and the situation with the spread of COVID-19 were at the fore (Figure 8). The total value of the vouchers sold by tour operators and travel agencies in 2021 was 1.19 million USD, which is 53% lower than in 2020, in which the value was 2.54 million USD (Figure 9). Thus, the development of the economic model of the international cooperation potential of Ukraine is decreasing due to the military actions in the country, making it difficult to expand the spatial boundaries of the existence of local and regional systems. When the limit is reached, the filled geoeconomic space of the tourism industry begins to degrade, which is manifested in the reduction of the occupied territory.

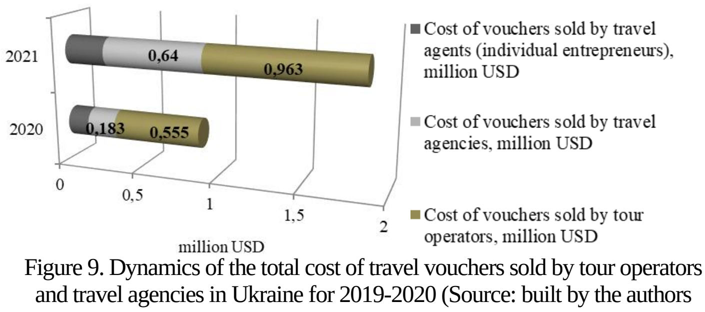


Figure 9. Dynamics of the total cost of travel vouchers sold by tour operators and travel agencies in Ukraine for 2019-2020 (Source: built by the authors according to International tourism, expenditures (2023); International tourism, expenditures for passenger transport items (2023); International tourism, expenditures for travel items (2023); International tourism, receipts (2023)

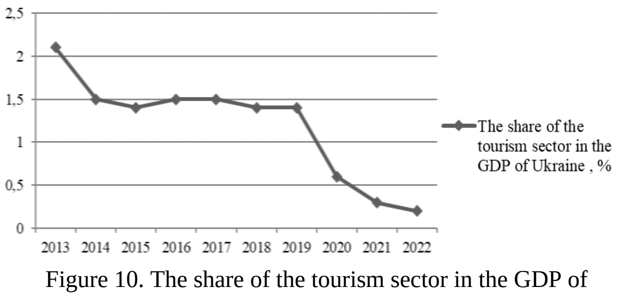


Figure 10. The share of the tourism sector in the GDP of Ukraine for 2013-2022, % (Source: built by the authors according to The Travel & Tourism Competitiveness Report (2021) and Tourist portal of Ukraine (2023)

DISCUSSION

Within the integrated geoeconomic space, Ukraine, as a functioning local-regional system of the tourism industry, corresponds to the global factors of the international tourism market, takes into account the priorities and norms of behaviour of the main participants of world economic activity (Matsuka, 2018; Trusova et al., 2023a). But during the period of martial law potential of the international community of Ukraine in the tourism industry is demonstrated is rapidly decreasing by the share of the tourism sector in GDP from 0.6% in 2020 to 0.2% in 2022, which is 16.7 times below the level of the world geoeconomics before the pandemic (on average 10% of GDP) and by 25.0 times, during the pandemic (the world level of the geoeconomics 5%), (Figure 10). Therefore, in order to restore competition between different systems of geospatial organizations of the tourism industry on the territory of Ukraine, stabilization measures for the development of the country's international cooperation potential on the world stage and the formation of high dynamics of the volume of export and import of tourist products by reducing restrictions on liberalization and transfer technologies of franchising in the cooperation of sub objects of tourist destinations are needed (Figure 11).

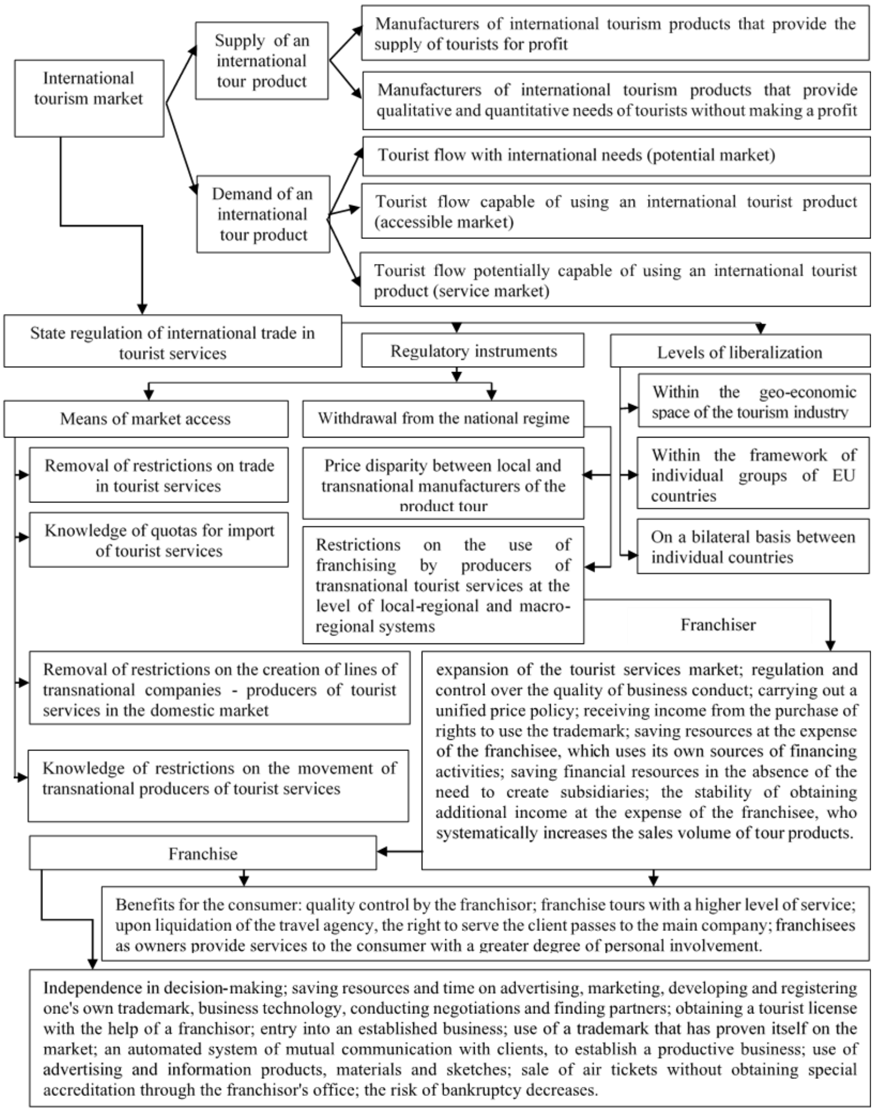


Figure 11. The structural model of the development of the international market of services under the influence of the level of liberalization and the introduction of transfer technologies of franchising in the international cooperation of entities of the tourism industry (Source: authors according to Hryhorenko (2010); Husiev (2010) and Pyvovarov (2007)

Nogachevsky (2010) characterizes franchising as "a form of long-term business cooperation, in the process of which a large company grants an individual entrepreneur or a group of entrepreneurs a license (franchise) for the production of products or the provision of services under the trademark of this company in a limited territory, for the term and under the conditions determined by the contract." as well as “the process of creation, support and development of the franchise system with the help of owners of independent enterprises” (Nogachevsky, 2010). Mahomedova (2011) used definition is as follows: “franchising is a business organization in which a company (franchisor) transfers to a certain person or company (franchisee) the right to sell the product and services of this company” (Mahomedova, 2011).

It is worth noting that for Ukraine, every year the management system of the tourist and hotel business based on franchise agreements is gaining popularity in Ukraine. Among the hotel enterprises operating in the domestic market, such franchise chains as Hyatt, Ramada, Radisson Hotels, Holiday Inn, Accor, and Premier Palace Hotel should be singled out. The networks of tourist agencies “Coral Travel”, “Hot Travel Agency”, “TUI”, “Go with us” are very popular. The attractiveness of franchising lies in the presence of significant advantages for both participants in the franchise relationship. For new travel agencies, it provides a stable income business, for well-known firms and companies – an opportunity to expand and strengthen their positions on the market.

This explains the great popularity of franchising in Canada, Western Europe, Japan, the countries of the Pacific region and Australia. Thus, the development of franchising in the tourist services market of Ukraine can be one of the most effective forms of supporting small businesses in regional tourist destinations (Mahomedova, 2011). Taking into account the peculiarities of the territorial organization of the international cooperation potential of Ukraine, at different levels of development of tourist destinations, a generalized multicultural form of functioning of the tourist industry within the geo-economic space of the international tourist market is proposed. In each tourist macro-region, a corresponding integration core is distinguished, that is, a state or a set of countries (markets), which are socio-economically united among themselves in tourism products between local-regional and macro-regional systems (Gee and Fayos-Solá, 1997).

As such cores, the most stable and attractive integration structures of the world of both regional and global importance have been identified: Association of Southeast Asian Nations, Cooperation Council of the Arab States of the Persian Gulf, Union of the Arab Maghreb, Eurasian Economic Community, European Union, South Asian Association for Regional Cooperation, Southern African Development Community, North American Free Trade Agreement (Carlisle et al., 2016).

In 2021-2022, the tourism industry on the international market was also at the level of 2019, as the key indicators of losses for the liquidation of the consequences of the COVID-19 pandemic show the following (International tourism, expenditures, 2023; International tourism, expenditures for passenger transport items, 2023; International tourism, expenditures for travel items, 2023; International tourism, receipts, 2023; The Travel & Tourism Competitiveness Report, 2021; United Nations Statistics Division, 2008; Tourist streams 1999-2020, 2023; UNWTO, 2022):

- international tourist movements in the world fell to 73.9%; loss of export earnings from international tourism is estimated at 1.3 trillion USD;
- approximately 100-120 million tourism workers were at risk; estimated losses in world GDP exceed 2 trillion. USD;
- the share of tourism in the world economy has halved: in 2019 it was 10.4%, and in 2021 it fell to 5.5% due to the coronavirus pandemic: before the pandemic, the travel and tourism industry created 10.6% of all workers places 10.6% million people) and (334 million people) of world GDP 10.4% (9.2 trillion USD). In 2022, the industry shrank by 18.5%, losing 62 million jobs; time spent on domestic visitors decreased by 45%, and on international visitors by 69.4% (Figure 12).

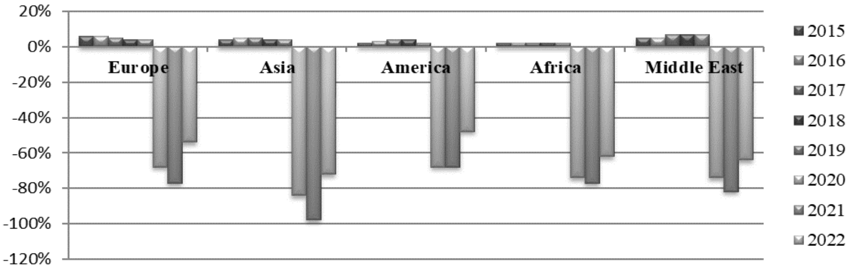


Figure 12. Rates of decline in the international tourism market for 2019-2022, % (Source: built by the authors according to International tourism, expenditures (2023); International tourism, expenditures for passenger transport items (2023); International tourism, expenditures for travel items (2023); International tourism, receipts (2023); The Travel & Tourism Competitiveness Report (2021); Tourist streams 1999-2020 (2023)

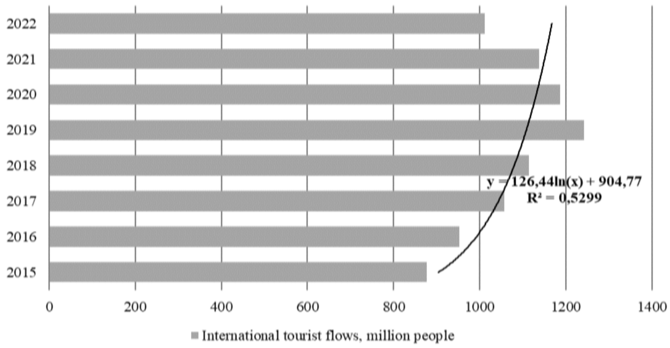


Figure 13. Dynamics of international tourist flows for 2015-2022, million people (Source: built by the authors according to The Travel & Tourism Competitiveness Report (2021); United Nations Statistics Division (2008); Tourist streams 1999-2020 (2023)

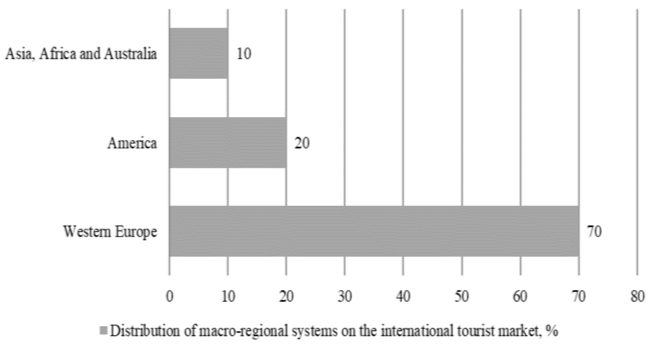


Figure 14. Distribution of macro-regional systems on the international tourist market in 2022, % (Source: built by the authors according to The Travel & Tourism Competitiveness Report (2021); United Nations Statistics Division (2008P); Tourist streams 1999-2020 (2023)

The rate of decline of the international tourism market in 2022 is unprecedented compared to previous crisis events (the SARS epidemic and the World Economic Crisis of 2008-2009), which also had a negative impact on the global tourism industry (Figure 13). The number of international tourist movements in 2022 was lower compared to the same period before the pandemic in 2019. According to the UN World Tourism Organization (UNWTO), in 2022 the number of international tourists decreased by 20-30%, a decrease in income from international tourism amounted to 300-450 billion USD (Trusova et al., 2023b; UNWTO Tourism Dashboard, 2023). This is explained by different levels of socio-economic advancement of macro-regional and local-regional systems. Thus, in the structure of the global geoeconomics, the stable development of the countries of Western Europe depends on the tourism industry, which provides more than 70% of the revenue part of the budget, in America – 20%, in Asia, Africa and Australia – 10% (UNWTO Tourism Dashboard, 2023).

In European countries 616.2 million people or 49.9% of the world's population work in the market of tourism services. This is explained not only by the presence of world-famous cultural, historical and natural monuments, the developed industry of tourism and trade, but also by the traditional preference of European residents to spend their holidays in a near foreign country. About 90% of tourists in Europe are Europeans themselves. Within the framework of the European macro-regional system, the Mediterranean local-regional system is leading, which is formed from a group of countries: Spain, Italy, Greece, as well as Germany, Benelux and Austria – up to 20% of international tourist flows. The group of countries that are part of the Eastern European local-regional system (Bulgaria, Croatia, the Czech Republic, Montenegro) occupy about 11% of international tourist flows (UNWTO Tourism Dashboard, 2023) (Figure 14).

In the American macro-regional system, about ¾ income from international tourist flows is provided by the local-regional systems of countries such as the USA, Canada, and Mexico. It should be noted that the USA has the largest hotel network in the world with a highly developed transport industry. A relatively insignificant place in the international tourist market is occupied by the African macro-regional system, which is formed from the local-regional systems of countries such as South Africa, Tunisia, Morocco, the Seychelles and the macro-regional system of the Middle East (local-regional systems operate in the UAE and Saudi Arabia) – 4% and 2% respectively (Sedarati et al., 2018). The rate of growth (decline) of the index of international cooperation between the macro-regional systems of the countries of the world by the number of displaced tourists in the local-regional systems is presented in Figure 15.

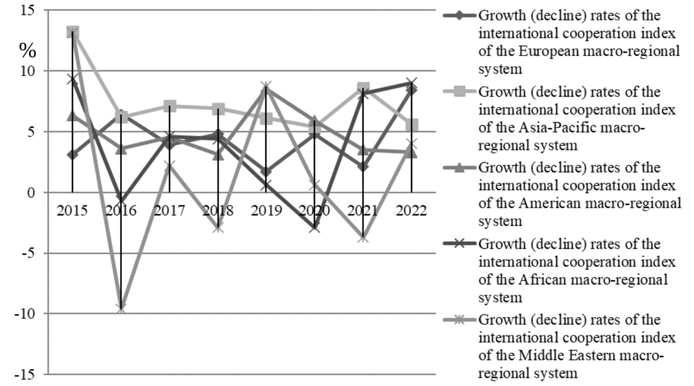


Figure 15. Rates of growth (decline) of the index of international cooperation between macro-regional systems of countries of the world by the number of displaced tourists in local-regional systems for 2015-2022, % (Source: constructed by the authors based on The Travel & Tourism Competitiveness Report (2021); UNWTO (2022)

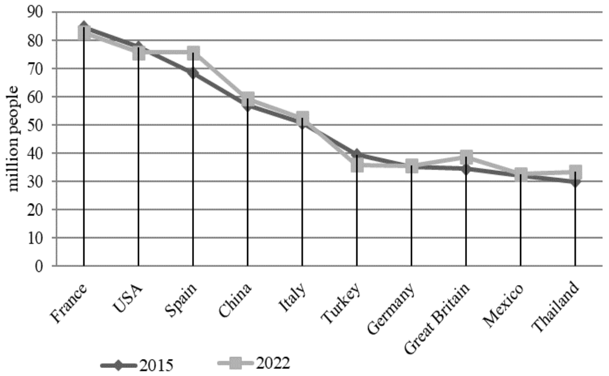


Figure 16. The potential of international cooperation of the country-leaders of local and regional systems by the number of tourists received for 2015-2022, million people (Source: built by the authors according to The Travel & Tourism Competitiveness Report (2021); UNWTO Tourism Dashboard (2023)

It should be noted that the dependence of the country's international cooperation potential with the local-regional system of the tourism industry on the macro-regional systems of developed countries remains, and its dynamics is due to the increase in demand from countries that have only domestic tourist destinations and are only developing, or are reviving in the post-conflict period. European countries remain the main centre of cultural and educational tourism; recently, Asia, in particular China and India, has become increasingly important for this type of recreation (UNWTO Tourism Dashboard, 2023). In 2021, the countries of the Asia-Pacific region were visited by 308.4 million tourists (25% of the world total), the countries of North and South America – 199.3 million people (16.1%), countries of Middle East and Africa – 53.6 million people and 57.8 million people, respectively (4.3% and 4.7% respectively) (The Travel & Tourism Competitiveness Report, 2021). In 2015-2022, the geographical structure of international cooperation of countries in the geo-economic space of the tourism industry did not undergo serious changes. The largest number of tourists visit France, the USA, Spain, China and Italy (Figure 16).

At the same time, one of the most characteristic trends in the development of international tourism at the present time is the predominance of the number of tourists who travel to countries of local-regional systems located close to each other compared to the number of tourists who are determined to travel to long-distance macro-regional systems.

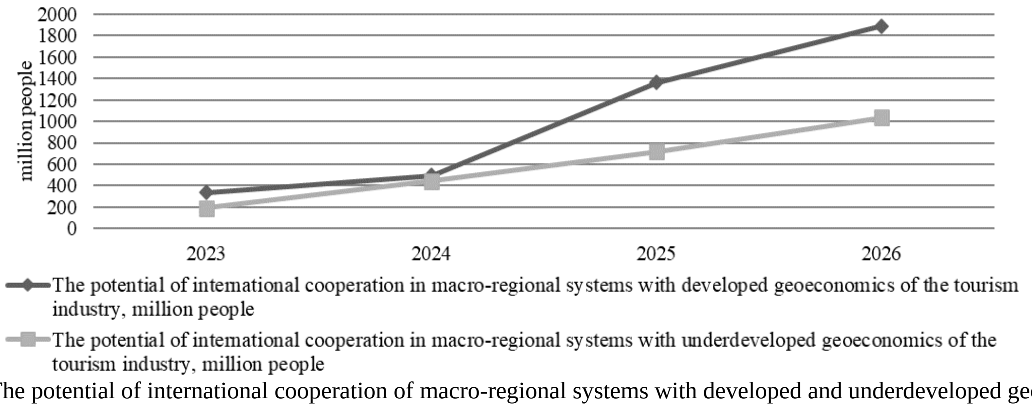


Figure 17. The potential of international cooperation of macro-regional systems with developed and underdeveloped geoeconomics of the tourism industry for 2023-2026, million people Source: built by the authors according to United Nations Statistics Division (2008)

With a partial decline in the demand for tourist products, the tourism industry exceeds 10% of the volume of the global geoeconomics in the field of services, which makes it possible to take third place after the volumes of international trade in the segment of oil and cars, and it is expected that by 2026 the growth rate of tourism business will be 4.1%-5.3% per year, the cost of travel will be from 1560 million USD to 1642 million USD (Figure 17). At the same time, the average growth rate of the index of international cooperation in the macro-regional system of the Middle East will be equal to 7.82%, Europe – 7.12%%, Asia and the Pacific destination – 5.0%, America – 4.52%, Africa – 3.3% (Figure 18).

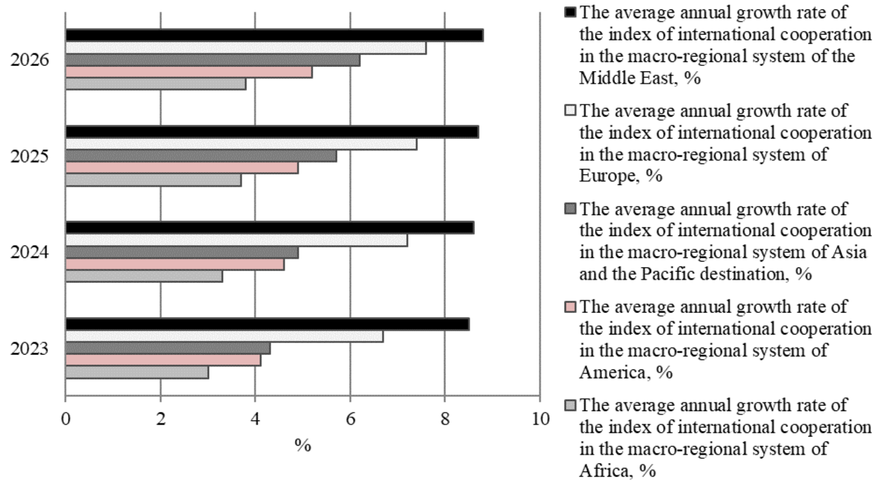
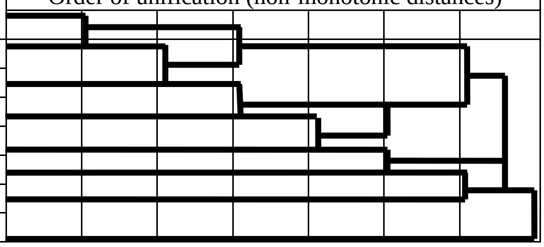


Figure 18. The average annual growth rate of the index of international cooperation of macro-regional systems with developed geoeconomics of the tourism industry for 2023-2026, % (Source: built by the authors according to The Travel & Tourism Competitiveness Report (2021); United Nations Statistics Division, 2008)

Under modern wartime conditions and taking into account the demographic structure of the resettlement of Ukrainian citizens to the territory of the Western regions (Vinnytsia, Volyn, Zakarpattia, Ivano-Frankivsk, Lviv, Rivne, Ternopil, Khmelnytsky, Chernivtsi regions) and regions of the Central part of the country(the city of Kyiv, Zhytomyr, Kyiv, Kropyvnytskyi, Poltava, Sumy, Cherkasy, Chernihiv regions), we have determined the geo-economic space of the enterprises of local and regional systems of the country, as the core of the development of the potential of international cooperation between European countries (United Nations Statistics Division, 2008). From the standpoint of the dynamics of the increase in the attraction of direct foreign investment from European countries for the development of the tourism industry in the Western and Central regions of Ukraine, which are similar in terms of the production of tourist products, a clustering of macro-regional and local-regional systems was carried out, and an economic model of their international cooperation was calculated with the help of bilateral tourist flows. The "full connections" method was chosen as the clustering algorithm, which includes new objects between which the distance level is set (Trusova et al., 2020b) (Table 1).

Table 1. Composition of clusters of tourism macro-regional systems of Europe and local-regional systems of Ukraine, selected by Ward's method Source: constructed by the authors according to United Nations Statistics Division (2008) and Trusova et al. (2020b)

Tourist macro-regional systems of Europe and local-regional systems of Ukraine	Order of unification (non-monotonic distances)
K1. Great Britain, the Netherlands, France, the city of Kyiv, Zhytomyr, Kyiv region	
K2. Spain, Italy, Germany, Cherkasy, Chernihiv	
K3. Ireland, Luxembourg, Ivano-Frankivsk, Lviv, Ternopil	
K4. Austria, Greece, Denmark, Portugal, Finland, Sweden, Kirovograd, Poltava, Sumy	
K5. Estonia Latvia, Lithuania, Vinnytsia, Chernivtsi	
K6. Belgium, Bulgaria, Poland, Romania, Volyn, Zakarpattia	
K7. Slovakia, Slovenia, Hungary, Croatia, Czech Republic, Rivne, Khmelnytskyi	



Euclidean distances between clusters are equal to 1, which indicates the objectivity of the number of selected clusters (Figure 19). In Figure 20 the distribution of clusters according to the average value of the indicators of the integral index of international cooperation of local-regional systems of Ukraine and macro-regional systems of European countries is presented (see formula 1). The results of calculations show that clusters 3 and 7, are distinguished by the level of favourable geo-economic environment, their values exceed the average value of the indicator by 52.1% and 42.7%.

A high level of development of international cooperation in the field of travel is characteristic of 3.4 and 7 clusters, with an increase in value from the average by 10.4%, 23.3% and 43.7% respectively. The best results of cooperation between local-regional systems of Ukraine and macro-regional systems of European countries are determined by the level of development of tourist infrastructure in clusters 2, 5 and 6 – exceeding the average value by 65.1%, 69.1% and 64.2% respectively. According to the level of bilateral tourist flows, the cluster 2 and 3 clusters are distinguished - exceeding the average value by 38.3% and 38.1% respectively.

In terms of the level of attractiveness of natural and cultural resources in the local-regional systems of Ukraine, the macro-regional systems of Europe match the clusters 2, 3, 4 and 6 – exceeding the average value among the totality of tourist associations in the geo-economic space by 6.2%, 31.4%, 7.2% and 22.1% respectively. Clusters 1, 3 and 7 demonstrate a high level of attraction of foreign direct investments of European countries for the development of local and regional systems of Ukraine – exceeding the average value by 51.6%, 47.0% and 31.7% respectively. Accordingly, in these clusters, the share of GRP volume per capita from attracting FDI increases by 17.92%, 26.8% and 13.3% respectively. The development of international cooperation of local and regional systems of Ukraine allows to increase the level of income of tourism industry entities in clusters 2, 3 and 4 – exceeding the average value by 24.4%, 22.8% and 15.9% respectively.

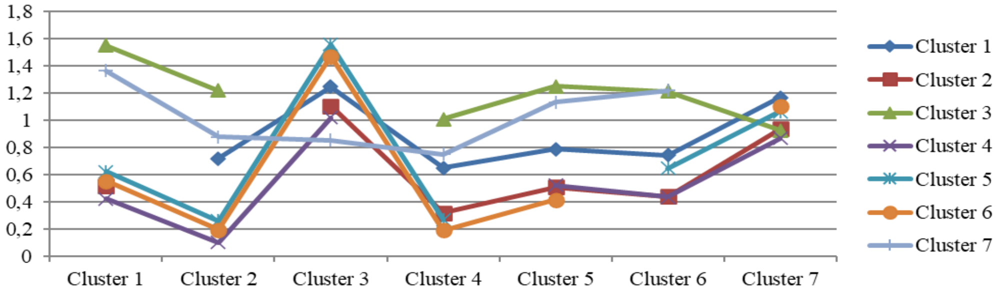


Figure 19. Euclidean distance in hierarchical clustering of tourism local-regional systems of Ukraine and macro-regional systems of European countries

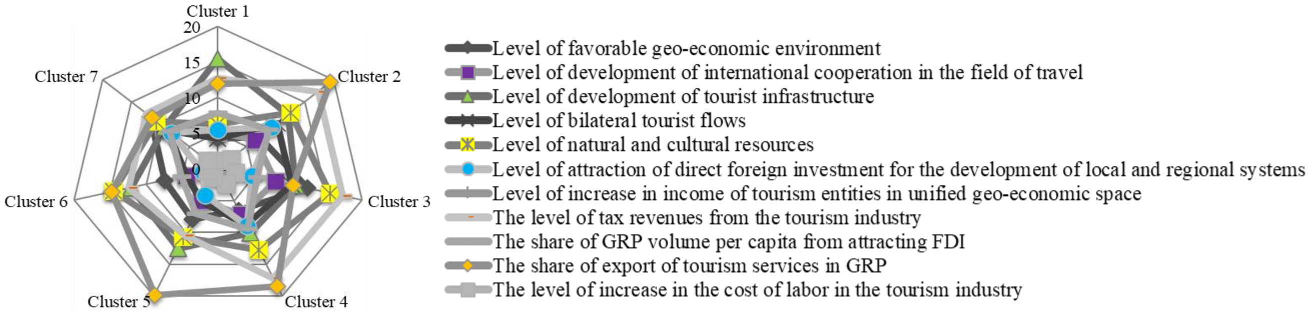


Figure 20. Distribution of clusters according to the average value of indicators of the integral index of international cooperation of tourism local-regional systems of Ukraine and macro-regional systems of European countries

At the same time, in these clusters, the level of growth of tax revenues from the tourism industry in the state budget of the countries is higher than the average value by 21.5%, 21.4% and 20.6% respectively. The export of tourism services in the GRP of local and regional systems of Ukraine increases in clusters 2, 4 and 5 – on average by 28.2%, 21.4% and 30.2% respectively. Accordingly, the intensive increase in the cost of labour in the tourism industry of local and regional systems of Ukraine increases in clusters 2, 3 and 4 – on average by 32.1%, 40.9% and 42.7% respectively. The integral index of international cooperation of local-regional systems of Ukraine and macro-regional systems of European countries in the period 2023-2026 is presented in Figure 21. According to forecasts, the level of international cooperation of the local and regional systems of Ukraine between the macro-regional systems of the European countries of the first cluster will increase by 22.4% for 2023-2026, the second cluster – by 27.6%, the third cluster – by 61.6%, the fourth cluster – by 50.8%, the fifth cluster – by 69.1%, the sixth cluster – by 30.6%, the seventh cluster – by 34.2%.

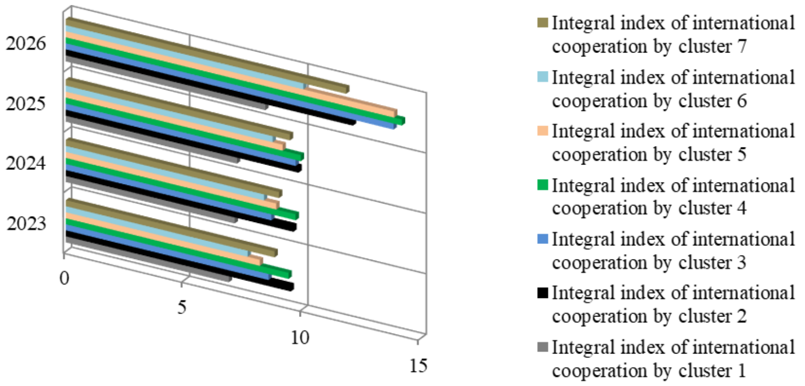


Figure 21. Integral index of international cooperation of local-regional systems of Ukraine and macro-regional systems of European countries for 2023-2026, %

CONCLUSIONS

Strengthening the positions of the tourism industry of Ukraine is possible under the conditions of creating a competitive national tourism product, the image of local and regional systems, adopting an early strategy and implementing a policy of sustainable development in order to solve the urgent problems of ensuring the safety of the stay of foreign citizens; the use of information technologies for the promotion of the tourist product, meeting the needs of consumers; improvement of management and marketing of foreign economic activity in tourism; improvement of national transport connections and roads; implementation of the principles of corporate social responsibility in the tourism business; responsible attitude to natural and cultural resources; protection of terrestrial ecosystems and biodiversity.

Prospects for the development of the tourism industry of Ukraine in the context of geopolitical events must be linked to effective cooperation with EU countries, taking into account the possibility of promoting the national tourism product to the European market; involvement in the information space, laying of transnational corridors to attract more international visitors, best practices in the organization of tourist activities; strengthening of European integration processes in the country. Cross-border cooperation with neighbouring European countries will contribute to the development of tourism and is a promising direction for effective tourism. Prospects for development are also seen in the strengthening of tourism cooperation with the countries of Asia and the Middle East. It is important to simplify visa formalities with individual countries. Easing the procedure for entering and obtaining a visa will help increase the volume of international arrivals to Ukraine.

The creation in local and regional systems of Ukraine of strategic management regarding the rational use of attracted foreign direct investments from partners of macro-regional systems of European countries has the potential to exist for increasing labour productivity, strengthening economic growth and international cooperation in the tourism industry with the aim of rapprochement with European tourism firms to provide approximately 4.3 million jobs, which will be 5% of the total employment in the country. In addition, this will allow to increase by 21% the promotion of Ukrainian tourist products on the international market and to increase by 19% the added value of services in these countries. Ensuring a safe level of functioning of the macro-regional tourism system of Ukraine will stop the fall in demand for tourist services and speed up the earning of profits by tourist enterprises.

Author Contributions: Conceptualization, S.M.T. and V.S.D.; methodology, S.M.T. and V.S.D.; software, A.A.P. and M.M.P.; validation, M.T. and V.S.D.; formal analysis, V.O.O., A.A.P. and M.M.P.; investigation, S.M.T., A.A.P. and M.M.P.; data curation, S.M.T. and V.S.D.; writing - original draft preparation, S.M.T. and V.S.D.; writing - review and editing, S.M.T. and V.S.D.; visualization, Sergiy V.S.D. and V.O.O., A.A.P. and M.M.P.; supervision, S.M.T.; project administration, S.M.T. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 09.05.2023 Revised: 10.07.2023 Accepted: 16.08.2023 Available online: 15.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.962-972
DOI 10.30892/gtg.49312-1096

A THEMATIC REVIEW ON RELATIONSHIP BETWEEN RECOVERY PERCEPTION TOWARDS PLACE ATTACHMENT IN URBAN ENVIRONMENT

Yurui CHEN
Department of Landscape Architecture, Faculty of Design and Architecture,
Universiti Putra Malaysia, Serdang, Selangor Malaysia, e-mail: gs62068@student.upm.edu.my

Shureen Faris Abdul SHUKOR*
Department of Landscape Architecture, Faculty of Design and Architecture,
Universiti Putra Malaysia, Serdang, Selangor Malaysia, e-mail: shureen@upm.edu.my

Adam Aruldewan S. MUTHUVEERAN
Department of Landscape Architecture, Faculty of Design and Architecture,
Universiti Putra Malaysia, Serdang, Selangor Malaysia, e-mail: aruldewan@upm.edu.my

Citation: Chen, Y., Shukor, S.F.A., & Muthuveeran, A.A.S. (2023). A THEMATIC REVIEW ON RELATIONSHIP BETWEEN RECOVERY PERCEPTION TOWARDS PLACE ATTACHMENT IN URBAN ENVIRONMENT. *GeoJournal of Tourism and Geosites*, 49(3), 962–972. https://doi.org/10.30892/gtg.49312-1096

Abstract: Place attachment is often seen as a resource for coping with health recovery, especially in the post-pandemic period. The purpose of this review was to systematically review the variables, research frameworks, and interactions related to place attachment and recovery perceptions. This paper reviewed 53 papers from 2020 to 2023 on place attachment and recovery perception using ATLAS.ti. Existing research confirms that there are differences in the degree of attachment and recovery in different types of urban environments. This paper encourages the integration of information between different disciplines, such as urban planning specialists, environmental psychologists, and public health experts, to further improve the urban environment.

Key words: sense of place, restorative, psychological restoration, health, post-pandemic

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INTRODUCTION

The impact of the COVID-19 pandemic on mental health lasts long (Kathirvel, 2020). Urban living is a chance for individual and collective growth but may threaten mental health (Lecic-Tosevski, 2019). Environmental psychology uses the term 'restoration' to describe the process of recovering physiological and psychological adaptive capacities through the sense of nature (Van Cauwenberg et al., 2017). Some environments, such as green space exposure, may be associated with lower healthcare expenditure and provide health support (Becker et al., 2019). Studies have often focused on the nature or aspects of restorative surroundings to people's perceptions of those environments, ignoring the importance of personal and societal factors in such psychological healing. Recovery potential is influenced by objective characteristics and personal and social factors, human-territorial relationships, i.e., place attachments (Menatti et al., 2019).

The idea of place attachment, which began in social psychology and phenomenology and is more commonly used in tourism destination studies (Hwang et al., 2005), is now filtering down to built-up environments. Green buildings, green spaces, streets and place attachment have been the subject of research (Cole et al., 2021; Lomas et al., 2021). Planners and landscape designers might concentrate on conserving landscapes that provide community attachment to a location (Cheng and Kuo, 2015), such as historic sites, conventional structures, and local plants. A deeper understanding of the environment's restoration value and fresh insights into people's placement choices in urban settings can result from more research into place attachment in the context of broader personal, social, and cultural issues.

By reviewing relevant reviews within the last 5 years, we found several major concerns in explaining the role and impact of place attachment (see Table 1). Urbaniak (2019) states the relationship between place and social exclusion (Urbaniak and Walsh, 2019), However, Urbaniak (2019) only focused on the complexity of the interrelationship between place and social exclusion, yet viable policies and practices need to be in place to clarify the association and mechanisms of place attachment and recovery of perception. Cole (2021) states that place attachment and pro-environmental behaviour, inform green building design strategies (Cole et al., 2021). However, Cole only focused on place attachment promoting pro-environmental behaviours and quality of life. His design strategy lacks a focus on the restoration of perception. Li (2023) state the place attachment and the benefits derived from familiar natural landscapes (Li et al., 2023). However, there is no mention of the role beyond the natural landscape. Yashadhana (2023) stated the relationship between placemaking and health and well-being, such as activities that promote attachment (Yashadhana et al., 2023). The context of its concern, however, is the link between health and well-being as well as place-making among refugees in high-income settings. The relationship between place attachment and recovery in the broader context is not addressed.

* Corresponding author

Table 1. Review articles according to themes

Author(s) and Year	Title	Main Focus
(Urbaniak and Walsh, 2019)	The interrelationship between place and critical life transitions in later life social exclusion: A scoping review	Linking place, old-age social exclusion and risk during critical life transitions.
(Dwyer et al., 2019)	The role of place attachment in tourism research	Place attachment to sustainable tourism, destination resilience, and destination competitiveness.
(Cole et al., 2021)	Place attachment in green buildings: Making the connections	Design Strategies to Support Place Attachment.
(Li et al., 2023)	Beyond "bluespace" and "greenspace": A narrative review of possible health benefits from exposure to other natural landscapes	Possible mechanisms that might explain how exposure to these landscapes can promote human health and well-being.
(Yashadhana et al., 2023)	Place-making and its impact on health and wellbeing among recently resettled refugees in high income contexts: A scoping review	'Activities' that facilitate relational place attachment.

One of the main limitations is that many of the studies used systematic reviews to explore place attachment in tourism, natural environment risk management, or to assess the restorative value of urban environments (Dwyer et al., 2019; Weber and Trojan, 2018; Bonaiuto et al., 2016). In addition, many existing studies are case studies assessing the impact of place attachment in specific contexts, such as landscape change (Gobster et al., 2022).

At the same time, more of the aforementioned studies were conducted before the epidemic, and trends in the post-epidemic era have not been taken into account. The impact of place attachment on perceptions of recovery, which is important information for policymakers, and designers to make appropriate decisions, was not assessed. However, it needs to be clarified whether the relationship between attachment and recovery outcomes is consistent across settings, nor is it clear how much weight each determinant has in the association between place attachment and better recovery status. A study on the general impact of place attachment on recovery perception has yet to be explored. The purpose of this review was to systematically review the variables, research frameworks, and interactions related to place attachment and recovery perceptions. The findings may inform future stakeholder and urban planning research.

MATERIALS AND METHODS

The phrase 'thematic review' uses ATLAS.ti 23 as the instrument, as Zairul (2020) suggested (Zairul, 2020). Thematic analysis, according to Clarke and Braun (2006), identifies the pattern and creates themes through reading material related to the issue (Braun and Clarke, 2006). The next step is to spot the pattern and create a category to comprehend the publication trend better. Several selection criteria were used in the literature selection process. i) Publication between 2020 and 2023; ii) The keywords are placement and restorative. We sought to synthesise the most recent data starting on January 1, 2020, emphasising the most recent papers that appeared following the pandemic. It also follows Subiza-P´erez 's research direction recommendation to explore whether people's restorative perceptions in outdoor and indoor environments change in the post-epidemic and whether international agencies and countries have corresponding recommendations (Subiza-Pérez et al., 2021). The articles under examination are written in English. They do not include works that fall under the rubric of literature reviews.

After modifying the search criteria, search each database using identical search terms ('title + abstract + keywords'). We solely used peer-reviewed journal papers to ensure the quality of the data. Databases were collected from the 'core database' of Scopus and Web of Science, widely used to collect evidence on landscape architecture and urban planning (Kabisch et al., 2015). The rules for creating search items were 'place attachment' and 'recovery' (Table 2). The details are listed (Figure 1).

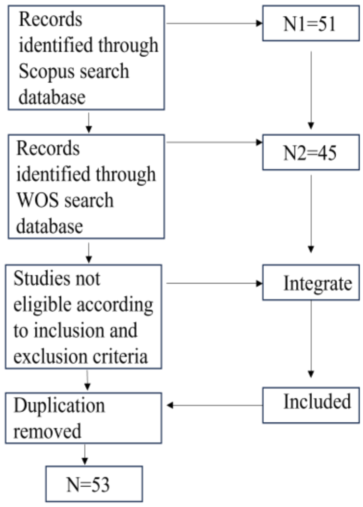

Figure 1. Inclusion and exclusion standards

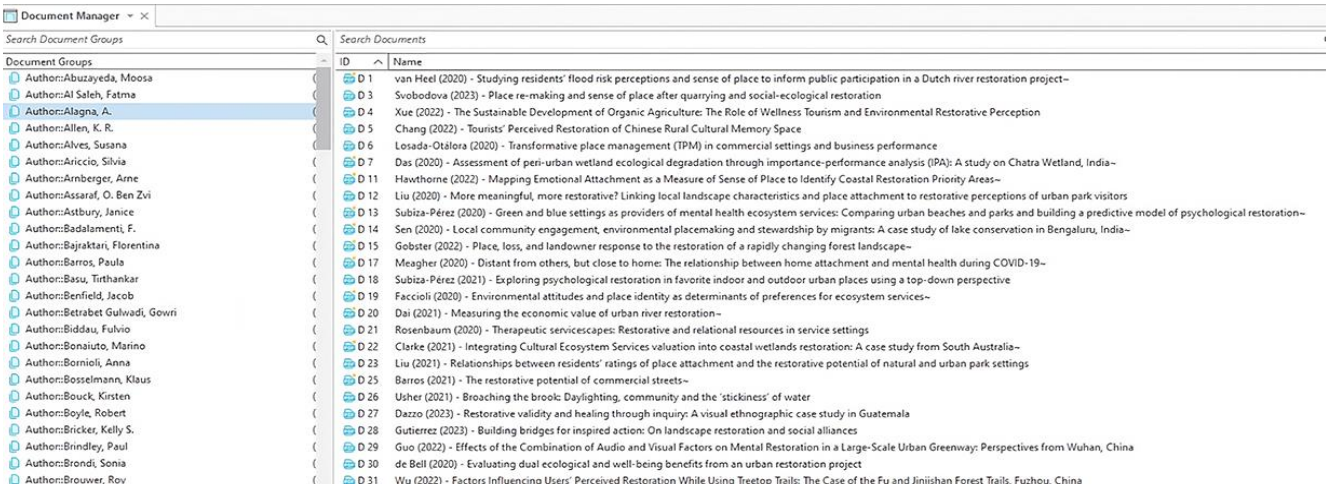

Figure 2. Metadata generated in ATLAS. ti 23 (Source: authors)

Selecting articles by identification, screening, qualification, and inclusion (Table 3). For data processing, the articles were added to Mendeley. This process eliminated duplicate articles, updated author names, and verified accurate information in crunching data. Ninety-six articles were found in the initial search. The evaluation criteria led to the removal of 43 articles. Fifty-three articles remain in the paper. The articles were added to ATLAS. ti 23 as primary documents (Figure 2), and each was then organised into the following categories: author; periodical; countries; and year of publication (Figure 3).

Table 2. Search keywords from Scopus and Web of Science (Source: authors)

Scopus	Title-Abs-Key ('Place attachment') and Title-Abs-Key ('Restorative') Or Title-Abs-Key ('Restoration') and PUBYEAR > 2020	51results
Wos	'Place attachment' (Topic) And Restorative (Topic) OR 'Restoration' (Topic) >2020	45 results
Total	Remove duplicates Exclusion of irrelevant literature	53 results

Table 3. Lists the inclusion criteria and review questions (Source: authors)

Reviewing questions	Possible information
1. What is the study design?	1. Research purpose, sample volume, location, method, and data type.
2. What is the context?	2. How does the environment influence place attachment and restoration?
Inclusion criteria	Exclusion criteria
1. Empirical study	1. Reviews, reports, books, or conference proceedings
2. Presented in English	2. Not in English
2. Relevant to key concepts	3. With a focus on clinical recovery (such as dental)
4. Articles accessible	4. Not accessible

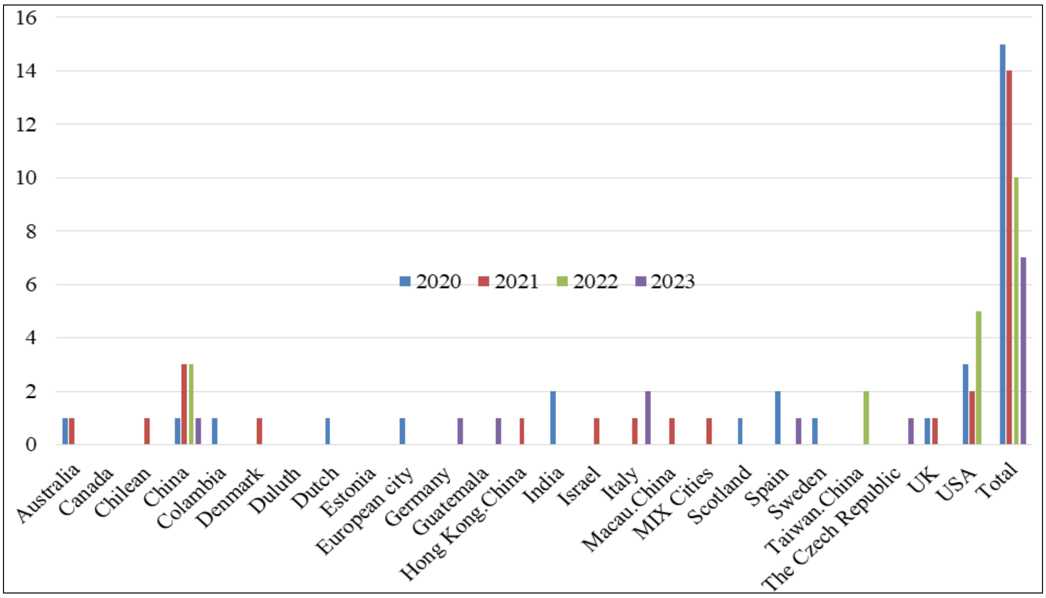

Figure 3. The No.of publications and countries (Source: authors)

RESULTS

If 'place attachment' were used as the keywords, the literature found would have been several thousand. However, when focusing the search on the string as place attachment plus recovery, the data demonstrate a considerable decrease and are more precise. According to the list, the top two popular choices are the Journal of Environmental Psychology and Landscape and Urban Planning. The two journals published nine of the 53 articles.

The paper analyses the trends and patterns of the selected publications. The initial coding was merged and renamed, resulting in a coding of only three themes. The study found three distinct themes following; i) place attachment-related variables, ii) recovery-related variables and iii) frameworks and models (Table 4). These themes are not independent but overlap between articles in this review. It is common for some articles to use several themes.

Table 4. Articles categorized by topic (Source: authors)

Author(s) and Year	1. Recovery perception (RP)	2. Place Attachment (PA)	3. Relationship (RP – PA)
(van Heel and van den Born, 2020)		√	
(Svobodova et al., 2023)			√
(Xue and Shen, 2022)			√
(Chang and Li, 2022)			√
(Losada-Otalora and Ribamar Siqueira, 2020)		√	
(Das and Basu, 2020)		√	
(Hawthorne et al., 2022)		√	
(Liu et al., 2020)			√
(Subiza-Pérez et al., 2020a)	√		√
(Sen and Nagendra, 2020)		√	

(Gobster et al., 2022)		√	
(Meagher and Cheadle, 2020)			√
(Subiza-Pérez et al., 2021)			√
(Faccioli et al., 2020)		√	
(Dai et al., 2021)		√	
(Rosenbaum et al., 2020)			√
(Clarke et al., 2021)			√
(Liu et al., 2021)			√
(Barros et al., 2021)	√		
(Usher et al., 2021)		√	
(Dazzo et al., 2023)	√		
(Gutierrez et al., 2023)			√
(Guo et al., 2022)			√
(de Bell et al., 2020)			√
(Wu et al., 2022)			√
(Husser et al., 2020)			√
(Shen et al., 2022)			√
(Nubani et al., 2022)		√	
(McCall and Greaves, 2022)		√	
(Madsen et al., 2021)		√	
(Lee et al., 2021)		√	
(Han et al., 2023)		√	
(Sedawi et al., 2021)		√	
(Biddau et al., 2023)		√	
(Palang, 2023)		√	√
(Fleming et al., 2022)			√
(Dasgupta et al., 2022)		√	
(Webb, 2022)		√	
(Liu et al., 2022)			√
(McCunn et al., 2023)			√
(Villagra et al., 2021)	√	√	
(Li et al., 2023)			√
(Jiang et al., 2021)	√		
(Lin et al., 2021)	√		
(Odzakovic, et al., 2020)	√	√	
(Mura et al., 2023)		√	
(Maricchiolo et al., 2021)		√	
(Sun et al., 2021)	√		
(Subiza-Pérez et al., 2020b)	√		
(Gatti et al., 2022)	√	√	
(Zhang et al., 2023)	√		
(Payne et al., 2020)	√		

1. Recovery Perception (RA)

During and after COVID-19, several approaches introduced new ways of thinking about restoration-related variables (Figure 4).

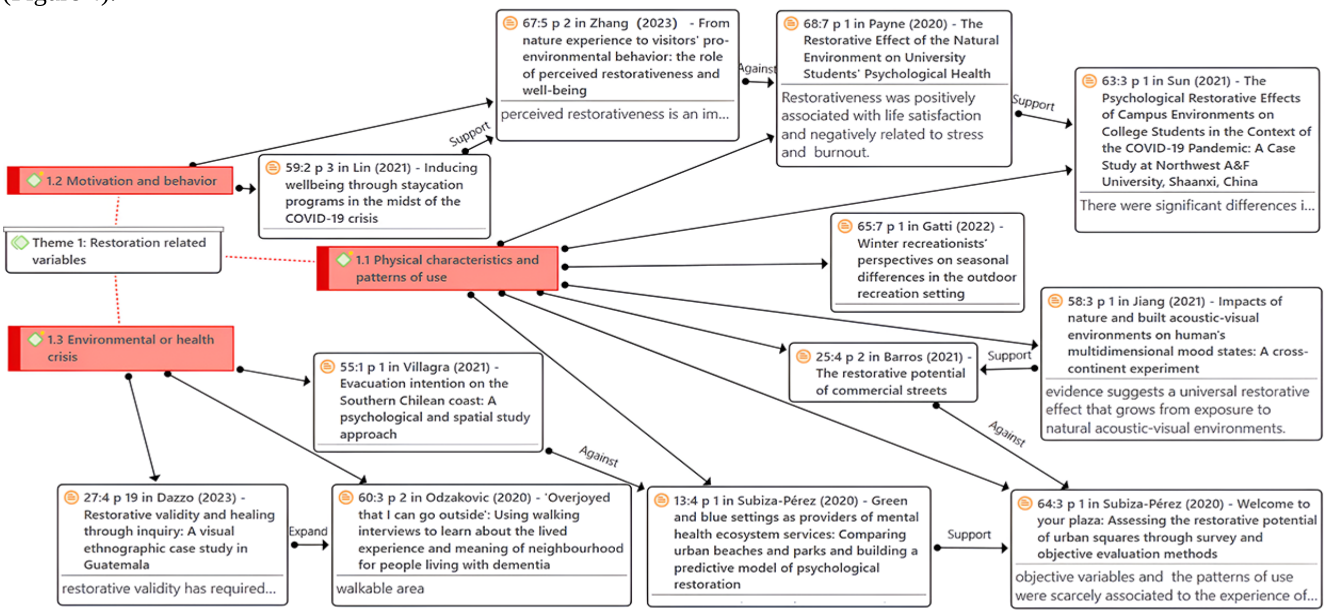

Figure 4. Network on the Restorative-related variables theme (Source: authors)

1.1. Physical Characteristics and Use Patterns

There are inconsistent findings from relevant studies regarding the relationship between physical characteristics and use and recovery. According to Subiza-Pérez (2020), neither the physical/design qualities of the place nor the habits of use significantly impact the restorative experience in green and blue environments (Subiza-Pérez et al., 2020a), including in the square space (Subiza-Pérez et al., 2020b). However, the opposite view is held in some studies of streets and natural spaces. Barros (2021) believes there is some potential for recovery in certain combinations on commercial streets (Barros et al., 2021). The visual and acoustic environment of nature also supports this view. Researchers suggest that exposure to natural acoustic-visual environments produces a generally restorative effect (Jiang et al., 2021). Sun (2021) compares the differences in recovery in different environments. It was noted that recovery effects were more significant in blue spaces than in green and athletic fields and greater in green and athletic fields than in grey spaces (Sun et al., 2021). This finding was made in a campus setting during the COVID-19 epidemic. This is partly supported by Payne's (2018) research on natural environment interventions for mental health for university students. Students in natural environments were significantly less stressed (Payne et al., 2018). Some findings point to similar restorative effects across spaces. Zhang (2023) claims that urban parks generate equivalent restorative effects, but national parks increase one's subjective vitality (Zhang et al., 2023). This may be a result of both being predominantly green spaces. Researchers have focused on the specific restorative nature of the winter environment (Gatti et al., 2022). However, only qualitative studies have been conducted on people who regularly engage in outdoor winter sports, and there is a lack of quantitative data.

1.2. Motivation and Behaviour

Motivated behaviour is an essential variable in exploring recovery. According to Zhang's study from 2023, perceived restorative triggers emotions of well-being and pro-environmental behaviours (Zhang et al., 2023). This is supported by Lin (2021), which explored the link between motivation and psychological outcomes in an adverse environment (Lin et al., 2021).

1.3. Environmental or health crises

Restoring relevant disparities in the face of environmental and health crises is worth exploring. Villagra (2021) states the differences in perceived safety, place attachment and restorative perception across spatial variables. Higher scores on psychological markers were given to natural evacuation sites with situational amenities, more elevation, distance from the shoreline, evacuation routes, and emergency infrastructure (Villagra et al., 2021). This result refutes Subiza-Pérez's (2020) assertion that the physical features of the environment and the practises employed have a minimal impact in this area (Subiza-Pérez et al., 2020b). According to Odzakovic (2020), there is a sense of attachment to the area among dementia patients who reside in the community. It provided a walkable area and social opportunities to move freely and feel rejuvenated (Odzakovic, et al., 2020). Dazzo (2023) emphasises that restorative validity requires researchers to explore ways to humanise their actions (Dazzo et al., 2023). It also inspires dementia research, where researchers examine their research behaviours.

2. Place Attachment (PA)

Several authors discuss attachment-related variables, some related to the attachment process, such as social relationships, and attitudes. Some related to the research background, such as indigenous, blue space, and ecology (Figure 5).

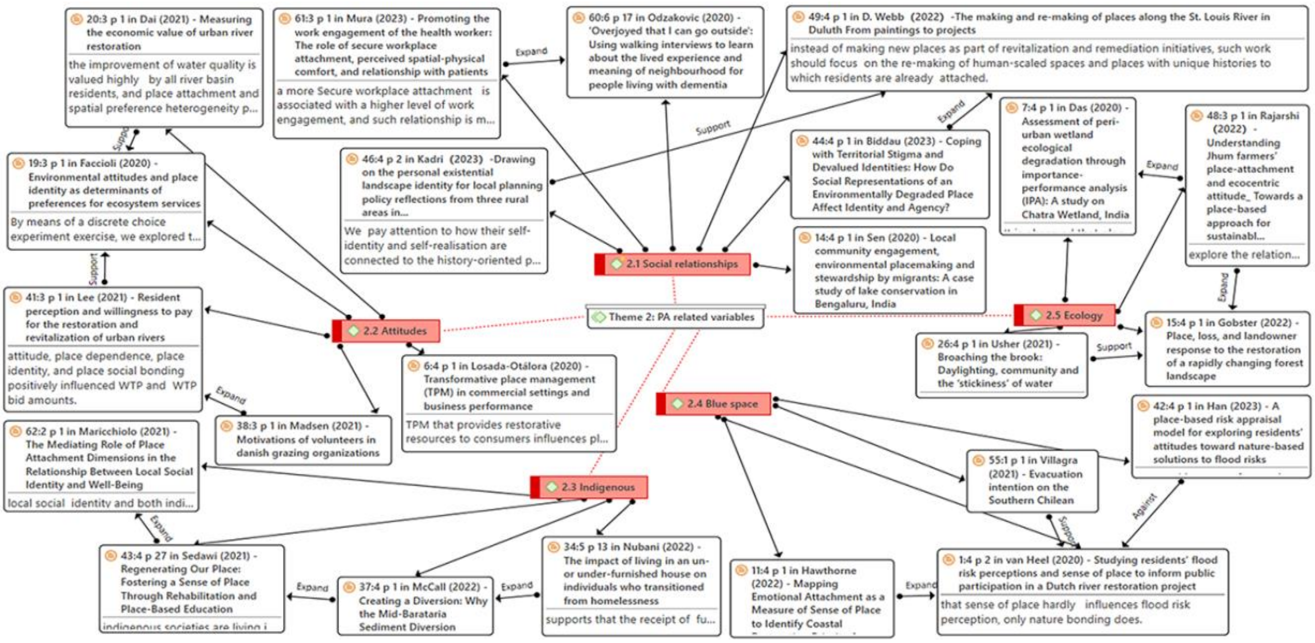

Figure 5. Network on the PA-related variables theme (Source: authors)

2.1. Social Relationships

Environmental placemaking has shifted fundamentally in modern cities' relationship between humans and nature conservation (Sen and Nagendra, 2020). Among the attachment-related studies, attention is paid to social relationships and especially historical ties. According to Webb (2022), regional archivists, historians, and art or architectural historians should be contacted because they know local, place-based projects and architectural and visual landscapes (Webb, 2022). Kadri (2023) states that the local people's self-identity and self-actualisation are linked to the history of the territory in which they live (Palang, 2023). Biddau (2023) supports this claim, stating that in response to territorial stigmatisation and the devaluation of local and social identities, identity processes appear to act as self-protective mechanisms at the individual and societal levels (Biddau et al., 2023). Attachment positively contributes to health workers and patients (Mura et al., 2023; Odzakovic et al., 2020).

2.2. Attitudes

One of the most critical indicators of stakeholder attitudes - willingness to pay (WTP) is influenced by place attachment. Faccioli (2020) points out the influence of local identity on WTP for ecosystem services. WTP for peatland restoration was higher when people had positive attitudes towards the environment (Faccioli et al., 2020). Dai's (2021) study of watersheds supports this view. He pointed out that all watershed residents place a high value on improved water quality. Site attachment and spatial preference heterogeneity influence the public's WTP for river restoration (Dai et al., 2021). Lee (2021) investigated the connection between attitudes, place attachment, and WTP.

The findings demonstrated that WTP was positively impacted by attitudes, location attachment, place identity, and place social relations (Lee et al., 2021). In addition to environmental stakeholders, the behavioural motivations of consumers and volunteers have also received academic attention. Otalora (2020) points to ways of providing restorative resources for consumers to influence place attachment by improving consumer well-being (Losada-Otalora, 2020). Madsen (2021) states five motivational factors determine volunteer participation: sociability, nature values, instrumentality, sense of identity and personal interest. Attachment to place is an important driving factor (Madsen et al., 2021).

2.3. Indigenous

Place attachment has focused more on localisation-related research. According to Maricchiolo (2021), local identification and social interactions are the positive mediating factors exploring the connection between social identity and health (Maricchiolo et al., 2021). Some research has focused on student education, the living behaviour of locals, and homelessness. When focusing on place-based education initiatives, Sedawi (2021) emphasised the value of extending the local environment's borders to allow kids to spend time learning in a healthy setting when their local environment is polluted (Sedawi et al., 2021). According to McCall (2022), small-scale fishing is a critical component of social identity and a source of solid local attachment for local fishermen. Project planning should consider their potential social and psychological effects on coastal communities (McCall and Greaves, 2022). Nubani (2022) strongly supports that receiving furniture contributed to place attachment (Nubani et al., 2022). Studies above provide evidence for the positive impact of place attachment resources.

2.4. Blue space

Place attachment is frequently mentioned in coastal and river management because of the blue space's critical ecological regulating role. Han (2023) states that place identity negatively predicts supportive attitudes in the Place-Based Risk Assessment Model. In risk assessment, the plurality of an individual's place, context and relationships are vital in determining attitudes towards nature-based solutions (Han et al., 2023). Inconsistent with that conclusion is the fact that Van Heel (2020) concludes that a sense of place hardly influences flood risk perception. Only nature bonding does (van Heel and van den Born, 2020). A ‘place bonding’ factor combined assertions about place identification and location reliance. This view has been expanded in subsequent studies. Villagra (2021) examined how psychological and spatial indicators affect the intention to evacuate to a designated location. The results showed that perceived safety, attachment and recovery differed between scenarios (Villagra et al., 2021). Hawthorne (2022) further explored that place attachment can influence future priorities for coastal restoration. They used ArcGIS to map integrated measures of attachment (Hawthorne et al., 2022).

2.5. Ecology

Attachment is a vital variable in studies related to landscape change and ecological restoration. According to Gobster (2022), persons already sentimentally linked to former landscape elements may be severely impacted by landscape change. The degree of attachment can affect how people experience change and react to it (Gobster et al., 2022). Landscape features such as tree canopies can characterise a sense of place and mitigate the negative emotions of landscape change. Some artificial landscape changes, such as the restoration of many canalised watercourses, enhance the connection with wilderness, the attachment to place and the sense of community (Usher et al., 2021). These two studies illustrate the need to strengthen human connections to the countryside landscape, promoting attachment and mitigating negative emotions. In addition to the effects on individuals, pro-environmental behaviour is also linked to ecocentric attitudes. Rajarshi (2022) argues that ecocentric attitudes are linked to place attachment and that, despite being influenced by other factors, ecocentric attitudes usually contribute to environmentally responsible behaviour (Dasgupta et al., 2022). There is a need to continue to explore ways to strengthen ecosystem services, and resident satisfaction is one way to do this. Importance-performance analysis reveals residents' satisfaction with the performance of wetland ecosystem services. People's attachment to and proximity to wetlands are crucial in people's perceptions (Das and Basu, 2020). It is worth pointing out that the study used a four-dimensional place attachment scale rather than the more commonly used two dimensions, focusing on social and natural connectedness.

3. Thematic Relationship Between RP and PA

Several authors have proposed the attachment role in recovery (Figure 6).

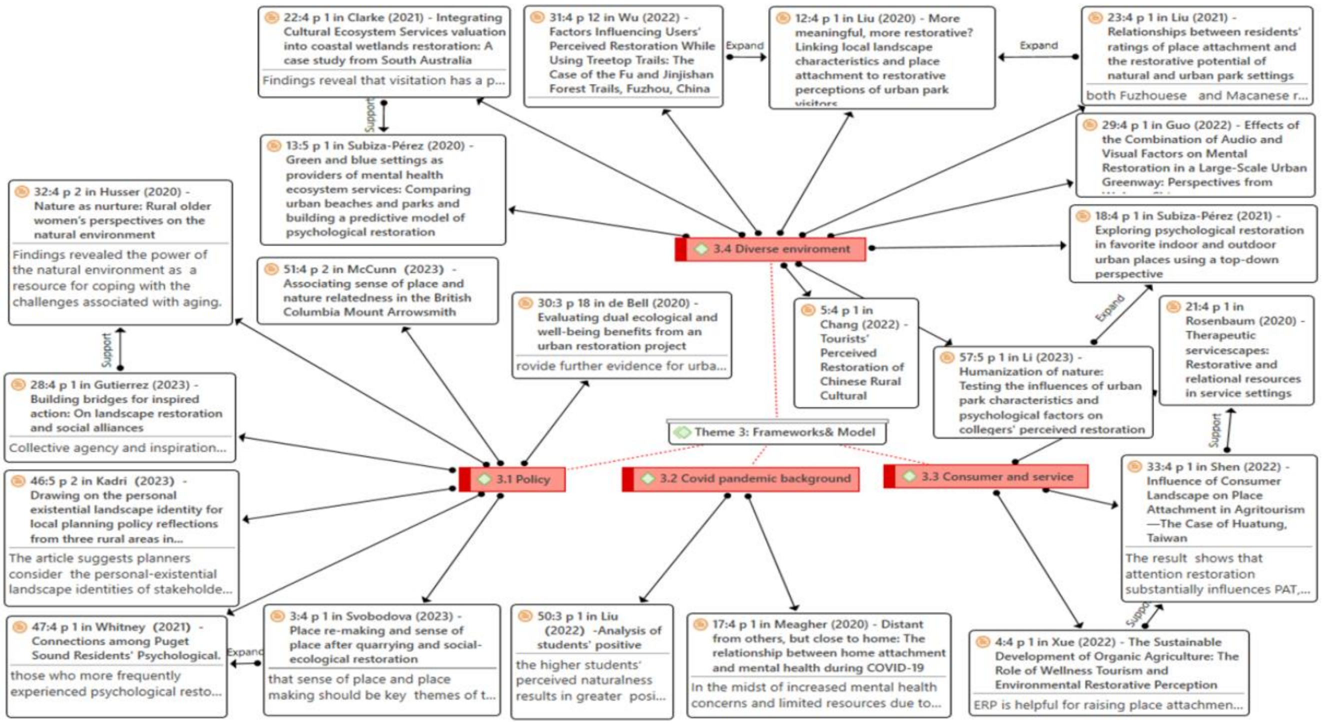

Figure 6. Network on the framework and model theme (Source: authors)

3.1. Policy

Academic research has made recommendations and policies on demographic issues, urban management, and restoration projects. Husser (2020) demonstrated that nature is a resource for overcoming ageing difficulties (Husser et al., 2020). According to Gutierrez (2023), strengthening the stakeholder's inspiration who are tied together by a shared love of the landscapes they are attached to can improve the connections between people and places (Gutierrez et al., 2023). This complements previous research and helps to alleviate intergenerational conflict. In the context of urban governance, while affirming the status of place as a critical factor, the process factors of governance cannot be ignored. Whitney (2021) states that place attachment fully mediates the effect of the frequency of psychological recovery on beliefs about governance (Fleming et al., 2022). Svobodova (2023) emphasises that a sense of place and place-making should be critical themes in the sustainable development debate, as they contribute to a better understanding of the human variables that constrain or enable socially just development (Svobodova et al., 2023). Individuals and places in restoration projects are also leading factors in planning policy. At the macro level, Kadri (2023) suggests that planners consider the personal-existential landscape identities of stakeholders as a significant factor in the local planning policy-making process (Palang, 2023).

According to Bell (2020), incorporating ecological and social factors can improve the long-term viability of restoration efforts, especially in metropolitan areas (de Bell et al., 2020). McCunn (2023) states that among the design proposals for specific operations, municipal planners should focus money or public involvement on trails, parks, and other natural elements to enhance the sense of place in coastal and mountain towns. Municipal planners can focus on the restorative effects of community member's relationships with the environment (McCunn et al., 2023).

3.2. COVID background

In the epidemic context, recovery and attachment-related research focus on green spaces and indoor environments. Attachment and health recovery have been shown to benefit from family and green space (Liu et al., 2022; Meagher and Cheadle, 2020).

3.3. Consumer and service

The relevant variables' findings in the traditional domain of place attachment research, namely tourism and consumption, are equally compatible with the model of recovery and attachment. According to Rosenbaum (2020), favourable social and physical surroundings boost customers' sentiments of attachment and well-being. Future behavioural intentions of consumers are determined by the impact of the store on their well-being and their desire to maintain place attachment (Rosenbaum et al., 2020). Shen (2022) states that the consumer landscape positively affects attention restoration and place attachment (Shen et al., 2022). Xue (2022) states that environmental restorative perception helps raise place attachment, healthy image, and loyalty to tourist destinations (Xue and Shen, 2022).

3.4. Diverse environment

The attachment-recovery model has been validated in beaches, urban parks, rural cultural spaces, and greenways. Subiza-Pérez (2020) states that beachgoers reported higher attachment, identity, and repair degrees than survey respondents in urban parks (Subiza-Pérez et al., 2020a). Clarke (2021) supports this finding, it showed that access to coastal wetlands had a positive impact, and on this basis, it was noted that people valued places they knew best (Clarke et al., 2021). Chang

(2022) reveals that visitors generate restorative cognitions in rural cultural spaces through situational engagement and placed attachment (Chang and Li, 2022). Guo (2022) highlights how sound a greenway setting might aid in psychological healing (Guo et al., 2022). According to Subiza-P'erez (2021), place attachment, place identity, and perceived restorative potential were the best indicators of subjective restoration (Subiza-Pérez et al., 2021). The landscape factors' moderating and mediating impacts on the preference restoration nexus were discovered (Li et al., 2023). Liu (2020) stated that when respondents rated photographs that contained local landscape features, they showed stronger place attachment and perceived restorative nature (Liu et al., 2020). He explored further in terms of familiarity. Liu (2021) further noted that respondents rated familiar urban park environments higher than unfamiliar ones in all categories. No distinction existed between the natural environment and the restorative potential of urban parks with which they were familiar. Place attachment predicted restorative potential in familiar urban parks (Liu et al., 2021). Wu (2022) broadens this perspective by stating that the treetop trail's quality encourages the user's attachment to the location and impression of recovery (Wu et al., 2022).

DISCUSSION

Previous research has focused on the relationship between quality of life, place attachment and restorative perception, with attachment, in turn, influencing perceptions of restoration (Ruiz and Bernardo Hernández, 2014). Place attachment has been highlighted in recent research as a mediating factor between environment and psychological recovery. It has also been validated in different settings, while research has focused on differences in familiarity (Liu et al., 2021), audiovisual factors and the naturalness of the environment (Guo et al., 2022). The thematic review has resulted in new research recommendations. Twelve research directions to guide research and practice in place attachment bonding recovery so that new research opportunities can be identified, and the strategic success of policymakers can be assisted (Figure 7).

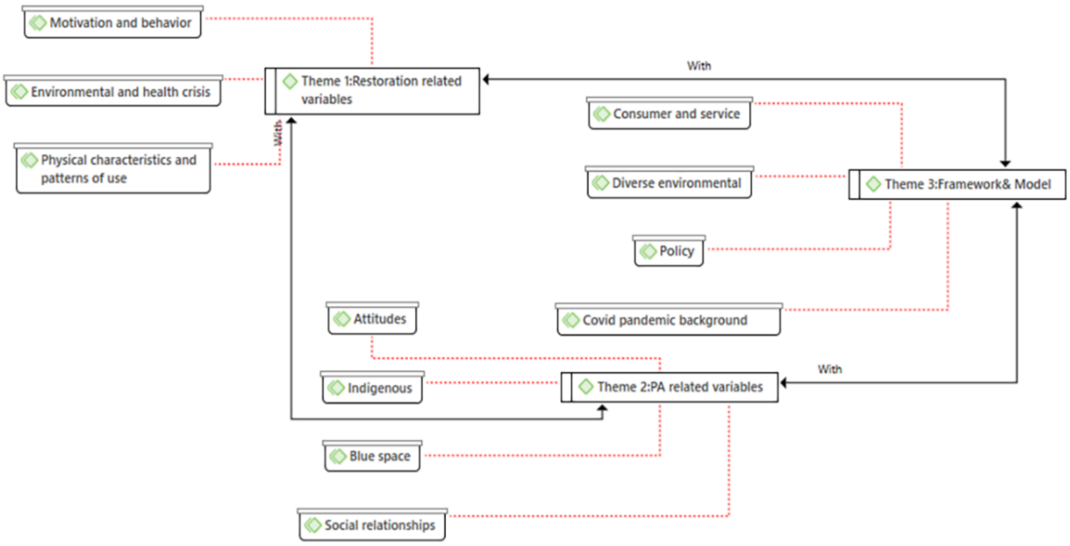

Figure 7. A framework for the existing discussion (Source: authors)

Recent research can be grouped into the following categories: Physical Characteristics and Use Patterns: Focusing on the variables associated with achieving enhanced recovery outcomes. Motivation and Behaviour: Recommendations on government policy and site management. Environment and Health Crises: A policy proposal for landscape change, ecological challenges, and personal health restoration. Social Relationships: Sorting out the effects of historical relationships and interpersonal interactions on attachment. Attitudes: More research on environmental WTP and volunteer motivation. Indigenous: More research into local culture and behavioural patterns, with place perception and well-being as part of the consideration. Blue spaces: Focus on essential ecosystem services beyond green spaces to create new values to support psychological recovery. Ecology: Existing projects such as ecological restoration focus on attachment situations to support psychological recovery and turn risk into opportunity. Policy: Assess policy recommendations where relevant frameworks have been adopted. COVID background: Assess differences in attachment recovery indoors and outdoors in the context of an epidemic. Diverse environment: Practical assessment of adopting attachment recovery models in different settings. Consumer and services: Assessment of frameworks in projects such as eco-agriculture or tourism destinations.

From the 53 articles reviewed in this paper, the relationship between RP and PA was obtained through thematic analysis using ATLAS. ti 23 software. Progress in research is still relatively slow, partly due to a lack of awareness among policymakers, and place attachment is only valued in response to environmental changes such as environmental renovation and renewal and natural crises. Theme 1 focuses on the context and relevant variables supporting restoration to clarify the processes influencing health restoration. As health restoration was not explicitly stated, some literature on ecological restoration and river restoration was still included in the paper as it focused on stakeholder perceptions of place and attachment. It is divided into three sections, physical characteristics and use patterns, motivation and behaviour, and environmental or health crisis. There needs to be more consistency of opinion in the first section, which may be related to sample size and variable selection and needs to be further explored. The literature corroborates the link between recovery and motivational behaviour. Related ideas also need to be explored in the context of environmental health crises.

Place attachment as a reliable resource for coping with health decline associated with urbanisation and ageing is divided into five sections regarding research on relevant variables: Social relationships, Attitudes, Indigenous, Blue space, and Ecology. Attachment is related to social relationships in the occupational environment of some groups as well as in the living environment. Attachment is influenced by historical factors related to the local context and culture. It also plays a role in the WTP and the motivation to behave to the environment, which is supported by the literature in the ecology and blue space sections. The study's framework emphasises the need to clarify the connection between place attachment and recovery perception literature. The findings are first presented regarding policy on several aspects of demography, urban management, and ecological restoration projects. This is followed by an empirical study of health issues in a post-epidemic context. Thirdly the relationship between the two concepts is investigated from the consumption domain. Finally, both models are validated from different environmental contexts, adding more considerations for further exploration.

The following conclusions can be reasonably drawn: i) There are differences in the degree of attachment and recovery in different types of urban environments. Such differences can be used as a basis for design guidance, i.e., highlighting their local historical characteristics, and degree of naturalness. ii) Place attachment predicts perceptions of restoration, and a sense of environmental restoration contributes to place attachment, which also holds for consumer environments and tourist destinations. iii) Environmental attitudes such as willingness to pay for the environment, pro-environmental behaviour and volunteer behaviour are influenced by place attachment. iv) In the study of river and coastal environments, the dimensions of 'natural bonding' and 'social bonding' are important.

CONCLUSION

The health benefits of urban environments are associated with place attachment and restorative perceptions. Healthy environments also contribute to improving the socioeconomic benefits of urban environments. This paper encourages the integration of information between different disciplines, such as urban planning specialists, environmental psychologists, and public health experts, to further improve the urban environment. The primary objective of this research is to analyse existing patterns of place attachment and recovery in different contexts and to provide guidelines for future research. It also explores additional liveable environment research variables to address mental health challenges in the post-popular era from the perspective of human-place integration. A new guiding concept of integrating place-making and place attachment in urban planning and design is proposed to integrate place attachment theory into the design of restorative environments.

Author Contributions: Conceptualization, Y.C. and S.F.A.S.; methodology, Y.C.; software, Y.C.; validation, A.A.S.M.; formal analysis Y.C. ; investigation Y.C.; data curation, A.A.S.M.; writing - original draft preparation, Y.C.; writing - review and editing, S.F.A.S. and A.A.S.M.; visualization, Y.C.; supervision, S.F.A.S. and A.A.S.M.; project administration, S.F.A.S. and A.A.S.M.. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The authors acknowledge the reviewer for their thoughtful comments.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 09.05.2023 Revised: 11.07.2023 Accepted: 17.08.2023 Available online: 18.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.973-987
DOI 10.30892/gtg.49313-1097

A FRAMEWORK FOR ASSESSING WELLNESS TOURISM DESTINATION COMPETITIVENESS: A PERSPECTIVE FROM THE WELLNESS TOURISM CLUSTERS IN THAILAND

Thadathibesra PHUTHONG*[*]
Silpakorn University, Faculty of Management Science, Department of Logistics Management, Phetchaburi, Thailand, e-mail: phuthong_t@su.ac.th

Pongpun ANUNTAVORANICH
Chulalongkorn University, Faculty of Architecture, Department of Industrial Design, Bangkok, Thailand, e-mail: p.idchula@gmail.com

Achara CHANDRACHAI
Chulalongkorn University, Chulalongkorn Business School, Department of Commerce, Bangkok, Thailand, e-mail: achandrachai@gmail.com

Krerk PIROMSOPA
Chulalongkorn University, Faculty of Engineering, Department of Computer Engineering, Bangkok, Thailand, e-mail: krerk.p@chula.ac.th

Citation: Phuthong, T., Anuntavoranich, P., Chandrachai, A., & Piromsopa, K. (2023). A FRAMEWORK FOR ASSESSING WELLNESS TOURISM DESTINATION COMPETITIVENESS: A PERSPECTIVE FROM THE WELLNESS TOURISM CLUSTERS IN THAILAND. *GeoJournal of Tourism and Geosites*, 49(3), 973–987. https://doi.org/10.30892/gtg.49313-1097

Abstract: This article aims to identify the variables that determine wellness tourism destination competitiveness using a case study in Thailand. This study outlines a suggested competitiveness framework for wellness tourism destinations based on the viewpoint of wellness tourism clusters. The study's model illustrates the different categories and components and their relationship to competitiveness. Thirteen in-depth qualitative interviews were conducted with leading experts in wellness tourism. Thematic and content analysis was used to examine the interview data using the Nvivo 12 programme. The study identified seven emerging themes that encompass factors that affect a wellness tourism destination's competitiveness. These factors include the destination's environment, the area's policy and strategy to facilitate travelling and wellness tourism, infrastructure and capability to support wellness tourism, human-made resources and culture of wellness tourism, strategy and structure for healthcare services, potential for developing innovation and cooperation to build collaborative strengths and proactive marketing. The participants' descriptions show the existence of a comprehensive framework for assessing the competitiveness of wellness tourism destinations in the Thai wellness tourism market. The concept elucidates the dynamic complexity of wellness tourism destination competition, which is believed to guarantee success for both individual stakeholders and society.

Key words: wellness tourism, wellness destination, destination competitiveness, assessment framework, qualitative study, sustainable development goals

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INTRODUCTION

Tourism and travel industries are important potential drives for development and economic growth, creating employment opportunities as high as 6.1% of overall employment in 2021. The rate was 5.3% higher than in 2020 but 10.3% lower than in 2019 due to the COVID-19 pandemic (World Travel & Tourism Council, 2022). Tourism and travel industries are the main sources of income for different countries, are in the highest growth rate industrial group and promote the development and growth of other industries that are directly and indirectly related. For Thailand, these industries are considered key in the first S-Curve industries and significantly stimulate economic growth. Data from the Digital Government Development Agency (2023) indicated that the number of international tourists visiting Thailand between 2015 and 2019 trended continuously upward, from 29.9 million people in 2015 to 39.9 million in 2019. The number in 2020 fell to 6.7 million people due to unforeseen circumstances, economic conditions and the COVID-19 pandemic; however, in the first quarter of 2023, Thailand's tourism situation improved, with 5.5 million international tourists travelling to Thailand, bringing an average of two hundred thousand Thai baht into the country (Ministry of Tourism and Sports, 2023).

Results from the COVID-19 pandemic and the increasing popularity of wellness trends have given rise to a new travelling style, i.e. wellness tourism. The trend has gained popularity both in Thailand and abroad and is likely to grow continuously. Wellness tourism refers to travel associated with finding, maintaining and promoting good health, covering all services relating to holistic treatment and health improvement. Service users can choose a health-promoting service while travelling abroad (The Global Wellness Institute, 2017) and in Thailand, wellness tourism can be divided into two major types. The first is health treatment and therapy tourism, where treatment and therapy are combined with tourism, e.g. travelling and receiving dental services, aesthetic surgery and gender affirmation surgery in a hospital or clinic. The second is health-promoting tourism refers to travelling to tourist attractions, staying in hotels, resorts or wellness centres and attending health-promoting activities, such as Thai massage, aromatherapy, mineral bath and herbal therapy (Tourism Authority of Thailand, 2019).

[*] Corresponding author

Wellness tourism is also related to and promotes other forms of tourism, such as cultural tourism, culinary tourism, eco-sustainable tourism, sports tourism, adventure tourism, 'agri-tourism', medical tourism, spiritual tourism and 'volun-tourism'. This connection might stem from the fact that wellness tourists who travel domestically or internationally might have secondary objectives related to other types of tourism. The data from the global tourism industry showed that the value of global wellness tourism is close to culinary tourism and eco-sustainable tourism (Global Wellness Institute, 2013). The global wellness economy report 2022 by Global Wellness Institute (2022) also showed that the global wellness economy value was worth 4.4 trillion US dollars (USD) and was forecasted to reach 7 trillion USD by 2025. Personal care and beauty groups generated the highest income at 955 billion USD, followed by healthy eating, nutrition and weight loss at 946 billion USD, physical activity at 738 USD billion and wellness tourism at 436 billion USD respectively.

In the global wellness economy context, wellness tourism currently generates a large amount of income for the country because such tourists are highly educated, well-off, stay for long periods and have higher travel budgets than others. This is consistent with the TTB Analytics Centre analysis report, which predicted that 2023 Thai wellness tourism could generate almost 728 million USD. The data also indicated that Thailand is an important destination for wellness tourism regarding its good healthcare and health security. From the 2021 Global Health Security Index report, Thailand ranked fifth of 195 countries worldwide and first in Asia (The Global Health Security Index, 2022). The market value of wellness tourism in Thailand is also predicted to increase due to being a tourist destination with outstanding, beautiful, abundant and diversified natural resources. The country is also abundant in natural and human-made tourist destinations, including traditions, cultures and heritage unique to each area. Furthermore, natural resources are used for treatments and physical and mental health rejuvenation. Staff are knowledgeable and skilled in providing services, especially Thai massage and natural herbal spa treatments and Thailand offers a wide selection of certified hotels and accommodations.

Moreover, transportation infrastructure is convenient and covers all areas. Thai identity, which is kind and attentive, is also attractive to tourists. As a result, wellness tourism in Thailand has gained more popularity and leads the Asia region as a global wellness tourism destination. The top 20 global wellness tourism destination survey determines the criteria of the number of trips, direct employment and expenditures, indicating that Thailand received 12.5 million trips, representing an estimated direct employment value of 0.53 million and expenditures of 12.0 billion USD; these figures are 13th in the world. Furthermore, from the top 10 ranking of Asia-Pacific wellness tourism countries, Thailand ranked fourth for income at 12,018.4 million USD, following China, Japan and India (Global Wellness Institute, 2018).

The data above indicate that wellness tourism was a business sector that generated significant revenue for Thailand. It was specified as one of the fifth first S-Curve industries in the targeted industry research in the National Research Plan and Strategy No. 9 (2017–2021) (National Research Council of Thailand, 2016).The Department of Health Service Support, Ministry of Public Health (2016) specified that the strategic plan for wellness tourism in Thailand includes increasing the competitiveness of healthcare services, promoting healthcare services categorised by its main products, emphasising developing healthcare workers for academic excellence at all levels, developing community or small enterprises to support wellness tourism and promoting marketing and publicity (Department of Health Service Support, Ministry of Public Health, 2016). Furthermore, the promotion of wellness tourism is also a goal of Thailand's National Development Strategy (2017–2026).

Competitiveness is a comparative factor to measure an individual's ability or capability against competitors. Developing competitiveness to attain superiority is a goal that every country or organisation aims to realise. The competitiveness of wellness tourism in this study refers to the readiness of an area to facilitate the development, improvement or changes and the appeal of that area to attract wellness tourists to travel to that area compared to the competitors. The Thailand 10-year Tourism Development Direction Project Report by Economics Tourism and Sports Division, Ministry of Tourism and Sports (2016) showed that Thailand's wellness tourism competitiveness was at a moderate level; however, it maintained a high interest in the global market. Thailand has long been famous for wellness tourism; however, its popularity declined due to a loss of identity caused by the deterioration of different tourist attractions and management problems with maintaining identity or highlighting the area. Therefore, to increase the potentiality of wellness tourism, emphasis should be placed on creating uniqueness, improving and developing tourist attraction standards, connecting to the local lifestyle, creating new experiences and utilising natural, cultural and local knowledge resources (Economics Tourism and Sports Division, Ministry of Tourism and Sports, 2016).

Research from other countries has been conducted in the past decade, focusing on developing guidelines to improve the potential of tourist attractions related to wellness tourism and provide a competitive edge over other countries in the future. Some studies compiled the determinants and strategies of developing medical tourism through a service integration and tourism destination competitiveness approach (Hosseini and Taghvaei, 2021). Other studies explore factors that affect destination competitiveness and its relationships with tourism satisfaction and tourists' behavioural intentions to return and to recommend the location to others (Zeng et al., 2021). Further research aims to conceptualise a construct called 'medical tourism experience' and develop a scale for measurement (Ghosh and Mandal, 2019) or construct a health tourism destination index to contribute to the overall strategic planning process by identifying improvements in activities and enhancing competitiveness in health tourism management (Lee and Li, 2019). Additionally, some extant literature aims to identify the determinants of health tourism competitiveness using customised indicators and Dwyer's integrated model (Mosammam et al., 2019), explores the importance and performance of medical tourism destination competitiveness (Junio et al., 2017), identifies the attractiveness of wellness destinations (Medina-Muñoz and Medina-Muñoz, 2014) and or investigates the potentials of Serbia as a medical tourism destination in the international tourism market (Milićević et al., 2013).

Focusing on related literature in Thailand's information databases, i.e. ThaiJo, Thai Journal Citation Index-TCI and Thai-Lis Digital Collection using keywords 'wellness tourism', 'destination' and 'competitiveness', revealed studies that propose guidelines for developing wellness tourism destination competitiveness using case studies from different areas. An example was a study determining the potential of Betong district in Yala province as a wellness destination in the deep south of Thailand, serving both domestic and international tourists (Praprom and Laipaporn, 2023). Other studies analysed the strategy of Thai medical services promotion at foreign markets and the development of medical tourism (Ushakov et al., 2019), the potential spatial analysis of the west coast zone (Thailand Riviera) and the development of the area to be a wellness tourism destination (Suksri and Samkhuntod, 2021). Additional research examined actors supporting the readiness of wellness tourism and the presentation of wellness tourism activities and tourist attractions in Chonburi province (Riwatthana et al., 2023) and the potential of wellness tourism in Phuket province (Klangnurak and Jaroenwisan, 2023). The results from the literature review showed that, overall, studies on wellness tourism destination competitiveness are still limited regarding Thailand.

Therefore, to fill the gap, the research question of what components and indicators comprise wellness tourism destination competitiveness assessment was developed for the present study. The research objective was to study and develop indicators for wellness tourism destination competitiveness assessment. The results can benefit stakeholders in the wellness tourism clusters in Thailand, including the health industry, tourism industry, supporting industries and public agencies or associations. Guidelines could be adapted to evaluate, improve and develop competitiveness and to improve wellness tourism destinations as high-quality and sustainable international centres for wellness tourism.

MATERIALS AND METHODS

This research is a qualitative study. The data were collected using documentary research from secondary data sources and the primary data sources were collected using semi-structured interviews. After reviewing concepts and related studies, we specified the basic research framework using the grounded theory-building process by Rodon and Pastor (2007), as shown in Figure 1.

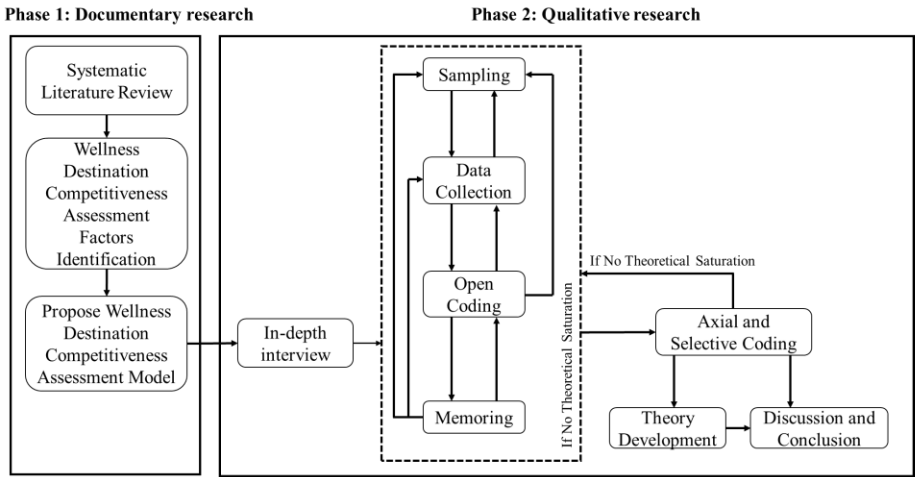

Figure 1. Research process (Source: Developed by the authors)

Documentary research

This study uses documents, concepts, theories and related research to specify the criteria and related indicators to determine the criteria and indicators for assessing wellness tourism destination competitiveness. A systematic review was employed using the PRISMA mechanism (Moher et al., 2009). We specified the research framework to conclude the data from content analysis in three issues related to research methodology, the scope of the study and factors. First, the assessment of wellness tourism destination competitiveness started with a literature review plan starting from determining the research questions regarding which factors should be focused on in the assessment. Second, we conducted a literature review by specifying important words or keywords for searching; third, we specified the time frame for searching. Research published in English from the past five years was selected. The work had to be complete versions with content related to assessing wellness tourism destination competitiveness. The obtained research was of good quality regarding the research methodology; each study passed the criteria, had no bias, had complete results and had an appropriate research methodology. Moreover, the rights of the sample groups were protected according to appropriate human research ethics. The studies were retrieved from the Scopus database and the final selection was screened and assessed for quality. After conducting the above steps, 674 studies passed the inclusion criteria. We again screened the content for more specific searching and specified research studies with keywords in the research title. Studies that did not correspond to the inclusion criteria were excluded, yielding 238 studies. We then examined the abstracts and selected only those focusing on assessing wellness tourism destination competitiveness concerning the wellness tourism business. Finally, 16 studies passed all the criteria, which underwent content analysis and model synthesis for assessing wellness tourism destination competitiveness to develop the research framework.

Qualitative research (Semi-Structured interview)

The basic research framework from phase 1 was used for qualitative research in phase 2. This approach allowed us to develop indicators for assessing wellness tourism destination competitiveness using grounded theory methodology (Glaser and Strauss, 1967). This study used the interpretivism and constructivism paradigms to find the new meaning or theory from the main informants' perspectives and theoretical sampling. We began by forming the assumptions and theoretical explanations from the data compiled specifically for the research, enabling us to develop concepts to connect reasons as temporary assumptions for use as guidelines to interview the main informants. We interviewed the informants to collect data alternating with adjusting the assumptions until the data and theoretical saturations were reached (Creswell, 1998). For example, if redundant responses with no new issues were provided, we stopped collecting data and proceeded to theoretical generalisation or theoretical explanation to reach the theoretical conclusion of the factors for assessing wellness tourism destination competitiveness.

Source of Research and the Selection of Informant

For the qualitative research, this study selected samples using the theoretical sampling method based on the principle that the main informants were appropriate and consistent with the research objectives (Strauss and Corbi, 1998). In other words, we collected data from experts in the wellness tourism clusters using the purposive sampling method based on the research objectives. The data were from educational institutions/professional associations/institutes, public sectors driving and supporting wellness tourism promotion policies, supporting associations/agencies, full-service tourism, healthcare services with at least three years of experience in wellness tourism management and Thai and international wellness tourists travelling to a wellness tourism destination in the past year.

Research tools

This study included three research instruments: the researcher, interview guide and data recording field tools.

1) The researcher was considered an important instrument in data collection. The researcher selected the main informants and collected and presented data; therefore, the researcher was the best interview instrument, must possess knowledge of the research topic, could form questions, listen and build relationships with the informants and have theoretical sensitivity. The researcher prepared by studying documents, concepts, theories and research related to assessing wellness tourism destination competitiveness before preparing the interview guide developed from the basic research framework.

2) Interview guide is a question guideline for an in-depth interview with the characteristics of a semi-structured interview. The main informants were experts in the wellness tourism enterprise network who could respond with as much detail as they wanted. The researcher used question guidelines about assessing wellness tourism destination competitiveness as an interview guide, which covered the research objectives and other related issues. From the components and indicators of the assessment derived from a systematic review, the questions were divided into question guidelines for basic information of the main informants and open questions about assessing wellness tourism destination competitiveness from the interviewees' perspectives. The accuracy and appropriateness of the interview questions were checked using a triangulation design from three experts and scholars in the field of wellness tourism. This approach ensured content completeness and accuracy.

Field notes were collected from the online interviews for data analysis. These details included the interviewees' information, particulars of answers and opinions, observations like gestures, facial expressions, tone, personality, actions and the atmosphere during the interviews. The interview recordings were transcribed and the transcriptions were used with the field notes to review the interviews and eliminate data errors.

Collecting data

The researcher coordinated with different agencies and informants in the wellness tourism enterprise networks for data collection. The research objectives, data application and privacy policy were explained to the informants so they knew about the research objectives and cooperated with the researcher. Experts in the wellness tourism enterprise network were interviewed. After the interview, the interviewees were asked to provide recommendations for additional participants, who were then contacted for later interviews. Invitation letters were sent to the participants to schedule the date and time for the interview along with the interview guide for consideration.

At the beginning of the interview, the researcher introduced himself and explained the research objectives and the estimated interview duration. The researcher then asked permission to record a video clip of the interview using the Zoom meeting application; the informants could turn off their cameras if they did not want to be recorded or did not want the interview to be transcribed. The interview was conducted using the interview guide and commenced by establishing the informant's basic information, followed by questions about types, processes, criteria, decision guidelines and problems and challenges of assessing wellness tourism destination competitiveness.

The process was repeated with the participants until there were no further questions. Data saturation was reached after interview 13. The interviews then ended. Key issues and observations of the interviewees' behaviours and gestures were noted and the results were reviewed and relayed to the participants. Data were collected between October 2021 and November 2021 and interview duration was between 27.39 and 101.50 minutes, with an average of 64.61 minutes.

Coding and data analysis

The data were analysed using content analysis and thematic analysis based on the concept proposed by Terry et al. (2017). Nvivo 12 software was employed for data management using an inductive approach, thematic coding and weight. The details are as follows.

1) The content was examined using word-by-word transcription and repeated listenings to establish correct details from the interviews. Content and thematic analyses were performed by categorising word groups based on the indicators and components. These included analysing data obtained later from in-depth analysis for improvement, adjustments and addition of indicators and components until indicators with the same directions of story and issue could be grouped.

2) The sample groups were categorised based on the interviewees' characteristics, i.e. the categorisation of business clusters.

3) The data connection pattern was obtained by analysing the connection between the data characteristics divided by groups and the data content divided by indicators and components. The data connection was analysed for similarities and differences to compare and count the word frequency distribution from the interviewee in each data connection pattern.

4) The data connection was divided by indicators and components to synthesise and conclude patterns and count word frequency distribution mentioned by the interviewee in each category.

5) Weight of factors predicted to affect the assessment of wellness tourism destination competitiveness was analysed using quantitative data and conditioning factor analysis from the qualitative data. NVivo 12 software programme was employed to analyse text quantitatively. The data were categorised and coded by the researcher.

6) Indicators and components analysed by NVivo 12 software programme were concluded as connection patterns and developed as a model for assessing wellness tourism destination competitiveness.

Reliability assessment of the research

The researcher's reliability assessment criteria included credibility requirements prepared using qualitative research methodology, documents, textbooks and research related to assessing wellness tourism destination competitiveness. The researcher confirmed the data by examining the codes provided and discussing the rationale for coding with the research team. The researcher then brought the preliminary conclusion from the data analysis to three experts to verify their accuracy. The second criterion was transferability, in which the researcher described the participants' detailed characteristics for application to studies in other contexts. The third and final criterion was dependability on other criteria, in which the researcher described the research methodology to the participants, starting from data collection, data analysis and research conclusion. The goal was to help readers understand and examine the study; Figure 2 illustrates this process.

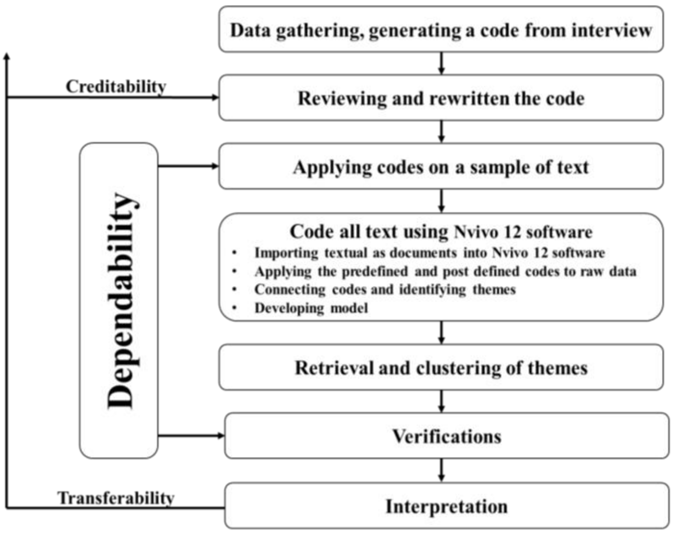

Figure 2. Research reliability assessment process
(Source: Developed by the authors)

RESULTS AND DISCUSSIONS

Results

Participants' characteristics

The participants in the present study included three representatives from the public sector driving and supporting wellness tourism, five representatives from educational institutions/professional associations/institutes, three representatives from full-service tourism and healthcare service enterprises and two wellness travellers and tourists. There were 13 participants, including 9 female and 4 male participants. They had experience working in or relating to wellness tourism between 5 and 40 years, with an average of 19.38 years. Most participants graduated with a bachelor's degree and were employed as directors, assistant professors in education or research institutes and owners of wellness tourism businesses, or they were wellness travellers and tourists. Table 1 presents the details.

Table 1. Informants' sociodemographic characteristics (Source: Analysed by the authors)

Cluster	Gender	Experience (Year)	Education	Position	Duration (Minutes)
Public agencies driving and supporting wellness tourism	female	33	Bachelor's degree	Director	48.05
	female	29	Master's degree	Director	51.49
	female	13	Bachelor's degree	Director	72.10
Educational institutions/ professional associations/institutes	Female	27	Doctoral degree	Assistant Professor	27.39
	Male	9	Doctoral degree	Assistant Professor	96.45
	Female	5	Doctoral degree	Ph.D. lecturer	48.45
	Female	16	Doctoral degree	Ph.D. lecturer	76.27
	Male	22	Doctoral degree	Assistant Professor	49.28
Full-service travelling and wellness service entrepreneurs	Male	25	Bachelor of Medicine	Wellness tourism business owner	68.16
	Female	22	Bachelor's degree	Wellness tourism and spa business owner	101.50
	Male	40	Master's degree	Wellness tourism business owner	95.03
Wellness travelers	Female	5	Master's degree	Wellness traveler	48.52
	Female	6	Master's degree	Wellness traveler	57.22

Definition of key themes

The data analysis from the thematic analysis revealed themes for assessing wellness tourism destination competitiveness. These included 1) the environment of the destination, 2) policies of the area which facilitated travelling and wellness tourism, 3) infrastructure and capability to support wellness tourism, 4) human-made resources and wellness tourism culture, 5) strategies and structure of healthcare services, 6) potential for developing innovation and 7) collaboration for collective strength and proactive marketing. The following subsection presents the details.

Theme 1: **The environment of the destination**

The participants reported that a destination should facilitate development, improvement or changes and provide local appeal to attract wellness tourists. Additionally, residents must have a good quality of life and businesses related to travelling and tourism should be easy to establish. The location should be appropriate, with readily available educational institutions. Furthermore, the political and administrative sectors should be transparent, with policies promoting investment and police stations, hospitals and healthcare services provided should cover all areas. The transportation was family, kid and disability friendly. Healthcare staff and equipment are expected to be hygienic and certified by related agencies and local people should be able and willing to communicate fluently in foreign languages. Skilled staff members should be available, along with knowledge about travelling and tourism provided by educational institutions. Suitable areas should have service-minded people and ICT infrastructures should be provided. Communication facilitating travelling and tourism activities should be supported by analogue and wireless systems supporting mobile devices, as shown in the excerpt below.

'...For the academic part, educational institutions should be able to do this. These institutions should be bases for wellness destinations to rely on. For example, Chula or Silpakorn are strong with design institutes, so let them design about wellness. Rajabhats already worked on tourism and travelling and ancient Thai medicine, so they should expand their businesses and build permanent connections abroad. Now, my hot spring club has connections with those in all areas of Japan, with Japanese onsen associations in Osaka and Kyoto and with 18 countries in Europe. I joined a meeting and they wanted to be our sister city. They want to have a connection with our association and country, but we can do nothing because we cannot hold any conventions because Europeans do not think we are democratic. We are not that interested in this. This issue is probably taken rather superficially. I feel sorry that we never get deeper about this. So, I think institutions and departments should be hosts for this and ask for budget, be a foundation and make it continuous'.(Key informant from the full-service and wellness tourism enterprise group No. 3)

Theme 2: **Policy of the area and strategies facilitating travelling and wellness tourism**

The participants reported that for a destination to attract wellness tourists, it should be ready in terms of travelling and tourism policy and tourist attractions that facilitate the development, improvement and changes; it should also provide local appeal. Furthermore, travelling and tourism policies with international standards should be emphasised. Examples were visa policies to promote tourism and laws and regulations to protect the environment with support from public agencies in the area. International meetings should also be organised with agencies or associations and travel expenses should be specified. There should also be a tax incentive policy and the ability to use different currencies for financial transactions. Moreover, importance should be placed on environmental sustainability by organising activities for tourist participation to maintain the cleanliness of the area. Waste collection, waste management from travelling and strict compliance with environmental regulations of businesses, entrepreneurs and other related agencies should also be focused on, as presented in the excerpt below.

In 2016, the spa law was implemented. It could be considered an upward trend because, in the past, there were no clear laws. We were in the special business group and the image was that we were like massage parlours. After there were clearer laws and regulations and the medical hub policy specialising in healthcare, public and private organisations supported us. When the law is clearer, you can see that massage and spa businesses can be started more easily but with high competitiveness. When the competition is high, if you could not make it sustainable, you could not survive. We can see that there are a lot of businesses that are open and closed. So, there should be clear regulations. Regulations are good, but when put into practice, it is difficult. For example, being a service provider in the healthcare business, such as being a therapist, can you believe it? The course fee is very expensive. So, there are some places which say that this is business, so we will pay for the course and you will come back and work for me. But after receiving the certificate, they do not stay with the organisation but work for others. So, there are regulations, but the implementation is not effective. (Key informant from educational institutions/professional associations/institutes No. 3)

Theme 3: **Infrastructure and capability to support wellness tourism**

The participants reported that for a destination to attract wellness tourists, it should be ready in terms of travelling and tourism policy and tourist attractions that facilitate the development, improvement and changes; it should also provide local appeal and transportation infrastructure to connect with public transport and support international connections. The transportation networks between cities and rural areas should be high-quality and cover all areas. Road, rail and air transport should be convenient and easily accessible. Tourist centres should be established to provide information about transporting and travelling in the area; they should be easily recognisable and ready to help and facilitate tourists. Adequate facilities should also be provided for money exchange services. Adequate, high-quality and various accommodations and facilities should also be ready to support travellers. Various food and beverages should be served with high-quality and local identity and should be seasonal and healthy. Furthermore, the area should be able to hold recreational and entertainment activities in line with the local identity, for example, local fairs, events and sports events with local themes. The excerpt below provides additional details.

'I need to tell the researcher that this is my own personal opinion. It might be different from others. I don't think that the most civilised or comfortable place was the destination for wellness tourism. I try to take into account different contexts. Sometimes we talk about the structure. Some places are very difficult to travel to, but people are willing to cross the water to the islands to visit that place, whereas some places are already in the cities. Some issues are difficult to talk about because it is the structural analysis of the country. Thailand and tourism are macro destinations covering a very wide picture. In Thailand, some provinces are very popular and contain many hidden wellness destinations, with some as stand-alone places. If we think about the northern region, we might think about one, two or three places, but there are many places in the southern area. These, for us, become a limitation. Our country is a macro destination. In terms of tourism, there are a variety of tourist attractions, but they are far apart and difficult to connect. So, when we talk about structure, I would ask first about travelling and transportation accessibility. I think if we were to be serious, the transportation might not have to be very comfortable but should be easily accessible. The second point about structure is the signs; there should be details telling how each point is connected. We already have cars and signs, so I would cut the point of transportation quality off. I believe this is difficult to say, so I would skip this first because it is very difficult to develop. In the end, we would come back to the preparation to support tourists. You must have good infrastructure. Flowing water and bright light are the first things. Telephone signals should support a certain number of people. This is a tourist attraction or destination. You must prepare the basic infrastructure to serve this'. (Key informant from educational institutions/professional associations/institutes No. 2).

Theme 4: **Human-made resources and culture for wellness tourism**

The participants reported that for a destination to attract wellness tourists, it should be ready in terms of wellness tourism and tourist attractions that facilitate the development, improvement and changes; it should also provide local appeal, beautiful nature with biodiversity, culture and local knowledge and resources to support human-made wellness tourism. These included abundant natural resources to support wellness tourism, such as hot springs, rivers and canals. There should also be outstanding history, culture, buildings, local knowledge, facilities and resources supporting the development of tourist attractions or routes. New activities should be held to respond to wellness tourists' needs with businesses relating to wellness tourism, such as wellness hotels, thalassotherapy centres, yoga centres, sporting facilities, spas and wellness centres and excellent recreation facilities. These expectations are illustrated in the excerpt below.

'For tourism in the area of my responsibility, we are ready in terms of culture, natural tourist attractions and art and culture. This could be therapy for the tourists and make them feel that, by coming to Chiang Rai, they are healthier. Some tourists come for treatment. They stay in hospitals and get treatment. In their free time, they might go for therapy and travel to different places in Chiang Rai for better health. About herbal food some communities offer herbal food to tourists. These places are also beautiful and attractive to tourists. They are impressed and have no complaints. Now, there is an ancient Lanna medical massage offered. There are local knowledge learning centres where tourists could pay a visit when they have pains and aches. It is Lanna tapping line or hammer massage using hammer tapping on the body for relaxation and treatment. The locals gather as a group to treat patients. There are also therapists who use sesame oil, step on the tail, press with hot water and step on the body for relaxation. They do this quite well. So, we have resources or local identity which we can choose and use for developing new things and creating many new wellness products'. (Key informant from the government agency driving and supporting wellness tourism No. 2).

Theme 5: **Strategies and structure for health-promoted services**

The participants reported that for a destination to attract wellness tourists, it should be ready in terms of strategic planning to develop and improve wellness tourism and tourist attraction and present health-promoted treatment activities to attract wellness tourists. Furthermore, importance should be placed on delivering high-quality treatment services by experts, as modern technology and equipment can provide a satisfying experience for customers. Services in compliance with international medical and healthcare standards and with wellness tourism awards and certifications should be developed. Products, services, activities and other components of wellness tourism should also be connected with tourists who travel to the destination. Furthermore, the destination must be ready with areas and tourist attractions which could support all wellness activities, such as nutrition therapy, exercise, meditation, hydrotherapy, mental rejuvenation and physical and aesthetic treatment, as presented in the excerpt below.

'We are ready whether it be culture, natural tourist attractions and art and culture. These could be therapy for tourists to make them feel that when they visit Chiang Rai, they are healthier. This is what we call mind and soul therapy. They could learn about the lifestyle there and about homestay, which is interesting for some of them. There are also cafés and farm stays where local and chemical-free food is served. This is the main selling point to invite tourists to the area. Some set up a camp and learn about different things. On the Ruenrom farm, there are DIY activities where they can dye cloths, make salted eggs, visit vegetable farms and learn how to reduce energy use. These tourists are interested in these, especially in winter. They would come to relax and learn about organic farming and join activities with the Ruenrom farm. Some groups are specifically interested in activities on farms. If they receive prizes, we will especially support them because, at least, we praise those who do good for tourism. We need to think whether the entrepreneurs have ever been to that point or received any awards. These serve as a guarantee for the government sector, which deals with this directly. In addition, there are also activities in the temples, medication and catering. We placed importance on these things. How can the hotels connect to one another to support the tourists, for example, when COVID-19 cases are found, or how can we transfer the tourists to the hospital and help them fast enough? This is to build trust'.

'...for example the Pangha community in the Maesai district, there are facial spas and masks. It is a tourist community with homestays and tourist attractions in the area. In the Pangha community, there is a place which is popular among tourists called Khun Jindarat, whose business is mulberry paper making. Tourists can make mulberry paper and mulberry paper bags. There are also DIY activities for tourists to draw pictures on mulberry paper and decorate it with flowers. There is also a part about aesthetic wellness with products named CO. Extracted honey is used in cosmetic products. Tourists can do facial and honey facial masks. This is another community working in this area and succeeding. They continually develop from two to three beds. The main thing is the service mind and the customers are always impressed every time they visit. There are activities for tourists which are enjoyable and fun. Meditation activities are also available at the

Chuentawan Farm by V. Vajiramedhi. Mind and meditation practices and how to find happiness in life are taught by V. Vajiramedhi. The place is well-decorated and there are his teachings displayed on every corner. There are also courses offered. Tourists enjoy going there to pray, listen to his teachings and practice walking meditation. He is still running the place. This is also interesting*'.* (Key informant from the government agency driving and supporting wellness tourism No. 2)

Theme 6: **Potential for developing innovation**

The participants reported that for a destination to attract wellness tourists, it should be ready to create or present new health-promoted products or services that appeal to wellness tourists. Furthermore, knowledge for developing new products or services and activities and components of wellness tourism which could respond to the customers' needs is required. Staff should be ready to develop new products and services, have expertise in wellness tourism and creativity and have the passion to develop new products or services. They should be able to apply and adopt new technology currently on trend or emerging to improve their ability to create or present new wellness products or services that differ from competitors. Preparation and new methods for solving problems or complaints regarding the delivery of health-promoted services should be conducted regularly and continuously. These methods also include the ability to utilise resources in the community, local knowledge and distinctive local identity to develop selling points and add value to wellness products or services, as illustrated in the excerpt below.

'...Actually, in terms of health, local materials found in the area could be used and adapted so that they can be used in the local area and become its identity. This is better than imitating others*'.*

(Key informant from the government agency driving and supporting wellness tourism No. 1)

'...We say there are many styles of wellness tourism. For Thai local knowledge, we have Thai medicine scholars, which is good. So, if local people have the know-how or knowledge which has been developed from the past, as in the southern part I used to visit, there are Manorah massages using a stick. That is very good*'.*

(Key informant from education institutions/professional associations/institutions No. 1)

'...The most important thing may be local knowledge in the area. It might be considered old, but if you look at the old things and add in creativity, they will become new things. Therefore, for the local knowledge in the area, as I said, each area has different healthcare methods. So, the more you know about your roots, the more you can develop your business. For the local knowledge we have today, we can use the methods people used to do*'.*

(Key informant from educational institutions/professional associations/institutes No. 3*)*

Theme 7: **Cooperation for collaborative strengths and proactive marketing**

The informants reported that for a destination to be ready in terms of collaborative strengths and proactive marketing, it should specify a clear position and targeted customers to attract wellness tourists. Furthermore, it should emphasise establishing business networks or groups of people who are business allies in the form of clusters to work collaboratively. These could be cooperative endeavours between public and private agencies or collaborations with wellness tourism or medical agencies. Local communities should have the opportunities or receive support to participate in planning to develop wellness tourism. Moreover, importance should be placed on marketing wellness products and services in the clusters by creating and presenting the destination branding to be more attractive and memorable than competitors. Regional, national and international activities, events and marketing campaigns promoting wellness tourism in which the community could participate and help promote local employment should be organised. Connections between advertisements and publications and online wellness social media should be encouraged. Furthermore, technology should be used to simulate the surroundings of the actual places for the target groups, customers and potential customers to experience, understand and visualise the destination. Shared values should be formed and the tourists can generate content, such as via online reviews and satisfaction scoring through online channels, as illustrated in the excerpt below.

'...The entrepreneurs themselves and collaboration between public and private sectors are important for matters related to the environment. If there is a provincial policy to promote wellness destinations with plans and strategies to support this directly, they should be integrated with those of the private sector who offer products related to wellness tourism and let them develop their staff and facilities, educate them and be a good host. As for the entrepreneurs, they could respond to the customers*'* needs. Collaboration between public and private sectors; for example, the collaboration between wellness hospitals is something that should be done. There are many agencies that help us develop the community. They develop products that the community can sell. These include the provincial office of commercial affairs and the provincial administration office. I tell them that there is this culture. It is like our network. For the cultural aspect, they join cultural competitions. Whether it be going to the temples or meditation, they are culture related. For all these three to four things that I mentioned, if they collaborate, develop, integrate and exchange information or talk to one another and decide which items could be publicised. I will pick that up and publicise it. Every sector is related*'.*

(Key informant from the public sector driving and supporting wellness tourist No. 2)

'...It is better to have collaborative marketing. We do collaborative marketing in the area that I am responsible for. Wellness tourism in this area is not that outstanding, but we have different interesting spots. We have a salt spa here and healthy food here. This is a tourist attraction in the community with herbal plants and cultural tourism. So, there are spots here and there. If you ask about the design or recommendation to sell to the tourists, we will demonstrate that these are possible routes. If you visit this place, you can try two massages and two spas. Another recommendation is about alliance and network. If you ask about online learning, I will say it is possible. Online PR is also recommended, or it can be publicised to a group of tourists or an elderly family group. This is a network connecting with other tourist attractions. For example, the Abhaibhubejhr brand is already very strong, but wellness tourism brands are not. There are very few wellness tourism spots in an area based on statistics, so this customer group is not that significant when compared to adventure tourism or seminar tourism or paying respect to the Buddha, but it has increased and expanded well. More wellness tourism products are used'. (Key informant from the public sector driving and supporting wellness tourism No. 3)

The participants' analysis results of themes and frequency of words related to the components of assessing wellness tourism destination competitiveness are depicted in a hierarchy chart (Figure 3). Figure 3 presents the main theme and frequency of words the informants mentioned or referenced using colours and areas in the pictures to reflect the hierarchy of importance and numbers of sayings regarding the assessment of wellness tourism destination competitiveness. The themes of cooperation for collaborative strengths and proactive marketing were mentioned and referenced most, with 178 references (brown). The environment of the destination followed at 176 references (blue), strategies and health-promoted structure at 175 References (green), the potential for developing innovation at 119 references (red area), human-made and cultural resources for wellness tourism (yellow) and infrastructure and ability to support wellness tourism (grey) at 114 references each and the area's policy and strategies to facilitate travelling and wellness tourism at 109 references (orange).

The content and themes were analysed to present the sub-themes. Using the hierarchy chart technique, they were developed as indicators for assessing wellness tourism destination competitiveness. The results from the analysis showed that 1) the theme of cooperation for collaborative strengths and proactive marketing consisted of nine sub-themes. Furthermore, 2) the destination's environment consisted of six sub-themes and 3) strategies and health-promoted structure consisted of eight sub-themes. Additionally, 4) potential for developing innovation consisted of five sub-themes, 5) human-made and culture resources for wellness tourism consisted of four sub-themes, 6) basic structure and ability support wellness tourism consisted of five sub-themes and 7) policies of the area and strategies to facilitate travelling and wellness tourism consisted of four sub-themes. Figure 4 illustrates these results.

Figure 3. The main themes of the overall components of assessing wellness tourism destination competitiveness via the Hierarchy chart technique (Source: Retrieved from NVivo 12 software)

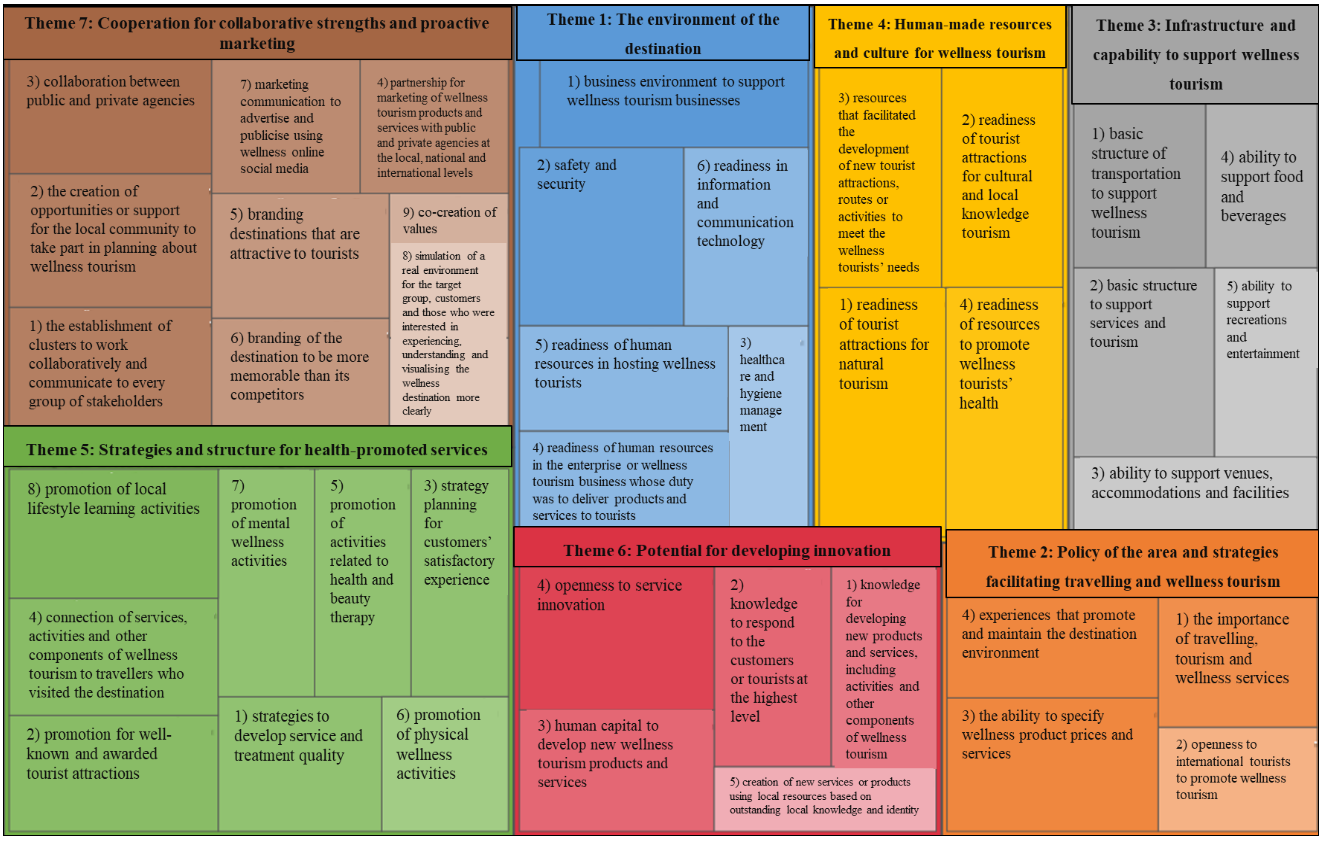

Figure 4. The main themes of the components for assessing wellness tourism destination competitiveness and sub-themes when analysed by hierarchy chart technique (Source: Retrieved from NVivo 12 software)

DISCUSSION

Results from the data analysis showed that participants most mentioned cooperation for collaborative strength and proactive marketing. These terms were followed by the environment of the destination, strategies and structure of health-promoted services, the potential for developing innovation, human-made resources and culture for wellness tourism, the basic structure and ability to support wellness tourism and policy of the area and strategies to facilitate travelling and wellness tourism respectively. These terms reflected the interviewees' perspectives; an area or tourist attraction aiming to be a wellness destination must be ready to cooperate for collaborative strengths and proactive marketing to identify and communicate to the target customers. This finding was in line with a study by Altinay and Kozak (2021), who found that collaborating with business partnerships in the destination or area to advertise safe and hygienic health-promoting services to tourists led to competitive advantages for the destination. Bogale and Wondirad (2019) and Petrović et al. (2018) indicated that collaboration to develop wellness tourism should include integrated cooperation among public agencies, the service, public and educational industry sectors and private agencies to enable collaboration for successful proactive marketing and to respond to the tourists' needs and satisfaction. Furthermore, Dias et al. (2021) pointed out that collaborative marketing promotion to communicate to the marketing target using clusters was a strategy that helped stimulate and attract tourists to decide to travel and relax in the area or destination. These findings also align with Goal 17 of the United Nations Sustainable Development Goals (SDGs) (United Nations, 2020), which focuses on the formation of partnerships to achieve the goals. Therefore, wellness tourism cluster stakeholders in tourist attraction areas must focus on improving wellness tourism governance, strengthen private/public partnerships and engage multiple stakeholders at international, national, regional and local levels. Implementation of these activities can better inform wellness tourism cluster stakeholders on how to achieve the sustainability objectives consistent with the SDGs.

Moreover, areas or tourist attractions that facilitate development, improvement and changes and the local area's appeal could encourage wellness tourists to visit. This finding was consistent with Akin et al. (2021), who found that the destination's overall image, the expertise of staff in tourism and services and business expertise in providing wellness tourism services were important factors in promoting the destination, thereby improving competitiveness. Altinay and Kozak (2021), Armis and Kanegae (2021), Ferreira and Perks (2020) and Woyo and Slabbert (2021) emphasised the importance of tourists' personal safety and hygienic healthcare services at the destination. Furthermore, Bogale and Wondirad (2019), Gajić et al. (2018), Mustafa et al. (2021), and Neto et al. (2020) found that an area or destination with educational institutions providing knowledge about wellness tourism administration and management, hospitals and businesses providing healthcare services, friendliness of the local people (Petrović et al., 2018; Woyo and Slabbert, 2021) and local telecommunications were important factors in attracting wellness tourists, which could improve the destination's competitiveness. These findings also align with Goal 4 of the SDGs, which focuses on quality education.

Thus, wellness tourism cluster stakeholders in tourist attraction areas must focus on human capital development, especially the skills of wellness tourism operators and the capabilities of trained personnel to meet customer needs. Experienced and knowledgeable staff will support wellness tourism across all sectors of the industry. The provision of wellness tourism quality education, with employment opportunities for youths, women and minority groups through in-house skill development training courses is essential to deliver wellness products and services to tourists. Goal 6 focuses on clean water and sanitation. Hence, wellness tourism cluster stakeholders in tourist attraction areas must focus on providing related infrastructure to achieve clean water access, security and pollution control technology. Goal 16 focuses on peace, justice and strong institutions. Wellness tourism cluster stakeholders in tourist attraction areas must focus on engaging local communities to foster tolerance and understanding between people of different cultures and ensure that the local people are ready to host wellness tourists. Implementation of these activities can better inform wellness tourism cluster stakeholders on how to achieve the sustainability objectives consistent with the SDGs.

An area or a tourist attraction operating as a wellness tourism destination must be ready for strategic planning to develop and improve wellness tourism services and present health-promoted activities to attract wellness tourists. This finding is in line with a study by Bogale and Wondirad (2019), who found that hydrotherapy, cooking and certified health-promoted services were important factors in promoting the tourists' satisfaction and revisit intent. Ferreira and Perks (2020), Gajić et al. (2018), Goffi and Cucculelli (2019), and Neto et al. (2020) suggested that the health-promoted quality of service and satisfactory experience of the tourists were essential, while Lee and Li (2019) proposed health-promoted therapy activities and healthy food. Moreover, Milićević et al. (2020) and Mustafa et al. (2021) demonstrated that various and high-quality health-promoted activities, i.e. spas and wellness activities, could help develop and improve wellness tourism. Endorsing health-promoting activities could also help attract wellness tourists to visit the attractions or areas.

These findings align with Goal 3 of the SDGs, which focuses on good health and well-being. Wellness tourism cluster stakeholders in tourist attraction areas must focus on establishing the public health infrastructure required for tourists that will also benefit local communities. Wellness tourism-related activities such as adventure sports, recreation and sightseeing will also promote the physical and mental health of the local community members. Goal 4 focuses on quality education. Wellness tourism cluster stakeholders in tourist attraction areas must also focus on increasing educational achievements to develop a skilled workforce through in-house skill development training courses to transfer knowledge and deliver quality service to ensure satisfactory tourist experiences. Implementation of these activities can better inform wellness tourism cluster stakeholders on how to achieve the sustainability objectives consistent with the SDGs.

Such wellness destinations had to prioritise developing and improving creative ability and presentation of new wellness products or services to promote the destination and attract wellness tourists to decide to visit those places. This result was in line with Altinay and Kozak (2021), who revealed the importance of technology adoption and digital service experience. The results were also consistent with a study by Bogale and Wondirad (2019), who demonstrated that increasing the capability and service quality of health-promoted businesses or organisations could help attract visitors. Moreover, Dias et al. (2021) and Rucci et al. (2021) reported that the creative ability and presentation of new services that could respond to the targeted customers' needs were crucial. Font et al. (2021) highlighted the importance of knowledge about services and improvement of quality for health-promoted services, the ability to adopt those to improve wellness services for tourists and the use of local resources to increase the economic value of wellness products and services to make them more outstanding (Goffi and Cucculelli, 2019). These findings align with Goal 1 of the SDGs, which focuses on the eradication of poverty, Goal 2, which focuses on the elimination of hunger and Goal 10, which focuses on reducing inequalities. Wellness tourism cluster stakeholders in tourist destinations must focus on engaging the local population to create jobs and income. Local resources can be developed into new wellness products or services to promote a more resilient agricultural sector. Goal 8 focuses on decent work and economic growth. Hence, wellness tourism cluster stakeholders in tourist destinations must focus on educating the local people with skills through lifelong learning to increase the productivity of wellness tourism and respond to the needs of the tourists at the highest level by creating novel wellness tourism product activities. Goal 9 focuses on industry, innovation and infrastructure. Therefore, wellness tourism cluster stakeholders in tourist destinations must focus on supporting community infrastructure development. Wellness products or services must be novel, sustainable, innovative and resource-efficient while reducing the carbon footprint. Implementation of these activities can better inform wellness tourism cluster stakeholders on how to achieve the sustainability objectives consistent with the SDGs.

The area or tourist attraction and its surroundings must be ready concerning natural resources, culture and unique local knowledge. Such areas should be outstanding and facilitate the development, improvement or changes pertaining to wellness tourism, including the local area's appeal, which could promote the destination to attract wellness tourists. This was consistent with studies by Akin et al. (2021), Armis and Kanegae (2021), Bogale and Wondirad (2019), Ferreira and Perks (2020), Mustafa et al. (2021) and Woyo and Slabbert (2021), who found an area with abundant natural resources, exquisite sceneries, human-made natural tourist attractions in harmony with the nature, outstanding architecture with unique local identity and variety of culture and tradition (Dos Anjos and Da Rosa, 2021; Goffi and Cucculelli, 2019; Hernández-Rojas et al., 2021; Wardana et al., 2019). Gajić et al. (2018) and Petrović et al. (2018) emphasised the preparation of adequate medical or wellness service facilities for tourists' needs, such as state-to-the-art equipment. Furthermore, various resources facilitating new styles of wellness tourism could promote development, improvement or changes in the area or tourist attraction, creating a competitive advantage and attracting more tourists.

These findings align with Goal 11 of the SDGs, which focuses on sustainable cities and communities. Hence, wellness tourism cluster stakeholders in tourist attraction areas must focus on regenerating and preserving cultural and natural heritage assets to promote wellness tourism and enhance the opportunities to live in safer and cleaner communities. Goal 15 focuses on life on land. Thus, wellness tourism cluster stakeholders in tourist attraction areas must focus on developing new routes or activities to meet the demands of wellness tourists, while also conserving and preserving biodiversity and generating revenue as an alternative livelihood for the local communities. Goal 8 focuses on decent work and economic growth. To fulfill this objective, wellness tourism cluster stakeholders in tourist attraction areas must focus on providing decent work opportunities by optimising natural resources, culture and unique local knowledge to facilitate new styles of wellness tourism. Implementation of these activities can better inform wellness tourism cluster stakeholders on how to achieve the sustainability objectives consistent with the SDGs.

Wellness destinations should be ready in terms of travelling infrastructure and facilities for tourists and should also serve various needs for services. These findings were consistent with studies by Akin et al. (2021), Armis and Kanegae (2021), Dos Anjos and Da Rosa (2021), Ferreira and Perks (2020), Martín-González et al. (2021), Milićević et al. (2020), Mustafa et al. (2021), Neto et al. (2020) and Petrović et al. (2018), who reported about various types of transportation infrastructure in the area or tourist attraction which connected and covered all areas. Armis and Kanegae (2021), Ferreira and Perks (2020), Goffi and Cucculelli (2019), Martín-González et al. (2021) and Mustafa et al. (2021) highlighted the importance of serving tourists in terms of accommodations. Moreover, Akin et al. (2021), Armis and Kanegae (2021), Bogale and Wondirad (2019), Milićević et al. (2020) and Neto et al. (2020) indicated the significance of news services, suggestions about wellness tourism and infrastructure facilities of the area and its surroundings through offline and online channels. Akin et al. (2021), Armis and Kanegae (2021), Bogale and Wondirad (2019), Goffi and Cucculelli (2019),

Milićević et al. (2020) and Neto et al. (2020) also reported that the variety of entertainment activities, such as nighttime activities, art exhibitions, films, special activities or events, sports events and readiness for food and drinks services could help attract tourists (Armis and Kanegae, 2021; Bogale and Wondirad, 2019; Ferreira and Perks, 2020; Goffi and Cucculelli, 2019; Mustafa et al., 2021; Woyo and Slabbert, 2021). The readiness of travel infrastructure and convenience for tourists could also help attract more wellness tourists. These findings align with Goal 3 of the SDGs, which focuses on good health and well-being and Goal 9, which focuses on industry, innovation and infrastructure.

Wellness tourism cluster stakeholders in tourist destination areas must, therefore, focus on health-related wellness tourism infrastructure, including facilities specifically devoted to health and well-being improvement such as health farms and spa resorts. These facilities should be accessible to local residents as well as tourists to promote activities such as adventure sports, recreation and local lifestyle learning. Goal 11 focuses on sustainable cities and communities. To achieve this goal, wellness tourism cluster stakeholders in tourist destination areas must focus on advanced wellness infrastructure and accessibility. Investment in green infrastructure will promote smarter and greener destinations for the enjoyment of residents and wellness tourists alike. Implementation of these activities can better inform wellness tourism cluster stakeholders on how to achieve the sustainability objectives consistent with the SDGs.

Moreover, wellness destinations must place importance on determining policies about travelling and tourism to facilitate travel, tourism and wellness services. These include creating environmentally friendly experiences at wellness destinations to attract wellness tourists. The results were in line with a study by Altinay and Kozak (2021), who reported on the promotion of wellness tourism policy in the area by the public and related supporting agencies. Akin et al. (2021), Dias et al. (2021) and Neto et al. (2020) found that openness to international tourists by facilitating visa application, customs clearance and expedited immigration process was critical. Financial institutions and currency exchange should also be facilitated and adequate for tourists (Bogale and Wondirad, 2019; Gajić et al., 2018; Mustafa et al., 2021). Furthermore, Akin et al. (2021), Armis and Kanegae (2021), Goffi and Cucculelli (2019), Milićević et al. (2020) and Neto et al. (2020) indicated the ability to specify multilevel and reasonable prices of wellness tourism products and services were important factors. Dos Anjos and Da Rosa (2021), Ferreira and Perks (2020), Gajić et al. (2018), Goffi and Cucculelli (2019), Liu et al. (2021), Martín-González et al. (2021), Mustafa et al. (2021) and Neto et al. (2020) showed that sustainable, environmentally friendly experiences could promote quality of life for people in the area were indicators of policies for attracting tourists. These findings align with Goal 7 of the SDGs, which focuses on affordable and clean energy.

Therefore, wellness tourism cluster stakeholders in tourist destination areas must promote investments in clean energy sources. This will reduce greenhouse gases, mitigate the effect of climate change and contribute to energy access for all. Goal 12 focuses on responsible consumption and production, while Goal 13 focuses on climate action. Wellness tourism cluster stakeholders in tourist destination areas must, therefore, adopt sustainable consumption and production modes. Green environmentally friendly wellness tourism activities such as eco wellness tourism will promote conservation and deliver socio-economic benefits. Wellness tourism cluster stakeholders in tourist destination areas must take the lead and adopt strategies that both promote and maintain the destination environment. Goal 8 focuses on decent work and economic growth. Consequently, wellness tourism cluster stakeholders in tourist destination areas must focus on setting policies that best facilitate travelling, tourism and services to promote wellness tourism and offer specific wellness products at competitive prices. Implementation of these activities can better inform wellness tourism cluster stakeholders on how to achieve the sustainability objectives consistent with the SDGs.

CONCLUSIONS

In conclusion, the framework for assessing wellness tourism destination competitiveness from the data analysis included 1) the destination's environment, 2) the area's policy and strategy to facilitate the travelling and wellness tourism, 3) the basic structure and capability to support wellness tourism, 4) human-made resources and culture of wellness tourism, 5) strategy and structure of health-promoted services, 6) potential for developing innovation and 7) cooperation for collaborative strengths and proactive marketing. Conversely, results from the data analysis and themes for presenting the sub-themes were developed as indicators for assessing wellness tourism destination competitiveness using the hierarchy chart technique. It was found that **the theme of the environment of the destination** comprised six sub-themes: 1) business environment to support wellness tourism businesses; 2) safety and security; 3) healthcare and hygiene management; 4) readiness of human resources in the enterprise or wellness tourism business whose duty was to deliver products and services to tourists; 5) readiness of human resources in hosting wellness tourists; and 6) readiness in information and communication technology. **The theme of the policy of the area and strategy which facilitated travelling and wellness tourism** comprised four sub-themes: 1) the importance of travelling, tourism and wellness services; 2) openness to international tourists to promote wellness tourism; 3) the ability to specify wellness product prices and services; and 4) experiences that promote and maintain the destination environment.

The theme of infrastructure and capability to support wellness tourism included five sub-themes: 1) basic structure of transportation to support wellness tourism; 2) basic structure to support services and tourism; 3) ability to support venues, accommodations and facilities; 4) ability to support food and beverages; and 5) ability to support recreations and entertainment. **The theme of human-made resources and culture of wellness tourism** consisted of four sub-themes: 1) readiness of tourist attractions for natural tourism; 2) readiness of tourist attractions for cultural and local knowledge tourism; 3) resources that facilitated the development of new tourist attractions, routes or activities to meet the wellness tourists' needs; and 4) readiness of resources to promote wellness tourists' health. **The theme of strategy and structure for healthcare services** comprised eight sub-themes: 1) strategies to develop service and treatment quality; 2) promotion for well-known and awarded tourist attractions; 3) strategy planning for customers' satisfactory experience; 4) connection of services, activities and other components of wellness tourism to travellers who visited the destination; 5) promotion of activities related to health and beauty therapy; 6) promotion of physical wellness activities; 7) promotion of mental wellness activities; and 8) promotion of local lifestyle learning activities.

The theme of potential for developing innovation included five sub-themes: 1) knowledge for developing new products and services, including activities and other components of wellness tourism; 2) knowledge to respond to the customers or tourists at the highest level; 3) human capital to develop new wellness tourism products and services; 4) openness to service innovation; and 5) creation of new services or products using local resources based on outstanding local knowledge and identity. **The theme of cooperation to build collaborative strengths and proactive marketing** included nine sub-themes: 1) the establishment of clusters to work collaboratively and communicate to every group of stakeholders; 2) the creation of opportunities or support for the local community to take part in planning about wellness tourism; 3) collaboration between public and private agencies; 4) partnership for marketing of wellness tourism products and services with public and private agencies at the local, national and international levels; 5) branding destinations that are attractive to tourists; 6) branding of the destination to be more memorable than its competitors; 7) marketing communication to advertise and publicise using wellness online social media; 8) simulation of a real environment for the target group, customers and those who were interested in experiencing, understanding and visualising the wellness destination more clearly; and 9) co-creation of values. This information is summarised in Figure 5.

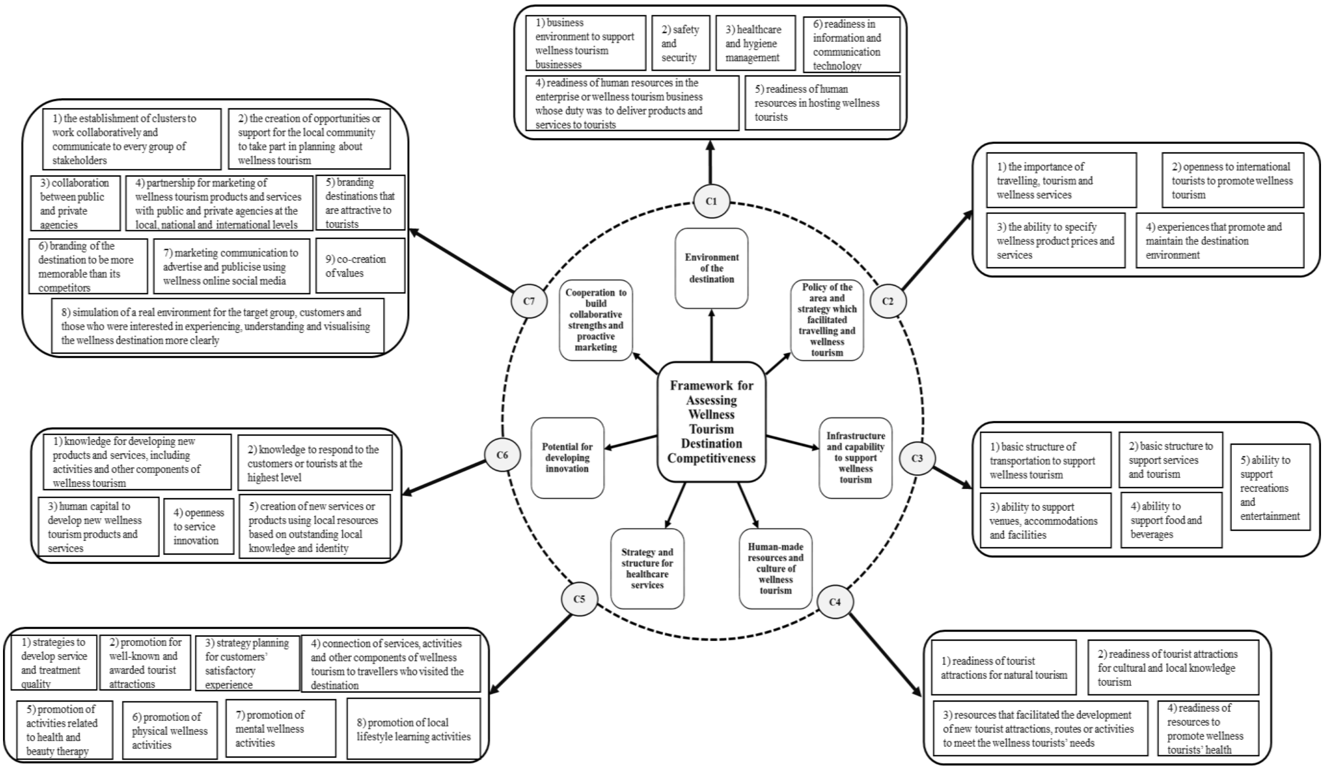

Figure 5. The proposed framework for assessing wellness tourism destination competitiveness (Source: Developed by the authors)

IMPLICATIONS AND RECOMMENDATIONS

Implications

This research provided important components and indicators that could be applied to extend the results of the present study and develop knowledge to increase wellness tourism destination competitiveness. It could also inform about the components and indicators in developing wellness tourism destination competitiveness which would be beneficial for suggestions to stakeholders in Thailand's wellness tourism clusters, which were the healthcare industry, tourism industry and public and private agencies. The study indicates which factors are considered important for improving wellness tourism destination competitiveness to upgrade the destination, compete internationally, policies of the area and strategies facilitating travelling and wellness tourism, infrastructure and ability to support wellness tourism, human-made resources and culture for wellness tourism, health-promoted strategies and structure, the potential to develop innovation and collaboration for collective strengths. These might be effectively applied to other similar projects.

Recommendation for future research

This research developed a basic research framework from a systemic review of related previous studies concerning the components of assessing wellness tourism destination competitiveness. This study also conducted qualitative research to develop indicators using grounded theory methodology from interviews with participants related to the wellness tourism clusters in Thailand. Future research might employ quantitative research to confirm the model to assess wellness tourism destination competitiveness. The data from this study could also be used to develop assessment criteria weight for assessing wellness tourism destination competitiveness or as a support system for decision-making through a mobile or web-based application. These could be used to administer, compare and specify strategies to develop the competitiveness of the wellness tourism destination. This approach could facilitate and support the decision and uplevel sustainable competitiveness ability of entrepreneurs in the clusters, public and private agencies and stakeholders related to the wellness tourism industry in the future.

Author Contributions: Conceptualisation, T.P.; methodology, T.P.; validation, T.P.; formal analysis, T.P.; investigation, T.P.; writing—original draft preparation, T.P.; writing—review and editing, A.C. and T.P.; visualisation, T.P.; supervision, P.A., A.C. and K.P. All authors have read and agreed to the final version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki, the Belmont Report, CIOMS guidelines and the principle of the international conference on harmonisation-good clinical practice (ICH-GCP) and approved by the Research Ethics Review Committee for Research Involving Human Subjects: The Second Allied Academic Group in Social Sciences, Humanities and Fine and Applied Arts at Chulalongkorn University with COA No. 314/2564.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data are not publicly available, as respondents were guaranteed confidentiality and anonymity in this study.

Acknowledgments: The data are not publicly available, as respondents were guaranteed confidentiality and anonymity in this study.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 11.05.2023 Revised: 14.07.2023 Accepted: 18.08.2023 Available online: 18.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.988-997
DOI 10.30892/gtg.49314-1098

EVALUATION OF THE ATTRACTIVENESS OF TOURISM IN ALGERIA: MULTICRITERIA METHOD APPLIED TO AREAS OF TOURIST EXPANSION

Imene LAIFA*
Department of Architecture, Faculty of Earth Sciences,
Badji Mokhtar University, Annaba, Algeria, e-mail: imen.laifa@univ-constantine3.dz

Nassira BENHASSINE
Department of Architecture, Faculty of Architecture and Urban Planning,
Constantine University 3, Constantine, Algeria, e-mail : nassira.benhassine@univ-constantine3.dz

Citation: Laifa, I., & Benhassine, N. (2023). EVALUATION OF THE ATTRACTIVENESS OF TOURISM IN ALGERIA: MULTICRITERIA METHOD APPLIED TO AREAS OF TOURIST EXPANSION. *GeoJournal of Tourism and Geosites*, 49(3), 988–997. https://doi.org/10.30892/gtg.49314-1098

Abstract: Tourist attractiveness is the ability of a destination to generate towards itself tourist flows. Its evaluation is crucial for the success of tourism development. The objective of this research is to develop a model for evaluating the attractiveness of tourist destinations to assess the attractiveness of the Larbi Ben M'Hidi tourist expansion area in Skikda, Algeria. The applied method uses both a qualitative diagnosis of the destination's tourist resources and a quantitative visitor questionnaire survey to inventory, consolidate and evaluate the existing attraction portfolio from a supply and demand perspective. The results show that the landscape and climate are the elements of attraction. They identified the factors perceived as most important for the destination, its strengths and the weak indicators on which to act. Differences in evaluation have emerged between demand and supply, which shows that there are differences between the subjective and objective measure of tourist attractiveness. The proposed framework complements the body of theoretical knowledge on assessing the attractiveness of tourist destinations. In addition, by assessing and matching the differences between the reality of a destination and the perception of a visitor, they can help tourist destinations and their managers guide the development of their tourist areas.

Key words: tourist attractiveness, tourist expansion area, multi-criteria method, supply, demand, Skikda

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INTRODUCTION

Tourist attractiveness is defined as the ability to attract and satisfy potential tourists (Medina-Muñoz and Medina Muñoz, 2014). This capability is enhanced by providing a range of destination attributes (Lee and King, 2019). In this sense, it has the particular characteristics of a destination that make it attractive to tourists (Cho, 2008). The attractiveness of a tourist destination also reflects the feelings, opinions and perceptions of tourists about the destination's perceived ability to satisfy a vacation need (Hu and Ritchie, 1993; Mayo and Jarvis, 1981). Researchers have found that it depends on the availability of resources and the perceived value of those resources (Edward and George, 2008; Formica and Uysal, 2006). In addition, attracting tourists and meeting their demand is an important economic challenge and tourist destinations are now under extreme pressure to rejuvenate and strengthen their attractiveness. Competitive pressure forces international, national, state and local governments to re-evaluate existing tourism resources and take advantage of them to reposition and attract more visitors (Formica and Uysal, 2006). In this context, Algeria has low tourist flows despite a recognized tourist potential. With the aim of reversing this trend and moving Algeria from an issuing country to a receiving country of tourists, the Algerian state has defined five actions called the five dynamics of putting Algeria in tourism by 2030. This is the biggest challenge facing the Algerian economy today (Rahal et al., 2020). These dynamics are identified in the National Tourism Development Plan (SDAT), which focuses on the establishment of tourist expansion zones (T.E.Z "ZET"). The Tourist Expansion Zone is "a region or area of territory enjoying natural, cultural, human and creative qualities or peculiarities conducive to tourism, suitable for the establishment or development of a tourism infrastructure that can be exploited for the development of at least one or more profitable forms of tourism" (JORA n°11, 19 February 2003). Two instruments govern the ZET, the local Tourism Development Master Plan (SDATW) and the Tourist Development Plan (PAT). Since 2014, Algeria has 205 Zones declared and classified, massively located on the coast.

It is clear that the issue of tourist expansion zones has been debated. Many research projects have attempted to set out the rules for the promotion, management and development of these areas, as well as the measures implemented to control tourist land (Ghodbani et al., 2016; Mebirouk and Hacini-Chikh, 2019; Metlef, 2019; Ould Taleb and Tessa, 2020; Yahiaoui and Bouhdid, 2015). To contribute to this debate, we will focus on the ZETs of the wilaya of Skikda. A Mediterranean wilaya located in the east of Algeria. With its 250 km coastline, it holds important and diversified tourist resources and potential. These riches are concentrated in eleven (11) ZETs all coastal. They occupy an area of 2082 ha and

* Corresponding author

are a major asset for tourism development. Despite its potential, the wilaya of Skikda is far from being a tourist destination that can accommodate a large influx of tourists. Based on the results of research carried out on tourism in Skikda (Meghzili, 2015), the various tourist destinations called tourist expansion zones have several handicaps that hinder the development of Skikda’s tourist attractiveness. Hotel infrastructure is still inadequate and of poor quality. The transportation system is failing, and public spaces need to be requalified. The prices of the stays and the quality of the services do not respond to a certain clientele preferring to abstain and choose another destination, despite the improvement of the security situation (moreover, Algerians ignore these infrastructures and prefer to stay in Tunisia). Additionally, the SDATW of Skikda and the PAT are characterized by traditional approaches that do not reflect the challenges of national tourism policy. Thus, we note the lack of measurement tools to assess the attractiveness of tourist expansion zones.

The main question that this research will try to answer is how to develop the tourist attractiveness in the tourist expansion zones of the wilaya of Skikda? The hypothesis is focused on the construction of a tool to assess the attractiveness of tourist expansion areas that takes into account both supply and demand, this will help managers and decision makers to consider possible actions to improve their attractiveness. This research document is therefore an attempt to establish a model for assessing the attractiveness of Tourist Expansion Zones from the point of view of supply and demand, based on a grid of criteria and indicators that are scientifically valid and capable of helping decision-makers and managers of these destinations to implement the tourism strategy for 2030. It is supposed to assess and match the differences between destination reality and visitor perception. It is worth mentioning that the proposed framework is being tested in the context of the ZET of Larbi Ben M'Hidi (Figure 1) which is a popular tourist venue located in the northeast of Skikda. This destination was selected from among the eleven ZETs of Skikda (Figure 2) taking into account several criteria (geographical criteria, urban criteria, administrative criteria, planning criteria).

Figure 1. Geographical Situation of the Larbi Ben M'Hidi Destination in Skikda (Algeria) (Source: authors, 2022)

LITERATURE REVIEW

The attractiveness of destinations influences the choices of tourists and may be the most decisive factor for visiting or revisiting a destination (Pompurová et al., 2023). Researchers agree that the term tourism attractiveness cannot be defined unequivocally and that each tourist arriving at a given destination may consider its attractiveness differently (Roman and Bury, 2022). The tourism literature considers it a relative, multidimensional and complex concept. It depends on quantitative and qualitative variables (Montargot and Ouchen, 2018). Several researchers have explored the dimensions of tourist attractiveness and identified its indicators (Buhalis, 2000; Cooper et al., 2005; Decrop, 2006; Dwyer and Kim, 2003; Gagnon, 2007; Galarneau, 2015; Gearing et al., 1974; Zerouali Ouariti and Jebrane, 2019; Jafari, 1979; Laws, 1995; Lew, 1987; Ritchie and Crouch, 2000; Ritchie and Zins, 1978; Van Raaij, 1986). Gearing et al. (1974) grouped these indicators into five broad categories: natural factors,

Dendrogram using the average distance between groups
Distance resized, combined cluster

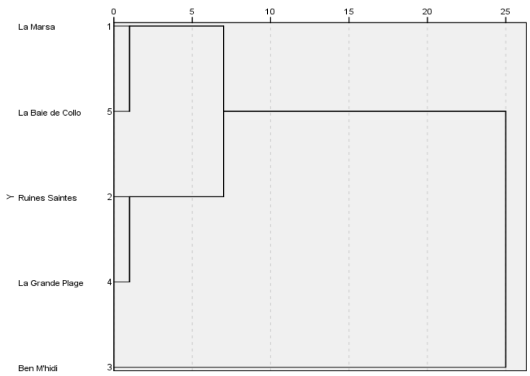

Figure 2. Selection of the Tourist Expansion Zones Studied (Source: authors, 2022)

social factors, historical factors, recreational facilities, and infrastructure. They were then expanded to seven dimensions with the addition of price levels and visitor satisfaction (Dupeyras and MacCallum, 2013; Ritchie and Zins, 1978). Kim and Song (1998) lists several other factors that affect a destination's attractiveness. These are clean and peaceful environments, the quality of accommodation facilities, family amenities, safety, accessibility, reputation, entertainment and leisure activities. Based on the synthesis of the different attributes of tourist attractiveness elaborated from twenty works by Galarneau (2015), nine attributes recur in eight works, namely: season-climate, natural places, infrastructure of reception, accessibility-transport, cultural and historical places, entertainment, culture and hospitality, events and safety.

Three approaches have been adopted to understand the dimensions of the attractiveness of a tourist destination. The first concerns the evaluation of tourist attractiveness based on demand. This approach focuses on consumer psychology (Ariya et al., 2017; Backman and Crompton, 1991; Blazeska et al., 2015; Hu and Ritchie, 1993; Kim and Song, 1998; Mayo and Jarvis, 1981; Nasir et al., 2020; Pompurová et al., 2023; Vengesayi et al., 2009). Destination attractiveness is often measured by tourists' perceptions of the destination's perceived ability to meet their needs (Mohanty et al., 2021). The demand outlook is based on tourist perceptions and interests about destination attributes (Li et al., 2023).

This is a subjective measure often referred to as perceived attractiveness (Giambona and Grassini, 2019; Musolino and Volget, 2018; Szubert et al., 2021). It is based on the assumption that a travel destination is attractive if tourists who visit it consider it an attractive destination (Hu and Ritchie, 1993). In addition, the success of the tourism industry depends on the satisfaction of tourists (Mohanty et al., 2021). Improving this satisfaction should be the primary function of a destination management organization (Biswas et al., 2020). From a supply perspective, the quantity and quality of the tourist attractions of the destinations are measures of the attractiveness of the destinations (Li et al., 2023). The second approach (Gunn, 2014; Kaur, 1981; Leiper, 1990; Smith, 1983; Walmsley and Jenkins, 1992; Young, 1999) is better defined by Kaur considering tourist attraction as the attraction generated by all the existing attractions in a given place at a given time (tourist attractiveness is an objective quality possessed by the destinations). It focuses on the identification of the physical characteristics of the destination and the analysis of its tourist resources as an essential step in the assessment of tourist attraction potential (Gunn, 1988). We speak of attractiveness expressed by the material and intangible resources of the destination (Musolino and Volget, 2018).

Being a mixed approach, the third focuses on the interaction between supply and demand (Edward and George, 2008; Formica and Uysal, 2006; Gu et al., 2022; Liu et al., 2016). It is developed as a result of criticism of the two previous approaches because of the systematic disregard of supply and demand. Some researchers say that without attractions tourism is impossible (Gunn, 2014), while others believe that demand drives tourism (Dale, 2000). The reality lies in the reciprocal relationship between these two key elements, which is essential to the very existence of tourism (Formica, 2000; Formica and Uysal, 2006). Edward and George (2008) treat the gap between the personal benefits of visitors and the perceived benefits as a better indicator of destination attractiveness. The attractiveness of tourist destinations depends on the availability of resources and the perceived values of those resources (Formica and Uysal, 2006).

Even before the work of formica and Uysal (2006), Edward and George (2008), Lew's research (1987) proposes a typology in three categories to circumscribe the attractive value of tourist sites: idiographic perspective; organizational perspective; and cognitive perspective. The first concerns natural qualities (panorama, fauna, flora, climate, etc.) and cultural qualities (history, population, monument, institution, etc.).

The second approach refers to conditions of possibility or even to contexts: originality, accessibility, positioning with regard to the comparable offer, layout, planning, capacity to support the environment, availability of services, etc. The first two are related to the tourism offer component. The third type of approach refers to visitor perceptions and experiences. This approach is linked to the tourism demand component.

The plurality of evaluation approaches can be explained by the plurality of disciplines that have addressed the issue of assessing tourist attractiveness (geography, economy, urban planning, management, society, etc.). Based on the above, researchers who view tourism as a landscape industry have spatial analysis and planning perspectives. Those who are more interested in demand or in the results of market attractiveness have borrowed knowledge from marketing, management science and operational research. For this research work and in view of our profile, we have chosen the mixed approach which is part of an overall logic. The overall attractiveness of a tourist destination must combine the assessment of existing resources or attractions with their perceived attractiveness (Gu et al., 2022). This leads us to apply a methodology combining the two aspects of supply and demand in order to arrive at an overall and general assessment of tourist attractiveness where the objective and the subjective complement each other.

METHODS

The tourist attractiveness of the *Larbi Ben M'Hidi* area was assessed on the basis of an examination of tourist resources (attractions) and perceptions of tourists during their stay in Skikda using a multi-criteria evaluation grid (Figure 3) structured around selected dimensions of tourist attractiveness. These dimensions were identified through previous studies (Buhalis, 2000; Cooper et al., 2005; Decrop, 2006; Galarneau, 2015; Gearing et al., 1974; Jafari, 1982; Kim and Song, 1998; Lew, 1987; Ritchie and Crouch, 2003; Van Raaij, 1986) and interviews with tourism industry experts and tourists as part of the knowledge of the various elements of attraction and experience in Skikda. A total of 30 indicators organized in 06 dimensions were selected: landscape dimension; social dimension; recreational dimension; infrastructure, environment and urban setting. The selected indicators will be scored on a balanced scale of 5 (based on the Likert scale), with no weighting to assign a specific weight or value to the different indicators:

1- Very unfavourable to attractiveness

2- Unfavourable to attractiveness
3- Moderately favourable to attractiveness
4- Favourable to attractiveness
5- Very Attractive

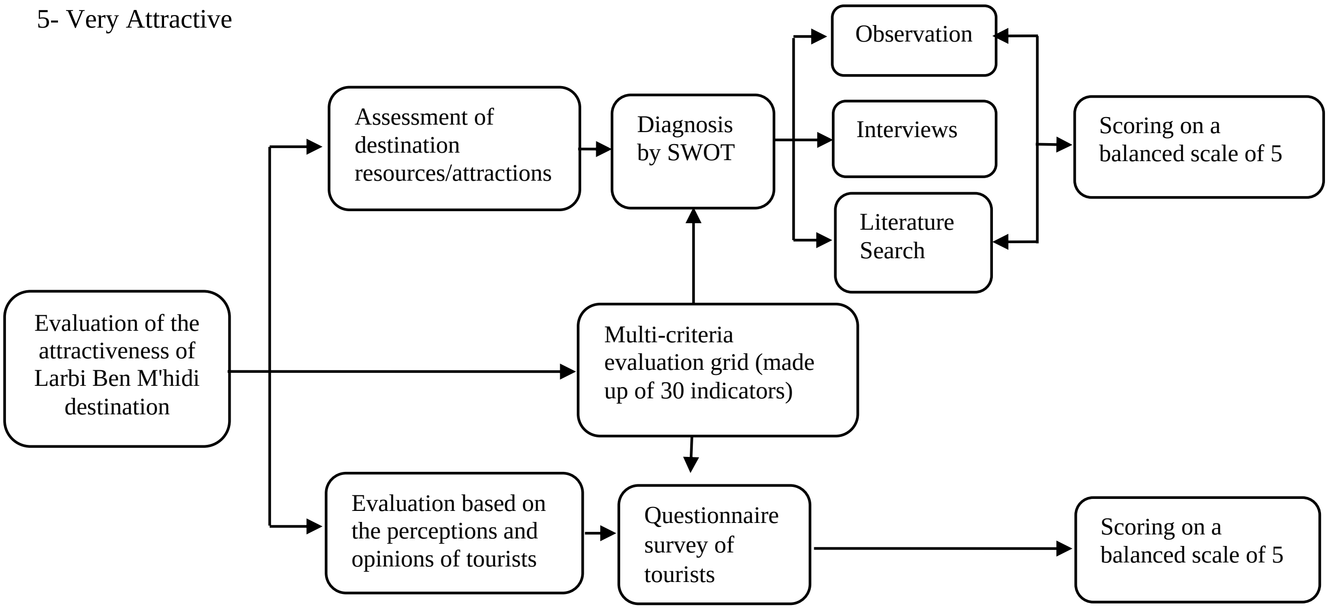

Figure 3. Methodological Steps (Source: authors, 2023)

The examination of the tourist resources of the destination is entered through a diagnosis using the SWOT matrix (Strengths, Weaknesses, Opportunities, Threats) on the dimensions of tourist attractiveness already selected in the evaluation grid. To validate our diagnosis, we used documentary research (consultation of various reports, maps, photos, history books, press articles, statistical data, urban planning instruments, and territorial diagrams), observation and exploratory conversations. We asked the different categories of actors around our subject of study (decision-makers, tourists, residents and professionals) and who should be or are involved in the development of tourism in Skikda.

Based on the confrontation of internal and external factors of development (Laïfa and Mebirouk, 2021), the SWOT analysis can detect factors that are favorable, useful for tourist attractiveness and those that are unfavourable. Indeed, the attributes of the destination presented as strength should be the subject of initiatives (triggers) of an attractiveness strategy, while the attributes presented as weaknesses serve as a starting point for developing an attractiveness strategy. This qualitative analysis gives us an overall, brief and summary picture of the area of *Larbi Ben M'Hidi*, an approach considered as a support and source of information for the evaluation and rating of criteria and indicators of tourist attractiveness from the point of view of supply.

Furthermore, tourist perceptions were captured through data collected using the questionnaire on the same dimensions and indicators selected in the multi-criteria grid. Tourist responses are used to assess the attractiveness of the studied zone in terms of demand. The sample of this study was composed of national and international tourists who visited the tourist destination chosen for this study. In total, we interviewed 200 tourists. The questionnaire is self-administered and indicators are measured using a 5-point scale (based on the Likert scale), ranging from 1: very satisfied to 5: very dissatisfied. At the end of this stage, we obtain the ratings of the users on the performance of the destination in each of its attributes: A satisfied tourist = a powerful attribute and therefore favorable to the attractiveness.

Table 1. The Multicriteria Grid (Source: authors, 2023)

Dimensions	Indicators
Landscape dimension	-Climate; -Topography; -Fauna and flora; -Thermal and mineral springs; -Natural beauty
Social dimension	-Fairs and exhibitions; -Reception of the local population; -Feeling of security; -Local cuisine
Recreational dimension	-Sports activities; -Educational resources; -Resources for health, rest, tranquility and relaxation -Shopping Resources; - Night entertainment; -Equipment for families
Environmental dimension	-Presence of green space; - Possibilities of natural hazards in or around the destination; -Miscellaneous pollution - Possibilities of technological risks in the nearby destination or surroundings; -Cleanliness of public spaces
Infrastructures	-Accommodation; -Catering; -Road infrastructure; -Public transport; -Parking facility
Urban dimension	-Accessibility to destination; -Development and diversity of public spaces -Development and equipping of beaches; -State of the built environment; -Architectural quality

RESULTS AND DISCUSSION

1. SWOT analysis: For a qualitative diagnosis of studied zone

We first present the results of the diagnosis of tourist resources that was done using the SWOT matrix (Table 2), these results will be used to score the multi-criteria grid indicators from a supply perspective.

The region of *Larbi Ben M'Hidi* is characterized by diverse natural attractions and has an 8700 m seafront forming an uninterrupted bay on the Mediterranean. These tourist potentialities allowed it to be classified among the tourist expansion areas of Skikda. Despite this profile, its territory was used for other non-tourism purposes in the absence of a tourism development plan. Since the year 2000, the area is equipped with a tourist development plan and is undergoing major development with the aim of enhancing the existing natural potential and developing its attractiveness.

These facilities are large projects and luxurious tourist complexes that offer services with unaffordable prices for the majority of Algerian citizens. With regard to outdoor spaces, their development remains minimal or even below the requirements of a tourist area where quality public and outdoor spaces are a strong indicator of its attractiveness. Finally, we cannot ignore the presence of a large industrial area near the region of *Larbi Ben M'Hidi*, which constitutes a major risk and may compromise the development of tourism in the region.

Table 2. The SWOT table of studied zone (Source: authors)

Strengths	Weaknesses
-A rich and diverse natural heritage (Sea, forest, fauna, flora, mineral springs...) -An uninterrupted bay with a fringe of 8700 m -Good bathing ability both in terms of the quality of the sand and in terms of the width of the sandy strip -Beaches monitored thanks to the presence of a military barracks and the displacement of foreigners working on the petrochemical platform -A population favourable to tourist hospitality. -Restaurants that offer local cuisine and help promote Skikdi culinary art -A semi-Olympic swimming pool that offers several sports and leisure activities -Private beaches of the study area offer a place of relaxation, rest and tranquility -Attractive projects such as water parks: Marina d'or water park (other parks have just been added) -A good commercial offer that meets the needs of tourists -A capacity of reception strengthened by the presence of holiday camps belonging to the different companies and national companies -A territory with an ancient tourist past (colonial period) -Membership of the first Tourism Excellence Cluster -A strategic location at the scale of Skikda Satisfactory accessibility	-An abandoned forest area -Lack of night entertainment -Low recreational activity -Pollution caused by the presence of a petrochemical industrial activity next to the study area -Presence of bathing beaches on the study area -Degraded appearance of vegetation cover -Limited infrastructure for tourism exploitation of natural heritage -Lack of high capacity accommodation structures -Low hotel services and their cost too expensive for the majority of Algerian citizens -Accommodation facilities do not meet current tourism demand -Road degradation -Transportation system fails -Degradation of the urban environment of the studied zone -Degraded public space not reflecting a seaside tourist destination. -Degradation of the façade, which largely furnishes the coastal promenade buildings in poor condition are on the coastal strip -Poverty of public space in urban furniture Soil degradation in several parts of the coastal parkway -Insufficient supply in quality public spaces -Timid development of outdoor spaces that do not reflect a tourist area -Lack of beach equipment -Lack of accessibility: Insufficient road access for future the study area tourism program -Presence of several unfinished constructions.
Opportunities	**Threats**
-Active participation of the associative movement in Skikda in tourism through the initiation of leisure activities and sports: “Blue Planète Skikda” club for the promotion of various sports in natural environments and “Alto Sportif Skikda” association for aerial sports (paragliding, surfing, climbing and hiking) -A strong will on the part of local officials to develop the Tourist Expansion Zone	-Risk of weakening the natural maritime landscape and artificialization of the coastline due to urban agglomerations surrounding the study area -Air pollution that risks compromising the development of tourism in Skikda and especially in the Tourist Expansion Zones -Increase in accidents at the petrochemical industrial complex (1980 and 2003) -Erosion of the beach due to lack of maintenance and protection. -Discharges of waste water into the sea which may render parts of the beach inoperative because of the odours which may emanate

2. The Results of the Evaluation of the Attractiveness of the Study Zone According to the Multicriteria Grid

The two radar profiles in the figure below (Figure 4) present the final results of the evaluation of the attractiveness of the study zone, the first with the blue colour represents the supply and the second with the orange colour indicates the demand. The objective is to match the differences between the reality of the destination and the tourist’s perception and finally to highlight the areas of tourist attractiveness that register a deficit and require an upgrade, that is, it would be necessary to identify the issues on which priority must be given to action and those that present opportunities for a future development of the attractiveness of the study tourist zone.

2.1. Recreational Dimension, Urban Dimension and Infrastructures

Differences in the assessment of tourism attractiveness emerged between supply and demand for the following three dimensions: “recreational dimension”, “urban and architectural setting”, and “infrastructure”. These dimensions are considered to be non-performing from a supply perspective because they are below the tourism attractiveness performance threshold whose value is equal to 3. Moreover, from a demand perspective, these areas of attractiveness are in a medium range from the scale of assessment (urban and architectural dimension 3.2; infrastructure, 3.2 and recreational dimension, 3.3).The evaluation results from a supply perspective reflect the lack of educational resources such as botanical gardens, zoos and/or aquariums. Additionally, they display: the weakness of recreational activities and the lack of night time entertainment; the deterioration of roads and the inefficiency of the transport system; the lack of high-capacity accommodation structures and the weakness of hotel services and their cost to the majority of visitors.

The lack of quality public spaces as well as the inadequacy of the coastal promenade are far from being the markers of a seaside tourist destination furnished by a facade lacking in architectural quality (unfinished buildings and buildings in poor condition); and finally, a simplistic layout of outdoor spaces. Moreover, from the point of view of demand, the results are indicative of the efforts made on the one hand by the associative movement in the promotion of water sports and the presence of attractive projects (water parks and semi-Olympic swimming pool); and on the other hand by the public authorities who have facilitated the accessibility of the study zone (through certain projects such as the East/West motorway) and encouraged private investment within the study zone.

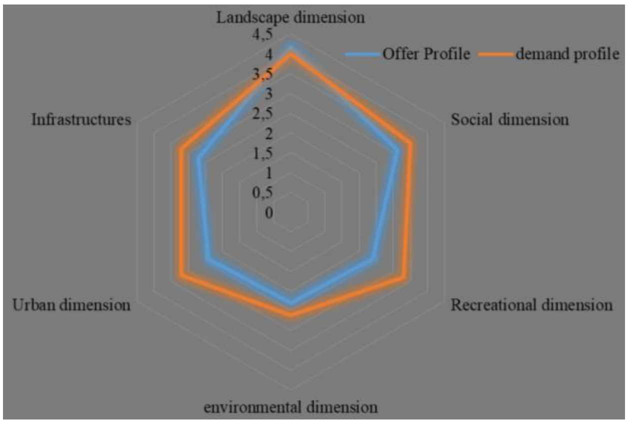

Figure 4. General Evaluation Profiles of the Attractiveness of the Tourist Zone (Source: authors, 2022)

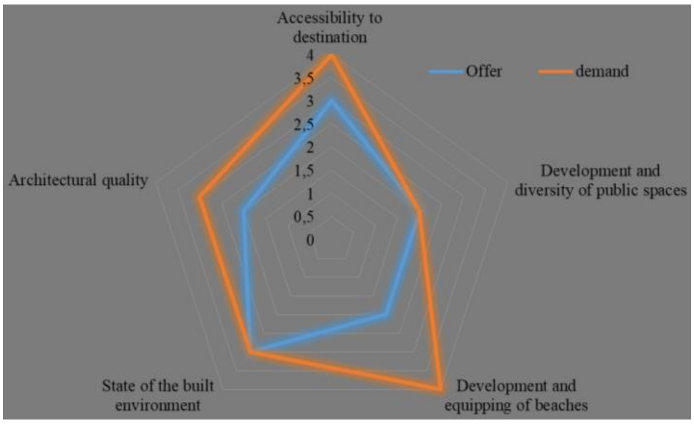

Figure 5. Evaluation Profiles of the Urban Dimension (Source: authors, 2022)

On a more detailed scale, the evaluation of the dimensions indicators cited above showed differences between the results of supply and demand but also some correlations were noted (Figures 5 and 6). The diagnosis of the state of public spaces and the state of the built environment correspond to the perceptions of visitors. The built environment is in a medium range from the scale of assessment. The development of public spaces is considered inefficient and unfavourable to attractiveness, which explains why the tourist destination has not been able to offer what is really perceived by the tourist demand. The SWOT diagnosis of the attributes of the study zone revealed a shortage of quality public spaces; a poverty of public spaces in urban furniture and soil degradation in several parts of the coastal promenade. Accessibility is considered to be efficient from the point of view of demand, and is in an average range from the scale of assessment from the point of view of supply for the lack of visibility of the road leading to the tourist area.

In terms of architectural quality, we found several buildings in poor condition and others unfinished on the coastal strip from the point of view of the application the assessment is average. On the other hand, the diagnosis found that the layout and equipment of the beaches were not conducive to the attractiveness of the study zone (lack of beach equipment), whereas the majority of users (70) are satisfied, which explains why tourism demand does not give importance to the development and equipment of beaches and prefers to see them in their natural state.

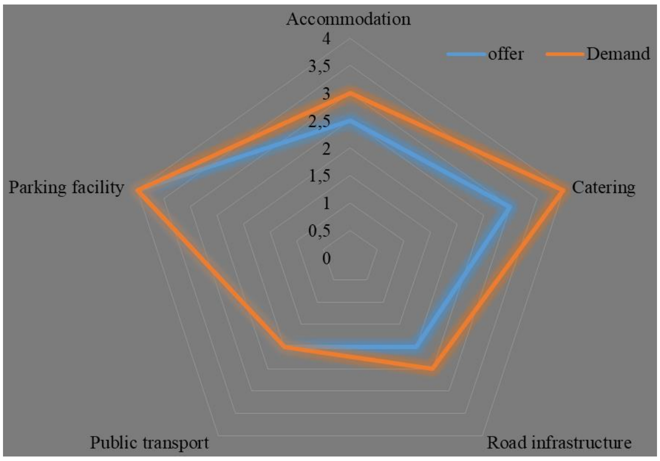

Figure 6. Infrastructure Dimension Assessment Profile (Source: authors, 2022)

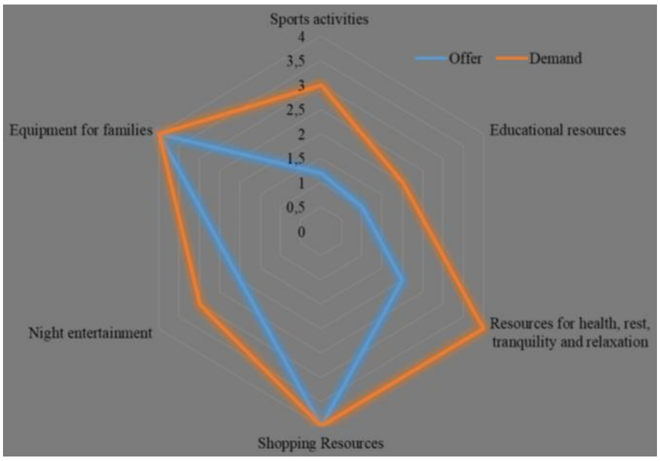

Figure 7. Recreational Dimension Assessment Profile (Source: authors, 2022)

The results of the evaluation of road infrastructure, transport and parking in the study zone from the point of view of supply are consistent with those from the point of view of demand. Road infrastructure and public transport are unfavourable to attractiveness, this result is due to the deterioration of roads and the lack of efficiency of public transport (lack of comfort, very slow transport, etc.). The parking is considered efficient therefore favorable to the attractiveness thanks to the availability of areas dedicated to the parking. Accommodation is considered to be moderately attractive from a demand perspective and unfavourable from a supply perspective, as it does not meet current tourism demand. In this sense, we noted the lack of large capacity accommodation structures (the largest capacity is that of the Royal Tulip Hotel estimated at 318 beds). The weakness of hotel services and their costs are too expensive for the majority of visitors to the study zone (In summer 2022, the price of a night in half board in a single room is estimated at 188, 22 euro and in a double room is estimated at 243, 17 euro). In terms of catering, the study zone has several restaurants offering dishes of local cuisine and participating in the promotion of culinary art.

The equipment for families and the shopping resources are considered efficient from the point of view of supply and demand, they constitute two indicators favorable to the attractiveness of the study zone. This result (Figure 7) is due in particular to the presence of several leisure facilities: existing and being realized (semi-olympic pool, Marina d'or Water Park). Moreover, the study zone is characterized by a good commercial offer concentrated in the surrounding urban agglomerations. The study zone was able to offer what is actually perceived by the demand. Educational resources are very unfavourable to the attractiveness of the study zone, the results of evaluation of this indicator from the point of view of supply coincide with those from the point of view of demand because totally absent in the study zone. Moreover, sports activities and night entertainment are considered unfavourable to the attractiveness of the study zone in terms of supply but moderately favourable in terms of demand. About these sports activities, we noted an active participation of the associative movement in tourism through the initiation of leisure activities and sports: let us quote as an example the club “Blue Planète Skikda” for the promotion of various sports in natural environments and the “Alto Sportif Skikda” association for aerial sports (paragliding, surfing kit, climbing) and hiking. However, by referring to interviews with visitors and citizens of Skikda, these associations and their activities are unknown to them.

Finally, it should be pointed out that the visitors considered the resources for health, rest, tranquility and relaxation favorable, despite the lack of structures that meet this indicator within the study zone.

2.2. Landscape Dimension

The criteria composing the «landscape dimension» are considered efficient, and are important assets for the development of the tourist attractiveness of this study zone. The landscape of the study zone is the most attractive area from the point of view of demand and supply with a value of 4. The sea is the main object for which tourists move towards Larbi Ben M'Hidi. Thanks to an uninterrupted bay (more than eight kilometers), Larbi Ben M'Hidi offers a good bathing ability perceived through the quality of its sand as well as the width of its sandy strip. To maintain the existing tourist flow at Larbi Ben M'hidi, this natural element of the sea should be preserved, protected and enhanced against the continuous artificialization of the coastline and from existing sources of pollution. This area is rated as performing but requires more development to achieve the highest performance value.

2.3. Social Dimension

The results of the evaluation of social indicators from the supply point of view intersect with those from the point of view of demand and are in a medium range from the scale of evaluation, whose value is equal to 3. The tourist region offers what is actually perceived by the demand. The attitude of residents reflects the mindset or disposition of residents towards a tourist destination and can be defined as hostile, indifferent or supportive (Alloui-Ami Moussa, 2021). According to the results, the population of Skikda is favorable to the tourist reception. Since the improvement of the security of the country in Algeria, the company has become very favorable to the creation of tourist infrastructure and leisure. The inhabitants of Skikda, like all Algerians, are hospitable in nature and aspire to introduce the visitors of their city to their culture. Hospitality is a key factor in destination selection (Kelfaoui et al., 2021). The feeling of security is considered to be efficient, that is to say favourable to attractiveness. The beaches of the destination are the most guarded of the wilaya thanks to fixed stations of the gendarmerie or the police. This interest is mainly due to the presence of a military barracks and the displacement of foreigners working on the petrochemical platform. “Fairs and exhibitions” are an indicator against attractiveness. The ZET does not host exhibitions or events.

2.4. The Environment

As for the environmental dimension, this is a major weakness for the study zone, which is exposed to air pollution caused by the release of black gas and smoke from continuously lit torches. The cleanliness of public spaces, the possibilities of technological and natural risks have similar results both in terms of supply and demand. While the indicators “presence of green spaces and various pollutions” present contradictory results. The cleanliness of public spaces is considered inefficient and unfavourable to attractiveness. The possibilities of natural risks, constitute an effective indicator therefore favorable to the tourist attractiveness. The area where the study zone is located is stable and has not previously experienced flooding or earthquakes. On the other hand, technological risks threaten the study zone in view of the countless accidents at the petrochemical complex (1980 and 2003). From a supply perspective, “the green space” indicator is within a mean range from the scale of assessment. This result is due to the presence of significant vegetation cover. On the other hand, visitors are not satisfied. Their dissatisfaction is justified by the absence of public gardens or other public green space, the vegetation cover is abandoned without any maintenance. Visitors were moderately satisfied with the “miscellaneous pollution” indicator. From the point of view of supply, this indicator is very unfavourable to the attractiveness, it constitutes a weakness and risks to the development of tourism in Skikda and especially the study zone. Pollution caused by the petrochemical complex by fumes, sometimes creating a veiled screen on a large part bordering the industrial area. In addition, discharges of waste water into the sea can make some parts of the beach unserviceable due to odours. Recalling that two beaches located on the study zone are prohibited to swim.

In short, this study looked at the diagnosis of the state of a tourist destination and its available resources in conjunction with demand preferences. Through the results obtained, the evaluation from the point of view of demand was different from that from the point of view of supply for several dimensions or indicators. It states that in considering a tourism project or developing a tourism region, we should not simply rely on the opinions of users or the evaluation of tourism resources. It is important to consider both supply and demand (Gu et al., 2022). The interaction between demand and supply is central to distinguishing the attractiveness of a tourist destination from others (Liu et al., 2016).

People travel or participate in leisure activities because they are driven or driven by travel motivations and destination attributes (Formica and Uysal, 2006). Analytical techniques to measure attractiveness should aim to combine the assessment of existing resources with their perceived attractiveness (Formica, 2000; Formica and Uysal, 2006). Echtner and Ritchie (1991) argue that the analysis of attributes and holistic impressions of tourists must be taken into account as the omission of either aspect will result in incomplete measurement. At the end of this research, it can be argued that the objective of this study was achieved by studying the attractiveness of the tourist area of *Larbi Ben M'hidi* and proposing a model of attractiveness of seaside tourist destinations. The proposed methodology has built on previous studies. It used different theoretical and analytical models known for their simplicity of use and flexibility to identify the dimensions of tourist attractiveness, to note, evaluate and compare simultaneously the attractiveness of supply and demand. The process allowed an objective comparison of the assessments of the attractiveness of supply and demand. The possibility of obtaining scores from two different perspectives offered an opportunity to study the interaction between demand and supply in determining the attractiveness of tourism.

CONCLUSION

In conclusion, it can be said that the results of the model presented in this research allow tourist expansion zone to design and develop more effective planning and marketing programs using an integrative or systemic approach. Thus the hypothesis of this work, which is concerned with the construction of a tool for assessing the attractiveness of tourist expansion areas which takes into account both supply and demand in order to help managers and decision-makers to consider possible actions to improve attractiveness is confirmed. It is necessary to understand the tourist and his motivations (Gemar et al., 2022). It is also important to explore the inventory of existing resources and attractions of the tourist destination (Backman et al., 1991; Ferrario, 1979).

This model, which takes into account the tourist and attractions, reduces the time taken by decision-makers to reflect by targeting the weak indicators on which to act. Its application leads to the formulation of recommendations and the planning of actions concerning the development, redevelopment, requalification or rehabilitation of the sub-systems of the destination in question. By applying this approach, Tourist Expansion Zone will be able to maximize the potential of its attractions and optimize the efficiency of its resource allocation. However, it has limitations in view of the degree of subjectivity included in the rating of attractiveness indicators from the point of view of supply (the transition of the data collected and analysed by SWOT to their rating). The results of this study help to broaden current knowledge on assessing the attractiveness of tourist destinations and the interaction between supply and demand. It may also be applied to other destinations taking into account and taking into account the specificities and characteristics of those destinations.

Author Contributions: Conceptualization, I.L and N.B.; methodology, I.L. and N.B.; software, I.L.; validation, I.L. and N.B.; formal analysis, I.L. and N.B.; investigation, I.L.; data curation, I.L.; writing - original draft preparation, I.L; writing - review and editing, I.L. and H.G.; visualization,N.B. and I.L.; supervision, N.B.; project administration, I.L. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 16.05.2023 Revised: 16.07.2023 Accepted: 21.08.2023 Available online: 18.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.998-1005
DOI 10.30892/gtg.49315-1099

FACTORS INFLUENCING TOURIST SATISFACTION WITH AGRITOURISM IN THE MEKONG DELTA, VIETNAM

Nguyen Truong SON[*]
Faculty of Business Administration, University of Economics, University of Danang, Da Nang, Vietnam, e-mail: sonnt@due.edu.vn

Quoc Nghi NGUYEN
School of Economics, Can Tho University, Can Tho, Vietnam, e-mail: quocnghi@ctu.edu.vn

Thi Hong Loc HOANG
School of Economics, Can Tho University, Can Tho, Vietnam, e-mail: hthloc@ctu.edu.vn

Citation: Son, N.T, Nguyen, Q.N & Hoang, T.H.L. (2023). FACTORS INFLUENCING TOURIST SATISFACTION WITH AGRITOURISM IN THE MEKONG DELTA, VIETNAM. *GeoJournal of Tourism and Geosites*, 49(3), 998–1005. https://doi.org/10.30892/gtg.49315-1099

Abstract: The Mekong Delta, Vietnam possesses great potential and advantages for developing agritourism. To ensure the sustainable development of agritourism, enhance service quality, and improve tourist satisfaction are essential. This study aims to identify the factors influencing tourist satisfaction with agritourism in the Mekong Delta. Data were collected using a quota sampling method, with a sample size of 228 tourists who had visited and experienced agritourism in the Mekong Delta, Vietnam. A mixed-method approach combining qualitative and quantitative research was used to test research hypotheses. By applying structural equation modeling (SEM), the study demonstrated that local culture, natural landscape, novelty, assurance, tourism human resources, and perceived value positively influenced tourist satisfaction with agritourism in the Mekong Delta. Among these factors, the natural landscape had the most impact on tourist satisfaction with agritourism in the Mekong Delta.

Key words: satisfaction, agritourism, tourist, Mekong Delta

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INTRODUCTION

Tourism is one of the fastest-growing industries in the world and plays a crucial role in the economy, stimulating growth in various sectors (Osman and Sentosa, 2013). In the context of climate change, rising food prices, and global and regional economic crises, the interconnection between agriculture and tourism can provide fundamental solutions for many countries (Torres and Momsen, 2011). Agritourism, a form of tourism based on agricultural resources and activities, is developed based on key elements such as natural landscapes, local life, agricultural production, and agricultural products (Sznajder et al., 2009). Rural tourism development helps preserve traditional cultural values, reduce poverty, bring economic benefits, protect the environment, and improve infrastructure and technical facilities (Dua et al., 2022). Agritourism serves as a form of environmental and land resource conservation (Dewandini and Dananto, 2021). Agritourism has brought significant value, which has attracted considerable attention from researchers in the field of rural tourism (Getz and Page, 1997). In tourism studies, tourist satisfaction has been explored from various perspectives, focusing on the antecedents of satisfaction, the process of achieving satisfaction, measuring satisfaction, and the importance of satisfaction for loyalty and behavioral intentions of tourists (Engeset and Elvekrok, 2015).

The Mekong Delta has enormous potential and advantages for developing agritourism based on favorable geographical conditions, fertile soil, climate, and biodiversity. In recent decades, agritourism development in the Mekong Delta has been closely linked to the sustainable and efficient exploitation of resources, development in harmony with environmental protection, and biodiversity conservation. It has made significant contributions to shaping agritourism products, including tangible and intangible cultural heritage, rural spaces encompassing traditional villages engaged in agricultural, forestry, and fisheries production, as well as handicrafts. Through these efforts, unique agritourism products have been created, such as observing rice paddies, experiencing a day as a farmer, engaging in organic vegetable cultivation, and participating in agricultural harvests. However, there are still limitations and challenges in the development of agritourism in the Mekong Delta, including inadequate infrastructure, duplicated products/services. Most tourist attractions only meet the basic needs of visitors. Issues related to marketing and advertising agricultural products receive insufficient attention. A literature review on the topic of factors affecting visitor satisfaction for agritourism shows that most of the studies focus on measuring visitor satisfaction with service quality. In the field of agricultural tourism, few studies have identified the factors affecting the satisfaction of tourists with agricultural tourism, especially agricultural tourism services in the Mekong Delta. Therefore, this study was carried out to demonstrate the factors affecting the satisfaction of tourists with agricultural tourism in the Mekong Delta, Vietnam.

[*] Corresponding author

THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

Theoretical framework

Agritourism

Agritourism, also known as agricultural tourism, is a term that has been around for a long time worldwide. There have been various definitions proposed by researchers regarding agritourism. According to the OECD (1994), agritourism is a form of tourism that takes place in rural areas. Agritourism includes visits to farms and rural communities but excludes activities in outdoor recreational areas such as national parks, forests, or wilderness areas (Oppermann, 1996). According to Sharpley and Sharpley (1997), agritourism involves tourism products directly related to the environment, agricultural products, and agritourism accommodation. Agritourism is an activity that involves visiting a farm or any agricultural establishment for relaxation, recreation, and gaining knowledge, with the possibility of participating in farm activities (Lobo et al., 1999). According to Barbieri and Mshenga (2008), agritourism encompasses any activity that takes place on farms to attract tourists. The diversity of agritourism stems from the rich resources available in rural areas, including heritage tourism, cultural tourism, traditional craft village tourism, community-based tourism, eco-tourism, and agro-biological tourism (Katsushiro and Sieu, 2013).

Satisfaction

Customer satisfaction is the evaluation of customers regarding a product or service that meets their needs and expectations (Zeithaml and Bitner, 2000; Kotler and Keller, 2006). Customer satisfaction is the overall attitude of customers towards a service provider, a perception of the gap between what customers predicted and what they received to fulfill their needs, goals, or desires (Hansemark and Albinsson, 2004). As presented by Baker and Crompton (2000), satisfaction is the emotional state of tourists after experiencing a trip. Customer satisfaction is the difference between the expected value and perceived value that tourism products have on the emotional state of tourists (Yoon and Uysal, 2005). Tourist satisfaction is a positive perception or feeling that tourists have when participating in leisure and entertainment activities and is expressed through the level of enjoyment from those experiences (Chen and Tsai, 2007).

Tourist satisfaction can be defined as the evaluation of tourists regarding the quality of the destination and the fulfillment of tourists' needs and expectations (Fu et al., 2019). Satisfaction with a tourist destination will influence the likelihood of tourists returning to the destination or spreading positive word-of-mouth about it (Lee et al., 2012). The success of tourist destinations is often attributed to tourist satisfaction (Nowacki, 2009).

Research hypotheses

The relationship between local culture and tourist satisfaction

Local culture is a core element that lays the foundation for the development of agritourism in the Mekong Delta region (Chau et al., 2016). Each tourism type has its own history and unique characteristics of the local culture, which helps tourists gain a deeper understanding of the significance of different tourism types in each locality (Nghi, 2013). Agritourism is a product of the intelligence and experience of an entire community (Burkheiser, 1969). Several studies have demonstrated that local culture positively influences tourist satisfaction (Tribe and Snaith, 1998; Shahrivar, 2012; Jayasinghe et al., 2015; Carvache-Franco et al., 2018; Chia et al., 2021). Therefore, the study proposes hypothesis H1: Local culture has a positive impact on tourist satisfaction with agritourism in the Mekong Delta region.

The relationship between natural landscapes and tourist satisfaction

The natural landscape is an essential component of tourism resources (Chau et al., 2016). The natural landscape not only influences tourists' destination choices but also impacts the flow of tourists at the national and global levels (Nghi and Ngọc, 2009). The natural landscape has a certain impact on the attractiveness of a destination (Vuong and Huyen, 2021). The more beautiful, captivating, and novel the natural landscape is, the higher tourist satisfaction (Ngoc and Trinh, 2015; Giang and Ngoc, 2021; Dung et al., 2023). Therefore, the study suggests hypothesis H2: Natural landscape positively affects tourist satisfaction with agritourism in the Mekong Delta region.

The relationship between novelty and tourist satisfaction

Product differentiation refers to the ability of a product to create differences and outperform competing products in the market (Best, 2013). Understanding customer needs and applying them to create a differentiated product enhances its competitive advantage (Dalrymple and Parsons, 2000). Novelty creates attractiveness and special impressions about the product and enhances tourist satisfaction, and willingness to pay (Trinh and Nghi, 2018). Therefore, the study proposes hypothesis H3: Novelty positively influences tourist satisfaction with agritourism in the Mekong Delta region.

The relationship between assurance and tourist satisfaction:

Assurance is a crucial criterion for tourism service quality and impacts the development of tourism at a destination (Cavlek, 2002; Garg, 2015). Safety and security concerns related to destinations have become increasingly significant for tourists (Poon and Adams, 2000). During the tourism service experience, tourists are particularly concerned about personal safety and security (Dung et al., 2023). Safety and security are important factors that influence tourist satisfaction at a tourist destination (Tuan, 2015; Carvache-Franco et al., 2018; Vuong and Huyen, 2021). So, the study proposes hypothesis H4: Assurance has a positive impact on tourist satisfaction with agritourism in the Mekong Delta region.

The relationship between tourism human resources and tourist satisfaction

The enthusiasm, friendliness, willingness to assist, and promptness in addressing tourist-related issues of tourism staff at the destination positively impact tourist satisfaction (Nhan and Dua, 2015). The role of tourism human resources is crucial in improving the quality of services and enhancing tourist satisfaction. Several studies have demonstrated that the quality of staff at the destination positively influences tourist satisfaction (Nhan and Khanh, 2014; Tuan, 2015; Vuong and Huyen, 2021; Dung et al., 2023). Therefore, the study suggests hypothesis H5: Tourism human resources positively influence tourist satisfaction with agritourism in the Mekong Delta region.

The relationship between perceived value and tourist satisfaction

Perceived value is the emotional relationship established between customers and suppliers after customers have used the services and realized that the services create added value (Butz and Goodstein, 1996). Additionally, Woodruff (1997) suggests that perceived value is the customer's love, perception, and positive evaluation of the product's characteristics. Perceived value facilitates the customer's usage goals and intentions.

In the field of tourism, several studies have demonstrated a positive correlation between perceived value and tourist satisfaction (Hoa and Hang, 2017; Trang and Lan, 2019; Vuong and Huyen, 2021; Dewandini and Dananto, 2021; Hossain et al., 2021). Thus, the study sets out hypothesis H6: Perceived value positively affects tourist satisfaction with agritourism in the Mekong Delta region.

Based on the literature review and the research hypotheses formulated, the research model for the factors influencing tourist satisfaction with agritourism in the Mekong Delta region is established as figure 1 follows:

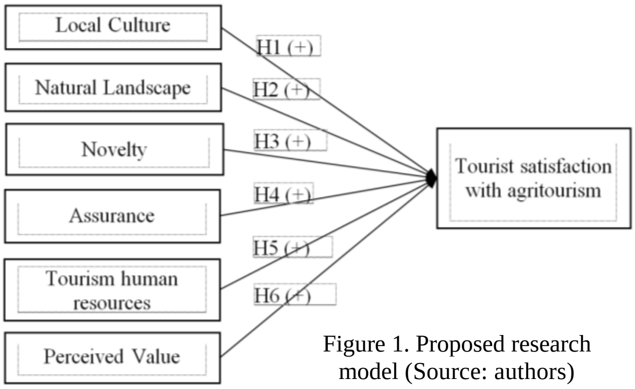

Figure 1. Proposed research model (Source: authors)

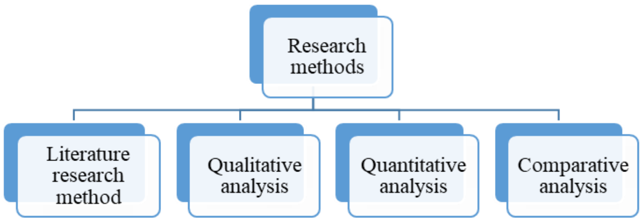

Figure 2. Flowchart of the research methods (Source: authors)

Table 1. Interpretation of observed variables in the research model

Factor	Observed variable	Scale	Reference resources
Local Cultural (LC)	1. Agritourism in the Mekong Delta is associated with river culture. 2. Agritourism in the Mekong Delta represents a typical community cultural life. 3. The cultural aspect of agritourism activities in the Mekong Delta is interesting.	Likert 1-5	Tribe and Snaith (1998), Shahrivar (2012)
Natural Landscape (NL)	1. River landscapes are new and attractive for agritourism experiences in the Mekong Delta. 2. Rice field landscapes are impressive, especially for the agritourism experiences in the Mekong Delta. 3. The landscape of fruit-laden orchards is an attractive factor of agritourism in the Mekong Delta region.	Likert 1-5	Ngoc and Trinh (2015), Vuong and Huyen, (2021)
Novelty (NO)	1. Agritourism in the Mekong Delta has distinctive features compared to other places. 2. Activities in agritourism in the Mekong Delta are novel and attractive. 3. Activities in agritourism in the Mekong Delta offer a special experience.	Likert 1-5	Best (2013), Dalrymple and Parsons (2000)
Assurance (AS)	1. The experience of agritourism services is accurate with the introduction information /advertisement. 2. Security is always well guaranteed during the experience of agritourism in the Mekong Delta. 3. Food safety and hygiene are focused on during the experience of agritourism in the Mekong Delta.	Likert 1-5	Tuan (2015), Dua et al. (2022)
Tourism Human Resources (HR)	1. Tourism staff show friendliness, politeness, and enthusiasm. 2. Tourism staff can communicate and behave well. 3. Tourism staff have knowledge and skills in organizing and providing tourism services.	Likert 1-5	Nghi (2013), Tuan (2015)
Perceived Value (PV)	1. Feel the value of quality after experiencing agritourism in the Mekong Delta. 2. Feel the emotional value after experiencing agritourism in the Mekong Delta. 3. Feel the social value after experiencing agritourism in the Mekong Delta. 4. Feel the value by the price after experiencing agritourism in the Mekong Delta.	Likert 1-5	Hoa and Hang (2017), Trang and Lan (2019)
Satisfaction (SA)	1. Compared to expectations, I feel satisfied with the experience of agritourism in the Mekong Delta. 2. I do not regret choosing to use/participate in agritourism in the Mekong Delta. 3. I enjoy participating in agritourism activities in the Mekong Delta. 4. Overall, I am satisfied with agritourism activities in the Mekong Delta.	Likert 1-5	Dua et al. (2022), Hong et al. (2022)

RESEARCH METHODOLOGY

Analytical method

To test the research hypotheses, a combination of qualitative and quantitative research methods was applied (Figure 2). The participatory rural appraisal helps identify appropriate measurement scales for the research model. The discussion occurred with 7 experienced agritourism tourists and 3 experts in agritourism research. Quantitative analysis methods were used to test the research hypotheses, including testing the reliability of the measurement scales by Cronbach's alpha coefficient, exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and structural equation modeling (SEM).

Data collection method

In the SEM model, a reasonable sample size should reach a minimum of 200 observations (Hoelter, 1983). However, a larger sample size increases the reliability of the study, and the CB-SEM model requires a large sample size (Raykov and Widaman, 1995). Therefore, the study aims to survey a minimum of 200 observations to test the research model.

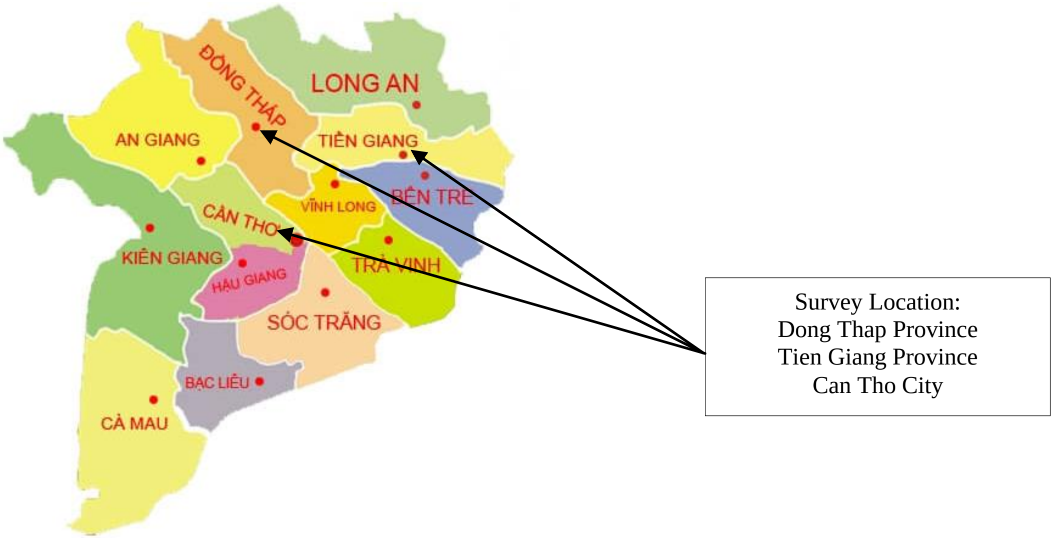

Figure 3. Location map of the Mekong Delta (Source: authors)

The research data were collected through an online survey method. This survey method was chosen because of several advantages, notably eliminating the cost of paper, and data entry, and the ability to reach survey participants beyond geographical boundaries (Cobanoglu et al., 2021). An official survey was conducted from December 2022 to January 2023. The sample was selected from famous agritourism sites in Tien Giang Province, Dong Thap Province, and Can Tho City (Figure 3). The study utilized quota sampling to collect data, with criteria for grouping including tourist type, gender, occupation, education level, and age. The number of survey questionnaires obtained was 235, and after removing unsuitable questionnaires (lack of reliability), a total of 228 valid questionnaires were used to test the research hypotheses.

Table 2. Structure of the research sample (n = 228) (Source: authors)

Tourist type	**Frequency**	**%**	**Education level**	**Frequency**	**%**
International	78	34.21	Junior high school	24	10.53
Domestic	150	65.79	High school	67	29.39
Gender	**Frequency**	**%**	College	28	12.28
Male	118	51.75	University	84	36.84
Female	110	48.25	Postgraduate	25	10.96
Age	**Frequency**	**%**	**Occupation**	**Frequency**	**%**
16 - 30	42	18.42	Manager	43	18.86
31 - 45	73	32.02	Office staff	78	34.21
46 - 60	65	28.51	Public sector labor	52	22.81
Above 60	48	21.05	Freelancer	55	24.12

Based on the statistical results of the demographic characteristics in Table 2, out of the 228 valid questionnaires, domestic tourists accounted for 65.79% and international tourists accounted for 34.21%. The gender distribution of the respondents was relatively balanced, with males accounting for 51.75% and females accounting for 48.25%. The majority of the participating tourists were in the age range of 31 to 45 years old, accounting for 32.02%. Most of the respondents had completed high school education (29.39%), and university education (36.84%). In terms of occupation, office workers had the highest proportion of respondents, accounting for 34.21%.

RESEARCH RESULTS AND DISCUSSION

Analytical results

Scale reliability

The Cronbach's alpha test result in Table 3 shows that all research scales meet the requirements (Nunnally and Bernstein, 1994), with Cronbach's alpha values ranging from 0.802 to 0.907. All observed variables in the survey were related to tourists who had previously visited and experienced agrotourism services in the Mekong Delta region, especially agritourism destinations. Particularly, all scale items had item-total correlations greater than 0.3 (Nunnally, 1978; Peterson, 1994; Slater, 1995). The EFA results indicated that the observed variables converged into 7 factors, with factor loadings of observed variables exceeding 0.5 (Table 2). The KMO coefficient of 0.895 (>0.5) confirmed that the factor analysis was suitable for the research data. The total variance extracted reached 75.59%, indicating that the 7 factors accounted for 75.59% of the data variation (Anderson and Gerbing, 1988; Hair et al., 1998).

The result of the CFA in Table 3 demonstrated that the measurement scales are appropriate for the market data (Anderson and Gerbing, 1988; Hu and Bentler, 1999), as indicated by the following statistical indices: CMIN/Df = 1.524 ($\leq$ 3); TLI = 0.955 ($\geq$ 0.9); CFI = 0.963 ($\geq$ 0.9); RMSEA = 0.048 ($\leq$ 0.08). Besides, all unstandardized regression weights were statistically significant ($p < 0.05$), confirming the convergent validity of the observed variables.

Based on Table 4, the values of composite reliability (CR) and average variance extracted (AVE) meet the criteria, with CR values (ranging from 0.807 and above) and AVE values (ranging from 0.513 and above) satisfying the requirements (Jöreskog, 1971; Fornell and Larcker, 1981). Therefore, the research data is suitable for the market data, exhibiting convergent validity, unidimensionality, discriminant validity, and reliability.

Table 3. Evaluation of scale reliability (Source: authors)

Observed variable	Mean	Standard deviation	Factor loading	Cronbach's alpha
Local Culture (LC)				**0.846**
LC1	3.54	0.698	0.781	
LC2	3.70	0.785	0.842	
LC3	3.45	0.835	0.755	
Natural Landscape (NL)				**0.849**
NL1	3.71	0.719	0.685	
NL2	3.68	0.760	0.808	
NL3	3.63	0.725	0.845	
Novelty (NO)				**0.836**
NO1	3.86	0.684	0.811	
NO2	3.89	0.748	0.785	
NO3	3.85	0.673	0.757	
Assurance (AS)				**0.810**
AS1	3.82	0.835	0.833	
AS2	3.75	0.760	0.738	
AS3	3.81	0.718	0.703	
Tourism Human Resources (HR)				**0.867**
HR1	3.75	0.757	0.871	
HR2	3.72	0.745	0.864	
HR3	3.83	0.817	0.674	
Perceived Value (PV)				**0.802**
PV1	3.43	0.708	0.568	
PV2	3.58	0.744	0.855	
PV3	3.48	0.736	0.815	
PV4	3.50	0.765	0.522	
Satisfaction (SA)				**0.907**
SA1	3.99	0.650	0.839	
SA2	3.90	0.643	0.644	
SA3	3.88	0.639	0.820	
SA4	3.92	0.588	0.852	

Table 4. Research scale validation results

Factor	Number of observed variables	Composite reliability CR	Average Variance extracted AVE	Resources
Local Culture (LC)	3	0.849	0.653	Jöreskog (1971), Fornell and Larcker (1981)
Natural Landscape (NL)	3	0.850	0.655	
Novelty (NO)	3	0.838	0.634	
Assurance (AS)	3	0.812	0.590	
Tourism Human Resources (HR)	3	0.875	0.701	
Perceived Value (PV)	4	0.807	0.513	
Satisfacion (SA)	4	0.907	0.711	

Hypothesis testing

Based on the structural equation modeling (SEM) result, the research model is suitable for the market data. This is indicated by the following outcomes: Chi-square/df = 1.468 ($\leq$ 3); TLI = 0.960 ($\geq$ 0.9); CFI = 0.967 ($\geq$ 0.9); RMSEA = 0.045 ($\leq$ 0.08). The hypothesis testing result is presented in Table 5.

Table 5. Research hypothesis test

Hypothesis	Relationship	Standardized estimated value	P-value	Result
H1	SA ← LC	0.154	0.023	accepted
H2	SA ← NL	0.232	0.001	accepted
H3	SA ← NO	0.146	0.025	accepted
H4	SA ← AS	0.182	0.003	accepted
H5	SA ← HR	0.206	0.002	accepted
H6	SA ← PV	0.225	0.000	accepted

Based on Table 5, hypotheses H1, H2, H3, H4, H5, and H6 are all accepted with a 95% confidence level. This shows that the factors of local culture, natural landscape, novelty, assurance, tourism human resources, and perceived value are positively correlated with the satisfaction of tourists with agritourism in the Mekong Delta region. Among these factors, the natural landscape factor has the most impact on the satisfaction of tourists with agritourism in the Mekong Delta region.

Discussion of Results

Hypothesis **H1:** Local culture has a positive influence on tourist satisfaction with agritourism in the Mekong Delta region. The estimated result in Table 5 shows that local culture positively impacts the satisfaction of tourists with agritourism, with a standardized estimated coefficient of 0.154 and a statistically significant p-value of 0.023. When participating in agritourism in the Mekong Delta region, tourists can experience the cultural characteristics of the region, such as the waterway culture and the rice civilization, and the distinctive community culture of the Southwestern region. This experience brings many interesting and new things for tourists, thereby enhancing their satisfaction with agritourism in the Mekong Delta region. The research result continues to affirm that local culture is a core factor and foundation for the development of agricultural tourism in the Mekong Delta region (Chau et al., 2016). The research result is consistent with some studies proposed by Tribe and Snaith (1998), Shahrivar (2012), and Jayasinghe et al. (2015), Carvache-Franco et al., 2018, Chia et al., (2021).

Hypothesis **H2:** Natural landscapes have a positive effect on tourist satisfaction with agricultural tourism in the Mekong Delta region. Hypothesis H2 is accepted after considering the standardized estimated value of 0.232 and a statistically significant p-value of 0.001. When visiting agritourism sites in the Mekong Delta, tourists can admire and enjoy the impressive natural landscapes, such as the river landscapes, the beautiful rice fields, and the attractive fruit gardens. This creates a sense of excitement and special impressions in the minds of tourists, thereby improving their satisfaction with the tour. The research finding is consistent with studies proposed by Ngoc and Trinh (2015), Vuong and Huyen (2021), Giang and Ngoc (2021), Dung et al. (2023).

Hypothesis **H3:** Novelty positively affects tourist satisfaction with agritourism in the Mekong Delta region. The estimated result in Table 5 shows that novelty positively impacts the satisfaction of tourists with agritourism, with a standardized estimated coefficient of 0.146 and a statistically significant p-value of 0.023. This indicates that when tourists perceive the novelty and attractiveness of agritourism products in the Mekong Delta compared to other places, their satisfaction will increase. Activities such as experiencing the ripe rice season, a day as a farmer, and participating in the harvest season have created unique and distinctive impressions in the minds of tourists. The research result confirms the value of novelty in creating attractiveness and special impressions of products, enhancing tourist satisfaction (Trinh and Nghi, 2018).

Hypothesis **H4:** Assurance positively influences tourist satisfaction with agritourism in the Mekong Delta region. The estimated result in Table 5 shows that assurance has a standardized estimated value of 0.183 and a statistically significant p-value of 0.003. Security and food safety are always well-ensured during the agritourism experience in the Mekong Delta. Furthermore, the tourism destinations consistently deliver on the provided information and advertisements, which builds trust among tourists. Therefore, tourists feel reassured during the tour, leading to an improvement in their satisfaction. The research results further confirm that assurance is a crucial criterion for the development of tourism in a destination (Garg, 2015; Cavlek, 2002). This finding aligns with studies in the field of tourism proposed by Tuan (2015); Carvache-Franco et al., 2018; Vuong and Huyen (2021), Dung et al. (2023).

Hypothesis **H5:** Human resource positively impacts tourist satisfaction with agritourism in the Mekong Delta region. Hypothesis H5 is accepted after considering the standardized estimated coefficient of 0.206 and a statistically significant p-value of 0.002. When visiting tourist sites in the Mekong Delta, tourists are welcomed with friendliness, politeness, and enthusiasm by tourism staff. Additionally, tourism staff knows how to communicate and interact well with tourists. Especially, tourists will find that the organization of services meets their needs in the best possible way. The research result emphasizes the important role of tourism human resources in tourist satisfaction. The finding aligns with several studies proposed by Nhan and Khanh (2014), Tuân (2015), Vuong and Huyen (2021), and Dung et al. (2023).

Hypothesis **H6:** Perceived value positively influences the satisfaction of tourists with agritourism in the Mekong Delta region. Table 5 shows that the perceived value has a standardized estimated value of 0.225 and a statistically significant p-value of 0.000. After experiencing agritourism in the Mekong Delta, tourists perceive positive values in terms of quality, emotional value, social value, and especially value for money. When tourists positively evaluate the perceived value after their experience in the Mekong Delta, their satisfaction with agritourism will be higher. This research finding is similar to studies proposed by Hoa and Hang (2017), Trang and Lan (2019), Vuong and Huyen (2021), and Dewandini and Dananto (2021), Hossain et al., (2021).

CONCLUSION

Overall, the research results have achieved the set goal of demonstrating the factors influencing tourist satisfaction with agritourism in the Mekong Delta region (Vietnam). The research findings indicate that local culture, natural landscape, novelty, assurance, tourism human resources, and perceived value positively affect tourist satisfaction with agritourism in the Mekong Delta. Among these factors, natural landscapes are evaluated by tourists as having the most impact on their satisfaction with agritourism in the Mekong Delta. The research results provide useful reference materials for destination managers in agritourism and researchers in this tourism sector.

Author Contributions: Conceptualization, N.T.S and Q.N.N.; methodology, N.T.S and Q.N.N.; software, Q.N.N and T.H.L.H.; validation, N.T.S and Q.N.N.; formal analysis, Q.N.N. and T.H.L.H.; investigation, N.T.S., Q.N.N and T.H.L.H.;

data curation, Q.N.N and N.T.S.; writing - original draft preparation, N.T.S., Q.N.N and T.H.L.H.; writing - review and editing, N.T.S., Q.N.N and T.H.L.H.; visualization, Q.N.N and T.H.L.H.; supervision, N.T.S.; project administration, Q.N.N. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 20.05.2023 Revised: 12.07.2023 Accepted: 22.08.2023 Available online: 26.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1006-1014
DOI 10.30892/gtg.49316-1100

DETERMINANT FACTORS OF MARKETING AND NON-MARKETING RURAL-URBAN LINKAGE OF ADWA TOWN AND ITS SURROUNDING RURAL ADWA

Mewael Berhane MENGESHA*
Department of Geography and Environmental Studies, Aksum University, Axum, Ethiopia, e-mail: mewfel@yahoo.com

Tegegne GEBRE EGZIABHER
Department of Geography and Environmental Studies, Addis Ababa University, Addis Ababa, Ethiopia, e-mail: tegegneg@yhaoo.com

Citation: Mengesha, M.B., & Egziabher Gebre T. (2023). DETERMINANT FACTORS OF MARKETING AND NON-MARKETING RURAL-URBAN LINKAGE OF ADWA TOWN AND ITS SURROUNDING RURAL ADWA. *GeoJournal of Tourism and Geosites*, 49(3), 1006–1014. https://doi.org/10.30892/gtg.49316-1100

Abstract: This study attempts to assess the determinant factors of marketing and non-marketing rural-urban linkage of Adwa town and its surrounding by employing a cross-sectional research design. A two-stage sampling procedure was used. Random sampling was mainly used to select 221 research subjects. A Household sample survey was the principal method used to solicit the primary data. Quantitative statistical tools such as mean, quartiles, Chi-square, ANOVA, and regression were employed. About 62% of the poor have experienced a strong non-marketing linkage, whereas 64.9% of the sample poor respondents had experienced a weak marketing linkage. The findings of the study show that a household's access to irrigation, livestock ownership, beehive ownership, access to a mobile phone, number of farm plots, age, and distance from the town was found to be the most important determinants of the orientation as well as the magnitude of marketing linkage. Similarly, a household head's gender, family size, livestock ownership, and the number of farm plots were found to be the most important determinants of non-marketing linkage.

Key words: rural-urban linkage, non-marketing linkage, marketing linkage, Adwa

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INTRODUCTION

Background of the Study

United Nations Member States agreed to policies that support integrated urban and territorial planning and development in both the 2030 Agenda for Sustainable Development and the New Urban Agenda. They called for new, inclusive approaches and enhanced synergies between urban and rural communities that is rural-urban linkage. As a result, the weight given to rural or urban areas' developmental policies in developing countries has shown considerable variation over time. These development strategies have addressed either urban or rural areas separately (Chowdhury et al., 2005). According to Tegegne (2001), most pro-poor and anti-poverty initiatives remain steadfast for discrete urban or rural domains. It is widely recognized that there exists an economic, social, and environmental interdependence between urban and rural areas, and there is a need for a balanced and mutually supportive approach to the development of both rural and urban areas. This mutual development is manifested through rural-urban linkages (Armin and Jutta, 2021; Mohammed, 2007; Somanje et al., 2020; Tegegne, 2001).

The interaction between urban and rural areas in a given area is inevitable. What matters is the degree of the linkages and the types of linkages that exist in the area (Tacoli, 1998; 2004). Several factors can affect the linkages between rural and urban areas. Socio-economy relations resource endowment, land tenure policy, and land size, built environment are among others (Andualem and Umer, 2023; Douglass, 1998; Tegegne, 2005). Therefore, a crucial consideration should be given on the complex context-specific nature of these linkages and their potential site-specific variation (Mercandalli et al., 2023).

Statement of the Problem

Though there is a vast volume of literature on the subject of rural-urban linkages, there are gaps in our knowledge about the factors that determine such rural-urban linkages. In particular, the determinant factors of marketing and non-marketing linkages have not been well studied in Ethiopia. Those who have made studies on rural-urban linkages have tried to treat issues like farm and non-farm linkages in Northern Ethiopia (Tassew, 2002), linkages under different farming systems in Robe and Limu (Tegegne, 2001), livelihood strategies and their implications for rural-urban linkages in Wolenkomi (Mohamed, 2007), natural resource management and rural-urban linkages in Ethiopian highland (Carucci and Yihenew, 2007) and market linkages in Western Shoa Zone (Mesfin, 1995). The above studies, however, did not examine determinant factors of marketing and non-marketing linkages. This study hopes to fill this gap through a case study of Adwa town and its surrounding rural areas.

LITERATURE REVIEW

Factors Affecting Rural-Urban Linkages:

Several factors can affect the linkages between rural and urban areas (Mercandalli, 2023). Socio-economy relations,

* Corresponding author

resource endowment, land tenure policy, and land size, a built environment are among others (Douglass, 1998; Tegegne, 2005; Alemayehu et al., 2021). Socioeconomic relation is one important factor that can affect the rural-urban linkage. Inequality in income access to land and other resources can affect the linkage (Douglass, 1998).

Social exclusion such as access to education could tend to diminish rural-urban linkages (Mbella and Mbella, 2021). The built environments are major sources for regional differentiation in rural-urban linkages. Adequate infrastructure development such as roads, communication networks, market center, irrigation, electricity, telephone services, and the like can determine the nature, scale, and magnitude of rural-urban interaction (Douglass, 1998).

Conditions of a natural environment and resource endowment can also affect the rural-urban linkages. Farmers with a small size of land have a limit to produce surplus production for the market and invest and use agricultural inputs. A farming system that does not encourage inputs will ten to reduce rural-urban linkages (Tegegne, 2005).

THE RESEARCH METHODOLOGY

Research Design

To understand properly the existing local factors that determine marketing and non-marketing rural-urban linkages, a cross-sectional survey design was employed. The methodological stages of the study is presented in Figure 1.

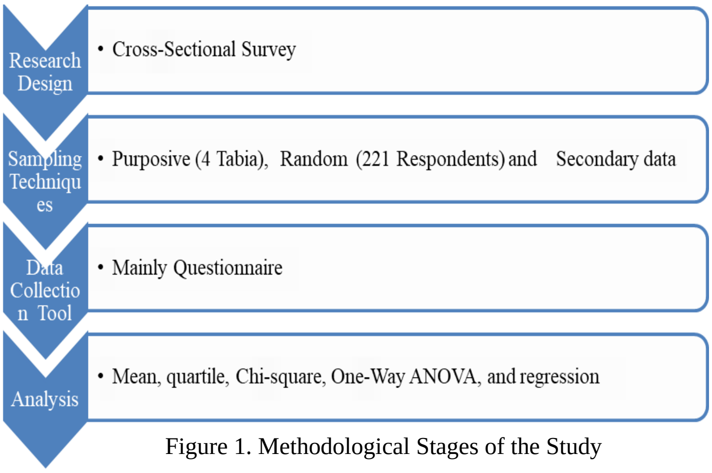

Figure 1. Methodological Stages of the Study

Sampling Method and Sample Size

The study adopted a distance of 5 Kms (nearest) to 26 Kms (far) from Adwa town to be an area of intensive interaction between the rural and urban areas. Once the broader range of *Tabias* was determined, a two-stage sampling procedure was used. In the first stage, four *Tabias* from the *Wereda* that are free from the influence of the secondary market were chosen. These *Tabias* were chosen purposively to represent different characteristics. In the second stage, with proportional allocation 221 rural household heads were selected randomly (Table 1). A roster of the respective *Tabias* served as a sample frame.

Table 1. Distribution of Sample *Tabias* and Rural Household Heads

Sampled *Tabias*	Specific feature	Total No. of HHs.	No. of sample HHs.	Distance to town (km)
EndabaGerima	Stone extraction, Tourism	1319	66	18
Soloda	Conservation	846	42	5
BeteYohaness	Industrial	1343	67	10
TahitayLogomti	Irrigation	915	46	26
		4423	**221**	

Type and Source of Data: Quantitative and qualitative data were used in this study. The quantitative data include demographic, usage of agricultural input, market use, migration, land holding size, and other related information. Statistical reports of CSA were also included.

Data Collection Techniques: Since the study uses a cross-sectional survey type, it mainly relies on quantitative primary data that are gathered from the sample through a structured questionnaire. The questionnaire was piloted to determine the clarity and understandability of the question and to assess whether the questionnaire can able to collect the intended information. Well-trained enumerators who were supervised by the researcher administered the questionnaire. A re-visit was made to several households in each site to insure reliability.

Data Analysis: The primary and secondary data obtained from respondents and documents respectively were processed, classified, and tabulated. A combination of different statistical techniques such as mean, quartile, Chi-square, One-Way ANOVA, and regression was used to adequately address the objective of this research. To do this SPSSv.20 software was used.

Model Specification: To achieve the objective, a linear regression analysis was applied. Three separate models are run to see the determinants of the marketing and non-marketing linkage.

$Y = f(\beta o + \beta 1X1 + \beta 2X2 + \beta 3X3 + \ldots \beta 13X12)\ldots.$ (Adopted from Howitt and Cramer, 2011)

Where Y is the level of rural-urban linkage, X1; X2; X3; . . . ; X12: are explanatory variables defined below, β1; β2; β3; . . . ; β13 are estimated regression coefficients/parameters associated with the explanatory variables (X1, X2,X3,... , X12), respectively, β0 is a constant (random error).

Dependent Variable

Y1: The level of rural-urban linkage as measured by marketing rural-urban linkage (focus on the orientation) index is a continuous dependent variable in the model.

Y2: The level of rural-urban linkage as measured by income from marketing rural-urban linkage (the degree) is a continuous dependent variable in the model.

Y3: The level of rural-urban linkage as measured by the non-marketing rural-urban linkage index is a continuous dependent variable in the model.

Independent Variables:

The literature indicates that many factors can influence the level of rural-urban linkage at a household level. Age, sex, marital status, educational status, family size, farm size, number of plots, livestock ownership, engagement in irrigation, number of bee hives, possession of cell phones, and distance from the town are considered explanatory variables in this study.

Description of the Study Area

Adwa Wereda is located in the central zone of Tigray National Regional State. It is bordered on the south by Werié Leké, on the north by Mereb Leké, on the west by Laelay Maychew, and on the east by Ahferom Weredas. The town is completely bordered by Adwa Wereda (Figure 1). It is found about 1006 kilometers north of Addis Ababa.

RESULT AND DISCUSSION

Demographic Characteristics of the Respondents

Table 2 showed the basic demographic characteristics of the sample rural households. In terms of education, about 63.8% of the respondents had attained at least primary school (1-8 grades). This literacy rate was higher than the national literacy rate and also higher than the regional rural literacy rate which was about 41.3% (CSA, 2013).

Table 2. Basic Demographic Characteristics of Sample Rural Households

Variable	Affiliation	Number	Percentage
Education	Illiterate	54	24.4
	Primary	141	63.8
	Secondary	26	11.8
Sex	Male	176	79.64
	Female	45	20.36
Average family size		5.1	
Average Age		44.4	

Table 3. Composition of Sample Rural Households' Level of Linkage

Linkage Type	Level of Linkage Quartile				Total
	I	II	III	IV	
Marketing	51 (23%)	58 (26%)	57 (26%)	55 (25%)	221
Non-Marketing	35 (16%)	70 (32%)	22 (10%)	94 (42%)	221

Households in Ethiopia are largely male-headed. Males head about 74% of the households in the country while 77% the rural households (EDHS, 2012). This fact was corroborated by the present study where it was found that 79.64% of the sample males headed rural households. Similarly, the average household size of the nation was 4.6 and that of the rural population was 4.9 (EDHS, 2012). The average household size of the sample (5.1) was slightly higher than the national average and almost similar to the average household size of the rural population. It was, however, higher than the regional average (4.3) and the rural regional average (4.6) (CSA, 2012).

Determinants of Rural Households' Linkages: Positive interactions between rural and urban areas facilitate an all-rounded development in both areas. The strength of interaction and interdependence of these spatial units, however, are influenced by several factors such as farming system, access to natural resources, accessibility and affordability of transport, income (measured from the volume of crop production and the number of cattle owned), and the like. To capture further factors affecting the rural-urban linkage in the study area, it is important to see first the level of rural-urban linkage. Here sample households were categorized as having strong and weak rural-urban linkages.

In this study, sampled households were categorized as first, second, third, and fourth linkage quartiles in terms of their score of marketing and non-marketing linkage indices (Table 3). In this sense, sample rural households who had a strong rural-urban linkage would have better access to information, frequency of movement (market and other non-market purposes), and utilization of financial services than their counterparts.

According to the survey result (Table 3), a large proportion of the households (42%) and little proportion (16%) of the households were grouped in the two extreme non-marketing linkages, strong and weak or fourth and first quartile respectively. In the marketing linkage, the share of the first (23%) and fourth (25%) quartiles was with little difference. The first rural-urban linkage quartile implies a very weak linkage while the fourth quartile implies a very strong linkage. However, for this study, those households who did fall in the first and second quartiles were considered to be weak linkage and those who did fall in the third and fourth quartiles were considered as having a strong linkage.

Table 4. Sample Rural Households' Level of Linkage and Economic Status (***Significant at 99 %)

Type of Linkage	Linkage Index	Economic status			Chi-Square statistics
		Rich	Middle	Poor	
Marketing Linkage	Strong - (49.8)	26 (23.6)	56 (50.9)	28 (25.5)	**36.72***
	Weak - (50.2)	18 (16.2)	21 (18.9)	72 (64.9)	
Non-Marketing Linkage	Strong - (52.5)	19 (16.4)	25 (21.6)	72 (62)	**29.17***
	Weak - (47.5)	25 (23.8)	52 (49.5)	28 (26.7)	
Total (221)		**44**	**77**	**100**	

As shown in Table 4, about 62% of the sample poor respondents experienced a strong non-marketing linkage, which is by far higher than those who are rich in economic status (16.4%). This shows that the poor income group had frequent visits to the town to get additional income from different urban-based income-generating activities. The Chi-square test (X2=29.17, df=2, p=0.001) also confirmed that there was a significant systematic association between the household head's level of non-marketing linkage and the economic status at 99% confidence interval. This is quite different from the common experience by which the rich income group is expected to have a strong linkage than the poor. The better-off tend to diversify in the form of non-farm business activities, while the poor tend to diversify in the form of casual work, especially on other farms. Diversification by the poor therefore tends to leave them still highly reliant on agriculture, while that by the better off reduces such dependence (Ellis, 2004).

In the case of the marketing linkage, about 65% of the sample poor respondents experienced a weak marketing linkage, which is far higher than those who were rich (16.2%) and middle (18.9%) in economic status. While the majority of the middle (50.9%) and rich (23.6%) income groups had a strong marketing linkage as compared to poor income groups (Table 4). This shows that the non-poor income group had frequent visits to the town to sell their product and get more income from these outputs. The Chi-square test (X2=36.72, df=2, p=0.001) also confirmed that there was a significant systematic association between the household head's level of marketing linkage and the economic status at 99% confidence interval. This is consistent with the common experience by which the rich income group is expected to have a strong marketing linkage than the poor. The better off tend to diversify in the form of non-farm business activities (Ellis, 2004). In similar way other researchers also state that the dominant population visit urban centers for marketing purpose (Christiawan et al., 2020; Mbella and Mbella, 2021).

Table 5. Distribution of Sample Rural Households' Level of Linkage in Tabias (***Significant at 99 %)

Type of Linkage	Linkage Index	*Tabia*				Chi-Square Statistics
		Bete-Yohannes	Endaba-Gerima	Soloda	Tahtay-Logomti	
Marketing Linkage	Strong -(50%)	20 (18)	46 (42)	17 (15)	27 (25)	**24.03***
	Weak - (50%)	47 (42)	20 (18)	25 (23)	19 (17)	
Non-Marketing Linkage	Strong - (52%)	50 (43)	29 (25)	32 (28)	5 (4)	**56.51***
	Weak - (48%)	17 (16)	37 (35)	10 (10)	41 (39)	
Total (221)		**67**	**66**	**42**	**46**	

This level of linkage had also shown a difference among the target *Tabias* (Table 5). In marketing linkage, Endaba Gerima has the strongest marketing linkage with Adwa, followed by Tahtay Logomoti. This was mainly attributed due to the marketing of livestock products and honey production. To see if there could be a systematic association between the nature (characteristics) of *Tabia* and the level of marketing rural-urban linkage, a Chi-square test was carried out. Accordingly, the Chi-square test (X2=24.03, df=3, p=0.001) confirmed that there was a significant systematic association between the characteristics of *Tabia* and the level of marketing linkage at 99% confidence interval. This shows that the characteristics or nature of *Tabia* affected the level of marketing linkage.

In the case of the non-marketing linkage (Table 5), BeteYohannes had the strongest linkage with Adwa, followed by Soloda. This is mainly attributed due to the relative advantage of proximity to the town. Households from these *Tabias* visited the town frequently to get different services and jobs. Particularly the distant *Tabia*, TahtayLogomti had only 4% of households who had a strong non-marketing linkage with the town. The Chi-square test also (X2=56.51, df=3, p=0.001) confirmed that there was a significant systematic association between the household head's residence or *Tabia* and the level of non-marketing rural-urban linkage at 99% confidence interval. This shows that the characteristics or nature of a *Tabia* affected the level of non-marketing linkage. So, such variations attributed to different factors would be treated here under.

Linear Regression Model Result

Twelve variables were hypothesized that can significantly influence the household's level of rural-urban linkage in the study area. These variables are summarized in Table 6.

Table 6. Summary of Variables Considered

Variables	Meaning	A priori Sign
AGE	Household head's age (in years)	Positive /Negative (+/-)
SEX	Sex of the household head	(+/-)
MSTA	Marital status of the household head	(+/-)
EDU	Education level of the household head	(+)
FAMS	Total family size of the household	(+)
TLU	Livestock ownership (calculated in terms of Tropical Livestock Unit-TLU)	(+)
TFS	Total farm size of the household (in hectares)	(+/-)
NFP	Number of Farm Parcels	(+/-)
BHO	Beehive ownership	(+)
CPP	Cell phone possession	(+)
DIT	Distance from the town	(-)
IRR	Engagement in irrigation	(+)

Before running the regression model, the problem of multicollinearity among the explanatory variables was checked by using collinearity diagnostics or Variance Inflation Factor (VIF). The value of VIF for each variable proved that the assumption of multicollinearity was not violated, as VIF values for each variable are less than 10. Similarly, using the Durbin-Waston autho collinearity checked and found that there was no authocollinearity problem.

Determinants of Marketing Linkage

Farmers from the surrounding area visit the market to sell crops, livestock/livestock products, poultry, vegetable, honey, and forest/forest products. These are the most common items brought to market by farmers. Some of them bring one of the above items to the market while others bring more than one item.

Farmers who bring more items to the market are believed to have a higher frequency of visits and higher linkage and rely more on the market than those who bring none or limited items to the market. The reason is that the products have different seasons to be brought to the market. As a result, a value of 1 was given for those who bring a specific item to the market and a value of 0 was given if they did not bring the specified item. Finally, the values were added up to get the scores of marketing linkage (orientation) for the household. The scores varied between 0 and 6; with 0 representing farmers who brought no output to the market and 6 representing farmers who brought all six major items to the market. It has to be noted that this measure shows the marketing orientation of farmers.

Table 7. Linear Regression Estimates of Variables for Marketing and Non-Marketing Linkage
Source: Model output; N.B: **, *** denotes significance at 95% and 99% level of confidence respectively

Variables	Marketing Linkage (Visit)				Marketing Linkage (Income)				Non-Marketing Linkage			
	Coefficient	Std. Error	t-Ration	P- Value	Coefficient	Std. Error	t-Ration	P- Value	Coefficient	Std. Error	t-Ration	P- Value
Constant	-3.921	1.598	-2.454	.015	5814.721	9896.343	.588	.557	8.400	2.163	3.883	.000
AGE	.228	.070	3.277	.001**	76.397	430.797	.177	.859	-.111	.094	-1.182	.239
SEX	-.271	.279	-.969	.334	-471.384	1729.188	-.273	.785	-1.023	.378	-2.706	.007**
MSTA	-.251	.136	-1.843	.067	-968.327	843.746	-1.148	.252	-.217	.184	-1.178	.240
EDU	.230	.156	1.473	.142	561.120	964.810	.582	.561	-.012	.211	-.058	.953
FAMI	-.053	.052	-1.018	.310	-558.840	320.150	-1.746	.082	.127	.070	1.812	.071*
TFAS	.419	.444	.944	.347	3634.648	2750.979	1.321	.188	-.813	.601	-1.352	.178
NFP	.149	.047	3.159	.002**	94.453	292.138	.323	.747	-.246	.064	-3.855	.000***
TLU	.154	.048	3.238	.001**	1264.259	295.356	4.280	.000***	-.129	.065	-2.004	.046**
DIT	.111	.079	1.395	.165	-1149.441	491.669	-2.338	.020**	-.018	.107	-.165	.869
BHO	.163	.042	3.872	.000***	720.463	260.007	2.771	.006**	.032	.057	.570	.570
CPP	-.413	.150	-2.751	.006**	-2577.468	929.888	-2.772	.006**	-.086	.203	-.422	.673
IRR	.337	.171	1.969	.050**	6532.648	1058.617	6.171	.000***	.077	.231	.334	.738
Age Squared	-.002	.001	-3.142	.002**	-1.418	4.514	-.314	.754	.001	.001	1.159	.248
Observations	221				221				221			
R-squared	.363				.342				.243			
Adj R-squared	.323				.300				.195			
F(13, 207)	9.058				8.262				9.722			

To examine the degree of the marketing linkage, however, the income gained from the sales of items or the linkage with Adwa market was also considered as an indicator of the degree of marketing linkage. Thus, income from the linkage was taken as the second dependent variable to be explained by the independent variables.

Table 7 depicted the regression estimates of the model and the Adjusted R-squared with a value of 0.323 indicated that the model explained the variation in the level of marketing linkage in the study area for 32.3 percent of the sample. The ANOVA statistic of 9.058 (13 df) shows that the model is different from zero and significant at 99 percent of confidence level. In other words, the model is fit at 99 percent confidence level. Most of the variables in the regression model had the correct sign as hypothesized in the priori expectation except the possession of cell phones. By removing the most insignificant variables the regression model result shows that only six variables namely Number of farm plots (NFP), Livestock ownership (TLU), Beehive ownership (BHO), Engagement in irrigation (IRR), Cell phone possession (CPP) and Age (AGE) had a significant effect on the level of marketing linkage (its orientation) in the study area.

Similarly, a linear regression model was also used to identify the variables that affect the degree of marketing linkage. The degree of marketing linkage was measured by the income derived from the visits to marketplaces. The Adjusted R-squared of 0.30 indicated that the model explained the variation of the level of marketing linkage in the study area for 30.0 percent of the sample. The ANOVA statistic of 8.262 (13 df) shows that the model is different from zero and significant at 99 percent of confidence level. The model is fit at 99 percent confidence level.

Most of the variables in the regression model had the hypothesized signs as expected. The Result showed that Livestock ownership (TLU), Beehive ownership (BHO), Engagement in irrigation (IRR), Cell phone possession (CPP), and Distance to the town (DIT) had a significant effect on the level of income earned from marketing linkage in the study area (Table 7). The following provided a discussion of the results.

Total livestock holding: Households with different livestock ownership could have a better understanding of marketing information and diversification as well as boost their overall production capacity. TLU, is thus, hypothesized to have a positive influence in enhancing the level of marketing linkage. The result showed that livestock ownership of the household head is associated with the level of marketing linkage of the household head positively and significantly (p=0.001) at 95 percent of significant level. A unit of change in TLU of a household affects the level of marketing linkage (its orientation) of that household by 0.154. The status of livestock ownership of the household head is also associated with the level (degree) of marketing linkage of the household head positively and significantly (p=0.001) at 95 percent of significant level. A unit of change in TLU of a household affects the degree of marketing linkage of that household by 1264.259. This finding is consistent with the findings of other studies by Alemayehu et al., (2021), which found that livestock holding generates income through the sale and is an important asset for enhancing livelihood diversification. The income earned from livestock and/or livestock products could be reinvested in other agricultural and non-farm activities that would have a significant influence on strengthening the level of marketing linkage.

Table 8. TLU Ownership of the Three Income Groups (*** Significant at 99%)

Economic Status	Min	Max	Mean	SD	ANOVA
Rich-44	4.22	11.07	5.88	1.33	**85.08*** **
Middle-77	2.27	7.31	4.73	1.01	
Poor-100	0.0	6.65	3.13	1.34	

Though there was a significant difference in the mean of livestock holding among the three income groups (Table 8: F=85.08, df=2, p=0.001), having several numbers of livestock holding was revealed to have a strong marketing linkage. This livestock holding was among the major indicators of a household being rich or poor. As a result, those who had a higher TLU were those who were rich. In the previous section, it was founded that those who were rich had a strong marketing linkage than their poor counterparts.

Engagement in irrigation: Most of the time farmers engaged in irrigation produce vegetables and fruits that are demanded by the nearby urban dwellers. The types of equipment and fuel for the generators are available in urban centers. The products of such activity are almost all sold in urban areas. Therefore, there is an expectation that those who are engaged in irrigation would have a positive impact on the level of marketing linkage. The result revealed that those households with irrigation are found to have a positive and significant (p=0.05) influence on their orientation of marketing linkage at 90 percent of confidence level. An engagement in irrigation increased the orientation of marketing linkage of the household by 0.337. The result also revealed that those household heads who engaged in irrigation were found to have a positive and significant (p=0.001) influence on their degree of marketing linkage at 99 percent of confidence level. Taking other variables constant, an engagement in irrigation increased the degree of marketing linkage of the household by 6532.648. This implies that those who were engaged in irrigation would have a strong marketing linkage/visiting with the town and earn more income than those who did not. This finding is consistent with that of Seid (2007) who indicated that access to irrigation schemes encourages households to focus on items that have high demand in the urban market. Irrigation thus contributed to improving the livelihood of rural households.

Number of beehives owned: Those who produced honey sold their product in the nearby town and purchased bee hives from such centers. It is thus expected that engagement in honey production and the availability of beehives would have a positive influence on the level of marketing linkage. The result revealed that bee hive ownership is found to have a positive and significant (p=0.001) influence on the households' orientation of marketing linkage at 99 percent level of confidence. An increase in the ownership of beehives by a unit had an impact of an increase in the visit of market linkage of a household by 0.163. In line with this hypothesis, bee hive ownership was also found to have a positive and significant (p=.006) influence on the households' level of marketing rural-urban linkage at 95 percent level of confidence. The ownership of bee hives is affecting the degree of marketing linkage of a household by a factor of 720.463.

Cell phone possession: Those with cell phones are expected to have an access to information, mainly market information from the nearby town. Understanding markets is essential for farmers. Direct access to information on consumer preferences and the price could determine the practices of farmers attending markets.

Based on the market information the farmers could be selective to visit the market only in periods when the price is favorable for them. Hence, it is hypothesized that the possession of cell-phone would have a positive influence on the level of a household's marketing linkage with the urban centers. In line with this hypothesis, possession of a cell phone had a negative and significant (p=0.006) influence on the households' orientation and level of marketing rural-urban linkage at 95 percent level of confidence. This is attributed to the fact that those who got market information would be selective in visiting the market. Instead of supplying their items to the market every day without assessing the price and back without selling them; farmers would be more strategic and bring their items when the market price is suitable for them. This implies that those who manage to get market information probably would have a better opportunity to spend more time in the rural area and be able to produce more production which leads them to boost their income and may not be forced to create a strong marketing linkage with the nearby town to seek an additional source of income.

Number of Farm Parcels: It is expected that, as the number of farm parcels of a farmer increases, the attention and care given to proper farming practices reduces drastically, affecting the adoption of improved technologies and maintenance of existing structures and may lead to poor yield. This may reduce the household's intention to visit towns for marketing purposes. On the other hand, the household may visit the nearby town for an additional source of income. For these reasons, the influence of the number of farm parcels on the level of rural-urban linkage on indeterminate a priori. The result showed that the number of farm parcels had a positive sign and was statistically significant (p=0.002). This implies, other variables held constant, probability of creating a strong marketing linkage in the study area increased as the number of farm parcels increased by 0.15 units. However, this variable did not have a significant impact on the degree of marketing linkage. The mean number of farm parcels in the study area is 3.79 with a maximum number of 9. This large number of farm plots was mostly owned by the rich and middle-income group households as they tend to share crops with the poor households. As a result, the rich diversify their income which would enhance the farmers' visits to towns for marketing. This result is consistent with that of Shafeisabet and Mirvahedi (2021) access to agricultural land enhances rural-urban linkages.

Age (Age-Squared): The age of the household head was expected to have either a positive or negative effect on the level of rural-urban linkage. Older farmers are likely to be relatively reluctant to attend markets and diversify their income. Hence, their rural-urban linkages would be limited. On the other hand, older farmers are likely to have more farming experience and would therefore be likely to be more receptive to new technologies that would strengthen their linkage. Younger farmers would be more accommodating to new ideas and would invest in new and long-term innovations. For these reasons, the influence of age on the level of marketing linkage could not be determined a priori. The result of this study showed that age had a negative sign and it was significant (p=0.002) at 95% confidence level. This implies that older farmers were likely to have weak marketing linkage than their younger counterparts. This finding is consistent with other researcher's finding which noted that 'the younger generations are more able to have higher levels of rural-urban linkages in Africa' (Akkoyunlu, 2013).

Distance from the town: Greater physical access to the market improves farm and non-farm earnings opportunities. Therefore, a longer distance to the nearest market is expected negatively affects the rural-urban linkage due to high transaction and transport costs as well as a lack of market information. Income depends on market access simply because people must be able to sell their processed products, handicraft, or labour. As expected, the distance to urban center coefficient turned out to be a negative and significant (p=.020) influence on the households' level of income earned from marketing linkage at 95 percent level of confidence. With an increase in distance to the urban center, the level of income earned from the marketing linkage of a household decreased by 1419.441. Therefore, households closer to the town were more advantageous in getting income from different activities than distant households from the town.

Determinants of Non-Marketing Linkage

Non-marketing linkage in this study was measured by using the frequency of visits of rural households to Adwa town for non-marketing purposes. This third dependent variable was computed by summarizing the main indicators of non-market visits; mainly the major services related to finances, health, education, jobs, agricultural extension, and grain mill. Some farmers visited the town to get one service while others visited the town to get more than one service. Farmers who got more services in Adwa town were believed to have higher linkage and relied on these services than those who did not or had limited visits to get the services. As a result, a value of 1 was given for those who got a specific non-market service in the town and a value of 0 was given if they did not get the specified service. Finally, the values were added up to get the scores of non-marketing linkage for the household. The scores varied between 0 and 5 with 0 representing farmers who did not get the service in the town and 5 representing farmers who got all the five major mentioned services in the town.

The Adjusted R-squared of 0.195 indicated that the model explained the variation of the level of non-marketing linkage in the study area for 19.5 percent of the sample. The ANOVA statistic of 5.11 (13 df) shows that the model is different from zero and significant at 99 percent of confidence level. The model is fit at 99 percent confidence level (Table 7). The majority of the variables in the regression model had the correct a priori signs or the hypothesized signs as expected. By removing the most insignificant variables, the regression model result showed that only four variables namely Sex of the household head (SEX), Total number of family members (FAMI), Number of farm plots (NFP), and Livestock ownership (TLU) had a significant effect on the level of non-marketing linkage in the study area. The variables that are statistically significant with the level of non-marketing linkage of the households are estimated and presented in Table 7. The following paragraphs provided a discussion of the results.

Sex: This variable refers to male or female-headed households. More importantly, farming is a male-dominated sector because of its strenuous nature. A household head who is female could take on more family and social responsibilities that are activities carried out in rural areas. The sex of a household head is associated with the level of non-marketing linkage negatively and significantly (p=0.005) at a five percent of probability. Thus, if a female heads the household, the level of non-marketing linkage decreased by a factor of 1.023. Moreover, responsible household heads perhaps need services and can frequently visit the town. Male household heads would have an opportunity to visit the town to search for additional income, purchase different items or inputs, and the like. However, this finding is not consistent with that of Seid (2007) that shows the rural-urban linkage between Bahir-Dar and its surrounding rural areas in Ethiopia benefitted females the most through their participation in non-farm activities. Similarly, Akoyu (2013) and Tacoli (2004) states that women are more likely to engage in petty trade and secondary occupation.

Family Size: This is among the determinants in the level of rural-urban linkage a household has, especially concerning poor resource farmers who depend solely on family labour to maintain their farms. It was not surprising that households with larger family members had a better rural-urban linkage. Household size influences the decision of farmers to undertake different income-generating activity measures given household labour is the whole supplier of the required labour for undertaking farming and other activities. Households with abundant labour supply are believed more likely to engage in livelihood diversification or have a higher participation in non-agricultural activities. Labour-rich households feel less constrained to send some of their members to non-farm activity. Thus, as household size increased, intra-household specialization increased. The family size of a household head was associated with the level of non-marketing linkage positively and significantly (p=0.071) at ten percent of probability. The coefficient implies that one unit increase in a family member of household head increased the probability to have a strong non-marketing linkage by 0.127, keeping other variables in the model constant.

Total livestock holding: In line with what was hypothesized at the outset of this study, TLU determined the level of non-marketing linkage negatively. In this study, the status of livestock ownership of the household head is associated with the level of non-marketing linkage of the household head negatively and significantly (p=0.046) at a five percent of significant level. An increase in TLU of a household declined the level of non-marketing linkage of that household by 0.129. This finding is inconsistent with other studies. Therefore, the income earned from livestock and/or livestock products could be reinvested in other agricultural and non-farm activities that would have an insignificant influence on strengthening the level of rural-urban linkage. Those who have more oxen spend more time on their farms than their counterparts. Therefore, it was not a surprise to get a negative sign of the TLU in this regression model. The number of oxen owned also contributed to the low production in the study area. This small ownership of oxen forced one farmer to agree with another farmer to plow their land turn by turn. This situation led the poor farmers to visit the town when their ox was occupied by another partner. Therefore, this affected the linkage negatively.

Number of Farm Parcels: It is expected that, as the number of farm parcels of a farmer increase, the attention and care given to proper farming practices will consume more time. Or the attention and care given to proper farming practices to get more yield would consume more time and finally the household may fail to visit the town frequently. As a result, of such time shortage, the household could not visit the nearby town for other purposes (non-market reasons). As expected, in the analysis for this study, the number of farm parcels took a negative sign and was statistically significant (p=0.001). Other variables held constant, the probability of creating a strong non-market linkage in the study area reduced as the number of farm parcels increases by 0.25 units. This seems to be quite logical, as due to a lack of time to manage the farm plots in the study area most of the households have to spend more time and leading to a lower level of visiting the town for non-marketing purposes. The population pressure leading to the fragmentation of farmlands in the area could be linked to this finding.

CONCLUSION

Different households with different income statuses may show a different level of marketing and non-marketing linkage with the nearby town. Nearly, two-thirds of the sample poor respondents had experienced a strong non-marketing linkage, which was by far higher than those who were rich in economic status (16.4%). The majority (49.5%) of the middle-income group had a weak non-marketing linkage as compared to the poor (26.7%) and rich (23.8%).

This showed that the poor had frequent visits to the town to get additional income from different income-generating activities. In the case of the marketing linkage, about 65% of the sample poor respondents had experienced a weak marketing linkage. The majority of the middle (50.9%) and rich (23.6%) income groups had a strong marketing linkage as compared to the poor (25.5%). This showed that the non-poor income group had frequent visits to the town to sell their product and while the poor visited to get more income from urban-based activities. Therefore, the non-marketing linkage was facilitating livelihood diversification for the poor to improve their livelihood.

The research also set out to identify the major factors determining the marketing (both its orientation and magnitude) linkage. Accordingly, access to irrigation schemes, livestock ownership, bee hive ownership, access to cell phones, number of farm plots, and age was found to be the most important determinants of the orientation of marketing linkage of the households. The magnitude of marketing linkage of households was also influenced by access to irrigation schemes, livestock ownership, bee hive ownership, access to cell phone, and distance to the town.

The final regression model indicated that rural households, those who were younger, with a large number of farm plots, with a larger amount of TLU, with mobile phone services, who own bee hive colonies, those who were engaged in irrigation schemes and close to the town were more likely to have a strong marketing linkage. Hence, to maximize households' benefit from the marketing linkage, attempts should be made to enhance the households' access to irrigation, agricultural technologies, and rural road programs.

Similarly, the linear regression analysis pointed out that rural households that were male-headed, had large family sizes, owned a small amount of livestock, and have a small number of farm plots were more likely to have a strong non-marketing linkage. An attempt to improve the status of these factors, no doubt, contributes greatly to the enhancement of the marketing linkage of the households.

Glossary

Hinterland- refers to the rural areas around a town which is served by urban center.

Household- group of people who live together and make common provision for cooking food or other essentials of living.

Tabia- a term used to indicate the lowest administrative unit at the grassroots level in the rural area.

Wereda- refers to district, including a number of rural 'Tabias' and/or urban 'Kebeles'.

Author Contributions: Conceptualization, M.B. and T.G.; methodology, M.B. and T.G.; software, M.B; validation, M.B. and T.G.; formal analysis, M.B.; investigation, M.B.; data curation, M.B. and T.G..; writing - original draft preparation, M.B.; writing - review and editing, M.B. and T.G.; visualization, M.B.; supervision, T.G.; project administration, M.B. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: We would indebted to thank Aksum University for granting the Ph.D. scholarship and providing logistics for the fieldwork.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 22.05.2023 Revised: 14.06.2023 Accepted: 23.08.2023 Available online: 26.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1015-1026
DOI 10.30892/gtg.49317-1101

DIGITAL TRANSFORMATION RESHAPING TOURISM EDUCATION: INVESTIGATING THE INFLUENCE OF MOOCS ON TEACHING TOURISM FUNDAMENTALS AND LOCAL LORE

Yerlan ISSAKOV
Abai Kazakh National Pedagogical University, Institute of Natural Sciences and Geography, Department of Geography and Ecology, Almaty, Kazakhstan, e-mail: erlan.issakov@gmail.com

Bakyt AKTYMBAYEVA
Al-Farabi Kazakh National University, Faculty of Geography and Environmental Sciences, Almaty, Kazakhstan, e-mail: b.aktymbaeva@mail.ru

Alexandr ARTEMYEV
Al-Farabi Kazakh National University, Faculty of Geography and Environmental Sciences, Almaty, Kazakhstan, e-mail: alexandr.artemyev@kaznu.edu.kz

Gulnar KUBESSOVA
K. Zhubanov Aktobe Regional University, Faculty of History, Aktobe, Kazakhstan, e-mail:gulnar_kubesova@mail.ru

Sholpan ABDREYEVA
Al-Farabi Kazakh Hational University, Faculty of Geography and Environmental Sciences, Almaty, Kazakhstan, e-mail: s.abdreyeva@kaznu.edu.kz

Arzigul SURINA
Almaty Management University, School of Hospitality and Tourism, Almaty, Kazakhstan, email: a.surina@almau.edu.kz

Zeynep TUYEBEKOVA
Almaty Technological University, Faculty of Economics and Business, Department of Tourism and Service, Almaty, Kazakhstan, e-mail: z.tuebekova@mail.ru

Youssef EL ARCHI*
National School of Business and Management of Tangier, Abdelmalek Essaâdi University, Morocco, e-mail: elarchi.youssef@etu.uae.ac.ma

Brahim BENBBA
National School of Business and Management of Tangier, Abdelmalek Essaâdi University, Morocco, e-mail: b.benbba@uae.ac.ma

Lóránt Dénes DÁVID*
John von Neumann University, Faculty of Economics and Business, Kecskemét, Hungary; Hungarian University of Agriculture and Life Sciences, Institute of Rural Development and Sustainable Economy, Gödöllő, Hungary, e-mail: david.lorant.denes@nje.hu

Citation: Issakov, Y., Aktymbayeva, B., Artemyev, A., Kubessova, G., Abdreyeva, S., Surina, A., Tuyebekova, Z., El Archi, Y., Benbba, B., & Dávid, L.D. (2023). DIGITAL TRANSFORMATION RESHAPING TOURISM EDUCATION: INVESTIGATING THE INFLUENCE OF MOOCS ON TEACHING TOURISM FUNDAMENTALS AND LOCAL LORE. *GeoJournal of Tourism and Geosites*, 49(3), 1015–1026. https://doi.org/10.30892/gtg.49317-1101

Abstract: With the rapid development of new innovative technologies in the education system, massive open online courses (MOOCs) have begun to appear. It is very important to evaluate the effectiveness of MOOC in teaching the basics of tourism and local lore to students of the educational program in Geography. Therefore, the purpose of this study was to investigate the effectiveness of teaching the discipline "Fundamentals of organising and conducting tourism and local lore activities" to students of the Geography educational programme of higher education institutions (universities) in Kazakhstan through MOOC. In the study, the elective subject "Fundamentals of organising and conducting tourism and local lore activities" was taught through MOOC on the Eduardo platform. The study consisted of two phases, with 14 students from the Kazakh National Women's Teacher Training University (KNWTTU) as the control group and 19 students from the Astana International University (AIU) as the experimental group. As a result, at the first stage, KNWTTU and AIU students were approximately at the same level. In the second formative stage, students in the control group remained at the initial level, while students in the experimental group showed a high level. In the first phase, the experimental group scored 10.5% "high", 15.8% "medium" and 73.7% "low"; after MOOC training, 31.6% "high", 47.4% "medium" and 21% "low". Thus, the use of MOOC in the formation of tourism and local lore competence of future geography teachers contributes to the improvement of students' knowledge and understanding of their native land and the formation of tourism and local lore skills.

Key words: Moocs, tourism education, digital transformation, local lore, training, Kazakhstan

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* Corresponding author

INTRODUCTION

The rapid development of new innovative technologies has facilitated the evolution of the educational model from traditional face-to-face learning to online distance learning (Hew and Cheung, 2014). The rapid development and integration of new innovative technologies is changing perceptions of all aspects of education (Goopio and Cheung, 2021). MOOCs are a method of online learning available to students anywhere in the world to improve their skills (Altalhi, 2021). MOOC are also an innovative way for teachers to interact with students and a new paradigm for online learning (Soares et al., 2015). A MOOC is a short specialised course, offered for free or a small fee, which gives a certificate of completion (Kaplan and Haenlein, 2016). MOOC usually involve the provision of content through video lectures by renowned experts in a particular discipline (Pappano, 2012). The first modern MOOC on an open platform was held at Athabasca University in 2008 (Kolowich, 2013). In 2015, MOOCs had a total of 4,550 programmes involving more than 570 universities, with 35 million students (Cook, 2016).

Nowadays, with the increasing popularity of MOOCs, tourism and local lore are becoming more and more accessible to the general public. The works of a number of international scholars are valuable in this direction, including the following: Murphy et al. (2015), Annaraud and Singh (2017), Lin and Cantoni (2017) and Kong (2022). Furthermore, although some academics, such as Jackson (2013), doubt the use of MOOC, this innovative learning tool has a significant impact on digital education (Barcena and Martín-Monje, 2014). Nevertheless, although there are studies of MOOC dealing with various topics, research in the context of tourism and local lore is still scarce. Many of them focus on students' visions, leaving gaps in the literature on MOOC educators. In this context, the importance of MOOCs as a tool to improve the quality of higher education and the competitiveness of universities is clear (Hone and El Said, 2016). The emergence of new education formats, such as MOOC, will have a fundamental impact on the higher education sector as well as other sectors (Jo, 2018). In addition, one of the main benefits of MOOCs for universities is that they provide instantaneous data on students' online activity, allowing developers to continuously improve their courses (QS, 2016). Extensive data from digital MOOC platforms can be of great benefit to research on online learning (Diver and Martinez, 2015). Empirical research in this field is therefore needed to understand students' perceptions and evaluate the effectiveness of learning in tourism and local lore education through MOOC.

Thus, the purpose of this study was to investigate the effectiveness of teaching the discipline "Fundamentals of Organising and Conducting Tourism and Local Lore Activities" to Geography students of Kazakhstan higher education institutions through MOOC. This is due to the fact that one of the effective methods of shaping students' tourism and local lore competence in the geography education system is the MOOC. In addition, no one has yet fully explored the possibilities of learning the basics of tourism and local lore through MOOC on the part of Kazakhstani scientists. Therefore, it is very important to explore the possibilities of using MOOCs so that future geography teachers will be competent in organizing and conducting tourism and local lore activities (Berdenov et al., 2021; Gozner. et al., 2021).

The State Programme for the Development of Tourism Industry of the Republic of Kazakhstan for 2019-2025 notes "the insufficient level of qualification of teachers and specialists in tourism and local lore technology. The need for professional development of teachers in tourism and regional studies is 69.2%" (Resolution of the Government of the Republic of Kazakhstan dated May 31, 2019), the indication of the relevance of the issue determines the relevance of the issue. In addition, research aimed at developing tourism and local lore competences of future geography teachers (Honcharuk et al., 2021; Rozhi et al., 2022; Ilieș et al., 2021; Herman et al., 2023; Demeuov et al., 2021; Issakov et al., 2023a; Ogutu et al., 2023) determines the need for appropriate decisions with identifying issues of tourism and local lore activities organisation (Gozner et al., 2021; Cheng et al., 2023; El Archi et al., 2023a; Polishchuk et al., 2023).

Therefore, in accordance with the objectives of the study, we took as the object of study students of the educational program in "Geography" "AIU" located in Astana and "KNWTTU" located in Almaty, Republic of Kazakhstan. The study used modelling, MOOC, data analysis, mathematical, comparative and control methods to shape the tourism and local lore competence of future geography teachers. It is aimed at determining the effectiveness of teaching by means of specially developed curriculum and structural model of the discipline "Fundamentals of organizing and conducting tourism and local lore activities"- MOOC. The study determines the results of revealing and formative research practices on specially prepared control questions. Developing the role of MOOCs in teaching tourism and local lore to future teachers of geography, improving the methodological system of tourism and local lore research at the university and organising tourism activities in education will be the focus of the relevant decisions. This study, in comparison, helps to assess the current tourism and local lore competence of future geography teachers in Kazakhstan universities, to identify the importance of studying and promoting students' knowledge about their native land, to form tourism and local lore skills and to improve students' knowledge.

In the realm of tourism and hospitality education, an increasing number of MOOCs have become accessible to the general public (Hsu, 2018). In a sector facing workforce shortages, MOOCs offer valuable opportunities for further training to in-service personnel. Furthermore, they serve as a knowledge dissemination channel for individuals aspiring to work in this field, leading to rapid growth in hospitality and tourism subjects delivered through MOOCs in recent years (Xiao et al., 2019). Exploring how learners can best benefit from MOOCs is a compelling area of study (Hood et al., 2015). Despite its significance, empirical research on the application of MOOCs in hospitality and tourism education remains limited (Veletsianos et al., 2015).Previous research (Chowdhury, 2020; Sharma et al., 2022) has highlighted the positive impact of technology-mediated education on enhancing overall learning effectiveness and satisfaction among learners. These studies also underscored the significance of user-friendliness in technology-mediated teaching tools, as it plays a crucial role in accelerating the adoption of online education by students. Additionally, Wieser and Seeler (2018) found that integrating technology into the education system presents an opportunity to cater to students in an advanced manner. The authors emphasized the necessity for higher education institutions to take initiatives in implementing various technology-based teaching-learning tools.

According to Deale (2015), technology's impact on education and the hospitality and tourism industry is pervasive, spanning across various sectors such as lodging, foodservice, meetings, special events, and even education itself. One notable technological advancement in this domain is MOOCs. However, empirical research on MOOCs is still in its early stages (Ossiannilsson et al., 2016). A recent study conducted by Kala and Chaubey (2023) has demonstrated a significant correlation between student engagement and perceived learning in the realm of tourism-Massive Open Online Courses (MOOCs). The research proposed various approaches to ensure student engagement and perceived learning, contributing to a positive attitude towards MOOC platforms and the institutions delivering these courses.

This study aimed to explore the effectiveness of using MOOCs as a means of teaching the discipline "Fundamentals of Organising and Conducting Tourism and Local Lore Activities" to Geography students in higher education institutions in Kazakhstan. The choice to investigate this approach stems from recognizing MOOCs as an effective method for cultivating students' competence in tourism and local lore within the geography education system. Despite its potential, the possibilities of learning tourism and local lore through MOOCs have not been thoroughly explored by Kazakhstani scientists until now. Hence, this research becomes particularly significant in shedding light on the untapped potential of MOOCs for developing the knowledge and skills required by future geography teachers in organizing and conducting tourism and local lore activities. By examining this novel approach, the study seeks to contribute valuable insights to enhance the competence and pedagogical practices of geography educators in Kazakhstan.

MATERIALS AND METHODS

The methodological basis of the study is to define the place of tourism and local lore competence by identifying and systematising the professional competences needed to train future geography teachers (Mazbayev, 1993; Ozerov, 2021; Benedyuk, 1999; Konstantinov, 2003; Abisheva and Abdreeva, 2019; Ivleva, 2006; Omarov, 2008; Serikova, 2009, Vukolov, 1997; Smirnov, 2012); Assessment of the possibility of forming tourism and local lore competence of geography teachers according to the components "motivational and emotional-value", "acquisition of new activity-cognitive and subject-professional knowledge" and "self-development and research competence" (Braslavska and Roghi, 2019; Maslova et al., 2020; Yarmakeev et al., 2016); developing your own structural model for developing tourism and local lore competence (Rozhi et al., 2023; Melnyk et al., 2019); determining the effectiveness of mobile GIS applications in organising and carrying out tourism and local lore activities (Lee, 2020; Sebastian and De Miguel, 2017; Wang et al., 2017); Preparation of the teaching package for the discipline "Fundamentals of organising and conducting tourism and local lore activities", its preparation and testing in practice of the MOOC training programme (Golovanov, 2008; Sadykov and Gizzatzhanova, 2022; Batyrbekov et al., 2022) there were conceptual ideas.

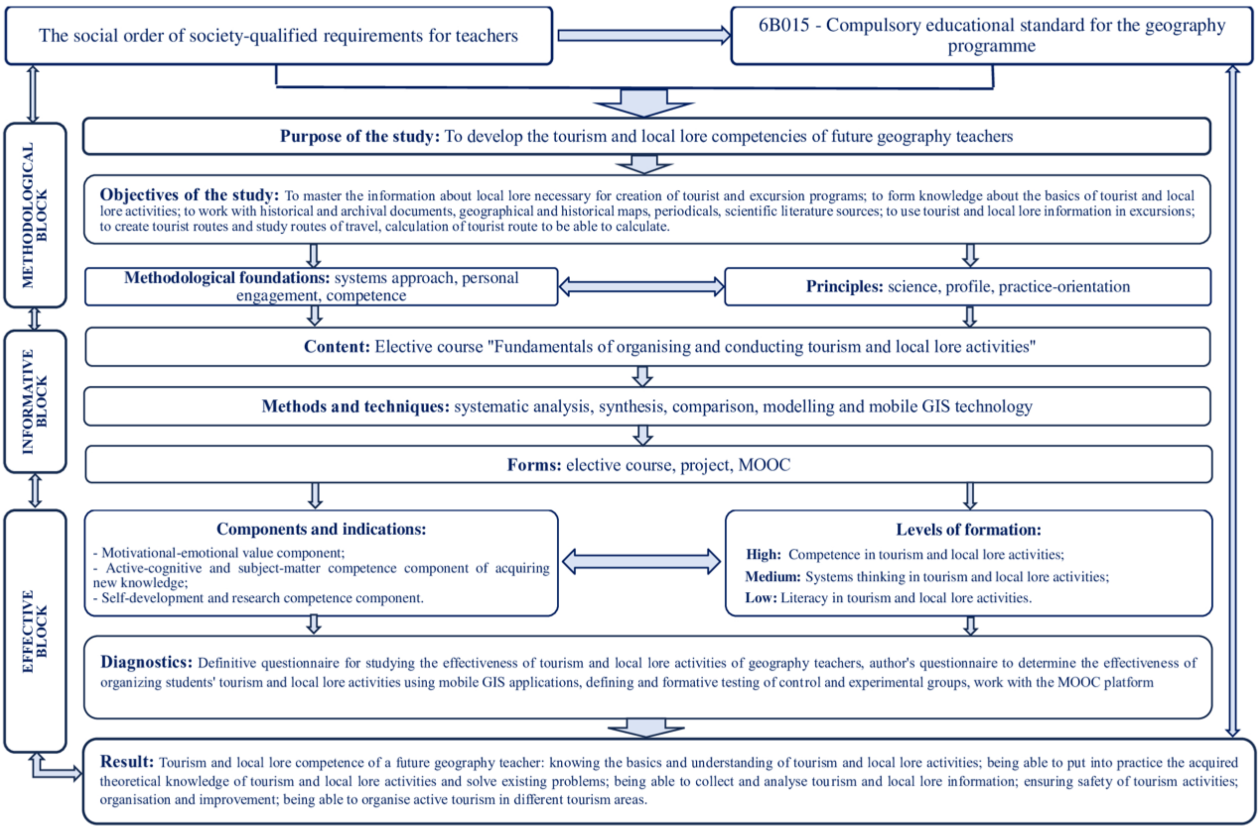

Figure 1. Structural model of tourism and local lore competence formation for future geography teachers (Source: by the authors)

The study aimed to assess the effectiveness of teaching the discipline "Fundamentals of organising and conducting tourism and local lore activities" to students in the geography programme of the University of the Republic of Kazakhstan through MOOC. Therefore, after conducting a literature review, we developed our own structural model of understanding the basics of organising and conducting tourism and local lore activities, having established that all components of tourism and local lore competence of future geography teachers are closely interrelated (Figure 1).

The methodological and structural block of the model includes: *methods* (activity-based, systemic, personal, technological, competence-based); *principles* (scientific, visual, problem-based, developmental and educative learning, activity and independence, area studies); *competences* (motivational-emotional-valuable, activity-cognitive and research competences). The goal (improving future geography teachers' training for local lore and tourism work on the basis of competence-based approach), tasks (formation of positive motivation, transfer of subject knowledge and skills of local lore and tourism research, personal qualities and competences to students) are distinguished within the target block of the model.

In addition, based on this model, we prepared a curriculum for the discipline "Fundamentals of organising and conducting tourism and local lore activities" and a MOOC course on the Eduardo platform for learning through MOOCs. The MOOC course consists of 3 modules and 15 lectures and 15 practical sessions. During this study, 19 third year students of "Geography" educational programme of AIU took part as experimental group and 14 second year students of "Geography-history" educational programme of KNWTTU took part as observation group.

In the first stage of the study, the answers to the "defining" questions were obtained, and in the second stage, the "formative" questions were obtained. Assessment of answers to the question was evaluated as "high level", " medium level" and "low level":

High level: pupils show all the most important aspects of the history, nature, demography, ethnogeography, culture, economy, ecology of their native land, give specific examples.

Medium level: students describe individual aspects of tourism and local lore (e.g. geographical, historical, natural, ecological, etc.), give specific examples.

Low level: students do not answer or do not know about the history, nature, demography, ethno-geography, culture, economy, ecology of their native region, have difficulties in giving examples.

We presented MOOC lessons on the discipline "Fundamentals of organising and conducting tourism and local lore activities", developed on the Eduardo platform using the ZOOM software, and organised an explanatory lesson. The explanatory work started with a presentation of the Eduardo platform, then we provided information about the lecture and presentation packages, video lectures, test questions, quiz, documentation possibilities and the 3 MOOC core modules. The control group was informed about the content of the discipline "Fundamentals of organising and conducting tourism and local lore activities". The study lasted for a fortnight from 17.04.2023 to 30.04.2023.

In the first stage of the study to determine the effectiveness of teaching the discipline "Fundamentals of organising and conducting tourism and local lore activities" through MOOC, we obtained students' answers to the defining control questions from the experimental and control groups.

In the second stage of the study we conducted the results of the formative experiment in each module after studying the 3rd module of the discipline "Fundamentals of organizing and conducting tourism and local history activities" through the MOOC of the experimental group. We received answers to the specially designed questions (via google forms) in the 3rd module from the participants of the forming experiment and the control group.

The aim of obtaining answers to these questions was to test the effectiveness of the specially developed tourist-regional methodology. During the formative experiment while testing the formation of the main structural elements of professional competence in tourism and local lore issues, the independently proposed methodology of training students in the educational programme "Geography" of pedagogical universities in tourism and local lore training was taken as a basis. After each stage of tourism and local lore activities the answers to the specially developed questions were obtained: they clearly show the content of tourism and local lore activities, the work of the systemic didactic principles, teaching-methodological and integration processes.

Figure 2. Research Flowchart (Source: compiled by the authors)

RESULTS AND DISCUSSION

As a result of the study in the first stage, we received answers to the determining control questions aimed at determining the effectiveness of teaching the discipline "Fundamentals of organizing and conducting tourism and local lore activities" through MOOC from 3rd year students of the educational programme "Geography" of AIU and 2nd year students of the educational programme "Geography-History" of KNWTTU. Answers to the questions of the defining first stage from the control and experimental groups can be seen in Table 1 and figure 3 below.

In the second stage of the research, the first module of tourism and local lore training was conducted after the experimental group had studied the MOOC. The questions of the formative experiment were: concept of tourism and local lore activities, local lore component in geographical education, tourism component, target character of tourism and local lore activities, variety of forms, the most popular form of tourism and local lore competence formation-excursion. Answers to the questions developed in module 1 (via google forms) were received from the participants of the forming experiment and the control group (Table 2).

Table 1. Answers/results of defining questions (for module 3) (Source: compiled by the authors)

№ s/n	Modules	Group	Number of students	Nature of answers by level, %		
				High	Medium	Low
1.	Module 1: Issues developed for the module "Tourism and local lore as a science"	E C	19 14	10.5 7.1	15.8 21.4	73.7 71.5
2.	Module 2. Developed questions on the module "Tourist and local lore resources of the Republic of Kazakhstan"	E C	19 14	15.8 -	21 14.2	63.2 85.8
3.	Module 2. Questions developed on the module "Technology for organizing and conducting tourism and local lore activities".	E C	19 14	5.2 14.2	10.5 7.1	84.3 78.7
4.	**The result of the defining experiment**	**E** **C**	**19** **14**	**10.5** **7.1**	**15.8** **14.2**	**73.7** **78.7**

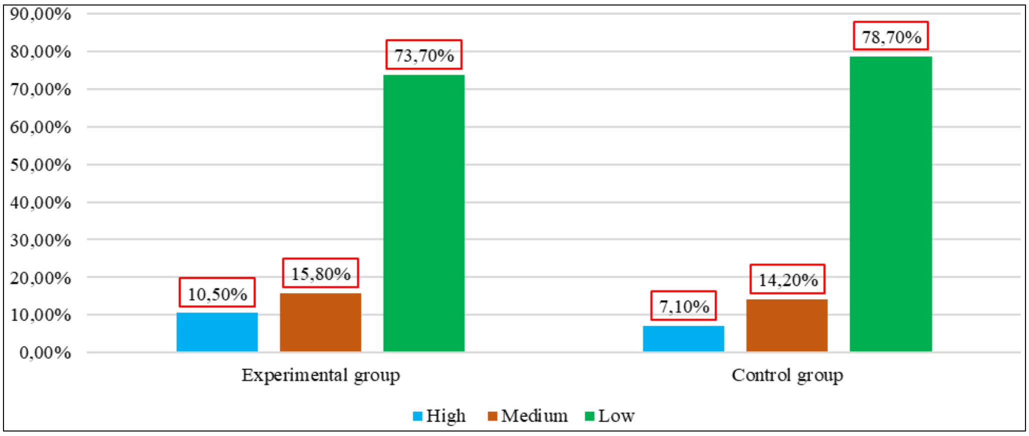

Figure 3. Comparison of answers to the defining questions (Source: compiled by the authors)

Analysis of the result:

- Students in the experimental and control groups have a predominant knowledge of the natural features of their native land. There is no (or insignificant) knowledge of the ethno-geography of the native land;

- The knowledge and skills of students in the control group in tourism and local lore activities were lower than those of students in the experimental group.

The effectiveness of implementing methodological ways of improving tourism and local lore training of future geography teachers became known through listening to the MOOC lectures.

Table 2. Answers/results of questions to determine the results of the formative experiment
(in module 1 " Tourism and local lore as a science") (Source: compiled by the authors)

№ s/n	Module 1	Group	Number of students	Nature of answers by level, %		
				High	Medium	Low
1.	Lecture 1. Developed questions on "Concepts, essence and purpose of tourism and area studies"	E C	19 14	47.4 7.1	52.6 14.2	- 78.7
2.	Lecture 2. Developed questions on "the development and historical stages of local lore in Kazakhstan"	E C	19 14	52.6 14.2	36.9 21.4	10.5 64.4
3.	Lecture 3: Development of questions on "The place and role of excursions in the organisation of tourism and local lore activities"	E C	19 14	26.3 -	68.4 28.6	5.3 71.4
4.	**Result for the first module**	**E** **C**	**19** **14**	**42.1** **7.1**	**52.6** **21.4**	**5.3** **71.5**

Table 3. Answers to questions / results of the formative experiment
(on module 2 "Tourism and local lore resources of the Republic of Kazakhstan") (Source: compiled by the authors)

№ s/n	Module 2	Group	Number of students	Nature of answers by level, %		
				High	Medium	Low
1.	Lecture 4. Developed questions on "Tourist and local lore objects of the East Kazakhstan economic region"	E C	19 14	42.1 28.6	47.4 35.7	10.5 35.7
2.	Lecture 5. Developed questions on "Tourist and local lore objects of the North-Kazakhstan economic region"	E C	19 14	26.4 14.2	36.8 21.4	36.8 64.4
3.	Lecture 6. Developed questions on "Tourist and local lore objects of the central economic region of Kazakhstan"	E C	19 14	36.8 21.4	42.1 21.4	21.1 57.2
4.	Lecture 7. Developed questions on "Tourist and local lore objects of the South Kazakhstan economic region"	E C	19 14	36.8 14.2	47.4 28.6	15.8 57.2
5.	Lecture 8. Developed questions on "Tourist and local lore objects of the West Kazakhstan economic region".	E C	19 14	42.1 28.6	36.8 35.7	21.1 35.7
6.	**Result for the second module**	**E** **C**	**19** **14**	**36.8** **21.4**	**42.1** **28.6**	**21.1** **50**

The questions on the 2nd module of the forming experiment "Tourist and local lore resources of the Republic of Kazakhstan" are made on tourist local lore forms of the East Kazakhstan, North Kazakhstan, Central Kazakhstan, South Kazakhstan and West Kazakhstan economic regions, aimed at revealing and improving the quality of knowledge, local lore knowledge of students on the geography of their native land (Table 3).

Analysis of the result:

- Compared to the results of the defining question, the level of local history knowledge and skills of the students in the experimental group increased significantly;
- The students in the control group had an insignificant increase in knowledge and skills compared to the results of the defining questions at the initial stage;
- The number of students with high level of answers prevails in the experimental group, the control group is dominated by the average level of answers.

In this modular stage of local lore training for future geography teachers, we focused on the following tourism and local lore sites in economic areas:

- *East Kazakhstan Economic Region:* One-Minaret Mosque in Semey, monument to A.S. Pushkin, Shilikty Tsar's Mound, Katon-Karagai State National Nature Park, Tarbagatai State Zoological Reserve, Abai House of Education, Ahmet Riza Madrasah, Yamyshev Gate, F.M. Literary and Memorial Museum. Dostoevsky, building of local history museum (governor's house), Republican literary and memorial museum of Abay, building of local history museum (governor's house), Republican literary and memorial museum of Abay, building of Abay theatre, monument to victims of Semipalatinsk nuclear test site, memorial complex "Abay - Shakarim", monument "Enlik-Kebek", Shulba water reservoir, Borovlyansk pine forest, Alakol lake;
- *North Kazakhstan Economic Region:* Kokshetau and Bayanaul resorts, Korgalzhyn and Naurzum nature reserves, forests and lakes of the Kokshetau mountains, tourist and local lore sites in Astana: Baiterek, Independence Palace, Kazakh Yeli Monument, Nur Alem, Khan Shatyr shopping mall, Nurzhol Boulevard, Azret Sultan Mosque, Astana Opera Theatre, Astana Ballet Theatre, Barys Arena Sports Complex, Astana Arena Stadium, Alau Ice Rink;
- *Central Kazakhstan Economic Region:* Karaganda Museum of Fine Arts, Karaganda Academic Theatre of Musical Comedy, Karaganda Regional Central Mosque, Aksoran Kyzylaray Mountain, Kazakh Small Hills, Lake Balkhash, Ulytau, large mounds, burial grounds, mausoleums of Begazy Dandybai culture, stone symbols, petroglyphs, mines, copper, tin, silver, gold and metal smelting furnaces and other ancient monuments;
- *South Kazakhstan economic region:* Otrar city, Arystanbab mausoleum, Khizir tower, Khoja Ahmed Yasawi mausoleum, Pevica Kum natural monument, Charyn gorge, Altyn Emel national park, architectural mausoleums Aisha Bibi, Karakhan, Babadja Khatun, Aksu-Zhabagly reserve, Taukehan, Zhangirhan, Abylaihan, Kazybek Bi Museums, Kazygurt mountain, Zhanakorgan sanatorium, Kolsai lakes, Ile-Alatau national park, Almaty central museum, Shymkent central Akmeshit, Panfilov park, Koktobe, Alma-Arasan ski resort, Kokzhailau, Samal, Sauran, Sairam, Baikonur cosmodrome;
- *West Kazakhstan economic region:* Imangali mosque in Atyrau, Beket-Ata underground mosque, lake Shalkar, Budarinsk reserve, Irgiz-Turgay reserve, Mugalzhar mountain, Ustyurt reserve, Karakiya-Karakol reserve, Kendirli bay, Caspian Sea, Ural city, West Kazakhstan Regional Museum of Local Lore, Yemelyan Pugachev museum, Beshoky plateau, Inder mountain, Imankara cave, Sarayshyk ancient settlement excavations, Bozzhyra gorge, Sherkala mountain, Karakiya depression.

The questions of the formative experiment, 3/1 were developed on the lecture materials of the 3rd module " Technology of organisation and conducting of tourist and local lore activities": the concept of a tourist route, standards and discharge requirements in tourism, stages of organisation and conducting of a tourist trip, formation of a route, choice of equipment, food and medical support during a trip, definition of a tourist route, cost estimate and documentation. The answers/results of the students' control questions on the technology of organising and conducting tourism and local lore activities at the end of the 3rd stage of systematic tourism and local lore learning during the formative experiment are presented in Table 4.

Table 4. Answers/results of the test questions of module 3 "Technology for organising and conducting tourism and local lore activities" (Source: compiled by the authors)

№ s/n	Module 3	Group	Number of students	Nature of answers by level, %		
				High	Medium	Low
1.	Lecture 9. Developed questions on "The concept of a tourist route"	E C	19 14	21.1 7.1	42.1 14.2	36.8 78.7
2.	Lecture 10. Developed questions on "Standards and category requirements in tourism"	E C	19 14	10.5 21.4	36.8 7.1	52.7 71.5
3.	Lecture 11. Developed questions on the topic "Stages of organising and conducting a tourist trip"	E C	19 14	10.5 21.4	57.9 14.2	31.6 64.4
4.	Lecture 12. Developed questions on the topic "Designing a route. Selection of equipment. Application of mobile GIS".	E C	19 14	15.8 14.2	47.4 21.4	36.8 64.4
5.	Lecture 13. Developed questions on "Nutrition and health care in camping"	E C	19 14	10.5 14.2	52.7 21.4	36.8 64.4
6	Lecture 14-15. Developed questions on the topic "Estimates of tourism itinerary. Documentation"	E C	19 14	26.3 7.1	47.4 7.1	26.4 85.8
7.	**Result for the third module**	**E** **C**	**19** **14**	**15.8** **14.2**	**47.4** **14.2**	**36.8** **71.6**

Table 5. Answers/results to the final questions of the formative phase (in module 3) (Source: compiled by the authors)

№ s/n	Modules	Group	Number of students	Nature of answers by level, %		
				High	Medium	Low
1.	Module 1: Issues developed for the module "Tourism and local lore as a science"	E C	19 14	42.1 7.1	52.6 21.4	5.3 71.5
2.	Module 2. Developed questions on the module "Tourist and local lore resources of the Republic of Kazakhstan"	E C	19 14	36.8 21.4	42.1 28.6	21.1 50
3.	Module 2. Questions developed on the module "Technology for organizing and conducting tourism and local lore activities".	E C	19 14	15.8 14.2	47.4 14.2	36.8 71.6
4.	**Result of the formative experiment**	**E** **C**	**19** **14**	**31.6** **14.2**	**47.4** **21.4**	**21** **64.4**

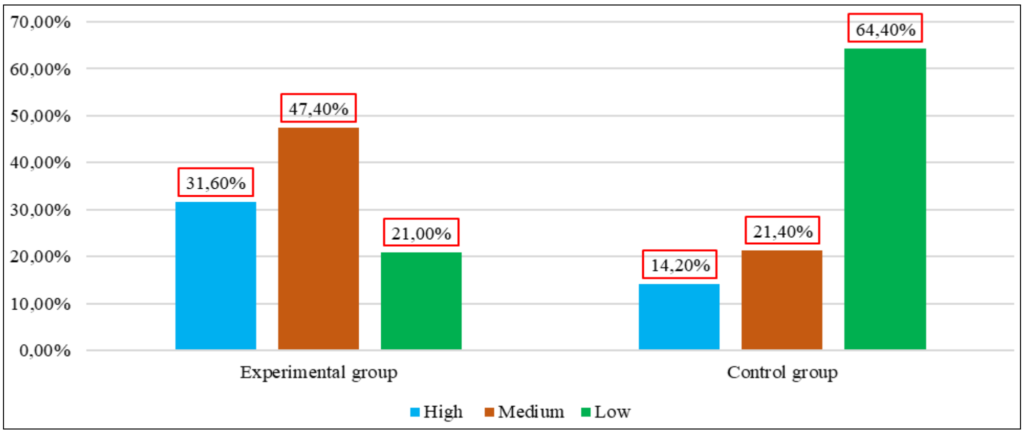

Figure 4. Results of the formative experiment (Source: compiled by the authors)

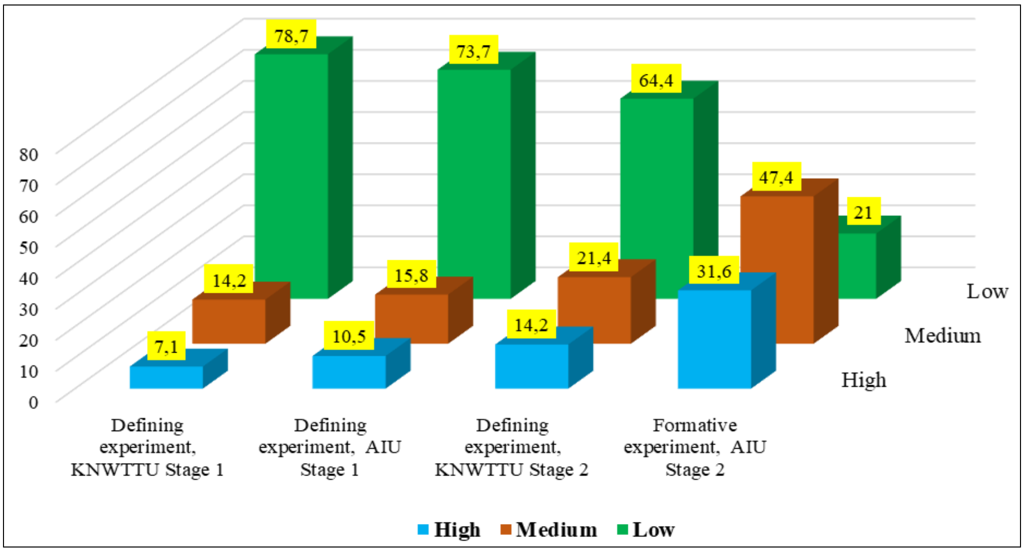

Figure 5. Comparison of the results of the defining and formative experiment (Source: compiled by the authors)

This stage of tourism and local lore competence formation for future geography teachers:

- *The concept of a tourist itinerary:* the pre-planned route of a tourist, the result of the design of a tourist activity, the technological documents, the season of the tourist, the itinerary, the duration, the methods, the content and the programme of sports and recreational activities, the classification of tourist itineraries and the classification of transtou rs by means of transport;

- *Standards and category requirements in tourism:* categories of difficulty of tourist trails, duration of a hike - trail, the main part of the trail, the established level of difficulty, requirements for the duration and length of the trail, categories of difficulty of cave tourism, categorisation of mixed trails, non-category tourist trails and trips, characteristics of non-category tourist trails and trips by difficulty, group composition, leader of a sports trip and requirements for the qualification of the tourist;

- *The stages of organising and conducting a hiking trip:* self-development of a hiking trip, components of organising and conducting a hiking trip, development of a planned hiking trip, formation and promotion of a tour and marking of hiking trips, ecological trails, development of a hiking trip, stages of developing a hiking trip, group formation, group tasks in a trip, determination of an area and type of trip, preparation of a hike and result of a trip and report on a hike;

- *Development of the route route. When selecting equipment, the following were taken into account:* types of hiking equipment, group general and special equipment, individual, general and special equipment, types of hiking equipment in a water trip, general (used in any type of trip and in any season) group equipment, general list of group accessories, general list of individual equipment and composition of repair kits in a water trip;

- *Nutrition and health care for the camping trip:* preparing a camping menu, stages of menu planning, daily ration, set of products, food list: amount, cost, menu for one camping day, calculation of food cost for 10 days, composition of first aid kit, set of injections and medicines, first aid;

- *Itinerary estimate. Documentation:* budget of a tourist trip, itinerary and route booklet, documents for a categorised trip, application to the search and rescue service, itinerary passport, cartographic material, tourist maps, mountain pass charts, river water obstacle charts, technical description of the trip, group activity, travel time, convenient overnight places, places and methods of insurance, technique of difficult parts of the water route, samples of normative documents, literature sources and report.

Thus, the second stage of the experiment on formation of tourism and local lore competence of future geography teachers is characterized by the revival of students' research work. The results of the research showed that systematic training of future geography teachers in tourism and local lore activities is one of the factors stimulating scientific research in the field of tourism and local lore activities in accordance with the curriculum.

However, the main factor contributing to the personal and professional development of future geography teachers is its implementation based on different methodological approaches (Kadyrbekova et al., 2019). The research devoted to the problems of future teachers' training does not sufficiently consider the possibilities of the competence approach in purposeful design of tourist and local lore activities, as a result of which the level of tourist and local lore competence formation in future geography teachers with deep knowledge of content, organizational forms, methods and technologies of its implementation can be increased, which confirms the need for theoretical substantiation and practical solution of this problem.

In the modern system of geographical education the implementation of tourism and local lore activities and the formation of a local image of the region remain one of the leading directions in the teaching of geography. Therefore, the formation of tourism and local lore competences in geography teacher training is aimed at introducing students to the basics of tourism and local lore, studying their own country and native land, equipping them with cognitive skills and abilities (Issakov et al., 2023b; Dávid et al., 2011). Also the most important strategic task of higher education today is the professional all-round development of the younger generation. Tourism and local lore activities are one of the most effective means of complex influence on the formation of their personality (El Archi et al., 2023b; Issakov et al., 2021). Here, thanks to the teacher's good judgement, the foundations of cultural education are formed: the moral, political, aesthetic, labour, physical, mental and psychological horizons of the pupils are broadened (Ayzhan et al., 2021).

At the same time, the defining values necessary for future geography teachers to carry out tourism and local lore work are: education, reliability, fairness, self-esteem, tolerance, creativity, interest in their work and professional experience (Zueva, 2017; Dávid, 2009). The model of preparing future geography teachers for tourism and local lore work on the basis of competence approach and its components is one of the main directions of geographical higher education reform and technology of tourism and local lore competence formation. In this regard, we believe that the development of students' value worldview, vision, feeling and understanding of the environment, orientation, personal self-improvement, knowledge assimilation will allow them to conduct tourism and local lore activities.

Moreover, it will be worth looking at scholars' views on cross-border activities at a later stage (Dávid et al., 2008; Dávid and Szűcs, 2009; Bujdosó, et. al., 2011; Bujdosó et al., 2015; Herman et al., 2020).

Tourism and local lore - the ability to acquire cognitive activity, knowledge and research skills in the field of tourism and local lore, as a personal characteristic that combines important qualitative characteristics, the manifestation of purposeful cognitive activity of students to study the territory of their native land (Duda-Gromada 2010, Dávid et al., 2012a; Dávid et al., 2012b; Gadzhiev, 2021). Formation of future geography teacher's motivation to organize tourism and local lore activities using mobile GIS - applications; importance of personal motives for increasing the value of his/her mobile GIS applications and quality of training in tourism and local lore activities; value of student geographer's attitude to conducting scientific research, which allows creative approach to solving educational tasks and improving the educational process (Issakov et al., 2022; Beták et al., 2023).

In addition, the possibilities and effectiveness of using the Eduardo platform in the teaching of MOOC lessons were identified based on the results of teaching the discipline "Fundamentals of organising and conducting tourism and local lore activities" through MOOC. Existing research has also identified different aspects of students' participation in MOOC, such as behavioural participation (Moskal et al., 2015) and emotional and social involvement (Daniels et al., 2016). Correlational studies have also examined the relationship between key factors associated with participation and learning, such as course completion and attainment (Xiong et al., 2015; de Barba et al., 2016).

The application of local lore activities also contributes to regional competitiveness and maintain cultural heritages (Dávid, et al. 2003; Dávid, 2004; Dávid et al., 2007; Bujdosó and Dávid, 2013; Deac, et al. 2019). However, there is no consensus on how to formulate and measure student participation in MOOCs. Differences in the formulation and practical application of student participation in MOOCs make it difficult to compare the results of different studies and to draw conclusions about the preconditions and effects of participation in MOOCs (Deng et al., 2019). However, student participation in a MOOC can be seen as a diagnostic tool to provide general feedback to teachers.

CONCLUSIONS

The rapid development and integration of innovative technologies have brought about a significant shift in the educational landscape. MOOCs, with their flexible accessibility and diverse learning opportunities, have emerged as a pioneering approach in tourism education, reshaping the way students learn and teachers interact with their learners. As the prevalence of MOOCs continues to expand, their impact on global education is likely to be increasingly transformative and influential. This study aimed to investigate the effectiveness of utilizing Massive Open Online Courses (MOOCs) to teach the discipline "Fundamentals of Organising and Conducting Tourism and Local Lore Activities" to Geography students in Kazakhstan's higher education institutions. The findings of this research shed light on the potential benefits and implications of incorporating MOOCs into the geography education system.

Firstly, the study highlighted the cost-effectiveness and flexibility of MOOCs, which offer specialized courses either free of charge or at a nominal fee. The preference for digital learning modules over traditional ones indicates a shift towards embracing innovative technologies in tourism education, making MOOCs an attractive option for learners seeking accessible and self-paced learning opportunities.

Secondly, the structural model of training through MOOCs emerged as a comprehensive approach to developing tourism and local lore competences among future geography teachers. By encompassing the formation of mental abilities, advanced knowledge in tourism and local lore, preparation for research activities, and the ability for professional development in tourism and local lore practice, MOOCs offer a holistic and well-structured learning experience.

Thirdly, the experimental methodology used in teaching the "Fundamentals of Organising and Conducting Tourism and Local Lore Activities" through MOOCs demonstrated its effectiveness as an educational tool. The significant improvement observed in the experimental group's performance compared to the control group underscores the value of incorporating MOOCs into the teaching process to enhance students' learning outcomes.

Lastly, teaching tourism and local lore through MOOCs not only enriches students' cognitive abilities and knowledge but also fosters the development of essential personal qualities. This integration of cognitive activity, research skills, and important qualitative characteristics contributes to the comprehensive growth of future geography teachers, preparing them to become competent professionals in organizing and conducting tourism and local lore activities.

This study has provided valuable insights into the potential benefits of using MOOCs for teaching tourism and local lore to Geography students. By embracing digital learning technologies and exploring the effectiveness of MOOCs, Kazakhstan's higher education institutions can prepare future geography teachers with the necessary knowledge, skills, and competences for organizing and conducting tourism and local lore activities effectively. As the landscape of education continues to evolve, this research contributes to the broader understanding of leveraging technology for educational advancement and showcases the importance of continual exploration and integration of innovative teaching approaches.

Author Contributions: Conceptualization, Y.I. and L.D.D.; methodology, Y.I. and L.D.D.; software, Y.I. and L.D.D.; validation, Y.I. and L.D.D. and B.A.; formal analysis, Y.I. and L.D.D. and A.A.; investigation, Y.I. and L.D.D. and G.K.; data curation, Y.I. and L.D.D. and S.A. and A.S.; writing - original draft preparation, Y.I. and L.D.D.; writing - review and editing, Y.E.A. and B.B. and Z.T. and B.A.; visualization, A.A. and G.K. and S.A. and Y.E.A. and B.B.; supervision, Y.I. and L.D.D. and Z.T. and A.S.; project administration, Y.I. and L.D.D. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: We would like to thank the 3rd year students of the Astana International University and the 2nd year students of the Kazakh National Women's Teacher Training University for participating in the study and contributing to our research.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 23.05.2023 Revised: 17.07.2023 Accepted: 24.08.2023 Available online: 26.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1027-1036
DOI 10.30892/gtg.49318-1102

ASSESSMENT OF PROTECTED AREA MANAGEMENT PRACTICES IN THE NIGERIAN NATIONAL PARK SERVICE: THE CASE OF CROSS RIVER NATIONAL PARK

Ayuk A. NCHOR*

Department of Forestry and Wildlife Resources Management, University of Calabar, Nigeria, e-mail: nchorayuk@yahoo.om

Beshel A. URIM

Department of Forestry and Wildlife Resources Management, University of Cross River State, Nigeria, e-mail: beshelogar@gmail.com

Edimorphy T. KEJUO

Department of Forestry and Wildlife Resources Management, University of Calabar, Nigeria, e-mail: edimorphykejuo@yahoo.com

Citation: Nchor, A.A., Urim, B.A., & Kejuo, E.T. (2023). ASSESSMENT OF PROTECTED AREA MANAGEMENT PRACTICES IN THE NIGERIAN NATIONAL PARK SERVICE: THE CASE OF CROSS RIVER NATIONAL PARK. *GeoJournal of Tourism and Geosites*, 49(3), 1027–1036. https://doi.org/10.30892/gtg.49318-1102

Abstract: The study examined the level of Protected Area Management Practices in the Nigerian National Park Service. Primary data were collected through interviews and Focus Group Discussion. Secondary data involved a reconnaissance survey of the park for two months to assess the situation on ground in the study area. Data obtained were analyzed using descriptive statistics as well as chi-square. Results of the study revealed that management strategies adopted in the operations of the park were inadequate for effective park management. Adequate funding and provision of modern patrol equipment were considered necessary for effective management of the park.

Key words: Protected area, management practices, Focus group discussion, management strategies, funding, effective park management

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INTRODUCTION

Protected areas (PAs) are key sites where conscious efforts are made for the preservation of wildlife and the sustainability of ecosystems (Craigie et al., 2010 and Stolton et al., 2015). However, the state of biodiversity is deteriorating globally, compromised by anthropogenic threats that have increased in recent decades (Pereira et al., 2012). The effectiveness of wildlife protection varies greatly across PAs, ranging from effective to almost entirely ineffective with poor or a complete lack of any protective measures (Craigie et al., 2010; Leverington et al., 2010). Currently, many West African countries are affected by the same kinds of land-use development, i.e., urbanization and agricultural production that in the past destroyed the original forest cover of many parts of Europe, the United States of America, and large areas of East Asia (International Cooperation and Development, 2016). However, societal dynamics in the twenty-first century are connected with the numerous conservation issues facing PAs. Protected area managers are confronted with relentless increasing pressure to cope with these changes. Assessments of PA management effectiveness offer valuable information about the threats and other management issues that PAs face (Schulze et al., 2017).

These assessments create opportunities for all stakeholders, especially policymakers, to improve their conservation strategies, reallocate budget expenditures, and develop strategic responses to the most prevalent threats and management weaknesses (Leverington et al., 2010; Watson et al., 2014). There is, therefore, a call for the periodic assessment of PAs in terms of their management effectiveness, as reported by many authors (e.g., Goodman 2003; Kolahi et al., 2013). In Ghana, the International Union for Conservation of Nature and Natural Resources/Program on African Protected Areas and Conservation (IUCN/PACO, 2010) assessed the management effectiveness of many PAs from the perspective of government authorities, with little or no inclusion of the views and knowledge of local communities, non-governmental organizations, district assemblies, the Environmental Protection Agency (EPA), and other relevant local stakeholders.

However, the local communities are directly dependent upon the natural resources and land-use decisions of these areas for their basic needs and livelihoods. Planning and implementing systems for managing PAs that exclude local communities and other stakeholders have resulted in various conflicts and frustrations, including dislocation, violence, poaching, and poverty among indigenous communities (Amaja et al., 2016; Frank, 2016). Involving local communities and other Stakeholders in the process can contribute to the effectiveness of PA management since people's perceptions and attitudes towards PAs are influenced by their involvement in the PA management activities and decision-making (Ramakrishnan, 2007). In a similar study, community participation in tourism development ensures the inclusion of local communities in the planning, decision making and implementation of tourism development programmes and projects (Nchor, 2021). It is therefore vital that local communities and other stakeholders be included in PA management

* Corresponding author

effectiveness assessments to bring together a range of vantage points and knowledge for both, aligning interests and innovative problem-solving. There is a global increase in the trend of conserving natural resources through the designation of areas where various types of resources are put under protection. More than 100,000 designated protected areas have been listed in the world database on Protected Areas. These cover over 11.4% of the Earth's land surface along with marine protected areas (Dudley et al, 2005). During the fourth world congress in 1992, the prior paradigm focusing on the conservation of species and habitat shifted from adhoc management of resources based on past approaches to deliberate protection with Laws, Acts, Policies, Regulations and Management Plans. These strategies and innovations are meant to guide management needs and provide for effective management of protected areas across the continents.

The congress identified effective management as one of the four major protected area issues of global concern. There was therefore a call for International Union for the Conservation of Nature (IUCN) to further develop a system of monitoring management effectiveness of protected areas in order to get a more logical and transparent basis for planning and for allocation of resources. This was further emphasized in the 5th IUCN World Parks congress held in Durban in 2003. The congresses also laid emphasize on such issues as "How well is the global protected areas estate managed? Are this areas meeting their conservation objectives? An evaluation of management effectiveness is therefore a first step to diagnose the ills of these areas and prescribe correct treatment". The congresses also addressed the issue of building a global database containing inform ation on the management effectiveness of the protected area estate. This has also been considered by the Convention on Biological Diversity (CBD) as an important part of the protected area management and has been addressed in its programme of work. Accordingly, one of the CBD's programme elements is "to evaluate and improve the effectiveness of protected area management". It has emphasized the need to evaluate the effective management in at least 30% of each party's protected areas by 2010 and in the nationally protected area systems and, as appropriate, ecological works (Dudley et al, 2005). It has also commenced developing and adopting appropriate methods, standards, criteria and indicators for evaluating the effectiveness of protected area management and governance. It has also setup a related database, taking into account the IUCN-WCPA framework for evaluating management effectiveness and other relevant methodologies which should be adapted to local conditions. In Nigeria, creation of Kainji Lake National Park (KLNP) in 1976 marked the first major attempt to manage protected areas for recreational purposes. The National Park Service (NPS) was later established in 1991 creating six National Parks. Further to this development two additional Parks were established in 1999 bringing the total number of Parks to eight. In spite of the enormous resources in terms of flora and fauna unique cultural attributes as well as spectacular landscape, the use of the Parks for tourism purposes in particular and for human needs generally has not been maximally exploited. Furthermore, the conservation and management of these Parks is influenced by the local communities living very close to Park boundaries.

The problems of Protected Area Management (PAM) are generally Institutional and Infrastructural:

Institutional: This has to do with re-orienting and repositioning the management and administrative system of the Parks to be self-sustaining in their sourcing for funds as against dependence on government subventions as evidenced in Annual reports of the Parks.

Infrastructural: This involves the quality and availability of facilities that make the Park attractive and inviting to the public. These include good access or approach roads to the Park, hotels or lodges, telecommunication facilities, electric power and recreational opportunities, etc.

Consequently, management problems including encroachments and grazing are prevalence inside the Park. Furthermore, poaching as well as illegal settlements have become major threats to the integrity of the Park (Nchor, 2021). Above all, the Parks are funded through annual budget allocations from the Federal government. This has become grossly inadequate to support Park operations, a development corroborated by Nchor (2021) regarding inadequate funding as a serious witness in Cross River National Park. Management of Parks is capital intensive as funds are required for the provision of basic infrastructures, employment of the right caliber of professionals and the development of support zone communities living very close to the boundaries. These challenges have not been addressed by the National Park Service in the past years. Successful Park management requires a much wider perspectives than that provided by conservation biology if it is targeted at understanding and managing the enormous challenges it faces. It does not only involve making management more efficient but goes beyond that by defining what it aims to accomplish so that strategies and goals are adopted to make management more efficient. Accountability for performance is being increasingly demanded across all sectors of society and conservation management is no exception. Traditionally, concerns for accountability focused on issues of financial and managerial probity but this has now expanded to include concerns for management effectiveness. Viewed in this light, accountability is not so much about "checking up" on managers to see where they are failing, but on developing a professional approach to management. Governments and other funding or regulatory bodies are requiring information on management effectiveness that will allow them to assess whether results being achieved are commensurate with the effort and resources being expended and in line with policy and management objectives. This study therefore examined the level of Protected Area Management Practices in Cross River National Park.

MATERIALS AND METHODS

Study Area

Cross River National Park (CRNP) is situated in Cross River State, which is in the South - East end of Nigeria bordering the Republic of Cameroon. The Park covers a total area of 4000sq km, mainly made up of moist tropical primary rainforest ecosystem. The Park has two distinct, contiguous Sectors: Oban and Okwangwo Sectors. Oban Sector lies within longitude 8 º02'E and 8 º55'E and Latitude 5 º00'N, and 6º00'N. It covers a total area of 3000sq km, and is the larger of the two sectors, rich in biodiversity. Oban Sector is ecologically contiguous with Korup National Park in the Republic of Cameroon. It is reputed to be the richest ecosystem in Nigeria in terms of biodiversity (Cliffs, 2004).

It has 1568 plant species of which 77 are endemic to Nigeria, 75 species of mammals, 282 species of birds, and 42 species of snakes (Cliffs, 2004). Oban Sector moist primary forests are also rich in epiphytic ferns and orchids. Okwangwo Sector covers a total area of 1000sqkm and lies between latitudes 6 º02'N and 6 º028'N and longitudes 902' E and 9 º27' E. It shares international boundaries with Takamenda Game Reserve in the Republic of Cameroon. It is made up of primary rainforest, Montane Forest and derived savannah, with about 1545 identified species of plants in 98 families. The rediscovery of Gorillas in the Boshi and Okwangwo areas in late 1987 is of particular importance, because as they are the most viable population of low land gorillas in Africa (Happold, 1987).

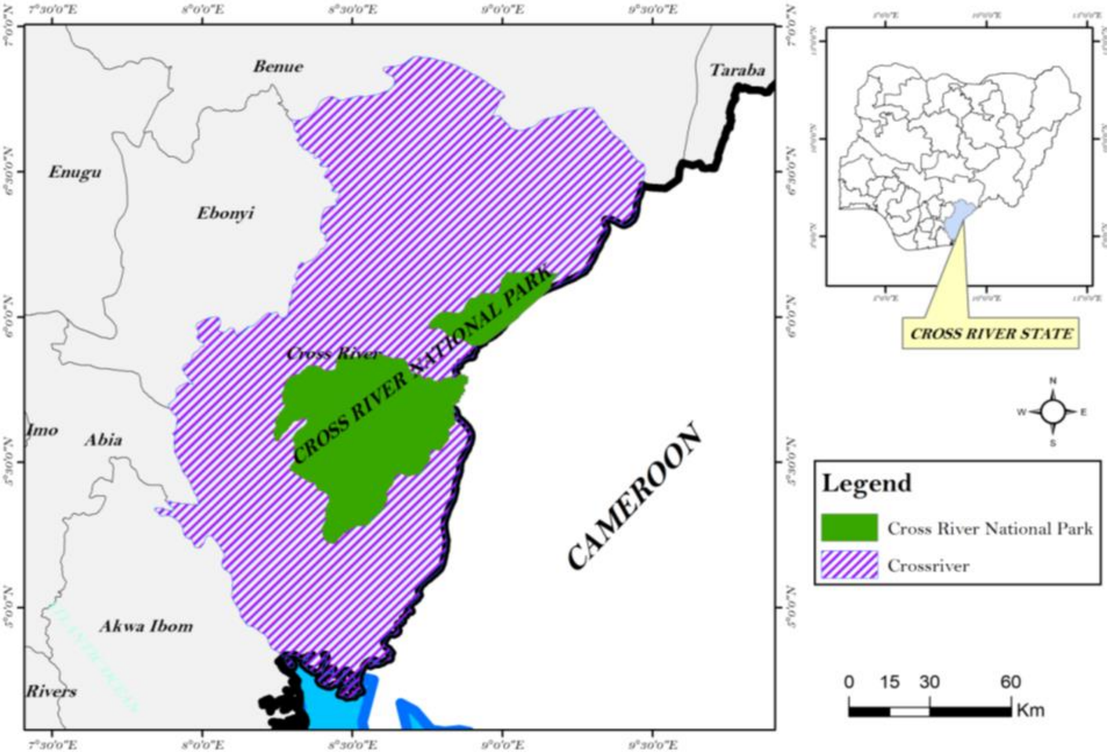

Figure 1. Cross River National Park

Method of Data Collection

The survey was conducted in November, 2021 to March, 2022. Both primary and secondary data were collected. The primary data collection tool for the study was a standard questionnaire based on a modified Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) methodology. The questionnaires comprise of two sections. The first section consisted of information about personal characteristics of respondents such as Age, Gender, Level of Education, etc. while the second section focus on protected area management practices in the area of Staffing, Local Community Participation, Status of Park Infrastructures/Maintenance as well as Park Protection and Conservation. Other areas included Park Finances and Budget as well as Research and Monitoring Programmes. The questionnaire covers some aspects of international evaluation framework developed by the World Commission on Protected Areas (WCPA) (Hockings, 2003). The questionnaire was structured around a Likert scale (Ko and Steward, 2002), which allow respondents to make personal decisions based on individual degree of rating and intensity of items contained in the questions, which varied from, Agree (A), not sure (NS), to Disagree (D). The questionnaire was developed by the research team and used for the collection of data for the study. Secondary data involved a reconnaissance survey of the park for two months to assess the situation on ground in the study area. During the period the Park was contacted to gather all relevant documents pertaining to their operations. This included existing documents containing appropriate biological and management information, draft management plans, tourism development plans, zonation plans (where available) and annual reports covering the study period (2011 - 2015). Field trips were also embarked upon to assess the situation on ground.

Focus Group Discussion (FGD) were held with principal stakeholders in this study namely officials of national Park Service to obtain secondary data. The meetings provided a forum for the acquisition of first hand briefing on the scope of the assignment. It also provided a medium to gain insight into the views and sensitivities of senior Park administrators on their expectations as well as concerns about the current state of the Parks and their views of the Parks' future. Documentary materials consisting substantially Annual Reports of the Park were obtained from the Park's Head Office. These were reviewed critically with a view to making inferences that will enable the study make meaningful recommendations. Extensive use of the internet provided valuable resources material, especially with regard to obtaining information about other countries' experiences with National Parks. Site visits to the field were undertaken with a view to having first hand practical and empirical experience about the realities and physical conditions at the Park.

The administration of questionnaires was in a workshop setting with strict supervision from the researcher using previously collated data and Park records. This allowed for respondents to be accountable to one another. Nine departments were used for the study including Human Resource Management **(HRM)**, Ecology and Resource Management **(ERM)**, Planning Research and ICT **(PR/ICT)**, Works/Maintenance **(W/M)**, Ecotourism, Finance and Account **(F&A)** as well as Litigation **(LIT)**, Public Relation **(PR)** and Internal Audit **(IA)** (Table 1).

Sample Size

The formula developed by Yamane (1973) for determination of sample size used in this study is given as:

$$n = \frac{N}{1} + N\ (e)^2$$

Where: n = The sample; N = The population of the study; e = The allowable or margin error which in this study was pegged at 0.05 $n = \frac{415}{1} + 415\ (0.05)^2 = \frac{415}{2.04} = 203$

A formula adopted by Kathuri and Pals (1993) was used to determine the sample size for each Unit/Department as follows: $n_{n} = (\frac{Nn}{N})$ x n

Where, n_n = The sample size of each unit; N_n = Population of the unit; N = Total population size; n = Total sample size.

Hypothesis:

H_0: Protected Area Management Practices are adequate for effective management of Cross River National Park.

H_1: Protected Area Management Practices are not adequate for effective management of Cross River National Park.

Table 1. Nominal roll of Cross River National Park (Source: Field survey, 2022)

S/N	DEPARTMENTS / UNITS	JUNIOR		SENIOR		TOTAL	
		Total No. of Staff	Sample Size	Total No. of Staff	Sample Size	Total No. of Staff	Total No. Sampled
1	Human Resource Management	6	3	26	13	32	**16**
2	Ecology and Resource Management	194	95	91	45	285	**140**
3	Planning, Research and ICT	18	9	18	9	36	**18**
4	Works/Maintenance	3	1	9	4	12	**5**
5	Ecotourism	11	5	16	8	27	**13**
6	Finance and Account	4	2	11	5	15	**7**
7	Others (Litigation, Public Relation and Internal Audit)	2	1	6	3	8	**4**
	Total	**238**	**116**	**177**	**87**	**415**	**203**

The study developed and adopted a quantitative research design. Data was collected from staff in the six Departments operating in the Cross River National Park namely: Planning Research and ICT **(PR/ICT)**, Works/Maintenance **(W/M)**, Ecotourism, Finance and Account **(F&A)** as well as Litigation **(LIT)**, Public Relation **(PR)** and Internal Audit **(IA)**. The study population was selected from the six Departments. The sample Size for the study was generated from the formula developed by Yamane (1973) for the determination of sample size with: $n = \frac{N}{1} + N\ (e)^2$

Where: n = The sample; N = The population of the study; e = The allowable or margin error which in this study was pegged at 0.05 $n = \frac{415}{1}\ 415\ (0.05)^2 = \frac{415}{2.04} = 203$

A formula adopted by Kathuri and Pals (1993) was used to determine the sample size for each Unit/Department as follows: $n_{n} = (\frac{Nn}{N})$ x n

Where, n_n = The sample size of each unit; N_n = Population of the unit; N = Total population size; n = Total sample size.

Thus, a total of 203 respondents constituted the sample size with 18 for **(PR/ICT)**,5 for **(W/M)**, 7 for **(F&A),** and 4 for **Others** (**LIT**,**PR** and **IA**). Table 1 The questionnaires comprised of two sections. The first section consisted of information about personal characteristics of respondents such as Age, Gender, Level of Education, etc. while the second section focused on Protected Area management practices in the area of Staffing, Local Community Participation, Status of Park Infrastructures/Maintenance as well as Park Protection and Conservation. Other areas included Park Finances and Budget as well as Research and Monitoring Programmes The questionnaire was structured around a Likert scale (Ko and Steward, 2002), which allow respondents to make personal decisions based on individual degree of rating and intensity of items contained in the questions, which varied from, Agree (A), not sure (NS), to Disagree (D). The questionnaire was developed by the research team and used for the collection of data for the study. It was also subjected to a pilot test on 12 staffs in the park in order to check on the convenience of administrating the questionnaire.

Both primary and secondary data were collected. The primary data collection tool for the study was a standard questionnaire based on a modified Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) methodology. Secondary data involved a reconnaissance survey of the park for two months to assess the situation on ground in the study area. During the period the Park was contacted to gather all relevant documents pertaining to their operations. This included existing documents containing appropriate biological and management information, draft management plans, tourism development plans, zonation plans (where available) and annual reports covering the study period (2011 - 2015). Field trips were also embarked upon to assess the situation on ground. Focus Group Discussion (FGD) were held with principal stakeholders in this study namely officials of national Park Service to obtain secondary data. The meetings provided a forum for the acquisition of first hand briefing on the scope of the assignment. It also provided a medium to gain insight into the views and sensitivities of senior Park administrators on their expectations as well as concerns about the current state of the Parks and their views of the Parks' future. Documentary materials consisting substantially Annual Reports of the Park were obtained from the Park's Head Office. These were reviewed critically with a view to making inferences that will enable the study make meaningful recommendations. Extensive use of the internet provided valuable resources material, especially with regard to obtaining information about other countries' experiences with National Parks. Site visits to the field were undertaken with a view to having first hand practical and empirical experience about the realities and physical conditions at the Park. Descriptive and inferential statistics were applied on the collected data. Data was analyzed using statistical package for social sciences (SPSS) software version 27 Descriptive analysis was used to summarize the variable while chi-square analysis was adopted to test the hypothesis of the study.

Hypothesis:

H_0: Protected Area Management Practices are adequate for effective management of Cross River National Park.

H_1: Protected Area Management Practices are not adequate for effective management of Cross River National Park.

Table 1. Nominal roll of Cross River National Park (Source: Field survey, 2022)

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6	Finance and Account	4	2	11	5	15	**7**
7	Others (Litigation, Public Relation and Internal Audit)	2	1	6	3	8	**4**
	Total	**238**	**116**	**177**	**87**	**415**	**203**

RESULTS AND DISCUSSIONS

Characteristics of Respondents

Majority of the respondents (85.0%) were males, indicating that the profession is male-dominated. This may be due to the fact that in this region of Nigeria, female education is relatively low and the work requires some enforcement skills, which may be elusive to women. Furthermore, most of the respondents fall between the ages ranging 51 - 60. In addition, 37.5% of the respondents have work experience of 20 years and above (Table 2). Majority of the respondents (50.7%) had secondary school education. This could be due to the fact that most of them were park rangers, whose jobs did not require any technical education.

Table 2. Demographic background of respondents (Source: Field survey, 2022)

S/N	Respondents		Frequency	Percentage
1	Gender	Male	173	85.0
		Female	30	15.0
2	Age	30 and below	12	5.8
		31 – 40	17	8.3
		41 – 50	47	23.3
		51 – 60	103	50.8
		Above 60	24	11.7
3	Qualifications	Primary Education	45	22.2
		Secondary Education	103	50.7
		NCE/ND	35	17.2
		B.Sc.	20	9.9
4	Work Experience	1 - 5 years	24	11.7
		6 - 10 years	39	19.2
		11 - 15 years	27	13.3
		16 - 20 years	37	18.3
		Above 20 years	76	37.5

Effective Internal Communication

Majority of the respondents (71.43%) affirmed that internal communication between all levels of park staff is not effective. (Table 3). The means and effectiveness of communication between staff in the field and administrative staff appeared to be below acceptable standard. Furthermore, the results indicated that the processing of information and data associated with management were inadequate, thus data about the protected areas were not available and up-to-date. Respondents in this study also suggested that staff conditions, inadequate skills and inadequate communication across the park was due to general lack of funds by government and supporting agencies leading to inadequate communications with local communities and inadequate data collection and analysis of park operations.

X^2_{cal} =134.966** df = 2, X^2_{tab} = 5.991, P - value = 0.000; Since t_{cal} (134.966) > t_{tab} (5.991), the null hypothesis was rejected implying that internal communication between all levels of park staff is not effective in the study area.

Table 3. Effective Internal Communication in the Park (Source: Field survey, 2022)

Response	Departments / Units							
	HRM	**ERM**	**PR/ICT**	**W/M**	**ECOTOURISM**	**F/A**	**OTHERS**	**Total (%)**
Agree	8	4	4	4	4	6	8	38 (18.72)
Not sure	4	2	2	2	2	4	4	20 (9.85)
Disagree	27	20	18	18	14	27	21	145 (71.43)
Total	**39**	**26**	**24**	**24**	**20**	**37**	**33**	**203 (100)**

Staff Employment Conditions

Majority of the population sampled (76.35%) were of the opinion that highly qualified staff were retained (Table 4).

From the results on employment conditions, the weight of opinion was that employment conditions for lower level positions were not good as compared to higher level staff. It was therefore relatively easy to retain this category of staff. On the other hand, employment conditions for positions with higher skill requirements and responsibility levels were not good enough to retain staff. This tendency to lose highly skilled and experience staff from the organization should be recognized as a critical weakness and needs to be addressed by improving employment conditions within the organization.

X^2cal = 54.310** df = 1, X^2 tab = 3.841, P - value = 0.000; Since t_{cal} (54.310) > t_{tab} (3.841), the null hypothesis was rejected implying that staff employment conditions are not good in the study area.

Table 4. Staff employment conditions (Source: Field survey, 2022)

Response	Departments / Units							
	HRM	**ERM**	**PR/ICT**	**W/M**	**ECOTOURISM**	**F/A**	**OTHERS**	**Total (%)**
Agree	8	6	6	8	4	8	8	48 (23.65)
Not sure	0	0	0	0	0	0	0	0 (0.00)
Disagree	30	22	18	16	16	27	26	155 (76.35)
Total	38	**28**	**24**	**24**	**20**	**35**	**34**	**203 (100)**

Local Community Participation

A greater number of the respondents (76.35%) disagreed that local communities were involved in the operations of Cross River National Park (Table 5). Conservation areas like CRNP started their programmes with an objective of managing their biodiversity and community development together, particularly to improve on the livelihoods of local communities known as support zone communities. However, none of the parks operated well designated buffer zones or proposed buffer zones to encourage local community participation. Though there are a number of activities across the park involving local communities, there is need to ascertain the level at which stakeholders participate and understand the objectives of the park. Though, the activities of the park in law enforcement were very high, community conflicts with the park authorities were also on the high side. This is a general development across protected areas globally because these areas are mostly surrounded by heavily populated communities and the land within these parks are under agricultural use. The local communities operating close to the parks have traditionally used and depended upon the resources available within and surrounding the protected areas. Furthermore, while the focus of the early stages of the designs of these parks was on biological integrity, the boundaries of the parks included both state and community owned land. Consequently, there are likelihoods of conflicts over resource; use rights in such areas particularly if there were no standard and adequate mechanisms for compensating local communities as in the case of the protected areas in China (Diqiang et al., 2003).

However, there were a few strengths in the planning, in all cases, the primary objective of establishing the park was for the maintenance and conservation of biodiversity. In these areas, the Federal Government has put in place some legislation to give the park legal status. In the same vein, communication with local communities regarding the management of the park including the involvement of local communities in park management projects and policy decisions was considered ineffective. This again should be recognized as an important weakness since improved communication with local communities is likely to lead to a much better understanding of the value of the protected areas, A greater degree of participatory management and acceptance of the protected area is also expected to boost the level of cooperation and the much needed support the park expects from these communities. The three elements that are related to community relations - communication with local communities, local community participation in park programmes and decision making as well as collaboration with stake holders had a non-convincing performance. More than 70% of respondents felt that participation in decision making was not effective. Although none of the assessments tested for a correlation between poor community relations and community-related threats (e.g. poaching and collection of Non Timber Forest Products (NTFP), a positive correlation would not be surprising. Analysis by Jacoby (2001) had a positive relationship between community relations and threats in US national parks.

Table 5. Local community participation/involvement in park Management (Source: Field survey, 2022)

Response	Departments / Units							
	HRM	**ERM**	**PR/ICT**	**W/M**	**ECOTOURISM**	**F/A**	**OTHERS**	**Total (%)**
Agree	10	8	6	4	4	10	6	48 (23.65)
Not sure	0	0	0	0	0	0	0	0 (0.00)
Disagree	29	20	18	20	16	26	26	155 (76.35)
Total	**39**	**28**	**24**	**24**	**20**	**36**	**32**	**203 (100)**

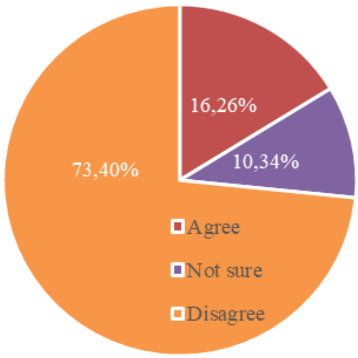
X^2cal = 54.310** df = 1, X^2 tab = 3.841, P - value = 0.000; Since t_{cal} (54.310) > t_{tab} (3.841), the null hypothesis was rejected implying that local communities were not involved in the operations of Cross River National Park in the study area.

Status of Park Infrastructures

The results in Figure 2 shows that 73.40% of the respondents submitted that park infrastructures were inadequate for critical management activities. In considering the level of infrastructures in the park, transport and park protection facilities, the general opinion of respondents was that these facilities were inadequate for management and monitoring purposes. In considering transport and facilities in the park, the means of transport was considered fairly adequate for management and monitoring purposes. This included equipment for field level data collection. This position is important in that without adequate means of collecting field data many management activities cannot be properly monitored and evaluated.

Some staff raise their concerns over the maintenance and care of equipment which was obviously regarded as being inadequate to ensure long term use. This assessment was reinforce by the opinion frequently express that not only equipment but structures such as building, roads and tourist infrastructures were suffering due to lack of funding and maintenance. An analysis of the Parks vehicles and motorcycles during the study period shows that the vehicles include Peugeot, Nissan Buses, Tractors Toyota Buses, Hilux and Land Cruisers, Isuzu Pick-up, Land Rovers, Fiat Truck and Motorcycles. Most of these vehicles are no more serviceable thus have been withdrawn and relocated to the National Parks Headquarters in Abuja for disposal in line with the Federal Government's monetization policy. A greater percentage of others including motorcycles acquired at the end of the Okwangwo programme (EU-WWF sponsored) are now unserviceable. However, information on the state of these motorcycles and vehicles, the number disposed of at the National Park's Headquarters, Abuja and the present location of the patrol vehicles across the various ranges in the Park was not available as at the time of this study.

X^2cal = 131.300** df = 2, X^2 tab = 5.991, P - value = 0.000; Since t_{cal} (131.300) > t_{tab} (5.991), the null hypothesis was rejected submitting that park infrastructures were not inadequate for critical management activities in the study area.



Fgure 2. Status of park infrastructures for critical management activities

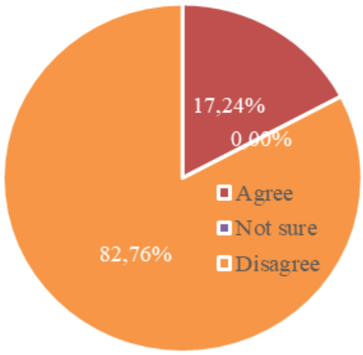


Figure 3. Maintenance and care of equipment (Source: Field survey, 2022)

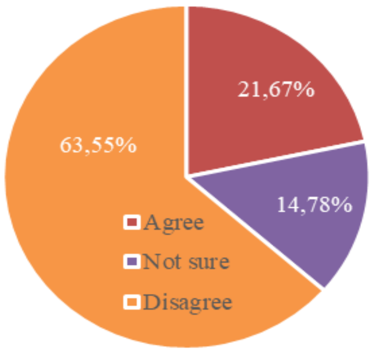


Figure 4. Park Protection and Conservation (Source: Field survey, 2022)

Maintenance and Care of Equipment

Results on the maintenance of equipment in the park shows that majority of respondents (82.76%) positioned that equipment in the park were not properly taken care of (Figure 3).

A critical weakness identified in the study was the maintenance and care of equipment which was obviously regarded as being inadequate to ensure long term use. This position was reinforced by the opinion frequently expressed that not only equipment but structures such as buildings, roads and tourist infrastructure were suffering due to lack of funding for maintenance. Reports from past studies have also attributed constrains in maintaining tourism infrastructure to lack of will by government to manage resources effectively (Gopal et al., 2008). This in the case of Obudu Ranch Resort where the complete shutdown of operations in the resort was due to government's disposition towards other projects and programmes (Ayuk et al., 2021). With respect to the adequacy of visitor facilities, there were generally considered not only being inadequate but in a high level of deterioration and standards that were not internationally acceptable.

X^2cal = 87.138** df = 1, X^2 tab = 3.841, P - value = 0.000; Since t_{cal} (87.138) > t_{tab} (3.841), the null hypothesis was rejected implying that equipment in the park were not properly taken care of in the study area.

Park Protection and Conservation

Figure 4 gives an assessment of the level of operations of the park in the areas of park protection and conservation of its resources. Majority of the population sampled (63.55%) were of the position that the activities of the park were not adequate to effectively perform critical management operations in the park. There was also an indication that majority of those holding this position were from the Ecology and Resource Management where most of their operations were seriously affected by paucity of funds. Park protection and conservation is one of the core operational activities of the Cross River National Park. A team of 189 staff were engaged by the Park for effective surveillance across the entire area covering 4000sqkm. The Park is divided into two Divisions - Oban and Okwangwo Divisions and 12 ranges for effective patrols. In Oban Division, the ranges are located in Nsofang, Okokoril/Ekuri, Ifumkpa, Nkunaya, Aking, Ekong Anaku, Erokut Park entry gate and Etara. The four ranges in Okwangwo Division are in Mbuli, Abu, Obisu, Anape and Butatong. Each Range is provided with a four wheel drive vehicles supported by patrol equipment (Figure 4).

A special Ranger squad has also been put in place by the Management of the Park for effective surveillance and quick intervention in areas that cannot be easily covered by regular patrols. The squad which is based at the Park's Head Office in Akamkpa, can be mobilized at short notice for rapid interception of poachers in any part of the Park. Surveillance operations were occasionally disrupted by some hostile and restive youths in support Zone Communities. These situations arise when suspects from the communities are arrested and prosecuted. In Oban Divisions two Park staff members were molested by youths of Aking community when suspects arrested in the Park were being conveyed to the Park's Head Office in Akamkpa for prosecution. During the attack, the Park staffs were injured while the official vehicle engaged in the exercise was vandalized. A similar incident in Butatong where the Divisional Head Office is located escalated to the barricading of the main entrance by restive youths. Management has commenced dialogue with the affected communities with the state security Adviser of the Governor in attendance. The activities of the park in law enforcement were very low and community conflicts with the park authorities were high. Furthermore, the park I mostly surrounded by heavily populated communities and the surrounding land under intense agricultural use. This communities operate close to the park and have traditionally used and depended upon the resources available within and its surrounding. Consequently, there are likelihood of conflicts over resource use right in such areas, particularly if there were no standard and adequate mechanisms for compensating local communities. Such conflicts has been reported in china protected areas (Diqiang et al., 2003).

X^2cal = 84.837** df = 1, X^2 tab = 3.841, P-value = 0.000;

Since t_{cal} (84.837) > t_{tab} (3.841), the null hypothesis was rejected implying that the activities of the park were not adequate to effectively perform critical management operations in the park in the study area.

Table 9. Cross River National Park: Park patrol equipment's (Source: Field survey, 2022)

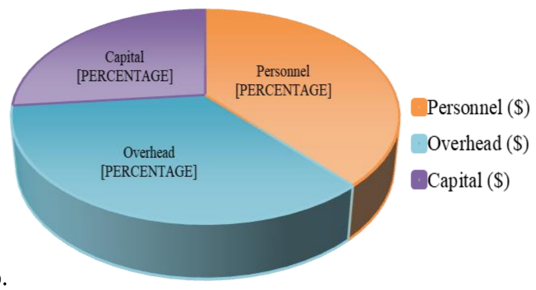
S/N	Description of equipment	Qty.	Remarks
1	Four wheel drive vehicles	6	Four are serviceable
2	Motor cycles	12	Distributed to all the Ranges
3	Shot guns (double barrel)	35	Serviceable
4	Shot guns (pump action)	9	-do-
5	Rifles	2	-do-
6	Camping tents	51	-do-
7	Camp beds	2	-do-
8	Global positioning system	6	-do-

FUNDING

Park Allocation

The overall funding in the park is reflected in the budget allocations of the park between 2011 and 2015. The allocation revealed that the sum of $1,910,046.772 was provided as both capital and recurrent allocation during the period. When considered on year to year basis, the overall allocation reflected an increase from $417,698.3023 in 2011 to $513,501.8243 in 2012, then dropped to $287,524.8826 in 2013. There was a further increase to $484,530.8314 in 2014 which later dropped to $206,790.9316 in 2015 (Figure 5a). In consideration of the expenditure of the park during the same period the highest provision when to personnel cost (38%), followed by Overhead (35%) while the lowest (27%) was in Capital expenditure (Figure 5b).

5a.



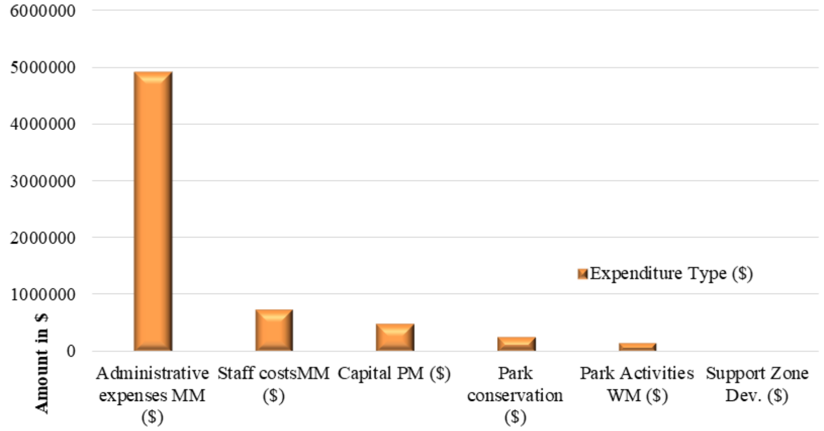
5 b.

Figure 5. Cross River National Park allocation (2011 - 2015)

Park Expenditure Profile

A total of $1,911,688.41 was expended by the park over the period under study. A breakdown shows that the highest ($4,908,404.04) was spent on Administrative Cost, followed by $755,780.28 on Staff Cost and $507,274.28 on Capital Expenditure. Other expenses were in the area of Park Conservation Operations ($274,556.98), Park Activities ($162,589) and Support Zone Dev. ($28,888.43) which was lowest during the same period (Figure 6). From the results Administrative Cost and Staff Cost constituted a significant level of the budget with park conservation accommodating one of the areas that had less emphasis in the budget. This development is supported by the results in Figure 4 above were majority of the respondents (63.55%) were of the position that the operations of park protection were not adequately supported financially to effectively perform critical management operations in the park. Biodiversity conservation is the core mandate of a Nigerian National Park Service. However, this was not evident from the results on the park's allocation as well as expenditure profiles. The study rather revealed that the highest allocation of funds to the park was appropriated to personnel and administrative cost while insufficient provision was devoted to protection and conservation of park resources.

The overall proportion of public funding going into investment in the park as well as protected areas globally, is declining (Eagles et al., 2002). In order to ensure that these challenges are overcome, protected area managers are encouraged to put in place stable platforms to generate revenue internally. There is also the need to seek external funding to successfully meet with the objectives of establishing them (Hockings et. al., 2000). Potential financing mechanisms for protected areas have also been identified by Spergel (2002), these include annual government allocations, park visitor fee, fines from illegal activities, conservation trust funds, donor contributions as well as debt for nature's swaps. Such strategies are likely to become more important in view of the general position that the park's funding is not likely to improve in the future. Inadequate funding was identified as a serious weakness in the park during the study. Funding was not adequate to conduct critical management activities. Lack of funds in the park also generated other management problems including inadequate field equipment, transportation, and facilities. Underfunding of protected areas appears to be a problem globally including those in Africa and Latin America which are managed on less than US $110 per square kilometer (km^2). This situation is less than the globally accepted US$210 per km^2 for effective management of Tropical Parks (James et al., 2001).



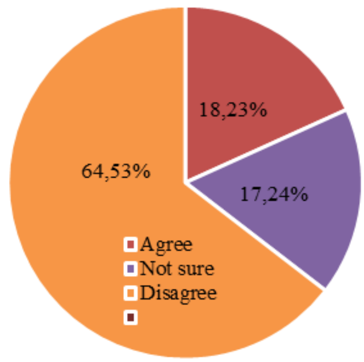


Figure 6. Cross River National Park Expenditure (2011 - 2015) (Source: Field survey, 2022) Figure 7. Research and Monitoring

Research and Monitoring Programmes

Majority of the respondents (64.53%) positioned that the park could not incorporate results of research and monitoring into park planning (Figure 7). The inadequacies of research, including ecological and threat-related research was a weakness in the park. This position is likely to have a negative effect in-that without adequate means of collecting field data, many management activities cannot be properly monitored and evaluated. Another challenge is the logical conclusion that data are not systematically used to inform management planning and decision making. For example, in Kwazulu-Natal (KZN) Province, at least 60% of respondent answered yes" or "mostly yes" to the statements "the results of research are routinely incorporated into planning", an equal number responded "no" or "mostly no" to another statement about the adequacies of ecological research, and social research, and means of collecting new data. The systemic lack- of adequate data and research means that protected area staff are unlikely to be able to test their assumptions or share their lessons which is the hallmark of effective adaptive management (Salafsky et al. 2001).

Inadequate research and monitoring in the park is not unique to Cross River National Park. Indeed, many protected areas, including those in the United States, face similar problems even though their resources are comparatively inadequate. The quality of natural resource inventories was considered low by the general opinion of Park Staff, which was a general problem globally. In South Africa, for example, natural resource inventories were also inadequate because of incomplete data on threatened species, inappropriate maps, resolution and inconsistent soil and vegetation map (Goodman, 2003).

CONCLUSION

In summary, statistical analysis shows that the null hypothesis for all the variables (Effective Internal Communication in the Park, Staff Employment Conditions, Local Community, Participation/Involvement in Park Management, Status of Park Infrastructures for Critical, Management Activities, Maintenance and Care of Equipment as well as Park Protection and Conservation were therefore rejected. It was therefore concluded that park protection practices in Cross River National Park were not adequate for effectives operations in the Protected Area.

Author Contributions: Conceptualization: A.A.N.; methodology: A.A.N.; software: B.A.U. and E.T.K.; validation: A.A.N. and E.T.K.; formal analysis: A.A.N. and B.A.U.; investigation: A.A.N.; data curation: A.A.N.; writing - original draft preparation, A.A.N.; writing - review and editing: A.A.N. and E.T.K.; visualization: E.T.K.; supervision: A.A.N.; project administration: A.A.N. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: We appreciate the support of the management of the National Park Service of Nigeria as well as Cross River National Park for the approval granted us to undertake this research work. We are also grateful to the Park for providing the necessary logistics in terms of staff and equipment during the entire fieldwork.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 22.05.2023 Revised: 25.07.2023 Accepted: 25.08.2023 Available online: 26.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1037-1045
DOI 10.30892/gtg.49319-1103

SPATIAL REGRESSION MODEL OF URBAN WALKABILITY UNDER THE 15-MINUTE CITY APPROACH

Juan E. ARISTIZÁBAL*
Universidad Nacional de Colombia, Sede Manizales. Facultad de Ingeniería y Arquitectura, Departamento de Ingeniería Civil, Grupo de Investigación en Movilidad Sostenible, Manizales, Colombia, e-mail: jaristizabals@unal.edu.co

William SARACHE
Universidad Nacional de Colombia, Sede Manizales. Facultad de Ingeniería y Arquitectura, Departamento de Ingeniería Industrial, Manizales, Colombia, e-mail: wasarachec@unal.edu.co

Diego A. ESCOBAR
Universidad Nacional de Colombia, Sede Manizales. Facultad de Ingeniería y Arquitectura, Departamento de Ingeniería Civil, Grupo de Investigación en Movilidad Sostenible, Manizales, Colombia, e-mail: daescobarga@unal.edu.co

Citation: Aristizábal, J.E., Sarache, W., & Escobar, D.A. (2023). SPATIAL REGRESSION MODEL OF URBAN WALKABILITY UNDER THE 15-MINUTE CITY APPROACH. *GeoJournal of Tourism and Geosites*, 49(3), 1037–1045. https://doi.org/10.30892/gtg.49319-1103

Abstract: The 15-minute city aims to decentralize the urban economic poles to provide local services to its entire population. The objective of this research is to geographically determine the economic poles in an intermediate Latin American city and evaluate their geospatial coverage. This research develops a geographic accessibility model to analyze the spatio-temporal distribution of the economic poles, considering the socioeconomic stratum of households in Manizales (Colombia). Moreover, we apply a spatial regression model of pedestrian trips. Results show that proximity to urban economic poles is directly correlate with pedestrian trips. In Manizales, only 35.8% of the population reaches its closest economic pole within a 15-minute walk; moreover, accessibility inequities mainly affecting lower-income families were detected. The 15-minute city approach poses a high potential to contribute to urban spatial justice to the extent that urban planners facilitate the growth of economic activities and services in neighborhoods, with special attention to the less privileged.

Key words: 15-minute city, accessibility, spatial statistics, urban mobility, pedestrian

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INTRODUCTION

In recent decades, urban environments have experienced a growth in the negative effects associated with mobility (Maltese et al., 2021). The main negative effects of mobility in cities are traffic congestion (Papageorgiou et al., 2003), traffic accidents (Escobar et al., 2021; Klanjčić et al., 2022), noise (Bao et al., 2022; Babisch et al., 2005), and pollution (Laumbach and Kipen, 2012; Wu et al., 2022). Many studies have shown that road infrastructure construction to satisfy the growing vehicular demand generates counterproductive effects associated with induced demand (Hsu and Zhang, 2014; Noland and Lem, 2002). However, this development model is still present in the urban agendas of many governments worldwide (Filippi, 2022; Volker et al., 2020), underestimating alternative strategies to structurally improve urban mobility (Antipova and Wilmot, 2012). On the other hand, once the restrictions adopted to contain the Covid-19 pandemic were eliminated, urban environments recovered their mobility conditions and, therefore, the aforementioned negative effects returned. This transition from the atypical city of quiet streets to the typical city of traffic and pollution has encouraged urban debate on the challenges of mobility planning (Aloi et al., 2020; Campisi et al., 2020). In contrast to the urban development model of the 20th century (construction of road infrastructure to meet the growing demand for vehicles), there are several alternatives to structurally improve mobility with a comprehensive approach and coordination between modes of transport. From this perspective, the 15-minute city concept emerges (Moreno et al., 2021).

The 15-minute city is a policy that promotes decentralization of urban activities, seeking that city services guarantee better population coverage. This policy implies leaving behind the model of urban activity centralized in economic poles, characterized by activities concentration and social dynamism, grouping employment, recreation, and financial services, among others. The 15-minute city aims to transform the so-called "dormitory neighborhoods" (Marín-Cots and Palomares-Pastor, 2020) into neighborhoods with more significant urban activity and better service coverage, contributing to urban spatial justice (Fainstein, 2014). Spatial justice promotes better opportunities and accessibility for people, considering the socioeconomic patterns that differentiate individuals living in a territory, that is, opportunities that respond to social diversity (Jian et al., 2020; Carroll et al., 2019). Although the foundations of the 15-minute city do not constitute a new urban policy (Patricios, 2002; Pozoukidou and Chatziyiannaki, 2021) and its implementation requires the study of social patterns related to access to services and urban forms (Moreno et al., 2021). This concept has gained importance in the

* Corresponding author

territories' study and, gradually, has been considered in the public policies of various urban agendas in the world. Currently, some cities with specific plans for urban decentralization are Melbourne (Australia), Bogotá (Colombia), Portland (USA), and Paris (France), among others (Alcaldía Mayor de Bogotá, 2021; Pozoukidou and Chatziyiannaki, 2021).

Pedestrian trips are the focus of the 15-minute city (Abdelfattah et al., 2022). The main objective of the 15-minute city is to increase the number of trips using active modes of transport (bicycle or walking) to generate positive effects on citizens' quality of life (Maizlish et al., 2017; Pisoni et al., 2022). To this aim, it is necessary to conduct the study of services accessibility (Aultman et al., 1997; Guzman et al., 2021). Also, it is required to analyze the pedestrian transport infrastructure related to the environment and accessibility (Vallejo-Borda et al., 2020), zebra crossings (Escobar et al., 2022a; Ahmed et al., 2021), and walkability scores (Rodriguez-Valencia et al., 2022; Dalmat et al., 2021), among others.

Various authors have approached the 15-minute city from a conceptual perspective. Mardones-Fernández et al. (2020) identified the action lines against urban dependence on motorized transport, addressing the concept of chrono-urbanism, one of the 15-minute city pillars. Moreno et al. (2021) studied the origin, objectives, and strategies of the 15-minute city concept. Pozoukidou and Chatziyiannaki (2021) studied three cities (Paris, Portland, and Melbourne) that have started to develop proximity urban planning. Marchigiani and Bonfantini (2022) and Pinto and Akhavan (2022) conceptually analyzed the 15-minute city, studying the particular case of Milan in Italy. Allam et al. (2022a) identified the local fiscal mechanisms for implementing the 15-Minute City, and Allam et al. (2022b) evaluated the importance of data and technology in smart cities to move toward this urban model. Analyzing the 15-Minute City from a gender perspective, Bruntlett (2022) showed that a policy of equity in land use that considers the women's mobility needs is a key element in the 15-Minute City. Some empirical research has been developed under the 15-Minute City concept but without geostatistical models. For example, Luo et al. (2022) proposed an indicator to measure exposure to green spaces (a fundamental issue for a city of proximity) with images from Google Street View and Machine Learning; subsequently, they analyzed this indicator, comparing it with rental prices in Zhengzhou (China). For his part, Kissfazekas (2022) analyzed real estate sales data in Budapest (Hungary) to identify the characteristics of urban development in city sectors planned under the concept of urban neighborhood units.

On the other hand, various authors have developed geostatistical models to analyze the 15-minute city, applying accessibility models considering the Travel Times (TT) or the Potential of Accessible Opportunities (PAO). The TT model estimates travel times without establishing a time limit, from the analysis units to a set of destination services. The PAO model determines the number of accessible services from the analysis units to a set of destination services, considering time or distance limits. For example, by applying a PAO model for 15-minute pedestrian travel times, Zhou (2019) identified residential districts that meet the 15-minute community schedule in Guangzhou, China. Marín-Cots and Palomares-Pastor (2020) studied urban density and complexity variables in Malaga (Spain); using a PAO model, they evaluated the potential for access to services in the distance ranges established for each type of service. Balletto et al. (2021) used a PAO model to establish three individual indices and their combination to assess walkability in Cagliari (Italy). Through a survey, Guzman et al. (2021) studied the changes in travel patterns in Bogotá (Colombia) at the beginning of the quarantine generated by the Covid-19 pandemic; subsequently, using a TT model, they calculated the accessibility of households to banks, neighborhood stores, educational centers, and health centers. Using PAO models, Ferrer-Ortiz et al. (2022) and Gaglione et al. (2022) analyzed the opportunities access potential in Barcelona (Spain) and Naples (Italy), respectively. To do this, they set a travel time limit of 15 minutes on foot and evaluate the potential for access to basic services. Hosford et al. (2022) used a PAO model to evaluate access to grocery stores in Vancouver (Canada) in a travel time of 15 minutes, considering two modes of transport: walking and cycling. Abdelfattah et al. (2022) analyzed indicators of population density, places of work, and services in Milan (Italy). In addition, they used the Walk Score indicator, which includes a TT accessibility model. Caselli et al. (2022) developed a TT model at the neighborhood level in Parma (Italy) to evaluate travel times from homes to two destinations: i) kindergartens and ii) points of great urban activity within the neighborhood.

Other authors have developed spatial regression models for mobility analysis from the 15-minute city approach. For example, Weng et al. (2019) applied the Walk Score in Shanghai (China) and developed a spatial regression model between socioeconomic variables (independent variables) and the Walk Score (response variable). Graells-Garrido et al. (2021) used indicators of services accessible through a PAO model in Barcelona (Spain); subsequently, they developed a spatial regression model between the different accessibility indicators and the travel flow as a response variable (number of incoming and outgoing trips to each of the neighborhoods). Finally, Calafiore et al. (2022) applied an indicator of accessibility to essential services using a PAO model in Liverpool (England); subsequently, they developed a spatial regression model between sociodemographic and environmental indicators (independent variables) and the accessibility indicator (response variable). There are three prominent aspects can be highlighted around the contributions of the 15-minute city concept: 1) few studies have been carried out using TT models, and, therefore, contributions using PAO models predominate. 2) Few studies apply spatial regression models, and an accessibility indicator is obtained to be used as a response variable (Calafiore et al., 2022; Graells-Garrido et al., 2021; Weng et al., 2019). Finally, 3) only one of the contributions has been carried out in the context of Latin American cities, characterized by socioeconomic phenomena very different from those observed in developed countries.

Unlike the works conducted by Calafiore et al. (2022), Graells-Garrido et al. (2021), and Weng et al. (2019), the present contribution applied a spatial regression model that uses the TT accessibility indicator as an independent variable. In addition, the socioeconomic stratum (SES) of households was involved in the analysis. On the other hand, while in the studies mentioned above, the Accessibility Score, the origin-destination flows, and the Walk Score were used as response variables, the present research has used the percentage of trips made in the pedestrian mode of transport. This variable allows us to identify the possible correlation and statistical relevance between walking as transportation means and living near an economic pole. From this perspective, the study allows us to verify whether the proximity of the services (a vital element of the 15-minute city) is related to the number of pedestrian trips. To our knowledge, this approach has not been used in previous research. In summary, the objective of this study is to assess the coverage provided by the economic poles of the city under analysis through a geographic accessibility model, and subsequently, using a spatial regression model, to evaluate the relationship between walking as a mode of transportation and various mobility and built environment variables, including an indicator derived from the accessibility model.

The study was carried out in a medium-sized city in the Andean region of Colombia. Approximately 450,000 people live in this city, characterized by a mountainous topography that poses particular challenges in mobility studies. The proposed methodology consists of four stages as follows: 1) identify the economic poles of the study area; 2) apply an accessibility model based on TT from the analysis units to the identified economic poles; 3) build a database with socioeconomic and mobility variables; and 4) develop the spatial regression model. The results indicate that 35.8% of the population living in the study area reaches its closest economic pole in a walk of no longer than 15 minutes; however, in the city analyzed, the current distribution of economic poles provides little coverage to low-income citizens. Additionally, the travel time walking to the nearest economic pole has statistical relevance and a negative correlation (-0.4034***) concerning the percentage of pedestrian trips. That means that the closer the population is to the economic poles, the greater the incentive to walk instead of using motor vehicles. In addition, the number of commercial nodes in an area is statistically significant and shows a positive correlation (0.5184***) to the percentage of pedestrian trips. The rest of this article has been structured as follows: Section 2 presents a case study description. In Section 3, the proposed methodology is explained. Then, by applying a spatial regression model in Section 4, the obtained results are shown. Section 5 addresses the discussion of the results. Finally, in Section 6, the main conclusions are presented, and some lines for future research are suggested.

Case Study Description

The geographic accessibility and spatial regression model was applied in Manizales, Colombia. This city is located in the Andean mountains at 2,150 meters above sea level and is characterized by a complex topography of inclined streets. In the Colombian context, Manizales is a medium-sized city with a population of 460,000. According to data from the Mayor's Office (Alcaldía de Manizales, 2017), walking is the most used mode of transport since it represents 29% of all urban trips. The public transportation system is made up of 64 bus routes with intermediate capacity (30 passengers), and there is a 3-km-long aerial cableway system with two lines and four boarding stations. According to the city's Master Mobility Plan (MMP), Manizales has four peak travel times (ptt): (i) $ptt_{1:}$ 6:15 am. to 7:15 am.; (ii) $ppt_{2:}$ 12:00 pm. to 1:00 pm.; (iii) $ptt_{3:}$ 1:15 pm. to 2:15 pm.; and (iv) $ptt_{4:}$ 5:45 pm. to 6:45 pm.

In ptt_1 and ptt_3 occur a higher proportion of reasons for study and work trips; in these periods, trips originate in homes, and the final destinations are the activity centers (offices, educational institutions, financial centers, factories, among others). In the opposite direction, during ptt_2 and ptt_4, the main reason for traveling is home, and the origin places are the activity centers. Based on the above, it was established that a representative trip in Manizales shows the following sequence: leaving home in ptt_1, returning home in ptt_2, leaving home again in ptt_3, and returning home in ptt_4.

METHODOLOGY

The proposed methodology to carry out the present study is summarized in Figure 1. In addition, an explanation of each stage is shown below.

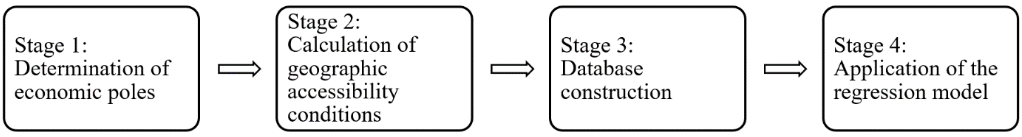

Figure 1. Proposed Methodology (Source: authors)

Stage 1 – Determination of economic poles: The information from the city government and the last Manizales Travel Survey (MTS) conducted during the diagnosis stage of the MMP was used to establish the economic poles of the study area. The MTS collects individual information regarding the mode of transport used, the number of trips and their hourly distribution, attraction and generation of trips, and reason for the trip, among other data. For each Transport Analysis Zones (TAZ), the economic poles were determined based on three binary criteria, whose values are strong-minded from the available information. The three criteria were: 1) estimation of Representative Trips (RT); 2) analysis of the Mixed-Use Area (MUA) of Manizales; and 3) service diversity analysis.

The five equations utilized in this study were an own development, aiming to provide a mathematical delineation of the process executed through the vector fields and processes calculator using Geographic Information Systems (GIS).

Criterion 1 (Representative Trips – RT). This criterion aims to estimate the representative trips in the Manizales ZAT. For this purpose, the Representative Trips (RT) indicator is proposed, whose value corresponds to the total trips attracted in the rush hours ptt1 and ptt3 and to the trips generated in the hourly peaks ptt_2 and ptt_4 at each ZAT. Then, using the information of the travel time peaks and their travel reasons, the RT for each TAZ_j can be estimated using Equation (1).

$$RT_j = A_j\ (ptt_1) + A_j\ (ptt_3) + G_j\ (ptt_2) + G_j\ (ptt_4) \tag{1}$$

Where, $A_j\ (ptt_1)$ and $A_j\ (ptt_3)$ represent the total trips attracted in TAZ_j during ptt_1 y ptt_3 respectively; in turn, $G_j\ (ptt_2)$ and $G_j\ (ptt_4)$ are the total trips generated in TAZ_j during ptt_2 y ptt_4 respectively. For the first criterion (K_1), in those TAZ_j whose RT_j is equal to or greater than the highest decile of the data (D_9), $K_{1(j)} = 1$; otherwise, $K_{1(j)} = 0$ (Equation 2).

$$K_1(j) = \begin{cases} 0 \; if \; RT_j < D_9 \\ 1 \; if \; RT_j \geq D_9 \end{cases} \quad (2)$$

Criterion 2 (Area of Mixed Use – AMU). In this criterion, the objective is to evaluate the surface intersection between each TAZ_j and the AMU. The local government of Manizales city has spatial information categorized according to land use. The total surface of this vector layer is 28.6 km^2, and the Area of Mixed Use is equivalent to 37.6% of this surface. For the second criterion (K_2), if TAZ_j has at least 37.6% of its area within the AMU, $K_{2(j)} = 1$; otherwise, $K_{2(j)} = 0$ (Equation 3).

$$K_2(j) = \begin{cases} 0 \; if \; S_j \cap S_{AMU} < 37.6\% * S_j \\ 1 \; if \; S_j \cap S_{AMU} \geq 37.6\% * S_j \end{cases} \quad (3)$$

Where, S_j corresponds to the surface of the TAZ_j, and SAMU represents the surface of the AMU intersected by a TAZ_j.

Criterion 3 (Service diversity). The objective of the third criterion is to evaluate the diversity of services in each TAZ_j. Although according to criterion 2, if a certain TAZ_j represents a hospital and is totally contained in the AMU, this is a TAZ_j with $K_{2(j)}= 1$. However, if the land use in said TAZ_j is only destined for health, this zone lacks the diversity of services. Therefore, for the third criterion (K_3), $K_{3(j)} = 1$ if TAZ_j corresponds to an area with a diversity of services; otherwise, if TAZ_j corresponds to an area with a single service, $K_{3(j)} = 0$ (Equation 4).

$$K_3(j) = \begin{cases} 1 \; if \; in \; TAZ_j \; there \; are \; diversity \; of \; services \\ 0 \qquad if \; in \; TAZ_j \; there \; is \; a \; single \; service \end{cases} \quad (4)$$

Therefore, a particular TAZ_j is an Economic Pole (EP) if it meets the three criteria proposed above (Equation 5).

$$EP_j = K_1(j) * K_2(j) * K_3(j) = \begin{cases} 0 \; the \; TAZ_j \; is \; not \; an \; economic \; pole \\ 1 \qquad the \; TAZ_j \; is \; an \; economic \; pole \end{cases} \quad (5)$$

Stage 2 – Calculation of geographic accessibility conditions: Once the economic poles have been established, the conditions of geographic accessibility to said poles must be calculated. The sub-procedure at this stage is as follows:

- Adjust the operability and connectivity of the graph in the pedestrian transport infrastructure network through a Geographic Information System (GIS).
- Calculate the travel times in each network arc, considering speed, topographic slope, and distance.
- Obtain the travel times' vector from all pedestrian network nodes to the economic poles using the "multipath algorithm" tool of the TransCAD software.
- Obtain the vector of minimum travel times from each node of the pedestrian network to each economic pole.

Finally, and aimed to obtain a spatial estimate of isochronous curves in the territory of analysis from pedestrian travel times, the data interpolation in a GIS is carried out using the ordinary Kriging method. This geographic accessibility model calculates the population-weighted pedestrian travel time for each TAZ_j. This time becomes one of the independent variables in the regression model.

Stage 3 – Database Construction: To build the database for each TAZ_j, sociodemographic and mobility information was obtained from the last MTS. Information on mobility and infrastructure, such as commerce, job offers, public space, and public transport availability, was taken from the city's open databases. Based on this information, for each TAZ_j were assigned independent variables related to demography, mobility, and built environment; in turn, as the response variable, the percentage of trips using the pedestrian mode of transport was assigned. Table 1 presents a brief description of the variables considered.

Table 1. Variables of the regression model (Source: authors)

Variable	Description	Type
Percentage of pedestrian trips	Percentage of trips on foot, with respect to the total number of trips generated from the TAZ_j, excluding "to return home" trips	Dependent
Pedestrian travel time (*ptt*)	Pedestrian travel time weighted by population, from TAZ_j to the nearest economic pole	Independent
Education level	Percentage of population living in the TAZ_j with university studies completed	Independent
SES indicator*	Percentage of households in the TAZ_j belonging to low-income SES (0,1,2)	Independent
Age	Percentage of people in the TAZ_j under 30 years old	Independent
Own vehicle	Average number of vehicles per household in the TAZ_j	Independent
Driving licenses	Average number of driver's licenses per household in the TAZ_j	Independent
Jobs	Jobs number in the TAZ_j normalized according to the number of trips generated	Independent
Commerce	Number of commercial businesses located in the TAZ_j normalized according to the number of trips generated	Independent
Public space	Square meters of effective public space per inhabitant in the TAZ_j	Independent
Public transport availability	Number of public transport routes in the TAZ_j + availability of aerial cable stations in theTAZ_j	Independent

*In Colombia, the SES is an indicator associated to dwellings, which is related to the economic incomes of families. This indicator is used for subsidies allocation (Cantillo-García et al., 2019). There are 6 SES (1-6), where SES 1 corresponds to households with lower incomes and SES 6 to households with higher incomes.

There are three alternatives to define the response variable (dependent variable): i) Consider all the reasons for displacement; ii) consider only trips to return home, or iii) Consider all the trips excluding trips to return home. The last alternative was adopted in this study since the regression model aims to analyze the trips originated from the TAZ_j for purposes such as work, study, recreation, and care, among others.

On the other hand, including the pedestrian travel time in the regression model allows obtaining a measure of the pedestrian-transport-infrastructure-network conditions and including time variations created by the route topography. This last condition provides a more realistic model for cities like Manizales located in mountain regions.

Stage 4 – Application of the regression model: The spatial regression model is built based on the variables described in Table 1. Initially, an Ordinary Least Squares (OLS) regression model is used. The model's validity is determined based on the Lagrange and Robust LM statistical tests reported in the OLS regression and the spatial autocorrelation check results. If the model is invalid due to substantive and/or residual spatial autocorrelation, a spatial regression model conditioned by statistical test results should be applied. Finally, the regression coefficients and statistical significance for each independent variable can be obtained, as well as the model coefficient of determination (R^2).

RESULTS AND DISCUSSION

Result 1 – Determination of economic poles: By applying the three criteria established in the methodology, the TAZ corresponding to economic poles (EP = 1) is depicted in Figure 2 (see blue zones). As can be seen, there are TAZ (EP = 1) that limit each other. According to the Urban Development Institute of Bogotá city (IDU, 2005), if the distance between the geometric centroids of these TAZ is less than 1.1 km (15 minutes walking at 1.2 m/s), they must conform to a single economic pole; Otherwise, they represent different economic poles.

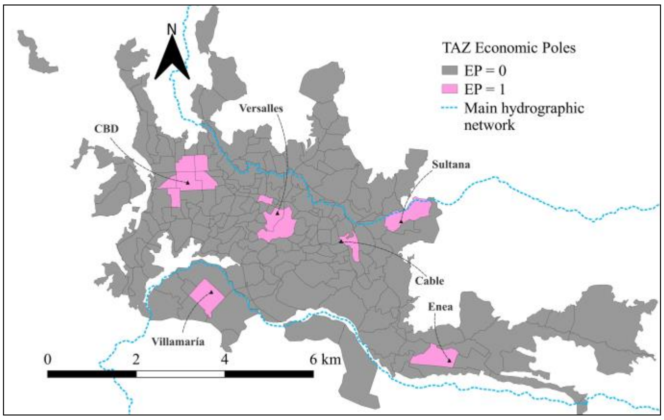

Figure 2. Result of criteria application in the TAZ of Manizales city (Source: authors)

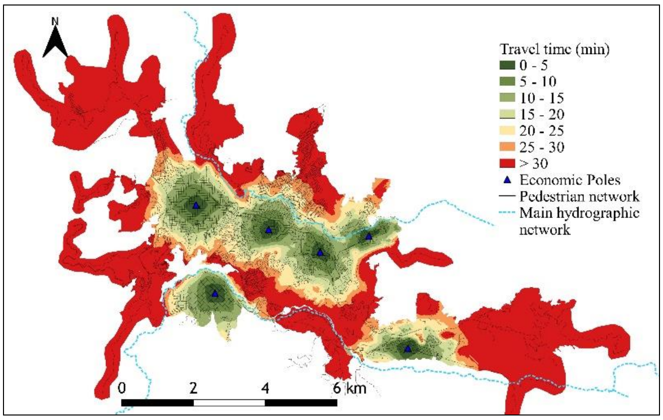

Figure 3. Pedestrian isochronous curves towards the economic poles (Source: authors)

As established in the methodology of this study, the economic poles are those TAZ with a high number of representative trips (RT) located in Areas of Mixed Use (AMU) where there is a diversity of services. These poles are: La Enea neighborhood, La Sultana neighborhood, El Cable sector, Versalles neighborhood, Villamaría center, and historic center.

Result 2 – Calculation of geographic accessibility conditions: As a result of the travel time model application, the map of pedestrian isochronous curves toward the economic poles was obtained (Figure 3); That is to say, the time required to reach the nearest economic pole from any point in the city. Figure 4a shows the coverage by general population and by area. As can be seen, 6% of the population reaches one of the six economic poles in a travel time equal to or less than 5 minutes; 19% of the population achieves it in a travel time of 10 minutes; 35.8% need up to 15 minutes.

Figure 4a shows the coverage by SES. For any travel time, SES 1 and 2 present the lowest population coverage of walking towards an economic pole. For travel times less than or equal to 10 minutes, strata 1, 2, and 4 show the lowest coverage. For instance, in 5 minutes, only 0.15% of the population living in strata 1 and 2 is covered. In contrast, in 5 minutes, strata 3, 5, and 6 reach population coverage of 12%, 10%, and 14%, respectively. From a travel time of 10 minutes, stratum four considerably increases its population coverage. For a travel time of 15 minutes, strata 1 and 2 only reach a population coverage of approximately 15%, while in strata 4, 3, 6, and 5, the coverage reaches 35%, 53%, 56%, and 72%, respectively.

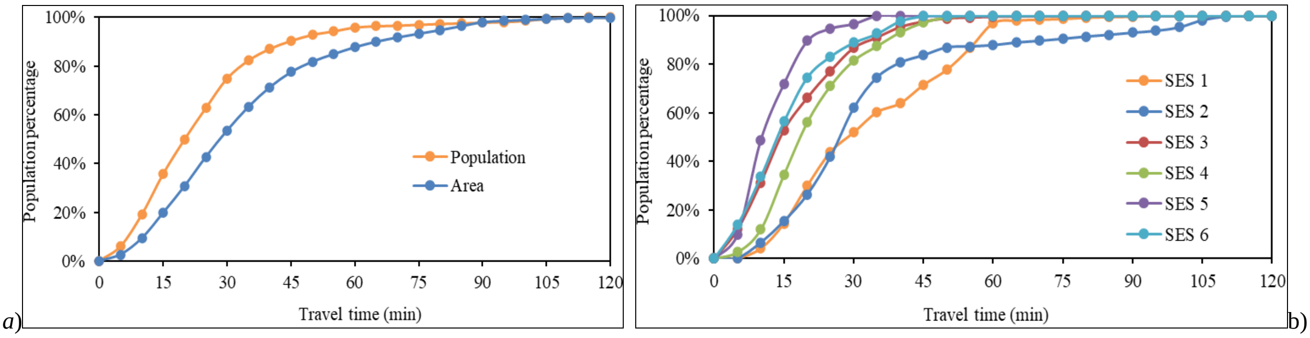

Figure 4. a) Coverage by general population and by area; b) coverage by SES (Source: authors)

Result 3 – Database Construction: Table 2 presents the statistical summary of the variables associated with each TAZ_j for the regression model.

Result 4 – Application of the regression model: Table 3 shows the results of the two regression models addressed: OLS and spatial regression. Based on the significance level observed in the Lagrange and Robust LM tests in OLS model, it is established that, due to the statistical significance of the Lagrange Multiplier error and delay tests, a Spatial Lag model should be used.

Table 2. Database used in the regression model (Source: authors)

Variable	Minimum	Quartile 1	Median	Average	Quartile 3	Maximum	Standard deviation
Percentage of pedestrian trips	0.00	6.15	21.54	25.82	39.79	100.00	22.85
Pedestrian travel time	3.27	12.41	18.89	22.45	28.84	105.48	14.41
Education level	0.00	3.64	11.28	17.52	25.46	100.00	18.63
SES indicator	0.00	2.97	13.32	36.21	82.60	100.00	39.10
Age	0.00	33.52	39.04	35.66	42.98	56.25	13.06
Own vehicle	0.00	0.43	0.62	0.69	0.90	2.33	0.39
Driving licenses	0.00	0.64	0.90	1.02	1.33	3.25	0.53
Jobs	0.00	0.03	0.23	0.91	0.63	14.58	2.21
Commerce	0.00	0.01	0.02	0.68	0.04	127.72	8.96
Public space	0.00	0.01	1.00	4.32	3.59	71.92	10.18
Public transport availability	0.00	4.00	10.00	14.36	20.00	75.00	13.88

Considering a statistical significance level of $p < 0.05$, the independent variables of the model are the pedestrian travel times (-0.4034***) and the number of commercial businesses located in the TAZ_j (0.5184***). The negative correlation of the pedestrian travel time variable suggests that those TAZ farthest from the economic poles generate the lowest percentage of pedestrian trips. According to the regression model, for each minute of variation in pedestrian travel time, the pedestrian trips inversely vary by 0.4%. On the other hand, the positive correlation observed in the number of commercial businesses located in the TAZ_j indicates that the greater the number of trips generated by a TAZ_j, the higher the percentage of pedestrian trips generated. In this way, when the commercial indicator in the TAZ_j differs by one unit, the pedestrian trips vary directly by 0.52%. The independent variable related to vehicle ownership shows a negative correlation (-10.4795), which suggests that those TAZ with a higher average number of vehicles per household generate a lower percentage of pedestrian trips. However, the null hypothesis test for this variable (0.0807) is not low enough to be considered statistically significant.

Table 3. Results of the OLS and Spatial Lag regression models (Source: authors) Response variable: percentage of pedestrian trips. Statistical significance: ***<0.001, **<0.01, *<0.05, °<0.10

	Indicators and variables	Regression models	
		OLS	Spatial Lag
	R^2	0.3026	0.3450
	I de Moran	0.2280	0.2280
	Log likelihood	-886.0870	-881.0880
	Akaike info criterion (AIC)	1,794.1700	1,786.1800
Regression coefficient + statistical significance	Pedestrian travel time	-0.5427***	-0.4034***
	Education level	-0.0582	-0.0066
	SES indicator	0.0653	0.0537
	Age	-0.0315	-0.0909
	Own vehicle	-10.4402	-10.4795°
	Driving licenses	-4.0500	-3.8867
	Jobs	-0.6579	-0.4939
	Commerce	0.5495***	0.5184***
	Public space	-0.0111	0.0241
	Public transport availability	0.1427	0.0611
p-value	Lagrange Multiplier (lag)	0.0106	---
	Robust LM (lag)	0.0561	---
	Lagrange Multiplier (error)	0.0496	---
	Robust LM (error)	0.3256	---

Based on the Representative Trips (RT), Area of Mixed Use (AMU), and Service Diversity criteria, the economic poles of Manizales city were identified. These areas generally concentrate most of the urban activity and are essential to the city's services and opportunities. For example, the Versalles neighborhood generates a high flow of RTs due to various services such as hospitals, universities, parks, and sports venues. In turn, the Historic Center concentrates the most significant number of financial institutions and various health, education, recreation, and security services (Escobar et al., 2015). The analyzed city covers an area of approximately 36 km2. The six economic poles identified suggest that in this city, there is an economic pole for every 6 km2. Due to the proximity between the economic poles of the Versalles neighborhood, the Cable sector, and the La Sultana neighborhood, in Figure 3, we observe that the 15-minute isochronal curve associated with these sectors is geographically connected. The preceding suggests that, in this area of the city, its inhabitants have access to at least two economic poles in less than a 15-minute walk.

The results indicate that 38% of the population can walk to one of the economic poles of the city in a maximum time of 15 minutes, indicating that the city still faces challenges in its urban planning processes and more significant efforts to stimulate pedestrian mobility. That is, a decentralized city where smaller-scale economic poles abound, providing various services for its inhabitants. On the other hand, under the current urban configuration, the lower socioeconomic strata (SES 1 and 2) have less walking access to the economic poles of the city. In contrast, the highest socioeconomic strata (SES 5 and 6) present better possibilities of accessing the economic poles on foot in a travel time of 15 minutes.

Although no work has been carried out in other urban contexts applying a methodology similar to the one used in this work, some studies based on regression models offer similar results in some socioeconomic variables. In particular, the identified contributions have demonstrated the inequity of accessing areas of urban activity, especially for lower-income households. For example, Weng et al. (2019) found that the most walkable environments with the most significant access to services in the city of Shanghai were located in the city's central areas, while much lower walkability indicators were observed in rural areas. Although these authors did not use socioeconomic variables such as income, socioeconomic status, or housing cost, they found that due to the high cost of housing in central areas, medium- and low-incomes populations tend to move towards rural areas in where walkability is less. In the spatial regression model of Calafiore et al. (2022) applied in the city of Liverpool, it was found that although the housing cost (socioeconomic indicator) presented a weak relationship with service access, in higher costs zones, less access to services was observed due to a lower urban density.

In the research by Hosford et al. (2022) carried out in Vancouver, the urban areas with a higher population of children, older adults, and minority groups showed less access to product stores; in contrast, areas with a larger population of employed people and higher educational levels showed better coverage. Although the socioeconomic analysis included a measure of the population's income, this variable did not affect access to services. Guzman et al. (2021) calculated access to banks, neighborhood stores, educational centers, and health centers in Bogotá. Their results show that the low SES presented better access to neighborhood stores, while the middle and high SES showed better access to educational centers, banking, and health services. The results obtained in the accessibility model of this research are consistent with other studies carried out in the context of Manizales city. In particular, the current distribution of the different urban services provides poor coverage for the lower SES. In this line, the work of Escobar et al. (2022b) identified social inequity in access to the aerial cableway because the lowest socioeconomic stratum (SES 1) showed the lowest population coverage compared to other SES. Zuluaga et al. (2021) analyzed access to the public bicycle service in Manizales, concluding that the current distribution of stations provides poor access to the lowest socioeconomic strata (SES 1 and 2). Gómez et al. (2022) analyzed the Spatio-temporal distribution of educational centers in Manizales, observing better coverage for high SES.

The socio-spatial analysis offered by the travel time variable in geographic accessibility highlights the importance of promoting a decentralized urban development model to facilitate the implementation of the 15-minute city concept. Although deeper statistical analyses are required to determine causality between the variables, a negative correlation between pedestrian travel time and the percentage of pedestrian trips suggests a statistical association between living near to an economic pole and making trips on foot. This outcome highlights the importance of redistributing employment in the city to facilitate accessibility relegating other transportation means. The city decentralization brings the population closer to the economic poles and creates positive effects on the number of pedestrian trips. On the other hand, the statistical significance shown by the number of commercial businesses recognizes the importance of this variable in the 15-minute city model. Therefore, increasing the commercial offer in the neighborhoods increases the job offer and the number of services, which in turn encourages the mobility of people in the public space.

CONCLUSIONS

The 15-Minute City promotes the decentralization of urban activities to guarantee better coverage of services to the population. Under this approach, urban planning should promote the transformation of the so-called “dormitory neighborhoods” into neighborhoods with more significant urban activity (economic poles), offering better opportunities to the citizens. In this context, the main objective of the 15-minute city is to facilitate pedestrian trips and, in this way, avoid using other transport means that increase pollution and urban congestion.

Although various research works have been conducted under this approach, three main gaps that encourage our research were detected. 1) research using TT models is scarce; 2) few studies apply spatial regression models and, in all of them, an accessibility indicator is obtained to be used as a response variable; and 3) only one contribution has been carried out in the context of Latin American cities, which are characterized by particular socioeconomic and geographic conditions. To respond to these gaps, the methodology proposed in this paper applies a spatial regression model that involves the TT accessibility indicator as an independent variable. In addition, the SES of households was considered in the analysis. Moreover, unlike previous contributions, in our model, the percentage of pedestrian trips was used as a response variable to identify the correlation between walking as a means of transportation and living near to an economic pole.

When applying the proposed methodology in the city of Manizales (Colombia), it was found that only 35.8% of the population reaches its closest economic pole in a walk of no more than 15 minutes, showing conditions that are more favorable for residents of higher economic income. In other words, in the context of the analyzed city, the current distribution of the economic poles provides little coverage to the areas inhabited by lower-income families. This situation indicates that in the analyzed city, more efforts must be made to improve urban justice. From a statistical point of view, the spatial regression model used in this research made it possible to characterize behaviors and patterns of pedestrian travel in the different activity areas of the city. In particular, it was found that the travel time walking to the nearest economic pole has statistical relevance and a negative correlation (-0.4034***) with respect to the pedestrian trips. It was also found that the level of business activity in an area is statistically significant showing a positive correlation (0.5184***) respect to the number of pedestrian trips.

Therefore, the proximity of urban services correlates with the number of pedestrian trips. On the other hand, since families with lower economic incomes showed poor access to the economic poles in the analyzed city, the 15-minute city approach poses a high potential to contribute to urban spatial justice to the extent that urban planners facilitate the growth of economic activities and services in neighborhoods, with special attention to the less privileged. However, this study shows some limitations related to the geographic accessibility model because other variables affecting the speed and intensity of pedestrian transportation, such as age, gender, and health conditions, were not considered. It is also necessary to develop models involving the urban relevance of the economic poles. Therefore, future works could analyze individual access to services through a POA model. In addition, more variables could be explored affecting the speed and intensity of pedestrian transport in different areas of the city or on different days of the week.

Author Contributions: Conceptualization, J.E.A., W.S. and D.A.E.; methodology, J.E.A. and D.A.E.; software, J.E.A.; validation, W.S. and D.A.E.; formal analysis W.S. and D.A.E.; investigation, J.E.A. and D.A.E.; data curation, J.E.A.; writing - original draft preparation, J.E.A., and D.A.E.; writing - review and editing, W.S. and D.A.E.; visualization, W.S.; supervision W.S. and D.A.E.; project administration, W.S. and D.A.E.; All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 22.05.2023 Revised: 26.07.2023 Accepted: 28.08.2023 Available online: 26.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1046-1055
DOI 10.30892/gtg.49320-1104

THE EPISTEMOLOGICAL VALUES OF TRAVEL & TOURISM COMPETITIVENESS INDEX AND ITS PREDICTIVE POWERS ON TOURIST ARRIVALS IN AFRICA; PLS-SEM APPROACH

Weldearegay G. HIYAB
Aksum University, Department of Tourism Management, Institute of Archaeology and Tourism, Aksum, Tigray, Ethiopia, e-mail: hiyabgebretsadik.gg@gmail.com

Thowayeb H. HASSAN*
Social Studies Department, College of Arts, King Faisal University, Al Ahsa, Saudi Arabia, e-mail: thassan@kfu.edu.sa

Mostafa A. HASSANIN
Mass Media Communication Department, College of Arts, King Faisal University, Al Ahsa, Saudi Arabia, e-mail: mahtaha@kfu.edu.sa

Muhanna Yousef ALMAKHAYITAH
Social Studies Department, College of Arts, King Faisal University, Al-Ahsa, Saudi Arabia, e-mail: malmakhayitah@kfu.edu.sa

Citation: Hiyab G.W., Hassan, T.H., Hassanin, M.A., Almakhayitah, M.Y. (2023). THE EPISTEMOLOGICAL VALUES OF TRAVEL & TOURISM COMPETITIVENESS INDEX AND ITS PREDICTIVE POWERS ON TOURIST ARRIVALS IN AFRICA; PLS-SEM APPROACH. *GeoJournal of Tourism and Geosites*, 49(3), 1046–1055. https://doi.org/10.30892/gtg.49320-1104

Abstract: This study aimed to assess the explanatory power of the sub-indices and pillars of the Travel & Tourism Competitiveness Index on ITA taking Africa as a case. The study extended the epistemological articulations and empirical values of the TTCI by introducing ITA as a dependent variable. It took WEF's 7 years report on TTCI of 29 African economies. Results show that the predictive powers of half of TTCI Sub-indices as formative indicators to ITA are weak and negative. Analogously, the collinearity, validity, and reliability issues of sub-indices were substantially not resolved. These findings have implied that the TTCI has to articulate its predictive bearing before it can be accepted as an epistemologically and practically relevant concept that prescribes policy issues especially on the course of diagnosing the African Tourism ecosystem.

Key words: destination competitiveness, TTCI, African Tourism, epistemology of competitiveness of competitiveness, PLS-SEM Approach

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INTRODUCTION

1. Study Background

The discourse of inquiry on tourist destinations competitiveness is a recent academic phenomenon (Mazanec and Ring, 2011; Mazanec et al., 2007; Pike, 2008; Weldearegay, 2017). However, it has suddenly overwhelmed the travel and tourism discipline of inquiry from the ending of the second millennia onwards and, currently, it is one of the hottest agendas of academic debates in the tourism field (Weldearegay, 2017). Destination competitiveness research has, now, well matured to a level of moving on from defining the concept, gathering important data on it, aggregating, disaggregating, and indexing towards the development of measurement instruments and elements of theory building discourses (Mazanec et al., 2007). Mapping all works of literature on destination competitiveness give two main streams of indicators; one, destination competitiveness measured from output or impact point of view (OECD's Approach); and, two, destination competitiveness measured from the input point of view (WEF's Approach).

From an input point of view, the most comprehensive and systematic collection of data on destination competitiveness is the Travel and Tourism Competitiveness Index (TTCI) (Ring, 2016) that has collected comprehensive data for more than seven years. The TTCI, which gives the basis to the Travel and Tourism Competitiveness Report (TTCR), was started in 2007 by WEF with three sub-indexes, 13 pillars, 58 individual indicators, and 124 economies which developed into four sub-indexes, 14 pillars, 90 individual indicators and 140 economies in 2019.

However, the TTCI receives strong criticisms from its different aspects. The aspects of the criticism are the following. On, the TTCI is based neither on well-built theory nor does itself constitute a theory. It has not discussed the philosophical and ideological underpinnings of its claims. As such, it is nothing more than a comprehensive definition of destination competitiveness (Mazanec and Ring, 2011; Mazanec et al., 2007). The second criticism of the TTCI is its arbitrary weighing of variables (Mazanec and Ring, 2011; Pulido-Fernández and Rodríguez-Díaz, 2016). Moreover, the variables in the TTCI index are measured based on hard data and executive's opinion poll (Pulido-Fernández and Rodríguez-Díaz, 2016). The last, but the most important, criticism is that, from an epistemological point of view, the destination competitiveness index appears to be systems of one side rather than cause-effect relationships (Mazanec et al., 2007). This is, therefore, where the

* Corresponding author

current study builds. In so doing, the TTCI is made to be the subject of this study, because, with all its criticisms, it still can be regarded as the most comprehensive and systematic collection of data on destination competitiveness (Ring, 2016). This discourse has, henceforth, tried to measure the predictive power of the sub-indices of TTCI on international tourist arrivals taking the case of Africa, and showed the level of the epistemological and practical relevance of the index.

2. Study Objective

The general objective of this study is to examine the epistemological Values of the Travel & Tourism Competitiveness Index (TTCI) and its Predictive Powers on the continent's "International Tourist Arrivals" and whether such results can be used as inputs towards African Tourism Ecosystem Diagnosis.

3. Null Hypotheses

H0: The coefficient β of the African Tourism Competitiveness Valuation results on the sub-index "Enabling Environment" as exogenous latent construct on the path relationship with the "International Tourist Arrivals" as an endogenous latent construct is statistically not different from zero, i.e. β= 0.

H0: The African Tourism Competitiveness Valuation results on the sub-index "Natural and Cultural Resources" as exogenous latent construct doesn't significantly explain the variation on the African "International Tourist Arrivals" as an endogenous latent construct, i.e. β= 0.

H0: The coefficient β of the African Tourism Competitiveness Valuation results on the sub-index "Infrastructure" as an exogenous latent construct on the path relationship with as an endogenous latent construct of African "International Tourist Arrivals" is statistically not different from zero, i.e. β= 0.

H0: There is no statistically significant direct path relationship between the African Tourism Competitiveness Valuation results on the sub-index "T&T Policy and Enabling Conditions" as an exogenous latent construct and the African "International Tourist Arrivals" as an endogenous latent construct, i.e. β= 0.

LITERATURE REVIEW

The discourse of inquiry on tourist destinations competitiveness is a recent academic phenomenon (Mazanec and Ring, 2011; Mazanec et al., 2007; Pike, 2008; Weldearegay, 2017). However, it has suddenly overwhelmed the travel and tourism discipline of inquiry from the ending of the second millennia onwards and, currently, it is one of the hottest agendas of academic debates in the field (Weldearegay, 2017). Destination competitiveness research has, now, well matured to a level of moving on from defining the concept, gathering important data on it, aggregating, disaggregating, and indexing to elements of theory building discourses (Mazanec et al., 2007).

Among many researchers in the destination competitiveness area, some have tried to clarify destinations competitiveness (Dwyer et al., 2004; Garau-Taberner, 2007; Hassan, 2000; Ritchie et al., 2001); some tried to develop a model (Crouch and Ritchie, 1999; Dwyer and Kim, 2003; Hassan, 2000; Ritchie and Crouch, 2003); other tried to identify the relevant factors of destinations competitiveness (Dwyer et al., 2004; Weldearegay, 2017); and, still others tried to evaluate an index's explanatory power (Mazanec and Ring, 2011; Weldearegay, 2017).

Referring to specific indicators; Hassan (2000) built on the theory of comparative advantage; Dwyer and Kim (2003) appreciated demand as an essential construct; Craigwell and Worrell (2008), Dwyer et al. (2000) and Song and Witt (2000) emphasized on destination pricing; Weldearegay (2017) built on the breadth of the concept by appreciating urbanization as a significant construct; and, Cárdenas-García et al. (2013) focused on sustainability dimension of it, to mention a few. In all these discourses, however, almost all authors regard their model as continuously evolving (Mazanec and Ring, 2011).

Coming to general streams, mapping all these works of literature on destination competitiveness give two main streams of indicators; one, destination competitiveness measured from output or impact point of view (OECD's Approach on the study of competitiveness); and, two, destination competitiveness measured from the input point of view (WEF's Approach on the study of competitiveness). On one hand, the substantially agreed output indicators of destination competitiveness are market share based on international arrivals in a destination (Crouch, 2010; Mazanec et al., 2007; Weldearegay, 2017), market share based on international tourism receipts in a destination (Crouch, 2010; Li et al., 2013; Mazanec et al., 2007; Weldearegay, 2017), and tourism revenue/spending per arrival in a destination (Kim, 2012; Weldearegay, 2017) which together appreciate the values of arrivals, the values of receipts and the proportional spending of incoming tourists indicating the destination's price or value proposition competitiveness (Weldearegay, 2017).

On the other hand, the input indicators of destination competitiveness are not, however, as such distilled based on academic debates. On this input aspect of the area, the first effort was the trial to develop Competitiveness Monitor (CM), which was developed by WTTC, in collaboration with the Christel DeHaan Tourism and Travel Research Institute (TTRI) of the University of Nottingham in 2001. It had 65 tourism competitiveness indicators classified into eight dimensions such as openness in tourism, competitiveness in prices, technology, infrastructure, social development, environment, human resources, and human tourism. This discourse has later joined to the initiative of the World Economic Forum (WEF) on compiling Travel and Tourism Competitiveness Report (TTCR) based on set indices, which was first published in 2007.

The Travel and Tourism Competitiveness Index (TTCI) that gives the basis to the Travel and Tourism Competitiveness Report (TTCR) started with three sub-indexes, 13 pillars, 58 individual indicators, and 124 economies which developed into four sub-indexes, 14 pillars, 90 individual indicators and 140 economies in 2019.

As put in Figure 1, in the 2019 report, the TTCI is conceived as a composite construct resulting from the four sub-indices. They are; Enabling Environment, Travel &Tourism Policy and Enabling Conditions, Infrastructure, and Cultural and Natural Resources (World Economic Forum, 2019). The sub-indices are composed of formative indicators too.

Accordingly; the Enabling Environment sub-index consists of five pillars (Business Environment, Safety & Security, Health & Hygiene, Human Resources & Labor Market, and, ICT Readiness); the T&T Policy and Enabling Conditions sub-index consists of four pillars (Prioritization of Travel &Tourism, International Openness, Price Competitiveness, and Environmental Sustainability); the Infrastructure sub-index consists of three pillars (Air Transport Infrastructure, Ground & Port Infrastructure, and Tourist Service Infrastructure); and, the Cultural and Natural Resources sub-index consists of two pillars (Natural Resources and Cultural Resources & Business Travel). Therefore, as stated elsewhere in this paper, mapping all these works of literature on destination competitiveness gives two main streams of indicators; they are output and input indicators. The input indicators of destination competitiveness that have the most comprehensive data (Ring, 2016) for more than 8 years are the ones embodied in the above briefly described Travel and Tourism Competitiveness Index (TTCI) developed by the WEF starting from 2007. However, the TTCI receives strong criticisms from its different aspects.

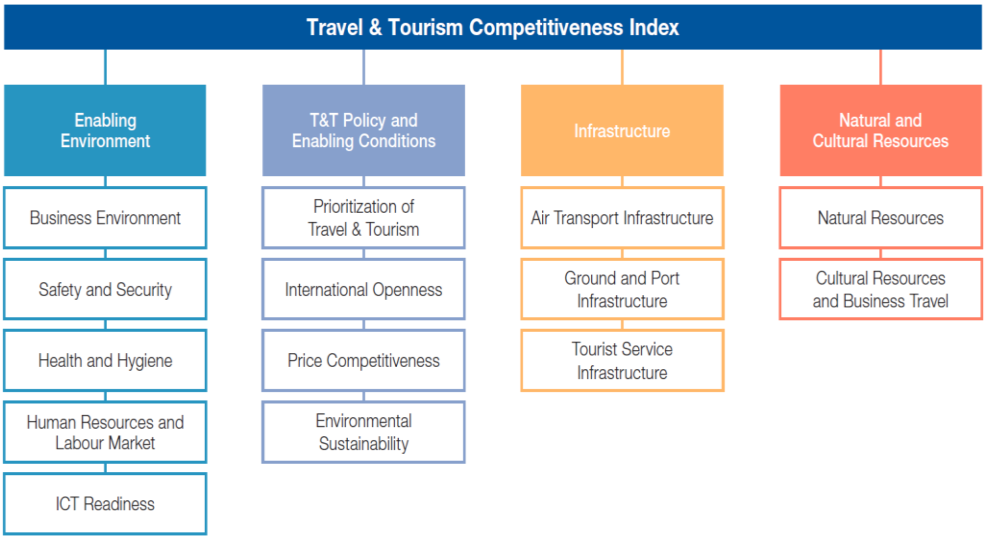

Figure 1. The TTCI Sub-Indices and Pillars (Source: World Economic Forum, 2019)

One aspect of the criticism is that the TTCI is based neither on a well-built theory nor does itself constitute a theory. It has not discussed the philosophical and ideological underpinnings of its claims. As such, it is nothing more than a comprehensive definition of destination competitiveness (Mazanec and Ring, 2011; Mazanec et al., 2007).

The second criticism of the TTCI is its arbitrary weighing of variables (Pulido-Fernández and Rodríguez-Díaz, 2016). The TTCI report treats all items at each step of aggregation – from 90 individual indicators to 14 pillars, and to 4 sub-indices, all calculated as unweighted average (Mazanec and Ring, 2011). However, not all individual indicators, individual pillars, or individual sub-indices would have the same explaining power.

The third criticism is the fact that the variables in the TTCI index are measured based on hard data and executive's opinion poll. In this case, it is argued that not all executives have first-hand experience with the issues and the "go-and-ask-the-practitioners" research strategy cannot be fulfilled. Related critics of these approaches consider that the opinions are too subjective (Pulido-Fernández and Rodríguez-Díaz, 2016). The last and the most important criticism is that it is not known if the two main streams of indicators which are the destination competitiveness measured from an output point of view, and destination competitiveness measured from an input point of view are in a significant statistical harmony to each other. In other words, the explaining power of the input indicators on the output indicators is not statistically estimated to be significant. From an epistemological point of view, the destination competitiveness index appears to be systems of one side rather than cause-effect relationships (Mazanec et al., 2007). This is, therefore, where the current study builds. In creating a proper link between the input factors with success criteria, the output side of destination competitiveness is proposed by many authors to be measured using different indicators including; the number of visitors (Mazanec et al., 2007; Weldearegay, 2017); tourism expenditures (Crouch, 2010; Li et al., 2013; Mazanec et al., 2007; Weldearegay, 2017); tourism receipt per arrival (Kim, 2012; Mazanec et al., 2007; Weldearegay, 2017); seasonality resilience on tourism (Butler, 2001); efficient use and preservation of natural and cultural resources (Ritchie et al., 2001); visitor satisfaction (Kozak, 2002); tourism growth (Mazanec et al., 2007). However, the measure of "International Tourist Arrivals" was used in this study as output indicators because the most readily available data is on this variable.

MATERIALS AND METHODS

1. Research paradigm, positionality, and place of the researcher

Axiologically, the research tried findings not to be mediated by values. The research appreciates that the researcher's biography may directly or indirectly influence the design, execution, and interpretation of the research which makes it very 'difficult' to fully attain a completely 'objective' reality. Ontologically, however, it appreciates that the difficulty to fully attain a completely 'objective' reality doesn't mean that, there is no objective external reality that is independent of human value systems. Epistemologically siding to positivistic world view, but reflexively acknowledging the influence of biography, the research has aspired to achieve 'empathetic neutrality and strived towards dualism of the researcher and the researched.

2. Data Source

The type of data used for this study is secondary data. World Economic Forum's Travel and Tourism Competitiveness Reports of the years 2008, 2009, 2011, 2013, 2015, 2017, and 2019 were used for the exogenous latent construct and the endogenous latent construct, data from the World Bank and the United Nations World Tourism Organization have been used (World Economic Forum, 2008, 2009, 2011, 2013, 2015, 2017, 2019).

3. Sampling and inclusion criteria

The African continent was taken as a single destination. This helps to smoothen the idea of distance bonus or burden from tourist generating countries; to estimate the sustainability of success criteria by avoiding disturbances by short-term phenomena, such as exchange rate fluctuations, terrorist attacks, mega-events, and catastrophes of all sorts that occur in a single country; to neutralize the effect of the size of nations or arrival per capita; and, to smoothen maintaining a sizeable market share versus fast growth of their share. Therefore, taking Africa as a single destination, 29 countries from Africa were taken as a sample. The inclusion criteria used was covering all the countries as long as a country has data of TTCI indices of the years 2008, 2009, 2011, 2013, 2015, 2017, and 2019. Technically, the sampling method can be regarded as a census. Table 1 lists the African economies included in the sample.

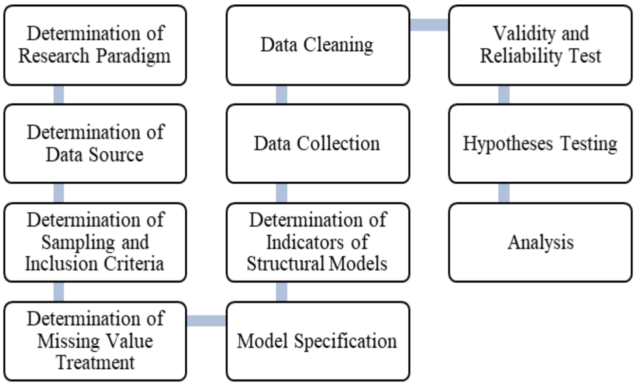

Figure 2. Flowchart of Research Methodology
Source: adopted from Craiut, et al. (2022), Prada et al. (2020), Teklebrhan, et al. (2023), and Arifin et al. (2023)

Table 1. Economies Participated in the Study

S.N.	Economy				
1.	Algeria	10.	Ethiopia	20.	Mozambique
2.	Benin	11.	Gambia	21.	Namibia
3.	Botswana	12.	Kenya	22.	Nigeria
4.	Burkina Faso	13.	Lesotho	23.	Senegal
5.	Burundi	14.	Libya	24.	South Africa
6.	Cameroon	15.	Madagascar	25.	Tanzania
7.	Chad	16.	Mali	26.	Tunisia
8.	Cyprus	17.	Mauritania	27.	Uganda
9.	Egypt	18.	Mauritius	28.	Zambia
		19.	Morocco	29.	Zimbabwe

4. Missing value treatment method

Casewise Deletion Method which deletes each row (i.e., case, response, observation) that contains a missing value was used as the missing value treatment method. This method has the disadvantage of changing the sample size and the power of the estimation. However, it is very accurate with a consistent sample size for each analysis across parameter estimations. Hence, sample size 29 is the reduced size after the missing value was treated.

5. Model specification

Partial Least Square (PLS) path modeling of the SEM was used because it is regarded as suitable when; sample size is small, applications have a little available theory, the correct model specification cannot be ensured, and when there is a non-normal distributional assumption of the data (Bacon, 1999; Hwang et al., 2010; Wong, 2010). This study used both the formative and the reflective measurement models. The reflective outer model is specified as: $X_\chi = \Lambda_\chi \xi + \varepsilon_\chi$

Where; X is exogenous Latent Construct or the four sub-indices of the TTCI, Λ (capital lambda) denotes the loading coefficients, and ξ (small letter xi) is the vector of latent Constructs or the 14 pillars of the TTCI, and ε (epsilon) is the residual. Customizing the recommendations of Bacon (1999), Hwang (2010) and Wong (2010), the formative inner model is specified as follow: $\eta = \mathrm{B}\xi + \zeta$ Where; η (small letter eta) is the endogenous latent Construct "International Tourist Arrivals", B denotes the matrix of coefficients, ξ (small letter xi) is the vector of exogenous latent constructs which are the four sub-indices of the TTCI, and ζ (small letter zeta) represents the structural model residuals.

Table 2. Indicators of the Outer Model, the Measure model, and the Structural Model (Source: Adopted from World Economic Forum, 2019)

S.N.	Exogenous Variables of the Outer Model	Endogenous Constructs of the Measure Model	Endogenous Variables of the Structural Model or Inner Model
1)	Business Environment (EE1)	Enabling Environment	International Tourist Arrivals
2)	Safety & Security (EE2)		
3)	Health & Hygiene (EE3)		
4)	Human Resources & Labor Market (EE4)		
5)	ICT Readiness (EE5)		
6)	Prioritization of Travel &Tourism (PL1)	Travel &Tourism Policy and Enabling Conditions	
7)	International Openness (PL2)		
8)	Price Competitiveness (PL3)		
9)	Environ. Sustainability (PL40		
10)	Air Transport Infrastructure (IN1)	Infrastructure	
11)	Ground & Port Infrastructure (IN2)		
12)	Tourist Service Infrastructure (IN3)		
13)	Natural Resources (NC1)	Cultural and Natural Resources	
14)	Cultural Resources & Business Travel (NC2)		

6. Data Processing Software

After the data was cleaned and arranged using Microsoft Excel, it was processed by a PLS data processing package called SMART PLS (Version3).

7. Indicator of the Endogenous Latent Variable

As stated elsewhere, the output side of destination competitiveness is proposed by many authors to be measured using different indicators including; the number of visitors (Mazanec et al., 2007; Weldearegay, 2017); tourism expenditures (Crouch, 2010; Li et al., 2013; Mazanec et al., 2007; Weldearegay, 2017); tourism receipt per arrival (Kim, 2012; Mazanec et al., 2007; Weldearegay, 2017); seasonality resilience on tourism (Butler,1994); efficient use and preservation of natural and cultural resources (Ritchie et al., 2001); visitor satisfaction (Kozak, 2002); tourism growth (Mazanec et al., 2007).

However, the measure of "International Tourist Arrivals" was used in this study as output indicators because the most readily available data from 2008 to 2019 is on this variable.

RESULTS AND DISCUSSION

1. Structural Inner Model and Hypotheses Testing

The structural inner model was estimated through R2. R 2 explains the percentage of the variance of the endogenous latent variable by the change in the exogenous latent variable in the structural equation model. Figure 3 shows that the coefficient of determination, R2, of the endogenous latent variable is found to be 0.764. This means that the four exogenous latent variables (Infrastructure, T&T Policy, and Enabling Conditions, Enabling Environment, and Natural & Cultural Resources) explain 76.4% of the variation in "International Tourist Arrivals". However, R2 is such a floating measure that its value increases even if an irrelevant predictor is added. Therefore, adjusted R2 is used to penalize such irrelevance. Customizing the recommendations of Bacon (1999), Hwang (2010) and Wong (2010), the Adjusted R2 is calculated using the following formula:

$$R^2 - adjusted = R^2 - \frac{p(1-R^2)}{n-p-1}$$

Where: = Unadjusted R-square; = sample size which is 29, after missing value treatment; = number of predictor variables (latent constructs) which is 4 in this model

Accordingly, customizing the recommendations of Bacon (1999), Hwang (2010) and Wong (2010), the adjusted R2 is calculated in the following manner:

$$R^2 - adjusted = 0.764 - \frac{4(1-0.764)}{29-4-1} = 0.764 - \frac{4(0.236)}{24} \Bigg| = 0.764 - \frac{0.944}{24} \Bigg| = 0.764 - 0.0393333333$$

$$R^2 - adjusted = 0.725$$

This means that the four exogenous latent variables have a 72.5% penalized and adjusted value of explaining the variation in International Tourist Arrivals unconditional to an irrelevant additional predictor.

Hence, the joint predictive power of the four TTCI Sub-indices overall model combined as formative indicators to International Tourist Arrivals is substantial firmly established. Nevertheless, the individual predictive power of the four TTCI Sub-indices as individual formative indicators to International Tourist Arrivals is not as to the essence of the World Economic Forum in its TTCI. The details are explained as follows. Path coefficient matrixes of the inner model Figure 3 suggest that "T&T Policy and Enabling Conditions" and "Enabling Environment" have a positive and direct effect on the endogenous latent variable. The path coefficient from "T&T Policy and Enabling Conditions" to “International Tourist Arrivals” is found to be 1.172 and the path coefficient from “Enabling Environment” to “International Tourist Arrivals” is found to be 1.216. As these results are out of the statistical values of the path coefficient range (-0.2, 0.2), and are positive values, these indicate that they contribute to an increase in “International Tourist Arrivals” thereby to TDC.

However, the correlation values between “T&T Policy and Enabling Conditions” and “International Tourist Arrivals” as well as between “Enabling Environment” and “International Tourist Arrivals” is showing more than 1. This could be because they may have a spurious component that each variable is being caused by some third variable or set of variables in the model. According to Deegan (1978), if there are 2 or more predictors that are correlated, positively or negatively, then the path coefficient values may exceed the bounds (-1,1). Nevertheless, as such path coefficients can legitimately occur in the presence of strong multicollinearity, analysts should not be reticent to report models with this characteristic.

Neither should analysts feel forced to modify models simply because of the presence of multicollinearity. Standardized regression coefficients are not restricted to any range as the standardized coefficient can coincide with the correlation coefficient. The higher the correlation between two independent variables in the model, the more likely it becomes that the standardized coefficient exceeds the statistical value 1. Therefore, the null hypotheses (H0) "The coefficient β of the African Tourism Competitiveness Valuation results on the sub-index "Enabling Environment" as exogenous latent construct on the path relationship with the "International Tourist Arrivals" as an endogenous latent construct is statistically not different from zero, i.e. β= 0" fails to be accepted. Likewise, the null hypotheses (H0) "There is no statistically significant direct path relationship between the African Tourism Competitiveness Valuation results on the sub-index "T&T Policy and Enabling Conditions" as an exogenous latent construct and the African "International Tourist Arrivals" as an endogenous latent construct, i.e. β= 0" fails to be accepted.

Other results from the path coefficient matrixes of the inner model in Figure 3 suggest that “Natural and Cultural Resources” and “International Tourist Arrivals” have negative effects on the endogenous latent variable “International Tourist Arrivals”. The path coefficient from “Natural and Cultural Resources” to “International Tourist Arrivals” is found to be -0.612 and the path coefficient from “Infrastructure” to “International Tourist Arrivals” is found to be -0.369. As these results are out of the statistical values of the range (-0.2 - 0.2), and are negative values, these indicate that they contribute to a decrease in "International Tourist Arrivals" thereby to TDC which are at odds with the essence TTCI of the World

Economic Forum on the same sub-indices. The finding on the negative relationship of "Natural and Cultural Resources" and "International Tourist Arrivals" is at odds not only with the essence and articulations of the TTCI, but also with the articulations of Weldearegay (2017), and Hassan (2000) that consider it to be one of the core drivers of tourist arrivals.

Therefore, the null hypotheses (H0) "The African Tourism Competitiveness Valuation results on the sub-index "Natural and Cultural Resources" as exogenous latent construct doesn't significantly explain the variation on the African "International Tourist Arrivals" as an endogenous latent construct, i.e. β= 0" fails to be accepted with the finding of negative relationships. Likewise, the null hypotheses (H0) "The coefficient β of the African Tourism Competitiveness Valuation results on the sub-index "Infrastructure" as an exogenous latent construct on the path relationship with as an endogenous latent construct of African "International Tourist Arrivals" is statistically not different from zero, i.e. β= 0" fails to be accepted with the finding of negative relationships. Another worth analyzing results from Figure 3 is explaining powers of the 14 pillars of the TTIC as reflective indicators of the 4 sub-indices.

Accordingly, 12 of the 14 reflective pillars have established strong explaining powers on all of the four sub-indices of the TTCI. However, the explaining powers of the reflective pillar "Prioritization of Travel &Tourism (PL1)" to the sub-index "T&T Policy and Enabling Conditions" and the reflective pillar "Human Resources & Labor Market (EE4)" to the sub-index "Enabling Environment" were found to be weak and negative (-0.027, and, 0.033 coefficient values, respectively). These results are at odds with the perspectives of TTCI of the World Economic Forum that they should be strong and positive. All in all, half of the four sub-indices of the TTCI ("Natural and Cultural Resources" and "Infrastructure") as formative indicators of International Tourist Arrivals and two of the 14 pillars (Prioritization of Travel &Tourism (PL1), and Human Resources & Labor Market (EE4)") as reflective indicators of "T&T Policy and Enabling Conditions", and "Enabling Environment", respectively, are at odds with the perspectives of TTCI of the World Economic Forum that they should be strong and positive. The negative signs in the sub-index "Natural and Cultural Resources" and the pillar "Human Resources & Labor Market (EE4)" are a repetitive phenomenon in that it was found the same in the study of (Mazanec and Ring, 2011) under different samples and different methodologies.

The results are at odds with the perspectives TTCI of the World Economic Forum on the sub-indices and in line with the critics made by tourism researchers in

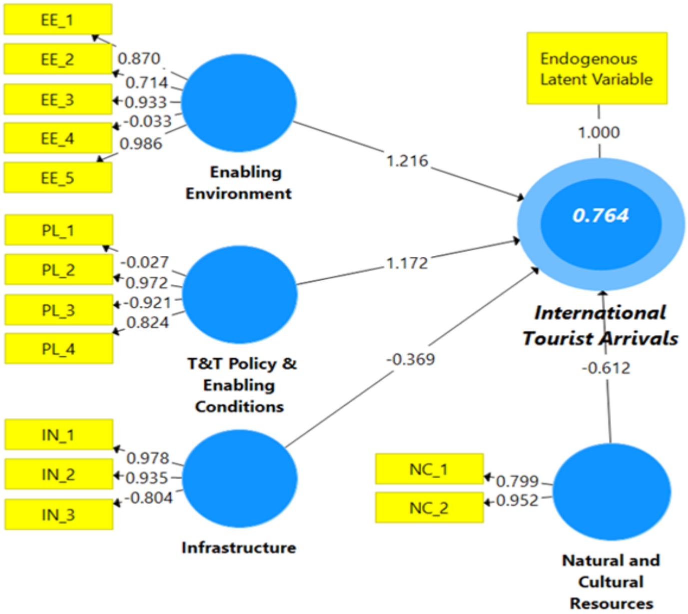

Figure 3. Resultant Structural Path Model Test (Source: Test Result)

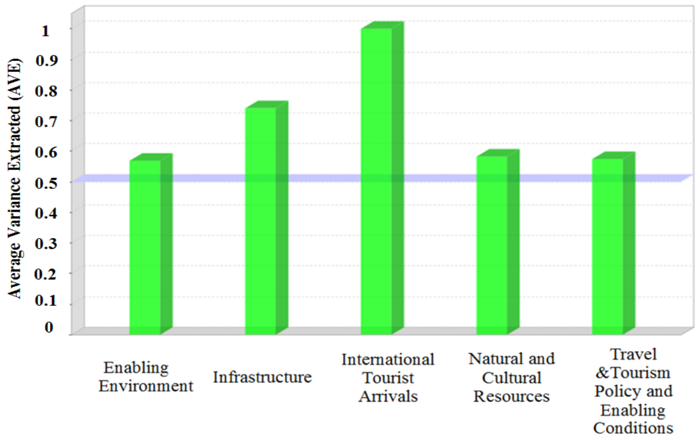

Figure 4. Average Variance Extracted (AVE) for Convergence Validity

Table 3. Inner Variance Inflation Factor (VIF) Values (Source: Test Result)

	Variance Inflation Factor (VIF)
EE_1	26.930
EE_2	7.694
EE_3	7.130
EE_4	5.927
EE_5	35.643
Endogenous Latent Variable _(Dependent _Variable)	1.000
IN_1	30.408
IN_2	23.732
IN_3	2.699
NC_1	1.500
NC_2	1.500
PL_1	1.100
PL_2	11.245
PL_3	5.096
PL_4	4.369

that the TTCI does not represent a destination's actual tourism performance in terms of generating tourist arrivals. So, the epistemological and practical characteristics of the indices, the pillars, and individual indicators of the TTCI are questionable because of their weak and negative predictive powers, and as such, the TTCI's claim of offering guidelines for developing competitiveness-enhancing strategies may posit practical, methodological and theorizing questions.

Statistically, this weak and negative predictive power can be attributed to; one, non-linear phenomena related to inaccurateness of valuing destinations based on the TTCI; two, unobserved heterogeneity where some other variables might act as a background variables.; three; the index valuations system may come too close to capture the cause–effect relationships or the approximated 7-point index scales TTCI system may not manifest true interval-scale property; four, the tourism resources may not be transformed properly into tourism products that attract tourists unless infrastructures are sufficiently developed, and as such, an interaction term or interplay between the indices "Natural and Cultural Resources" and "Infrastructure" can be observed which ultimately lower value of Infrastructure may offset the value of Natural and Cultural Resources; five, the fact that some of the variables in the TTCI index are valued on the basis of executive's opinion poll with "go-and-ask-the-practitioners" strategy which may collect subjective and professionally unsought opinions with little touch to the actual performance; six; among the 90 individual indicators within the pillars of the TTCI's sub-indices, some of them may be weakly theoretically justified and the statistical methods used to demonstrate the individual indicators' usefulness may not be accurate. All or the combination of some of the above problems can be attributed to result in weaker, and the unexpected negative, explaining power of the formative sub-indices "Natural and Cultural Resources" and "Infrastructure" and the two of the 14 pillars (Prioritization of Travel &Tourism (PL1), and Human Resources & Labor Market (EE4)") as reflective indicators of "T&T Policy and Enabling Conditions", and "Enabling Environment", respectively.

2. Inner Variance Inflation Factor (VIF) Values

To check the attributions, the collinearity test and the Inner Variance Inflation Factor (VIF) have been run. To avoid the collinearity problems, the VIF of 5 or lower is accepted (Hair et al., 2011). As can be seen in table 9, the VIF of the value of half of the exogenous latent variables is greater than 5 which indicates that there is a high collinearity problem. Therefore, the essence of attributing international tourist arrivals to the pillars has failed substantially. This high collinearity test result is consistent with the articulations of Deegan (1978) that if there are 3 or more predictors that are correlated, positively or negatively, then the path coefficient values may exceed the bounds (-1,1). This is because, it is found that the correlation values between "T&T Policy and Enabling Conditions" and "International Tourist Arrivals" as well as between "Enabling Environment" and "International Tourist Arrivals" are showing more than 1 (1.172 and 1.216, respectively).

3. Validity and Reliability Tests

3.1. Validity Tests

In this paper, validity tests are conducted to confirm the research design measures what is intended to measure and whether the total variations found reflect true variations. Accordingly, Average Variance Extracted (AVE) for Convergence Validity, Fornell-Lacker Criterion for Discriminant Validity, and Heterotrait-Monotrait Ratio (HTMT) for Discriminant Validity, have been used to estimate the soundness of the measures. Henseler et al. (2009) put that the average variance extracted should be higher than 0.5. From Figure 3, it is found that all of the AVE values are greater than the acceptable threshold of 0.5, so convergent validity is confirmed, and as such the research design measures what is intended to measure and the total variations in the endogenous latent construct reflect true variations. Table 4 shows the results of the discriminant validity test using the Fornell Larcker criterion. All diagonal elements in the table are not greater than the correlation values in their respective column nor are they larger than the correlation values in their respective row.

Accordingly, the Fornell–Larcker criterion of validity is not well captured. Hence, the TTCI constructs are not valid constructs to be sound explainers of ITAs. So, conclusions made regarding structural paths may or may not be correct as the strength of a relationship could be overestimated, underestimated or a relationship may be confirmed when in fact there is no real relationship. So, one cannot be certain which latent constructs are acting as the antecedent to the explained result. This result is consistent with the results of the Inner Variance Inflation Factor (VIF) used to test collinearity to find high collinearity problems where, in that regard, the essence of attributing international tourist arrivals to the pillars has failed substantially.

The heterotrait-monotrait (HTMT) ratio of correlations is a new method for testing discriminant validity in PLS-SEM. Discriminant validity is established between two constructs if the HTMT value is below 0.90. The results in Table 5 indicate that in more than half of the relationship between two constructs the HTMT value is greater than 0.9. This indicates that the latent constructs are not distinguishable. So, it cannot be certain that the results confirming hypothesized structural paths are real, or merely the result of statistical discrepancies. It is consistent with the results of the discriminant validity test using the Fornell Larcker criterion where the Fornell–Larcker criterion of validity was not well captured and so, the TTCI constructs were regarded as not valid constructs to be sound explainers of international tourist arrivals.

Table 4. Discriminant Validity; Fornell-Lacker Criterion (Source: Test Result)

	Enabling Environment	Infrastructure	International Tourist Arrivals	Natural & Cultural Resources	T&T Policy &_ Enabling Conditions
Enabling Environment	0.754				
Infrastructure	-0.963	0.860			
International Tourist Arrivals	<u>0.828</u>	-0.767	1.000		
Natural & Cultural Resources	-0.805	1.005	-0.699	0.763	
T&T Policy &_Enabling Conditions	-1.031	<u>1.062</u>	-0.753	<u>0.994</u>	0.758

Table 5. Heterotrait-Monotrait Ratio (HTMT) for Discriminant Validity (Source: Test Result)

	Enabling Environment	Infrastructure	International Tourist Arrivals	Natural & Cultural Resources	T&T Policy &_ Enabling Conditions
Enabling Environment					
Infrastructure	1.066				
International Tourist Arrivals	0.813	0.769			
Natural & Cultural Resources	0.915	1.000	0.719		
T&T Policy &_Enabling Conditions	1.246	1.190	0.809	1.107	

3.2. Reliability Test

The test of reliability is conducted to check the soundness of measurements. The reliabilities of the constructs are measured through Composite Reliability, Cronbach's Alpha, and rho_A. Table 6 has contains three reliability Tests. The first result is on Composite Reliability. It is used for the internal consistency measure of PLS. A sound measure of composite reliability or internal consistency is a value greater than 0.7 and hence only half of the latent constructs (Enabling Environment and Natural & Cultural Resources with Composite Reliability values of 0.831and 0.735, respectively) satisfy the composite reliability measure. The second reliability result that Table 6 presents is that Cronbach's Alpha. It is a method used to check the reliability of PLS construct scores which is calculated based on the correlations between the variables to be observed. The recommended Cronbach's Alpha value is greater than 0.5. The testing results of this study show only half of the latent constructs (Enabling Environment and Natural & Cultural Resources with Composite Reliability values of 0.774 and 0.732, respectively) satisfy the Cronbach's Alpha reliability measure. Two constructs (infrastructure and T&T Policy &_Enabling Conditions) that do not satisfy Composite Reliability have not again satisfied Cronbach's Alpha result recommendations while the rest two (Enabling Environment and Natural & Cultural Resources) have satisfied both Cronbach's Alpha and Composite Reliability test thresholds. The third reliability test result that Table 6 presents is the rho_A reliability test result. It is a method employed to check the reliability of PLS construct scores, which is regarded better reliability measure than Cronbach's Alpha because it is calculated based on the loadings rather than the correlations between the variables to be observed. The recommended rho_A value is in the range from 0.700 to 1.000 for formative constructs. The testing results of this study show that rho_A values of four of the latent constructs fall between 0.741 to 1.000 satisfying the suggestions of Henseler et al. (2014).

Table 6. Reliability Tests (Source: Test Result)

Construct	Composite Reliability	Cronbach's Alpha	rho_A
ENABLING ENVIRONMENT	0.831	0.774	0.912
INFRASTRUCTURE	0.540	-0.311	0.898
INTERNATIONAL TOURIST ARRIVALS	1.000	1.000	1.000
NATURAL & CULTURAL_RESOURCES	0.735	0.732	0.741
T&T POLICY &_ENABLING CONDITIONS	0.287	-0.571	0.918

CONCLUSIONS AND RECOMMENDATIONS

1. Conclusions

This study built on relating African valuations on the sub-indices of TTCI with international tourist arrivals to Africa in view of increasing the epistemological and empirical values of TTCI of the World Economic Forum. It put efforts to increase the operational usage and theoretical articulations of the TTCI as the subject of the study by introducing a dependent variable to it and measuring the explaining power of the indices. It took WEF's 7 years report on TTCI of 29 African economies. Accordingly, the following results are found; One, the structural inner model estimated through adjusted R2 resulted that the joint predictive power of the four TTCI Sub-indices combined as formative latent variables have a 72.5% adjusted value of explaining the variation in International Tourist Arrivals. Nevertheless, the individual predictive power of the four TTCI Sub-indices as individual formative indicators to International Tourist Arrivals is not as to the essence of the World Economic Forum in its TTCI. Considering the individual predictive power, the two main streams of indicators which are the destination competitiveness measured from an output point of view measured by International Tourist Arrivals, and the destination competitiveness measured from the input point of view as put in the TTCI are partly found to be statistically unharmonious to each other. Specifically, the explaining power of the input indicators in the TTCI, sub-indices "Natural and Cultural Resources" and "Infrastructure" on the output indicators (International Tourist Arrivals) are statistically estimated to be weaker and negative. Two, the collinearity test through Inner Variance Inflation Factor (VIF) has been run and the VIF of values of half of the exogenous latent variables is greater than the acceptable threshold which indicates that there is a high collinearity problem. Therefore, the essence of attributing international tourist arrivals to the individual pillars of the TTCI has failed substantially.Three, the discriminant validity test using the Fornell Larcker criterion and Heterotrait-Monotrait Ratio (HTMT) were not well captured through convergent validity was established. So, the TTCI constructs were regarded as not distinguishable, giving mixed messages, and as such, they are invalid constructs to be sound explainers of international tourist arrivals. So, it cannot be certain that the results shown in the structural paths are real.

Four, the TTCI constructs "Infrastructure", and "T&T Policy &_Enabling Conditions" are found to be not satisfying both Composite and Cronbach's Alpha Reliability tests though the rho_A reliability test was well satisfied. These again give mixed messages. Therefore, the study finding has implied that the TTCI has strong epistemological issues to be resolved before it reaches the level of prescribing on policy or practical issues. The fact that, epistemologically, the destination competitiveness index appears to house indicators of one side features rather than cause-effect relationships (Mazanec et al., 2007), lacks the proper link with success criteria such as tourist arrivals. However, the concept of TTCI is of little epistemological value unless it explains the destination's actual performance in a system of cause-effect relationships. Without these dependent variables, a TTCI's values get fixed in a stage of description.

As such, TTCI cannot transcend towards having epistemological values that have back and forward explanations as well as cause and effect relationships nor will it have healthy policy prescriptions capacity. This is because; both theory building and policy prescriptions shall begin on featuring relationships among cause and effects or at least associations between factors. If TTCI is to be accepted as an epistemologically and practically relevant concept, therefore, it should articulate how it is capable of explaining performance features that directly depend on it such as tourist arrivals, tourism receipts, and/ or receipts per arrival. As such, the TTCI shall transcend from strictly supply-driven to include the demand dimensions to it in the harbor of bridging its applicability and theorizing gaps. The overall finding of this paper is that the TTCI has not matured enough to be used by tourism policymakers, especially in Africa, to be able to see where interventions would be valued, make wise public spending and how to prioritize their focus to the things that matter to maintain a competitive destination before better theorizing and measurements are appropriated to it.

2. Recommendations

The study provides two sets of recommendations; epistemologically and empirical. Epistemologically, based on the finding that the TTCI has strong cause and effect issues to be resolved before it reaches the level of prescribing on policy or practical issues, making the various individual indicators, pillars, and sub-indices of the TTCI of the World Economic Forum theory-guided and data-driven would strengthen its significance to theoreticians and academicians. The individual predictive power of the four TTCI Sub-indices as individual formative indicators to International Tourist Arrivals or spending should be measured before TTCI reports can be produced. In line with this, collinearity issues of sub-indices, pillars, and individual indicators, their validity issues to be sound explainers of competitiveness, and the reliability of measures should be tested. To do so, introducing a critical change in the future measurement of destination competitiveness index would be to make them in line with output measures of tourist destination competitiveness such as tourist arrivals and spending. This would lead to better theorizing of the TTCI by establishing both the cause and the effect epistemological aspects of it. Empirically, again based on the findings that the valuations of Africa on the TTCI are not consistent with the number of tourists the continent receives, there is a need to revisit its real-time competitiveness. Therefore, while taking the valuations of TTCI as a springboard is quintessential, grossly taking the prescriptions would be misleading. So, there is a need to revisit the continental tourism eco-system with a new start and be subjected to eco-system diagnosis that intends long-term structural fix. Because African tourism eco-system diagnosis is significant to broadly understand the continental peculiarities of the Tourism Sector that are deviating it from the TTCI reports. This is because the gross TTCI reports do not support the African tourism sector's work in tune with its real-time data. Therefore, though basing on the TTCI is quite important, revisiting them against regional tourist flows and at the African tourism eco-system level is prototypical. This can ultimately keep a high degree of sector organization at a continental level based on real-time data of input and output indicators.

Limitations of the Study

The scores of the independent variables on different countries are captured from the World Economic Forum (WEF) (World Economic Forum, 2008, 2009, 2011, 2013, 2015, 2017, 2019), The World Bank (2021), and the UNWTO (United Nations World Tourism Organization, 2009, 2010, 2012, 2014, 2016, 2018, 2021). The scores of the measures are therefore only as good as the implicit assumptions of the WEF, World Bank, and the UNWTO. As the study uses a secondary data source, the quality of the data wholly depends on the previous source of data.

Author Contributions: Conceptualization, W.G.H., T.H.H, M.A.H., and M.Y.A; methodology, W.H.G.; software, W.H.G ,T.H.H validation, W.H.G., T.H.H.,M. A.H., and M.Y.A. formal analysis, W.H.G.and T.H.H ; investigation, W.H.G., T.H.H.,M.A.H., and M. Y.A; data curation,T. H.H.,M.A.H., and M.Y.A; writing - original draft preparation,W. H.G., T.H.H.; writing - review and editing, W.H.G., T.H.H, M.A.H., and M.Y.A; visualization,W.H.G.; supervision, W.H.G.; project administration, W.H.G.,T.H.H. All authors have read and agreed to the published version of the manuscript.

Funding: This work was supported by the Deanship of Scientific Research, Vice Presidency for Graduate Studies and Scientific Research, King Faisal University, Saudi Arabia (Grant No.4161), through its KFU Research Summer initiative.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: This work was supported by the Deanship of Scientific Research, Vice Presidency for Graduate Studies and Scientific Research, King Faisal University, Saudi Arabia (Grant No.4161), through its KFU Research Summer initiative.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 23.05.2023 Revised: 02.07.2023 Accepted: 29.08.2023 Available online: 26.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1056-1066
DOI 10.30892/gtg.49321-1105

SOCIAL COST - BENEFIT ANALYSIS OF ACTIVE MOBILITY PROJECTS IN CONTEXTS WITH STEEP TERRAIN. A CASE STUDY IN COLOMBIA

Santiago CARDONA URREA
Universidad Nacional de Colombia, Sede Manizales, Facultad de Ingeniería y Arquitectura, departamento de Ingeniería Civil, Grupo de Investigación en Movilidad Sostenible, Manizales, Colombia, e-mail: scardonau@unal.edu.co

Diego Alexander ESCOBAR
Universidad Nacional de Colombia, Sede Manizales. Facultad de Ingeniería y Arquitectura, departamento de Ingeniería Civil, Grupo de Investigación en Movilidad Sostenible, Manizales, Colombia, e-mail: daescobarga@unal.edu.co

William SARACHE[*]
Universidad Nacional de Colombia, Sede Manizales. Facultad de Ingeniería y Arquitectura, Departamento de Ingeniería Industrial, Grupo de Investigación en Innovación y Desarrollo Tecnológico, Manizales, Colombia, e-mail: wasarachec@unal.edu.co

Citation: Cardona Urrea, S., Escobar, D.A., & Sarache, W. (2023). SOCIAL COST - BENEFIT ANALYSIS OF ACTIVE MOBILITY PROJECTS IN CONTEXTS WITH STEEP TERRAIN. A CASE STUDY IN COLOMBIA. *GeoJournal of Tourism and Geosites*, 49(3), 1056–1066. https://doi.org/10.30892/gtg.49321-1105

Abstract: Active mobility projects can potentially initiate paradigm shifts in population and urban planning decision-makers. This paper aims to conduct a social cost-benefit analysis of an active mobility project in a Colombian city. The increase of physical activity, reduction of CO_2 emissions, and traffic crashes were measured in an area with suitable slopes to promote bicycles for commuting. A social cost-benefit ratio of 1.14 was found, with physical activity and road safety as the most important outcomes of the active mobility infrastructure. Furthermore, a big room for the increase and promotion of cycling as a mode of transport is addressed.

Key words: social cost-benefit analysis, steep terrain, active mobility, walking, cycling, modal shift

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INTRODUCTION

From the perspective of active mobility projects, many authors have documented the benefits to society generated by cycling and walking. An increase in physical activity and a reduction of premature deaths (Mueller et al., 2015), a reduction of air pollutants (Espinosa et al., 2018), traffic congestion (Rabl and de Nazelle, 2012), an increase in road safety (Prato et al., 2016), and accessibility (Oviedo and Sabogal-Cardona, 2022). Several methods, such as balance sheet calculations (BSC), cost-effectiveness analysis (CEA), and multi-criteria analysis (MCA) have been popular for evaluating active mobility projects (Ruffino and Jarre, 2020). Nevertheless, cost-benefit analysis (CBA), also known as social cost-benefit analysis (S-CBA) (Ruffino and Jarre, 2020), has been the most used technique in the last two decades because it assesses the return on societal welfare. For instance, the World Health Organization (WHO) developed the Health Economic Assessment Tool (HEAT) to support the evaluation of active mobility (walking and cycling) projects, considering S-CBA.

The tool conducts an S-CBA in four categories: physical activity, air pollution, crash risk, and carbon emissions (Kahlmeier et al., 2017). Similarly, Sælensminde (2004) evaluated the implementation of active mobility networks in three Norwegian cities using a S-CBA. Traffic congestion, road safety, health, and external costs due to a modal shift from cars to active mobility were considered. The modal shift calculation considered the average distances of cycling and walking trips, resulting in a benefit-cost ratio of 4 to 5 times the initial investment. Later, a study conducted by Woodcock et al. (2009) compared the effects on health (physical activity, air pollution, and road crashes) of hypothetical scenarios of public policy implementations in London (UK) and New Delhi (India), where car traffic decreased, and technology improved to reduce air pollution, and active mobility grew. Health effects were measured through disability-adjusted life-years [DALYs], finding significant benefits of up to 7,332 DALYs avoided in London and 12,516 DALYs avoided in Delhi. A mixed approach was considered between increased active travel and lower emissions. Gotschi (2011) carried out an S-CBA of three different future investment plans (basic, 80%, and world-class) in bicycling infrastructure in Oregon (US). Health benefits were monetised via two methods: the value of statistical life savings and healthcare cost savings. The benefit-cost ratio reached 3.8 for the basic plan, 2.3 for the 80% plan, and 1.3 for the world-class plan when healthcare and fuel savings were considered. The ratio increased to 53.3, 33.1, and 20.1, respectively, when the value of saved statistical lives was considered.

Similarly, Macmillan et al. (2014) simulated the societal costs and benefits due to public policies implemented to increase the use of cycling as a commute mode in Auckland (New Zealand). A benefit-cost ratio between 6 and 20 was found. The highest benefits came from reducing all-cause mortality due to increased physical activity. In a case study of a

[*] Corresponding author

6-mile recreational and commuting bikeway connecting two cities (Wilmington and New Castle) in Delaware, USA, Li and Faghri (2014) developed a comprehensive framework to support the construction of new cycling facilities through S-CBA. This study involved the analysis of social benefits due to traffic reduction (fuel and parking cost savings, congestion decrease), health improvement, road safety, and emissions and noise reduction. A net benefit-cost ratio of 1.92 was found when a 10% active mobility mode share was reached. In Flanders (Belgium), the impact of two bicycle superhighways was studied by Buekers et al. (2015). The effect on health was considered from a modal shift from car to cycling and walking. The number of cyclists and distances cycled were used to create future scenarios of private and active modal shares.

Health was measured through DALYs, and noise and CO_2 were considered for the environment and congestion in the model. The study found a benefit-cost ratio above 1 in all 22 evaluated scenarios, except for two where higher average construction costs were assumed. Brey et al. (2017) evaluated an S-CBA of cycling promotion policies in Seville (Spain) using questionnaires applied to private and public bike-share-system users, detecting an internal rate of return of 130%. Furthermore, Maizlish et al. (2017) quantified the health benefits and decrease in greenhouse gas emissions due to California's regional transportation plan with a high level of active transportation in the future.

Ambitious scenarios increased physical activity among the population by up to 283 minutes per week and reduced 2.5 to 12 deaths and DALYs compared to preferred scenarios. Similarly, Chapman et al. (2018) conducted an S-CBA of the ACTIVE (Activating Communities to Improve Vitality and Equality) program in New Zealand, comparing the net benefits for health and the environment between two cities where the program was implemented comparing with two control cities where it was not. The results indicated a benefit-cost ratio of 11:1.

In the Latin American context, few studies have applied S-CBA or evaluated health impacts related to active mobility projects and public policies. de Sá et al. (2015) evaluated the modal shift from car to active mobility in Sao Paulo (Brazil) and its impact on physical activity. Three hypothetical scenarios were considered, using the household travel survey and trip distance as a data source. Walking was identified as the most probable substitute for car trips in short distances (less than 1,000 meters). In contrast, public transport (i.e., subways, trains, and buses) was identified as the preferred mode for long distances (more than 1,000 meters). This resulted in increased physical activity levels from 19.4 to 26.7 minutes per capita while reducing private vehicle use. Moreover, de Sá et al. (2017) modelled the health impact of physical activity, air pollution, and road injuries in Sao Paulo (Brazil). A comparison between the current travel patterns of the city (2012 baseline year) with four counterfactual scenarios were conducted: Sao Paulo's central business district, London (2012), highly motorised Sao Paulo (as California), and 2040 Sao Paulo's vision.

Results showed a notable rise in health gains of 64,000 DALYs avoided. In the Colombian context, Espinosa et al. (2018) estimated the CO_2 emissions for two cities (Cali and Villavicencio), considering a hypothetical scenario of a 10% bicycle modal share for 2030. This situation will generate a cumulative avoidance between 2015 and 2030 of 83,245 CO_2 tons in Villavicencio and 445,976 CO_2 tons in Cali. Although Latin American studies have examined the health and emissions benefits of active mobility but have not utilized cost-benefit analyses.

Table 1 presents a brief summary of the reviewed research on evaluations of active mobility projects: i) The scenarios are categorized as infrastructure projects, implementation of public policies, and hypothetical scenarios; ii) The calculations consider the active mode of transport (cycling or walking); iii) The assessments take into account variables such as traffic, health, noise, pollution, and road safety; iv) The modal shift variables are based on trip distances for cycling and walking (percentages extracted from literature reviews) and are calculated for the city or area of influence; v) The research calculates the benefit-cost ratio (Yes/No); vi) Whether the topography of the case study region was considered (Yes/No).

Table 1. Synthesis of some contributions related to evaluations of active mobility projects. Source: authors

Autor	Types of scenarios	Modes of transport		Variables					Variables of modal shift and cycling share			BCR	Topo	City	Income level by World bank	
		B	W	T	H	P	N	RS	D	LR	R				HIC	LMIC
Sælensminde (2004)	IP	X	X	X	X	X		X	X		C	Yes	No	Hokksund, Hamar and Trondheim	X	
Woodcock et al. (2009)	HS	X	X		X	X		X	X		C	No	No	London, New Delhi	X	X
Gotschi (2011)	IP	X		X	X						C	Yes	No	Oregon	X	
Macmillan et al. (2014)	SPP	X	X	X	X	X		X		X	C	Yes	No	Auckland	X	
Li and Faghri (2014)	IP	X		X	X	X	X	X		X	C	Yes	No	Delaware	X	
Buekers et al. (2015)	IP	X	X	X	X	X	X	X			C	Yes	No	Flandes	X	
de Sá et al. (2015)	HS		X	X	X				X*		C	No	No	Sao Paulo		X
Brey et al. (2017)	SPP	X		X	X	X		X			C	Yes	No	Seville	X	
Maizlish et al. (2017)	SPP	X	X		X	X		X			C	No	No	California	X	
de Sá et al. (2017)	HS	X	X		X	X		X			C	No	No	Sao Paulo		X
Espinosa et al. 2018)	HS	X	X			X					C*	No	No	Cali and Villavicencio		X
Chapman et al. (2018)	SPP	X	X		X	X		X			C	Yes	No	New Plymouth and Hastings	X	
Rodrigues et al. (2020)	HS	X	X		X	X		X			C*	Yes	No	Porto	X	

IP: Infrastructure project; HS: Hypothetical scenario; SPP: Scenarios of public policy; B: Bike; W: Walk; T: Traffic; H: Health; P: Pollution; N: Noise; RS: Road Safety; D: Distance; LR: Literature review; R: Analysis resolution; C: City; AI: Area of influence *Consider projected modal shares of cycling and walking in government plans; BCR: Calculate the benefit-cost ratio Topo: Topography was considered? HIC: High Income Country; LMIC: Lower and Middle Income Country

As shown in Table 1, the literature presents several studies related to active mobility, which evaluate public policy implementations and hypothetical scenarios. Hypothetical scenarios often assess future transport mode shares with higher rates of active mobility among residents (de Sá et al., 2015, 2017; Espinosa et al., 2018; Rodrigues et al., 2020; Woodcock et al., 2009). In contrast, most studies assess modal shifts and benefits at the city level. Only Buekers (2015) estimated the benefits of the area of influence near the project. A common approach is to calculate the benefit-cost ratio; however, this is only possible if infrastructure or public policy implementation costs are available (e.g., Buekers et al., 2015; Gotschi, 2011; Li and Faghri, 2014). In Latin America, the reviewed articles calculated health benefits or pollutant reductions without implementing an S-CBA mainly because they are related to hypothetical scenarios and do not contemplate infrastructure projects with a detailed budget (de Sá et al., 2015, 2017; Espinosa et al., 2018). On the other hand, only Rodrigues et al. (2020) discuss the importance of steep topographies in the impact of active mobility projects, especially for increasing the use of the bicycle as a transport mode; however, they did not use it as a variable for the S-CBA. Additionally, all the reviewed articles measured the impacts at the city level. For example, the social well-being benefits and modal shift were calculated based on the overall impact on the population in the city, without considering specific effects on the project's area of influence where there is a greater potential for modal shift from private vehicles to active modes.

Therefore, this article aims to address these gaps by conducting an S-CBA in a medium-sized Colombian city where steep topography affects the construction of infrastructure for mobility projects and the popularisation of cycling as a transport mode. The project's impact will be measured by focusing on the most used variables in the literature: health, environmental, and road safety. Open-source programs like QGIS and programming languages like Python will be used for calculations. Furthermore, transportation data such as the Household Travel Survey and the Origin-Destination Matrix, geography data like Digital Elevation Model (DEM) and crowd-sourced data associated with cycling commutes will be used. This research can be replicated in other contexts where topography is an important variable in calculating the project's impact and data on modal shift and health are scarce.

The most important contributions of this research can be outlined as follows: i) The topography was a crucial variable in delimiting the area of influence of the active mobility infrastructure project. Steep topography affects the construction of new transport infrastructure due to the negotiation of public space with private vehicles and the popularisation of bicycles as a mode of transport; ii) The modal shift calculation considers trips within the area of influence and the average trip distance per mode of transport, estimated from the household travel survey. Furthermore, indicators from the World Health Organization about the percentage of shifted trips were used to avoid overstatement in the measures (Kahlmeier et al., 2017); iii) Social benefits were estimated regarding health, pollution, and road safety. A proposed method to estimate road safety benefits is presented, considering vision zero and safe road infrastructure approaches in the design and public policy implementations. This method reduces the probability of road crashes, calculating the Social Cost Saved due to fatalities and injuries prevented; iv) This research focuses on S-CBA in terms of health, environment, and road safety in a medium-sized Colombian city where the steep topography limits the use of the bike as a mode of transport. Studies on active mobility projects and S-CBA are scarce in the Global South, and Latin America and the Caribbean.

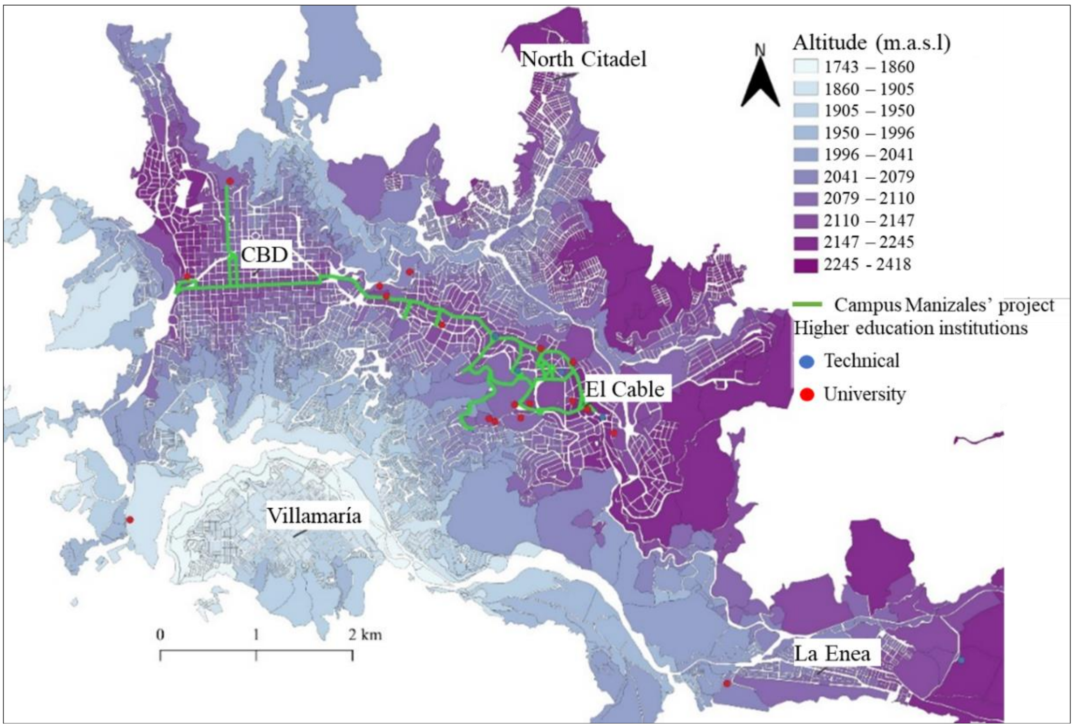

Figure 1. Case study location and Manizales' topography (Source: authors)

In Colombian medium-sized cities, infrastructure projects aimed at promoting active mobility (cycling and walking) are highly criticised and difficult to sustain due to the prevailing mobility status quo, where cars are the most dominant factor on the streets (Nello-Deakin, 2019; Oldenziel and Albert de la Bruhèze, 2011). Consequently, governments, practitioners, and academics have shown a growing interest in developing active mobility projects appropriately (Ruffino and Jarre, 2020). Campus Manizales (CM) is an infrastructure project that seeks to improve the active mobility network (cycling and walking) in the city of Manizales (Colombia) through the construction of boulevards, parks, and bike paths. This city is in the Andes Mountains in the centre-west of Colombia (Figure 1). CM aims to consolidate Manizales as Colombia's higher education capital by connecting 20 facilities (16 university campuses and 4 technical campuses) through an active mobility network. CM considers the intervention of 136,000 m^2 of public space (44% of boulevards and 37% of parks) (see green lines in Figure 1), including the provision of 16 km of separated bike paths (9 km in one direction and 7 km bidirectional) following a focus on designing road infrastructure for safety and vision zero in road crashes.

Moreover, it seeks integration with the city's mobility system through direct connections with aerial-cable car stations, public bike-sharing system stations, and bus stops. In Latin American contexts, where social inequalities, poverty, and urban segregation constantly affect inhabitants, boosting this kind of project is essential. Manizales City has a population of 450,000, and has steep topography, hindering the urbanisation processes and increasing the use of the bike as a mode of transport. As shown in Figure 1, the altitude of Manizales ranges from 1,743 to 2,418 meters above sea level (masl), with an average of 2,150 masl. CM is the first active mobility infrastructure project in the city where traditionally, mobility paradigm projects have been prioritized, investing most of the transport municipality budget in increasing the operational speeds and connections of private vehicles (cars, motorcycles, and taxis). These projects include new roads and intersections, widening of lanes, bridges, and roundabouts. Detailed designs included the project cost is USD 25.5 million.

MATERIALS AND METHODS

The methodology (Figure 2) was designed to be replicated in any context if the necessary data is available. Firstly, the required materials are described in detail. Then, the area of influence proposal and modal shift calculations are explained. Finally, the social cost-benefit assessment is described.

Phase 1 – Input Data: The transport network represents roads and intersections in a GIS environment. The road network for private vehicles and active mobility (walking and cycling) was obtained from previous investigations in the study area (Escobar et al., 2021). Researchers can download and use transport networks from OpenStreetMaps in absence of official data. GPS data for cycling commutes were collected through the Strava application to calculate average speeds, considering road slopes in the city. More than 20,000 GPS points were collected. In addition, Transport Analysis Zones (TAZ), Origin-Destination Matrix (ODM), and Household Travel Surveys (HTS) were obtained from the data collected in Manizales' Mobility Master Plan (Alcaldía de Manizales, 2017). This data is typically used for transport planning and is periodically collected by local governments. Besides, the National Administrative Department of Statistics collected sociodemographic information at various geographic resolutions (DANE, 2018). Finally, georeferenced data for road crashes were obtained from local authorities upon request. Information on crashes from 2013 to 2020 was registered, including crash severity (simple, injured, and fatal) and people involved (age, gender). Additionally, road crash data were validated with the National Agency of Road Safety (ANSV, 2022) information available for all municipalities in Colombia.

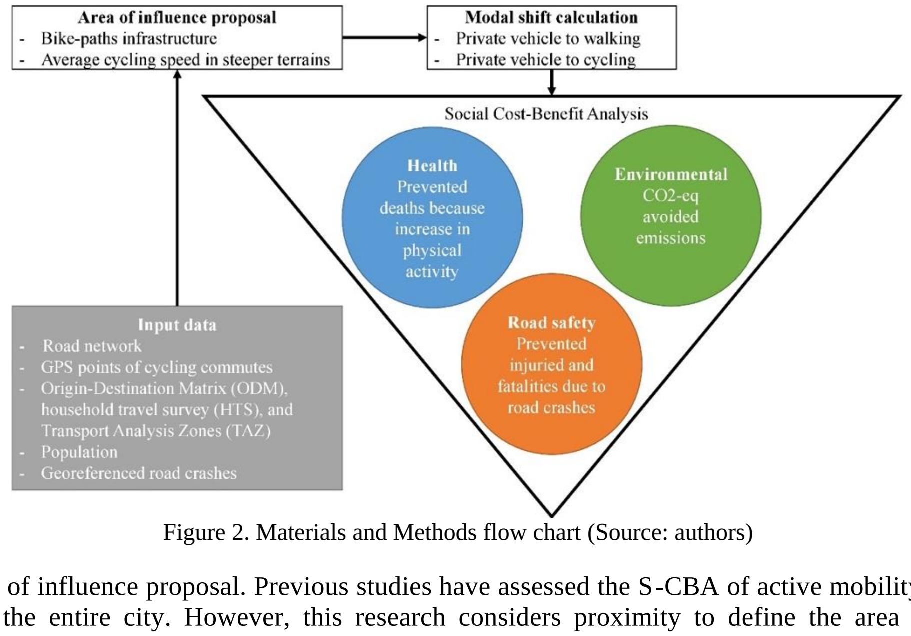

Figure 2. Materials and Methods flow chart (Source: authors)

Phase 2 – Area of influence proposal. Previous studies have assessed the S-CBA of active mobility projects based on their benefits for the entire city. However, this research considers proximity to define the area of influence. It is expected that most trips shifting from private vehicles to cycling or walking will occur near the infrastructure provided. The influenced area was estimated as the minimum coverage of 5 min. from bike infrastructure considering a bikeable distance in the most challenging topography conditions, i.e., the road slopes higher than 6% (Romanillos and Gutiérrez, 2020). Finally, coverage distances were analysed by grouping different average cycling speeds per slope percentage and using a 90% confidence interval (z = ±1.65) to broaden the range of analysis, to define the area of influence, i.e., the zone where modal shift calculations and social benefits will be concentrated.

Phase 3 – Modal shift calculation. Modal shift resulting from the active mobility project is estimated based on the ODM and HTS, considering the following constraints and assumptions: i) Sociodemographic groups: The age groups recommended by the World Health Organization (WHO) for cycling are people between 20 and 60 years, and for walking, people between 20 and 74 years (Kahlmeier et al., 2017); ii) Potential trips by distance: The potential trips for a modal shift from private vehicles (cars, motorcycles, and taxis) to active mobility are restricted to distances shorter than the average trip distance for bikes and walking in the current ODM. The ODM reflects the mobility dynamics built throughout a household survey where sociodemographic characteristics are recorded. For each mode of transport and purpose, trips are grouped between pairs of origin-destination zones represented in TAZs. The distance between each pair of TAZs using its centroid as a reference was calculated using the private vehicle road network and the QNEAT3 plugin of QGIS 3.16. The modal shift assumes that most of the trips to cycling and walking come from private vehicles (car, motorcycle, and taxi), considering their similar recent trips in the mobility system (Oviedo and Sabogal-Cardona, 2022); iii) Shifted trips: Finally, the shifted trips to cycling and walking were calculated as the product of the potential trips for a modal shift from private vehicles and the changeable default values defined by the WHO as 30% for cycling and 20% for walking (Kahlmeier et al., 2017). This study used a conservative approach; therefore, shifted trips from public transport were not considered.

Phase 4 – Social cost-benefit analysis. To calculate the benefits, two scenarios were studied: one without an active mobility project and the other with the project. The project was 2023, and a projection period of 10 years was considered. The scenario without the project corresponded to the current mobility dynamics extracted from the ODM. The scenario with the active mobility project involved the modal shift calculation. Health benefits are connected to increased physical activity, such as using bicycles and walking as modes of transport (Kahlmeier et al., 2017: 15). Table 2 shows the parameters defined by the WHO in the HEAT tool for health benefits. For instance, for people between 20 and 60 years, a relative risk reduction of 10% (i.e., the relative risk of 90%) was obtained if they ride at least 1,213 km/year-person as a commute. Using Equation 1 as an example, if the study zone registers an average distance of 750 km/year-person using a bike, this translates to a relative risk reduction of 6.2% (i.e., the relative risk of 93.8%) (Kahlmeier et al., 2017). In Equation 1, RRr represents the relative risk reduction in the study area, Dsz is the distance travelled per person per year in the study zone, Dref is the distance travelled per person per year in the reference zone established as Denmark by WHO, and RR is the relative risk.

Table 2. Basic parameters for health benefits assessment (Source: authors)

Mode of transport	Relative risk (RR)	Relative risk (RRr)	Distance travelled (person/year) in Denmark (Dref)	Age group (years) to measure health benefits
Cycling	90 %	10%	1213 km	20 to 60
Walking	89 %	11%	700 kms	20 to 74

$$RRr = \left(\frac{D_{sz}}{D_{ref}}\right) * (1 - RR) \tag{1}$$

The distance covered by walking or cycling per person per year ($D_{bike\ or\ walk}$) (used as *Dsz* in equation 1) is computed using Equation 2 (Source: authors); where $\overline{d_{bike\ or\ walk}}$ is the average distance of the trips by cycling or walking, $P_{bike\ or\ walk}$ is the people using each mode of transport, and *P* is the total number of people commuting in the study zone. Finally, the distance is calculated for a whole year, considering five working days per week and 52 weeks/year.

$$D_{bike\ or\ walk} = \frac{\left(\overline{d_{bike\ or\ walk}} * 5 * 52\right) * P_{bike\ or\ walk}}{P} \tag{2}$$

Prevented deaths in the study zone are calculated as the product of the relative risk reduction and the total fatalities for all causes. The Value of Statistical Life (VSL) was used to estimate the social cost of safety due to the prevention of premature deaths. According to the calculations of Mardones and Riquelme (2018), the VSL in Colombia was 640,000 USD.

On the other hand, the Environmental benefits refer to the reduction of CO_2 equivalent (CO_2-eq) emissions per year in the study zone considering the modal shift from private vehicles (motorcycle, car, and taxi) to active mobility (walking and cycling). The emissions were calculated using methodologies used in transport inventories (Escobar et al., 2022b; Espinosa et al., 2018). This method calculates the activity factor, the efficiency factor, and the emission factor.

The activity factor is based on the distance covered per type of vehicle in the study zone. This research calculated the number of trips per mode of transport, the distance between TAZs obtained from ODM (explained in phase 2), and an occupancy factor per mode of transport. The efficiency factor describes the distance covered per volume of fuel consumed (mainly expressed in km/gallon or km/m^3); this factor is specific to each vehicle or mode of transport. Finally, the emission factor expresses the number of pollutants per type of fuel considering pollutants per gallon (in this case, in CO_2-eq); it was obtained from the most recent calculations of Colombian fuel types (Amell Arrieta et al., 2016). Changes in emissions between the baseline and projected scenarios are monetised using the social cost of carbon, which is a value in USD for each ton of CO_2-eq saved due to the project (Griffiths et al., 2012). Following WHO's suggestion, the social cost of carbon in Colombia was estimated to be 78 USD in 2014 and is expected to increase to 103 USD in 2032.

Traditional road safety assessments in S-CBA of active mobility projects consider the increased distance travelled by commuters as a rise in exposure to road crashes (Kahlmeier et al., 2017). Two assumptions were adopted: i) the rise of active mobility reduces the probability of use of motorised traffic; ii) Active mobility projects must be designed with a vision zero and road infrastructure safety management focus (Belin et al., 2012). A value per each prevented road crash involving fatalities or injured is given to monetise road safety benefits. The Years of Potential Life Saved (YPLS) and the Social Cost Save (SCS_y) per year were used for fatalities. This is a similar method to estimating the social cost lost due to fatalities, but, in this case, we compute the social cost saved (Roselli, 2018). The YPLS estimations in the study zone (see eq. 3) considered the life expectancy (LE), the average age of fatalities ($\overline{A_f}$) and the prevent fatalities per year, calculated as the difference between the average number of fatalities ($\bar{F}$) and the projected fatalities when the project is finished (F_i). On the other hand, the prevented injured person (PIP) by road crashes was estimated using Equation 4, where the difference between the average number of injured people ($\bar{I}$) and the projected injured people when the project is finished (I_i) was computed.

$$YPLS = \left(LE - \overline{A_f}\right) * \sum_{i=1}^{n} (\bar{F} - F_i) \qquad (3) \qquad PIP = \sum_{i=1}^{n} (\bar{I} - I_i) \qquad (4)$$

Finally, the social cost saved due to road safety (SCS_{rs}) is achieved by monetizing the values of prevented fatalities (SCS_y) and injured (SCS_p) by road crashes (see Equation 5). To monetize fatalities, a value of three times of the Gross Domestic Product (GDP) per capita is given per YPLS (Instituto de Evaluación Tecnológica en Salud, 2014; Roselli, 2018) (USD $5,085 in the Caldas department in 2023). To monetize the injured person, we used the estimation of Gómez-Restrepo et al. in 2014, where health system costs were considered (USD 430 for 2023 per injured person).

$$SCS_{rs} = YPLS * SCS_y + PIP * SCS_p \qquad (5)$$

RESULTS AND DISCUSSION

This area was defined by the proximity to the CM project and average cycling speeds per road slope for commute trips in Manizales. More than 20 thousand GPS points were collected before and during the Covid-19 pandemic. Speeds were calculated and added to the road cycling network through Python 3.7. This network had road slopes calculated using the Manizales' Digital Elevation Model (DEM), like Romanillos and Gutierréz (2020), who analysed cycling speeds in Madrid. The average speed decrease with higher ascent slopes (higher than 0%) because people need more power to maintain the speed; the study area evidences the steeper terrain with road slopes up to 25%. Table 3 shows average cycling speeds grouped by road slope and the distance coverage (in meters) for different cycling speeds. Average speeds for descent terrains (slopes less than 0%) resulted in higher than 20 kph, while the speeds for ascent terrains with slopes higher than 6 % are near 10 kph. Considering uncertainty in the average cycling speed results, Table 3 presents the minimum and maximum speed for a confidence interval of 90% (z = 1.65). Finally, the distance coverage was calculated for a maximum travel time of 5 minutes to the new cycle infrastructure project. We observe that coverage is huge sensible to the change of speeds and slopes; consequently, we decided to delimit the area of influence to 500 meters (Figure 3) considering the steeper terrains in the study area, high road slopes (more than 6%) and an average cycling speed of 6 kph.

Table 3. Average cycling speeds per road slope groups and distance coverage (Source: authors)

Slope (%)	Cycling speed (kph)				Distance coverage (meters) in five minutes		
	Avg	Std	90% (z = 1.65)		Avg	90% (z = 1.65)	
			min	max		min	max
< -10	23.01	10.82	5.16	40.86	1,918	430	3,405
- 8 - -10	22.23	7.57	9.74	34.72	1,853	812	2,893
-6 - -8	24.16	7.98	10.99	37.33	2,013	916	3,111
-4 - -6	25.39	8.40	11.53	39.25	2,116	961	3,271
-2 - -4	23.36	7.47	11.03	35.69	1,947	920	2,974
0 - -2	24.06	7.06	12.41	35.71	2,005	1,034	2,976
0 - 2	14.71	4.80	6.79	22.63	1,226	566	1,886
2 - 4	15.38	6.39	4.84	25.92	1,282	403	2,160
4 - 6	12.19	4.18	5.29	19.09	1,016	441	1,591
6 - 8	10.70	2.77	6.13	15.28	892	511	1,273
8 - 10	10.65	3.29	5.22	16.09	888	435	1,340
> 10	9.60	2.58	5.34	13.86	800	445	1,155
Avg: Average; Std: Standard deviation; min: minimum; max: maximum							

The area of influence intervened by CM project covers 101,604 inhabitants, nearly 20.4% of the total inhabitants in Manizales and Villamaría (498,943 inhabitants). On the other hand, 178,052 trips are made within the TAZ in area of influence (Figure 3), especially between the Central Business District (CBD) and El Cable sector. Moreover, walking is the most used mode of transport with 46.4%, followed by a car as a private vehicle (19.3%) and public transport (16.6%). Cycling has a minimum use with 0.6% of all trips, although the zone's topography characteristics allow bike mobility compared with other zones with higher slopes. Gender has been established as an important variable for transportation studies because mobility dynamics between males and females are nearly different (Rodas-Zuleta et al., 2022). The population covered is 54.5% female (55,345 inhabitants), ten per cent more than male. Furthermore, age groups are very important for social benefits assessments. For instance, for cycling, 57,833 inhabitants (56.9% of the total) between 20 and 60 years lived around the CM project, while for walking, 74,659 inhabitants (73.4% of the total) between 20 and 74 years were covered.

Since modal shift assessment is a difficult stage in mobility projects, we defined a conservative approach to avoid bloated results. Table 4 shows the total trips for private vehicles, the potential trips to shift and the shifted trips to walking and cycling. Regarding private vehicles, the use of cars (34,431 trips) doubles the use of motorcycles (17,238 trips) and triples the use of taxis (9,957 trips). An analysis of trip distance per the mode of transport shows that walking registers the shortest average distance at 1.71 km. Meanwhile, cycling has an average distance of 2.54 km; this result is equal to the average distance of a motorcycle (2.54 km) and close to a taxi (2.58 km) and car (2.65 km). The potential trip to shift from private vehicles was obtained using waking and cycling average trip distance and the age constraint. In this case, cars represent a similar proportion of the total trips while motorcycles reduce their participation in the total potential trips for walking and cycling. Taxis have a lower percentage of potential cycling trips than walking, which can be explained by age. Finally, considering a modal shift from private vehicle to cycling and walking of 30% and 20% respectively, the trips shifted to cycling is 7,284 (11.8% of total private vehicle trips) and walking 4,128 (6.7% of total private vehicle trips).

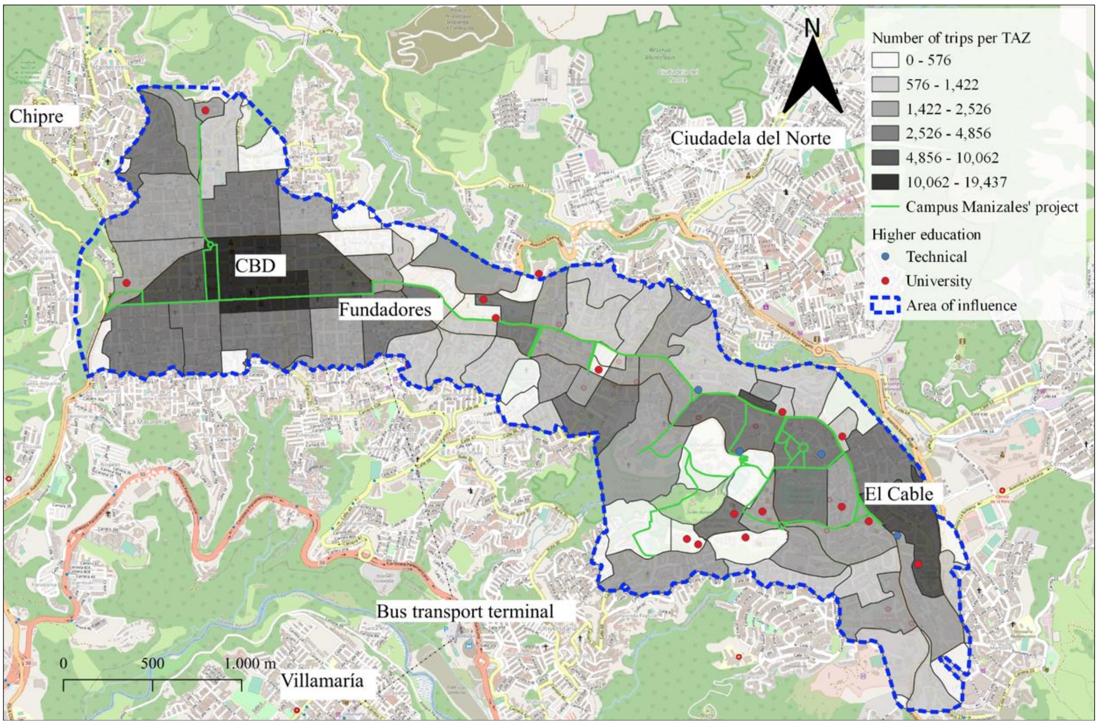

Figure 3. Trips per TAZ in the area of influence (Source: authors)

Table 4. Modal shift analysis for private vehicles to active mobility (Source: authors)

Mode of transport	Trips	Cycling (Age 20 - 60 years and average distance of 2.5 km)		Walking (Age 20 - 74 years and average distance of 1.7 km)	
		Potential trips to shift	Shifted trips	Potential trips to shift	Shifted trips
Car	34,431 (55.9%)	15,252 (62.8%)	4,576	12,377 (59.9%)	2,475
Motorcycle	17,238 (27.9%)	6,403 (26.4%)	1,921	4,853 (23.5%)	971
Taxi	9,957 (16.2%)	2,625 (10.8%)	788	3,412 (16.6%)	682
Total	61,626	24,280	7,284	20,642	4,128

The health benefits assessment considers relative risk reduction due to increased physical activity caused by cycling and walking. In the current scenario, the area of influence registers a walking distance of 144.59 km per person per year, while cycling reaches 3.17 km. This result shows the low use of cycling as a mode of transport (achieved only 0,6% of all trips in Manizales) and an opportunity to increase their use. The CM project stimulated a shift in transportation modes within the population, resulting in an average of 27.87 km of cycling per person per year.

This represents a remarkable increase of 779% compared to the base scenario. Moreover, this increase in cycling led to a relative risk reduction of 0.23% per year in premature deaths, as demonstrated in Table 5. Due to walking being the primary mode of transportation in the area of influence (accounting for 46.4% of all trips), the increase in its usage resulting from the modal shift leads to a 7.19% rise in the distance covered per person per year. Additionally, this increase in walking contributes to a 0.08% reduction in the risk of premature deaths attributed to physical inactivity.

Table 5. Distance covered and relative risk reduction for cycling and walking (Source: authors)

Mode of transport	Base scenario		Project scenario		Relative risk reduction
	Distance (km-person/year)	Relative risk	Distance (km-person/year)	Relative risk	
Cycling	3.17	99.97%	27.87	99.77%	0.23%
Walking	144.59	98.80%	155.00	98.72%	1.28%

Involving the number of deaths because of different causes (some types of cancer, mental health, coronary heart disease, lung disease, and high blood pressure, among others.) in the study zone, reaching 843 deaths in 2019, and using time-series data of deaths, a linear regression (35.06*x + 69848. $R^2 = 0.85$) was performed to define the number of deaths in the long term. A total of 35 premature deaths are prevented in a ten-year projection (2023 – 2032) because of increased physical activity (walking and cycling) in the area of influence.

Regarding to the environment factor, emissions of CO_2-eq in the base scenario result in 7,665 tons/year, showing a geographical pattern (Figure 4) like the number of trips per TAZ. CBD (823 CO_2-eq tons/year) and El Cable (736 CO_2-eq tons/year) registered the highest emissions in the area of influence. Most zones record emissions between 115 and 274 CO_2-eq and are located around the CM project. On the other hand, the CM project boosted a modal shift producing a drop in the emissions near to 8% per year (618 CO_2-eq tons/year) due to transport. Figure 5 shows the percentage of saved CO_2-eq per TAZ, finding a high reduction near universities (up to 43% of emission reduction) located in the west of the influenced area. In this case, the CBD register savings of around 7.41% despite having the highest emissions and trips.

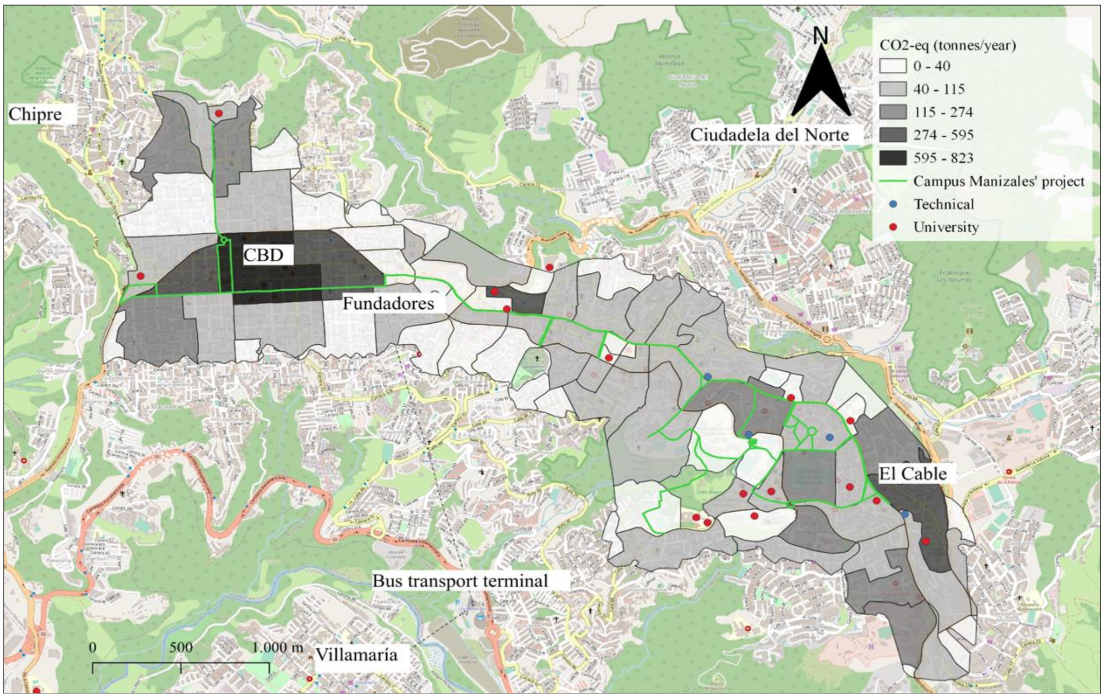

Figure 4. CO_2 -eq (ton/year) in the base scenario (Source: authors)

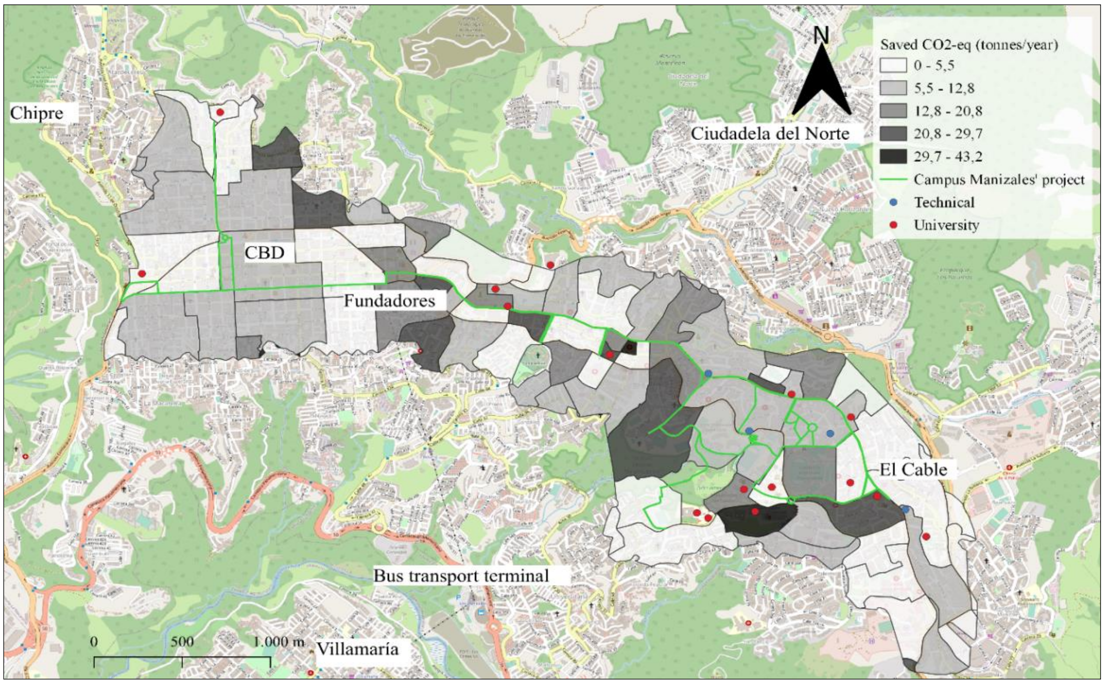

Figure 5. Saved CO_2 -eq (%) with CM project (Source: authors)

Finally, road crashes in the area of influence are analysed to define the benefits of the CM project. Following road safety recommendations in Manizales, some infrastructure and human behaviour interventions have worked to reduce road crashes, showing a decreasing trend in road crashes between 2013 and 2019 (Linear regression -18.74*x + 38174. R2 = 0.78). The five-year period generates 69.2% of simple crashes, 30.1% of them with injured and 0.7% with fatalities involved (2020 and 2021 were excluded). The CM project might avoid 624 injured and 19 fatalities, near 608 years of potential life saved (YPLS), in the ten-year projection. Table 6 presents the final S-CBA, where health, environment and road safety benefits were monetized.

Prevented deaths due to an increase in physical activity because of walking have the highest impact (USD 15,779,861), followed by years of potential life saved (YPLS) because of prevented road crashes with fatalities involved (USD 9,442,616). Finally, the S-CBA ratio is 1.14; consequently, the project shows a positive social impact in the study zone during the ten years.

This research concentrates on the benefits of the CM project up to 500 meters from the intervened road network. We defined the proximity to the project as the key to boosting a modal shift from private vehicle to active mobility because the provision of bicycle infrastructure increases the probability of bike use for commuting. This zone has the potential to obtain the highest benefits related to physical activity, environmental, and road safety related to CM project. Nevertheless, as other authors express (Brey et al., 2017; Chapman et al., 2018; Sælensminde, 2004), active mobility impacts could be translated to the entire city. In this case, we prefer to keep a conservative approach to mitigate the impact of some assumptions related to modal shifts, health benefits and the city's steep topography. High ascent road slopes affect the cycling speed among commuters limiting the accessibility and the increase of the bike in the modal share (Romanillos and Gutiérrez, 2020); however, its inclusion as an analysed variable in social cost-benefit analysis is scarce. E-bikes and e-scooters have the potential to minimize the ascent slope effects; nevertheless, recent studies shows that e-scooters have a minimum benefit on physical activity and air pollution and a high negative impact on road crashes (Félix et al., 2023). On the other hand, recently literature has paid particular attention to the differences in the travel patterns between women and men to design infrastructure (Montoya-Robledo et al., 2020) considering factors such as gender-based violence (Rodas-Zuleta et al, 2022).

Table 6. Summary of social cost-benefit analysis of Campus Manizales' project. (Source: authors)

Year	Health: Walking		Health: Cycling		Emissions		Road Safety				
	PD	(USD)	PD	(USD)	CO2-eq (tonnes)	(USD)	PIP	(USD)	PD	YPLS	Value (USD)
2023	2.74	$ 1,481,907	0.49	$ 266,280	618	$ 55,002	37.07	$ 15,942	1.33	42.62	$ 650,386
2024	2.78	$ 1,503,258	0.50	$ 270,117	618	$ 55,002	42.71	$ 18,366	1.47	46.90	$ 715,692
2025	2.82	$ 1,524,609	0.51	$ 273,953	618	$ 55,002	48.35	$ 20,790	1.60	51.18	$ 780,997
2026	2.86	$ 1,545,960	0.51	$ 277,790	618	$ 55,002	53.99	$ 23,215	1.73	55.46	$ 846,303
2027	2.90	$ 1,567,311	0.52	$ 281,626	618	$ 55,002	59.62	$ 25,639	1.87	59.73	$ 911,609
2028	2.94	$ 1,588,662	0.53	$ 285,463	618	$ 55,002	65.26	$ 28,063	2.00	64.01	$ 976,914
2029	2.98	$ 1,610,013	0.54	$ 289,299	618	$ 55,002	70.90	$ 30,487	2.13	68.29	$ 1,042,220
2030	3.02	$ 1,631,364	0.54	$ 293,136	618	$ 55,002	76.54	$ 32,911	2.27	72.57	$ 1,107,526
2031	3.06	$ 1,652,714	0.55	$ 296,972	618	$ 55,002	82.18	$ 35,335	2.40	76.85	$ 1,172,832
2032	3.10	$ 1,674,065	0.56	$ 300,809	618	$ 55,002	87.81	$ 37,760	2.54	81.13	$ 1,238,137
Total	29	$ 15,779,861	5	$ 2,835,444	6180	$ 550,020	624	$ 268,508	19	619	$ 9,442,616

PD = Prevented deaths; PIP = Prevented injured person; YPLS = Year potential live saved

Modal shift is a problematic measure in mobility projects, especially when it considers the modal shift from private vehicles (car, motorcycle, and taxi) to active mobility (walking and cycling or public transport) (Kahlmeier et al., 2023; Kahlmeier et al., 2017; Oviedo and Sabogal-Cardona, 2022; Rodrigues et al., 2020). Several factors (supply infrastructure, accessibility, road safety, socioeconomic level, environment awareness, age, sex, trip purpose, distance, topography, among others) could determine the number of trips translated (De Vos et al., 2022). In this research, we constrain the modal shift to the area of influence and consider three assumptions based on age group, mode of transport and distance of commute. The first assumption related to the age group relates to the health benefits assessment, where only people between 20 and 60 years and 20 and 74 years are considered for cycling and walking by recommendations of WHO (Kahlmeier et al., 2017). The second assumption is related to the modes of transport we want to attract to active mobility projects. In this case, sustainable mobility and the potential use of walking and cycling are crucial. For example, Oviedo and Sabogal-Cardona (2022) argue the potential of cycling as a mode of transport for private vehicle commutes, considering the last one as the least wanted in urban mobility due to its negative externalities like traffic jams, road crashes, and the environment. Finally, the average distance per mode of transport is defined as the threshold for potential trips of modal shift (De Vos et al., 2022; Sælensminde, 2004). This conservative framework provides us with the certainty of not overstretching the effects of active mobility projects in a modal shift from private vehicles to walking and cycling.

Furthermore, the S-CBA considered three perspectives: health, environment, and road safety. Those are generally used in S-CBA analysis of cycling and walking projects (Ruffino and Jarre, 2020; Tainio et al., 2021). However, other benefits related to traffic jams, travel time savings or noise are more challenging to measure. Consequently, this study considers only the benefits that could be calculated with common built-in data for transport planning, such as the household travel survey and origin-destination matrix (de Sá et al., 2015, 2017). For instance, a previous work related to the impact of the CM project on private vehicle accessibility concluded that the impact is less than 3%, and it could be concentrated in the high socioeconomic groups of the population, promoting their shift to active modes of transport.

On the other hand, environmental impacts of 618 CO_2-eq tons/year avoided are less than reported by Espinosa et al. (2018) for Cali (29,731 CO_2-eq tons/year) and Villavicencio (5,540 CO_2-eq tons/year). In this article, the study zone was limited, while the other studies considered the entire city and future modal shares in Cali and Villavicencio regarding optimistic bike use for commutes. Road safety is an essential dimension of active mobility projects because people feel more comfortable cycling and walking when they have proper infrastructure or traffic is pacified (Macmillan et al., 2014; Montoya-Robledo et al., 2020; Escobar et al., 2022a). This innovative approach to measuring S-CBA related to road safety must be considered in future scenarios to create a safe transport system for everyone. Active mobility projects evaluated through S-CBA generally use the cost-benefit ratio as an economic appraisal; nevertheless, it is difficult to compare the results throughout studies because of their heterogeneity. For example, the CM project has a benefit-cost ratio of 1:1.14, mainly because the benefits are related to increased physical activity and road safety.

CONCLUSION

The research conducted in Latin America regarding the social benefit of active mobility projects or public policy has traditionally overlooked economic appraisal through the benefit-cost ratio. The presented method, based on existing literature on Social Cost-Benefit Analysis (S-CBA) in active mobility projects, can be adapted to cities where data is limited and hard to obtain. Additionally, the delineation of the area of influence using proximity and cycling speeds, considering road slopes, represents an improvement in evaluating active mobility projects, especially in areas with challenging topography that affects distance coverage and cycling speeds. The CM project in Manizales demonstrates a social cost-benefit ratio of 1.14 over a ten-year projection, highlighting its positive impact on the entire population of Manizales, even though the benefits are calculated based on the area of influence. This study represents the first S-CBA conducted in a city with limited bike usage for commuting due to steep topography and high road slopes.

However, the research does have limitations concerning the assumptions made for modal shift calculations and health benefits. The percentage of modal shift from private vehicles to cycling and walking is based on existing literature, and it is crucial to have demand estimation to provide objective certainty to the modal shift. Health benefits assessments related to increased physical activity also require further discussion in the context of Latin American settings, as the assumptions made in studies conducted in developed and high-income countries may not necessarily apply. These limitations were beyond the scope of this study and could be addressed in future research. Moreover, it is essential to implement this method in Latin American contexts, where active mobility projects face challenges due to a strong focus on the mobility paradigm centred around cars among decision-makers and politicians.

Author Contributions: Conceptualization, S.C., D.A.E. and W.S; methodology, S.C., D.A.E. and W.S; software, S.C.; validation, D.A.E. and W.S.; formal analysis, S.C., D.A.E. and W.S; investigation, S.C., D.A.E. and W.S; data curation, S.C.; writing - original draft preparation, S.C., D.A.E. and W.S; writing - review and editing, S.C., D.A.E. and W.S;. and H.G.; visualization, S.C; supervision, D.A.E; project administration, D.A.E. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The authors sincerely thank the sustainable mobility research group members and the "Manizales Campus" project team for their contribution to the research development.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 20.05.2023 Revised: 28.07.2023 Accepted: 30.08.2023 Available online: 27.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1067-1074
DOI 10.30892/gtg.49322-1106

THE END OF COVID-19 AND IMPLEMENTATION OF THE SUSTAINABLE DEVELOPMENT GOALS BY THE HOSPITALITY SECTOR IN SUB-SAHARAN AFRICA

Ngoni C. SHERENI*
School of Tourism & Hospitality, College of Business and Economics,
University of Johannesburg, Johannesburg, South Africa, e-mail, nshereni@uj.ac.za

Christian M. ROGERSON
School of Tourism & Hospitality, College of Business and Economics,
University of Johannesburg, Johannesburg, South Africa, e-mail, chrismr@uj.ac.za

Citation: Shereni, N.C., & Rogerson, C.M. (2023). THE END OF COVID-19 AND IMPLEMENTATION OF THE SUSTAINABLE DEVELOPMENT GOALS BY THE HOSPITALITY SECTOR IN SUB-SAHARAN AFRICA. *GeoJournal of Tourism and Geosites*, 49(3), 1067–1074. https://doi.org/10.30892/gtg.49322-1106

Abstract: The World Health Organisation (WHO) declared the end of the COVID-19 pandemic as a public health emergency in 2023. This study aims to review the impacts of the COVID-19 pandemic on the hospitality sector in Africa in terms of achieving the United Nations Sustainable Development Goals. It is based on a review of documentary sources on the nexus between COVID-19, SDGs and the hospitality sector in sub-Saharan Africa. The findings highlight that the COVID-19 pandemic resulted in the closure of hospitality facilities, significant job losses, decline in GDP contribution, financial losses and an increase in poverty which negatively impacted the achievement of various SDGs. This said, the pandemic also brought certain positive impacts including a reduction in carbon emissions and a greater appreciation of domestic tourism. Arguably, in the post COVID-19 period, the hospitality sector in sub-Saharan Africa needs a reset with expanded measures towards the achievement of the SDGs. Correspondingly, African hospitality scholarship must pivot to address relevant research issues around the SDGs.

Key words: COVID-19, hospitality sector, sub-Saharan Africa, SDGs

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INTRODUCTION

On 4 May 2023, the Director General of the World Health Organisation (WHO) announced the end of COVID-19 as a public health emergency (United Nations, 2023). This statement was celebrated by the United Nations World Tourism Organisation (UNWTO) which called for destinations to start to re-evaluate existing travel restrictions (UNWTO, 2023a). The announcement set the tone for a new trajectory of encouraging destinations to open up fully for international tourist arrivals. The initial data for 2023 is promising in terms of tourism recovery with twice as many people travelling in the first quarter of 2023 as compared to the same period in 2022 (UNWTO, 2023b). One of the key issues surrounding the recovery of the tourism industry post-COVID-19 concerns the linkage of tourism development with the United Nations Sustainable Development Goals (SDGs) (Gossling et al., 2020; Rogerson and Baum, 2020).

A critical milestone in aligning the recovery of the global tourism industry with SDGs is the outcome of the meeting of tourism ministers of G20 member countries held at Goa, India on 21 June 2023. The ministers affirmed the need to transform the tourism industry post COVID-19 and ensure that it progresses towards contribution to the SDGs (UNWTO, 2023c). Further, the G20 ministers pledged support for five tourism priority areas identified as important by India's G20 Presidency in advancing towards the achievement of the SDGs, namely green tourism, digitalization, skills, tourism small and medium enterprises, and destination management (Tourism Working Group India G20 Presidency, 2023).

Arguably, as the global economy recovers from the COVID-19 pandemic greater consideration must be given to adopting an all-encompassing sustainable approach towards tourism development which involves enhanced commitment to the SDGs (Seraphin and Gowreesunkar, 2021). Moreover, with climate change the next disruptive crisis likely to have a major future impact on the tourism industry, climate adaptation, sustainability issues and the SDGs must be at the centre stage for the transformation of the tourism industry (Dube, 2021).

Jones and Comfort (2020) suggest that COVID-19 resulted in a number of economic, environmental and social challenges impacting significantly upon issues of sustainability. Truppa and Dolezal (2020) concur that the COVID-19 pandemic has considerably affected the prospects of sustainable development, and livelihoods, making urgent the need for a scholarly focus on the SDGs. It is observed that variations exist in the way sustainability has been understood and adopted by the tourism and hospitality industry in different contexts. Indeed, considerable differences exist in the manner that sustainability in the tourism industry is viewed by tourism policy makers and tourism enterprises in the Global North as opposed to the Global South where the actual level of adoption of sustainability principles is often dependent on the target market (Melissen et al., 2018; Khonje and Leonard, 2019).

* Corresponding author

The COVID-19 pandemic represents a trigger event for African tourism businesses to readjust their operations moving into the post-pandemic period (Rogerson and Rogerson, 2021a, 2021b). The hospitality sector of Africa as a significant sub-sector of the tourism industry is expected to play a leading role in contributing to the attainment of the SDGs in the post-COVID-19 era (Shereni, 2022). Most existing African tourism studies conducted around the uncertain times of COVID-19 are focused on ramification and destination impacts with only a limited literature dedicated to establishing the connection between COVID-19 and the SDGs (Rogerson and Rogerson, 2021a).

With the pandemic no longer viewed as a public health emergency it is essential that African scholars pivot to address critical policy debates and reflect upon the COVID-19 ramifications for the achievement of SDGs and how the hospitality sector might integrate the SDGs in its recovery strategies. As our geographic focus is the record of sub-Saharan Africa the findings inject a perspective from the Global South on the rising international debates concerning the ability of tourism and hospitality to contribute to the SDGs in the post-pandemic era. The next section looks briefly at the methodological considerations for this paper, then moves to a contextual overview of the impacts of COVID-19 on the hospitality sector of sub-Saharan Africa before unpacking the nexus of SDGs and the African hospitality economy.

METHODS

The research is anchored on a desk-top review of documentary sources and existing scholarship that interrogates the relationship between COVID-19, SDGs and the hospitality sector in sub-Saharan Africa. Insights were drawn from peer reviewed articles, books, book chapters, reports and other relevant materials. The source of literature was from databases such as Scopus, Google Scholar and Web of Science among others; a limitation is that the search was confined to English-language based publications. A wealth of scholarly material exists on how the COVID-19 pandemic affected various facets of life including the implementation of the SDGs. The study investigates how in various countries of sub-Saharan Africa the COVID-19 pandemic affected the implementation of the SDGs in the hospitality sector. Our objectives are informed by the viewpoint that “a review of past research efforts is an important endeavour in all academic research areas” (Nunkoo et al., 2013: 5).

COVID-19 AND THE HOSPITALITY SECTOR IN SUB-SAHARAN AFRICA

The tourism and hospitality economy of sub-Saharan Africa was radically impacted by COVID-19 induced restrictions (Rogerson and Baum, 2020; Chapungu et al., 2023). As is documented in detail by Dube et al. (2023a) despite the fact that the tourism economy of Africa previously had confronted such periodic crises as extreme weather events, civil unrest, the onset of diseases such as Ebola, nothing could have prepared the continent’s tourism stakeholders for the devastation wrought by the pandemic. COVID-19 resulted in the hollowing out of the African tourism economy, the shutting down of popular tourist attractions across various African countries and some destinations transmitting messages encouraging people to stay at home. Airlines to and from destinations in Africa were suspended contributing to the collapse in tourist arrivals and the demise of aviation as a vital support arm of the tourism industry.

For the accommodation services economy, the COVID-19 impacts were devastating. Troughton (2020) highlights that between January and June 2020, average hotel occupancy rates in Africa fell by a massive 79.2% to 16.9%. April 2020 was the worst affected month, recording an average occupancy rate of 12% (Faria, 2021). Overall, Mensah et al. (2023) stress the unprecedented impacts of the COVID-19 pandemic for Africa’s tourism and hospitality economy. It is pinpointed that whilst the African continent recorded the least numbers of COVID-19 infections and deaths, it endured disproportionately the greatest negative impacts of the pandemic on its tourism sector relative to other parts of the world (Mensah et al., 2023). The hospitality sector in Africa suffered crippling losses due to COVID-19 as lockdowns and border closures translated into low hotel occupancy levels and minimal international tourist arrivals (Chapungu et al., 2023; Dube et al., 2023a). The long-term implication of COVID-19 was to threaten and “reverse development gains over the previous decade and deepen the continent’s chronic challenge of poverty” (Rogerson and Rogerson, 2021a, p. 1027).

Beyond this macro-picture for sub-Saharan Africa as a whole, rich material is available from several countries to substantiate the devastating effects of COVID-19 on the hospitality sector. Southern African nations such as Zimbabwe and South Africa mandated the closure of hotels, restaurants and other related hospitality establishments due to the COVID-19 restrictions (Nhamo et al., 2020; Chihwai et al., 2023). In South Africa Rogerson and Rogerson (2020a) report that the country’s leading hospitality groups such as Tsogo Sun and Sun International temporarily closed down their properties in compliance with the government’s lockdown requirements. Thwala and Dube (2023) observe that in Cape Town, one of the prime tourism destinations in Africa, hotel occupancies plummeted to around 10% between April and August 2020 as an outcome of the COVID-19 pandemic. In Ghana, after the pronouncement of the initial COVID-19 regulations, tourism subsectors (including hospitality) suffered a 60% decline in business level (Thams et al., 2020). Small hotels laid off workers while bigger establishments sent their employees on annual leave. Owusu et al. (2023) reveal that the COVID-19 pandemic affected hospitality establishments in Ghana in the areas of supply chain, finances and operational issues. In Zambia, the COVID-19 pandemic adversely impacted every level of the hospitality value chain resulting in the closure of businesses mainly of the smaller establishments (Andrew et al., 2023).

One of the best documented country examples of the pandemic’s impacts is Zimbabwe (Dube et al., 2023b; Mandizvo et al., 2023). For Zimbabwe, detailed data from the national tourism authority (ZTA) shows that the national average hotel occupancy fell from 44% in 2019 to 19% in 2020 returning to pre-pandemic levels only in 2022 (Zimbabwe Tourism Authority, 2022). Victoria Falls, an iconic destination that relies mainly on international tourists, was the worst affected in terms of the collapse of hotel occupancies. The experience of neighbouring Botswana was that at the onset of COVID-19 only a few accommodation facilities catering for essential service providers and those designated as mandatory quarantine centres remained open whilst the rest closed for a prolonged period (Mogomotsi et al., 2023). From the Namibian context research details a significant downturn in international tourist arrivals which negatively affected job opportunities, foreign exchange earnings, tax contribution, ADR, RevPAR and occupancy rates in the hospitality sector (Kauatuuapehi et al., 2023). Although occupancy rates for the hospitality sector across several destinations in Africa subsequently improved following the easing of lockdown measures, the levels were still low as compared to 2019 (Chihwai and Dube, 2023). Chikodzi and Dube (2023) flag that the underperformance of the sector is a contributory factor to the continuing economic crises that afflict both South Africa and Zimbabwe.

A striking set of findings emerged from South African research investigations concerning the uneven geographical impacts within the country of COVID-19 upon the tourism and hospitality sector. In one of the earliest studies, the vulnerability of different spaces to the pandemic impacts was assessed with the key conclusion that its harshest impacts would be experienced by South Africa's most tourism-dependent localities (Rogerson and Rogerson, 2020b).

The landscape of the South African tourism space economy was partially re-moulded as a result of the spread and impress of COVID-19 with its accompanying changes in consumer preferences for travel, most especially for leisure (Rogerson and Rogerson, 2021b, 2021c). In respect of absolute impacts, the greatest losses in tourist trips fell upon the country's largest metropolitan centres and were exaggerated by shifts taking place within the economy of business tourism (Rogerson and Rogerson, 2022a). Not only flows of leisure and business tourists to urban destinations were curtailed by the pandemic. It has been shown that the volumes of VFR travel flows into South Africa's major city destinations were radically curtailed by the pandemic (Rogerson and Rogerson, 2023).

The South African findings demonstrate the highly negative effects of the pandemic upon coastal tourism as a whole with the largest coastal cities experiencing its worst impacts. COVID-19 caused a reversal of trends that had been recorded for the previous two decades for the benefits of coastal tourism to be concentrated in South Africa's largest coastal cities such as Cape Town or Durban (Rogerson and Rogerson, 2022b). Instead, it resulted in the relative improvement of smaller coastal centres and in particular of places well-located for access to the domestic markets offered by large cities. Overall, South African research underscores an improved competitiveness for leisure visitors of geographically accessible small towns and rural spaces close to major metropolitan centres (Rogerson and Rogerson, 2022c). Finally, the tourism geographical research in South Africa demonstrates clearly that in relative terms the hardest hit tourism and hospitality spaces by COVID-19 were the country's peripheral small towns and remote rural areas (Rogerson and Rogerson, 2022c, 2023).

With the international advance of vaccinations, the ebbing of COVID-19 and the re-opening of economies in many African countries improved prospects emerged for the hospitality sector albeit the onset of different COVID-19 variants resulted in only slow recovery. As in 2023 the WHO declared the pandemic to be no longer a public health emergency the hospitality industry necessarily must re-set to changing travel mobilities and build resilience for the post-COVID-19 era. Across African destinations, adjustments are occurring in consumer psyche and travel behaviour. A search for open spaces, re-connection with nature, issues of personal safety and health concerns are viewed as influential factors impacting consumer travel intentions post-COVID-19 (Rogerson and Rogerson, 2021b; Shava and Shava, 2023). These shifts have ramifications for the contribution of the hospitality sector in sub-Saharan Africa to the United Nations SDGs.

THE HOSPITALITY SECTOR AND THE UNITED NATIONS SDGs

Over recent years debates around sustainability in the tourism and hospitality sector have become oriented around the United Nations Sustainable Development Goals (SDGs) (Saarinen, 2018; Hall, 2019; Saarinen, 2021). Table 1 provides a summary of the 17 SDGs proposed by the United Nations. The global appeal of the SDGs derives from an agenda that is championed and agreed upon by a wide spectrum of stakeholders led by multi-lateral institutions (Raub and Martin-Rios, 2019; Shereni, 2022). The SDGs and their specific targets afford a basis for strategizing how tourism might contribute to sustainable change in destination communities and environments especially those in the Global South (Saarinen, 2021). Among others, Gössling et al. (2020) point out that post-COVID-19 there is a need for the tourism and hospitality industry to 'do things differently' and align their operations to the SDGs.

Advancing sustainable tourism is viewed in many countries of sub-Saharan Africa as the key to the attainment of SDGs (Saarinen, 2020; Dube, 2021; Shereni, 2022). Saarinen (2021, p. 25) avers that "tourism destination development should be managed for change, and there is a clear need for better destination governance towards SDGs, given the lesson the current crisis has provided us – not to mention the state of relatively near future affairs characterised by increasing globalisation, related economic insecurity and global climate change". Dube and Nhamo (2021) observe that tourism stakeholders in Africa have started to integrate SDGs into their operations in order to ensure improved sustainability. In several countries SDGs have been integrated into existing development plans for the tourism industry, as reported for example in Sierra Leone and Uganda (Allen et al., 2018).

Shereni (2022) emphasizes that prior to the COVID-19 pandemic, many tourism businesses in Africa already were giving some attention to the SDGs. It has been observed that this is potentially because the tourism industry has an ethical and moral duty to prioritise the SDGs as some of the global challenges emanate from tourism activities (Dube, 2020). Scholarly material that focuses on tourism and the SDGs is still somewhat sparse in the African context (Dube, 2020; Saarinen, 2020). For the past three years, tourism academic debates have concentrated around COVID-19 leading to the paucity of studies on SDGs. Certain observers contend little serious attention is accorded to SDGs by the tourism industry in the Global South as compared to the Global North where leading hotel groups have adopted widely the SDGs and are making significant progress in their implementation (Shereni et al., 2022b). Factors that underpin these variations in the adoption of SDGs and sustainability practices between enterprises operating in the Global South as opposed to the more prosperous environments of countries in the Global North have been isolated. Colonial legacies, differential development, political and business systems as well as different religious beliefs in the Global South are suggested as some of the several factors causing differences in sustainability practices (Melissen et al., 2018; Mzembe et al., 2019).

Table 1. Sustainable Development Goals (Source: UNWTO, 2015:16)

Goal 1	End poverty in all its forms everywhere
Goal 2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture
Goal 3	Ensure healthy lives and promote well-being for all at all ages
Goal 4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Goal 5	Achieve gender equality and empower all women and girls
Goal 6	Ensure availability and sustainable management of water and sanitation for all
Goal 7	Ensure access to affordable, reliable, sustainable and modern energy for all
Goal 8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Goal 9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Goal 10	Reduce inequality within and among countries
Goal 11	Make cities and human settlements inclusive, safe, resilient and sustainable
Goal 12	Ensure sustainable consumption and production patterns
Goal 13	Take urgent action to combat climate change and its impacts
Goal 14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development
Goal 15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Goal 16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
Goal 17	Strengthen the means of implementation and revitalize the global partnership for sustainable development.

The hospitality sector, one of the biggest sub-sectors of the tourism economy, is recognised for being resource-intensive and thus posing various sustainability challenges (Dube, 2022; Shereni et al., 2022a). This situation calls for the sector to be cognizant of its impacts on the environment and society. Consequently, sustainability issues particularly SDGs must be at centre stage in researching hospitality operations not only in the African context but globally (Shereni, 2022). The SDGs set a global agenda for development by 2030 to confront challenges faced in both the Global South and Global North contexts (Saarinen, 2020). They set a long-term vision that guides the hospitality sector on the implementation and ultimately the achievement of sustainability targets (Seraphin and Gowreesunkar, 2021). Although the localization of SDGs in the hospitality sector in Southern Africa is still lagging there is mounting evidence of SDGs being integrated into certain hospitality operations (Dube, 2021). Studying Zanzibar Bacari et al. (2021) observe a number of sustainability initiatives pursued by the hospitality sector which are contributing to the achievement of the SDGs. Among these are environmental actions, staff development, offering placement opportunities to local tourism students, buying from local suppliers and supporting health care in the community.

In other African research, the implementation of environment-related SDGs (SDG 6, SDG 12, SDG 7 and SDG 13) was observed as varying according to the grading of hotels with the highest implementation occurring in 5 star hotels (Abdou et al., 2020). In Zimbabwe Shereni (2022) demonstrates that the country's larger hospitality establishments are more likely to implement SDGs at a broader scale as compared to smaller establishments mainly due to financial and knowledge capacity gaps. Dube and Nhamo (2021) indicate that the hospitality sector in Victoria Falls, Zimbabwe is making efforts to reduce carbon emissions variously through the adoption of green and renewable energy, afforestation and environmental education. This has direct implications for the achievement of the SDGs especially SDG 13 on climate action. Eco-certification standards are common in the hospitality sector and contribute significantly to the implementation of the SDGs most especially those aligned to environmental sustainability. Certification schemes are directly aligned to SDG 12 on Sustainable Consumption and Production (Spenceley, 2019). It is acknowledged, however, that across sub-Saharan Africa only a small fraction of hospitality establishments are certified despite the existence of (at least) 18 operational sustainable tourism certification programmes in Africa (Spenceley, 2019). Mensah and Blankson (2014) indicate few hotels in Ghana subscribe to certification standards. Lack of awareness of certification schemes and their benefits is widely attributed to the low adoption of tourism certification and eco-labelling (Motsaathebe and Hambira, 2022). Research findings from Zimbabwe confirm that in the local hospitality sector, there is minimal adoption of internationally recognised certification schemes (Njerekai, 2019; Shereni et al., 2022).

There are numerous drivers and impediments that affect the adoption of SDGs in sub-Saharan Africa. Demand from conscious customers, legitimation, certification schemes, pressure from external stakeholders and the need to operate within a certain policy framework are important drivers for the hospitality sector to adopt sustainable principles critical to the achievement of SDGs (Shereni et al., 2023; Stevens-King and Bello, 2023). Governance issues are also seen to impact the implementation of the SDGs across the hospitality sector in Africa (Siakwah et al., 2020).

Indeed, Dube (2020) avers that governance and misalignment of policies make the integration of SDGs into the tourism industry difficult. Other challenges include knowledge and financial capacity gaps, lack of coordination, skills gaps as well as contextual factors such as the size of the organization and the specific nature of the industry (Shereni et al., 2022a, 2023; Stevens-King and Bello, 2023).

The COVID-19 outbreak resulted in many hospitality stakeholders channelling resources towards 'flattening the curve' thereby impacting resource allocation towards the achievement of the SDGs (Nhamo et al., 2020). One of the major areas of concern for hospitality businesses as a result of COVID-19 relates to financial losses (Sucheran, 2022). In the post-COVID-19 period, businesses potentially could reduce their financial support to sustainability programmes as they seek to consolidate their operations (Jones and Comfort, 2020). For hospitality businesses, this means reduced resources and commitments to the achievement of the SDGs. Job losses experienced in the tourism industry due to the COVID-19 pandemic obviously impact the achievement by the hospitality sector of SDG 8, namely decent work and economic growth. Significant employment losses were recorded for several countries in Africa due to COVID-19.

The World Travel and Tourism Council (2022) reported that for the tourism industry across Africa, at least 5.8 million jobs were lost in 2020 because of the pandemic. Such job losses in the hospitality sector impact negatively not only the achievement of SDG 8 but also other SDGs. The majority of employees in the hospitality sector are women and youth and are mainly working in micro, small and medium-sized enterprises in tourism (ILO, 2022). In addition, in Africa rural communities and indigenous peoples are historically marginalized communities which have benefited from tourism and are affected negatively by the COVID-19 spread (Rogerson and Rogerson, 2020a).

The bleeding of job opportunities immediately affects therefore the ability of the sector to contribute to SDG 5 on gender equality as well as SDG 10 on reducing inequality and paying attention to the needs of disadvantaged and marginalized populations. Further the reduced contribution of the tourism and hospitality sector to GDP means inevitably that progress towards SDG 1, no poverty, is retarded across sub-Saharan Africa.

Of concern for sub-Saharan Africa are issues surrounding SDG 12 which relates to Sustainable Consumption and Production and SDG 13 which centres on the need for climate action. In the global context, Gössling et al. (2020) point out the positive impacts of COVID-19 in encouraging airlines to phase out inefficient aircraft, business meetings assuming video conferencing format and consumers showing greater interest in environmentally-friendly products. Nhamo et al. (2020) record that carbon emissions in the tourism industry were cut drastically due to reduced business activities, the grounding of airlines, cruise ships and other modes of transport used to move tourists (Nhamo et al., 2020). All the above have positive outcomes for the achievement of both SDG 12 and SDG 13. The reduced tempo of tourism, the closure of hotels and other tourism services is credited for reducing waste generated by the industry (Musavengane et al., 2022), It is questionable whether such positive outcomes will be sustained post-COVID-19 (Jones and Comfort, 2020). Although certain observers assert the COVID-19 pandemic gave rise to conscious travellers interested in environmental issues an important contribution made by Mkono et al. (2022) offers a caution. This study provides compelling evidence that environmental issues are not high on the agenda in the factors considered by consumers in making current travel decisions beyond the pandemic period.

A further positive trend influenced by COVID-19 has been the boost given to domestic tourism not least for the survival of local hospitality economies (Mogomotsi et al., 2023; Shereni et al., 2023; UNWTO, 2023a). Measures put in place to restrict international travel compelled decision-makers in many nations to accord heightened attention to stimulate domestic tourism. Potentially a boost may be given to encourage destinations in sub-Saharan Africa to appreciate the benefits of encouraging regional tourism. Arguably, such a policy shift can contribute to SDG 10 on reducing inequality by providing opportunities for different localities to benefit from domestic and regional tourists who do not always exhibit the same travel preferences as those of international tourists.

CONCLUSION

The 2023 announcement of the ending of the COVID-19 pandemic as a public health emergency and instead its recognition by WHO as now an ongoing health issue prompted this reflection and review of its ramifications for the hospitality sector in Africa and most especially in terms of achieving the United Nations Sustainable Development Goals. Arguably, despite the flood of writings on COVID-19 and tourism only a small literature has interrogated its relationship to the SDGs in the resource-constrained environment of sub-Saharan Africa.

It has been demonstrated that the pandemic presented massive challenges to the hospitality sector across sub-Saharan Africa that hindered contributions to the SDGs. The biggest was job losses, which greatly influenced the ability of the hospitality sector to contribute to SDG 8 on decent employment and economic growth. COVID-19 triggered other challenges that constrained progress for the achievement of other SDGs. These relate most importantly to Goal 1 on no poverty, Goal 5 on gender equality and Goal 10 on reducing inequality.

Overall, the loss of business in the hospitality sector due to COVID-19 resulted in resources being channelled towards survival and reopening of the hospitality sector with few resources remaining to commit to initiatives for contributing towards the achievement of SDGs. Some appreciation must be accorded to the unintended benefits of COVID-19 for the hospitality sector of sub-Saharan Africa. As noted these concern the reduction in greenhouse gas emissions and the initiatives to boost domestic (and regional) tourism. The close of the pandemic era reinforces the imperative for the hospitality sector in sub-Saharan Africa to accelerate its contribution to agenda 2030 of the United Nations. In addition, it underlines the need for African hospitality scholarship to scrutinize in greater detail the pressing research agenda around the nexus of hospitality enterprises and the SDGs.

Author Contributions: Conceptualization, N.S. and C.R.; methodology, N.S. and C.R.; formal analysis, N.S. and C.R.; investigation, N.S. and C.R.; writing - original draft preparation, N.S. and C.R.; writing - review and editing, N.S. and C.R. Both authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: Thanks to inputs made to the paper by Skye Norfolk, Lulu White and Robbie Norfolk.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 23.05.2023 Revised: 24.07.2023 Accepted: 31.08.2023 Available online: 27.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1075-1086
DOI 10.30892/gtg.49323-1107

ASSESSING THE DEVELOPMENT POTENTIAL, FEASIBILITY AND VISITOR ASSESSMENT IN THE SIPINSUR GEOSITE NATURAL TOURISM AREA, TOBA CALDERA GLOBAL GEOPARK, INDONESIA

Agus PURWOKO*
Universitas Sumatera Utara, Faculty of Forestry, Medan, Indonesia, e-mail: agus9@usu.ac.id

Anita ZAITUNAH
Universitas Sumatera Utara, Faculty of Forestry, Medan, Indonesia, e-mail: anita@usu.ac.id

Datuk Ary Andriansyah SAMSURA
Radbound University, Faculty of Management, Nijmegen, Netherlands, e-mail: d.samsura@fm.ru.nl

Robert SIBARANI
Universitas Sumatera Utara, Faculty of Humanities, Medan, Indonesia, e-mail: rs.sibarani@usu.ac.id

Iskandar MUDA
Universitas Sumatera Utara, Faculty of Forestry, Medan, Indonesia, e-mail: iskandar1@usu.ac.id

Cynthia FAUSTINA
Universitas Sumatera Utara, Faculty of Forestry, Medan, Indonesia, e-mail: cynthiafsn2@gmail.com

Citation: Purwoko, A., Zaitunah, A., Samsura, D.A.A., Sibarani, R., Muda, I., Faustina, C. (2023). ASSESSING THE DEVELOPMENT POTENTIAL, FEASIBILITY AND VISITOR ASSESSMENT IN THE SIPINSUR GEOSITE NATURAL TOURISM AREA, TOBA CALDERA GLOBAL GEOPARK, INDONESIA. *GeoJournal of Tourism and Geosites*, 49(3), 1075–1086. https://doi.org/10.30892/gtg.49323-1107

Abstract: This study aims to examine the potential of tourism objects, development feasibility, visitor assessment of aspects of travel satisfaction, services and conditions of infrastructure, as well as visitor participation in conservation and the environment. This research was conducted using the analysis method of Analysis of Operation Areas of Natural Tourism Objects and Attractions (AOA-NTOA) and descriptive analysis using survey and interview methods. The research instrument used is the Guidelines for AOA-NTOA issued by the Director General of Forest Protection and Nature Conservation, Ministry of Forestry of the Republic of Indonesia. The results showed that Sipinsur Nature Tourism has three potentials, namely; 1) The beauty of natural scenery with a cool mountain microclimate, the diversity of various types of aesthetic flora and fauna, namely various species of aesthetic trees such as Sumatran pine (*Pinus merkusii*) and red shoot tree (*Syzygium oleana*), various palms, and flower plants; 2) Various exotic fauna such as wild cats and eagles; 3) Camping ground area as a center for adventure tourism activities. The results of the development feasibility analysis were declared feasible to be developed into a more developed tourist attraction with an average feasibility index of 73.98%. Visitors' assessment of the aspect of travel satisfaction shows that the majority visit more than 1 time and disseminate information to other parties. The majority of visitors (80.1%) get information about Sipinsur's natural attractions from friends/relatives. The majority of visits were carried out in groups (96%), namely with groups of friends/professionals 56.56% and family (42.42%). As many as 78.78% of visitors make Sipinsur the main destination, with the most visit duration between 2-4 hours (34.34%). In the aspect of visitor assessment of the service and condition of facilities and infrastructure of tourism objects, the majority of visitors rate like/interested/good, some rate very like/very good/very interested, and only a few rate less good / less attractive on the overall assessment indicators. For the aspect of visitor participation in conservation and the environment, it shows that the majority of visitors reject various irresponsible behaviors and actions and are willing to participate in conservation efforts and preservation of the surrounding environment. The development feasibility analysis was declared feasible to be developed into a more developed tourist attraction. Assessment of tourism satisfaction aspects shows that the majority visit more than once and disseminate information to other parties. The majority of visitors like and have a good impression of aspects of service, facilities, and infrastructure. For the aspect of participation in conservation and the environment, it shows that the majority of visitors are aware of the responsibility and willing to participate.

Key words: development feasibility, ecotourism, Geosite of Sipinsur, participation in conservation, Toba Caldera Global Geopark, tourism development, tourism satisfaction, visitor assessment

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INTRODUCTION

Forests are declared as areas that have many values or benefits that can be used as well as possible. From the context of the national economy, forests have many functions that provide direct and indirect benefits. However, economic studies rarely examine these functions in a holistic and integrated manner. According to Law of the Republic of Indonesia Number

* Corresponding author

41 of 1999 concerning Forestry, forests have various economic benefits. One of the benefits in question is aesthetic services for ecotourism activities. According to Manalu and Manik (2021), in the current era of globalization, the tourism industry has become one of the largest suppliers of income in the human economy. Ecotourism not only contributes to the economy but is also a form of sustainable use of natural resources (Sakellari and Skanavis, 2013). Vita and Kyaw (2016) also stated that many studies have found a very strong causal relationship between tourism development and the growth of Gross Domestic Product (GDP). According to Dowling and David (2003), ecotourism is a form of tourism that fosters a learning experience and appreciation of the natural environment or some of its components by the cultural context of the related environment. Ecotourism should be conducted in a manner that enhances the destination's resources while prioritizing the economic viability of its operation. This is in line with the goal of sustainable development, namely promoting development, in particular reducing unemployment and poverty (Gasper et al., 2019).

Indonesia's natural potential is very diverse, one of which is the natural tourism potential of the provinces in Indonesia. Besides Java and Bali, Sumatra is the main destination that attracts tourists through its natural wealth. In particular, North Sumatra is currently developing its natural potential, one of which is Lake Toba. Around 12.1 million domestic tourists and 231,465 foreign tourists visited North Sumatra in 2018 (Anele, 2020). This means that tourism not only brings financial gain to the region but also creates jobs for artisans and indigenous people in North Sumatra.

The tourist attraction in the Lake Toba area and its surroundings cannot be separated from the uniqueness of the landscape and the history of Lake Toba itself as a geotourism. Geotourism is a type of sustainable tourism that focuses on objects in the form of geosites, by offering attractions in the form of visitor knowledge, environmental education and entertainment (Santangelo and Valente, 2020). Geotourism is a tourism concept that combines geological and geographical approaches. These two aspects complement each other, and the combination of the two can result in a comprehensive geotourism concept. This concept explores the potential of what nature offers to humans and how humans are able to manage nature sustainably (Mucivuna et al., 2019; Ólafsdóttir et al., 2018; Santangelo and Valente, 2020; Dowling and Newsome, 2018). According to Chesner (2012), the Toba Caldera in Indonesia is one of the most remarkable volcanic features formed over a long period. Lake Toba is the largest lake in Indonesia (90 x 30 km^2) and is also the largest quaternary volcanic-tectonic caldera (giant volcanic crater) in the world. This caldera was formed by a collapsing process after the eruption of the ancient Toba volcano supervolcano, which was then filled with rainwater (Nasution, 2019).

Currently the Toba Caldera has been designated by UNESCO as a Geopark. Geopark is an area that has prominent geological elements including archaeological, ecological and cultural values in it, where local communities are invited to participate to protect and improve the function of natural heritage. Geopark is a concept introduced by UNESCO in 2004 that aims to protect a nationally protected area with a wealth of unique geological heritage and aesthetic value that can be developed in a management model that integrates aspects of conservation, education, and local economic development (UNESCO, 2006). Humbang Hasundutan Regency is one of seven districts in the Lake Toba Global Geopark area. This district has an area of 2,335.33 km^2, with the capital being Dolok Sanggul. According to Damanik et al. (2021), one of the attractions is an ecotourism object. The tourist attraction here that is most in demand by tourists is Sipinsur Geosite. Geosites are landforms that represent certain aspects of relief determined by morphogenetic processes and geological sublayers. Geosite is a landscape that is formed independently or in collaboration with other bioecological or anthropic elements so that it becomes an object of heritage. Geosites are the clearest representation of geomorphological processes of the relationships that exist between the various factors that cause them (Ilies and Josan, 2009). Currently, Sipinsur has been designated as one of the Toba Caldera Geosites, together with 15 other geosites in the Lake Toba area and its surroundings (Anele, 2021; Astuti, 2021). As stated by Ginting and Siregar (2018), the Muara geosite is a tourist attraction in the Lake Toba area. It also occurs in the Muara geosite. The tourism sector in this area has received maximum handling so that many tourists look to its natural potential. Sipinsur is also one of the geosites in the Toba Global Geopark area. At this location, tourists can see firsthand the wide and beautiful view of Lake Toba. The location of Sipinsur Tourism is on a hill in the highlands, so you can see many sides of the panorama of Lake Toba and Samosir Island. The area is about two hectares and is located at an altitude of 1,213 meters above sea level (Gov. Humbang Hasundutan, 2017).

So far, very little research has been done on the Sipinsur Nature Tourism object related to the potential and development of this tourism. This tourist object has never done a comprehensive analysis of the potential and feasibility of its development. Meanwhile, comprehensive information related to this needs to be taken into consideration by managers in developing this natural tourism object. Comprehensive data and information from the research results are also needed as introduction and promotion materials to potential visitors, both local and international. Therefore, research on feasibility analysis and aspects of ecotourism development in the Sipinsur Nature Tourism area is very necessary.

The purpose of this research is to examine the potential of tourism objects, to analyze the feasibility of developing tourist objects, and to analyze visitor ratings on aspects of travel satisfaction, aspects of service, and the condition of infrastructure, as well as aspects of visitor participation in conservation and the environment at the Sipinsur Geosite Natural Tourism Area Toba Caldera Global Geopark Indonesia.

MATERIALS AND METHODS

This research was conducted at the Sipinsur Nature Park in Pearung Village, Paranginan District, Humbang Hasundutan Regency, North Sumatra Province, Indonesia.

1. Population and Sample

The population in this study is all visitors who come to Sipinsur Natural Tourism Objects in one year. Sampling in this study uses the accidental sampling method, where every visitor who comes to the research location can be used as an accidental responder. The determination of the number of samples in this study was made using the Slovin formula (Sugiyono, 2011). The Slovin formula, according to Mtotywa et al. (2022), Setiawan et al. (2021), Ellen (2012), and Sugiyono (2017), is as follows:

$$n = \frac{N}{1+N\,(e)^2} \qquad (1)$$

Notes: n = number of samples; N = total population; e = fault tolerance limit (0,1);

The total population of visitors to Sipincur Nature Tourism in this study was 8,344/month so using the percentage error tolerance limit of 10%. Therefore, the number of research samples required is 99.33, which is rounded up to 99 visitors.

2. Research variable

The variables analyzed in this study refer to the Guidelines for Analysis of Operational Areas for Natural Tourism Objects and Attractions (AOA-NTOA) of the Director General of Forest Protection and Nature Conservation, Ministry of Forestry, Republic of Indonesia. This analysis guideline is also used in similar studies such as in the mangrove area of Tanjung Bara Sangatta Beach (Karlina et al., 2010), Teroh-teroh Waterfall (Panjaitan et al., 2015), Oro-oro Ombo Tourism Village (Wirahayu et al., 2022), and Bogor (Rahayuningsih et al., 2016).

3. Data analysis technique

Data analysis was carried out using two methods, namely:

a. Descriptive analysis with qualitative and quantitative approaches the quantitative measuring instrument used in this study is a questionnaire distributed to respondents.

b. Assessment of the feasibility of developing natural tourism objects by the AOA-NTOA guidelines.

Weighting is carried out on each criterion according to the AOA-NTOA guidelines, namely:

a. The attractiveness criterion is given a 6 because it is the main factor for someone doing tourism activities.

b. Accessibility is given a weight of 5 because it is an important factor that supports tourists' carrying out tourism activities.

c. Accommodation and facilities/infrastructure are given a weight of 3 because they are supporting factors in tourism activities.

The total score for one Natural Tourism Objects and Attractions (NTOA) assessment criterion can be calculated by the following formula (Mukmin, 2022):

$$S = N \times B \qquad (2)$$

Notes: S = score/value of a criterion; N = sum of values; B = value weight;

The value of the feasibility index of a tourist attraction is calculated by comparing the score obtained with the total score of a criterion (the maximum value of each score is 5). The results of the assessment are as follows:

$$(A \div B) \times 100\ \% \qquad (3)$$

Notes: A = Scor kriteria; B = Scor Total kriteria; According to Karsudi et al. (2010) after the comparison, the feasibility index score obtained in percent is categorized as follows:

- If the feasibility level is > 66.6% then it is declared feasible to be developed
- If the feasibility level is 33.3% - 66.6% then it is declared not feasible to be developed
- If the feasibility level is < 33.3%, it is declared not feasible to be developed.

RESULTS AND DISCUSSION

1. Ecotourism Potential in Tourist Areas Sipinsur

Nature Tourism development is essentially an effort to develop and utilize tourism objects and attractions. According to Nahuelhual (2013), Ecotourism potential is the variety of natural resources found in a certain place or area that can be developed and used as a tourist attraction. From the results of the study, it was found that the potential contained in the Sipinsur Nature Tourism area was the potential for the beauty of natural scenery, the cool microclimate, the potential flora, and fauna, as well as the potential camping and camping grounds. Regarding the potential of the Sipinsur area, Damanik et al. (2021) also reported the same thing. According to Purwoko et al. (2020), the impact of tourism on the economy can be both positive and negative. Ecotourism in many conservation areas tends to be an alternative conservation approach to improve livelihoods. The economic value of ecotourism is expected to increase public awareness of conservation efforts as well. These impacts can be divided into public income, employment opportunities, prices and tariffs, distribution of benefits, ownership, and control, development, and government revenues.

Figure 1. The potential for the beauty of natural scenery in the Sipinsur Nature Tourism area from various directions; a. View of Sibandang Island, b. view of the coastal landscape of Muara District, c. view of the other side of Lake Toba

1.1. Natural Scenery Has Potential Beauty

Natural beauty is the main attraction of tourism activities. According to Gurung and Seeland (2008), in a case study in the Himalayas, visitors who are attracted by the beauty of nature stay longer than those who come to experience the culture. The natural scenery available at Sipinsur Nature Tourism is very beautiful and is the biggest attraction to attract visitors. If you enter the area, visitors will be greeted with the coolness obtained from the pine trees that surround the natural tourist area. This area also provides a beautiful view of Lake Toba, which makes visitors feel an extraordinary beauty, which also makes visitors not bored come to this tourist attraction. The blue water of Lake Toba provides coolness and tranquility for visitors to relax.

The potential beauty of the natural scenery of the Sipincur area can be felt immediately after walking 50 m from the entrance of the area. From the beautiful view of Lake Toba seen from this area, we can see Samosir Regency. The district has Sibandang Village, which is located closest to the waters of Lake Toba. Visitors can enjoy the view from all directions. Visitors can not only enjoy the beautiful scenery of Lake Toba but also the hills, where visitors can see districts in hilly areas.

1.2. Potential Flora and Fauna

Sipincur nature tourism is dominated by pine trees (*Pinus merkussi*). The coolness obtained from this type of plant makes visitors spend longer vacation time at tourist attraction locations. The flora found in this nature tour is pine trees (*Pinus merkussi*), red shoot trees (*Syzygium oleana*), palms, and various types of flowers. While the types of fauna in the tourist attraction area are wild cats and eagles, The fauna in this area is classified as not getting too much attention from visitors because they come to this tourist area to enjoy the natural scenery.

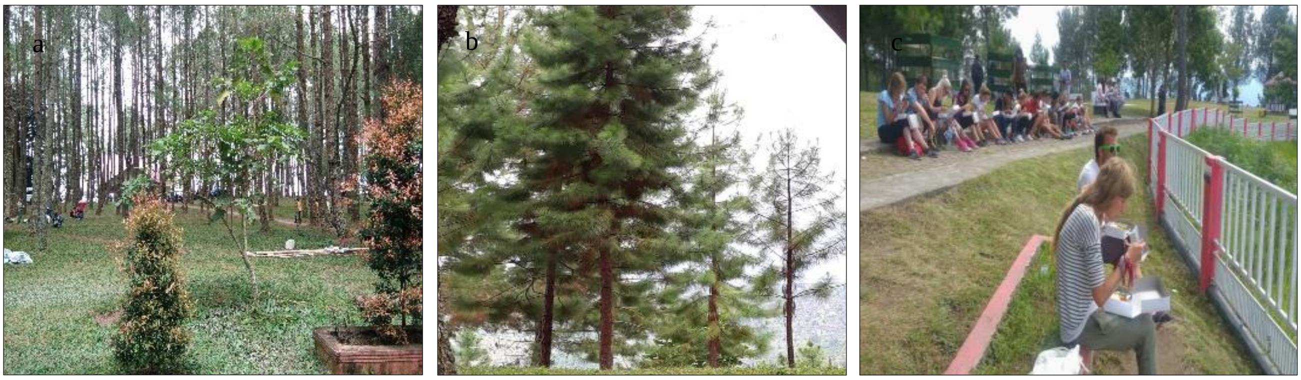

Figure 2. The potential of Flora and Fauna in Sipinsur Nature Tourism, a. Stands of Sumatran pine trees and exotic red shoots, b. Sumatran pine and red shoots which are endemic species, c. Visitor activities at Sipinsur Geosite

1.3. Potential Camping Area/Camping Ground

Camping ground facilities are an arena for camping for visitors who want to camp at this location for various activities, including research, organization, scouting, and enjoying the beautiful scenery at night at tourist attraction locations.

Figure 3. Potential camping area/camping ground; a. Camping ground, b. Playground under pine stands

Visitors who come to the Sipinsur Nature Tourism Area are not only local tourists but foreign tourists as well. Activities carried out in this area include not only enjoying the scenery, and the types of flora and fauna that exist, but camping as well. However, in this area, many activities have been realized, such as painting competitions, comparative studies conducted by Czech students, the Regional Festival (Gondang Sabangun Festival), and many other activities that visitors can do while enjoying the coolness and beautiful scenery. This activity must have received permission from the manager and the government.

2. Feasibility of Development of Sipinsur Natural Tourism Area

Aspects assessed from the Sipinsur Nature Tourism area include location attractiveness, accessibility, socio-economic environmental conditions, accommodation, supporting facilities and infrastructure, as well as the availability of clean water that supports the development of tourism objects.

2.1. Tourist Attractions

The attractiveness of a tourist location is the main reason for visitors to visit a tourist attraction location. The attraction of Sipinsur natural tourism is quite large to attract visitors. These attractions can be in the form of prominent natural resources such as flora and fauna, a variety of nature tourism activities, uniqueness of natural resources, cleanliness of the location, safety, and comfort of the tourist location. According to Sammeng (2001), attractiveness is a factor that makes people want to visit and see a place or object. A tourist attraction is anything interesting, unique, and of high value to tourists visiting a specific area. The analysis of this attraction is intended to describe the forms of recreational activities that can be developed according to the attractions and resources available in a location. Each of these attractions has its value, and this value shows how strong an attraction can attract the interest of its visitors. Each tourist attraction has its charm that characterizes nature tourism.

Figure 4. Various attractions in sipinsur nature tourism; a. Ethnic dance performances, b. Tourist information board

2.1.1. Uniqueness and outstanding natural resources

Based on the results of the study, the criterion for the uniqueness of natural resources obtained a value of 15, because in the area there are only elements of flora and fauna. Along this tourist trail, visitors can enjoy the coolness provided by pine trees that grow neatly, densely, and cleanly. The existing pine trees are decades old and naturally existed before being directly managed by the government. This view is one of the unique features of the Sipinsur Nature Tourism Object.

2.1.2. A wide range of natural-based tourism activities

Based on the results of the study, it was determined that the criterion for the variation of nature tourism activities got a value of 25. Within the area, five elements are included in the assessment. Natural tourism activities that can be done in this nature tourism are: enjoying the beauty of Lake Toba, which is different from other locations (e.g., Parapat), seeing flora (types of plants available at tourist attraction locations), camping, which is usually done by teenagers, school children, and others. scouting, education, research, and sports activities. Tracking activities also have the potential to become a sport that is carried out on this tour, but there is no indication or marker from the manager for the implementation and location of tracking.

2.1.3. The numerous natural resources that stand out

The criterion for the number of natural resources that stand out is getting a score of 15 because in the area there are 2 elements, namely elements of flora and water. Sipincur Nature Tourism has four flora types, namely pine (*P. merkusii*), red shoots (*Syzygium oleana*), palms, and paper flowers. However, the area around the tourist attraction is dominated by the type of flora pine.

2.1.4. Cleanliness of nature-tourist sites

Cleanliness is an important factor that needs to be considered by tourism object managers. The influence of cleanliness is also a factor that influences visitors' interest in enjoying tourist attractions. The location cleanliness criterion got a score of 20 because in the area five elements were included in the assessment. This natural tourism does not influence industry, busy roads, residential areas, vandalism, or other pollution. However, the awareness of visitors to maintain the cleanliness of the tourist attraction is still lacking because there is still garbage found around the tourist attraction that is not disposed of in the place provided.

2.1.5. Nature tourism safety and Comfort

Security is one of the important factors that visitors expect. Visitors to a tourist attraction will expect security and comfort that will keep them from becoming bored. The security criterion got a score of 30 because in the area five elements were included in the assessment, while the comfort criterion got a score of 25 because in the area four elements were included in the assessment. This nature tourism is considered safe because there are no dangerous currents, no illegal logging, and encroachment, no theft, no disturbing beliefs, and it is free from dangerous diseases such as malaria. This nature tour is comfortable because it is free of disturbing odors; there is no disturbing public traffic; it is noise-free, and the air is cool. The only potential threat is the danger of landslides. However, this is relatively small because the side that has a relatively high slope is protected by the presence of pine trees that are still awake.

2.2. Accessibility

Tourism development will obtain optimal results if these development efforts are supported by the construction of facilities and infrastructure (Kanwal et al., 2020). In this case, one of them is accessibility. Accessibility is an important factor that needs to be considered to make it easier for visitors to travel from the visitor's residence to the location of the tourist attraction they will visit. Accessibility discusses the condition and distance of the road, the type of road, and the travel time required to travel from the city center to the location of the tourist attraction.

Based on the results of the study, it can be seen that the condition of the road is not too far from Doloksanggul to the tourist attraction, which is 9 km away. The access road for this tour is also paved. The time taken from downtown Doloksanggul to the tourist attraction area is 1-2 hours by land using public transportation or private vehicles. The total score obtained is 425. This value is obtained from the results of the assessment of each element or sub-element.

The criterion for road conditions and distances get a score of 25 because the road conditions are quite good and the distance from Doloksanggul is 9 km. The criterion for the type of road gets a value of 30 because the type of road while going to tourist sites is good. The criterion for travel time from the city center gets a value of 30 because the travel time that must be passed is only 1 hour. The factor that attracts visitors to come to the location of a tourist attraction is also its location close to other tourist attractions or close to the airport.

2.3. Socio-Economic Environmental Conditions

For tourism to contribute to sustainable development, it must be economically viable, ecologically sensitive, and culturally appropriate. Increments in understanding them can obscure basic problems and pose major challenges for regions (Sakellari and Skanavis, 2013). The condition of the socio-economic environment is also a factor that needs to be considered by tourism object managers. The strategic location of each facility and infrastructure must also attract the interest of the visitors and gets the value of 30. The land status of the Sipincur tourist attraction is state forest and gets a score of 30. The livelihoods of the population are mostly farm laborers, and most of them have graduated from junior high school and above and got a score of 25. In the assessment of environmental conditions, this economic factor can be said to be very good.

2.4. Accommodation

Accommodation in natural tourism activities is needed as a means when visitors want to stay at the location they visit. If there is no accommodation in a tourist location, accommodation can be provided at a location not far from the tourist attraction. This accommodation factor can also be considered for visitors who come from abroad to visit tourist sites. Based on the results of the study, it can be seen that the total score obtained is only 45 due to the absence of lodging places and only providing land for camping. This tourist attraction does not have other lodging places, so there are no rooms available. This can provide consideration for managers to provide more facilities to attract visitors.

2.5. Supporting Facilities and Infrastructure

Supporting facilities and infrastructure are one of the factors that help make it easier for visitors to enjoy tourist attractions, either directly or indirectly. The availability of this infrastructure is, of course, very helpful for tourists in communicating and even enjoying tourist visits; receiving treatment if they suddenly get sick; and having clean water for drinking. Likewise, the availability of facilities is very helpful in finding hygienic restaurants and public transportation, which makes it easier for visitors to come to tourist sites. Based on the results of the study, it can be seen that the criterion for facilities and infrastructure obtained a total score of 210. This result was obtained from the assessment of each element or sub-element which indicates the criterion for infrastructure received a score of 30 because in the area two elements are included in the assessment. The elements available in this tourist attraction are health centers and electricity networks. And the supporting facilities get a score of 40 because three elements are included in the assessment. The criterion is restaurants, shopping centers/markets, and souvenir shops. On this criterion, attention is still needed from the manager of the attraction because the facilities are still not provided for visitors.

2.6. Availability of Clean Water

Clean water is an important factor that needs to be provided by managers for visitors to increase their comfort in enjoying tourist attractions. Based on the results of the study, a total score of 840 was obtained. This result was obtained from the volume assessment, which obtained a total score of 840. This result was obtained from the volume assessment, which obtained a value of 25 because the volume of water available in the area is sufficient for use by visitors and managers. The assessment of the distance from the water source to the location of the object gets a value of 30 because the distance is not too far; it only covers a distance of 1 km. The assessment of whether or not water can flow to the object gets a value of 30 because it is very easy for water to flow to the location of a tourist attraction. The feasibility of consumption, which gets a score of 25, because all the water available in the area requires simple treatment, such as being cooked until it boils to maintain its hygiene and continuity, gets a score of 30 because of the availability of clean water throughout the year.

3. Assessment Results of NTOA

The aspects assessed in this study are the attractiveness of the tourist location, accessibility to be able to reach the location, accommodation around the tourist site, and also supporting facilities and infrastructure that support the development of tourist sites. The results of this assessment were obtained by making direct observations in the area. Based on the results of the assessment (Table 1.), it was found that the Sipinsur Nature Tourism area has the potential to be developed and is feasible. The results of the assessment of the Sipincur Nature Tourism Area deserve to be developed as a tourist attraction with a presentation of 73.98%. The attractiveness of this area has a percentage of 72.22%, accessibility has a percentage of 70.83%, socio-economic environmental conditions of 95.83%, accommodation of 41.67%, and facilities and infrastructure have a percentage of 70%, and the availability of clean water is 93.33%.

The assessment of accommodation is not feasible because there is no accommodation available in the tourist attraction; only the camp area is available. However, accommodation is available around the location of the tourist attraction in the form of a homestay. In general, the results of the assessment of the Sipinsur Nature Tourism Area show that this area has great potential and is worthy of being developed into tourism.

Table 1. Results of assessment of Sipincur Natural Tourism objects and attractions

Nu	Criterion	Weight (W)	Score (S)	Number of Scores (W*S)	Max Score (MS)	Dev. Feas. Index (%) (W*S)/MS	Development Feasibility Level
1	Attractiveness	6	130	780	1,080	72.22	Feasible
2	Accessibility	5	85	425	600	70.83	Feasible
3	Socio-economic environmental conditions	5	115	575	600	95.83	Feasible
4	Accommodation	3	25	75	180	41.67	Not Yet Feasible
5	Supporting facilities and infrastructure	3	70	210	300	70.00	Feasible
6	Availability of clean water	6	140	840	900	93.33	Feasible
	Overall					**73.98**	**Feasible**

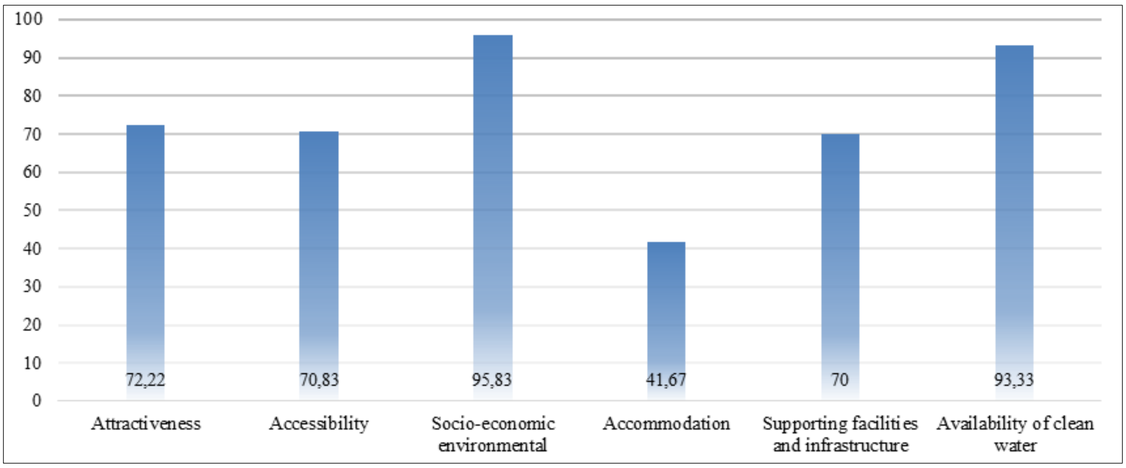

Figure 5. Various attractions in Sipincur Natural Tourism

4. Sipinsur Nature Tourism Development

Based on the report by Paramitha et al. (2019), Ecotourism Sipinsur plays an important role in the formulation of regional development plans, policies, and coordination of regional development plans that can support and encourage the development of each ecotourism destination. Damanik et al. (2010) also concluded that the business development of the Sipinsur ecotourism area has a positive and significant effect on regional development in Humbang Hasundutan Regency.

4.1. Infrastructure Development

Facilities and infrastructure are two of the factors that influence the development of tourism management that supports the smoothness of tourist activities while at the location of a tourist attraction. This is to the statement of Vila et al. (2015), which states that the factors that influence the development of tourism management are: service factors, facilities and infrastructure factors, object factors and natural tourist attractions, and safety factors. The facilities and infrastructure in Sipinsur are adequate because this tourist object is owned and managed by the Humbanghasundutan Regency Tourism Office (Paramitha et al., 2019). However, it is reported that due to inadequate funding by the government and limited private sector participation, some tourist destinations in Lake Toba are not well maintained and maintained.

The Sipinsur geosite itself collapsed due to natural elements (such as rain) without any serious efforts to restore it. This has an impact on reducing the number of foreign tourists visiting these sites (Anele, 2021). The facilities and infrastructure that need to be developed are seats (benches), which are located close to scenic spots; adding lodging (accommodation); adding selfie photo spots; adding trash cans; an internet network for all operators; children's games; rides. It is nature that attracts foreign tourists, making souvenirs by hand and adding directions to the location of tourist attractions.

4.2. Development of Tourism Objects and Attractions

The increase in tourist attractions carried out by the managers will increase the attraction of visitors to tourist attractions because the main factor that makes visitors come to tourist attractions is the potential and attractiveness of the area. This is to the statement of Devy and Soemanto (2017), which states that the attraction of tourist objects is one of the main capitals that must be owned in efforts to increase and develop tourist objects and attractions.

These developments include increasing the variety of plants that exist in tourist attractions and renewing attractions at certain times so that visitors don't get bored. The renewal of the tour can be done by adding rare tree species and giving instructions on the types of pine trees that are in the tourist attraction. It can also be done by tidying up the pine trees because many branches are rotten but still hanging on the pine trees.

4.3. Tourism Service Development

Service development needs to be done to improve the quality of tourist satisfaction after visiting tourist sites. Service can be an assessment for visitors to visit again. A good and appropriate feasibility index can be used as an effort to increase the development of tourism objects. A good and appropriate feasibility index can be used as an effort to improve the development of tourist attractions. As a comparison material, in North Sumatra Province there is also one of the natural attractions in the form of Terohteroh Waterfall which is tourism that has the potential of tourism objects and the feasibility level whose components are the same as Sipinsur Tourism (Panjaitan et. al., 2015).

The weakness of Sipinsur natural tourism lies in the attractiveness of tourist attractions, while the advantages are in accessibility, accommodation, facilities, and infrastructure. In both attractions, the accommodation criterion both have a low level of eligibility, which is not yet feasible. This can be a special concern for tourism object managers in developing the potential that exists in these attractions. Of the two, the overall feasibility level of Sipinsur natural tourism is greater than the natural tourism of Terohteroh Waterfall.

This natural tourism area requires a lot of development of ecotourism potential, starting with adding facilities, improving services, and attention from local governments. The community and the business society are also expected to participate in increasing the development of ecotourism potential from this natural tourism, starting from awareness of maintaining cleanliness and maintaining the preservation of flora in the Sipinsur natural tourism area.

5. Visitors' Rating of Sipinsur Nature Tourism

Visitors are parties who enjoy tourism services. Visitor assessment becomes an objective barometer to determine the quality of two natural tourism objects. This assessment method was also used by Göktuğ and Nihan (2015) in the Central Coast Region of Western Australia; Hodur et al. (2005) in the Great Plain; Willis (2009) in Hadrian's Roman Wall; and Naidoo et al. (2011) in Mauritius; Arabatzis and Grigoroudis (2010) in Dadia–Lefkimi–Souflion National Park; Herrera et al. (2018) stated that the assessments obtained based on the perspectives and opinions of managers and visitors can be used as a basis for participatory management of the sustainability of tourism destinations.

5.1. Travel Satisfaction Aspect

Visitor satisfaction is also a factor that needs to be considered as an evaluation tool for the development of natural tourism. One of the indicators assessed in travel satisfaction is the introduction of travel, type of tour group visit, frequency of visits, length of visit, and the main purpose of the tour.

a.

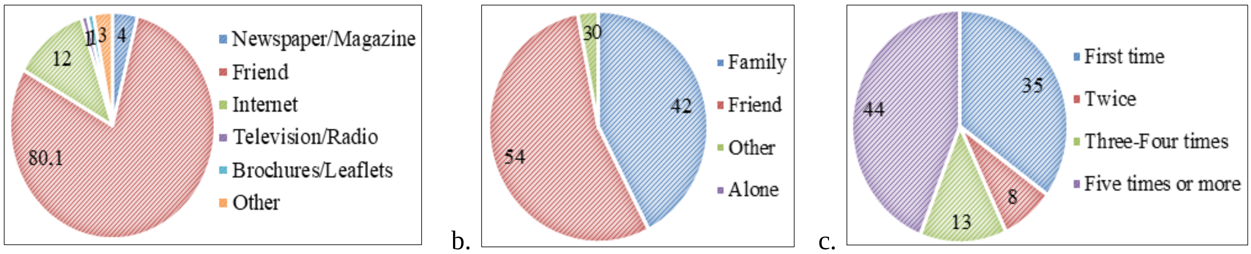

Figure 6. (a) Introduction to Sipincur Natural Tourism
(b) Type of visit of Sipincur Natural Tourism group (c) Frequency of visits to Sipincur Natural Tourism

Figure 6 (b) depicts a comparison of the types of tourist visits to Sipinsur Nature Tourism with friends or professional colleagues versus family or alone. Thus, 96% of visitors to Sipinsur Nature Tourism are visitors who come in groups. If in one group, the tourist destinations are met, then they can promote this tourist spot and come back with a new group. Based on Figure 6 (c), it can be seen that the highest frequency of visits by visitors to a site is five times or more, namely 44%, while the second time is 8%, three-four times 13%, and for the first time 35%. This is because visitors who often visit are the average community around the tourist attraction, whose location is not too far away, so they often spend their holidays on this natural tourism. The thing that dominates the second largest is those who visit for the first time. This is because many visitors from outside Humbang Hasundutan Regency are curious to visit these attractions.

Based on 7 (a) research, on average, visitors choose Sipinsur Nature Tourism as the main destination for traveling, as many as 78%, and those who choose not as much as 21%. That's because most of the visitors are people around the tourist area, and the location is not too far away. Based on Figure 6 (b), it can be seen that the length of the visit ranged from two to four hours, 34%, while 28% stated that it was between four and six hours and one to two hours.

As many as 16% of visitors even enjoy traveling activities for more than six hours. The length of tourist visits is related to the density of visitors in tourist attractions which disturbs the comfort of the visitors. At Sipinsur Nature Tourism, the length of visit of visitors does not have a major impact on the comfort of the visitors. This is because visitors limit the time of their respective tourist visits without direction from the tour manager.

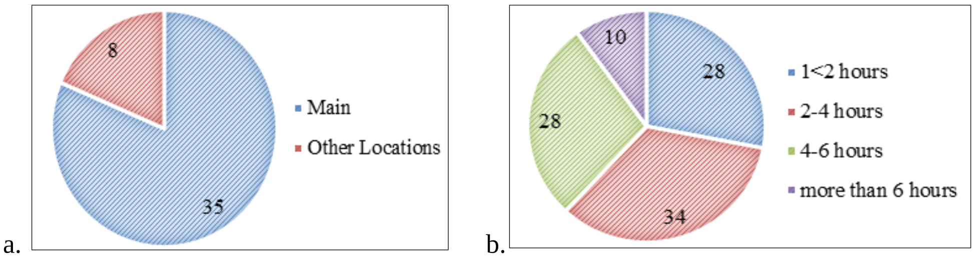

Figure 7. (a) Object urgency category for visitors (b) Duration of tourist visit

5.2. Services and Conditions of Sipinsur Nature Tourism Facilities and Infrastructure

The condition of services, facilities, and infrastructure owned by this tour can be used as evaluation material for managers in improving and increasing tourism potential to make it more developed. These services will give the impression of a traveling experience. The assessment from Figure 8 (a) of these services starts with tourist attractions, tourist activities, service officers, the conditions of facilities and infrastructure, and their management. The dominant visitors like the attraction components offered. This is because the tourist attraction components, such as having an attraction in the form of a pine forest (*Pinus merkusii*) and other components, give a good impression to the visitors.

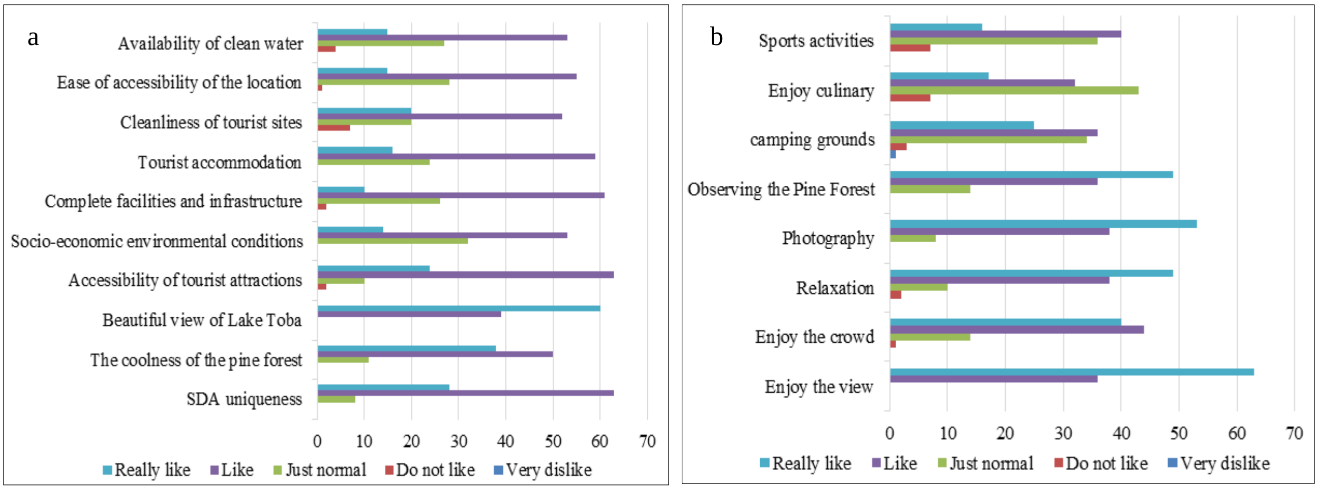

Figure 8. (a) Visitors' opinions about sipinsur's natural tourist attractions (b) Visitors' opinions about tourist activities

Judging from Figure 8 (b), it can be seen that almost most of the respondents like activities to enjoy the scenery, enjoy the crowds, relaxation, photography, observing the pine forest, camping grounds, and even sports activities. This is because, in addition to providing beautiful views, visitors also often take selfies at photo spots that have been provided in the tourist attraction area. However, in terms of enjoying the culinary delights of the visitors, it is normal because the cuisine provided is only local and traditional snacks that are usually consumed by visitors daily. The price of food is quite expensive, so it makes the visitors not enjoy the cuisine in the tourist attraction area. Tourist activities in this area need to be increased to increase their attractiveness and increase visitor awareness about nature conservation. By Maharani (2016), increasing awareness about nature conservation is in line with an increase in outdoor tourism activities.

From Figure 9 (a), it can be seen that the service provided by the manager to visitors is said to be good; only the souvenir shop component needs to be improved. This is because the souvenirs provided are not very attractive and do not follow trends. From Figure 9 (b), it can be seen that the condition of the facilities and infrastructure provided by the manager is adequate, and the components that need to be improved are the souvenir shop and the camping ground. This is because the facilities provided, such as tourist counters, tourist trail roads, bathrooms, conservation education themes, and the availability of trash cans, still meet the satisfaction of visitors.

The souvenir shop received an ordinary rating because the souvenir items were not unique and special, while the camping ground was not the center of activity for most of the visitors. Therefore, it is necessary to develop facilities and infrastructure to increase the attractiveness of tourism for the development of tourism. According to Nahuelhual (2013), the development of tourist attractions and tourist objects will achieve optimal results if these development efforts are supported by the construction of facilities and infrastructure. Based on Figure 9 (c), it can be seen that the opinion of visitors to the management of Sipinsur is said to be good. However, this is still a concern for the manager to continue to upgrade the convenience of service to visitors to attract visitors from outside the city and even abroad.

5.3. Aspects of Visitor Participation in Conservation and the Environment

In general, this participation statement shows that some of the visitors are people who care about conservation and the environment, which is reflected in the form of a participatory attitude. According to Nugroho et al. (2018), one of the efforts to optimally utilize local resources is to develop tourism with the concept of ecotourism, which is carried out as an inseparable part of conservation efforts. Based on Figure 10 (a), respondents indicated their dislike for some behaviors that were considered disturbing. The use of single-use plastic wraps, glasses, and bottles is an example of behavior that is considered to be disturbing the comfort of traveling. The visitors also did not show high awareness of maintaining cleanliness. Even though there are garbage dumps available, visitors still throw garbage carelessly.

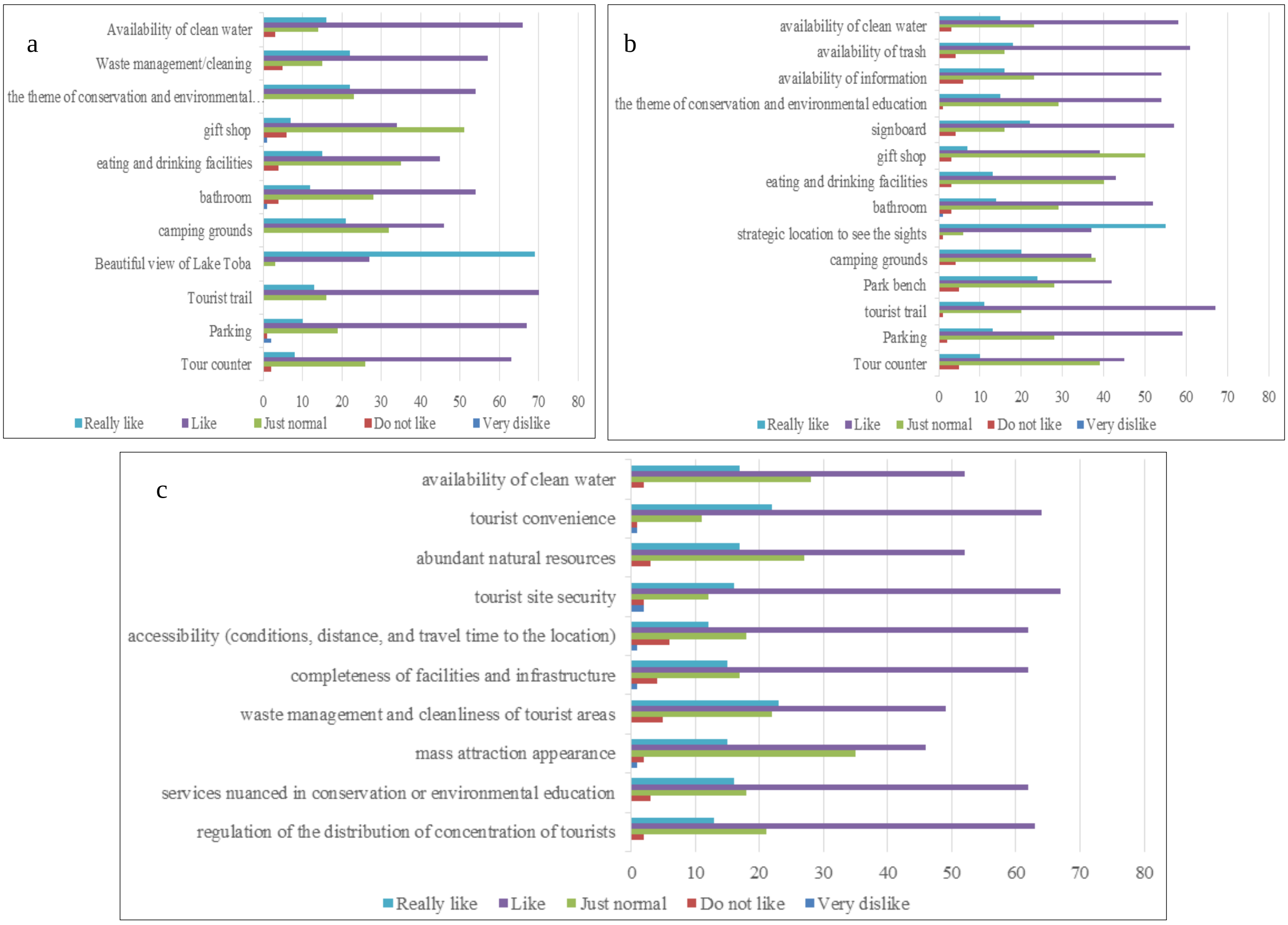

Figure 9. (a) Visitor's opinion about management service (b) Visitor's opinion about the condition of facilities and infrastructure (c) Visitors' opinions about tourism management

Based on Figure 10 (b), it can be seen the form of visitor participation can support conservation and the environment around the tourist attraction. It can be seen that most of the visitors are willing to take responsibility for overcoming conservation and environmental problems. This condition means that visitors like a clean and well-maintained environment. Directly, this is an indication that respondents and managers realize how important it is to maintain the natural tourism environment. This awareness needs to be developed as part of efforts to educate the public on the importance of beauty and comfort in the tourist environment.

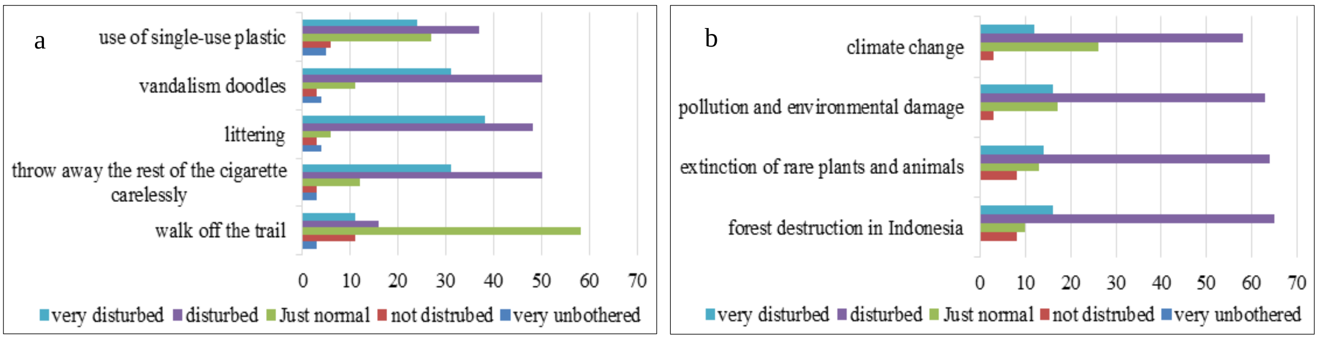

Figure 10. (a) Visitor responses to environmentally destructive behavior (b) Willingness of visitors to participate in conservation and environmental efforts

CONCLUSION

Sipinsur Nature Tourism has three potentials, namely the beauty of natural scenery with a cool mountain microclimate, the diversity of various types of aesthetic flora, especially pine (*Pinus merkusii*), red shoots (*Syzygium oleana*), various palms, and flower plants, exotic fauna such as wild cats and eagles, and the potential for camping grounds as a center for tourist activities. The results of the development feasibility analysis for all aspects including the attractiveness of the tourist site, accessibility, socio-economic environmental conditions, accommodation, supporting facilities and infrastructure, and the availability of clean water, were declared feasible to be developed into a more developed tourist attraction with an overall feasibility index of 73.98%.

Visitor assessment of travel satisfaction aspects shows that the majority of visitors visit more than 1 time (65%). The majority of visitors (80.1%) get information about Sipinsur natural attractions from friends/relatives. The majority of visits were carried out in groups (96%), namely with groups of friends/professionals 56.56% and family (42.42%). As many as 78.78% of visitors make Sipinsur the main destination, with the most visit duration between 2-4 hours (34.34%). In the aspect of visitor assessment of the service and condition of facilities and infrastructure of tourism objects, the majority of visitors rate like/interested/good, some rate very like/very good/very interested, and only a few rate less good/less attractive on the overall assessment indicators. The majority of visitors also reject various irresponsible behaviors and actions and are willing to participate in Conservation and Environmental Efforts.

Author Contributions: Conceptualization, A.P., and A.Z.; methodology, A.P. and R.S.; software, I.M. and C.F.; validation, A.P. and I.M.; formal analysis, A.P. and R.S.; investigation, A.P. and C.F..; data curation, A.Z. and C.F..; writing - original draft preparation, A.P. and C.F.; writing - review and editing, A.P. and D.A.A.S.; visualization, A.Z. and C.F.; supervision, D.A.A.S. and R.S.; project administration, C.F. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The author is grateful to the Universitas Sumatera Utara for supporting this research. The author also expresses his gratitude to the management of the Geosite Sipinsur Management, all informants, and visitors who have helped in carrying out this research.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 24.05.2023 Revised: 26.07.2023 Accepted: 01.09.2023 Available online: 27.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1087-1095
DOI 10.30892/gtg.49324-1108

THE BULGARIAN NATIONAL BLACK SEA RESORTS IN THE CONTEXT OF DOMESTIC TOURISM

Desislava VARADZHAKOVA*
National Institute of Geophysics, Geodesy and Geography at Bulgarian Academy of Sciences, Geography Department, Economic and Social Geography Division, Sofia, Bulgaria, e-mail:dvaradzhakova@gmail.com

Alexander NAYDENOV
University of National and World Economy, Department of Statistics and Econometrics, Sofia, Bulgaria, e-mail:anaydenov@unwe.bg

Nadezhda ILIEVA
National Institute of Geophysics, Geodesy and Geography at Bulgarian Academy of Sciences, Geography Department, Economic and Social Geography Division, Sofia, Bulgaria, e-mail:nadeto.ilieva@abv.bg

Marina RAYKOVA
National Institute of Geophysics, Geodesy and Geography at Bulgarian Academy of Sciences, Geography Department, Economic and Social Geography Division, Sofia, Bulgaria, e-mail:marinanikova@yahoo.com

Citation: Varadzhakova, D., Naydenov, A., Ilieva, N., & Raykova, M. (2023). THE BULGARIAN NATIONAL BLACK SEA RESORTS IN THE CONTEXT OF DOMESTIC TOURISM. *GeoJournal of Tourism and Geosites*, 49(3), 1087–1095. https://doi.org/10.30892/gtg.49324-1108

Abstract: Stimulating domestic tourism is a priority in the development of the tourism industry in Bulgaria. The share of the population's expenditure on travel within the country averages 69% of total travel expenditure. Therefore, the purpose of this article is to analyse the attractiveness, effectiveness, and significance of the national Black Sea resorts for domestic tourism. The data used in the present paper are published and accessible at the web site of the National Statistical Institute of Republic of Bulgaria. To examine the main tendencies in the yearly time series, concerning the Bulgarian Black Sea resorts, we have used statistical analysis of the trend cycle. The selected indicators used for analyses are bed-places in the accommodation establishments in the Bulgarian national Black Sea resorts, arrivals in accommodation establishments, nights spent, revenue from the nights spent and average daily rate per person. The results of the present analysis confirm some trends regarding tourists' attitudes towards domestic tourism and that the resorts offer a pricing policy to attract Bulgarian tourists. The analysis shows the potential of domestic tourism to recover the tourism industry in crises.

Key words: national resorts, domestic tourism, Black Sea, attractiveness, statistical analysis, trend cycle

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INTRODUCTION

Tourism is one of the priority sectors of the Bulgarian economy. The effect of the tourism industry on the local economies is reflected mainly by increasing employment in this sector, growth of the taxes received by the state, ensuring consumption in tourism-related industries. Stimulating domestic tourism is one of the main goals in the development of the tourism industry in Bulgaria. In the period 2008-2021, the share of the population's expenses for travel within the country averaged 69% of the total travel expenses, which shows the importance of this type of tourism for the economy. During the same period, the share of personal travel spending in the country averaged 71% of total personal travel spending. The highest share is marked by the expenses for travel in the country during the COVID-19 pandemic. They reach 88% in 2020 and 2021, and the personal trips spending achieve 90% of the population's travel expenses. These data show the extreme importance of domestic tourism in times of crisis and the untapped potential that this type of tourism has. In some destinations, there is even a preponderance of domestic tourism over incoming international tourism in economic terms (Kvítková et al., 2021). That is why this article examines domestic tourism with an emphasis on domestic leisure tourism. Leisure tourism includes all travel for the purpose of recreation during vacation. In Bulgaria, it is practiced in two main forms - summer (at the sea or in the mountains) and winter (usually in the mountains). Eight resorts of national importance have been announced in the country, of which six are on the Black Sea and two are mountain resorts. The six Black Sea coasts resorts with national importance defined by decision № 45/25.01.2005 of the Council of Ministers were chosen as the object of study. In this study, basic tourism indicators such as bed-places in the accommodation establishments in the Bulgarian national Black Sea resorts, arrivals in accommodation establishments, nights spent in accommodation establishments, revenue from the nights spent in accommodation establishments, average daily rate per person are discussed. Based on the significance of the domestic tourism for the economy of Bulgaria, the main aim of the paper is to

* Corresponding author

analyse the attractiveness, effectiveness, and economic significance of the biggest national Black Sea resorts for this type of tourism. For this purpose we use basic tourism indicators and examine the main tendencies in them.

LITERATURE REVIEW

The term “resort” has different significance in North American and in British English. In the first case resort is used as a hotel complex or property that offers recreational activities. In British English language resort has the meaning of a town that offers appropriate tourism resources for leisure and recreation and has good conditions and infrastructure for tourism. At the present paper the term “resort” is used in the British English context.

In Bulgaria, as early as 1987, the term resort was defined in the Regulation №14 on resort resources, resort areas and resorts. According to the normative act, a resort is a resort area in which resort facilities and establishments are located and are in use. A resort area is an area where there are declared and categorized resort resources and opportunities for the construction and operation of resort facilities and establishments. Mineral waters, healing mud (lagoon-estuary, spring and lake sediment mud, bentonite clays and peat) and areas with favourable factors for treatment, prevention and rest are defined as resort resources (Regulation №14, 1987). Resort areas and resorts are categorized according to their importance into resort areas and resorts of national importance and of local importance. Very often, however, resorts acquire the status of being of national or international importance primarily according to the proportion of domestic or international tourists who visit them (Kasagranda and Gurňák, 2017). In Bulgarian legislation, the term "national resort" is understood as a resort of national economic importance, usually visited by both domestic and foreign tourists. In 2012, the idea of defining national resorts was further developed and, in addition to the above, the following categories were created: spa resorts of national importance, climatic mountain resorts of national importance, climatic sea resorts of national importance. From 2020, the announcement of national resorts is carried out by a decision of the Council of Ministers after a proposal made by the Minister of Tourism (Tourism Act). National resorts in Bulgaria can be considered in two main directions: as destinations for domestic and destinations for international incoming tourism. Despite their economic importance due to the strong international inbound tourist flow to them, the role of domestic tourist flows to national resorts also turns out to be extremely significant.

According to UNWTO “Domestic tourism comprises the activities of a resident visitor within the country of reference, either as part of a domestic tourism trip or part of an outbound tourism trip” (UNWTO, 2011). Domestic tourism has a number of advantages. Domestic tourists do not need additional documents such as international passports, visas, vaccinations, and other health documents, do not need to pay for expensive transportation to remote destinations, in most cases save time on transportation, etc. Mazhande et al. (2020) point out some of the main advantages of domestic tourism such as it is not that sensitive to international trends of terrorism, global financial crisis and politics. Some of the main advantages of domestic tourism during global crises are significantly fewer restrictions on the accessibility of tourist resources and the possibility of traveling by personal means of transport (Chan, 2021). It also recovers faster than international tourism after crises (Gyimóthy et al., 2022). From another point of view, domestic tourism is an opportunity for the development of territories with attractive tourist resources in countries where, due to security risks, visa restrictions, inadequate air connectivity and/or insufficient infrastructure or weak advertising, international tourists find it difficult to visit (Chebli et al., 2021). The advantages of domestic tourism are most noticeable during crises - health, terrorism, etc. Health is one of the factors considered when choosing a travel destination (Widmar et al., 2017). In case of epidemics, the authorities of some countries recommend their citizens to limit their trips to destinations where epidemics are developing, which inevitably affects the expected intensity and direction of international tourist flows. In some regional disease outbreaks, such as Ebola, for example, both international and domestic arrivals decline in affected areas. (Kongoley-MIH, 2015; Maphanga and Henama, 2019; Widmar et al., 2017). Without underestimating the seriousness of the epidemics, however, it should be noted that the most drastic impact on tourism and effect on domestic tourism has the COVID-19 pandemic. While in epidemics, diseases are characterized by a regional character, for example 99% of Ebola cases are in Guinea, Sierra Leone and Liberia (WTTC, 2018), the pandemic is affecting tourism worldwide.

During the COVID-19 pandemic, the importance of domestic tourism has been felt. Many destinations have been closed and the international tourism decreased significantly (Korinth, 2022). In similar conditions domestic tourism supports the resilience of hotel demand and local tourism (Boto-García and Mayor, 2022). In a situation of global crisis, a significant part of outbound international tourism can be redirected to the domestic tourism market (Arbulú et al., 2021). In a study conducted in Bulgaria at the beginning of the pandemic, over 60% of Bulgarians are more inclined to domestic tourism (Naumov et al., 2020). Similar are the results of another research when 70% of the respondents in the beginning of the health crisis say they plan to travel in the country (Terziyska and Dogramadjieva, 2021). Although there is a significant reduction in international demand during global crises, domestic tourist flows could support the local economies (Kvítková et al., 2021; Duro et al., 2022; Falk et al., 2022; Rogerson and Rogerson, 2022,) but only partially mitigate losses from reduced international tourist flows (Allan et al., 2022).

However, the economic importance of domestic tourism is not only seen during crises. It is one of the industries that generate a high economic effect at the local level (Benchaib, 2022). Even before the COVID-19 pandemic, domestic tourism generated higher revenue than international tourism (UNWTO, 2020). The economic and social role of tourism, including domestic tourism, are decisive for the development of resorts. In a study carried out in Bulgaria on the impact of tourism on the national resorts, the local population living in the municipalities where the six national Black Sea resorts are located express a positive attitude towards the development of tourism in them, and also believe that tourism in general contributes to economic development in their municipality (Vodenska, 2019). Therefore, the main goal of this article is to analyse the importance of domestic tourism for the national resorts in Bulgaria, where mass leisure tourism is mainly practiced.

STUDY AREA

The development of modern tourism along the Black Sea coast of Bulgaria dates to the 1940s and 1950s. In this period, the massive construction of accommodation began, initially in the resorts of Sv. Kostantin i Elena (St. St. Constantine and Helena) and Zlatni Piyasatsi (Golden sands), and later in Slanchev bryag (Sunny Beach), International Youth Centre Primorsko and Albena. According to the Act on territorial planning, settlements are of national and local importance, and the Council of Ministers defines these of national importance. On this basis, a decision was made to designate nine resorts and holiday villages as settlements of national importance. These are the Black Sea resorts Albena, Zlatni piasatsi, Sv. Konstantin i Elena, Slanchev briag, International Youth Centre Primorsko, the Black Sea holiday villages Elenite and Dyuni, and two mountain resorts: Pamporovo and Borovets. Later in the same year, the Elenite Holiday Complex was excluded from the List of Resorts of National Importance by Decision No. 9799 of November 9, of the Supreme Administrative Court. Albena, Dyuni, Zlatni piasatsi, International Youth Centre Primorsko, Sv. Konstantin i Elena, Slanchev briag are declared of national importance by a decision of the Council of Ministers in 2005. Three of them – Albena, Zlatni piasatsi and Sv. Konstantin i Elena are located at the North Black Sea Coast, and Dyuni, International Youth Centre Primorsko and Slanchev briag – on the South coast (Figure1).

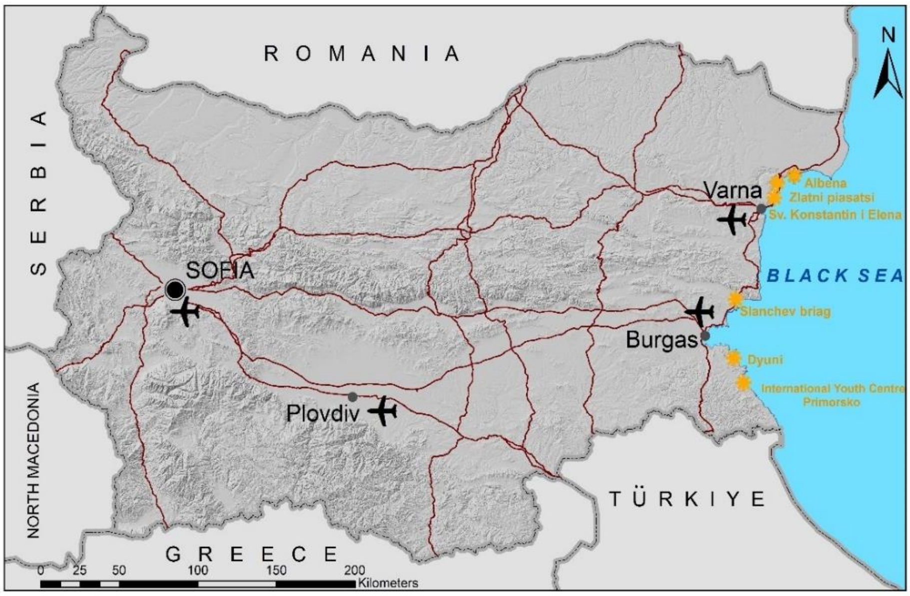

Figure 1. Bulgarian national Black Sea resorts

Albena is located 30 km north of the city of Varna. The resort complex is managed by "Albena" JSC. The beach strip is more than 6 km long and up to 150 m wide, with 21 beaches located on it (Official website of Albena JSC, 2023). It is certified with the "Blue Flag" environmental award. 36 accommodation places (with a capacity of more than 10 bed-places) and a bed capacity of almost 20,000 beds operate annually in the complex. The revenue from the nights spent reach over BGN 92 million per year (NSI). Zlatni piasatsi is the second largest resort in Bulgarian Black Sea coast, after Sunny Beach. It is located in the northern part, 17 km north of the city of Varna. It has a 3.5 km long sandy beach. Annually, more than 110 accommodation establishments with a capacity of more than 10 bed-places, function there. The total bed capacity in them is over 43,000 bed-places. The revenue from the nights spent reach more than 230 million BGN per year (NSI).

Sv. Konstantin i Elena is the oldest Bulgarian Black Sea resort. In the period 1958-1992 it was known as "Druzhba". It is located 8 km north of the city of Varna. There are 7 hot mineral springs in its territory. The beach is 3.5 km long. 55 accommodation establishments (with a capacity of more than 10 beds) operate annually in the resort. They provide more than 9,000 bed-places. The revenue from the nights spent reaches over BGN 32.5 million per year. Slanchev briag (Sunny Beach) is the largest Bulgarian Black Sea resort. It is located 35 km from the city of Burgas. The beach of the resort is over 5 km long. About 180 accommodation establishments with a capacity of more than 10 beds function there annually. Their total bed-places are more than 64,000. The revenue from the nights spent in the resort reach about 313 million BGN per year (NSI). Dyuni holiday village is located 5 km south of the city of Sozopol and 10 km north of the Ropotamo reserve. There are 5 accommodation establishments in the resort with a total capacity of 3916 bed-places. The revenue from the nights spent in the resort reaches about 26 million BGN per year (NSI).

International Youth Centre Primorsko is located in a bay between the towns of Primorsko and Kiten. Its construction began in 1957. Until 2001, it was owned by the youth tourism agency "Orbita", and after an auction it was purchased by "Albena" JSC. It has 1527 bed-places in 3 accommodation establishments as of 2021 (NSI).

METHODOLOGY

The data used in the present paper are published and accessible at the web site of the National Statistical Institute of Republic of Bulgaria. According to the Institute's methodology the available results cover all accommodation establishments with capacity of 10 and more beds, operating during the analysed period. On Figure 2 the methodology steps flowchart is presented.

The selected indicators used for analyses are bed-places in the accommodation establishments in the Bulgarian national Black Sea resorts, arrivals in accommodation establishments, nights spent in accommodation establishments, average length of stay in national Black Sea resorts, revenue from the nights spent in accommodation establishments, average daily rate per person. Their definition is based on the methodology used by the National Statistical Institute of Republic of Bulgaria who is responsible for collecting the data for each of them. Bed-places in the accommodation establishments in the Bulgarian national Black Sea resorts is an indicator that shows the bed capacity and includes total number of beds that are on offer (occupied or non-occupied), available at the accommodation establishments.

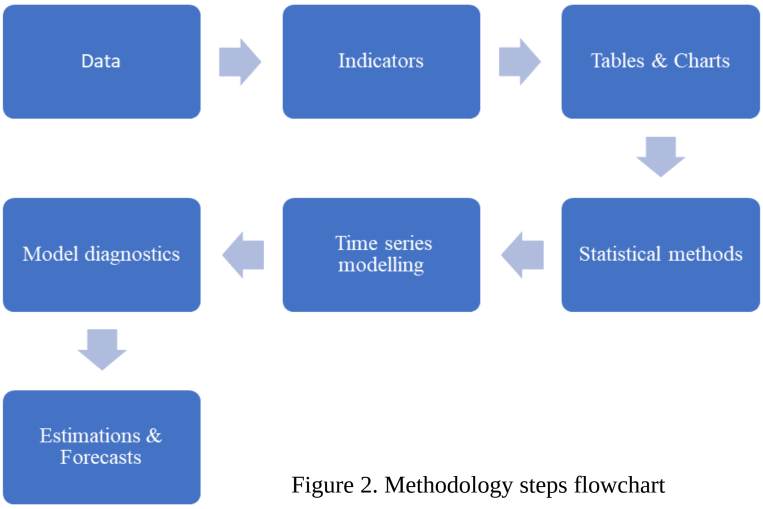

Figure 2. Methodology steps flowchart

The indicator "Arrivals in accommodation establishments" shows the registered arrivals in all operating accommodation establishments in the referenced resorts for the respective period. Nights spent in accommodation establishments include all nights spent in short-time accommodation establishments with capacity of 10 and more beds, operating during the referenced period. The average length of stay in national Black Sea resorts is calculated on the basis of the total nights spent divided to the number of arrivals in accommodation establishments. Revenue from the nights spent in accommodation establishments includes all sums that are paid by the guests for accommodation. The extra services expenditures are not included. Average daily rate per person is an indicator calculated dividing the revenue from the nights spent to the nights spent in accommodation establishments. The indicators have been selected to assess several key aspects of the performance of the Bulgarian Black Sea National Resorts. These are the bed capacity of the resorts (through the indicator "bed-places in the accommodation establishments"), the attractiveness for Bulgarian citizens, expressed through the volume of the domestic tourist flows (the indicators "Arrivals in accommodation establishments", "Nights spent in accommodation establishments" and "The average length of stay") and price attractiveness through "revenue from the nights spent in accommodation establishments" and "average daily rate per person in accommodation establishments".

Data sources: The main data source for the forthcoming analyses (including: charts, tables and estimated models) is the website of the National Statistical Institute of Bulgaria where these data are publicly available: https://www.nsi.bg/en/content/1983/annual-data?page=29. In order to examine the main tendencies in the yearly time series, concerning the Bulgarian Black Sea resorts, we have used statistical analysis of the trend cycle.

The main trend in each of the yearly time series we have analysed using the general equation form: $y_t = f(t) + \varepsilon_t$,

Where: y_t are the values of each time series for a given year *t* using certain trend cycle model, $f(t)$ is the trend model type as a function of the time variable t and ε_t is the error term.

During the trend cycle analysis, the models that we have used are summarized as follows:

Table 1. Trend cycle analysis models

No.	Model type	Equation
1	Linear	$y_t = \beta_0 + \beta_1 . t + \varepsilon_t$
2	Power	$y_t = \beta_0 + t^{\beta_1}$
3	Logarithmic	$y_t = \beta_0 + \beta_1 . \ln(t) + \varepsilon_t$
4	Polynomial of 2nd order	$y_t = \beta_0 + \beta_1 . t + \beta_2 . t^2 + \varepsilon_t$

Where: $\beta_0, \beta_1, \beta_2$ are the parameters of a given trend-cycle model. During the process of the selection of the best-fit trend-cycle model for each time series we have considered only the adequate models with the highest R-squared and those with the statistically significant model parameters. The parameters of each model are estimated using the ordinary least squares (OLS) method and the calculations are executed in the R programming language environment. As a result of the best-fitting procedure we have obtained the following estimated model: $\hat{y}_t = f(t)$

Where: $\hat{y}_t$ are the estimates for each time series for a given year *t* using certain trend cycle model

It should be noted that model parameters and forecast estimates, concerning the usage of the trend-cycle models, are subject to stochastic processes and contain a certain amount of forecasting errors (at 95% confidence level).

RESULTS

Bed capacity of the Bulgarian national Black Sea resorts

According to National Statistical Institute (NSI) data, as of 2022, the largest national Black Sea resorts are Slanchev bryag, Zlatni piasatsi, Albena and Sv. Konstantin i Elena. Almost 80% of the bed capacity in the Black Sea national resorts is in Slanchev bryag and Zlatni piasatsi. 11% of the beds are located in Albena, and in Sv. Konstantin i Elena - 5.4% (Figure 3). With the smallest share are Dyuni with less than 3% and International Youth Centre Primorsko with only 1%. That is why the object of further research in the paper are the resorts of Slanchev bryag, Zlatni piasatsi, Albena and Sv. Konstantin i Elena, which have greater economic importance.

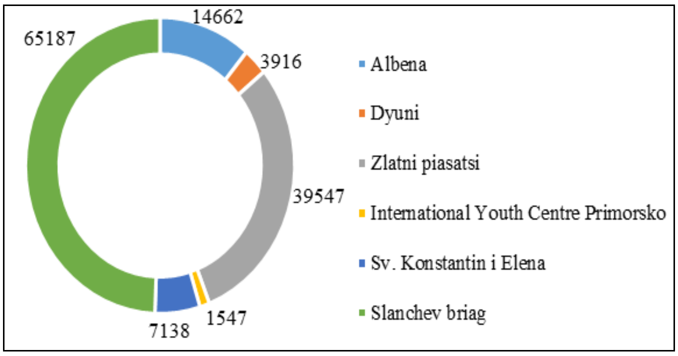

Figure 3. Bed-places in the accommodation establishments in the Bulgarian national Black Sea resorts

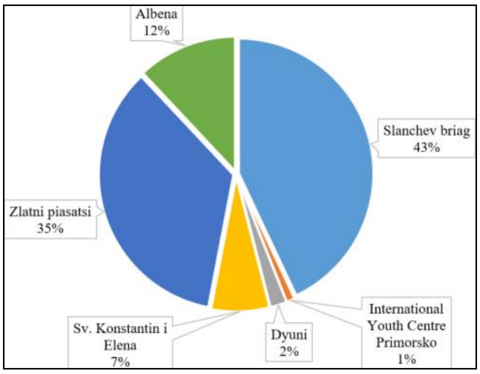

Figure 4. Share of the arrivals in accommodation establishments in 2019 (%)

Arrivals at the national Black Sea resorts in Bulgaria

The attendance of the national Black Sea resorts in Bulgaria is important for the investment processes in the general and in the tourist infrastructure and superstructure. For investments and the development of the transport network (international airports, ports, road network), for regular and seasonal air lines to the interior of the country and to important global emitting markets, it is of great importance what part of the visitors are Bulgarians and what part of them are foreigners.

Figure 4 shows the share of arrivals in each of the resorts, compared to the total number of arrivals in all Black Sea national resorts. The calculation is made for 2019, as this is the last year for which there are no resorts with confidential data for the recent years. Bearing in mind that the largest national Black Sea resorts are Slanchev bryag and Zlatni piasatsi, it is logical that about 80% of the arrivals are realized in accommodation establishments there.

In 2022, the biggest recovery following the decline caused by the pandemic in terms of arrivals in accommodation establishments is recorded by the largest seaside resort – Slanchev bryag, with almost 100% compared to 2019. Albena is the slowest to recover, which in 2022 still cannot reach 50% of arrivals in 2019 (Table. 2).

Table. 2 Arrivals in accommodation establishments (in number) (Source: NSI)

Resort	2019	2020	2021	2022
Albena	246231	70617	99933	118871
Zlatni piasatsi	713440	281096	468268	588081
Sv. Konstantin i Elena	134198	63384	94049	113654
Slanchev bryag	894206	285866	603773	887513

Table. 3. Arrivals at the national Black Sea resorts in Bulgaria by domestic tourists (Source: NSI)

	2019		2020		2021		2022	
	Number	Share	Number	Share	Number	Share	Number	Share
Albena	69673	28%	30363	43%	30326	30%	40994	34%
Zlatni piasatsi	80347	11%	93103	33%	102571	22%	96787	16%
Sv. Konstantin i Elena	67805	51%	44748	71%	57697	61%	62237	55%
Slanchev bryag	71567	8%	118161	41%	168977	28%	177326	20%

Arrivals at the national Black Sea resorts in Bulgaria by domestic tourists

Not only the volume of the total tourist flow to the national Black Sea resorts is important for the development of tourism, but also the volume of the domestic tourist flows. Based on the NSI data shown in table. 3 the following results are observed. As an absolute value, the number of Bulgarian citizens who spend the night in Slanchev bryag is the largest. According to the relative share of domestic tourist flows compared to the total number of tourists traveling to the national Black Sea resorts, however, Slanchev bryag was the least preferred by Bulgarians before the pandemic, and in 2022, when tourism partially recovers, it displaces Zlatni piasatsi. The relative share of Bulgarian citizens among all visitors is the largest in Sv. Konstantin i Elena as annually it is over 50%, and in 2020 it even reaches 71%. On this basis, the resort can be rated as the most preferred by Bulgarians among the national Black Sea resorts. During the pandemic years - 2020 and 2021, the number of arrivals by Bulgarian citizens increased in all analysed resorts, except for St. Constantine and Elena and Albena, where it doubles down. In 2022, however, both resorts show an increase in domestic tourist flows. In the conditions of a pandemic in 2020 and 2021, compared to 2019, the share of arrivals of Bulgarian citizens has grown significantly in all resorts. The biggest increase is observed in Slanchev bryag - from 8% in 2019 to 40% in 2020. The reasons for the obtained results are reflection of the national and international restrictions related to travel, such as vaccination requirements, the closure of the borders of some countries at the peak of the pandemic, the fear of infection in the population when traveling long distances by public transport, increased sanitary requirements, etc. Considering the time series specifics, concerning the number of arrivals of Bulgarian tourists during the 2019-2022 period, the following representation can be formed:

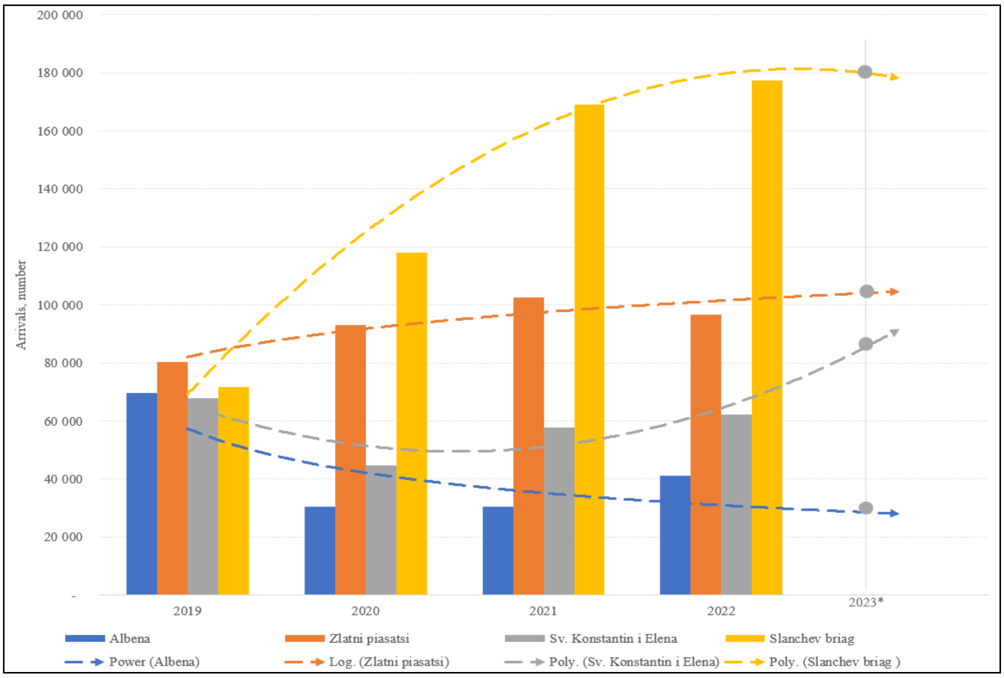

Figure 5. Arrivals in accommodation establishments by Bulgarian tourists 2019-2022 and forecast for 2023 (number)

Using the above-mentioned models, we have estimated the following best-fitting models for each time series (Table 4):

Analysing the results presented at Figure 5 and Table 4, concerning the time series of the arrivals in accommodation establishments by Bulgarian tourists for the period 2019-2022, we can conclude the following:

- The Albena time-series show decreasing trend which could lead to even lower number of arrivals in 2023 – approx. 28 thous.
- The trend in number of arrivals at the Sv. Konstatin i Elena resort at the beginning of the period shows decrease followed by an increase which is expected to result in approx. 92 thous. arrivals in 2023.
- The number of arrivals at the Zlatni piasatsi resort follows overall mild increase during the 2019-2022 period which could result in approx. 105 thous. arrivals in 2023.
- The number of arrivals at the Slanchev briag resort follows overall steep increase during the 2019-2022 with ‘slowing down’ growth rate which could result in approx. 178 thous. arrivals in 2023.

Table 4. Estimated trend-cycle models for the time series of the arrivals in accommodation establishments by Bulgarian tourists (Source: Authors)

Time-series	**Model**	**R-squared**
Albena	$\hat{y}_t = 57357.t^{-0,445}$	$R^2 = 0{,}638$
Sv. Konstatin i Elena	$\hat{y}_t = 93557 - 34872.t + 6899{,}3.t^2$	$R^2 = 0{,}659$
Zlatni piasatsi	$\hat{y}_t = 82068 + 14014.\ln(t)$	$R^2 = 0{,}801$
Slanchev briag	$\hat{y}_t = -5821{,}8 + 84616.t - 9561{,}3.t^2$	$R^2 = 0{,}985$

Table 5. Nights spent in accommodation establishments by Bulgarians and foreigners (in number) (Source: NSI)

	2019		2020		2021		2022	
	BG	Other	BG	Other	BG	Other	BG	Other
Albena	290198	1100186	133571	213045	130721	388751	155422	427725
Zlatni piasatsi	252251	3469287	304416	858642	..	..	311558	2367690
Sv. Konstantin i Elena	255691	343607	167980	88403	215707	188127	229418	272718
Slanchev bryag	247663	5016304	442922	921086	657148	2350647	685126	4078085

Nights spent in accommodation establishments by Bulgarians

The highest share of nights spent is registered in Slanchev bryag both in terms of the total number and of domestic tourists. Realized nights spent by foreigners exceed those by Bulgarians in the resort. The largest number of nights spent by Bulgarian citizens before the pandemic was recorded in Albena, and in the following years their number significantly decreased. The trend is opposite in Zlatni piasatsi and Slanchev bryag, where nights spent by Bulgarians increase annually during the analysed period. The data for Zlatni piasatsi in 2021 are confidential due to the low number of nights spent in some of the indicators - for Bulgarians or for foreigners (Table 5). Focusing on the dynamics and the tendencies in the duration of the vacations spent at the four Black Sea resorts by Bulgarian tourists we can build the following graphical representation (Figure 6). Using the models described in the methodology section of the present article we have estimated the following best-fitting models for each time series (Table 6). Considering the graphical representation (Figure 6) and the estimated models (Table 6) we can make the following conclusions:

- The number of nights spent at the Albena resort follows overall decrease during the 2019-2022 period which could result in approx. 112 thous. nights spent in 2023.
- The number of nights spent at the Sv. Konstatin i Elena resort follows overall increase during the 2019-2022 period which might result in approx. 336 thous. nights spent in 2023.
- The number of nights spent at the Zlatni piasatsi resort follows overall mild increase during the 2019-2022 period which could result in approx. 338 thous. nights spent in 2023.
- The number of nights spent at the Slanchev briag resort follows overall steep increase during the 2019-2022 with decreasing growth rate which might result in approx. 681 thous. nights spent in 2023.

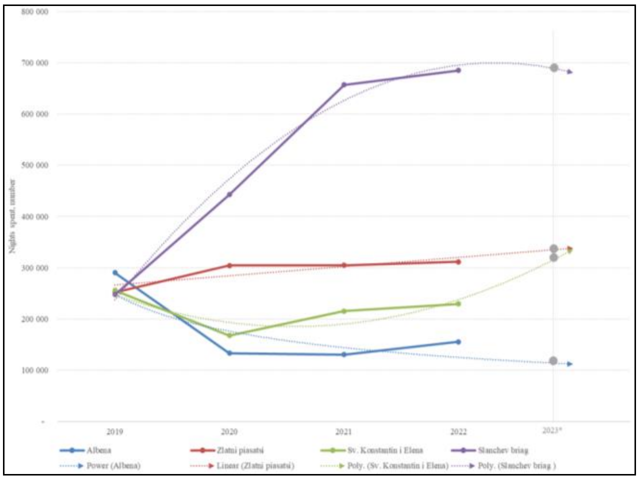

Figure 6. Nights spent in accommodation establishments by Bulgarians 2019-2022 and forecast for 2023 (number)[1]

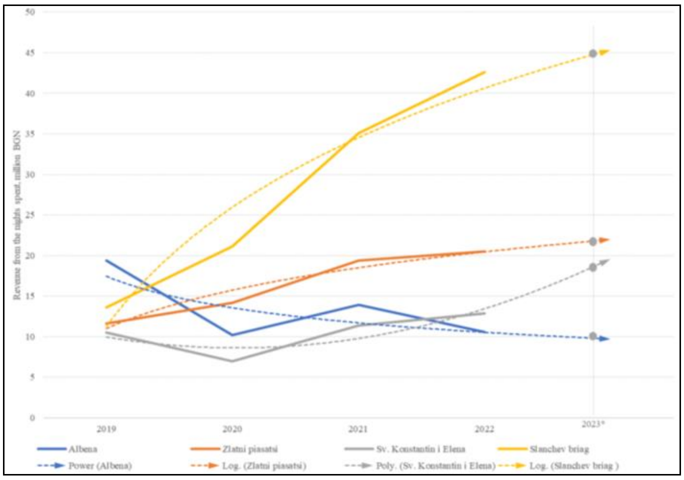

Figure 7. Revenue from the nights spent in accommodation establishments by Bulgarian tourists 2019-2022 and forecast for 2023 (million BGN)

Table 6. Estimated trend-cycle models for the time series of the nights spent in accommodation establishments by Bulgarian tourists (Source: Authors' calculations)

Time-series	Model	R-squared
Albena	$\hat{y}_t = 247638.t^{-0,492}$	$R^2 = 0{,}758$
Sv. Konstatin i Elena	$\hat{y}_t = 351750 - 129887.t + 25356.t^2$	$R^2 = 0{,}646$
Zlatni piasatsi	$\hat{y}_t = 248680 + 17833.t$	$R^2 = 0{,}699$
Slanchev briag	$\hat{y}_t = -82540 + 361763.t - 41820.t^2$	$R^2 = 0{,}983$

Table 7. Revenue from the nights spent in accommodation establishments by Bulgarians and foreigners, in millions of BGN (Source: NSI)

	2019		2020		2021		2022	
	BG	Total	BG	Total	BG	Total	BG	Total
Albena	19.4	88.1	10.2	25.6	13.9	43.9	10.6	38.3
Zlatni piasatsi	11.6	230.5	14.2	70.6	19.4	154.9	20.5	213.6
Sv. Konstantin i Elena	10.5	32.7	7.0	13.4	11.4	26.5	12.9	34.4
Slanchev bryag	13.6	313.4	21.1	77.6	35.1	196.6	42.6	339.6

Revenue from the nights spent in accommodation establishments

Before the pandemic in 2019, revenues from Bulgarians in the two largest resorts are only about 4-5% of total revenues. In 2020, this share increases sharply, reaching 27% in Slanchev bryag, after which it gradually decreases. In 2022 it is around 10-13%, which is still twice as much as in 2019. The years after the pandemic will show whether Bulgarians will permanently show a greater preference for the Bulgarian Black Sea coast and whether interest in Slanchev bryag and Zlatni piasatsi by domestic tourists will increase. In the two smaller resorts - Albena and Sv. Konstantin i Elena the revenue by Bulgarians is between 20 and 40% of their total income. In 2020, 52% of the revenue in Sv. Konstantin i Elena are generated by domestic tourists. The changes in the revenue from the nights spent in accommodation at the four resorts can be presented graphically (Figure 7). Using the models described in the methodology section, we have estimated the following best-fitting models for each time series (Table 7 and Table 8). Considering the graphical representation (Figure 7) and the estimated models (Table 8) we can make the following conclusions:

- The revenues from the nights spent by Bulgarian tourists at the Albena resort gradually degrease possibly resulting in approx. 9,7 million BGN revenue in 2023.
- The "earnings" at the Sv. Konstatin i Elena resort progressively increase which could lead to 19,6 million BGN revenue in 2023.
- The revenues from the nights spent by Bulgarian tourists at the Zlatni piasatsi resort increase with slowing rates which will probably result in approx. 22,0 million BGN revenue in 2023.

[1] For the modeling purposes the value for the nights spent in accommodation establishments by Bulgarians for "Zlatni piasatsi" resort for 2021 is an interpolated one

- The incoming monetary flow in the Slanchev briag resort is in expanse mode which could bring a revenue reaching 45,3 million BGN in 2023.

Table 8. Estimated trend-cycle models for the time series of the revenue from the nights spent in accommodation establishments by Bulgarian tourists (Source: Authors' calculations)

Time-series	Model	R-squared
Albena	$\hat{y}_t = 17{,}44.\, t^{-0{,}363}$	$R^2 = 0{,}644$
Sv. Konstatin i Elena	$\hat{y}_t = 13{,}8 - 5{,}09.\, t + 1{,}25.\, t^2$	$R^2 = 0{,}690$
Zlatni piasatsi	$\hat{y}_t = 11{,}02 + 6{,}8025.\ln(t)$	$R^2 = 0{,}934$
Slanchev briag	$\hat{y}_t = 11{,}29 + 21{,}158.\ln(t)$	$R^2 = 0{,}936$

Average daily rate per person

The average daily rate per person for Bulgarians in the considered period is lower in all resorts, except for Albena. There it is higher by about 5-7%. Since the average length of stay of Bulgarians is the same for all resorts (3-4 nights), the reason can be assumed to be in the preference for higher categories of hotels. Unfortunately, there is no such kind of statistics and this is one of the limitations of the study. The lowest average daily rate per person for accommodation for Bulgarian citizens, both during the pandemic and before it, is offered by the resort of Sv. Konstantin i Elena (Table 9).

Table. 9. Average daily rate per person, in BGN (Source: NSI)

Resorts	2019		2020		2021		2022	
	BG	Other	BG	Other	BG	Other	BG	Other
Albena	67	62	76	73	106	77	68	65
Zlatni piasatsi	46	63	47	66	n/a	n/a	66	82
Sv. Konstantin i Elena	41	65	42	73	53	80	56	79
Slanchev bryag	55	60	48	61	53	69	62	73

DISCUSSION AND CONCLUSION

The results of the analysis in the present paper confirm some trends regarding tourists' attitudes towards domestic tourism. In the first summer season during the pandemic, a significant increase in the share of domestic tourism is shown in all national Black Sea resorts. It is also observed as a trend in tourists' preferences for local destinations at the beginning of the health crisis (Chan, 2021; Naumov et al., 2020; Terziyska and Dogramadjieva, 2021; Varadzhakova et al., 2021). That proves the potential of domestic tourism as an alternative for revitalising the tourism industry (Chan, 2021). The largest resorts – Slanchev bryag and Zlatni piasatsi have seen significant growth in domestic tourism during the pandemic. Unlike them, Albena and Sv. Konstantin i Elena, lose some of their attractiveness for Bulgarian tourists during the same period.

Despite the good results in terms of domestic tourism in the largest Bulgarian national Black Sea resort, Slanchev bryag, the trend, according to the applied models, is for the share of Bulgarian tourists to decrease in 2023. This shows that during the pandemic the resort has not been able to positively influence its image among the local population enough to reverse the trend from the period before 2020, when it was the least preferred by domestic tourists compared to the rest of the national summer resorts.Based on the registered revenue from accommodation in the analysed resorts and despite the available limitations in the data presented by NSI (data for 2021 for Zlatni piasatsi is missing), it can be concluded that the resorts offer a pricing policy to attract Bulgarian tourists. Based on the used prognostic models, only Albena in 2023 is expected to lose revenue from nights spent by Bulgarian citizens, although before the pandemic it was the most preferred resort by domestic tourists compared to other national Black Sea resorts.

In order to strengthen the image of domestic tourism, it is necessary to analyze the target groups of tourists by resorts and to use adequate marketing strategies to attract them. Age specifics, marital status, the presence of children in families and other factors that determine the use of different marketing communication should be taken into account, such as the implementation of an advertising campaign through social media influencers (Raafat et al., 2023), specific digital marketing tools (Chamboko-Mpotaringa and Tichaawa, 2023). The motivation of domestic tourists is also relevant (Bayih and Singh, 2020; Rehman and Alnuzhah, 2022), which can be the subject of future research.

Author Contributions: Conceptualization, D.V.; methodology, A.N. and D.V.; formal analysis, D.V. and A.N.; investigation, D.V. and A.N.; data curation, A.N. and D.V.; writing - original draft preparation, D.V., A.N., N.I., M.R.; writing - review and editing, D.V. and M.R.; visualization, A.N. and N.I.; supervision, D.V.; project administration, D.V.. All authors have read and agreed to the published version of the manuscript.

Funding: Bulgarian National Science Fund.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: This paper presents results of the "Modeling and research of public attitudes of Bulgarian citizens regarding the image of domestic leisure tourism - situational analysis and conceptual framework for overcoming the negatives" project, funded by the Bulgarian National Science Fund, contract № КП06-Н65/6 from 12.12.2022.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 26.05.2023 Revised: 24.07.2023 Accepted: 04.09.2023 Available online: 27.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1096-1108
DOI 10.30892/gtg.49325-1109

A TALE OF FIVE CITIES: RESIDENTS' PERCEPTIONS OF THE AFRICAN CUP OF NATIONS TOURNAMENT IN CAMEROON

Paul Nkemngu ACHA ANYI[*]
Walter Sisulu University, College Street Campus, Faculty of Business Science, Department of Tourism, Hospitality and Sports Management, Buffalo, South Africa, e-mail: Pacha-anyi@wsu.ac.za

Citation: Acha Anyi, P.N. (2023). A TALE OF FIVE CITIES: RESIDENTS' PERCEPTIONS OF THE AFRICAN CUP OF NATIONS TOURNAMENT IN CAMEROON. *GeoJournal of Tourism and Geosites*, 49(3), 1096–1108. https://doi.org/10.30892/gtg.49325-1109

Abstract: This study explores residents' perceptions of the impacts of hosting major sports events such as the Africa Cup of Nations football tournament (AFCON) 2022 in their city. Even though previous studies have established that support from the local community is vital for the successful delivery of major sports events, residents continue to be side-lined, and their views ignored in the organisation of various events. A cross-sectional research design was employed, and a questionnaire used in collecting data from 1683 respondents across all five host cities of AFCON 2022 in Cameroon. The main finding of this study is that the respondents perceive social, economic and community impacts from hosting the AFCON 2022 to be particularly high and that there are statistically significant differences between the respondents based on age groups and educational level. A major implication of this study is that organisers of sports events such as the AFCON 2022 need to pay greater attention to community perceptions if they intend to garner the support of residents. Tourism policy and planning implications are also discussed.

Key words: residents, perceptions, sports events, Social exchange theory, AFCON 2022, Cameroon

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INTRODUCTION

Studies on major sports events have gained increased traction in recent years, due in part to the extensive media attention on the countries and destinations hosting the events (Yao and Schwarz, 2018; Ye et al., 2012), and the widely publicised political and socio-economic benefits that could accrue from the successful hosting of such events (Donaldson, 2013; Kumar and Hussain, 2014; Nyikana and Tichaawa, 2023; Salgado-Barandela et al., 2021). Wang and Jin (2019) assert that sports events have been instrumental in the development of many destinations. Coates (2012), however, argues that the gains from hosting sports events are closely linked to whether the event was a small community event, a hallmark or a mega event. Hallmark events are usually destination bound, and held regularly (Getz, 2008), while major sports events such as the FIFA World Cup, the Olympic Games and the African Cup of Nations (AFCON) are organised on a rotational basis between countries, and have an international appeal (Jafari, 1988; Yao and Schwarz, 2018). The global attention that major sports events receive seems to explain the highly competitive nature of the bid to host such events (Arnegger and Herz, 2016; Jago et al., 2010). Johnston et al. (2021) have highlighted the critical role that residents play in the successful hosting of sports events. Support from the host community has the potential to ignite the festive atmosphere that could create lasting memories for sports fans and residents alike (Al-Emadi et al., 2017; Gursoy and Kendall, 2006). Residents' apathy or hostility towards a sports event can, however, engender unfriendliness, tensions, and aggressiveness towards visitors (Bull and Lovell, 2007). Despite the widely disseminated advantages of consultation with, and participation of, residents in the hosting of major sports events, Gursoy et al. (2017) lament the fact that the awarding of successful bids to host mega sports events continues to be driven by narrow political and financial interests, with little or no regard for the perceptions of local community members.

Extant research has alluded to the fact that consultation with, and involvement of, residents in the planning and delivery of major sports events could yield several benefits such as improved feasibility planning, less time spent on conflict resolution, more friendliness towards visitors, greater exposure to local culture and greater sustainability of events (Choi and Sirakaya, 2005; Lee and Jamal, 2008; Yen and Kerstetter, 2009). Most research linking residents to major sports events has centred on residents' attitudes towards the event (Kim et al., 2015) and participation in them (Bull and Lovell, 2007). This study contributes to the existing body of empirical research exploring the perceptions of residents on the impacts of hosting major sports events in their city (Al-Emadi et al., 2017; Johnston et al., 2021).

Study context

Cameroon as host of AFCON 2022

An analysis of Cameroon's perspective as host of AFCON 2022 requires consideration of the historical context, in the sense that Cameroon last hosted the continental showpiece fifty years ago, in 1972. At the time, there were only eight national teams participating in the finals of the competition. Currently, there are twenty-four teams vying for the trophy,

[*] Corresponding author

with 404 foreign-based players involved in professional leagues across the world (The Guardian, 2022). The excitement of winning the rights to host the AFCON tournament in 2019 soon turned to frustration, however, as delays in infrastructure development prompted the Confederation of African Football (CAF) to request Egypt to host the competition in 2019, with Cameroon given another opportunity in June 2020. Unfortunately for Cameroon, the COVID-19 pandemic caused a further delay of the tournament, initially until June 2021, and then to January 2022, to avoid the mid-year rains in the country (BBC Sport, 2020). It is against this background that the motivations for Cameroon contending, against all odds, to host a successful AFCON tournament, are examined. The Mail and Guardian (2021) identifies three reasons why Cameroon beat all the odds to host AFCON 2022: national unity, infrastructure development and economic benefits.

Considering the insurrection by armed groups in the two Anglophone regions of the country fighting for a separate state, it is easy to see why national unity is a priority for the government of Cameroon. This assertion is supported by the government-owned newspaper, the Cameroon Tribune, which quotes President Paul Biya of Cameroon as saying, "As a nation, we have the duty and opportunity to remind the world that we are a united and indomitable people, capable of displaying the fighting spirit that has enabled us in the past to win great battles" (Cameroon Tribune, 2022). The Daily Maverick further supports this theme of Cameroon seizing the opportunity presented by AFCON 2022 to stir up nationalism and unity by suggesting that football is more than just a sport in Cameroon, as it has been instrumental in the past in rallying Cameroonians together (Daily Maverick, 2021). Hence, the Mail and Guardian (2021) describes hosting the AFCON 2022 as a "vehicle to heal a wounded nation". In preparation for the hosting of AFCON 2022, Cameroon developed thirty "high-level sports infrastructure which will eventually be used by the youth of the country for various sporting activities" (Mail and Guardian, 2021). In the same vein, The Africa Report (2022) states that more than US$ 1bn was spent by the Cameroon government on infrastructure development and renovation. Most of the commentary on Cameroon as host of AFCON 2022 points to the link between infrastructure that was developed for the tournament and an attempt to pacify the youth of Cameroon. The economy of Cameroon has also suffered from the economic downturn caused by the COVID-19 induced lockdowns, as well as from the armed conflict. It has therefore been suggested that Cameroon went all out to host AFCON 2022 because the authorities saw it as an opportunity to stimulate economic activity in the country (Mail and Guardian, 2021; The Africa Report, 2022; The Guardian, 2022). The case for restoring national pride has also been suggested as one of the motivations close to President Biya's mind as he seeks to bring back the image of Cameroon as one of the most peaceful and politically stable countries in Africa (Mail and Guardian, 2021).

Tourism and sports in Cameroon

The enormous tourism potential of Cameroon has been widely documented in literature (Harilal et al., 2019; Hele, 2002; Kimbu, 2011; Tichaawa, 2017). Situated in the Gulf of Guinea, with direct access to the Atlantic Ocean coastline, and sandwiched between Central and West Africa, Cameroon is endowed with both the natural resource attributes of the equatorial rain forest to the southern and eastern parts of the country, and the grasslands to the north and north-west (McSweeney et al., 2008). It is therefore easy to understand why Cameroon is fondly referred to in tourism circles as "Africa in miniature" or a "microcosm of Africa", due to the rich diversity of its flora, fauna, topography and cultural heritage (Kimbu and Tichaawa, 2018; Nyikana and Tichaawa, 2018). The lauded tourism potential of Cameroon has not, however, yielded commensurate dividends towards its development, as tourism contributed a meagre 7.5% (US$ 2915.6 million) to the country's Gross Domestic Product (GDP) in 2019 (World Travel & Tourism Council (WTTC), 2019). Cameroon has one of the densest concentrations of endemic species on the African continent, including 409 mammalian species (11 of which are endemic), 849 bird species (with 7 endemic), 143 reptile species (23 being endemic), as well as over 200 amphibians, and counting (Dowsett-Lemaire and Dowsett, 2000; Stuart et al., 1990; Vivien, 1991).

One would therefore expect the tourism sector in Cameroon to contribute more to the country's growth, but tourism supports only 663,000 (6.4%) of the total workforce in the country (WTTC, 2019). Major challenges to the development of tourism in Cameroon are well documented, including inadequate infrastructure, poorly managed support services for tourism, poor implementation of tourism development plans, unqualified human resources personnel, absence of (or insufficient) stakeholder consultation and development, and political instability (Kimbu, 2011; Nyikana and Tichaawa, 2018; Schmitz and Tsobgou, 2016; Tichaawa, 2017; Tichaawa and Kimbu, 2019). Nyikana and Tichaawa (2018) assert that the passion for sports, particularly football, runs through the fabric of Cameroon society. The sports bond is so strong among Cameroonians that the national football team's participation in international tournaments has been known to promote national unity and calm social tensions (Khun, 2011; Tichaawa, 2013). It is therefore plausible to argue that sports events, especially those that involve football, are major drivers of domestic tourism in Cameroon. In the same vein, Tichaawa (2017) affirms that sports events play a significant role in supporting local economic development (LED), considering that businesses, formal and informal, derive increased sales and income from serving travelling supporters. It is in this context that the current study seeks to gain insight into the perceptions of residents of the host cities of the just-ended AFCON 2022, with regard to the impacts of the event on their lives, livelihoods and the city.

LITERATURE REVIEW

Impacts of mega sports events on host communities

Previous studies on the impacts of major sports events on host communities have highlighted the complexity and multi-dimensional nature of such impacts (Andriotis and Vaughan, 2003; Gaurav, 2019; Yen and Kerstetter, 2009); hence, researchers have adopted various methods in studying the impacts. In the absence of consensus on how to approach the study of the impacts of mega sports events on residents of host cities, many researchers have adopted the triple bottom line of economic, environmental and sociocultural dimensions as a conceptual framework (Chen, 2011; Fredline, 2004). This study adopts a similar approach, while using the Social Exchange Theory (SET) as a framework for assessing community support for major sports events (Gursoy and Kendall, 2006; Prayag et al., 2013). The underpinning proposition here is that residents' perceptions of the impacts of mega sporting events such as the AFCON 2022 will be influenced by their views on the potential benefits and costs associated with the event (Inoue and Harvard, 2014).

Perceived economic impacts

Most studies on the perceived impacts of major sports events generally focus on the potential economic impacts (Wang, 2008; Ye et al., 2012; Yao and Schwarz, 2018). In fact, many governments and organisations bidding to host mega events frequently lure public support by pointing to the potential economic benefits such as job creation, revenue generation and sales multipliers, that would accrue from having the event within their shores or destination (Crompton et al., 2001). According to Hemmonsbey and Tichaawa (2020) the branding of international sports events contributes significantly to the quality of visitors' experiences. The potential foreign currency injection into circulation in the local economy sounds not only appealing, but over-simplified (Kim et al., 2013). While the economic benefits arising out of the sales, and output multiplier emanating out of hosting a major sports event, are real (Liu, 2013), these should be pitched against possible social and environmental impacts that come with hosting mega sports events (Kim and Petrick, 2005; Prayag et al., 2013). Chen (2011) argues that potential economic impacts from hosting mega events often receive more publicity than social and environmental impacts, because economic impacts are more readily visible, while social and environmental impacts take longer to become apparent. It is therefore evident that regardless of the time factor, residents are more prone to support major sports events on the basis of economic considerations, than other factors.

Perceived social impacts

Residents' perceptions, assessment and reporting of social impacts that result from hosting major sports events, vary considerably (Yao and Schwarz, 2018). Some of the frequently cited social benefits of hosting major sports events include a sense of national identity, enhancing cultural values, and community building (Kim et al., 2015). Other researchers further allude to civic pride and improving destination image as some of the social benefits of hosting major events (Johnston et al., 2021; Prayag et al., 2013). A close study of literature on the perceived social impacts of mega sports events reveals that context plays a vital role in shaping residents' perceptions of such impacts. For instance, in their study on the social impacts of the FIFA World Cup hosted by South Korea in 2006, Kim and Petrick (2005) arrived at the conclusion that residents perceived that improved image, enhanced international recognition and a sense of community pride were the major benefits acknowledged by residents, while in a similar study on the FIFA World Cup hosted by Germany, Ohmann et al. (2006) found that residents of Munich perceived a sense of community, a better relationship with people of different ethnic origins and improved local infrastructure, as benefits to their community. It is important to note, however, that the measurement of perceived social impacts is complex and often subjective (Bull and Lovell, 2007; Waitt, 2003).

Perceived environmental impacts

The increased public discourse and awareness of environmental sustainability has raised the level of scrutiny on the environmental impacts of events, especially high-profile events such as mega sports events (Boggia et al., 2018; McCullough et al., 2020). Achu (2019) argues that regardless of size, all human activities generate environmental impacts. This is even more so because the organisation of major sports events such as the FIFA World Cup or the AFCON usually require significant infrastructure development, which heightens the environmental impacts of hosting such events. Parkes et al. (2016) urge organisers of mega sports events to take all necessary precautions to ensure that there is a balance between the construction required to host the event and the imperative of environmental preservation. In their study on the winter Olympic games in Salt Lake City in 2002, Deccio and Baloglu (2003) found that residents with a stronger environmental affinity were more inclined to oppose the hosting of the event in their city. A similar study by Konstantaki and Wickens (2010) prior to the London Olympic Games in 2012, revealed that older residents expressed greater concern about potential environmental impacts than younger respondents. Johnston et al. (2021), however, express a more optimistic view by pointing out that a city could actually draw greater attention to its physical landscape and local heritage through hosting a mega sports event. For instance, the organising committee of the Beijing Olympic Games initiated 160 projects aimed at curbing environmental pollution in the city during the games. Some of these projects included limiting the number of government cars in circulation during the games, shutting down some industrial production lines during the event, and prohibiting high-emission cars from entering the city for the duration of the games. While the triple bottom line may not exhaust all possible impacts from hosting mega sports events, it does provide a reasonable mechanism for discussion on most of the potential impacts that could result from hosting mega sports events. It is also clear that most of the impacts discussed here relate to general community welfare. The Social Exchange Theory (SET) presents an alternative framework within which the benefits and costs of hosting mega sports events can be examined within specific communities.

Social Exchange Theory

Inoue and Harvard (2014) suggest that the SET offers a framework for interpreting the transactional relationship within which the reaction of one party is predicated on the actions of another. The exchange of resources seems central to the SET as individuals and communities interact (Ap, 1992). The underlying assumption is that the perception of relationships as positive or negative is based on the potential rewards or costs associated with the exchange. West and Turner (2017) argue that humans are rational beings whose actions are aimed at accumulating rewards and avoiding losses or punishment. In any transaction, therefore, people evaluate whether the rewards exceed the costs, and conclude that the exchange was satisfactory – or vice versa. Hence, the central question in this evaluation framework is, "What is in it for me?" (Balduck et al., 2011: 110). Tourism studies frequently use the SET to illustrate the motivation behind some community members' perceptions of positive impacts resulting from community tourism projects, and the likelihood that future tourism development will gain approval from the community, while other community members remain hesitant (Ap, 1992; Fredline, 2004; Inoue and Harvard, 2014).

From a theoretical perspective, this can be translated to mean that residents with a positive inclination towards tourism development are those who perceive the benefits from tourism to exceed the costs, and therefore support the transaction or exchange. On the other hand, those who foresee the losses from the tourism venture as outweighing the benefits, will not support tourism development (Gursoy and Kendall, 2006). The purpose of introducing the SET in this study is to explore residents' perceptions of the impacts on their city serving as host to the AFCON 2022, based on the potential rewards or losses they envisage resulting from the event. Indeed, Jago et al. (2013) suggest that community members tend to base their perceptions of the impacts of hosting a major sports event on both positive and negative outcomes of the event on their community. The two key questions guiding this study are therefore the following:

- How do residents of the host cities of AFCON 2022 perceive the impacts of the event on their lives, livelihoods and community?
- What are the underlying factors shaping the residents' perceptions of the sport event?
- How do key demographic variables in the study compare based on the perceived impacts of hosting AFCON 2022?

In using SET to provide the theoretical underpinning in this study, it is acknowledged that SET has been criticised for focusing on individual needs at the expense of the group (Li et al., 2015; Miller, 2005). Nonetheless, Fredline and Faulkner (2000) point out that there are contexts and instances in which support for an event follows collective interests.

MATERIALS AND METHODS

The design and approach followed in attaining the objectives of this study are summarised in Figure 1 below:

Geographical context of the study

The five sites at which this study was conducted were purposively selected, as they were host cities for the matches played during AFCON 2021 – hence, Limbe in the South-West Region of Cameroon, Douala in the Littoral Region, Bafoussam in the West Region, Yaoundé in the Central Region and Garoua in the North Region. Three of the cities (Limbe, Douala and Garoua) have coastlines, while Bafoussam and Yaoundé are inland (Figure 1). Apart from Limbe, the rest of the host cities are regional capitals. Additionally, Yaoundé is the administrative capital of Cameroon, and Douala is the economic hub of the country. Considering the bilingual status of the country, except for Limbe where English is the main language of communication, the other four host cities have French as the principal medium of communication.

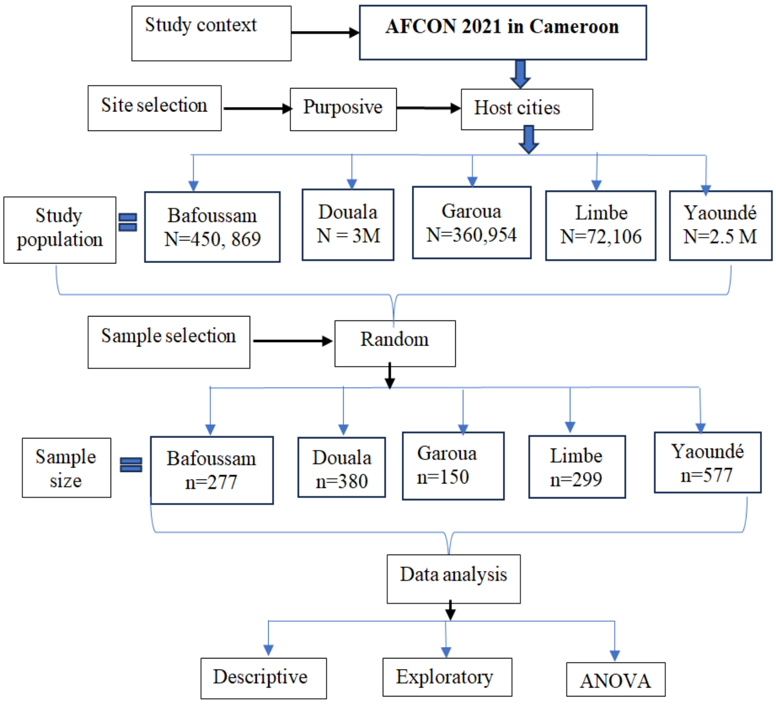

Figure 1. Summary of the research process followed in this study (Source: Author, 2023)

Related to the language question is the issue of political instability that is characteristic of the South-West Region where Limbe is situated. There is an ongoing armed rebellion in the South-West region, where separatist rebels are fighting the government for an independent state; however, the regions where the other four host cities are situated are politically stable. Another differentiating factor among the five host cities is that of religion or culture. Garoua is in a Muslim-dominated region, while the other four cities are in Christian-dominated regions. In terms of population, Douala and Yaoundé are more heavily populated (3 million and 2.5 million, respectively), whereas Limbe is the least populated, with 72,106 inhabitants, followed by Garoua (360,954) and Bafoussam (450,869) (World population review, 2022).

Study design

This study employed a cross-sectional research design to collect data from residents of the five AFCON 2022 host cities of Bafoussam, Douala, Garoua, Limbe and Yaoundé. Data was collected when the tournament started, on 6 January 2022, until 9 February 2022. A quantitative research approach was followed through the use of a questionnaire in collecting the data.

The questionnaire

A total of forty-four (44) items were included in the questionnaire, which was divided into two sections, labelled "A" and "B". The first section "A", consisted of questions 1-10, focused on collecting demographic information such as gender, age group, household income, employment, education, and host city, while questions 11 to 44 collected data on how the respondents perceived hosting the AFCON 2022 tournament would impact their lives and welfare. Questions in section "B" resulted from an in-depth literature review on the impacts of sports events on residents and the host city (Gursoy and Kendall, 2006; Jago et al., 2013; Johnston et al., 2021; Wang and Jin, 2019).

The triple bottom line of sustainability provided the underpinning lens or framework where various impacts were seen as being beneficial or detrimental to the economic, environmental or social welfare of the respondents (Johnston et al., 2021). The social context of the COVID-19 pandemic was also considered in some questions. A comprehensive list of potential impacts was subsequently adjusted to fit the Cameroon socio-economic context.

Pilot study

To ensure that all items considered in the questionnaire were relevant to the Cameroon situation, and that the use of language was clear of any ambiguity, a pilot study was undertaken in the town of Buea, which is in close proximity to the city of Limbe, in Cameroon. One hundred (100) postgraduate students from the University of Buea and Achas University Institute of Tourism and Business Management were randomly selected to complete the questionnaire, based on their experience of local sports competitions. The outcome of this process was the rephrasing of some questions and the substitution of some words that did not solicit the intended meaning. Once the final version of the questionnaire was adopted, an application for ethical clearance was completed and submitted to the ethics committee in the Faculty of Commerce and Administration at Walter Sisulu University, East London. The committee further scrutinised the research process and the questionnaire for any possible ethical risks. Ethical clearance for the study was granted on 2 November 2021.

Table 1. Demographic profiles of respondents (Source: Author, 2023)

Variable	Description	Frequency (N = 1683)	Percent
Gender	Male	863	51.3
	Female	819	48.7
Age	18 - 24 years	650	38.6
	25 - 35 years	460	27.3
	36 - 45 years	319	19
	46 - 55 years	158	9.4
	56 - 65 years	57	3.4
	Above 65 years	39	2.3
Income	Less than CFA50,000	384	22.8
	CFA50,000 - 150,000	330	19.6
	CFA151, 000 – CFA250,000	259	15.4
	CFA251, 000 – CFA350,000	209	12.4
	CFA351, 000 – CFA450,000	157	9.3
	CFA451, 000 – CFA550,000	132	7.8
	More than CFA550,000	212	12.7
AFCON interest	Will go to the stadium to watch	402	23.8
	Will go to the stadium to watch If there's money	427	25.4
	Will watch matches on TV	678	40.3
	Not interested in AFCON 2022	176	10.5
Employment	Not employed	682	40.5
	Government employee	211	12.5
	Private sector employee	334	19.8
	Self-employed	456	27.2
Highest education	Below GCE Ordinary level	262	15.6
	GCE Ordinary level	257	15.3
	GCE Advanced level	514	30.5
	Bachelor's degree	458	27.3
	Master's degree	140	8.3
	Doctoral degree	51	3
Province/Region	South-West	261	15.5
	Littoral	359	21.3
	Central Province	555	33.0
	Western Province	296	17.6
	North Province	7	0.4
	East	8	0.5
	North-West	38	2.3
	Far North	149	8.9
	Adamawa	2	0.1
	South	8	0.5
Host city	Limbe	299	18.0
	Douala	380	23.0
	Yaoundé	577	34.0
	Garoua	150	9.0
	Bafoussam	277	16.0

Data collection

Prior to data collection, fifteen (15) postgraduate students who had previously taken part in research activities, were recruited and trained in fieldwork. To qualify for selection, the students needed to have taken part in research at undergraduate level, and had to be residents of the AFCON 2022 host city where they were going to collect data. Three fieldworkers were allocated to each of the host cities, to ensure that data collection was as widely spread as possible across the study site. Data collection started on the day the opening match of the tournament was played on 6 January 2022, and ended when the final match was played on 9 February 2022. This was to ensure that the respondents were actually living the experience of hosting the matches. During the data collection exercise, residents who were outdoors doing their usual daily activities such as shopping, walking, going to work or relaxing in a liquor outlet or restaurant, were randomly approached and asked if they would be willing to take part in the study. Those who accepted to participate in the study were familiarised with their rights to anonymity and the freedom to opt out of the study at any point without further interrogation. With ethical considerations addressed, the respondents were handed the questionnaires to complete, while the fieldworker waited or attended to other potential respondents. The completed questionnaires were then returned to the fieldworkers who checked for completeness, at which point the process itself was complete.

Table 2. KMO and Bartlett's Test of Sphericity (Source: Author, 2023)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.909
Bartlett's Test of Sphericity	Approx. Chi-Square	1.618E4
	df	528
	Sig.	.000
Determinant		0.0000615

Table 3. Results of the Exploratory Factor Analysis (Source: Author, 2023)

Variables	AFCON 2022 impact factors			
	Factor 1 Social impacts	Factor 2 Economic impacts	Factor 3 Community impacts	Factor 4 Climate change
Traffic congestion	0.635			
Social distancing	0.658			
Prostitution	0.728			
crime	0.755			
Spread of Covid-19	0.750			
Diseases	0.698			
Increase happiness	0.325			
Friendliness	0.407			
Increased littering	0.344			
Employment opportunities		0.332		
Quality services		0.512		
Investment		0.763		
Reduce poverty		0.782		
Access to stadiums		0.653		
Waste of tax money		0.706		
Price increases		0.491		
Tourism		0.594		
Trade		0.467		
Improved promotion of the city			0.737	
Improved transport services			0.640	
Improved security			0.473	
Improved peace			0.476	
More pride in the city			0.482	
More cultural promotion			0.493	
Nation building			0.358	
Improved image			0.664	
Wildfires				0.750
Changes in weather				0.823
Greenhouse gases				0.727
Animals and plants				0.384
Environmental changes				0.409
Shortage of water				0.666
Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO)	**.863**	**.806**	**.841**	**.755**
Bartlett's Test of Sphericity	**.000**	**.000**	**.000**	**.000**
Mean	**3.89**	**4.0**	**4.1**	**3.2**
Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization.				

Data analysis

The data collection exercise yielded a total of 1683 completed, screened and usable questionnaires distributed as follows: Bafoussam - 277, Douala – 380, Garoua – 150, Limbe – 299, and Yaoundé – 577. The gathered responses were primarily coded and cleaned for outliers and other errors prior to being exported to SPSS 24.0 for comprehensive analysis. Exploratory Factor Analysis (EFA) was applied, in order to determine critical factors that are mostly impacted by hosting mega events such as the AFCON 2022, in Cameroon.

RESULTS

Demographic profiles of respondents

The first part of the descriptive analysis examined the demographic profiles of respondents. The objective of the analysis was to reflect on the characteristics of the participants in order to have an understanding of the representivity of various community groups such as gender, household income, employment status, education, among others. The results of the analysis of the demographic variables are presented in Table 1.

Out of the 1683 respondents, the majority (51.3%) were males, less than 24 years of age (38.6%) and used English as their main language of communication (61%). The annual income of most of the respondents (22.8%) was less than CFA50,000 francs (US$100) and most of the respondents said they were following the AFCON matches on television (40.3%). Even though the majority (30.5%) of the participants have successfully completed the General Certificate of Education Advanced level qualification (GCE A' level), unemployment is still unacceptably high (40.5%).

Factor analysis

Given the large quantity of data obtained from the 1683 respondents, Exploratory Factor Analysis (EFA) was considered relevant to determine the underlying impact factors from hosting the AFOCN 2022 matches (Anuar et al., 2012). However, prior to subjecting data to Factor Analysis (FA), it is advisable to check whether the data is suitable for the FA procedure (Yong and Pearce, 2013). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity were used for this test (Table 2).

A KMO value of 0.909 > 0.6 minimum threshold (Dhakal, 2018) was obtained. This strongly supported the use of factor analysis in order to extract the underlying factors which are deemed to significantly influence community perceptions on the impact of hosting sports events such as the AFCON 2022 in Cameroon. A highly significant Bartlett's Test result of .000 (Duran and Ozkul, 2012) was achieved, indicating existence of relationships between measured variables of the study.

Principal Component Analysis (PCA), along with Varimax rotation, was used in this study, in order to identify underlying factors of the study. Factor loadings of less than 0.40 were suppressed, as these were believed to have insignificant influence, as suggested by Dhakal (2018). In this study, EFA considered 32 variable items that were measured, in order to extract the underlying factors which are deemed to significantly influence community perceptions on the impact of hosting mega events such as the AFCON 2022 in Cameroon. The FA yielded results presented in Table 3.

The four factors extracted using FA (Table 3) yielded a cumulative variance of 52.44% and were labeled based on convenience as social impacts, economic impacts, community impacts and climate change impacts. Factors with Eigen values greater than one (1) were retained in this study, as these explained significant amounts of variance in the data.

Analysis of Variance (ANOVA)

Considering the fact that this study was undertaken across five cities, it was deemed necessary to explore the data further for possible variations among key demographic constructs such as the geographic location of respondents (host cities), gender and level of education. The data set was subjected to ANOVA in order to check for any statistically significant differences based on demographic characteristics. Results of the ANOVA based on host cities are presented in Table 4, below.

Table 4. Results of ANOVA on host cities and perceived social impacts (Source: Author, 2023)

Factor 1 Social considerations of hosting AFCON 2022	Host city and perceived impacts by residents											
	Limbe N1 = 299		Douala (N2 = 380		Yaoundé (N3 = 577)		Garoua (N4 = 150)		Bafoussam (N5=277)		P-value	t
	Mean	Std Dev	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.		
Traffic congestion	4.22	0.89	3.93	1.15	4.91	0.37	3.82	1.22	4.23	0.93	<,001	.08
Social distancing	4.10	0.96	3.90	1.21	4.97	0.16	3.92	1.24	4.15	0.95	<,001	.07
Prostitution	3.46	1.29	3.33	1.44	4.69	0.84	3.25	1.48	3.92	1.13	<,001	.10
crime	3.35	1.21	3.50	1.30	4.67	0.79	3.47	1.44	3.88	1.09	<,001	.09
Spread of Covid-19	3.77	1.23	3.60	1.35	4.85	0.61	3.64	1.44	3.86	1.11	<,001	.07
Diseases	3.78	1.30	3.42	1.29	4.72	0.64	3.41	1.42	3.94	1.08	<,001	.09
Increase happiness	4.02	0.83	3.69	1.16	4.76	0.56	3.61	1.07	3.77	0.99	<,001	.09
Friendliness	4.48	0.57	3.80	1.06	4.97	0.21	4.10	1.02	4.21	0.89	<,001	.12
Increased littering	3.82	0.89	3.56	1.22	3.60	1.09	3.22	1.27	3.90	1.08	<,001	.05
Total mean	3.89	1.02	3.64	1.24	4.68	0.59	3.60	1.29	3.98	1.03	<,001	0.08

It is evident from the results of the ANOVA presented in Table 4 that respondents from four of the five host cities of AFCON 2022 (Limbe – 4.48 out of 5, Yaoundé – 4.97, Garoua – 4.10 and Bafoussam – 4.21) perceive the greatest social benefit of hosting the tournament to be in the area of friendliness among people. On the other hand, traffic congestion is identified as the greatest social inconvenience based on the results from Limbe (4.22), Douala (3.93), Yaoundé (4.91), Garoua (3.82) and Bafoussam (4.23). With only one variable rated below 4 out 5, respondents from the city of Yaoundé perceive the social impacts from hosting AFCON 2022 to be quite high, while respondents from Douala perceive all social variables to have an impact of less than 4.Results of the ANOVA on the economic impacts of hosting AFCON 2022 from the five cities are presented in Table 5, below.

Compared with results of the ANOVA on social impacts, data from Table 5 on the economic impacts of hosting the AFCON 2022 matches presents more optimistic scores, especially with regards to investment opportunities, tourism growth and quality services. As with the previous case of social impacts, the city of Yaoundé has consistently high scores of above 4 out of 5. However, the city of Douala presents the least optimistic ratings of below 4, except in the case of more investment

(4.05). An interesting observation is that respondents from Douala perceive that hosting the AFCON 2022 will result in price increases (4.00). Most respondents from Limbe on the other hand consider hosting the AFCON a waste of taxpayers' money (4.47). With regards to community development impacts, the ANOVA results are presented in Table 6, below.

Table 5. ANOVA of economic impacts and host city perceptions (Source: Author, 2023)

Factor 2 Economic impacts of hosting AFCON 2022	Host city and perceived impacts by residents											
	Limbe N1 = 299		Douala (N2 = 380		Yaoundé (N3 = 577)		Garoua (N4 = 150)		Bafoussam (N5=277)		P-value	t
	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.		
Employment opportunities	4.20	0.89	3.41	1.28	4.93	0.31	3.79	1.18	3.92	1.03	<,001	.13
Quality services	4.60	0.83	3.54	1.23	4.94	0.39	3.88	1.10	3.91	1.13	<,001	.15
Investment	4.62	0.69	4.05	0.98	4.98	0.14	3.93	1.16	4.51	0.79	<,001	.13
Reduce poverty	3.59	1.08	2.89	1.42	4.43	0.55	2.95	1.54	3.39	1.36	<,001	.10
Access to stadiums	4.39	0.92	3.54	1.32	4.97	0.21	3.88	1.26	3.83	1.16	<,001	.12
Waste of tax money	4.47	0.76	3.92	1.24	4.95	0.25	4.18	1.18	4.48	0.89	<,001	.02
Price increases	4.55	0.58	4.00	1.02	4.92	0.36	4.22	1.00	4.36	0.84	<,001	.03
Tourism growth	4.45	0.79	3.79	1.08	4.93	0.35	3.88	1.09	4.06	0.90	<,001	.09
Trade	3.39	1.05	3.30	1.24	3.89	2.5	3.41	1.18	3.60	1.10	<,001	.12
Total mean	4.26	0.85	3.60	1.19	4.77	0.56	3.79	1.19	4.00	1.02	<,001	

Table 6. ANOVA on community impacts of hosting AFCON 2022 (Source: Author, 2023)

Factor 3 Community impacts of hosting AFCON 2022	Host city and perceived impacts by residents											
	Limbe N1 = 299		Douala (N2 = 380		Yaoundé (N3 = 577)		Garoua (N4 = 150)		Bafoussam (N5=277)		P-value	t
	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.		
Improved promotion of the city	4.48	0.60	3.86	1.04	4.97	0.18	4.10	1.12	4.42	0.80	<,001	.12
Improved transport services	4.34	0.87	3.49	1.17	4.95	0.24	3.74	1.22	4.27	0.87	<,001	.17
Improved security	4.64	0.54	3.77	1.12	4.87	0.49	4.36	0.99	4.11	0.98	<,001	.13
Improved peace	4.17	0.77	3.16	1.10	4.78	0.65	3.29	1.17	3.55	1.08	<,001	.19
More pride in the city	4.41	0.66	3.61	1.13	4.94	0.29	3.82	1.07	4.02	0.99	<,001	.14
More cultural promotion	4.46	0.65	3.43	1.14	4.97	0.18	3.38	0.99	3.86	0.94	<,001	.23
Nation building	4.45	0.82	3.50	1.19	4.84	0.57	3.29	1.29	3.93	0.98	<,001	.18
Improved image	4.51	0.76	3.97	1.07	4.96	0.19	4.15	1.03	4.22	0.91	<,001	.04
Total mean	4.43	0.71	3.60	1.12	4.91	0.35	3.77	1.11	4.05	0.94	<,001	0.3

Respondents from the cities of Limbe and Yaoundé perceive that hosting the AFCON 2022 will have significant impacts on the communities, particularly with regards to promotion of the city brand, image of the city and cultural attributes. Respondents from Bafoussam share the positive sentiments of their counterparts in Limbe and Yaoundé, but equally perceive positive impacts to accrue from improved transport services and improved security. However, respondents from the city of Douala are still quite apprehensive as their perceptions on all community variables are still below 4. The final theme extracted from the data in this study is on climate change. Results of the ANOVA are presented in Table 7, below.

Table 7. Results of ANOVA on climate change (Source: Author, 2023)

Factor 4 Climate change impacts of hosting AFCON 2022	**Host city and perceived impacts by residents**											
	Limbe N1 = 299		Douala (N2 = 380		Yaoundé (N3 = 577)		Garoua (N4 = 150)		Bafoussam (N5=277)		P-value	t
	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.		
Wildfires	2.83	1.14	2.95	1.26	2.64	1.06	2.90	1.24	3.20	1.04	<,001	.02
Changes in weather	2.52	1.07	3.01	1.19	2.86	0.91	3.08	1.11	3.36	1.01	<,001	.07
Greenhouse gases	3.00	0.94	3.23	1.25	2.73	0.99	3.36	1.17	3.48	0.99	<,001	.05
Animals and plants	3.79	0.78	3.08	1.16	3.89	1.01	3.30	1.19	3.38	1.05	<,001	.06
Environmental changes	2.80	1.24	2.85	1.27	2.52	1.32	2.64	1.23	3.24	1.05	<,001	.04
Shortage of water	2.97	1.11	3.30	1.27	2.83	1.24	3.21	1.26	3.60	1.14	<,001	.05
Total mean	2.98	1.05	3.07	1.23	2.91	1.09	3.08	1.20	3.38	1.05	<,001	.04

Results of the ANOVA on climate change impacts resulting from hosting the AFCON 2022 (table 7) present the lowest ratings from respondents in the host cities as all the perceived impacts are below the value of 4 out of 5. In fact, most of the scores range between 1 and 2. This could either mean that many of the respondents in this study do not perceive the correlation between sports events such as the AFCON and the climate change variables indicated or they perceive that the likelihood of sports events having an impact on the climate change variables is low.

In addition to analysing the results of this study from a host city perspective, it was deemed important to reflect on other demographic variables such as gender, age groups and level of education. Results of the analysis from a gender perspective are presented in table 8. The male respondents were coded as N1 and females as N2.

Results of the analysis of perceived impacts of hosting the AFCON games from a gender perspective (Table 8) reveal that with the exception of impacts on climate change (3.17), female participants in this study were more conservative on the severity of the impacts of the sport event than males. This is because the mean scores of the male participants on social impacts (3.96), economic impacts (4.09) and community impacts (4.19) are above those of the females. Results of the ANOVA based on age groups are presented in Table 9.

The objective was to find out if there are any statistically significant differences in the perceived impacts of hosting the AFCON 2022 matches based on age groups. In preparation for this analysis, the age groups were coded as follows: 18 – 25 years (N1), 26 – 35 years (N2), 36 – 45 years (N3), 46 – 55 years (N4), 56 – 65 years (N5) and above 65 years (N6).

Table 8. Analysis the impacts of hosting AFCON 2022 from a gender perspective (Source: Author, 2023)

AFCON impact factors	Gender variables and perceptions on AFCON 2022 impacts			
	N1 – 863 (Male)		N2 – 819 (Female)	
	Mean	Std Dev.	Mean	Std Dev.
Social	3.96	1.12	3.81	1.17
Economic	4.09	1.08	3.89	1.12
Community	4.19	0.98	3.89	1.06
Climate change and weather sensitivity	3.13	1.14	3.17	1.15
TOTAL MEAN	3.84	1.08	3.69	1.13

Table 9. ANOVA based on age groups (Source: Author, 2023)

AFCON IMPACT FACTORS	Age group (in years) and perceived impact level													
	N1 – 650 (18-25)		N2 – 460 (26-35)		N3-319 (36-45)		N4-158 (46-55)		N5-57 (56-65)		N6-39 (65+)		P-value	t
	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.		
Social	3.68	1.23	4.04	1.06	4.12	1.01	3.93	1.06	3.80	1.24	3.70	1.24	.001	0.02
Economic	3.80	1.14	4.09	1.05	4.21	1.06	4.05	0.97	4.00	1.14	4.01	1.10	.001	0.01
Community	3.87	1.07	4.14	1.02	4.25	0.94	4.11	0.91	3.97	1.13	4.01	1.08	.001	0.03
Climate change	3.15	1.16	3.16	1.19	3.19	1.05	3.09	1.11	3.00	1.20	3.04	1.16	.001	0.04
TOTAL	3.63	1.15	3.86	1.08	3.94	1.02	3.80	1.01	3.69	1.18	3.69	1.15		0.03

Results of the ANOVA on age groups presented in Table 9 reveal that there are statistically significant differences in the perceptions of the participants based on age groups. This is evident in the P-values which are all below 0.05 (Pallant, 2012). In order to understand the significance of the differences, the effect sizes (t) were calculated using the formula:

$$\text{Eta squared} = \frac{\text{Sum of squares between groups}}{\text{Total sum of squares}}$$

The results indicated minimal impact of the effect sizes as the values were below 0.06 (Cohen, 1988) while the rest demonstrated medium effect with values less than 0.14.

Further ANOVA was processed in order to ascertain if there were any statistically significant differences on the responses of the participants based on the level of education. Once more, the participants were divided according to their age groups coded as below General certificate of Education (N1), having obtained General Certificate of Education (N2), having passed the General Certificate of Education at the Advanced level (N3), having a Bachelor's degree (N4), Master's degree qualification (N5) and Doctoral degree (N6). Results of the ANOVA based on level of education are presented in Table 10.

Table 10. ANOVA on level of education and impacts of the AFCON 2022 **(**Source: Author, 2023)

AFCON IMPACT FACTORS	Education level and perceived impact level													
	N1 – 262 (Below GCE O' Level)		N2 – 257 (GCE O' Level)		N3-514 (GCE A' Level)		N4-458 (Bachelor's degree)		N5-140 (Master's degree)		N6-52 (Doctoral degree)		P	t
	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.		
Social	3.56	1.26	3.11	1.17	3.14	1.13	3.18	1.08	3.24	1.16	3.23	1.24	0.03	.032
Economic	3.79	1.22	3.88	1.15	3.97	1.06	4.16	1.04	4.05	1.07	4.29	0.90	0.02	.017
Community	3.82	1.14	3.92	1.09	4.02	1.00	4.22	0.91	4.12	1.05	4.3	0.94	0.05	.023
Climate change	3.07	1.26	3.11	1.17	3.14	1.13	3.18	1.08	3.24	1.16	3.23	1.24	0.04	.005
TOTAL	3.56	1.22	3.51	1.15	3.57	1.08	3.69	1.03	3.66	1.11	3.76	1.08	0.03	0.02

Results of the ANOVA on the level of education reveal statistically significant P-values on all four constructs of impacts tested. The P-values are ≤ 0.05 which is the threshold of statistical significance (Pallant, 2012). It was deemed important to assess the level of significance by calculating the effect sizes (t). As with the previous ANOVA on age groups, the ANOVA on level of education revealed minimal impact of the differences at below 0.06 (Cohen, 1988). The following section discusses the findings of this study in the context of previous research and reflects on the implications of the study.

DISCUSSION

This study explored perceptions of residents of the AFCON 2022 host cities on the impacts of hosting matches of the tournament in their city. Participants in the study were therefore residents of the cities of Limbe, Douala, Yaoundé, Garoua and Bafoussam that had been selected as host cities of the competition. Findings from the study avail the following insights.

Firstly, literature reviewed in this study reveals important insights on the relationship that exists between host communities and sports events, in terms of the support that flows from residents to sports events (Coates, 2012; Johnston et al., 2021) and the impacts that sports events make in communities (Al-Emadi et al., 2017; Gursoy and Kendall, 2006). Hence, the community-sports events relationship can be described as symbiotic. However, it is evident that there is a gap in literature on studies that examine the community - sports events nexus from a comprehensive perspective (Kim et al., 2015). Hence, this study contributes towards narrowing that gap by adopting a diverse and inclusive perspective in examining residents' perceptions on the impacts of hosting the AFCON 2022.

Secondly, EFA performed on the data set revealed four underlying factors or impact areas which are under consideration in this study. These include social well-being, economic considerations, community well-being and impacts relating to climate change. In the context of the Social Exchange Theory (SET), it can be concluded that these four factors represent the basis on which the respondents would lend their support to or withdraw their support from sports events such as AFCON 2022. These themes are consistent with key impact areas covered in previous studies on sport events such as 'Residents' attitudes toward the 2010 World Expo in Shanghai prior to and during the event' (Ye et al., 2012) and 'Impacts and implications of an annual major sport event: A host community perspective' (Yao and Schwarz, 2018). However, the present study considers new dimensions, notably climate change and community impacts.

Thirdly, the high mean scores recorded on three of the four impact factors, namely social impacts, economic impacts and community impacts are indicative of the general sense of expectancy that the respondents have on hosting the AFCON 2022 in their city. On the other hand, this sense of optimism is not shared on the climate change factor as the mean score is a meagre 3.2 compared with 4.0 for social impacts, 4.01 for economic impacts and 4.2 for community impacts. These findings are in line with a previous study by Chen (2011) which found that residents tend to prioritize more tangible impacts such as economic and community impacts over less tangible ones such as those related to climate change which take relatively longer to manifest.

Based on the social exchange theory, it can be further be inferred from the high mean scores on the social, economic and community impacts of hosting AFCON 2022 matches that there was great enthusiasm among residents for the sports event. As Jago et al. (2013) and Inoue and Harvard (2014) point out, there is a positive correlation between the benefits that community members expect to accrue from an event and their support for the event. Applied in this study, respondents are likely to support the AFCON 2022 sports event as a trade-in for the benefits that they expect to emanate from the event.

The ANOVA on the perceived social impacts of hosting AFCON 2022 matches across the host cities reveal high scores of above 4 out of 5 points on the variable "friendliness". In the context of Cameroon that has experienced social unrest for some time, this should be considered a positive outcome from hosting the AFCON 2022. This finding is aligned with the assertion by Nyikana and Tichaawa (2018) that Cameroonians are exceptionally passionate about sport. Previous studies by Khun (2011) and Tichaawa (2013) also confirm the strength of sports in calming social tensions and promoting peace.

From the economic impact perspective, the city of Yaoundé still dominates the high scores of above 4 out of 5, while respondents from all the host cities maintain the positive outlook on the economic benefits of hosting AFCON 2022, especially with regards to investment opportunities. Despite the generally positive perception of the economic impacts of the sports event, there is significant apprehension on the negative economic impacts as well, as can be observed from the high mean scores of above 4 out of 5 on price increases and traffic congestion. This mixed perception of the impacts of hosting major sports events is shared by Prayag et al. (2013), Kim et al. (2015) and Johnston et al. (2021).

Community impacts in this study refer to variables that have the potential to either contribute to or hamper community development. Benefits that accrue through variables such as the promotion of the city as an investment destination, improved transport services, security, peace and image of the city are common assets with the potential to benefit all residents. It is therefore quite encouraging to note the generally high perception mean scores of above 4 out of 5 from respondents across the host cities. In their study on events-based destination marketing, Wang and Jin (2019) find that residents tend to rate community impacts of sports higher than personal benefits. Hence, the high mean scores on community impacts of the AFCON 2022 come with little surprise. It is equally evident from the findings in this study that respondents perceive climate change impacts to be quite minimal based on the low mean scores. This finding is in line with previous studies (Boggia et al., 2018; Coates, 2012; Coles et al., 2022) which suggested that factors related to the environment and climate change tend to receive lower ratings from respondents.

Even though there is close parity between male and female respondents in the study, male participants generally perceive the impacts from hosting the AFCON 2022 to be higher than females. However, female participants perceive the impacts related to climate change to be more severe than their male counterparts. A study on the Qatar 2022 soccer world cup by Al-Emadi et al. (2017) also found a close rate of gender participation, however, with greater female respondents (53%).

The ANOVA on age groups revealed that age is an important determinant on how the respondents perceive the impacts of the AFCON 2022 tournament. Based on the statistically significant differences among the age groups, it is evident that respondents in the N2 group (26 – 35 years) and N3 group (36 – 45 years) perceive greater impacts from hosting the sports event than younger respondents in the N1 group (18 – 25 years) and older respondents N5 (56 – 65 years) and N6 (above 65 years). Once more, Al-Emadi et al. (2017) agree that the older residents tend to be less excited about the impacts of sports events due mainly to the cultural changes that younger visitors demonstrate. Unlike with the ANOVA on age groups, the statistical difference among the respondents based on level of education is negligible. The mean scores from all the groups are quite close, hence, educational status does not seem to influence the respondents' perceptions of the impacts of the AFCON 2022 sports event. This finding is in line with previous studies (Coles et al., 2022; Hiller and Wanner, 2015; Madray, 2020).

Implications and contributions

This study contributes towards including the perspective of community members on the perceived impacts of major sports events such as AFCON. Despite the extensive literature available on the impacts of sports events, there is still evident paucity in studies that adopt a comprehensive approach in exploring community perceptions on various ways in which they experience the impacts of sports events. Various policy and practical implications can be drawn from the findings and conclusions of this study. While contributing towards narrowing this gap, the current study has demonstrated that residents of communities have hold important views and have reasonable appreciation of the impacts of hosting major sports events. In addition to delving into residents' appreciation of the impacts of hosting major sports events such as the AFCON, this study further contributes towards bridging the gap between sports event organisers and community members through the introduction of the social exchange theory. In other words, through gaining an understanding of the impacts that community members expect to emanate from hosting sports events, the organisers of sports event such as the AFCON 2022 could work towards the realization of the positive impacts while mitigating the negative impacts that are likely to discourage community support.

This study also contributes to the body of knowledge on community support for sports events by affirming the diverse nature of residents' perceptions of the impacts of such events. It is evident from the various analysis of variance that demographic variations within communities tend to appreciate the impacts of sports events differently. The implication for organisers of sports events is that due diligence must be followed in engaging with communities in order to understand what really appeals to different sectors of the community considering that community support is not homogeneous. From a policy perspective, the findings of this study require public sector intervention in order to ensure that community structures are included in the organizing committees of important sports events such as AFCON 2022. The views of community members should not simply be academic but rather inform the implementation of activities of sports events. This can only be possible if policies governing the organization of sports events give directives to the inclusion of community representation.

Study limitations

It is worthwhile considering a few limitations to this study so that the context and interpretation can be clearly understood. The first limitation is that even though the sample size is statistically appropriate, the views expressed in the study do not represent the perceptions of every resident in the AFCON 2022 host cities. Therefore, generalization of the findings in this study should be done with caution. Secondly, while the quantitative research method employed in this study seeks to include the views of as many residents as possible, statistical applications such as EFA tend to retain only the dominant ideas. Hence, it is possible that specific ideas expressed by some respondents might not be articulated in this paper.

Suggestions for future research

Compared to major sports events in the global north such as the UEFA champions league and other major European football competitions, research on AFCON is still relatively sparse. It is therefore recommended that a qualitative research approach be adopted in studying community perceptions of the impacts of the competition. This could reveal detailed insights that a quantitative study might omit. Since AFCON is hosted by different African countries on a biennial basis, it is suggested that a longitudinal approach be adopted in studying the perceived impacts of the sports event, in order to ascertain if there are significant variations based on host communities.

Author Contributions: Conceptualization, P.A.; methodology, P.A.; software, P.A.; validation, P.A.; formal analysis, P.A.; investigation, P.A.; data curation, P.A.; writing - original draft preparation, P.A.; writing - review and editing, P.A.; visualization, P.A.; supervision, P.A.; project administration, P.A. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: Funding received from Walter Sisulu University in carrying out this study is acknowledged and appreciated. There is no known conflict of interest in this study.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 28.05.2023 Revised: 25.07.2023 Accepted: 05.09.2023 Available online: 27.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1109-1122
DOI 10.30892/gtg.49326-1110

ANALYSIS OF THE "GURI I PLAKËS" AREA AS AN OPPORTUNITY FOR THE DEVELOPMENT OF RECREATION, TOURISM AND ECONOMY, REPUBLIC OF KOSOVO

Hazir S. ÇADRAKU[*]
University for Business and Technology, Faculty of Civil Engineering and Infrastructure, Prishtinë, Republic of Kosovo, e-mail: hazir.cadraku@ubt-uni.net

Citation: Çadraku, H.S. (2023). ANALYSIS OF THE "GURI I PLAKËS" AREA AS AN OPPORTUNITY FOR THE DEVELOPMENT OF RECREATION, TOURISM AND ECONOMY, REPUBLIC OF KOSOVO. *GeoJournal of Tourism and Geosites*, 49(3), 1109–1122. https://doi.org/10.30892/gtg.49326-1110

Abstract: Space has an essential character for human life and activity. The reduction of touristic, recreational, sports spaces, etc., are affecting the quality of life and the health of the community in many urban areas of our country. Natural, hereditary values, etc., are of great importance for present and future generations, as a living environment for tourism and, physical and mental recreation. Tourism as an economic activity aims at the economic utilization and maximization of the natural and artificial values that a certain area, region or country has. This paper aims, based on the research results, to bring to every reader authentic data and information that show what it offers and what are the possibilities to form a tourist, recreational and sports center in the "Guri i Plakës" area, after considering the economic benefits that can be generated from this area. The work materials were: notebooks for keeping notes from the field work, handheld GPS for measuring coordinates where necessary, meter tape also for measurements, cameras, topographical maps at scale 1:50 000, geological and hydrogeological map (1:200 000), etc. The "Guri i Plakës" - in (eng: Old Woman's Stone) study area has an area of 125.08 hectares. 104.98 ha or 83.93% belong to the Municipality of Drenas (Gllogoc), while 20.10 ha or 16.07% belong to the Municipality of Obiliq. The research work identified two groups of values which make this area interesting for the development of tourism and recreation and are: natural and artificial values. The natural values include: the Drenica river the Dobroshec water source, the "Guri i Plakës", the Dora Stone (Guri Dora), the Folds in the Paleozoic formations, the karst relief in the limestone rocks. The Drenica River represents the main watershed in the "Guri i Plakës" research area. Relatively rich in aquatic flora and fauna. The study area is located in the central part of Kosovo, between coordinates 42° 40' 20" N, 20° 56' 40" E and belongs to the territory of Municipality of Drenas (Gllogoc) and Kastriot (Obiliq). It has an area of 125.08 hectares, with hilly mountainous relief with an altitude of up to 712 m. Important natural and artificial values have been distinguished in the study area. The proposed area "Guri i Plakës" has a physical and geographical position quite favorable for the development of a center (mini-center) for the development of tourism and recreation. Tourist activities (transit type or type of tourism) can be developed there, including activities such as: walking, camping, fishing, partly cycling, photography, recording video clips, part of the activities related to traditional nutrition (traditional food). The "Guri i Plakës" area can be used as a miniature laboratory because it contains many educational, research, scientific research components, etc. Lastly, the development of this area brings social, economic, etc. benefits for the entire community in its vicinity and other local and international visitors.

Key words: area, Guri i Plakës, tourism, recreation, economy

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INTRODUCTION

Natural, hereditary values, etc., are of great importance for present and future generations, as a living environment for tourism and, physical and mental recreation. Attractive natural forms, created in different geological periods such as special topographic, hydrographic geomorphological forms, etc., present values that can be assessed in terms of heritage, tourism, recreation and economic benefits. Tourism as an economic activity aims at the economic utilization and maximization of the natural and artificial values that a certain area, region or country has. According to Savanchiyeva et al. (2023), the tourism sector is the most important economic sector, the most important employment area and the most important source of income for the population, also Ivancsóné Horváth et al. (2023) point out that tourism is one of the leading sectors of the world economy. Yuliawati et al. (2019) and Duarte et al. (2020) in their works emphasize that geotourism promotes entrepreneurship with a local character and made market access for micro, small and medium enterprises. In this sense, the study area "Guri Plakës", presents a potential for local promotion and development, which goes in the spirit as the above-mentioned authors emphasize in their works. In economic terms, heritage values and tourism are a source of income and contributors to increasing social welfare through employment, increasing family income, raising living standards and sustainable development (Çadraku, 2022). Their economic, cultural and heritage exploitation and valorization brings multiple benefits directly for the residents of the area and indirect benefits for all visitors (tourists).

However, touristic and economic development depends on factors; spatial, material, social, institutional, etc. In an area, such as this one, which was taken in the research and analysis, it is aimed to show the natural and artificial values (constructed by human activity), as well as to show on the basis of the achieved research results that the in "Guri i Plakës" area there are natural and artificial values that can be maximized economically, always maintaining the natural balance or as many researchers emphasize in their works, the use of these values in harmony with the concept of integrated management of natural resources (World Commission on Environment and Development, 1987). The development of the

[*] Corresponding author

"Guri i Plakës" area as a recreational brain center has been analyzed based on several indicators; social, economic, health, spatial, cultural, educational, scientific, etc. The social indicator of the last decades, the transformations in the territory of Kosovo, among other things, were also manifested with the development and increase of the standard of living.

This development and this increase in the standard of living is increasing more and more the demand for environments in which the residents of certain areas can spend moments of a social character with their family and friends. So, these environments have importance and role in socialization, communication, sharing different moments with family and friends, maintaining and creating bridges between people from different areas and countries.

However, according to Ivancsóné Horváth et al. (2023) the development of tourism would be desirable for the people living there, but this can only be done in a sustainable way, bearing in mind the importance of nature conservation as well. Demographic indicators - the study area is located in close proximity to the municipalities: Drenas, Obiliq and Fushë Kosovë. According to the data from the development plans of these municipalities, the number of inhabitants in them is: Drenasi 58531 inhabitants (Municipality of Drenas, 2022), Obiliqi 21549 inhabitants (Municipality of Obiliq, 2022) and Fushë Kosovë 34718 inhabitants (Municipality of Fushë Kosova, 2022). Employment - according to the data in the Municipal Development Plan (MDP) of Gllogoc (2020-2028, page 58) it is shown that in the Municipality of Drenas unemployment is high (30%), where according to gender, 47% are male and 13% are female. The economic indicator-economic growth reflects on a stability and well-being for every people. Practice has shown that economic sustainability creates a satisfaction for people in the environment where they live and work. Economic sustainability does not favor the element of movement of residents from rural to urban areas or even from one country to another. The health indicator - physical activity, sports and recreation play a dominant role in terms of human health. The dynamics that are being experienced today by all the inhabitants of planet earth, where people's work and activities are mainly connected to indoor spaces (closed offices with artificial microclimatic conditions) and surrounded by technical and technological equipment (telephones, computers, etc.) is being shown as a factor which in not a few cases is affecting the general health of people. The spatial indicator - the growing trend of economic, industrial, urban development, etc., is affecting the occupation of spaces with objects, economic centers, industrial areas, road infrastructure, etc., thus bringing about the lack of spaces for certain urban and semi-urban areas with a recreational character (tourism, sport, recreation, etc.).

Cultural indicator - cultural identity has been and remains a distinguishing value of the peoples of every area, region and country. Preservation of culture, cultural infrastructure, etc., represents a challenge that requires mobilization from all social and institutional mechanisms. Cultural heritage and its preservation made people in every country feel good. The educational indicator - level of education represents an irreplaceable component for a sustainable development, good well-being, behavior, respect and preservation of the identity and values of an area, region and country. Scientific indicator - scientific achievements have been and remain closely related to the space where we live and work. There, the idea for a phenomenon, phenomenon, etc. begins and is generated, which is forwarded, researched, tested, developed, implemented-realized and made available to the general public. Potential pandemic situations, such as COVID 19 two years ago, require environments where people can spend relaxing and generally calming moments.

In the Municipal Development Plan 2020-2028 of the Municipality of Drenas, in the vision on page 21, it emphasizes the promotion of cultural heritage, tourism and sports, also on page 22, in the point of development goals and objectives, economic development in goal 4 emphasizes the promotion of rural tourism development. In the Development Plan of the Municipality of Obiliq (2020-2028) in point 2.3.8., page 36 elaborates on tourism, where it is emphasized that tourism as a sector has limited development. However, in this plan, it is emphasized that tourism should be developed based on the natural potential of the territory of this municipality. Also, in the Development Plan of the Municipality of Fushë Kosova (Municipality of Fushë Kosova, 2022) it is emphasized the need to develop tourism through the use of the natural, heritage and cultural potentials of the administrative territory of this municipality. So for what was said above, as well as supporting the Municipal Development Plan of Drenas 2020-2028, of the Municipality of Obliqi and Fushë Kosovë, the idea of researching and analyzing the "Guri i Plakës" area as an opportunity was strengthened even more for the formation (creation) of a space with a touristic and recreational character.

Therefore, this research (paper) goes in the spirit of the development plans of the municipalities within which the researched area is located and those in its vicinity. Therefore, the vision and purpose expressed in the MDP (2020-2028) of the Municipality of Drenas (Glogoc), the planning and treatments related to the development of tourism, heritage and culture in the Development Plans of the Municipality of Obiliq and Fushë Kosovë, was an impetus to undertake a research initiative and to carry out an analysis about the "Guri i Plaka" area and to answer questions: What natural value does this area have? What is the natural and artificial heritage of this area? What would be the options to develop a (mini) center for tourism and recreation in this area? Would there be multifunctional benefits for individuals and legal entities if this area is developed?. Seen from this point of view and for what was emphasized above, it comes to a moment of reasonableness which led me to develop this research (idea proposal) which is treated (elaborated) in this paper.

LITERATURE REVIEW

In written and electronic literature there are various definitions (definitions) related to cultural, natural heritage and tourism given by the author from all over the world, but nevertheless they all retain their substance for the purpose to which they are attributed. Below are the definitions (definitions) related to these names which are dealt with in the dictionary of the Albanian language and the legal acts that regulate these fields. The dictionary of the Albanian language treats inheritance from the aspect of law as: passing by law or by will the property of someone who dies to his descendants; the right to inherit an asset, while from the biological aspect as: the ability of living beings to maintain the similarity of the characteristic features and functions of the organism from generation to generation. The theory of heredity. The phenomenon of heritage, and as heritage, cultural heritage (Dictionary of Today's Albanian Language, 2022). According to Law No. 02/L-88, cultural heritage includes: architectural heritage, archaeological heritage, movable heritage and spiritual heritage (Official Gazette of the Republic of Kosovo, 2008).

Table 1. Some scientific publications by local and international authors regarding the potential, heritage and tourism in the Republic of Kosovo and other countries of the world

Name of the scientific article	Author	Year of publication	DOI, UDC, ISSN
The heritage, tourism and economic values of Mount Blinaja, Kosovo	Hazir S. Çadraku	2022	https://doi.org/10.34624/rtd.v39i0.27706
Identification and restoration of the traditional water mills in Lipjan	Besa Jagxhiu, Hazir Çadraku	2021	https://doi.org/10.1556/606.2020.00206
Geoheritage of the Central Part of Kosovo – its Tourism Potential	Besa Jagxhiu, Hazir Çadraku	2021	UDC: 551.4.03:338.48(497.115)
Assessment of water quality in Blinaja River Basin (Kosovo) using the Canadian Water Quality Index (WQI), Journal of Survey in Fisheries Sciences, 10(1) 29-47.	Çadraku HS, Beqiraj A.	2023	Journal of Survey in Fisheries Sciences 10(1) 29-47 2023
Morphometric Analysis of Llap River Watershed (Kosovo)	Hazir S. Çadraku	2023	Rev. Roum. Géogr./Rom. Journ. Geogr., https://doi.org/10.59277/RRG.2023.1.04
Analyzing of Morphometric Parameters and Designing of Thematic Maps Using Raster Geoprocessing Tool. Civil Engineering Journal Vol 8(No 9 (2022)):1835- 1845,	Hazir S. Çadraku	2022	https://doi.org/10.28991/CEJ-2022-08-09-06
Monitoring of Water Flow in the Springs of the Golesh Massif, Kosovo.Ecological Engineering & Environmental Technology 2022, 23(5), 109–123.	Hazir S. Çadraku	2022	https://doi.org/10.12912/27197050/151760
Content of the Label Paper and the Variation of Physico-Chemical Parameters in Bottled Water in Kosovo. Journal of Ecological Engineering 2022, 23(11), 122– 131.	Hazir Çadraku	2022	https://doi.org/10.12911/22998993/153453
The Landscape of the White Drin is a Tourist Attraction in the Development of Local Tourism	Bekë Kuqi, Afrim Selimaj	2022	https://doi.org/10.12912/27197050/154922
Tourism in Kosovo at the Time of the COVID-19 Pandemic	Millaku B, et al.	2022	https://doi.org/10.21744/lingcure.v6nS1.2166
Tourism Development in Kosovo and its Consequences (SARS-COV-2)	Petrit Hasanaj, Bekë Kuqi	2022	https://ikm.mk/ojs/index.php/kij/article/view/5554
Tourism Development and Frequency of Nationalities in Kosovo Tourism	Millaku B, et al.	2021	https://doi.org/10.14505//jemt.v12.4(52).10
Challenges in the Tourism Industry During COVID-19 Pandemic in Kosovo	Kuqi B, et al.	2021	https://doi.org/10.18280/ijsdp.160417
The impact of COVID-19 (SARS-CoV-2) in tourism industry: evidence of Kosovo during Q1, Q2 and Q3 period of 2020	Kuqi B, et al.	2021	doi.org/10.1080/20430795.2021.1883986
The E-Marketing Strategy Process in the Tourism Industry - Case Study Kosovo and Albania	Behrije Ramaj-Desku	2021	https://doi.org/10.31341/jios.45.1.8
Sustainable tourism development – analysis of tourism development in Kosovo	Tahiri A, et al.	2020	doi:10.15240/tul/004/2020-2-007
Kosovo Tourist Offer as Part of Tourism Development	Selimaj A, et al.	2019	ISSN: 2411-5681
Geotourism and territorial development: a systematic literature review and research agenda	Duarte A, Braga V, Marques C, Sá AA.	2020	Geoheritage. 2020;12:65. doi: 10.1007/s12371-020-00478-z
The Role of Tourism Management for Sustainable Tourism Development in Nature Reserves in Hungary	I. Horváth, Z., Kupi, M., & Happ, E.	2023	GeoJournal of Tourism and Geosites, https://doi.org/10.30892/gtg.49306-1090
Geoproduct development as part of geotourism at geopark Belitong	Yuliawati AK, Rofaida R, Gautama BP, Hadian MSD.	2019	In 1st International Conference on Economics, Business, Entrepreneurship, and Finance (ICEBEF 2018) (110–112). Amsterdam, The Netherlands: Atlantis Press; 2019
Geosite Assessment and Communication: A Review	Frederico et al.	2023	https://doi.org/10.3390/resources12020029, https://www.mdpi.com/journal/resources
Geoparks and Geosites	UNESCO, WA Wimbledon	1995	https://www.isprambiente.gov.it/en/
GEOSITES - inicjatywa Mi'rdzynarodowcj DoH Nauk Gcologicznych na rzecz ochrony dzicdzictwa geo!ogiczncgo.	Willian A.P. Wimbledon	1999	PoLish Geologicallnslilure Special Papers, 2: 5-8.
Geomorphosites and geotourism	Panizza M and Piacente S.	2008	Rev. Geog. Acad. 2008, 2, 5–9.

According to the dictionary of the Albanian language, the term tourism is defined as: Trips to different countries, which are usually organized by a group of people on vacation, to have fun, to see rare things, great works, natural beauties, etc.; the activity for the organization and development of these trips, while the law No. 04/L-176 (Official Gazette of the Republic of Kosovo, 2013), defines tourism as: the activity of persons who travel and stay in places outside their usual environment for no more than one (1) consecutive year for entertainment, work and other purposes, which are not related to the exercise of any activity. In the document the Development Plan of the Municipality of Drenas (Gllogoc) 2020-2028

(Municipality of Drenas, 2022) on page 167, point 3.3.12., cultural, natural heritage and tourism are dealt with. Referring to the MDP (Municipal Development Plan of Gllogoc 2020-2028), it results that in relation to tourism on page 101, a map titled: Map of the extent of natural and cultural heritage assets, showing the natural and cultural assets in the territory of the Municipality of Drenas (Gllogoc). On page 31 of the NAP, from the aspect of heritage, tourism, etc., the place called "Çuka e Godancit" (which belongs to the prehistoric period, registered with unique number in the database 3706) is mentioned as a natural heritage, while the train station is a cultural heritage. Dobroshec (year of construction 1936, with unique number in the database 4115). 11 natural monuments according to the MDP (2020-2028) have been identified (page 99).

On page 100 point 2.8.3. Tourism - a description is given about cultural tourism, ecotourism, etc., with a focus on their development and promotion. Regarding the name natural heritage in Law No. 03/L-233 (Official Gazette of the Republic of Kosovo, 2010) does not have a specific definition, but there are definitions which in principle manage to cover aspects related to natural heritage. So, according to the law No. 03/L-233 (Official Gazette of the Republic of Kosovo, 2010) we have the definition of nature values as follows: parts of nature that deserve special protection in order to preserve biological and landscape diversity because of their sensitivity or because of scientific, cultural, aesthetic, educational, economic and other public interests. Written and electronic documents related to touristic, recreational, heritage, cultural areas, etc., for the territory of the Republic of Kosovo can be found in the administrative and academic institutions of the Republic of Kosovo such as: State Agency of Archives of Kosovo, Ministry of Industry, Enterprise and Commerce-Department of Tourism, Kosovo Agency for Environmental Protection, etc., then in the Academy of Sciences and Arts of Kosovo, University of Pristina "Hasan Prishtina"-Faculty of Mathematical-Natural Sciences, etc. In recent years, the Kosovar author and other international authors have published a considerable number of works (scientific articles) which are shown in Table 1.

STUDY AREA

The study area is located in the central part of Republic of Kosovo (Figure 1). It lies between coordinates 42° 40' 20" N, 20° 56' 40" E. Administratively, it belongs to the Municipality of Drenas (Gllogoc) and Kastriot (Obiliq). It has an area of 125.08 hectares, with a hilly mountainous relief with an altitude of up to 712 m. The climate is medium continental (Pllana, 2015). The average annual air temperature is 11.66ºC (KEPA, 2022). The coldest month is January with -0.2°C, while the warmest month is August with 22.1°C (Table 2) (KEPA, 2022). The average annual rainfall in the research area showed a value of 649.9 mm (for the period 2001-2020 at the Prishtinë station) (KEPA, 2022). The lowest rainfall is shown in the months of February and August, while the highest in the months of May and October (Table 3).

Table 2. Average monthly temperatures (Prishtinë station)

Pristina station	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
	-0.2	1.9	11.4	11.4	15.6	19.7	22	22.1	16.5	12	6.5	1.1

Table 3. Average monthly rainfall (Prishtinë station)

Pristina station	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
	51.4	38	50.9	57.1	69.5	58.1	54	43	49.8	66	56	57

The values of solar radiation for the period 2002-2020 show a minimum value of 29.4 hours (year 2002, December) and a maximum value of 370.8 hours (year 2007, month of July) (KEPA, 2022), while in 2020 there was a total of 1806.9 hours of solar radiation (KEPA, 2022). According to Pashkov et al. (2023) meteorological parameters (air temperature, atmospheric pressure, wind speed, air humidity, solar radiation intensity, etc.) can have values that both contribute to and hinder the preservation and promotion of health. The hydrographic network is characterized by the Drenica river, which represents the main catchment of this area. According to the state of water 2015 report (http://www.ammk-rks.net/), water flows in the Drenica river are as follows: Q_{min} = 0.02 m^3/s, $Q_{avg.}$ = 1.52 m^3/s, Q_{max} = 32.80 m^3 /s (KEPA, 2015).

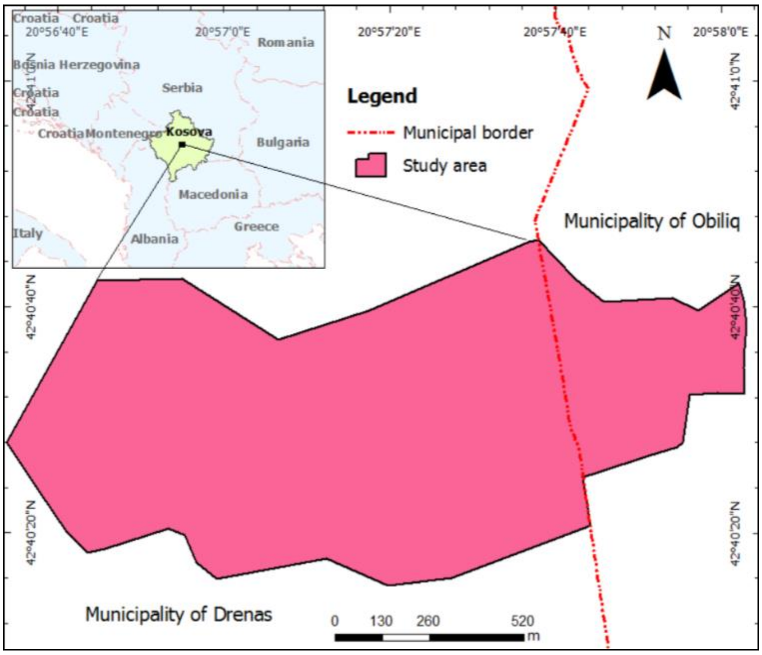

Figure 1. Location of study area (Source: own study, Çadraku, 2022)

MATERIALS AND METHODS

The research work until the finalization of this paper was carried out in two phases: the first phase was carried out in the field and the second phase in the office. More than 20 days of fieldwork were carried out with the aim of getting to know the study area and collecting data and information, including measurements and photographs related to natural and artificial objects in and near the study area. The second phase was carried out in the office, which had the purpose of preparation, selection, processing, analysis, interpretation, drawing conclusions and recommendations, including writing, building tables, the graphic part, etc., until the finalization of the work. For the logistical aspects, a land vehicle was used, while the work materials were: notebooks for keeping notes from the field work, handheld GPS for measuring coordinates where necessary, meter tape also for measurements, cameras, topographical maps at scale 1:25 000 (KCA, 2022), geological and hydrogeological map (ICMM, 2006), 10 liter graduated container for eventual measurement of water quantity in the sources identified in the study area and near it. Satellite images from the Advanced Land Observing Satellite (ALOS) platform with a high resolution of 20 x 20 m are also used for analysis (ALOS, 2022), cartographic information (topography 1:25000, aerial photographs of 2018, etc.), which are available on the geoportal of the cadastral agency of the Republic of Kosovo (KCA, 2022). The word program was used for writing the paper, the excel program was used for the construction of tables and certain calculations, the ArcGIS 10.5 software was used for the construction and design of maps, analysis and elements. The data generated and presented in this paper are authentic and most of them are generated (created) for the first time in the country.

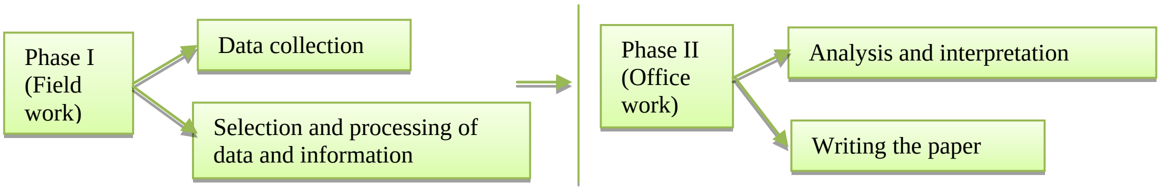

Figure 2. Flowchart of this paper’s methodology (Source: own study, Çadraku, 2022).

RESULTS AND DISCUSSION

The "Guri i Plakës - in English Old Woman's Stone" study area has an area of 125.08 hectares. 104.98 ha or 83.93% belong to the Municipality of Drenas (Gllogoc), while 20.10 ha or 16.07% belong to the Municipality of Obiliq. Hilly-mountainous relief with an altitude of 500 m to 715 m above sea level of the study area showed that it favors the element of movement through it for all ages (Figure 3) (with the exception of children aged 0-5 years and the elderly with health problems with difficulty walking without an escort). The research work identified two groups of values which make this area interesting for the development of tourism and recreation and are: natural and artificial values. The natural values include: the Drenica river (Figure 4), the Dobroshevc water source, the "Guri i Plakës", the Dora Stone, the Folds in the Paleozoic formations, the karst relief in the limestone rocks (Figure 5). The Drenica River represents the main watershed in the "Guri i Plakës" research area. Relatively rich in aquatic flora and fauna. Based on the State of Nature report 2008-2009 and the Red Book of the Fauna of Kosovo, (KEPA, 2009, Ibrahimi et al., 2019), the types of fish are present in the Drenica River as shown in Table 4.

The water source in Dobroshec (Spring Dobrosheci) is positioned at the coordinates: 42° 40' 08" N, 20° 56' 55" E and altitude Z = 579 m (Figure 6). It represents a vital resource for the study area and beyond, especially in terms of drinking water supply. In terms of education, it is important for the connection between theoretical work and practical work for students, especially for hydrology and hydrogeology students.

Figure 3. Recreational activity-example (Source: own study)

Table 4. Types of fish (Source: KEPA, 2009; Ibrahimi et al, 2019)

No.	Type name	No.	Type name
1	Squalius cephalus	10	Chondrostoma nasus
2	Leucaspius delineatus	11	Cyprinus carpio
3	Gobio obtusirostris	12	Alburnoides alburnus
4	Rutilus rutilus	13	Scardinius erythrophthalmus
5	Alburnoides bipunctatus	14	Cobitis eongatoides
6	Barbus balcanicus	15	Barbatula barbatula
7	Phoxinus phoxinus	16	Silurus glanis
8	Rhodeus amarus	17	Perca fluviatilis
9	Carassius gibelio	18	Barbus rebeli

Figure 4. a) Drenica River, b) Fishing activity (Source: own study)

"Guri i Plakës" - is positioned at the coordinates: 42° 40' 26" N, 20° 57' 36" E and altitude Z = 568 m (Figure 7), it is about 15 m high. This rock was split in 1936 by a French company during the construction of the Fushë Kosovë-Klinë-Pejë railway line. Since 2006, "Guri i Plakës" (Old Woman's Stone) has entered the list of category III protected geomonuments, according to IUCN (The International Union for Conservation of Nature) with code MN-034 and an area of 0.05 hectares (KEPA, 2021).

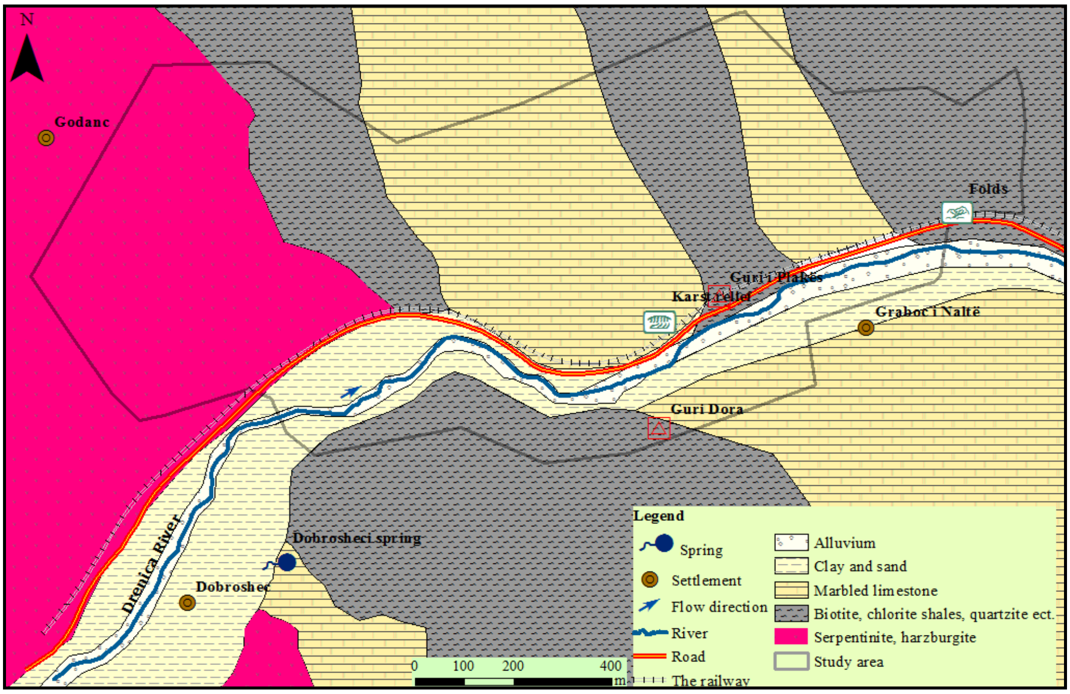

Figure 5. Geological map of the study area (Source: own study, map: Çadraku, 2020)

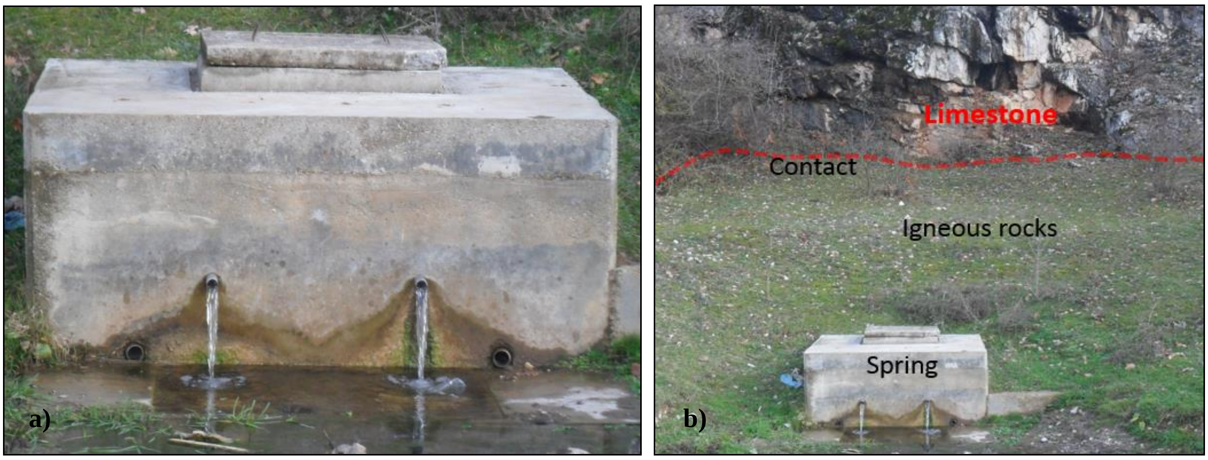

Figure 6. a) Dobroshec water source, b) Spring drainage contact between limestone and igneous rocks (Source: own study)

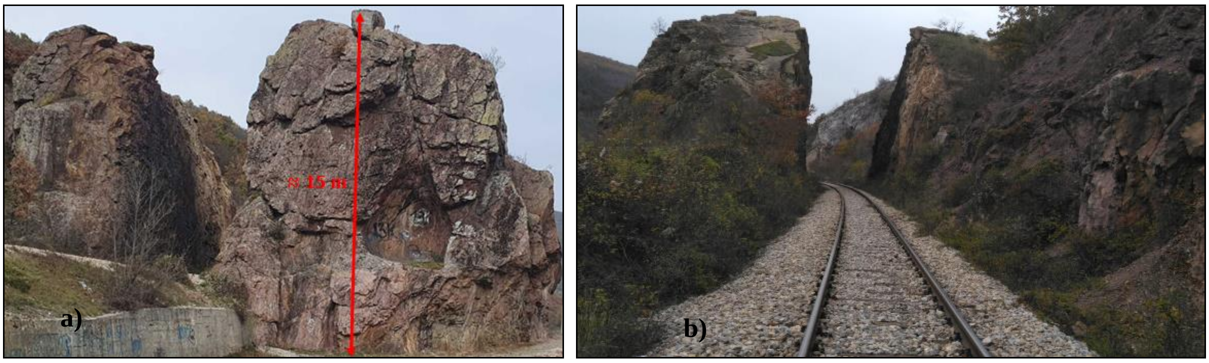

Figure 7. a) The height of the Gurit të Plakës, b) Guri i Plakës delineated by the Fushë Kosovë-Pejë railway (Source: own study)

"Hand" stone - baptized with the name "Hand" (by the author of this article). It is positioned at the coordinates: 42° 40' 19" N, 20° 57' 32" E and altitude Z = 597 m (Figure 8). It presents unique values in the country. This natural monument with a geomorphological character (rock) is recommended to be preserved and protected by institutions with legal acts as a value of natural heritage, for educational, touristic purposes, etc.

Folds - bending of rocks in the form of slabs that have different shapes and sizes (Shkupi, 1984), is positioned at the coordinates 42° 40' 32" N and 20° 57' 55" E with altitude Z = 566 m. It was formed in Paleozoic rocks (shales) (Figure 9). It presents an attractive geosite, created by various geological processes. Pasquaré Mariotto et al. (2023) emphasize that geosites can be related to a great deal of topics within the Earth science field. According to the commonly accepted definition "a geosite can be defined as a site location area or territory in which it is possible to identify a geological or geomorphological interest for conservation (Wimbledon, 1995, https://www.isprambiente.gov.it/en/, Wimbledon, 1999). According to Panizza (2001, 2009), Panizza and Piacente (2008) geosites are represented by geomorphological features and processes, which are part of geomorphodiversity and are called geomorphosites. According to Panizza et al. (1993), Hobléa et al. (2018) geosite are landforms that have acquired aesthetic, scientific, historical, cultural and socio-economic values. Therefore, these values which are present in this study area represent importance not only from the touristic and economic point of view, but also serve as an educational part for pupils and students. In (Figure 9 a and b) shows such a value (geosite) and there the folds elements such as: fold axis, limbs, hinge point, axial plane, can be treated practically. It is recommended to be preserved and protected by the institutions of the Republic of Kosovo for scientific purposes for pupils and students of the earth science-geology profile, etc.

Figure 8. a) The natural appearance of Stone "Hand", b) "Hand" stone modeled in the shape of a hand (Source: own study)

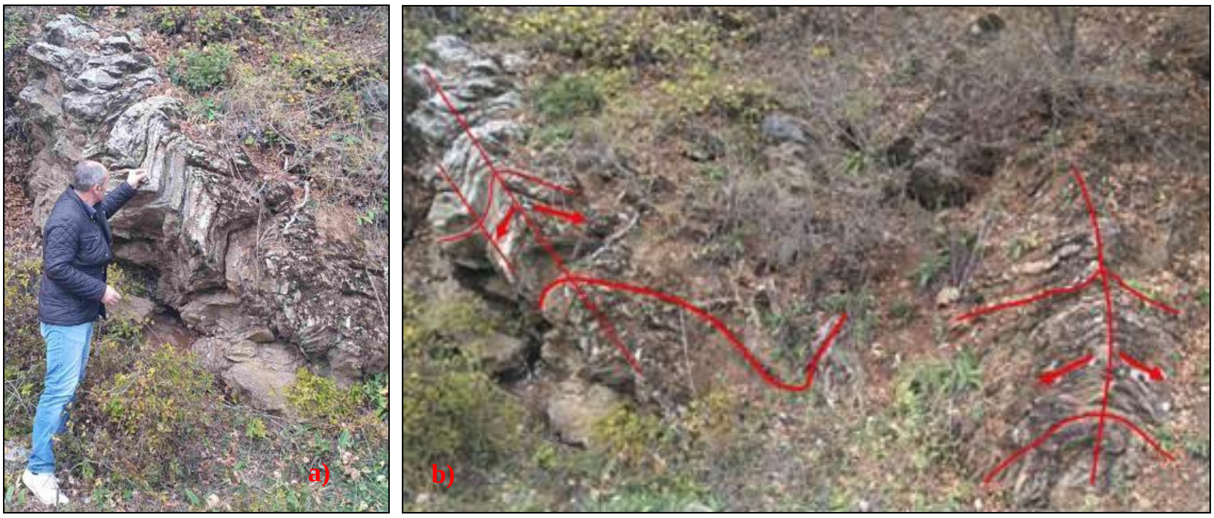

Figure 9. a) Folds, b) The elements of the folds (axis and limb) (Source: own study)

Figure 10. The karst relief (Source: own study)

Figure 11. The rock relief (Source: own study)

The karst - represents the totality of phenomena related to the activity of surface and underground water on rocks that are relatively more soluble in water. In the study area, karstic relief is present in Permotriassic limestones. In (Figure 10), is shown the karst relief positioned at the coordinates coordinates 42° 40' 24" N and 20° 57' 30" E, with altitude Z = 578 m.

Relief - in the ultrabasic rocks (Figure 11) in "Çuka e Godancit", positioned at the coordinates: 42° 40' 28" and 20° 56' 45", with altitude Z = 530 m. Based on the decision No. 116/2015 dt. 09.10.2015 (MCYS, 2022) Castle-Çuka of Godanci belongs to the prehistoric period and has a unique number in the database 003706. Several cultural heritage sites constructed by human activity have been identified in the study area.

This group of values includes: the railway with the engineering facilities connected to it (such as: bridges, aqueducts, retaining and protective walls, channels and signaling devices) and water mills. All these engineering works represent value and importance for the construction age of the railways (over 86 years), as well as for the type of material used for their construction. These works have heritage, cultural, educational, educational and touristic importance, which today (2022) can be used not only as heritage and touristic value but also from educational aspect, especially for profiles of construction technical schools and students of profiles in engineering of construction and infrastructure.

Behram's Mill - is located at the coordinates: 42° 40' 36" N and 20° 58' 02" E, with altitude Z = 568 m (Figure 12). This mill is estimated to have been built around the 1950s, while it was restored in 2019. It presents historical, hereditary, cultural, educational, scientific value, etc. Today (2022) is an object that preserves tradition, history, heritage and culture, which can be of interest to tourists (local and foreign visitors) who frequent this area.

Bajram's Mill - is located at the coordinates: 42° 40' 30" N and 20° 58' 04" E, with altitude Z = 560 m (Figure 13). This mill is also estimated to have been built in the 1950s. It had a function of sustaining life for the residents of the area, because it mainly grinded grains, the flour of which was used for cooking (preparation of bread) and food for the residents. Today it remains a heritage, cultural value, etc., thus testifying to the history and tradition and to keep it alive from generation to generation.

Figure 12. Behram's Mill (Source: own study)

Figure 13. Bajram's Mill (Source: own study)

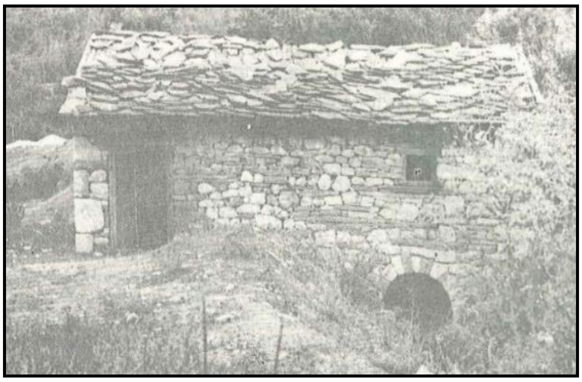

Figure 13. Bajram's Mill (Photo: Labus D., 1976)

Figure 14. The train station in Dobroshec (Source: own study)

These two mills were active (at work) until the last two decades, while now, as seen in the photo, they have been restored, preserving the traditional, historical values, etc. The proposed area for tourism and recreation "Guri i Plakës" gives added value. It is recommended to be saved, protected, maintained, etc., by public institutions of the Republic of Kosovo. At a distance of about 700 m (Figure 14), from the border of the study area, there is the Train Station in Dobroshec (Dritan), located at the coordinates 42° 40' 03" N and 20° 56' 35' E, with an altitude of 567 m.

It was built in 1936 (86 years ago). Once in good condition and very frequented and functional, today (2023) partially functional and frequented, while in a not good condition (Figure 14). Based on the decision No. 116/2015 dt. 09.10.2015, the train station in Dritan (Dobroshec) was included in the list of cultural heritage for contemporary protection with unique number in the database 4115 (MCYS, 2022).

Animals and Birds - the study area is relatively rich and frequented by wild animals and birds which add touristic value to the study area. **Animals** - the study area is frequented by wild animals such as: *Canis lupus, Vulpes vulpes, Sciurus vulgaris, Martes foina, Meles meles, Mustela putorius, Capreolus capreolus, Sus scrofa, Lepus europaeus, Erinaceus roumanicus* (KEPA, 2022), some of them live and some of them are in transit in this area. According to (KEPA, 2009, Ibrahimi et al, 2019) in the study area there are several types of reptiles such as: *Darevskia Praticola, Podarcis tauricus, Zootoca vivipara, Algyroides nigropunctatus, Lacerta viridis, Podarcis muralis, Lacerta agilis, Podarcis erhardii, Dolichophis Caspius, Testudines, Testudo hermanni, Testudinidae, Natrix tessellata, Vipera ammodytes etj., bretkosat; Triturus cristatus, Bombina variegata, Pelophylax ridibundus etc., lacertis; Zootoca vivipara, Lacerta viridis etc*. **Birds** - are found in the researched area: *Cyanistes Caeruleus, Passer Domesticus, Euphorbia Cyrarissias, Columba Palumbus, Columbia Livia, Garrulus Glandarius, Corvus Cornix, Matricaria Chamomilla, Lyscinia Meganchynchos, Dendrocopos Major, Rumex Crispus, Blackbird, thrush, Accipiter brevipes, Aquila chrysaetos, Ardea cinerea, Gyps fulvus, Aythya nyroca* (Ibrahimi et al, 2019).

Economic benefits

Taking into account the number of 114,798 inhabitants who live in the Municipalities: Drenas, Obiliq and Fushë Kosovë, as well as about 250,000 inhabitants who live in the Municipality of Prishtina, then the distance from the "Guri i Plakës" research area which is 8 km (straight line) from the municipality of Drenas, the Municipality of Obiliq 9 km, the Municipality of Fushë Kosovë 12.20 km, the Municipality of Prishtina 15 km and from the Prishtina International Airport "Adem Jashari" 12.40 km, without entering in deeper elaborations (of the character of the existing infrastructure) we can say that the development of the proposed area for recreation and tourism "Guri i Plakës" gives arguments that it brings multiple benefits. The research highlighted that there are several options for sharing the benefits that will be generated in the case of the development of this recreational, tourist area.

Option I - would be, the distribution of economic benefits based on the spatial aspect, the percentage participation according to the administrative territory of the Municipalities.

Option II - would be based on the value of investments from the Municipal units on which the researched area is located

Option III - if the area is given with concessions (law on public-private partnership), the company that takes it with the concession separates from the good material benefits based on the legal acts of the Republic of Kosovo (that is, state coercions of the nature of taxes, payments, etc.).

Table 5. Evaluation of economic benefits only for weekends (Source: own study, assumed-estimated by the author of the paper, Çadraku, 2022)

No. Visitors (weekends)	1 Euro bill	Total	Weekend days (per month)	Total	Weekend days (per year)	Total
100	1	100	9	900	104	10400
200	1	200	9	1800	104	20800
300	1	300	9	2700	104	31200
400	1	400	9	3600	104	41600
500	1	500	9	4500	104	52000
600	1	600	9	5400	104	62400
700	1	700	9	6300	104	72800
800	1	800	9	7200	104	83200
900	1	900	9	8100	104	93600
1000	1	1000	9	9000	104	104000
1100	1	1100	9	9900	104	114400
1200	1	1200	9	10800	104	124800
1300	1	1300	9	11700	104	135200
1400	1	1400	9	12600	104	145600
1500	1	1500	9	13500	104	156000
1600	1	1600	9	14400	104	166400
1700	1	1700	9	15300	104	176800
1800	1	1800	9	16200	104	187200
1900	1	1900	9	17100	104	197600
2000	1	2000	9	18000	104	208000

Table 6. Evaluation of economic benefits only for weekends (Source: own study, assumed-estimated by the author of the paper, Çadraku, 2022)

No. Visitors (weekends)	2 Euro bill	Total	Weekend days (per month)	Total	Weekend days (per year)	Total
100	2	200	9	1800	104	20800
200	2	400	9	3600	104	41600
300	2	600	9	5400	104	62400
400	2	800	9	7200	104	83200
500	2	1000	9	9000	104	104000
600	2	1200	9	10800	104	124800
700	2	1400	9	12600	104	145600
800	2	1600	9	14400	104	166400
900	2	1800	9	16200	104	187200
1000	2	2000	9	18000	104	208000
1100	2	2200	9	19800	104	228800
1200	2	2400	9	21600	104	249600
1300	2	2600	9	23400	104	270400
1400	2	2800	9	25200	104	291200
1500	2	3000	9	27000	104	312000
1600	2	3200	9	28800	104	332800
1700	2	3400	9	30600	104	353600
1800	2	3600	9	32400	104	374400
1900	2	3800	9	34200	104	395200
2000	2	4000	9	36000	104	416000

Opton IV - any other option is not excluded. The two residential buildings (houses) with their grounds located within the researched area for recreation and tourism are proposed to adapt residential units and to be allowed to exercise economic activity (hostel type, preparation and sharing of traditional foods) in order not to enter expropriation procedures that increase the cost of investments and development of this area. The owners of the two houses within the area must pay taxes or payments in accordance with the legal acts and the benefits that derive from the exercise of service activities (inns, traditional foods) per visitor (tourist). The other two objects; Restaurant "Guri i Plakës" and Farma, which are located at the eastern end of the study area, exercise their activities and functions in harmony with legal acts and share the benefits according to the value determined as tax or payment by the state institutions of the Republic of Kosovo. There will also be economic benefits for the residents of the neighborhood on the northeastern slope of the village of Graboc i Naltë, who can restore their nearly abandoned houses and properties as inns and environments for traditional cooking (traditional foods), etc. In the following, an assessment is shown in relation to the incomes and exits with a monetary value character if this area were to be developed (Table 5, 6, 7, 8 and 9).

Option I - if the researched area would be frequented only on weekends (Saturdays and Sundays, on average 9 days per month or 104 days a year, with a price of 1 euro entrance ticket) then the minimum income only from the entrance ticket payment are shown in Table 5. If we also take into account 12 days of official holidays (MIA, 2022), then we will have an annual total of 104 + 12 = 116 days off. If we were to take into consideration that for each day the area proposed for tourism and recreation would be visited by: 100, 250 or 500 visitors, then the revenues would be as in the Table 8.

Table 7. Evaluation of economic benefits only for weekends (Source: own study, assumed-estimated by the author of the paper, Çadraku, 2022)

No. Visitors (weekends)	5 Euro bill	Total	Weekend days (per month)	Total	Weekend days (per year)	Total
100	5	500	9	4500	104	52000
200	5	1000	9	9000	104	104000
300	5	1500	9	13500	104	156000
400	5	2000	9	18000	104	208000
500	5	2500	9	22500	104	260000
600	5	3000	9	27000	104	312000
700	5	3500	9	31500	104	364000
800	5	4000	9	36000	104	416000
900	5	4500	9	40500	104	468000
1000	5	5000	9	45000	104	520000
1100	5	5500	9	49500	104	572000
1200	5	6000	9	54000	104	624000
1300	5	6500	9	58500	104	676000
1400	5	7000	9	63000	104	728000
1500	5	7500	9	67500	104	780000
1600	5	8000	9	72000	104	832000
1700	5	8500	9	76500	104	884000
1800	5	9000	9	81000	104	936000
1900	5	9500	9	85500	104	988000
2000	5	10000	9	90000	104	1040000

Table 8. Evaluation of economic benefits for weekends and holidays (Source: own study, assumed-estimated author of the paper, Çadraku, 2022)

No. Visitors (weekends)	1 Euro bill	2 Euro bill	5 Euro bill	Weekend days (per year)	Total (Euro) per day			Total (Euro) per year		
250	1	2	5	116	250	500	1250	29000	58000	145000
250	1	2	5	116	250	500	1250	29000	58000	145000
250	1	2	5	116	250	500	1250	29000	58000	145000
500	1	2	5	116	500	1000	2500	58000	116000	290000
500	1	2	5	116	500	1000	2500	58000	116000	290000
500	1	2	5	116	500	1000	2500	58000	116000	290000

Table 9. Evaluation of economic benefits for one year (Source: own study, assumed-estimated by the author of the paper, Çadraku, 2022)

No. Visitors (weekends)	1 Euro bill	2 Euro bill	5 Euro bill	Day in the year	Total (Euro) per day			Total (Euro) per year		
100	1	2	5	365	100	200	500	36500	73000	182500
250	1	2	5	365	250	500	1250	91250	182500	456250
500	1	2	5	365	500	1000	2500	182500	365000	912500

CONCLUSION

Based on the analyzed data and information, we conclude that the proposed space "Guri i Plakës" as a whole represents a touristic and recreational potential which can be valued in economic terms for the general good. The research analysis showed that the proposed area "Guri i Plakës" has a physical and geographical position quite favorable for the development of a center (mini-center) for the development of tourism and recreation. Tourist activities (transit type or type of tourism) can be developed there, including activities such as: walking, camping, fishing, partly cycling, photography, recording video clips, part of the activities related to traditional nutrition (traditional food). Its water values can be used rationally through sports, recreational, scientific research activities, etc. The area offers opportunities for lecturers, students and students to organize visits with the purpose of practical, research and study work in the modules related to: geography, geology, hydrography, hydrology, hydrogeology, regulation of rivers, road infrastructure, railways, etc., while groups of fishermen can organize fishing competitions. For students of hydrology and hydrogeology, the hydrographic network with the Drenica River and water sources is of interest in this area. So this area can be used as a miniature laboratory because it contains many educational, research, scientific research components, etc. Social benefits - the development of this area has social benefits due to the fact that: the city of Drenas (Gllogoc) with a population of 58,531 inhabitants Municipal Development Plan of Gllogoc (2020-2028), page 43, https://kk.rks-gov.net, does not have any recreational tourist center of such character (as discussed and proposed in this article). The path (promenade) planned for recreational activities (walking, running, partly cycling) will have a length of 7175 m or 7.175 km. The width of the path is proposed to be 3 m, while with the berm and side channels for the drainage of atmospheric water (rain and snow melt), the width is proposed to be 4 m. The material for the construction of the layers of the path is recommended to be in accordance with the instructions of the technical construction conditions of the Republic of Kosovo, or the construction standards as determined by the norms or standards of the European Union for such purposes. Within the excavated area, it is proposed to build the following facilities: two information stations (for informing visitors), two parking lots (parking lots), four overpasses (two over the Drenica river and two over the road and railway), an observation point (tower type), ten bungalows (hostel-type camping house) and two restaurants, including two annexes one for first aid and one for fire protection.

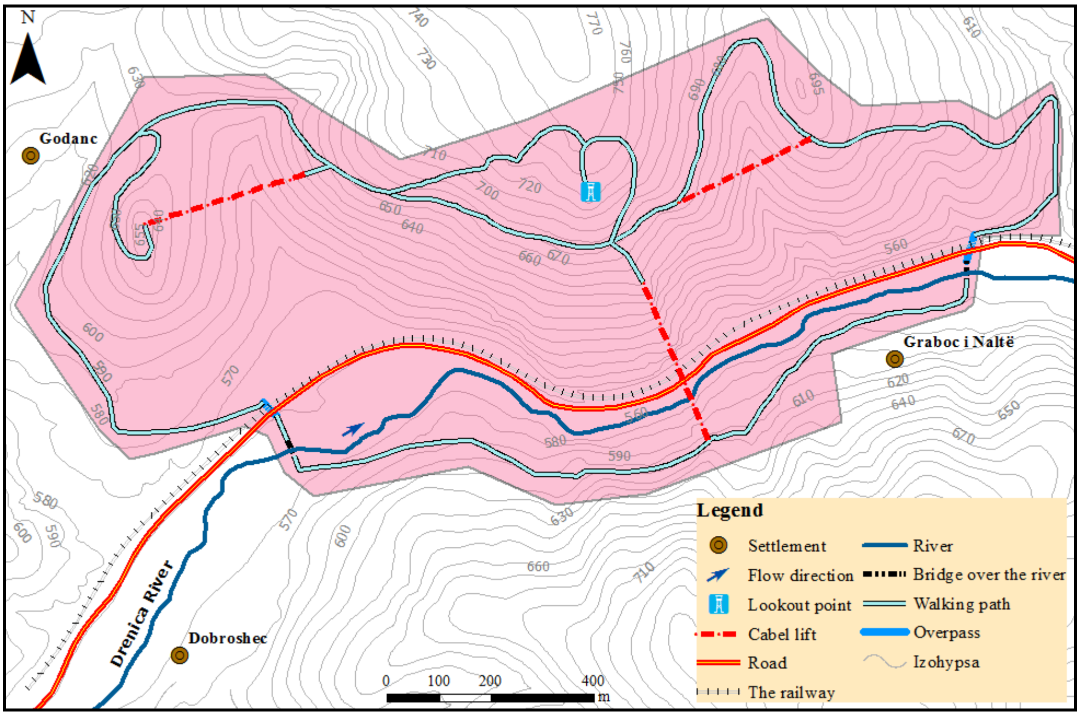

Figure 15. Map for the development of the first option (Source: own study, Çadraku, 2022)

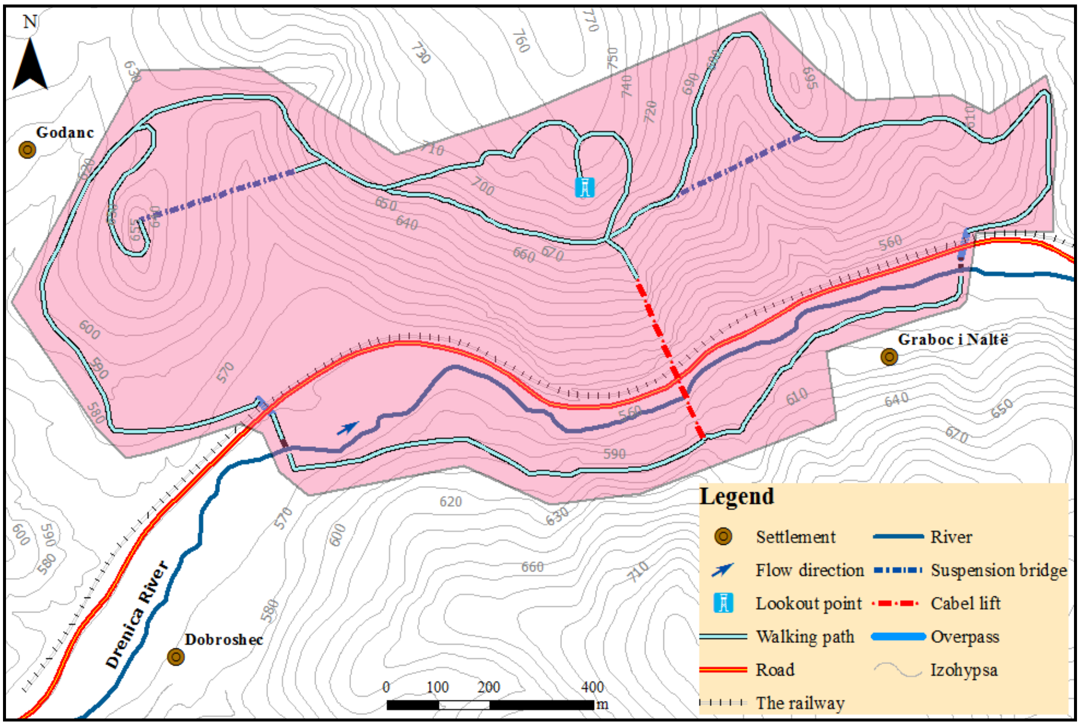

Figure 16. Map for the development of the second option (Source: own study, Çadraku, 2022)

Option I - this option (variant) plans to build two rope lifts on the walking path, as well as one lift which is placed from "Guri Kurrizi" (in eng. Backbone) (the northern slope of the study area) and goes to the southern slope to "Guri Dora" (in Eng. Stone Hand) (Figure 15).

Option II - this option (variant) plans to build two suspension bridges with a combined construction of steel, concrete and ropes on the walking path, as well as an elevator which is placed from "Guri Kurrizi" (the northern slope of the study area) and passes on the southern slope to the Dora Stone (Figure 16).

Option III - this option (variant) plans to build two rope lifts on the hiking trail, as well as one lift from "Guri Kurrizi" (northern slope of the study area) to "Guri i Plakës" (center), then from the Old Woman Stone (Guri i Plakës) to the southern slope to the Dora Stone (Guri Dora) and from the Dora Stone to the "Kurrizi Stone" (Figure 17).

Option IV - this option (variant) plans to build two suspension bridges with a combined construction of steel, concrete and ropes on the walking path, as well as an elevator which is placed from Guri Kurrizi (the northern slope of the study area) to "Guri i Plakës" (center), then from "Guri i Plakës" to the southern slope to "Guri Dora" and from "Guri Dora" to "Guri Kurrizi" (Figure 18).

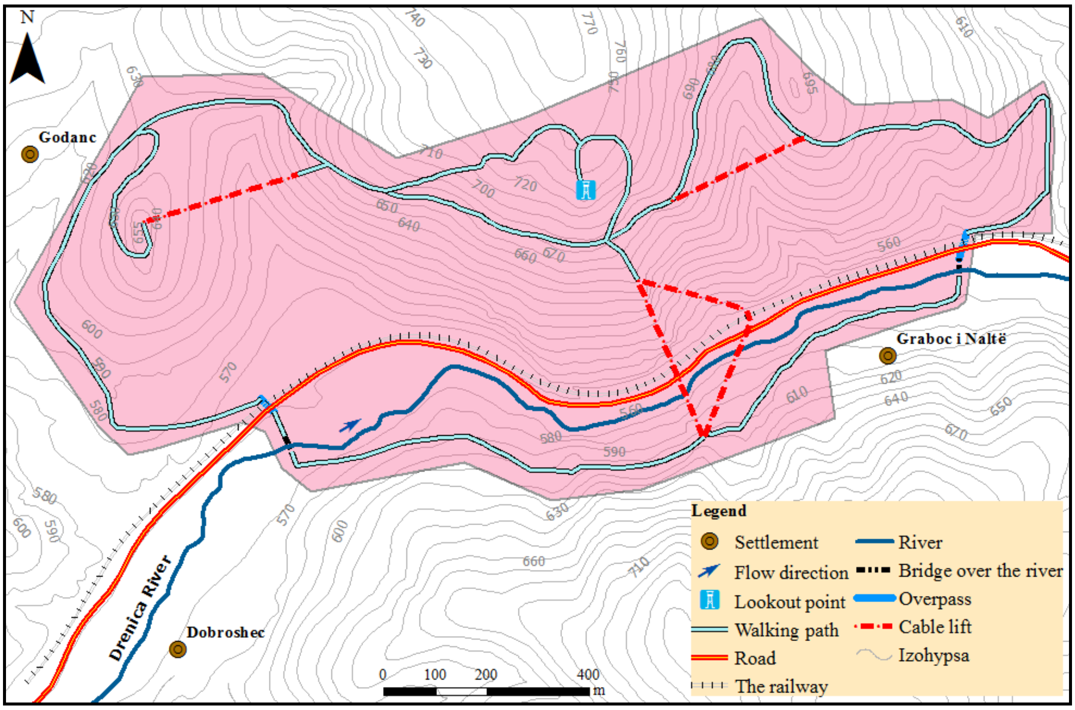

Figure 17. Map for the development of the third option (Source: own study, Çadraku, 2022)

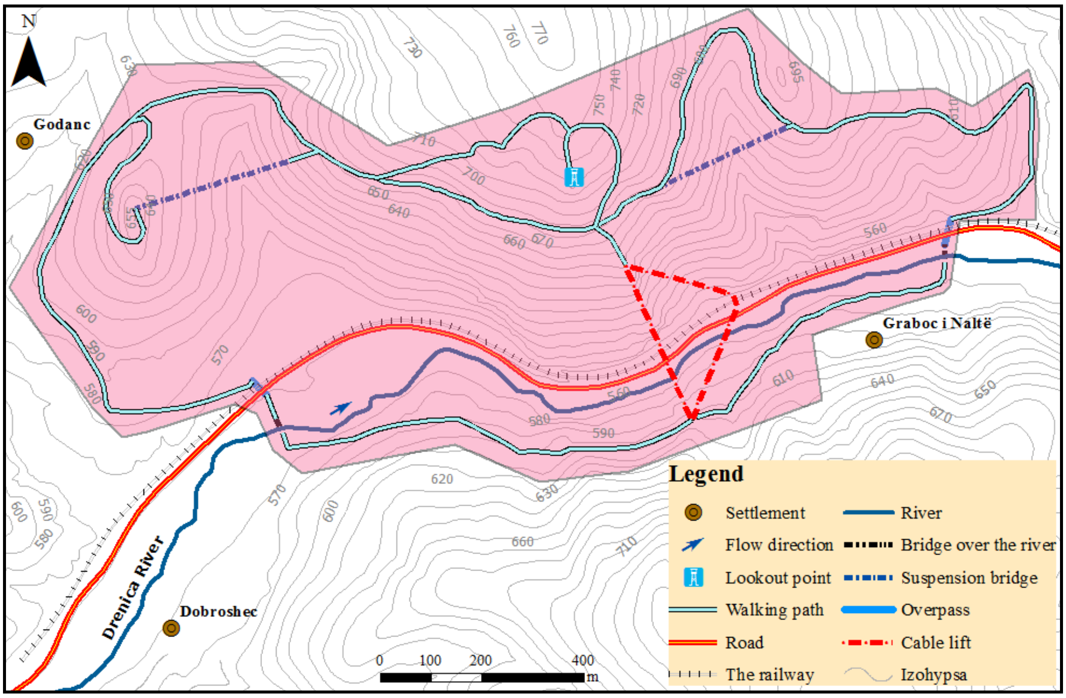

Figure 18. Map for the development of the fourth option (Source: own study, Çadraku, 2022)

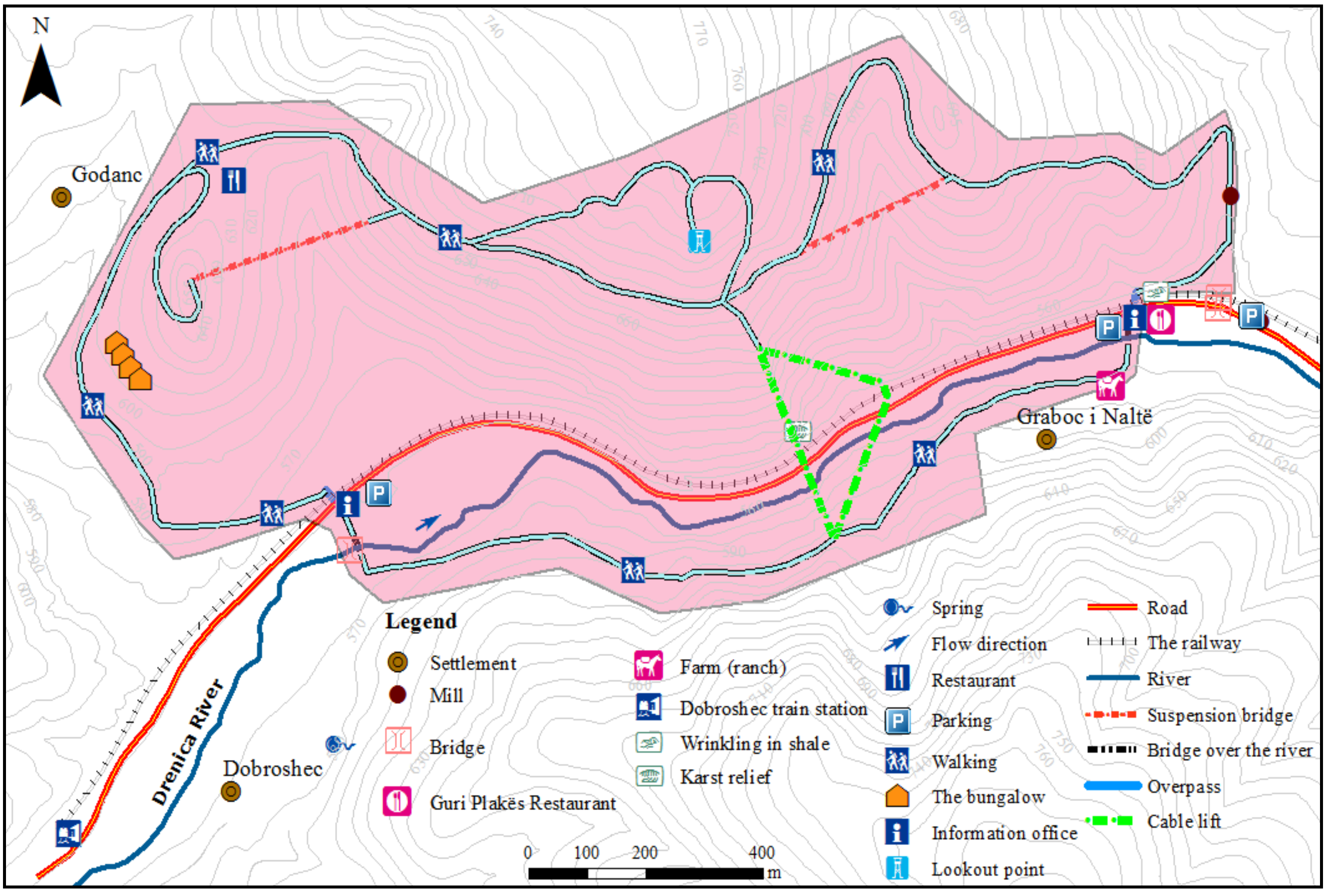

Figure 19. Map for the development of the final detailed option (Source: own study, Çadraku, 2022)

Figure 19 shows in more detail all the infrastructure and other supporting components of the study area.

It is recommended that the proposed area for the development of tourism and recreation can be achieved through investments from the budget of the Municipalities combined with grants or donations from local and foreign organizations and companies. Through the budget of the Municipalities and the Ministry of Culture, Sports, through the law on Public and Private Partnership, through long-term loans. The material goods that benefit from the provision of the services of this (mini) center can be divided according to the options proposed above.

Author Contributions: Conceptualization, H.Ç.; methodology, H.Ç.; software, H.Ç.; validation, H.Ç.; formal analysis, H.Ç.; investigation, H.Ç.; data curation, H.Ç.; writing - original draft preparation, H.Ç.; writing - review and editing, H.Ç.; visualization, H.Ç.; supervision, H.Ç.; project administration, H.Ç. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: On this occasion, I would like to thank my family for their logistical and financial support in carrying out the research work in the field, and especially my wife who helped me in collecting the data.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 26.05.2023 Revised: 01.08.2023 Accepted: 04.09.2023 Available online: 27.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1123-1133
DOI 10.30892/gtg.49327-1111

MOBILE AUGMENTED REALITY AS E-PROMOTION TO ATTRACT TOURISTS' AWARENESS AND INTENTION TO VISIT HALAL DESTINATIONS

Idris IDRIS*
Universitas Negeri Malang, Department of Social Science Education,
Faculty of Social Sciences, Malang, Indonesia, e-mail: idris.fis@um.ac.id

Aulia HERDIANI
Universitas Negeri Malang, Department of Accounting, Faculty of
Economics and Business, Malang, Indonesia, e-mail: aulia.herdiani.fe@um.ac.id

Khofifatu Rohmah ADI
Universitas Negeri Malang, Department of Social Science Education,
Faculty of Social Sciences, Malang,, Indonesia, e-mail: khofifatu.rohmah.fis@um.ac.id

Nur Baiti Inas SHOBIROH
Universitas Negeri Malang, Department of Social Science Education,
Faculty of Social Sciences,, Malang, Indonesia, e-mail: nur.baiti.2107416@students.um.ac.id

Citation: Idris, I., Herdiani, A., Adi, K.R., & Shobiroh, N.B.I. (2023). MOBILE AUGMENTED REALITY AS E-PROMOTION TO ATTRACT TOURISTS' AWARENESS AND INTENTION TO VISIT HALAL DESTINATIONS. *GeoJournal of Tourism and Geosites*, 49(3), 1123–1133. https://doi.org/10.30892/gtg.49327-1111

Abstract: This study aims to examine the relationship between mobile augmented reality, promotion-mix elements, destination awareness, and intention to visit halal destinations. By using explanatory research, questionnaires were distributed online (Google form) and offline to tourists visiting Karimunjawa, Indonesia. A total of 110 tourists participated in this study. Data were analyzed using the Partial Least Square-structural equation model. This study found that mobile augmented reality had no positive and significant effect on destination awareness and intention to visit halal destinations. Thus, Augmented reality has not been able to become an important factor in destination awareness and intention to visit halal destinations. Conversely, destination awareness has a positive and significant effect on the intention to visit halal destinations. Then, promotion-mix elements (PME) also have a positive and significant influence on destination awareness and intention to visit halal destinations. This study also found that destination awareness can mediate the relationship between promotion-mix elements and intention to visit halal destinations. Theoretical and empirical implications are also highlighted in this study.

Key words: mobile augmented reality, promotion-mix elements, destination awareness, intention to visit, halal destinations

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INTRODUCTION

The tourism sector is an important component as a driving force for the country's economic growth. Indonesia has a lot of great wealth potential and has policies to support tourism. Comprehensive tourism industry planning is able to create various job opportunities in the tourism industry, increase people's income and especially tourist destinations can become the largest foreign exchange earner for the country (Owusu-Mintah, 2014; Zueva, 2021). The industry also confirms that the role of tourism is getting bigger in economic and social interests in government (Firdaus et al., 2021).

In addition, tourism has become a world concern because it is the center of tertiary attention for the needs of the world community. In increasing the gross domestic product in the tourism sector, the ministry of tourism is also developing halal tourism and making massive efforts to promote it through various technological integration developments, especially with regard to the development of the latest technological discoveries (Adamczyk et al., 2019). At least, there are several technology products commonly used in tourism such as virtual reality-based technology (Idris et al., 2021), augmented reality (Rokhsaritalemi et al., 2022), android-based (Kang and Jwa, 2018), smart tourism (Hamid et al., 2021) and e-marketing promotions (Venugopal and Vishnu Murty, 2019). These various products facilitate the tourism sector in marketing tourism products, especially halal destinations (Battour and Ismail, 2019).

Halal tourism is currently one of the segments that plays an important role in the national and international tourism sector (Battour and Ismail, 2019; Idris et al., 2021). The development of the halal tourism industry is predicted to grow in 2060 by 70% (Indon et al., 2021; Peristiwo, 2020; Wisker et al., 2023). The report also shows that by the end of 2020, 13% of the Muslim population worldwide has grown drastically (Rashid et al., 2021). The rapid development of the Muslim population is one of the significant market potential factors for halal tourism. As a result, the growth of halal tourism has experienced drastic developments which continue to grow significantly. Some literature shows that halal tourism is associated

* Corresponding author

with sharia tourism, halal hotels, Muslim-friendly and halal restaurants. The government and tourism destination stakeholders collaborate to develop appropriate halal tourism programs (Pasarela et al., 2022; Sodawan and Hsu, 2022).

Fast growing halal tourism offers new destinations around the world and opens up opportunities to create uniquely attractive and globally competitive places to visit halal destinations (Aliffia and Komaladewi, 2021). Halal tourism is expected to take advantage of technological facilities such as Android-based (Nasution and Mulyadi, 2020), TV (Kim and Kim, 2020; Wen et al., 2018), Website (Wahab et al., 2017) and Augmented Reality (Arena et al., 2022; Pernekulova et al., 2021) as a strategic service through branding and marketing. Thus, exploring the factors that influence the intention to visit halal destinations (IVHD) is vital and urgent (Aliffia and Komaladewi, 2021). Empirically there are many factors that are predictors of IVHD, including Mobile Augmented Reality (AR), Destination awareness (DA) and promotion-mix elements (PME).

Mobile Augmented Reality (Mobile AR) technology, in the rapidly growing digital era, has become one of the innovations that has attracted the attention of many sectors, including tourism (Dieck and Jung, 2018). Using this technology as an e-promotion medium is assumed to have a significant impact on the intention to visit Halal destinations. Effective promotion can increase awareness and interest in halal tourist destinations and increase the likelihood of tourists visiting tourist destinations. Promotional activities such as advertising, social media distribution, and influencer marketing can help create a positive image of a halal tourist destination by highlighting its unique features and attractions (Venugopal and Vishnu Murty, 2019). Hardware-based mobile AR and app-based mobile AR are the two dominant platforms for mobile AR applications (Jamali et al., 2013). However, hardware implementations of Mobile AR are known to be more expensive and less flexible, while application-based implementations require additional up-front downloads and installations and are impractical to use across multiple communication platforms. AR applications are widely used in various fields. One of them is providing an interesting experience for tourists to explore and study halal tourist destinations with more attractive and communicative advertising which is very influential on the development of information and communication technology in the 4.0 era (Qian et al., 2022; Romli et al., 2020; Saputra and Iman, 2020).

Mobile AR in the tourism sector can enrich visitor knowledge and experience by displaying digital content such as audio guides, interactive maps, historical information, 3D animations and more (Ariffin et al., 2022). Tourists can access this information using a mobile device such as a smartphone or tablet equipped with the Mobile AR application. One of the advantages of electronic e-promotion is its ability to help tourists see destinations better before they visit so that it influences the intention to visit halal destinations (Hawkinson, 2018; Kannaiah and Shanthi, 2015). This technology allows tourists to see a visual preview of a tourist attraction before visiting it. This allows tourists to make better decisions about the destinations they want to visit. In the context of halal tourism, Mobile AR can be used to provide information according to the needs of Muslim tourists who offer halal-friendly services, and information about cultural and religious activities that take place according to their beliefs (Abidin et al., 2018). In addition, Mobile AR can also increase tourist awareness of the attractiveness of unique destinations. For example through the Mobile AR application, tourists can reconstruct or visual representation of objects that cannot be found in the real world. This can arouse tourists' curiosity and curiosity to encourage visiting destinations. Destination awareness (DA) is associated with understanding and awareness and experience of a particular destination (Sharifpour et al., 2014a, 2014b). This requires an understanding of the culture, environment, history and other aspects related to the destination. Safira and Salsabilia (2022) indicated that destination awareness refers to the understanding of the community in carrying out tourist activities.

In the tourism concept, DA is often understood as a dimension based on previous visits or the number of previous visits (Ghaffari and Monfared, 2021; Ruzzier, 2010). The higher the awareness of halal tourism, the more likely tourists are to visit halal destinations (Idris et al., 2022; Sodawan and Hsu, 2022). Meanwhile, IVHD refers to the intention of tourists to visit halal destinations (Izza et al., 2021). Factors that influence the intention to visit halal destinations include halal awareness, destination image, and destination trust (Jeon, 2022). In addition, the positive image of destinations related to halal tourism can also increase the desire to visit destinations (Han et al., 2019). Tourists generally intend to revisit halal destinations that have been visited if they are satisfied with their tourist experience (Muawanah et al., 2021). Therefore, the development of attractive, valuable halal tourist destinations and halal tourism education can increase the interest of tourists to visit halal tourist destinations so as to strengthen the desire of tourists to visit halal tourist destinations.

Promotion-mix elements (PME) are a collection of all promotional variables used to create, maintain and increase product demand or supply (Aldebi and Aljboory, 2017). Promotional activities can help dispel misunderstandings or negative stereotypes about halal tourism and provide assurance to potential tourists about the quality and safety of destinations. Overall, effective promotion can play an important role in shaping tourist intentions in halal tourism destinations. AR provides an alternative way to use applied information and communication technology as a way to enhance tourism development (Chung et al., 2015a; Song et al., 2021). Several promotion-mix elements that can be used to promote halal tourism by utilizing technology include advertising (Kristanto et al., 2021), sales promotion (Puspasari, 2022), personal selling and public relations (Yi et al., 2021). To increase the interest of tourists visiting halal destinations, the use of appropriate and effective promotions can be an important factor in promoting halal tourism.

AR, empirically, is also generally associated with visualization of destinations, interactive experiences, and the level of awareness of tourists (Carmigniani et al., 2011; Chung et al., 2015a, 2015b; Elmqaddem, 2019). Meanwhile, DA is associated with travel decisions, awareness of tourist destinations, differentiating destinations from other similar destinations, and recognizing some of the characteristics of destinations (Manurung and Astini, 2020a). AR has relationships with tourist satisfaction, DA, destination loyalty and promotions that result in academic contributions, implications of the findings for tourism marketers, and destination boundaries (Lai and Vinh, 2013; Rončević et al., 2019a). However, on the other hand, DA also affects brand loyalty to halal destinations and the attributes of halal destinations affect the attractiveness of destinations

(Jeon, 2022; Muawanah et al., 2021; Safira and Salsabilia, 2022). From the empirical studies above, it can be concluded that studies on the relationship between augmented reality, promotion and destination awareness are still rare in the context of IVHD. Thus, the purpose of this study is to analyze the relationship between Augmented Reality (AR), Promotion-Mix Elements (PME), and Destination Awareness (DA) on tourist intentions to visit halal destinations (IVHD).

LITERATURE REVIEW AND HYPHOTHESES

Augmented Reality (AR) and Destination Awareness (DA)

Digital tourism has become a significant demand for tourists nowadays. The emergence of Augmented reality can be an enlightening breakthrough not only for tourism managers, but also for tourists (Idris et al., 2021). AR blends virtual content into the real world, AR provides a unique and immersive experience that allows tourists to gain a more real understanding of the destinations visited (Ariffin et al., 2022; Saputra and Iman, 2020). With AR, tourists can see additional information such as history, interesting facts, and stories about these places directly from the device. This allows tourists to gain richer, deeper insights and increase understanding of destinations. AR can also be used to visualize destinations before a visit allowing travelers to better plan their trips and have realistic expectations (Chung et al., 2015b, 2015a). Thus, the use of AR in the context of tourism destinations can significantly increase tourists' level of awareness and appreciation of the destinations they visit. AR is becoming a powerful technology in increasing awareness of tourist destinations . The use of AR can also provide travelers with immersive and interactive experiences, enabling them to develop a deeper understanding of the destinations they visit (Weng et al., 2021). Thus, empirically, it can be concluded that AR has been a predictor of tourist destination awareness from various aspects such as experiencing (Khalil et al., 2023; Trunfio et al., 2022; Zhu et al., 2023), marketing (Wu et al., 2023), motivating and inspiring (Ahmad et al., 2022), and satisfying (Anand et al., 2023; Trunfio et al., 2022).

H1. There is a positive and significant effect between AR and DA

Destination Awareness (DA) and Intention to Visit Halal Destination (IVHD)

The concept of DA is important in the tourism context as it influences tourists' perceptions, decisions and behavior. A high level of destination awareness can help tourists better plan their trips, choose destinations that suit their interests and preferences, and maximize the tourist experience they get (Alam et al., 2022a; Sharifpour et al., 2014b; Zhu et al., 2023). The level of Destination Awareness significantly influences tourist satisfaction and intention to return to halal destinations in the future (Amalia and Gunawan, 2022; Lada et al., 2022; Safira and Salsabilia, 2022). In-depth knowledge and experience of a destination can increase traveler satisfaction, as they can make better decisions and utilize a destination's potential more effectively (Anand et al., 2023; Trunfio et al., 2022). Several studies have shown that there is a positive relationship between DA and IVHD (Chen et al., 2014; Tsaur et al., 2016). DA has an important role to increase tourist interest in visiting a destination (Amalia and Gunawan, 2022).

H2. There is a positive and significant effect between DA and IVHD

Augmented Reality (AR), Destination Awareness (DA) and Intention to Visit Halal Destination (IVHD)

The use of AR studies the impact in strengthening the intention of Muslim tourists to visit halal destinations (Lestari et al., 2023; Sodawan and Hsu, 2022; Ulfy et al., 2021). Experience in using AR exploring halal destinations virtually can increase the interest and intention of Muslim tourists to visit these destinations in real terms (Amalia and Gunawan, 2022). Tourists can use AR technology to view information regarding access to mobilization, halal food and facilities (Bakar et al., 2020; Lestari et al., 2023; Sudarsono et al., 2021). This gives them the confidence and comfort to plan trips to halal destinations that suit their needs. Study of Ramadhani and Mochklas (2019) showed that the use of AR can provide an interactive and informative experience to Muslim tourists, strengthen their intention to visit halal destinations and access services that comply with halal requirements. Thus, the use of AR in the context of halal destinations can play an important role in influencing Muslim tourists' intentions to explore halal destinations. This also shows that the use of AR can play an important role in influencing the intention of Muslim tourists to visit halal destinations. AR can increase the interest, confidence and comfort of Muslim tourists in exploring destinations that meet religious and cultural needs. In this case, AR has the potential to enrich the experience of Muslim tourists and increase awareness (DA) and tourist participation in the halal tourism industry. The tourism industry is characterized by increasingly fierce competition, leading destinations to find new ways to attract tourists (Chen et al., 2014; Idris et al., 2021).

H3. There is a positive and significant effect between DA and IVHD

H6. DA mediates the relationship between AR and IVHD

Promotion-Mix Elements (PME), Destination Awareness (DA) and Intention to Visit Halal Destination (IVHD)

Tourism promotion is characterized by a unique human touch. This is because tourism services require human intervention that treats tourists as people who seek fun, authenticity and innovation. That is why tourism promotion is also known as creative promotion (Aldebi and Aljboory, 2017). Marketing promotion is one of the media considered, technology that helps promotion with respect to social media. Email marketing and digital marketing techniques have now played an important role with effective reach and impact in religious tourism (Venugopal and Murty, 2019). Promotion-mix elements consist of advertising, sales promotion, public relations, and direct marketing, on destination awareness and tourist intentions to visit halal destinations. The results showed that PME elements significantly contributed to increasing DA on IVHD. Effective advertising and well-targeted sales promotions can increase tourists' knowledge and awareness about Halal destinations, creating greater interest in visiting them (Garabinović and Milićević, 2021).

In addition, good public relations with Muslim tourists and effective direct marketing efforts also play a role in increasing DA. According to Tsaur et al. (2016) in exploring strong promotions through social media, websites, and brochures of halal destinations can significantly increase the level of destination awareness. Appropriate and interesting information about halal attractions, halal food, and facilities available at destinations can influence Muslim tourists' intentions to visit them (Lai and Vinh, 2013; Wu et al., 2023). Effective direct marketing is an important factor in increasing the knowledge and understanding of tourists about halal destinations (Ahmad et al., 2022; Bartoluci and Omrcen, 2003; Idris et al., 2021; Rončević et al., 2019b). By increasing DA, destinations can attract more Muslim tourists who are interested in visiting halal destinations and make a positive contribution to halal tourism, as well as create a satisfying tourist experience for Muslim tourists.

H4. There is a positive and significant effect between PME and DA

H5. There is a positive and significant effect between PME and IVHD

H7. DA mediates between PME and IVHD

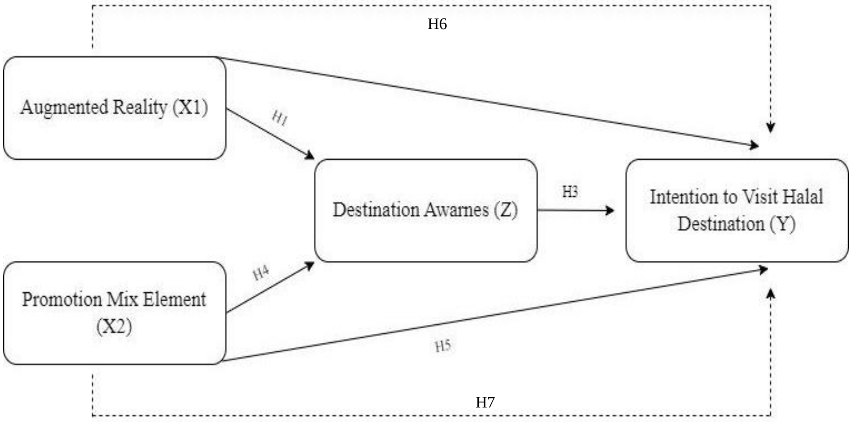

Figure 1. Conceptual framework Source: Created by author

METHODS

Research design

This study used a quantitative approach with an explanatory research design. The study was conducted at a tourist destination in Central Java, Indonesia with an unknown population. Meanwhile, the research process, in detail, can be seen in the flowchart as follows:

Sample Design and Data Collection

This study used a quantitative method with an unknown population of tourists because the numbers keep changing. So, the sample technique used the lemeshow formula (Syah et al., 2023), as follows:

$$n = \frac{Z\alpha^2 \ x \ P \ x \ Q}{d^2}$$

Info: n = minimum number of samples required; Z = Confidence score level 95% = 1.96; P = maximum estimate = 0.5;d = alpha of margin error 10%; Q = 1-P

$$n = \frac{1.96^2 \ x \ 0.5 \ x \ 0.5}{0.1^2} \qquad n = 96.04$$

Based on calculations using the Lemeshow formula (Syah et al., 2023), it is known that the number of samples is 96.04 or 100, so there must be at least 100 respondents. So, the sample of this study is 110 respondents. This research was conducted in Karimunjawa District, Jepara Regency, Indonesia. After obtaining permission directly from the Department of Tourism. Survey questionnaires were distributed online and offline between July and September 2022 to tourists. As an experiment, tourists try one of the SIPARTY application products (augmented reality tourism application system). After trying the SIPARTY application, 110 respondents filled out a questionnaire. Most of the respondents are male (68%), aged between 17-24 years (55%), work as students (45%), and their education is high school/vocational school level (45%) (Table 1).

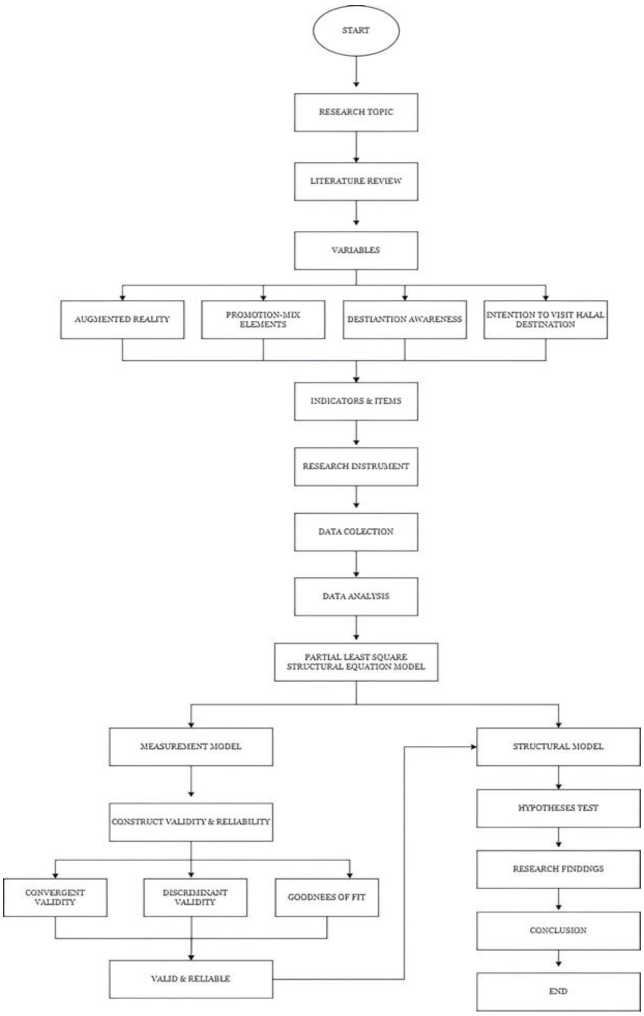

Figure 2. Flowchart of research method

Measures

This study used a correlation test with variables including AR, PME, DA, and IVHD. Assessment of instrument measurements through reliability and validity tests with the aim of identifying the level of accuracy and consistency of the tools used with the criteria of a loading factor value of more than 0.6 and an average variance extract (AVE) value of more than 0.5 in construct validity. Then, the composite reliability (CR) and Cronbach Alpha (CA) values must be above 0.7 and 0.6 respectively to review the reliability of the construct (Beckett et al., 2017; Hair et al., 2022). Empirical research from reliable and valid measurements has been published before being used which aims to operationalize the variables used in the research. Augmented Reality (AR) items are used to modify and find sources that are relevant to this research. There are 18 items in developing an instrument that measures AR which includes five indicators, namely information quality, system quality, personal innovativeness, risk and attitude (Chung et al., 2015a; Dieck and Jung, 2018). From this scale, 14 items were selected according to the provisions in the context of research on augmented reality. So, each item in the construct is measured and rated using a 5-point Likert scale from 1 "Strongly disagree" to 5 "Strongly agree". One example is "AR apps help me get important information". Table 2 shows that the AVE value is 0.851, CR is 0.957 and CA is 0.951. This indicates that the requirements of the reliability and construct validity criteria have been met.

Table 1. Distribution of respondent characteristics

Category	Info	n	Percentage
Gender	Male	68	62%
	Female	42	38%
Age	17-24	61	55%
	25-34	32	29%
	35-50	15	14%
	>50	2	2%
Education	Elementary	18	16%
	Junior School	17	15%
	Senior School	49	45%
	Bachelor/Master	26	24%
Job	Student	50	45%
	Private sector	23	21%
	Civil servant	1	1%
	Self-employed	29	26%
	Housewife	1	1%
	Others	6	5%

Table 2. Value of loading, AVE, composite reliability (CR) and cronbach alpha (CA)

Variabel	Indikator	Item		Loading	AVE	CR	CA
Augmented Reality (X1)	AR Information Quality	AR1	AR apps help me get important information	0.721	0.851	0.957	0.951
		AR2	AR applications present interesting information	0.782			
		AR3	The information displayed is in accordance with the original	0.724			
	AR System quality	AR4	The AR application provides various types of languages and the language used is easy to understand	0.784			
		AR5	Display quality (design) appeals to me	0.749			
		AR6	AR applications contain complete features (e.g: tourist locations)	0.772			
	AR Personalinnovativeness	AR7	I feel excited and happy to use AR applications	0.838			
		AR8	This app is innovative and fun	0.869			
		AR9	AR applications pay attention to the user's personal information	0.813			
	AR Risk	AR10	I feel safe while exploring and using AR applications	0.832			
		AR11	The risk of theft of the user's mobile number is low	0.835			
		AR12	Using AR apps while visiting tourist attractions is a great idea	0.742			
	AR attitude	AR13	AR applications make my travel experience more interesting and enjoyable	0.747			
		AR14	I love using AR apps as part of a sightseeing tour	0.738			
Destination Awareness (Z)		DA1	With the AR application, I am familiar with this tourist destination	0.851	0.838	0.902	0.856
		DA2	This tourist destination is very famous and the AR application helps me find this tourist destination	0.838			
		DA3	This is the first destination that came to my mind	0.841			
		DA4	It's easier for me to get to know tourist destinations because they are in the application, compared to other destinations that are not in the AR application	0.811			
Intention to VIisit Halal Destination (Y)		IVHD1	If I get the chance to travel, I intend to visit the tourist destinations mentioned on the AR app	0.868	0.841	0.938	0.917
		IVHD2	When I travel, it's likely that I visit tourist destinations mentioned in the AR app	0.872			
		IVHD3	I intend to visit this tourist destination after using the AR application	0.843			
		IVHD4	I will continue to visit this tourist spot in the future after exploring it on the AR app	0.880			
		IVHD5	I want to recommend this tourist destination to others after my experience using the AR application	0.868			
Promotion-Mix Elements (X2)	Advertisement	PME1	I had the opportunity to see various tourist destinations because of the AR application feature	0.773	0.811	0.900	0.876
		PME2	AR applications in transmitting/providing information on tourist destinations look interesting and complete	0.772			
	Publicity	PME3	Promotions and advertising offered in AR applications are free of charge	0.776			
		PME4	Tourist destinations provide modern and sophisticated promotional tools	0.757			
	Tourists' mental image	PME5	The current tourist destination has tourist attraction requirements and is better than I expected	0.738			
		PME6	I will suggest my colleagues, friends, relatives and family members to visit the tourist spots that I have visited this year	0.773			
		PME7	The costs incurred during visits on this tour are reasonable and appropriate	0.707			

DA variable instrument adapted from Lai and Vinh (2013) and Tsaur et al., (2016) to measure destination awareness with 4 items. All of these four items were used in this study because they were in accordance with the research context. All question instrument items are given a rating based on a 5-point Likert scale from 1 “Strongly disagree” to 5 “Strongly agree”. The following is an example of "With the VR application, I am familiar with this tourist destination". This can be seen in table 2 which shows the reliability and validity of DA items with an AVE value of 0.838 meaning that it has been fulfilled, CR and CA respectively of 0.902 and 0.856 which means that it has exceeded the requirements.

Variable Intention to VIisit Halal Destination (IVHD) uses 5 measurement items: "If I get the opportunity to travel, I intend to visit the tourist attractions mentioned in the VR application; When I travel, it is likely that I will visit the tourist destinations mentioned in the VR application; I intend to visit this tourist destination after using the VR application; I will continue to visit this tourist spot in the future after exploring it in the VR application; I want to recommend this tourist destination to others after my experience using the VR application." These five items have been modified based on previous studies (Chen et al., 2014; Chung et al., 2015b). IVHD item measurement uses a 5-point Likert scale, ranging from 1 "Strongly disagree" to 5 "Strongly agree". The instrument shows that the AVE value is 0.841, each CR is 0.938 and CA is 0.917. Thus, the variables in the instrument are stated to be consistent in measuring the construct.

Variable Promotion-Mix Elements (PME) for each item is measured on a 5-point Likert scale from 1 “Strongly disagree” to 5 “Strongly agree”. PME items are based on study of Aldebi and Aljboory (2017) with 9 items. However, only 7 items were taken which contained three indicators consisting of advertisement, publicity and tourists' mental image. One example is "I have the opportunity to see various tourist destinations because of the features of the AR application, the AR application in transmitting/providing information on tourist destinations looks interesting and complete and the promotions and advertisements offered in the AR application are free of charge." Table 2 explains that the AVE value is 0.811 , CR and CA are 0.900 and 0.876, respectively. So, it can be interpreted that the instrument used is in accordance with the requirements.

Table 3. Hypothesis testing using PLS **(Catatan: AR,** Augmented Reality; **DA**, Destination Awareness; **IVHD**, Intention to VIisit Halal Destination; **PME**, Promotion-Mix Elements)

Hypothesis	Variables	(β)	SE	sig.	Decision
1	AR (X1) -> DA (Z)	0.026	0.099	0.791	Not Supported
2	AR (X1) -> IVHD (Y)	-0.060	0.064	0.351	Not Supported
3	DA (Z2) -> IVHD (Y)	0.713	0.074	0.000	Supported
4	PME (X2) -> DA (Z)	0.568	0.103	0.000	Supported
5	PME (X2) -> IVHD (Y)	0.211	0.093	0.024	Supported
6	AR (X1) -> DA (Z) -> IVHD (Y)	0.019	0.071	0.792	Not Supported
7	PME (X2) -> DA (Z) -> IVHD (Y)	0.405	0.083	0.000	Supported

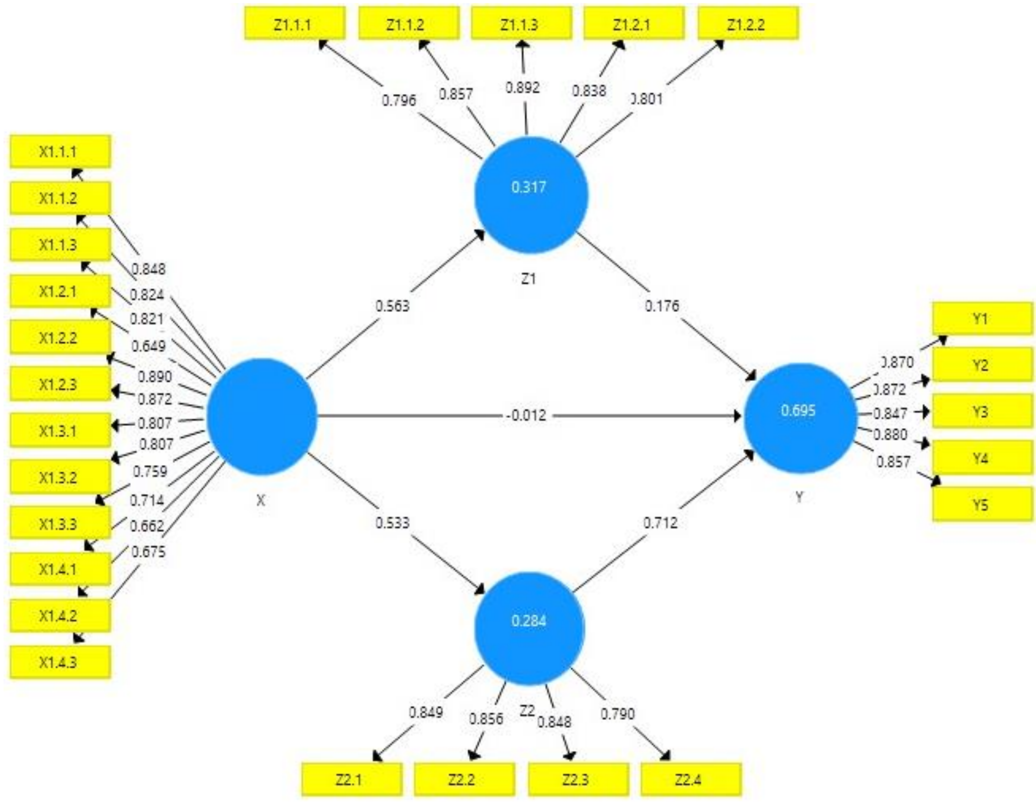

Figure 3. Path analysis

RESULTS AND DISCUSSION

This study used Partial Least Square (PLS) as data analysis with bootstrapping method of 500 sub-samples. The aim is to test the hypotheses that have been formulated previously. The development of the hypothesis is accepted if the results show that the significance level of the relationship between variables is less than 0.005. Table 3 presents the results of testing the relationship between variables. Table 3 and Figure 3 show that the relationship between AR and DA is negative with a value of β = 0.026, sig. = 0.791. This means that AR does not directly affect DA. Thus, H1 is rejected. Furthermore, AR (β = -0.060, sig. = 0.351) also showed no positive and significant effect on IVHD. This means H2 is rejected. Meanwhile, DA showed a positive and significant effect on IVD with a value of β = 0.713, sig. = 0.000. Thus, H3 is accepted. Furthermore, the value of the relationship between PME and DA is β = 0.568, sig. = 0.000, and PME and IVHD are β = 0.211, sig. = 0.024 respectively. This means that PME shows a positive and significant effect on DA and IVHD. Thus, H4 and H5 are accepted. Meanwhile, the results of the DA mediation test in the relationship between AR and IVHD showed that there was no effect between the two (β = 0.019, sig. = 0.792). Therefore, H6 is rejected. Furthermore, DA was shown to be a mediator between PME and IVHD with a value of β = 0.405, sig. = 0.000. So H7 is accepted.

AR, DA, and IVHD

The results of this study indicate that AR has a negative effect on DA. Although most of the previous studies showed significant results, the findings of this study show different results. AR, in this study, did not show a positive relationship with AD. This finding does not support previous studies (Chung et al., 2015a; Guazzaroni and Pillai, 2020; Maestro and Dumlao, 2019; Weng et al., 2021), but supports the research of Özkul and Kumlu (2019) which indicates that AR does not directly have a significant relationship with DA. Tourists' lack of understanding of the use of technology (Perry, 2020) and the existence of other more interesting media such as websites, android, and youtube is one of the rational reasons related to this finding (Qin et al., 2021; Sural, 2018). Several previous studies have shown positive and significant results related to the effect of AR on IVHD (Abidin et al., 2018; Chung et al., 2015a; Guazzaroni and Pillai, 2020; Weng et al., 2021).

The study of Özkul and Kumlu (2019) also shows that AR with the identification of halal products is positively related. Meanwhile, Arshad et al. (2017) and Çalışkan and Sevim (2021) examined between AR and accessibility of technology found that there is a positive effect between AR and IVHD. Although several previous studies showed significant results, in this study the results were different. AR and IVHD test results showed no positive and significant relationship between the two. Alam et al. (2022b) indicated that AR experiences felt by tourists distract from the actual environment and reduce the ability to navigate so that the desire or intention to visit halal tourism weakens. The experience provided by AR can create a real feeling and can reduce the authenticity of the tourist experience so that they feel bored and the intention to visit halal tourism is reduced. DA usually tends to have a less important role in influencing AR. However, Sharifpour (2014b) shows that DA has a positive and significant effect on IVHD. The findings of this study show the same thing. Puspitasari (1970) and Sodawan (2022) stated that halal destinations that have an awareness of the needs of Muslim tourists can attract interest in visiting these destinations. Halal tourist destinations that properly apply the concept of halal tourism can increase the loyalty of visiting Muslim tourists by providing halal principles. Thus, this can increase trust, loyalty, and intention to visit halal tourism (Lada et al., 2022; Wisker et al., 2023).

PME, DA, and IVHD

This study found that PME positively affects AD directly. This finding supports the research of Aldebi and Aljboory (2017), Kadir et al. (2020) and Astuti (2021) that the use of advertising, sales promotion, experiences, public relations and sophistication of technology can affect the level of awareness of tourists and the level of destination visits. In addition, advertising can be used to highlight the features of the elements as destination attractiveness. This can increase the awareness and interest of tourists (Mkumbo, 2018). Therefore, by using a combination of promotional elements, tourism marketing can effectively communicate the unique features of a destination, increase awareness and interest in tourist destinations (Bonelli and Leotta, 2021; Florido-Benítez, 2022; Sakshi et al., 2018).

Apart from having an effect on DA, PME also has a link with IVHD. Promotion-mixed elements can influence tourists' intentions to visit halal destinations. The results of this study also reveal that PME has a positive and significant effect on IVHD. These findings support a study of Yusuf et al., (2021) that tourist satisfaction influences their intention to visit halal destinations. Factors such as service quality, cleanliness, access, and promotion strategies can influence tourists' intentions to visit halal destinations (Giao et al., 2021; Lenggogeni and Febrianni, 2020; Yusendra and Paramitasari, 2018).

Indirect effect of AR and PME on IVHD through DA

This study also verified that there is no relationship between AR and IVHD through AD. For AR, the ability to master technology has an important role to use destination features (Magdi Orabi, 2022; Zagorc and Bernik, 2022). Kanwel et al., (2019) stated that tourists' lack of understanding of using technology would reduce their intention to return to halal destinations. The lack of experience, interaction and satisfaction of tourists distracts them from considering their intention to return (An and Lee, 2019; Manurung and Astini, 2020b). Therefore, DA does not mediate the relationship between AR and IVHD.

Lastly, this study proves that DA is shown to conclusively mediate the relationship between PME and IVHD. The study of Battour (2018) stated that marketing tourist destinations needs an understanding of Muslim travel behavior in meeting their needs, especially in the halal tourism industry. Promoting halal tourist destinations can increase tourist awareness of the availability of halal products and services at these destinations. This can help attract more Muslim tourists looking for Halal-friendly destinations. Thus, DA positively and significantly mediates the relationship between PME and IVHD (Bartoluci and Omrcen, 2003; Lai and Vinh, 2013; Tsaur et al., 2016). In addition, PME also has a positive and significant effect on DA and IVHD (Tangvitoontham and Sattayanuwat, 2022). These findings support the finding that awareness, perception, intention to visit, satisfaction, and loyalty are affected by PME (Yusuf et al., 2021). Apart from that, PME can also attract more Muslim tourists and create a positive image of the destination (Musa et al., 2021; Puad et al., 2016).

CONCLUSION

This study found that AR does not affect DA and IVHD nor did it indirectly affect IVHD through DA. Meanwhile, PME has a positive and significant effect both directly on DA and IVHD, and indirectly on IVHD through DA. In addition, DA, as a mediating variable, has been shown to have a direct effect on IVHD and can mediate the relationship between PME and IVHD. In contrast, DA does not mediate the relationship between AR and IVHD. These findings show that PME is able to increase the attractiveness of tourist awareness of a halal destination. If tourists understand and know information about a destination through promotion, it will affect the intention of tourists to visit the destination. Thus, the use of technology in the form of augmented reality with promotions must be utilized optimally. The existence of proper and effective promotion will attract awareness about the existence of halal destinations and will attract tourists' intention to visit halal destinations.

Limitation and Future Research

This research has several limitations, including because the use of AR in the promotion of halal destinations is still relatively new and still limited, so many tourists are not proficient in accessing it. This can affect the effectiveness of using AR in increasing DA and IVHD. Further research can be conducted to evaluate the effect of using augmented reality on awareness of halal tourist destinations. This can help in determining the effectiveness of using AR in the promotion of halal destinations. Therefore, it is important for marketers and tourism stakeholders to consider the positive and negative impacts of using AR in destination promotion and ensure that its use does not reduce the intention of tourists to return to halal destinations.

Author Contributions: Conceptualization, I.I.; methodology, A.H.; software, A.H. and N.B.I.S.; validation, I.I. and N.B.I.S.; formal analysis, K.R.A. and A.H.; investigation, I.I. and K.R.A.; data curation, A.H. and I.I.; writing - initial drafting, N.B.I.S. and I.I.; writing - review and editing, I.I. and A.H.; visualization, A.H. and K.R.A.; supervision, K.R.A.; project administration, I.I. All authors have read and approved the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 22.05.2023 Revised: 01.08.2023 Accepted: 07.09.2023 Available online: 27.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1134-1143
DOI 10.30892/gtg.49328-1112

THE ROLE OF TOURISM IN THE REGENERATION OF PERIPHERAL NEIGHBOURHOODS: A COMPARISON BETWEEN ALCÂNTARA (LISBON) AND BAGNOLI (NAPLES)

Luis Miguel BRITO
Escola Superior de Hotelaria e Turismo do Estoril (Estoril Higher Institute for Hotel and Tourism Studies), Estoril, Portugal, e-mail: miguel.brito@eshte.pt

Luca ZARRILLI[*]
University "G. d'Annunzio" of Chieti-Pescara, Department of Economic Studies, Pescara, Italy, e-mail: luca.zarrilli@unich.it

Citation: Brito, M.L., & Zarrilli, L. (2023). THE ROLE OF TOURISM IN THE REGENERATION OF PERIPHERAL NEIGHBOURHOODS: A COMPARISON BETWEEN ALCÂNTARA (LISBON) AND BAGNOLI (NAPLES). *GeoJournal of Tourism and Geosites*, 49(3), 1134–1143. https://doi.org/10.30892/gtg.49328-1112

Abstract: The urban geography of tourism destinations is always changing. These changes are part of a process of polarization in which some neighborhoods become increasingly popular, while others start to decline. We may observe these facts in such cities as Lisbon and Naples, two destinations that benefit from a strong tourism dynamism, mainly cultural. Despite the millions of visitors every year, both supply and demand are not homogeneous in these cities, concentrating demand in the Historical centres. It is undeniable that both Lisbon and Naples have more to offer, with a vast and differentiated heritage throughout all parts of the city. Despite being recognized as quality destinations, the polarization of supply and demand must be fought, allowing the sustainable growth of the Historic Centres and other urban areas. This paper aims to contribute to the debate on the way in which peripheral neighborhoods are transformed following the advance of tourism, in the context of the centre-periphery relationship on an urban scale and in the light of the functional rearrangement that accompanies the processes of urban regeneration. A comparison will be made between two former industrial peripheries: Alcântara (Lisbon) and Bagnoli (Naples). In addition to the bibliographic and documentary analysis, the authors have carried out an intense fieldwork, aimed at the census of the tourist facilities and their comparison. The results of the research show that Alcântara has undergone a process of urban regeneration in recent years which fostered tourist development, while Bagnoli seems to be stuck in a state of incapacity to develop a systemic regional planning, which also affects the pace of a possible tourist prospect.

Key words: Alcântara, Bagnoli, urban tourism, urban peripheries, urban regeneration, industrial tourism

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INTRODUCTION

The centre-periphery dichotomy is generally interpreted in terms of economic, cultural, political, and logistic dependence of the periphery on the centre, and this is not only for reasons strictly related to the geographical distance but also on the basis of sociological and anthropological considerations (Molinari, 2021; Zorina et al., 2023). This attitude is very evident on an urban scale, not only in developing countries but also in advanced ones, which invest large resources in regeneration projects of suburban neighbourhoods (Hackworth, 2006). Besides, neighbourhood change is dynamic and can often have a process phase that is shorter than the typical decennial intervals used in analyses, meaning that many cycles are missed (Gray et al., 2023). On the other hand, urban peripheries are complex, heterogeneous, and difficult to define univocally. They can also be dynamic places capable – often more than the centres – of welcoming and even stimulating innovation, and "heritage-related initiatives should not be restricted to cultural and historical centers" (Zorina et al., 2023). This is not only because they often have the physical space necessary for planning, but because, as Petrillo argues, "the periphery produces new ideas, which break with the norms imposed by the centre and are creative, not only from an aesthetic point of view but also from a political one" (Petrillo, 2018: 91). This article aims at contributing to the debate on a specific aspect of the centre-periphery relationship: the way in which the peripheral neighbourhoods are transformed internally, but also in their relationship with the centre (Fredriksson, 2017; Moya et al., 2023), following the advance of tourism, all this in the light of the functional rearrangement that accompanies the processes of urban regeneration (Barbini and Presutti, 2014). The most suitable urban regeneration strategies can be tailored by considering the regeneration constraint factors including the requests for historical and cultural conservation, government financial capacity and previous regeneration experiences (Liu et al., 2023; Deac et al., 2019). Tourism, with its pervasive force, moving from the centre invades urban "frontiers": areas previously considered peripheral (such as, for example, former industrial sites, degraded working-class neighbourhoods, and peri-urban areas) acquire a new centrality and are transformed into spaces for leisure, culture, advanced tertiary sector, tourism (Ashworth and Page, 2010; Berdenov et al., 2021; Gozner et al., 2021).

A comparison will therefore be made between two former industrial peripheries of two cities – Lisbon and Naples – which, despite the obvious differences, have some common features: a strong historical-cultural identity, made up of material but also

[*] Corresponding author

immaterial elements, such as gastronomy and music; a scenic dimension due to the amenity of the site and the hilly orography, which in turn requires specific means of transport (funiculars, urban lifts, the *electrico* – the tramway – in the case of Lisbon); the proximity to the water – river for Lisbon, sea for Naples – which gives them a particular glow and makes them very suitable for television, cinematographic and advertising shootings, also helped in this by generally mild climatic conditions; a very lively trend of tourist development, quite recent for Naples, now consolidated for Lisbon (Barata Salgueiro et al., 2017).

In particular, Alcântara (Lisbon) and Bagnoli (Naples) neighbourhoods will be analysed. Alcântara is going through a phase of great transformation from industry to services, with good tourist prospects, whereas Bagnoli is a neighbourhood with a problematic industrial past that is struggling to start a regeneration process, which would allow it to regain its early tourist vocation. Both districts are located on the outskirts of large cities, near the coast, and in pleasant natural contexts; of the industrial past, they partially conserve the physical facilities and the social landscape; they are located between the historic centre and tourist areas that are strong or emerging: Alcântara borders the famous Belém district, where some of the most important museums and monuments of Lisbon are located; Bagnoli is located on the eastern edge of the Campi Flegrei area, which is currently undergoing a tourist growth. We will therefore try to understand the transformation process that is taking place in the two districts also through their comparison, made possible and stimulating by the remarkable similarities on the one hand and by the different rhythms and methods of implementation on the other. The above-mentioned comparison will allow the authors to suggest new paths for the two neighborhoods tourist evolution, applying to Bagnoli some ideas experienced in Alcântara and vice-versa.

MATERIALS AND METHODOLOGY

Since statistical data are not available at the neighbourhood level (except those related to accommodation facilities), we have adopted a methodological approach based on the new trends in cultural geography (direct observation, analysis and interpretation of territories and cultural landscapes. See Claval et al., 2005).

Therefore, the methodology used in this article is essentially qualitative and in the first instance is based on a bibliographic and documentary analysis. The literature on the redevelopment of urban peripheries, industrial tourism, and the evolutionary history of the two districts, with particular reference to their industrial past, was consulted (Bujok et al., 2014; Bujok et al., 2015; Chmielewska and Lamparska, 2012; Gelbman, 2007; Keil et al., 2022; Mansilla and Milano, 2019; Mazzetti, 2001; Mendes, 2013; Tallon, 2010; Tulumello, 2015, Vidal, 2014; Vidal, 2015; Xie, 2015).

The regeneration plans drawn up by the municipal governments and, in the case of Bagnoli, also by the national government were examined (Invitalia). In addition, other documents issued by the competent bodies in the field of demography, territory, and tourism were analysed, as well as statistics on existing accommodation facilities (INE, Turismo de Portugal, Comune di Napoli). Simulations were run on Internet sites dedicated to hotel reservations. Finally, intense and repeated fieldwork was carried out, aimed at the census of the tourist facilities and their comparison – natural and cultural heritage, sports, and cultural facilities, among others. Figure 1 summarizes the methodology adopted in this study.

```
Methodology Flow Chart
---Decide Aims and Goals
--- Bibliographic and Documentary Analysis
   |--- Literature Review on
   |     |--- Redevelopment of Urban Peripheries
   |     |--- Industrial Tourism
   |     |--- Evolutionary History of Districts
   |     |     |--- Industrial Past
   |     |--- References to Various Sources
   |--- Examine Regeneration Plans
   |     |--- Municipal Governments
   |     |     |--- National Government (Bagnoli)
   |--- Analyse Documents
   |     |--- Demography, Territory, and Tourism
   |     |--- Statistics on Accommodation Facilities
   |     |     |--- INE - Statistics National Institute, Portugal
   |     |     |--- Turismo de Portugal (Tourism of Portugal)
   |     |     |--- Comune di Napoli (Naples Municipality)
   |     |     |--- Run Simulations on Hotel Reservation Websites
--- Conduct Fieldwork
   |--- Census of Tourist Facilities
   |--- Comparison of Facilities
   |     |--- Natural and Cultural Heritage
   |     |--- Sports Facilities
   |     |--- Cultural Facilities
   |     |--- Others
--- Results and Findings
---Conclusion
```

Figure 1. Research flow chart
(Source: developed by authors, based on OpenAI, 2023)

ADMINISTRATIVE AND HISTORICAL NOTES ON ALCÂNTARA

The *freguesia*[1] of Alcântara counted 13,850 inhabitants in 2021 (INE) and has an area of 5.07 sq. km (IGP). Located in the western part of Lisbon, it borders the *freguesias* of Estrela and Campo de Ourique to the east, those of Ajuda and Belém to the west, those of Benfica and Campolide to the north, while it overlooks the Tagus River to the south (Figure 2).

The origins of Alcântara date back to prehistoric times, but the first historical information refers to a Roman bridge, which in *Horta Navia* (the toponym that the Romans gave to this place) crossed a tributary of the Tagus (later called *ribeira*[2] *de Alcântara*). Today the stream is partially subterranean, but at that time this region of the western suburbs of Lisbon was very fertile (Freire, 1929). The name of the neighbourhood is instead of Arabic origin: *al-quantãrã* meaning "the bridge".

The first examples of industrialization in Alcântara date from the first half of the eighteenth century. Starting from 1725, in fact, the Marquis of Pombal, prime minister of King Joseph I, located various industrial activities there, such as the royal silk factory, the gunpowder factory, and the tanneries. But it was in the following century that the great industrial development of the neighborhood took place. Among the first factories of the nineteenth century were those of ceramics, but soon also cotton spinning mills, woolen mills, printing houses, foodstuffs, cereal mills and, later, even heavy industries such as chemistry and metallurgy were established (as a tall chimney still present in the neighborhood reminds us, Figure 3), the latter being transferred to the left bank of the Tagus after the construction of the 25th of April bridge, in 1966.

[1] Civil parish, the third level of the administrative division of Portugal
[2] The term *ribeira* indicates a secondary water course, a stream

In the 1980s, when the "culture of pleasure" (Zarrilli and Brito, 2013; Xie, 2015) established itself in the lifestyle of young Lisboans, Alcântara became very popular for its nightclubs, built inside old factories, far from the eyes (and the ears) of the residents. Today Alcântara is a very dynamic and fashionable district, affected by important reconversion projects of dismissed industrial and port facilities that characterize the landscape and define its identity (Figure 4).

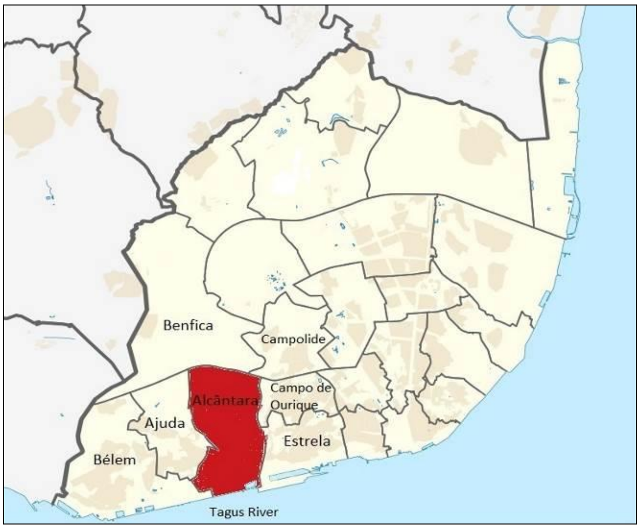

Figure 2. Administrative division of Lisbon (Source: Our elaboration on Wikipedia Commons. https://commons.wikimedia.org/wiki/File:Portugal_Lisbon_location_map.svg)

Figure 3. Dismissed chimney in a new residential complex (Source: Authors)

Figure 4. The commercial port of Alcântara (Source: Authors)

Figure 5. LX Factory (Source: Authors)

TOURIST RESOURCES OF ALCÂNTARA

In the imagery of Lisbon residents, Alcântara has always been an industrial district, although there are no more factories and its appearance has changed a lot in recent years, also thanks to the construction of numerous modern buildings: the CUF 2 hospital, the Hyatt Regency hotel, several offices and apartment blocks. Unlike the nearby neighborhood of Belém, Alcântara is frequented by a type of tourist that we could define as "unconventional", who go there, first of all, to visit the LX Factory, a successful example of reconversion of a 23,000 m^2 industrial complex dating back to 2008 (Zarrilli and Brito, 2021; Zarrilli et al., 2019). It is a multifunctional space aimed at a young audience, where trendy restaurants and cafés stand out, a bookshop decorated in a very original way, art studios, and shops selling design products, clothes, and shoes made by alternative designers and stylists. In addition, there is a hostel, around 200 offices, and several start-ups (Figure 5).

Figure 6. View of Alcântara from the 25th of April bridge (Source: Authors)

The LX Factory is also very popular in the evening as it hosts several nightclubs, as is indeed the tradition in the neighbourhood: as already mentioned, in Alcântara some old factories had already become famous discos, bars, and restaurants starting from the 80s, while after the 2000s the warehouses and depots located along the Tagus River, the so-called Docas, were transformed into restaurants and venues that are very popular with both Lisboans and tourists.

Near the LX Factory is the scientific and cultural centre of Macao, located in the eighteenth-century palace of the Pinto Basto family, founders of the famous Vista Alegre porcelain and glass factory, still today a producer of the best Portuguese porcelain. The building houses a specialized library and a museum that includes an exhibition of over 400 Sino-Portuguese pieces. However, the oldest museum in the neighborhood is that of Carris, the urban transport company, where the visitor can follow the history of Lisbon's trams and buses and where various events take place. In the same complex is the Village Underground, a reproduction of the English space of the same name, made up of 14 dismissed containers and two old buses transformed into offices and co-working spaces.

Not far from the Docas, in an old warehouse for storing cod, stands the Museum of the Orient, which houses permanent and temporary exhibitions of oriental art with Portuguese influence and vice versa. New museums have also been built in recent years. The Berardo museum, set up in a building with a facade covered in *azulejos*[3], houses objects in Art Nouveau and Art Deco styles belonging to the private collection of the entrepreneur Berardo. The Pilar 7 (Pillar 7) is instead a small museum located in the pillar of the 25th of April bridge. An elevator takes one up to the level of the actual bridge, from which it is possible to enjoy a panoramic view of the city and the river (Figure 6).

Still speaking of urban landmarks, it must be said that Alcântara valley is crossed by the most monumental part of the eighteenth-century Aqueduct "das Águas Livres" – with a total length of 19 km – which, like the 25th of April bridge, is part of the iconography and of the cityscape of Lisbon. As far as the historical and cultural heritage is concerned, the remarkable Hermitage of Sant'Amaro should be mentioned in the first place. It is a circular chapel, unique in Lisbon, decorated with seventeenth-century tiles that tell the story of the saint (Figure 7). From the square in front, you can enjoy a beautiful view of the Tagus and of the 25th of April bridge.

Figure 7. Sant'Amaro Chapel (Source: Authors)

The architectural heritage of Alcântara also includes ancient estates (*quintas*) and aristocratic palaces, unfortunately closed to the public. An exception is the Vale Flor Palace with its gardens, now transformed into a 5-star hotel, one of the most elegant in the city. In Alcântara there are several green and leisure spaces, such as the Tapada da Ajuda, the former royal hunting reserve now open to the public, as well as the tourist port of Sant'Amaro in the Docas area, which specialized in services for boating and water sports (Figure 8). Furthermore, it is worth mentioning the Fun Track, an open space intended for a very young audience who can practice skating or cycling and rent bicycles, skateboards, go-karts, skates, and street-surf boards.

Finally, it should be noted that Alcântara is one of the most interesting districts of Lisbon in terms of street art, which is present with various works by internationally known artists, such as AkaCorleone, Bordalo II, How and Nosm and Vhils.

From what has been described above, we can state that Alcântara has a rather diversified tourist supply, which ranges from the more traditional to the more innovative types of urban cultural tourism. They are made usable through the recovery and reuse of facilities belonging to the industrial past and are aimed above all at a young clientele looking for an alternative experience to the more usual itineraries, as evident from previous analyses (Zarrilli and Brito, 2017; Zarrilli et al., 2019; Zarrilli and Brito, 2021). From the point of view of tourist accommodation, Alcântara is emerging as a secondary nucleus with respect to the more central districts and as a valid alternative in terms of cost and logistics. In Alcântara there are three large hotels of high or very high level (one 4-star and two 5-star), for a total of 657 rooms and 1,314 beds. On the other hand, a growing part of the housing stock is now intended for tourist accommodation.

[3] Ceramic tiles with a glazed and decorated surface, widely used, among other things, to cover the facades of buildings

We are talking about the phenomenon known as airbnbsation (Sequera and Nofre, 2018), which we have tried to quantify using the data available in the *Registo Nacional de Turismo* (Turismo de Portugal): as of 31st of December 2022, 445 units were officially registered in Alcântara, for a total number of 1,417 beds. It should be emphasized that not all registered units are necessarily operational[4]: On 31st May 2023, we made an inquiry on the hotel reservation site Booking.com, from which it turned out that 106 units are effectively available for tourist accommodation.

Figure 8. Boats moored at the Docas (Source: Authors)

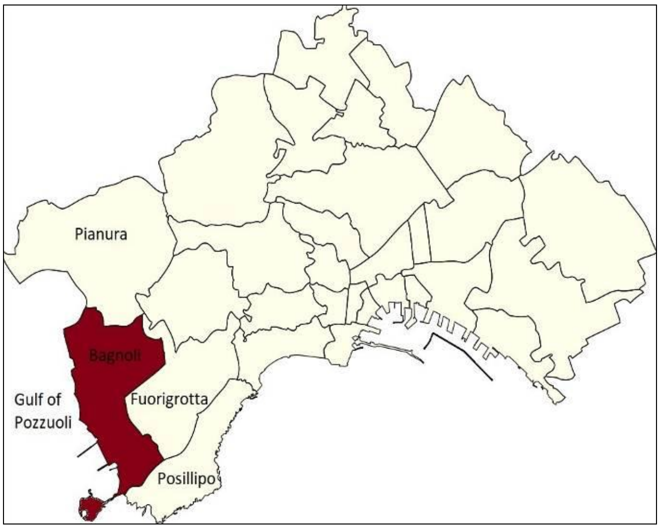

Figure 9. Administrative division of Naples (Source: Our elaboration on Wikipedia Commons. https://it.wikipedia.org/wiki/File:Quartieri_di_Napoli_-_vuoto.svg#globalusage)

ADMINISTRATIVE AND HISTORICAL NOTES ON BAGNOLI

Bagnoli district is part, together with the Fuorigrotta district, of the 10° municipality of the city of Naples. Its area is 7.96 sq. km, with a population of about 28,579 inhabitants as of 2001[5] (Comune di Napoli). It borders with Pianura neighbourhood and the city of Pozzuoli to the north, with Posillipo neighbourhood to the south, with Fuorigrotta neighbourhood to the east and it overlooks the Gulf of Pozzuoli to the west. The islet of Nisida is part of Bagnoli and is connected to the mainland by a long pier (Figure 9). The toponym Bagnoli comes from the Latin *Balneolis* (bathing area), as in ancient times this area had several thermal springs frequented by the Greeks and the Romans. Bagnoli is in fact part of the Campi Flegrei, a vast area located in the Gulf of Pozzuoli, west of the city of Naples, that is known for its intense volcanic activity, as well as for the beauty of its landscape and for the important historical-archaeological heritage.

At the end of the 19th century, the brilliant architect Lamont Young gave Bagnoli, at the time a small village of fishermen and farmers, a central role in a futuristic urban project for the development of tourism in the western part of Naples. However, the project was never implemented. In fact, various lidos and spas were already present in Bagnoli at that time. For instance, Lido Fortuna dates back to 1891, is one of the first in Naples, and is now back in business.

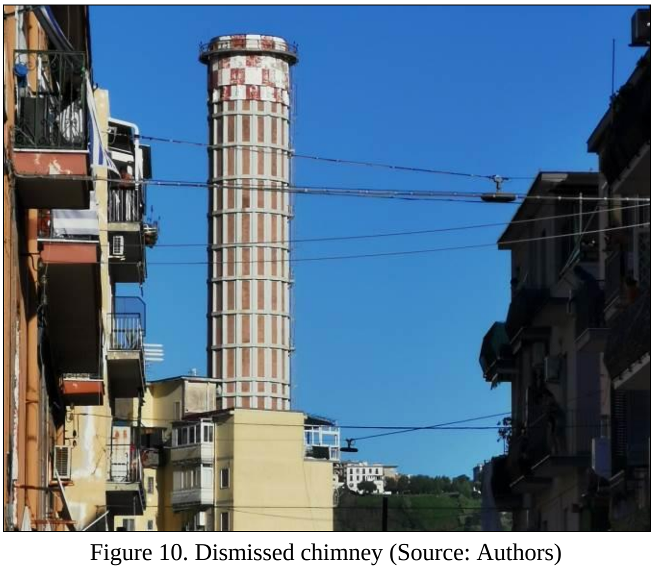

Figure 10. Dismissed chimney (Source: Authors)

Figure 11. The north jetty (Source: Authors)

[4] However, the figure is indicative of a significant – and increasing – accommodation capacity: the same figures as of 31.12.2018 were 260 and 846 respectively (Zarrilli et al., 2019:73);

[5] Last available figure at neighbourhood level. Subsequent figures are aggregated at municipality level.

The industrial history of Bagnoli, characterized by the massive presence of heavy industry, especially the iron and steel one, began in the early twentieth century, underwent ups and downs and ended definitively in 1992, when Italsider, the major public company settled in 1910, ceased production. At that time environmental and landscape concerns were still very rare and limited to a few enlightened minds. Thirty years after, the identity of Bagnoli as a working-class neighbourhood is still present and can be perceived in many features of the social and cultural landscape: suffice it to say that the chimneys of the dismissed plants stand out on the margins of the urbanized area, having now almost reached the status of landmark for the neighbourhood (Figure 10). Unfortunately, very little has been achieved in terms of functional reconversion of the industrial facilities. To date, four recovery projects have been implemented: Città della Scienza (City of Science), a multifunctional cultural institution dedicated to research, technological innovation and scientific dissemination[6], partially destroyed by arson in 2013; Pontile nord (north jetty), about 900 meters long, built in 1962 for the docking of large tonnage vessels, now converted into a scenic walk (Figure 11); Parco dello Sport (Sport's park), a 340,000 m^2 multi-sport and recreational complex, completed in 2010 and never operational (today in need of restoration); Auditorium "Porta del Parco", that reopened in December 2022 after more than a decade of inactivity.

Finally, it should be noted that in May 2021 Invitalia (the National Development Agency, responsible for implementing the revitalization of Bagnoli) published the details of the project which won the first prize in the competition it launched to transform the 250 hectares of the former industrial area in one of the largest urban parks on an international scale. The winning project, developed by a group of urban planning experts and called "*Balneolis e la nuova stagione felix*, "tells the return to the ideal of Campania Felix[7], according to a contemporary interpretation of the *genius loci*, which is expressed by means of the enhancement of the natural, agricultural, chromatic, aesthetic and well-being features that are typical of this site" (https://bagnolicontest.invitalia.it/i-progetti/primo-classificato). This project should be realised in the next years, but at the moment the timing and methods of implementation are not clear.

Figure 12. The former industrial area of Bagnoli (Source: Authors)

Figure 13. Free beach in Bagnoli (Source: Authors)

Figure 14. Boats moored near Nisida (Source: Authors)

Figure 15. View of Nisida from Posillipo hill (Source: Authors)

[6] Over the years it has received numerous awards, including those for scientific communication, the best European scientific museum, and the best new business incubator.
[7] The name used during the Roman period to indicate the present region of Naples.

TOURIST RESOURCES OF BAGNOLI

The tourist prospect of Bagnoli, very promising between the end of the 19th century and the beginning of the 20th century, was hindered by the industrialist choice, which handed over to posterity a territory that so far has been very difficult to recover, for a number of reasons ranging from objective difficulties to the incapacity and the corruption of the political class, from the disagreements between national, regional and municipal governments to the interference of organized crime (Figure 12). Bagnoli is above all a coastal district with a seaside vocation: in fact, it has some facilities (Lido Fortuna, which was mentioned before, and L'Arenile, a beach club with a swimming pool and a lounge bar), not to mention the stretches of free beach that could be equipped and managed by the Municipality of Naples (Figure 13). All this provided that the sea is cleaned of pollutants and officially made suitable for bathing – in fact, bathing already takes place, in spite of the prohibitions.

Boating could also be an interesting perspective for the district: the wide availability of moorings during the summer season could also be aimed at an audience of extra-regional or foreign boat owners visiting the Gulf of Naples (Figure 14).

Thermal bathing could also be enhanced. Currently, there is only one facility, Terme di Agnano, located in what was once a volcanic crater. The Romans already knew its therapeutic properties, and in fact, archaeological finds dating from the IV-III century BC are visible on the site. Bagnoli is also related to horse riding and horse racing. First of all, it houses the Agnano Racecourse, where international-level competitions are held. Furthermore, there is the Neapolitan Riding School, which has three stables, a dressage field, and a green field where, in the past and for several years, the International Show Jumping Competition was hosted. On the cultural tourism side, the City of Science should be mentioned: it was the first Italian interactive science museum, and in 2012 counted as many as 350,000 visitors (Città della Scienza).

A visit to the City of Science could be combined with that of the adjacent Pausilypon Archaeological Park, which is easily accessible from Bagnoli, even if it belongs to the Posillipo district from an administrative point of view. It is an archaeological site of great interest, that can be reached through the so-called Grotta di Seiano, a pedestrian tunnel from the Roman era more than 700 meters long which connects the Bagnoli plain to the Pausilypon villa, built in the 1st century BC by the Roman patrician Publius Vedius Pollio. The Literary Park of Nisida should also be mentioned: the islet of Nisida (from the Greek νησίδον, small island) is the headquarters of the Juvenile Correctional Facility of Naples and therefore is not normally accessible by the public. Nevertheless, for some years it has hosted a Literary Park, periodically open to the public thanks to guided tours that lead visitors along ancient paths now recovered in an itinerary that is both naturalistic and cultural (Figure 15). Besides the "Porta del Parco" Auditorium, Bagnoli has other spaces and facilities suitable for international-level concerts, as happened occasionally in the past.

From the nature tourism point of view, Bagnoli hosts, together with the city of Pozzuoli, the Astroni Crater State Nature Reserve, recognized as a Special Conservation Area and Special Protection Area.Furthermore, Bagnoli has good conditions for the development of residential tourism and could turn into a peripheral tourist accommodation area for the city of Naples: the strategic position[8] and the easy accessibility can explain the presence of four hotels[9], two of which are 4-star (Montespina Park Hotel, Hotel Nuvò) and two 3-star (Hotel Villa Maria, Hotel Taromy), for a total of 113 rooms and 236 beds. As for bed & breakfast and tourist apartments, no neighbourhood-level data are available. Therefore, as for Alcântara, on 31st May we carried out a survey on Booking.com, which revealed that there are only 22 units[10].

RESULTS AND FINDINGS: ALCÂNTARA AND BAGNOLI, TWO NEIGHBOURHOODS COMPARED

We want to underline once again that the industrial past is the aspect that most makes the two districts similar and comparable, also shaping their identity and directing their urban development. The industrial legacy is perceived above all in terms of the urban landscape, characterized by the presence of plants, chimneys, and warehouses, already converted or to be converted to new functions.

Coming instead to the central theme of our discussion, we can affirm that both Alcântara and Bagnoli have great tourist potential. These are two different realities which, as mentioned before, despite the differences, have some geographical and historical characteristics in common: In addition to sharing an industrial past, they are located on the outskirts of two tourist cities, in pleasant locations near the water (along the seashore in the case of Bagnoli, on the riverside in the case of Alcântara), have good road and railway connections, spaces suitable for hosting shows, museums and accommodation facilities sufficient to accommodate a number of guests appropriate to the current stage of their tourism development.

As far as accommodation facilities are concerned, it must be said that Alcântara's supply is more urban, considerable, widespread, and of a higher category. If Bagnoli wants to have a tourist future, investments will be needed in accommodation facilities – it must be said that the planned recovery of the Hotel Antiche Terme Tricarico goes in this direction.

The cultural heritage of the two neighbourhoods is quite dissimilar. In Alcântara there are many aristocratic palaces, especially along Rua da Junqueira, five museums with very diversified themes (transports, Orient, Macao, Art Deco, construction of the 25th of April bridge), and five religious' monuments, while in Bagnoli we find only two museums: the City of Science and the Sea Museum. On the other hand, Bagnoli has the Literary Park of Nisida, occasionally visitable by the public, while in the immediate vicinity, there is the entrance to the Pausilypon Archaeological Park, a testimony of classical antiquity of which no examples have survived in the case of Alcântara.

[8] Bagnoli has a central position between two areas that are growing from a tourist point of view: the Posillipo hill, an exclusive and scenic neighbourhood, and the city of Pozzuoli, the main urban centre of the Campi Flegrei.

[9] The re-opening of the Hotel Antiche Terme Tricarico is also planned: Active between the end of the nineteenth and the beginning of the twentieth century and located along the scenic coastal road leading to Pozzuoli.

[10] The same inquiry, carried out in September 2022, gave a result of 15 units. It should be noted that, albeit limited, there has been an increase in terms of accommodation capacity.

If we talk about infrastructure, the comparison can be between the bridge over the Tagus, 2,200 meters long, accessed with a lift, and the north jetty of Bagnoli, which allows scenic walks. As far as the natural heritage is concerned, both neighbourhoods have naturalistic areas: In Bagnoli, there is the Astroni Crater State Nature Reserve, while in Alcântara it's possible to visit the Tapada da Ajuda Park and Botanical Reserve, formerly a royal family hunting ground.

There is a certain balance regarding the leisure facilities. Both districts have moorings for boating. In Bagnoli, there are many clubs, discos, lounge bars, venues for concerts and events, a cinema, social gathering centres, the seashore with a beach club, a lido, and stretches of free sandy beaches. Furthermore, it's possible to attend the Agnano thermal complex, the Agnano Racecourse, and the Neapolitan Riding School. There is no beach in Alcântara, but the nightlife is just as vibrant at LX Factory, Village Underground, Docas and other dismissed industrial facilities. Not to mention the Fun Track, where it's possible to do skating, cycling, skateboarding, driving karts, street surfing, etc.

Table 1. Comparison between the tourist facilities of Alcântara and Bagnoli (Source: Authors)

Alcântara	**Bagnoli**
Accommodation	
• 3 hotels (5 stars: Pestana Palace, Hyatt Regency Lisbon; 4 stars: Villa Galé Opera (total rooms – 657; total beds – 1314) • 106 B&B and tourist apartments (including hostels). Inquiry carried out on Booking on 31st May	• 4 hotels (4 stars: Montespina Park Hotel, Hotel Nuvò; 3 stars: Hotel Villa Maria, Hotel Taromy) • 22 B&B and tourist apartments. Inquiry carried out on Booking on 31st May
Leisure facilities	
• Fun Track (skating, cycling, skateboarding, karts, street surfing, etc.) • LX Factory (restaurants, bars, bookstore, shops, ateliers, art galleries) • Village Underground (co-working, restaurants, concerts, DJ set) • Docas de Santo Amaro (restaurants, bars, discos) • Night clubs (Havana Bar, Alcântara Café, Microclub, Bosq, Radio-Hotel, etc.) • SPEP UP – People's University of the Society for the Promotion of Popular Education	• Porta del Parco Auditorium • La Perla Cinema • Discos, lounge bars, concerts and events venues (Arenile di Bagnoli, ex-base NATO, Riva club, Nevermind, Club Partenopeo, HBTOO, Post Aperitif Club, Rotonda Belvedere) • Community centre Villa Medusa • Ilva Club • North Jetty
Museums	
• Carris Museum • Macau Museum • Berardo Art Deco Museum • Oriente Museum • Pilar 7 - Bridge Experience	• City of Science • Sea Museum
Historical and cultural heritage	
• Flamengas Convent • Santo Amaro Chapel • S. Pedro de Alcântara Chapel • S. José Chapel • Nª Srª de Fátima Chapel • Many aristocratic palaces • Street art works	• Pausilypon Archeologic Park • Nisida Literary Park
Natural parks and reserves	
• Tapada da Ajuda Park and Botanical Reserve	• Astroni Crater State Nature Reserve
Sport, beach and thermal facilities	
• Moorings for boating • Sailing school Treino de Mar • Padel club	• Moorings for boating • 1 lido (Lido Fortuna) • 1 thermal facility (Terme di Agnano) • stretches of free sandy beaches • Agnano Racecourse • Neapolitan Riding School • Park of the Sport (not operational)
Academic facilities	
• Higher Institute of Agronomy • Higher Institute of Police Sciences and Homeland Security	• 1 branch (out of 3) of the Polytechnic and Basic Sciences School (Engineering), University of Naples "Federico II"
Cultural facilities and scientific institutions	
• Alcântara Congress Centre • Historical Archive of GNR (Guarda Nacional Republicana) • Alcântara library	• IDIS Foundation – City of Science • Business Innovation Centre • City of Science Congress Centre • City of Science Higher Education Centre • Turtle point (sea turtle research and rehabilitation centre)
Transports	
• Alcântara-mar station (Lisbon-Cascais suburban railway) • Alcântara-terra station (Linha de Cintura suburban railway) • Tram 15 (Lisbon centre– Algés) • Urban buses 724, 728, 738, 742, 751, 760 • Subway red line (under construction till December 2026)	• Bagnoli station (Subway Line 2) • Bagnoli station (Cumana railway) • Urban buses R7 e C1

Finally, a mention of the means of transport should be made: In both districts, there are good railway connections (two lines in both Alcântara and Bagnoli) and urban bus lines (six in Alcântara and two in Bagnoli). Alcântara, however, shows a high density of transport infrastructures (the 25th of April bridge, the railway stations and lines, the cruise terminal, the commercial port, and the tourist port) that characterize the urban landscape, generating an image of movement and at the same time of centrality with respect to a wider regional context that can be often found in the districts of the first urban periphery, as well underlined by Salet and Savini (2004). Bagnoli, instead, is not as crucial in the transport geography of the metropolitan area of Naples, being rather a crossing neighbourhood on the Naples-Pozzuoli route.

In Table 1, the tourist facilities of the two neighbourhoods are compared in detail.

CONCLUSIONS

Beyond the obvious differences in terms of tourist resources and accommodation facilities, the two neighbourhoods are akin enough to each other to hypothesize a similar development, from the points of view of the tourist image and of the role to play in the urban geography of the respective cities. However, it must be said that Alcântara has undergone a systematic process of urban regeneration in recent years, while in Bagnoli the interventions of this kind were sporadic and lacking an organic plan. Consequently, in Alcântara tourism has already begun to catch on for some years (Zarrilli and Brito, 2017; Zarrilli et al., 2019), while for Bagnoli it represents a sort of aspiration, often perceived and evoked as a possible panacea for the troubles of the neighbourhood. However, it should be emphasized that the industrial activity of Bagnoli was heavy and highly polluting (iron and steel, chemistry, asbestos) and the dismissed facilities, enclosed within an industrial area which is physically separated from the urban fabric, are more difficult to reconvert and make usable than in Alcântara, where heavy industry had been delocalized to the other bank of the Tagus in the 1960s and the remaining light factories were located within the inhabited area and integrated into the neighbourhood.

A good example of this is LX Factory, located a few meters from the important junction of Largo do Calvário and along the road that leads to Belém. The LX Factory is characterized by good accessibility and, consequently, by high usability. The image of an iconic and attractive place for young and unconventional tourists has been establishing itself over the years and therefore it is not surprising that it was the LX Factory that acted as a driving force for the tourist development of the whole district (Zarrilli and Brito, 2021). Unfortunately, Bagnoli does not have a tourist resource capable of playing such a catalytic role: The planned reconversion of the former industrial area will take too long and is still too uncertain to be taken into consideration here; the City of Science mostly attracts organized flows (for example school trips) aimed at visiting that specific facility regardless of the neighbourhood tourist supply; the north jetty is easily accessible, but is not attractive to this extent; the lidos are limited in their capacity, not counting the current bathing prohibition; the thermal facility is very difficult to reach by public transport. One solution could be to integrate the various sites with each other through a “hop-on hop-off” bus. In this way, it would be possible to offer tourists visiting the city of Naples a further multi-thematic itinerary, capable of combining classical archaeology, industrial tourism, edutainment, seaside resorts, and thermal bathing.

In conclusion, we believe that the two neighbourhoods are in two different development stages: While Alcântara communicates an idea of transformation and dynamism, thanks to the numerous recovery and reconversion projects already completed or in progress, which fostered an emerging tourist development, Bagnoli gives the impression to be stuck in a static condition, which over the decades has become almost emblematic of the inability to develop systemic regional planning and also hindered a possible tourist prospect. This negative impression could perhaps be softened by a new ferment – from a cultural point of view but also from that of urban planning – that seems to affect the neighbourhood in recent times and which, although embryonic, allows us to hope for a positive development.

This exploratory research can be deepened and confirmed through the adoption of appropriate methodologies, such as the assessment and the confrontation of the tourist potential of the two neighbourhoods – according to the methodology used in Iatu & Bulai (2011) – and a comparative SWOT analysis.

Author Contributions: Conceptualization, L.M.B. and L.Z.; methodology, L.M.B. and L.Z.; software, L.M.B. and L.Z.; validation, L.M.B. and L.Z.; formal analysis L.M.B. and L.Z.; investigation, L.M.B. and L.Z.; data curation, L.M.B. and L.Z.; writing - original draft preparation L.M.B. and L.Z.; writing - review and editing, L.M.B. and L.Z.; visualization, L.M.B. and L.Z.; supervision, L.M.B. and L.Z.; project administration, not applicable. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 29.05.2023 Revised: 03.08.2023 Accepted: 08.09.2023 Available online: 28.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1144-1151
DOI 10.30892/gtg.49329-1113

CURRENT ISSUES OF HEALTH AND WELLNESS TOURISM BASED ON POPULATION HEALTH PRESERVATION IN EASTERN KAZAKHSTAN

Shynar SHYNGYSBAEVA
L.N. Gumilyov Eaurasian National University, Faculty of Natural Sciences, Department of Physical and Economic Geography, Astana, Kazakhstan, e-mail: shyngysbaeva75@mail.ru

Abdimazhit SAIPOV
L.N. Gumilyov Eaurasian National University, Faculty of Natural Sciences, Department of Physical and Economic Geography, Astana, Kazakhstan, e-mail: saipov1954@mail.ru

Ardak ALDASHEVA
Almaty Technological University, Faculty of Food Technologies, Almaty, Republic of Kazakhstan, e-mail: aldashieva75@mail.ru

Gulshat ATAEVA*
L.N. Gumilyov Eurasian National University, Faculty of Natural Sciences, Astana, Kazakhstan, e-mail: ataeva_g_67@mail.ru

Nursaule MAKHANOVA
Al-Farabi Kazakh National University, Faculty of Geography and Environmental Sciences, Almaty, Republic of Kazakhstan, e-mail: makhanova.nursaule@mail.ru

Erim CANTÜRK
Dokuz Eylül University, Institute of Educational Sciences, Department of Turkish and Social Sciences, Geography Teaching Ph.D. Program, İzmir, Türkiye, e-mail:emircanturk@gmail.com

Citation: Shyngysbaeva, S., Saipov, A., Aldasheva, A., Ataeva, G., Makhanova, N. & Cantürk, E. (2023). CURRENT ISSUES OF HEALTH AND WELLNESS TOURISM BASED ON POPULATION HEALTH PRESERVATION IN EASTERN KAZAKHSTAN. *GeoJournal of Tourism and Geosites*, 49(3), 1144–1151. https://doi.org/10.30892/gtg.49329-1113

Abstract: Research is aimed at elucidating the salient challenges impeding the maturation of the health and wellness tourism cluster within the Eastern Kazakhstan region. The inquiry encompasses findings from a customer survey conducted within the Eastern Kazakhstan Region's sanatorium resort visitors in Katon-Karagay District in 2022-2023. Significant attention is devoted to the natural-ecological, economic-infrastructure, and socio-cultural components constituting the tourist cluster are expounded upon. Quantitative analysis revealed therapeutic mineral baths for targeted activities and massage for complementary activities to be the most fitting activities in the region's sanatoriums. Satisfaction rates detected 98% for the quality of medical services, 95% for the professionalism of medical personnel, 90% for medical procedures, 88.9% for entertainment programs, and 68.9% for children's activities. Critical challenges in medical and wellness tourism include insufficient accommodations for SPA and wellness, VIP segment tourists, and health-oriented tourist activities, including catering to children. The nation witnesses a promising landscape for the "Katon-Karagay" sanatorium-resort cluster, underscoring the imperative of establishing a public-private partnership and highlighting the need for a public-private partnership.

Key words: sanatorium-resort complex, tourist cluster, Eastern Kazakhstan region, Katon-Karagay, therapeutic and wellness tourism, public-private partnership

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INTRODUCTION

The burgeoning field of health and wellness tourism (HWT) is currently experiencing a surge in both domestic and international demand. This phenomenon can be attributed to the increasing awareness and emphasis on holistic well-being among individuals seeking to enhance their physical, mental, and emotional health through purposeful travel experiences (Ilies et al., 2017; Wendt, 2021). Within the broader context of national development priorities, exemplified by the "Kazakhstan-2030" Strategy, the health of citizens has emerged as a paramount concern. This strategic vision has culminated in the formulation and implementation of the state program "People's Health," which underscores the pivotal role of healthcare in ensuring the overall welfare of the population.

On a national scale, health policy in Kazakhstan is intricately intertwined with the advancement of sanatorium-based treatment, a cornerstone of the country's healthcare approach (Nazarbayev, 2003). As the nation acknowledges the significance of preventive and curative health measures, the integration of health and wellness tourism aligns seamlessly

* Corresponding author

with the overarching objectives of promoting healthy lifestyles and enhancing the quality of life for its citizens. By exploring the nexus between health policy, wellness tourism, and strategic development initiatives, this study aims to shed light on the multifaceted dimensions that shape the landscape of health and wellness tourism in Kazakhstan and its implications on the nation's overall well-being (Dmitriyev et al., 2021; Suleimenov et al., 2022; Berdenov, 2015).

Through an analytical examination of scholarly discourse, empirical evidence, and policy directives, this research seeks to elucidate the intricate interactions between health and wellness tourism, policy frameworks, and the broader socio-economic landscape. By understanding these interconnections, stakeholders can make informed decisions to harness the potential of HWT as a catalyst for individual and societal well-being while contributing to the attainment of national developmental goals. The focal objective of Health and Wellness Tourism (HWT) within a regional context encompasses the attainment of economic efficacy and is subject to the patterns of spatial development inherent to growth centers and nodes (Semenova et al., 2020). Its intrinsic framework is shaped by the influence of natural-resource factors (Almasan et al., 2019, Chen et al., 2013), economic considerations, infrastructure provisions, ethno-social dynamics (Huang and Xu, 2014), administrative and managerial elements, as well as tourist demand, historical evolution, and business initiatives (Dryglas and Salamaga, 2017).

Contemporary wellness tourism garners global attention due to tourists' growing concern with health and rehabilitation. According to the Global Wellness Institute, wellness tourism encompasses endeavors to "sustain or enhance personal well-being" (Praprom and Laipaporn, 2023). Globally, wellness tourism manifests as a robust and lucrative sector, growing at an annual rate of 20% with a value of USD 60 billion. Factors contributing to the nation's attractiveness for wellness tourism include political and social stability, a reputable healthcare sector, substantial investments in healthcare infrastructure, accredited medical organizations, cutting-edge equipment, adept medical personnel, and developed tourism infrastructure (Battakova and Saipov, 2022). This study selects the Eastern Kazakhstan region as an exemplary model for comparing mountainous regions. Situated at the heart of Eurasia, the region boasts diverse landscapes, tourist attractions, remote locations, and a modest standard of living. Moreover, the Katon-Karagay State National Nature Park, located in the Eastern Kazakhstan region's Katon-Karagay district, is nestled within the Southern Altay mountains, featuring elevations surpassing 3000 meters (Keukenov, 2022).

In contemporary times, the Eastern Kazakhstan region is marked by swift economic progress, a beneficial geopolitical and geographical position, advantageous natural and climatic circumstances, a substantial historical and cultural legacy, centuries-old hospitality traditions, and the existence of educational establishments focused on nurturing specialized skills for the tourism sector (Yegorina and Loginovskaya, 2016; Makhanova, 2022).

These landscape components with balneological significance and resultant health-focused attributes have substantial potential for medical and wellness tourism development (Tokpanov et al., 2021; Nakonechnykh et al., 2021; Akhmedenov, 2021; Mazhitova et al., 2018). That means that such emergence of mountain tourism can improve mental well-being, especially for those coping with stress, trauma, or conditions like disability (Dunets et al., 2019; Dunets et al., 2020). Moreover (Hojcska and Szabó, 2021) highlighted that this acknowledgment of the significance had propelled health and welness services to prominence within the tourism offerings spectrum (Dmitriyev et al., 2022).

In addition, the pandemic's repercussions have profoundly reshaped the tourism landscape (Rogerson, 2021). Consequently, changing paradigms will guide preferences for health and wellness journeys (Makhanova et al., 2022). Regions endowed with recreational centers and pandemic-related tourism events harbor the potential for health and wellness tourism growth. The Eastern Kazakhstan region, particularly the "Katon-Karagay" direction, emerges as a prominent choice (Hojcska and Szabó, 2021). This research aims to identify challenges in developing Eastern Kazakhstan's health and wellness tourism cluster by analyzing tourists' preferences and satisfaction levels. The investigation entails localized health-oriented tourism activities, surveying tourists using original methodologies (Efimenko and Glukhov, 2012: 54), and interpreting outcomes. Analysis of European tourism clusters describes the existence of HWT. It presents the structure of the health and wellness tourism cluster that encompasses medical treatment, wellness, and spa subcategories since the 80-s (The research of "TRAN – Health tourism in EU: The Department of General Policy Investigations of Structural Policy and Cohesion Policy of the European Union, 2005) (Figure 1). As depicted in the provided diagram, the conglomeration of the mentioned subtypes of Health and Wellness Tourism (HWT) shapes the structure of the medical and wellness tourism cluster (Figure 2).

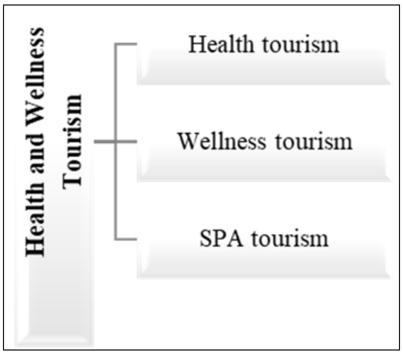


Figure 1. Medical and Wellness Tourism (Source: Research Documentation, 2023)

According to (Belov, 2016) at the core of such a cluster operates a specialized complex of enterprises providing health and wellness, educational tourist services, immediate dining facilities, and an array of supplementary amenities within a sanatorium-resort complex, alongside tourist transportation. The nucleus of the cluster centers on the consumers of the tourist product, namely tourists, who can be accommodated both within the sanatorium's premises and beyond – in hotels and campgrounds (Ozgeldinova et al., 2017). The cluster core also encompasses tourist firms rendering services related to arranging sanatorium-resort trips, transportation passes, tourist accommodation, and organizing excursions. The coordination of cluster activities is overseen by a management board (administration) comprising representatives from governmental and business sectors. Consequently, the functional complexes of the medical and wellness tourism cluster fall within the realm of public-private partnership expertise.

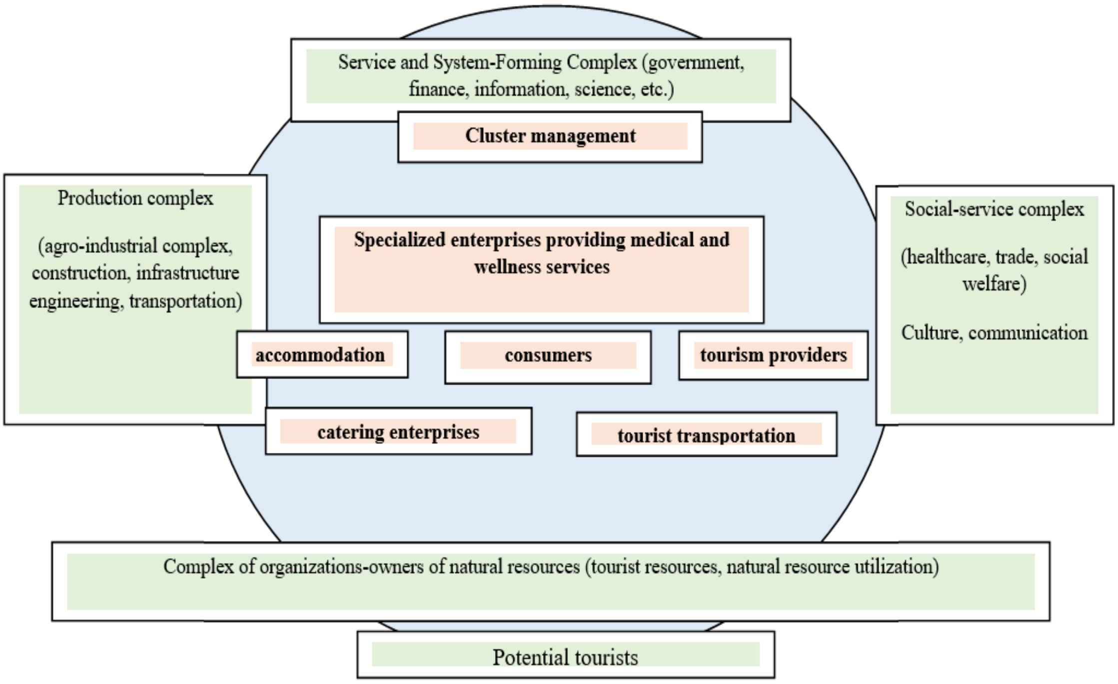


Figure 2. Functional complexes of medical and wellness tourism cluster (Source: Research Documentation, 2023)

"Katon-Karagay" - the primary focal point of investigation

The East Kazakhstan region connects Southern Siberia and Altay with Central Asia while sharing borders with two areas of Russia, a Chinese province, and three regions of Kazakhstan (Takhtayeva, 2014; Safarov et al., 2020).

Encompassing the Katon-Karagay State National Natural Park are the southern macro-slopes of the Lystvyaga and Katun ridges (constituting the south and eastern flanks of the Belukha Knot), the western expanse of the high-altitude Ukok plateau in Kazakhstan, Southern Altay, Tarbagatay (Altay), and Sarymsakty (Janaleyeva, 2010) (Figure 3). Furthermore, of particular significance are the rare species requiring conservation efforts, with more than 30 of these species teetering on the brink of extinction and listed in the Red Book (Aralbayev et al., 2004).

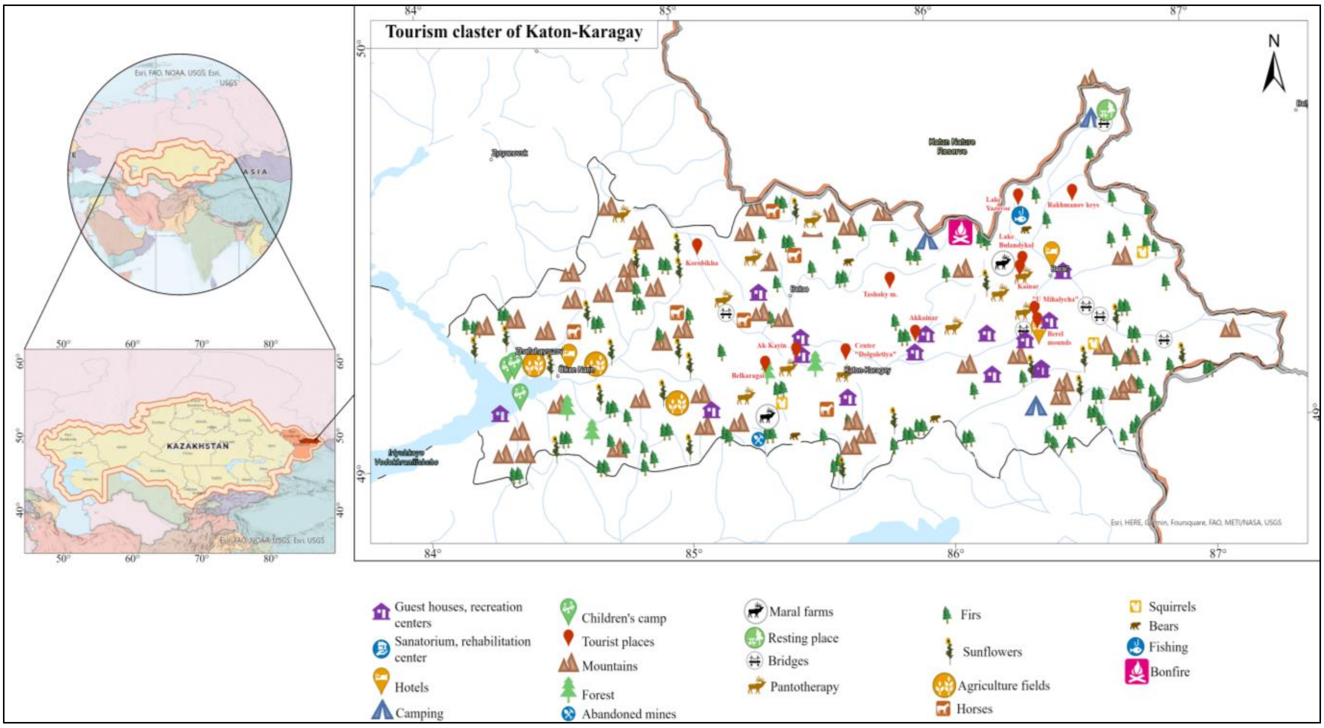


Figure 3. Tourism cluster of Katon-Karagay (Source: compiled by Shyngysbaeva in the ArcGIS program)

The park's demarcation is delineated as follows:

- Northward and eastward: Its boundary adjoins Russia (Altay Republic).
- Southeastward: The park's demarcation traverses the terrain of the Katon-Karagay district.
- Westward: The Farpusnaya (Shurshutsu) River defines the boundary to the hamlets of Belkaragai (bear) and Soldatovo.

• Southward: The boundary traces the northern declivities of the Southern Altay Mountain ranges, demarcating the confines of the Altay Tarbagatay, Muza-Belsky forestry, Chingistay forestry, and aligning with the administrative boundaries of the Katon-Karagay and Kurchum districts (Ivashchenko, 2009).

Over the preceding 10-15 years, the park's domain has witnessed the emergence of novel tourist attractions, substantial transportation infrastructure enhancements, and innovative investment initiatives. From our perspective, the formulation of a destination development strategy should be firmly anchored in the tripartite constituents of the tourism cycle: the natural-ecological, economic infrastructure, and socio-cultural. We shall succinctly expound on each facet.

The natural-ecological constituent encompasses the heart of the resort domain, comprising tracts imbued with the status of healthful and wellness-centric locales and the Katon-Karagay Natural Park itself. Nature, as a maternal benefactor, has endowed these territories with resplendent landmarks, including the Berel Mounds, the disused high-altitude Kokkol mine, the Rahmanovskie Klyuchi thermal springs, the Kokkol, Rahmanovskoe, Yazevoye, Ushkol, Maralye, Kaumysh, Bukhtarminskoe, and Yazevoy Kokkol water bodies, along with the cascading Rahmanovskiy waterfall. Additionally, these areas hold historical significance as they encompass the northern arm of the Great Silk Road, referred to as the Golden Branch of the ancient caravan route, and the Austrian road.

Economic-Infrastructure Framework. The official page of Katon-Karagay region akimat , in the vicinity, there operates a sanatorium ("Rahmanovskie Klyuchi") situated within the premises of the Katon-Karagay Botanical-Mineralogical Reserve and the Katon-Karagay State National Natural Park. The sanatorium's single-time capacity is 80 beds, specializing in balneotherapy (Zhensikbayeva and Saparov, 2017).

Additionally, there is one rehabilitation center ("Center for Longevity") and 12 healing resorts ("Zhannat" in Barlyk village, "Ak-Kayyn" in Katon-Karagay village, "Bayan" in Topkayn village, "Akmara" in Akmara village, "Akbulak Altay" in Akmara village, Tikhoye section, "Maraldy" in Maraldy village, "Abzal" in Sennoe village, "Zhazaba" in Yazovoye village, "Belovodie" in Bekalka village, "Verkh-Katun" in Aksharbak village, "Dimash" in Shubaragash village, "Katon-Karagay Deer Park" in Akmara village, "Temirlan" in Belqaragai village), five hotels, 12 guesthouses, 12 cafes, four restaurants, nine petrol stations, one pharmaceutical workshop for processing propolis and honey products (JSC "Aksu DEEN"), two honey product processing workshops (Collective farming of "Kasenov" and "Nectar Katon-Karagay"), two bus stations, and one seasonal ferry. The sanatoriums and healing resorts of the region collectively offer 105 rooms with a total capacity of 920 beds per day**.

Socio-Cultural Components of the Tourist Framework encompass supplementary activities within wellness and tourism. These involve traditional crafts and trades such as metal roofing and ceramics production. Primary tourist attractions surround the Katon-Karagay Mosque, the Pokrovskaya Church, museums including the "Oralkhan Bokei" House-Museum in Chingistay village, and the expansive Naryn Historical and Ethnographic Museum. Also, of interest are features like the "Key to the Eye" spring, the "Snake" well, and the City History Museum.

MATERIALS AND METHODS

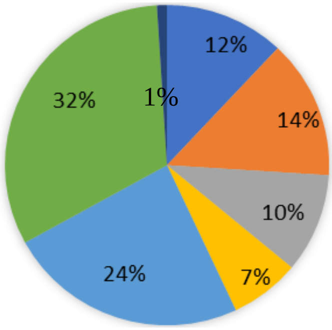
During the initial phase of the research conducted within the primary destination area of the wellness resort "Rahmanovskie Klyuchi," questionnaires were devised to complete a preliminary survey of tourists. The central aim of the survey was to discern the level of satisfaction among clients of the sanatorium regarding the services provided. Anticipating the culmination of this endeavor in 2023, a subsequent survey was meticulously designed to delineate the potential for developing wellness tourism, commonly known as Health and Wellness Tourism (HWT), in East Kazakhstan. This investigation considered the latent prospects of such an enterprise within the broader context of the regional economy (Zyryanov, 2020). Face-to-face interviews were conducted during direct interactions with the respondents, complemented by distributing printed questionnaires to health and wellness facilities.

The Katon-Karagay District Department of Entrepreneurship, Industry, and Tourism played a pivotal role by furnishing substantial support in orchestrating the survey. The architecture of the questionnaires was conceived to encompass inquiries targeting various forms of activities, as well as supplemental endeavors, undertaken during visits to wellness-oriented destinations. These instruments are strategically devised to evaluate the developmental potential inherent in the HWT concept within the confines of the "Rahmanovskie Klyuchi" resort. Through a meticulous analysis of the obtained outcomes, this assessment aims to discern the most promising modes of treatment conducive to patient recovery. Notably, the implications of these findings extend beyond the confines of the specific resort, potentially finding resonance within analogous establishments. The responses regarding the appeal of therapeutic procedures, the influential factors affecting the selection of HWT destinations, and the contemplations concerning seasonality, preferences, and vacation duration held significant importance.

RESULTS AND DISCUSSION

Within the premises of the sanatoriums "Rahmanovskie Klyuchi," "Center of Longevity," and "Ak-Kain," an extensive collection of 1700 responses were garnered from the visiting clientele, all in response to the distributed questionnaires. After meticulous processing and in-depth analysis, a panorama of significant findings emerged.

Undoubtedly, the primary endeavor of the survey was to meticulously discern the myriad motives that impel the guests to seek respite within the confines of the resorts. The outcomes bore testament to the intricate mosaic of reasons underpinning their sojourn, vividly delineated as follows: a substantive 32% of respondents disclosed a proclivity towards targeted medical interventions; an additional 24% accentuated their fervent pursuit of convalescence and proactive well-being pursuits; a notable contingent of 14% were drawn by the captivating allure of environmental change; another discerning 12% demonstrated a penchant for immersive exploration of the distinct travel encounters embedded within the Altay region's landscape; a further 10% displayed a discerning interest in engaging in vigorous leisure pursuits; lastly, a contemplative 7% sought sanctuary in the tranquil realms of pure relaxation (Figure 4).



32% of respondents disclosed a proclivity towards targeted medical interventions;
24% accentuated their fervent pursuit of convalescence and proactive well-being pursuits;
14% were drawn by the captivating allure of environmental change;
12% demonstrated a penchant for immersive exploration of the distinct travel encounters embedded within;
10% displayed a discerning interest in engaging in vigorous leisure pursuits;
7% sought sanctuary in the tranquil realms of pure relaxation
1% of respondents simply came to relax for the occasion.

Figure 4. Purpose of Visiting the "Rahmanovskie Klyuchi" Sanatorium (Source: Shyngysbaeva, 2023)

Remarkably, a resounding 91.5% of the surveyed participants were endowed with a comprehensive cognizance of the existence and multifaceted functions intrinsic to health and wellness tourism. This perceptible awareness underpins an elevated state of enlightenment within the populace, thus significantly contributing to a more informed understanding of this tourism segment.Furthermore, 97% of the respondents expressed a sense of contentment with the caliber of medical services bestowed upon them. In comparison, a substantial 96% lauded the consummate professionalism radiated by the medical personnel. In tandem, a commendable 93% vouched for the therapeutic procedures' efficacy.

In stark contrast, the satisfaction levels discerned regarding recreational programs unveiled notable disparities: the realm of entertainment initiatives garnered an approval rating of 87.9%, active participatory endeavors merited an appreciable 85.8%, and intriguingly, offerings oriented towards children's amusement garnered an appraisal of 67.9%. The management of sanatoriums and resort complexes should accord due significance to this latter facet, given its potential to galvanize demand amongst the parental demographic.

In a meticulously structured approach, respondents were entrusted with judiciously assigning priority ratings, utilizing a 5-point scale ranging from 1, denoting the least appealing, to 5 representing the utmost allure to the diverse categories of target activities. The discerned outcomes emerging from this concerted effort, pertinently aligned with the central tenets of HWT, are astutely expounded within the contours of Table 1.

Table 1. Description of target therapies in HWT by tourists' priorities (Source: Shyngysbaeva, 2023)

Code	Name of target activities
1	Mineral baths therapy
2	Climate therapy
3	Physiotherapy
4	Mineral water drinking therapy
5	Mud therapy
6	Unnatural physical therapy (light therapy, vibration therapy, speleotherapy, ozone therapy, hyperbaric chambers)
7	Non-standard therapy (aromatherapy, apitherapy (use of bee products), hirudotherapy, herbal treatment (phytotherapy)

In parallel, the panorama of auxiliary pursuits finds comprehensive elucidation through the intricate exposition embodied in Table 2. Particularly noteworthy is the distinct resonance exhibited when respondents were queried concerning the contemporary resonance of the WOT programs.

Table 2. Related tourism therapies by priority (Source: Shyngysbaeva, 2023)

Code	Related Therapy	Code	Related Therapy
1	massage	11	Art and DIY workshops
2	sauna complex	12	children's activities (entertainment staff)
3	terrain walks (hiking)	13	craftsmanship training
4	indoor pool	14	active games
5	outdoor swimming	15	berry and mushroom picking
6	excursions (historical, botanical, geological)	16	horseback riding
7	skiing, ice skating, sledding, snowmobiling	16	dancing
8	special dietary options	17	visiting sacred sites
9	sunbathing, insolations	18	shopping
10	museum visiting	–	–

Significantly, their collective sentiment unequivocally leaned towards an affirmative inclination for water-centric procedures, as aesthetically and informatively rendered in the visual medium of Figure 5. Participants were presented with ten discernible factors influencing their predilections regarding HWT destinations within the questionnaire framework. The resulting data from their responses to this specific inquiry have been meticulously encapsulated in Table 3.

In the realm of Altay, tourism reveals a conspicuous presence of seasonality, wherein 65% of vacationers opt to immerse themselves in the warm embrace of the summer season. Moreover, the mountainous expanse of the Katon-Karagay District bestows a plethora of essential requisites conducive to orchestrating invigorating winter recreational pursuits. These prerequisites encompass the undulating foothills, an unwavering mantle of snow cover, an abundance of daylight hours, and an entrancing panorama. In this context, strategic investments, the cultivation of a distinct and resonant brand identity, and the adroit deployment of efficacious advertising stratagems assume a role of paramount significance.

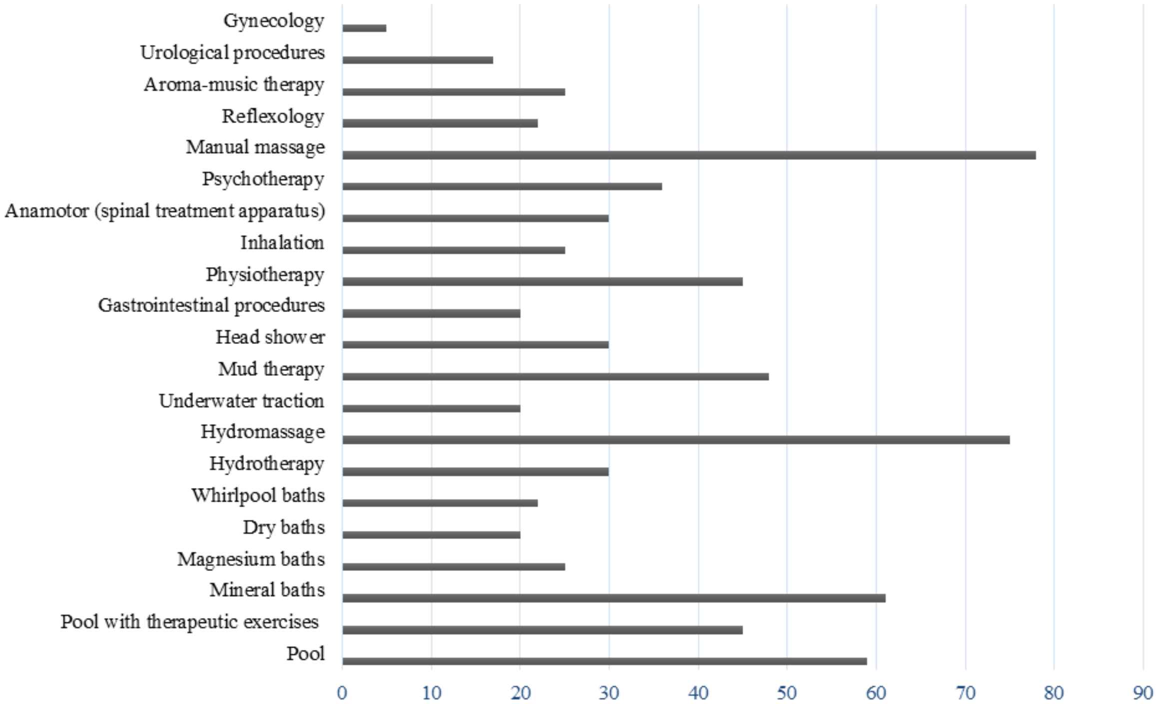


Figure 5. Priorities for medical services among tourists in percentage (Source: Shyngysbaeva, 2023)

In the annals of the Soviet era, an intriguing vignette emerges whereby trade unions extended the coveted privilege of a 21-day vacation package to eager seekers of leisurely reprieve. However, the resounding chorus of respondent voices today reveals a transformational narrative. Within this nuanced tapestry, 50% of the surveyed populace distilled their aspirations for holiday respite into a more compact 7 to 10 days. In contrast, the erstwhile revered span of 21 days commanded a mere 11% allegiance. These metrics serve as an eloquent testament to the heightened cadence of life dynamics that characterizes the landscape of market-driven paradigms.

Table 3. Primary determinants in the selection of a leisure destination encompass (Source: Shyngysbaeva, 2023)

Code	Determinants
1	Natural resources (mineral springs, climate, landscape)
2	Qualification of medical personnel
3	Availability and quality of medical equipment for conducting laboratory and instrumental examinations
4	Accommodation and catering
5	Competence of service personnel
6	Feasibility of utilizing externally sourced therapeutic agents (curative mud, mineral waters)
7	Availability and quality of information about the leisure destination
8	destination popularity
9	Hospitality of the local population
10	Level of economic development in the locality (leisure destinations)

Surpassing the threshold of 80%, the respondents unequivocally expressed their inclination to embark upon specialized expeditions tailor-fitted to accommodate exertion levels deemed admissible within the framework of age and health status. Embedded within this endorsement is the recognition of the paramount importance accorded to calibrating route length and the intricate contours of elevation disparities. As the spotlight shifts to the realm of overnight sojourns during two-day or more extended excursions, prospective participants overwhelmingly favor accommodations infused with a palpable aura of elevated comfort, serving as sanctuaries of repose in exploratory sojourns.

Venturing into the fiscal terrain, respondents candidly unveiled the mosaic of their financial capacities, portraying a distribution that unfolds thus: 45.3% of respondents reported an annual family income of up to 1 million tenge, 23.8% positioned themselves within the band of 1 to 3 million tenge, followed by 14.9% who gravitated towards the range of 3 to 4 million tenge. A discerning 4% sought their place within the echelons spanning 4 to 6 million tenges, while an additional 3% ascended to the pinnacle where annual income exceeds 6 million tenges.

This panoramic portrayal underpins a discernible stratification of financial endowments, underscoring the imperative for an expansive portfolio of lodging options and service attributes that harmoniously resonate with the heterogeneous fiscal capabilities of prospective clientele. The demographic landscape is a mosaic of ages spanning a broad spectrum, from the tender age of 18 to the seasoned maturity of 73 years. Nonetheless, the torch of prominence is gracefully passed to the age bracket between 35 and 50 years, emblematic of the diverse and variegated fabric of experiential narratives intricately woven through this study's intricate lattice.

CONCLUSION

In substantiating the specialization and structure of health and wellness tourism, it is imperative to draw upon the scholarly and methodological framework established within the broader socio-geographical domain and authors' works. One avenue for information acquisition and synthesis is through surveys, predicated upon an original methodology devised by the authors. Analyzing respondents' answers in tandem with selective surveys conducted among managers of tourism agencies concerning the consumer attractiveness of health and wellness tourism destinations in Eastern Kazakhstan has unveiled the following issues:

- Within the ambit of therapeutic courses, sanatoria with extended patient intake periods predominate, while a limited number of short-term lodging options exist in the realms of SPA and Wellness.
- More provisions should be present within sanatorium-resort complexes to accommodate tourists from the VIP segment, with service provisions befitting their corresponding class.
- Young potential tourists highlight the need for more health-focused offerings coupled with tourist activities.
- The entrenched image of a sanatorium solely as a "place of treatment" dissuades individuals with satisfactory health conditions from engaging.
- The state of advertising and the HWT cluster's brand identity should reflect the latent potentialities for expanding this domain within the region.

Addressing these outlined challenges will augur a heightened competitive edge for Eastern Kazakhstan's HWT cluster, catalyzing improvements in local employment levels and quality of life. This strategic advancement will also amplify the tourism sector's share in the gross regional product. The gleaned outcomes of the survey serve as a robust foundation for crafting a strategic spatial plan for medical-wellness tourism within the Katon-Karagay region, fostering holistic development.

Author Contributions: Conceptualization, S.S., S.A., A.G.; methodology, S.A., A.A.; software, S.S.; validation, A.G.; formal analysis, A.G., M.N.; investigation, S.S.; data curation, S.S.; writing - original draft preparation, A.G.; writing - review and editing, A.G.; visualization, S.A., A.A., C.E.; supervision, S.A., A.G.; project administration, A.G. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 04.06.2023 Revised: 12.08.2023 Accepted: 11.09.2023 Available online: 28.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1152-1164
DOI 10.30892/gtg.49330-1114

BRANDING OF TOURIST CLUSTER SYSTEMS: CASE OF ALMATY MOUNTAIN CLUSTER IN THE REPUBLIC OF KAZAKHSTAN

Banu ZHARKENOVA
L.N. Gumilyov Eurasian National University, Tourism Department, Astana, Kazakhstan, e-mail: banufeshion@mail.ru

Aidar MUKANOV
L.N. Gumilyov Eurasian National University, Tourism Department, Astana, Kazakhstan, e-mail: aidar81hamzauli@mail.ru

Kamshat MUSSINA
L.N. Gumilyov Eurasian National University, Tourism Department, Astana, Kazakhstan, e-mail: kamshatmussina@mail.ru

Lyailya MUTALIYEVA
L.N. Gumilyov Eurasian National University, Tourism Department, Astana, Kazakhstan, e-mail: mutalieva_leila@mail.ru

Yerzhan SAGATBAYEV
Astana International University, Higher School of Natural Sciences, Astana, Kazakhstan, e-mail: sagatbaeve@mail.ru

Sergey PASHKOV*
M. Kozybayev North Kazakhstan University, Department of Geography and Ecology, Petropavlovsk, Kazakhstan, e-mail: sergp2001@mail.ru

Citation: Zharkenova, B., Mukanov, A., Mussina, K., Mutaliyeva, L., Sagatbayev, Y., & Pashkov, S. (2023). BRANDING OF TOURIST CLUSTER SYSTEMS: CASE OF ALMATY MOUNTAIN CLUSTER IN THE REPUBLIC OF KAZAKHSTAN. *GeoJournal of Tourism and Geosites*, 49(3), 1152–1164. https://doi.org/10.30892/gtg.49330-1114

Abstract: In modern conditions, the competitiveness of many tourist centers is ensured through the development of forms of network interaction between entities involved in the process of tourist services within a certain geographical area. One of these forms of networking is a tourist cluster, which is based on such concepts as "integration", "cooperation", "competition". Each system in the field of tourism needs to be promoted and popularized among tourists, including the cluster. In this regard, the main purpose of this work is to consider the issues of branding tourist clusters on the example of the Almaty Mountain cluster in the Republic of Kazakhstan. As part of the study on specifics of cluster systems branding, the authors relied on scientific publications presented in various periodicals. To identify the main trends in the development of tourism and clusters in Kazakhstan, the data presented on the official websites of state bodies and statistical services were employed. Based on the presented analysis, the authors considered the main characteristics of the Almaty Mountain cluster development, as well as the features of branding this territory at the national and local levels. The main stages of territory branding are presented, taking into account the main characteristics of the cluster system. In general, within the framework of the work, the authors put forward the main directions for the formation and promotion of cluster systems brand in modern conditions. At the same time, it is noted that the branding process should ensure the sustainable development of integration and cooperation ties between the participants of the tourism cluster.

Key words: tourism, tourist cluster, territory, tourist routes, brand, geobranding, brand book, tourist center

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INTRODUCTION

Clustering of tourist territories is currently one of the processes that play an important role in the development of regional tourism and the formation of the tourist attractiveness of the region. Clustering is one of the systems that rationally promote attractive tourism products, including convenient accommodation, transportation and other services, by combining various companies and organizations operating in the tourism sector, such as hotels, travel agencies, transport companies operating in tight competitive conditions. For example, a number of authors note that tourism is a highly agglomerated industry and the integration ties formed within the framework of servicing tourists become more stable over time, groups of enterprises involved in a single value chain increase their common competitive advantages, as a result of which the territory turns into an attractive destination. (Elsner, 2010; Delgado et al., 2014; Benner, 2017; Yurensky, 2021).

The clustering of the tourist area can be due to several factors. Firstly, geographical features, that is, a combination of various geographical places, such as tourist areas, recreational areas, beaches, lakes. Each of these geographical places can be of interest to visiting tourists. Secondly, cultural and historical attractions: some tourist areas may have a rich history and cultural heritage, which can attract tourists interested in history, art and architecture. Thirdly, the availability of infrastructure: the clustering of a tourist area may also depend on the availability of certain infrastructure, such as various accommodation facilities, transport services. The presence of such infrastructure can significantly increase the

* Corresponding author

attractiveness of the tourist area and interest more tourists. Fourthly, the diversity of recreation types, if the tourist area can offer different types of recreation such as sports tourism, ecotourism, cultural and educational tourism, gastronomic tourism, then it is possible to cluster the tourist area, serving different groups of tourists with these offers.

Today, cluster policy is used in many countries as one of the effective ways to make the region more attractive from a tourist point of view. Clusters are an important tool for supporting small and medium-sized businesses, increasing exports, attracting investment, creating jobs and ensuring sustainable economic growth. In modern conditions, one of the main trends in the development of clusters is strengthening of interaction between cluster members at the international level. With globalization and advances in technology, we see clusters becoming more global and export-oriented.

Another important factor in the development of clusters is environmental sustainability. In general, today the creation and development of clusters is becoming more and more relevant, therefore their role and importance in the national economy of various countries is increasing. To increase competitive advantages, clusters, including those operating in the tourism sector, need to promote their unique characteristics and available resources by means of various marketing tools. One of the main goals of promoting a certain regional system in the field of tourism is to popularize the region and turn it into an attractive destination (Hartman, 2023). In this regard, branding is one of the most important tools for popularizing the area today. Cluster branding makes it possible to determine its uniqueness and attractiveness for potential investors and partners, and also helps to increase the recognition of the cluster and its products, increase customer loyalty and strengthen public relations. Cluster branding is a tool that helps create an image of a cluster, improve its recognition, stand out from competitors, and implement its marketing strategy in effective and successful manner in the future. World practice shows that often individual tourist areas in Turkey, Greece, Georgia have become attractive to tourists due to the correct strategy for branding the area (Kirillova and Gerasimova, 2019; Limonina and Karaseva, 2022). In the process of branding clusters, the following tasks are solved: firstly, the advantages and differences from competitors are determined, secondly, the trust in the area among the target audience of tourists increases, and thirdly, interest is formed among investors who are ready to invest their assets in the field of tourism and leisure.

However, the process of branding cluster systems is a rather long and complex process that requires a comprehensive study of the main approaches to branding and forming the image of a cluster. It should be noted that the peculiarity of cluster systems branding is the creation of conditions for the further development of integration links between cluster members. Based on this, the issues of branding cluster systems require further comprehensive study from a scientific point of view.

LITERATURE REVIEW

The issue of branding tourism clusters in the scientific literature is considered in a fairly broad aspect. Today, the branding process depends on many exogenous factors, which often determine the specifics of the formation of clusters in a certain tourist area and the priorities of its development. In this regard, in order to describe the key features of tourism cluster branding, it is necessary to reveal its nature and main characteristics. It should be noted that in the economic and geographical literature, a single point of view on the definition of the concept of "tourist cluster" has not yet been formed. Each author, considering this definition, presents characteristics depending on the aspects inherent in the development process of a particular cluster. One of the first attempt to describe the concept of "cluster" in the economic system was presented by M. Porter (Delgado et al., 2014), who defined a cluster as geographically concentrated groups of interconnected companies, specialized suppliers, service providers, firms in the relevant industries, as well as organizations related to their activities in certain areas, competing, but at the same time conducting joint work.

Based on the presented interpretation, it can be judged that the cluster is characterized by such characteristics as: geographical localization, when cluster members are concentrated within the boundaries of a certain geographical area; general characteristics of the activity of cluster subjects, where cluster members are involved in general economic and production processes; market orientation of the cluster, which is determined by the fact that cluster members integrate with each other in order to form common competitive advantages. Thus, the classical interpretation of the cluster determines its understanding as a group of geographically adjacent interconnected companies (Aslanova and Alimova, 2020) and related organizations of a certain area, characterized by a common activity and complementary to each other.

The specificity of clusters, their role in the national and regional economies stimulated a high scientific interest in studying the nature and content of clusters in various countries. Considering the work of researchers (Swann et al., 1998; Feser and Bergman, 2000; Schmitz, 2005; Elsner, 2010; Vysochan et al., 2021; Jang and Kim, 2022) we can summarize the essential features of modern clusters:

- belonging to the same sector (industry), functioning in close proximity to each other;
- location in one geographical area (Vysochan et al., 2021);
- a group of related companies, interacting institutions, united by commonalities and complementarities;
- the presence of both vertical and horizontal functional links between companies.

From the point of view of the economic approach, a cluster is considered as a form of increasing the joint competitive advantages of economic entities operating in interconnection with each other within any tourist area. For example, Yurensky D.A., considering the problems of globalization of tourism, notes that modern clusters act as an effective territorial form of increasing the competitiveness of tourism enterprises (Yurensky, 2021). Today, one of the main goals of the tourism enterprise is to ensure sustainable development in a rapidly changing external environment.

In modern conditions, rather new factors are formed in the external environment of the enterprise (Azmi et al., 2023) that influence the change in consumer preferences and the conditions for servicing tourists. The rapid variability and unpredictability of the operating conditions of tourism enterprises force them to look for new ways to ensure not only the survival of an individual subject, but also the formation of competitive advantages for a group of interconnected enterprises through the joint use of the tourist potential of the territory and the unique socio-cultural environment of the area. Based on this definition, we can assume that one of the features of the tourist cluster is the presence of business entities that operate in a common socio-cultural environment and are focused on efficient activities.

A number of scientists consider the tourism cluster from the point of view of an institutional approach and define it as a modern institution that combines a system of formalized and non- formalized relations of its participants between themselves and the external environment (Rodrigues, 2001; Scholz et al., 2012; Stepanova and Makhnovskiy, 2010) For example, Kizim A.A. notes that "... a tourism cluster is a set of companies located in the same territory that produce a tourist product, infrastructural tourism organizations and authorities regulating this area, the competitiveness and efficiency of each of which depend on the performance of all other subjects of the cluster" (Kizim et al., 2010). It should be noted that each element of the tourist cluster is interconnected with each other and the effective development of one component depends on the other. As part of the organization of economic activity, tourism enterprises operating as part of the tourism cluster, depending on the specifics of the products sold, have fairly close horizontal and vertical ties (Rodrigo et al., 2023).

In addition, in order to support and determine development priorities, the cluster can include both government bodies and entities engaged in research activities. The presence in the cluster of fairly closely related enterprises, public and other organizations, government agencies and other entities gives reason to judge that the cluster can act as a separate institution with its own characteristics. In addition, the closeness of vertical and horizontal links, as well as the degree of their coverage of various processes (from the development of a tourist product to the implementation and rendering service to customers) determines such cluster features as the depth and width of clustering.

The specifics of the tourism cluster can be considered from the point of view of regional management. European scientists note that ″... a tourist cluster can act as a mechanism for regional development aimed at strengthening the interests of the region, its independence and competitiveness" (Novelli et al., 2006, 1146). O. Petrova and M. Klevchenkov indicates that each cluster, including the tourist one, is a growth point for the development of the region's economy, involving other activities in the orbit of its activities. All enterprises whose activities are in one way or another connected with the regional tourist complex make investments in specialized technologies, information, infrastructure, human resources, which leads to the mass formation of new allied enterprises (Petrova and Klevchenkov, 2010).

This implies such a sign of a cluster as being limited within the boundaries of a geographical region or district, as well as the ability to attract both economic entities and other enterprises operating on the scale of a given region, subordinating them to the general conditions of development. A number of scientists suggest not to consider the geographical localization of enterprises as an integral feature of a tourist cluster. Thus, E. Karpova, analyzing clusters in tourism as an innovative form of modernization and diversification of the economy of the territory and a factor of its sustainable competitiveness, proposed to define a tourism cluster as a set of interacting and interconnected companies and organizations that are functionally isolated within the value accumulation system ("channel chains") - marketing - transport services - accommodation facilities - food establishments - entertainment facilities - consumption of complex tourist services"), united on the basis of cooperation and competition in order to obtain maximum income based on the local advantages of the territory, including tourist attractors and infrastructure (Karpova, 2012). On the one hand, the use of such an approach leads to the blurring of the concept of "tourist cluster". However, on the other hand, this approach takes into account the peculiarities of tourism services, as well as the role and position of tour operators. Most scientists, however, consider the geographical localization or concentration of tourism enterprises as one of the specific features of the tourism cluster (Kazmina et al., 2023; Shin et al., 2023). In our opinion, this is a reasonable approach that allows us to distinguish a tourist cluster from a territorial tourist and recreational complex that can successfully function without forming a cluster.

M. Beni also moved away from using the sign of the geographical concentration ofenterprises and focused on tourist attractions. In his opinion, a tourist cluster is a group of tourist attractions ina limited geographical area, provided with a high level of infrastructure and service development, with well-established social and political ties, as well as well-functioning management in companies that form networks for the production of tourist services, providing strategic competitive and comparative benefits (Beni, 2003). A number of researchers (Nikolaevna et al., 2014; Jorgensen, 2017; Omarov et al., 2020, Tchetchik et al., 2023) believe that the creation of a tourist (or tourist-recreational) cluster actually determines the positioning of the territory and affects the formation of an image of a region. This circumstance is the specificity of a tourist cluster. In addition, it should be noted such special consequences of the creation of a tourism cluster as natural restrictions on the development of other types of activities in the territory, primarily those that can adversely affect the ecological situation or the state of other tourism resources. Another characteristic inherent in the tourism cluster is that the integration of enterprises in the cluster is carried out through the creation of a tourism product. Since the tourist product, in fact, acts as a complex of individual tourist services, perceived by the consumer as a whole, a sound concept and strategy are of key importance for the successful functioning of the cluster (Sizeneva et al., 2018), includes cluster specialization, key growth points of the cluster, composition and structure of enterprises in the tourism cluster.

In general, it should be noted that in modern domestic scientific and practical literature there are two approaches to the interpretation of the concept of "tourist cluster". Firstly, the tourist cluster is considered as a tourist and recreational special economic zone. Secondly, the tourist cluster is interpreted as a geographically localized group of enterprises operating in the tourism and recreational sector. In the framework of this work, taking into account the above characteristics, we understand the tourist cluster as a group of enterprises, firms, attractions involved in the process of serving tourists within the boundaries of a certain geographical area, and between which stable ties have been formed that provide them with competitive advantages in the tourist services market.

It should be noted that even though the characteristics of tourist clusters are widely covered in the scientific works of researchers from different countries (Delgado et al., 2014; Benner, 2017; Karanovich, 2019; García-Villaverde et al., 2020; Danylyshyn et al., 2022), the issues of cluster branding remain poorly understood. Most of the authors in their works focus on the specifics of the clustering of the area (Bouchra and Hassan, 2023), determine the reasons for the formation of integration processes between the subjects of the local tourism market (Perkins et al., 2022), empirically substantiate the degree of agglomeration and convergence (Gómez-Vega et al., 2022; Glyptou et al., 2022). The tourist cluster is primarily a system that operates within a certain geographical area and is aimed at ensuring sustainable functioning. In this regard, it needs to promote and implement measures that make it widely recognizable among the tourist audience. Based on this, within the framework of the current paper, the main approaches to branding a tourist area are considered on the example of the Almaty Mountain cluster. Based on the study of the specifics of the development and functioning of the Almaty Mountain cluster in today's conditions, steps have been identified corresponding to the characteristics of the area to promote the area as a destination.

MATERIALS AND METHODS

Within the framework of the study, scientific works of foreign and domestic authors were usedas the main sources. As part of determining the main trends in the development of tourism in the Republic of Kazakhstan, describing the process of formation and development of a tourist cluster in the country and considering the main tools for branding tourist areas, including clusters, statistical data presented on the official Internet sources of the Bureau of National Statistics of the Republic of Kazakhstan, the Committee of Tourism Industry of the Ministry of Culture and Sports of the Republic of Kazakhstan, as well as local executive authorities. It should be noted that in some cases, when considering the priorities for the development of tourist areas in the country, the main sources of information were the State programs approved by the Government of the Republic of Kazakhstan, as well as master plans developed by NC JSC "KazakhTourism" and local Akimats.

Such theoretical research tools as analysis, synthesis and the axiomatic method were used as part of studying the specifics of the formation and functioning of tourist clusters, as well as describing the characteristics of its main elements, patterns of development in modern conditions, identifying the specific features of branding it as a tourist system. Employing these methods in the framework of the study made it possible to identify the main characteristics of the tourist cluster, to determine the specific features of its branding and promotion as an integral system. For example, the theoretical analysis made it possible to decompose the tourist cluster into its constituent parts and identify the main characteristics of the elements, determine the role of each element in the promotion and branding of the tourist territory, and describe the features of the interaction of subjects with each other in the framework of forming the image of the territory. Further, using synthesis tools, the elements identified earlier were combined and considered as a single system, which made it possible to reveal the general characteristics of the branding process of an integral system, acting in the form of a tourist cluster.

In order to study the contradictions between the elements of the cluster that arise within the branding of the tourist territory, the methodology of the categorical-symbolic approach was used, which is an element of such a scientific approach as homeostatics (Figure 1). Hence, the main factors that need to be taken into account when branding the tourist cluster were identified. Each element of the cluster, despite the presence of integration links with other elements of the cluster, tries to operate with these factors based on the specifics of its economic activity, as a result of which contradictions are formed. The identification of these contradictions makes it possible to determine the main measures to improve the efficiency of branding not only of the territory, butalso of the system functioning as a cluster.

In general, within the framework of studying the features of branding tourist clusters anddescribing the specifics of the implementation of this process, a number of axioms were putforward, i.e. a set of provisions that were identified as true characteristics of the cluster branding process. Thus, the following axioms were put forward:

- a close integration of economic activities of enterprises involved in the process of serving touristshas a significant impact on the process of natural formation of the brand of the tourist territory;
- the process of branding the territory begins with the activities of small tourist companies, but later all cluster members are involved in this process, and the complex image of the tourist territory depends on the specifics of their market behavior;
- the process of territory branding depends not only on the available tourist resources of the territory and the degree of their involvement, but also on the reaction of the local population to tourism, which are part of the socio-cultural environment of the tourist territory, including the cluster.

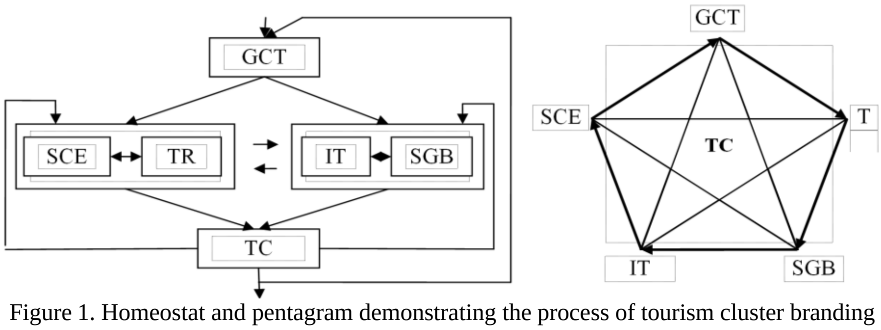

Figure 1. Homeostat and pentagram demonstrating the process of tourism cluster branding
(TC - tourist cluster, GCT - geographical characteristics of the territory, TR - tourist resources and natural objects, SCE -socio-cultural environment of the area, IT - infrastructure of the territory, including tourism, SGB - stakeholders and government bodies interested in tourism development) (Source: the figure was compiled by the authors)

The research algorithm consisted of the implementation of a number of measures aimed at studying both theoretical and practical features of the process of branding tourist clusters in Kazakhstan (Figure 2). A certain research algorithm, as well as its step-by-step implementation, made it possible to confirm, and in some cases reject the correctness of the presented axioms.

RESULTS AND DISCUSSIONS

Tourism in the Republic of Kazakhstan is one of the priority areas for the development of the national economy. To date, the main goal of developing tourism in Kazakhstan is to create a modern, highly efficient and competitive tourism complex, on the basis of which conditions will be provided for the development of the industry as a sector of the economy, integration into the system of the world tourism market and development of further international cooperation in the field of tourism. There are more than 100 water clinics in the country, more than 9000 archaeological and historical monuments (Issakov et al., 2023), most of which are located in the southern regions of the country. Given that Kazakhstan has a unique natural potential, the country has all the opportunities for the development of various types of tourism: cultural, educational, ecological, extreme, business, health and others (Atasoy et al., 2022).

Recently, thanks to the ongoing measures to develop tourist areas, there has been an increase in the indicators reflecting development of the tourism sector. A number of tourist centers are beginning to be in demand not only by domestic tourists, but also by foreign guests. Thus, in 2022, the number of served visitors in the country amounted to 7,335.2 thousand people (Statistics of tourism, 2023), which is 25.4% more compared to the same period. The number of accommodation facilities providing accommodation services for domestic and foreign tourists amounted to 3,970 units, where 2,316 accommodation units are located in cities,and 1,654 - in rural areas (Figure 3).

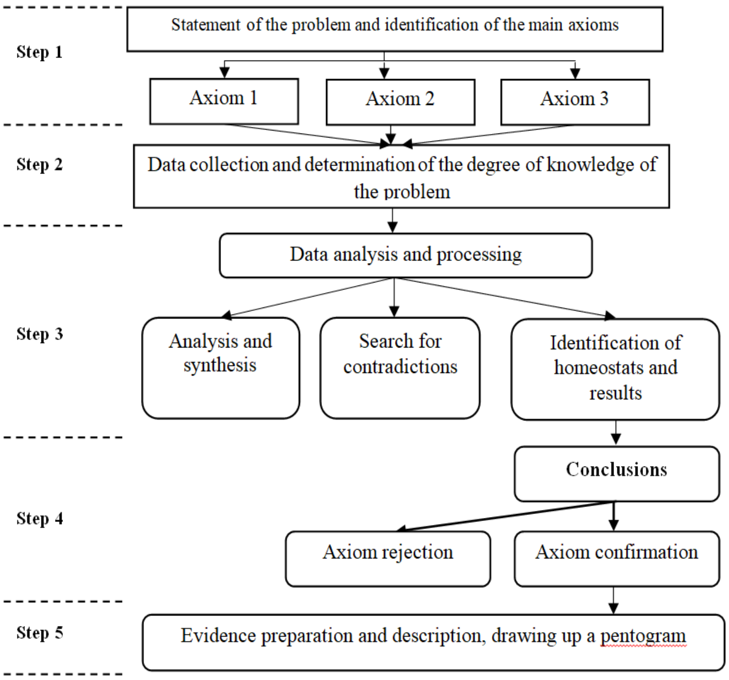

Figure 2. Methodology of research (Source: compiled by the authors)

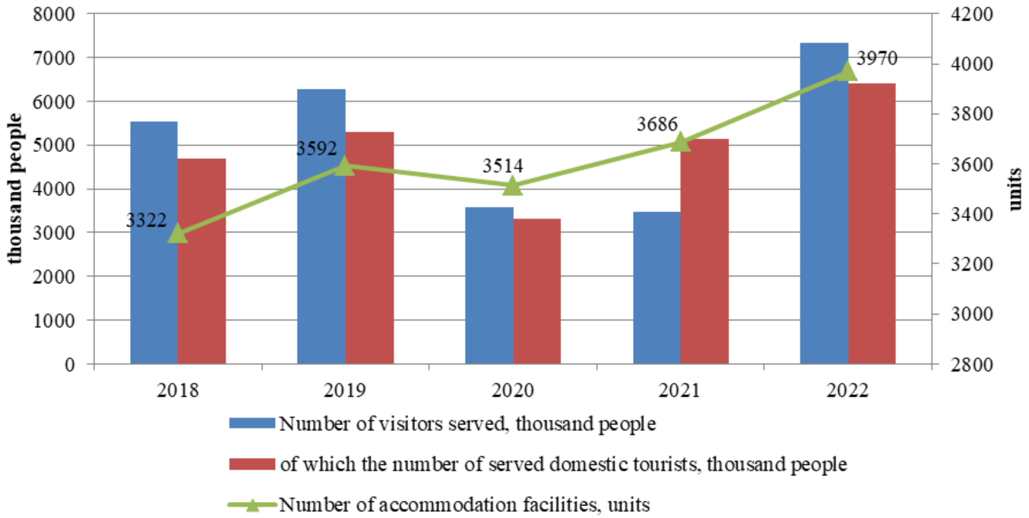

Figure 3. The number of served tourists and accommodation facilities in the Republic of Kazakhstan, for the period 2018-2022 (Source: the chart was compiled by the authors based on data from the Bureau of National Statistics of the Republic of Kazakhstan

Figure 3 clearly shows that the state of tourism industry development in Kazakhstan in recent years is characterized by its progressive and sustainable development. Currently, in order to create the necessary conditions for the development of tourism infrastructure at the level of the Government and local authorities, a concept has been developed (Concept of development of the tourism industry of the Republic of Kazakhstan for 2023–2029, 2022), programs (State program for the development of the tourism industry of the Republic of Kazakhstan for 2019–2025, 2018), roadmaps (State program for business support and development "Business Roadmap-2025", 2019) and investment master plans (Master Plan for Tourism of the Almaty-Bishkek Economic Corridor. Asian development bank, 2019; Concept of the Master plan for the development of the city "G4 City" in the Almaty region, 2022). Thus, as part of the implementation of the State Program for the Development of the Tourism Industry for 2019–2025, the following main measures were introduced: the "Tax free" system (value-added tax refund from a purchase made by a foreign citizen) was introduced;

the list of visa-free countries has been expanded to 79 countries, migration cards and registration of foreigners for a period of up to 30 days have been cancelled; a survey was carried out, places were identified where it is necessary to have sanitary and hygienic units with indication of locations; in 2020, the main emphasis was placed on the allocation of funding under the Employment Roadmap program, which financed the construction of 23 projects in the amount of 14.8 billion tenge, as well as 99 points of sanitary facilities in the amount of 1.0 billion tenge; the Program "Economy of Simple Things" includes 5 codes of the general classifier of economic activities of tourism and financed more than 58 projects worth more than 26 billion tenge with a loan term of up to 10 years; within the framework of the "Business Roadmap - 2025", more than 177 projects were financed in the amount of more than 60 billion tenge with a loan term of up to 5 years; a concept for the development of state national natural parks was developed and detailed, which became the basis for the adjusted master plans; 4 strategic investors were involved in the SNNP of the Almaty region, who are successfully implementing their projects, the "Open Skies" mode has been introduced at 12 airports in Kazakhstan; in 2020, the International University of Tourism and Hospitality (in accordance with the concept of development of the tourism industry of the Republic of Kazakhstan for 2023-2029) was opened in the city of Turkestan.

In recent years, the conditions for the development of the tourism industry have changed dramatically. The main reasons include the impact of the COVID-19 pandemic, the political and economic confrontation of some states, the formation of completely new consumer preferences among tourists, the active use of new digital technologies in tourism services, etc. These aspects have formed quite new conditions for the development of tourism in some areas. A number of countries were forced to reconsider the priorities of their tourism policy. Thus, in Kazakhstan, in order to adapt to new conditions, the Concept for the Development of the Tourism Industry of the Republic of Kazakhstan for 2023-2029 has been developed and is being implemented. In the Republic of Kazakhstan today, 10 main tourist areas have been identified in relation to which work is being carried out to turn them into attractive, competitive destinations. These include: Astana, the Burabai resort area, Alakol Lake, the mountain cluster of the Almaty region, the Bayanaul resort area, the Imantau-Shalkar resort area, the Baikonur space complex, Mangystau, Lake Balkhash, Turkestan (Figure 4).

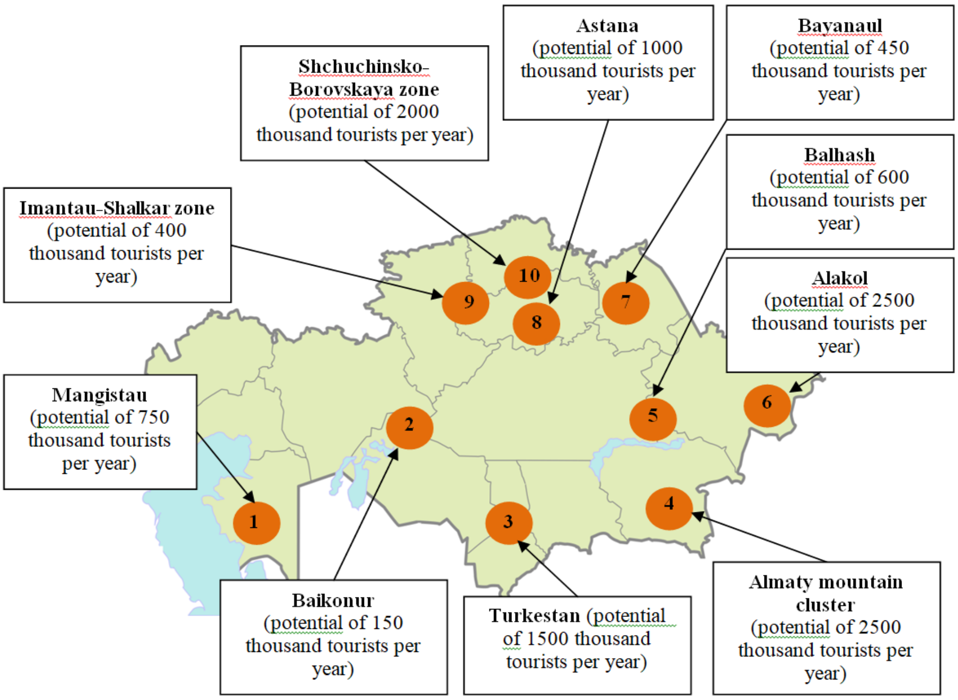

Figure 4. TOP-10 destinations of Kazakhstan envisaged for development (Note: the figure was compiled by the authors on the basis of the State Program for the Development of theTourism Industry for 2019-2025)

One of the promising destinations, which is most attractive for Kazakhstani tourists and visitors from neighboring countries, is the Almaty Mountain cluster. This cluster was created on the basis of the infrastructure of the city of Almaty, the state national natural parks "Altyn Emel","Ile-Alatau", "Kölsay Kölderi", "Charyn Canyon". Today, more than 60 tourist attractions are located on the territory of the Almaty Mountain cluster, the natural environment has a unique appeal. For example, the territory of the SNNP "Ile-Alatau" is divided into zones of conservation regime (total area 62,137 ha), environmental stabilization (16,412 ha), tourist recreational activities (15,408 ha),limited economic activity (105,295 ha), where there are such tourist sites as: Big Almaty Lake (average number of visitors for 2019-2022 is 120 thousand people), Aksai (7 thousand people), Kaskelen (9 thousand people), Butakovka (13 thousand people), Issyk (30 thousand people), Turgen (33 thousand people), Maralsay (4 thousand people), Kotyrbulak (4 thousand people).

In general, for the development of the infrastructure of this cluster, it is planned to implement a set of measures, which include the construction of a visitor center upstream of the Gorelnik thermal spring (the total cost of the project is 100 million tenge), in the areas of Mynbulak, Shygan, Aktau, Katutau, Kosbastau SNNP "Altyn- Emel", under the coordination of the Akimat of the Almaty region, the construction of 6 sanitary and hygienic units is being completed, in the SNNP "Ile

Alatau" it is planned to build 7 visit centers in 5 gorges, 10 glamping sites, an ethno village, caravaning centers, it is planned to equip 155 km of hiking trails(investments are provided for these purposes) in the amount of 10 billion tenge). General characteristics of the objects included in the Almaty mountain cluster are given in Table 1.

Table 1. Characteristics of SNNPs, the infrastructure of which is
involved inthe Almaty Mountain cluster (Source: Compiled by the authors based on sources)

SNNP "Ile Alatau"	SNNP "Kolsai Kolderi"
Total area - 199,252 ha: - protected regime - 62,137 ha; - environmental stabilization - 16,412 ha; - tourist and recreational activities - 15,408 ha; - limited households. activities - 105,295 ha.	Total area - 161,045 ha: - reserve regime - 62,527 ha; - environmental stabilization - 16,715 ha; - tourist and recreational activities - 6,720 ha; - limited households. activities - 70,083 ha.
Tourist potential - 5,000,000 people.	Tourism potential - 500,000 people.
Tourist flow for 2021 - 214.8 thousand people.	Tourist flow for 2021 - 85.1 thousand people.
Guest houses - 38	Guest houses – 110
Beds - 1 400	Beds - 1 198
The planned investment volume for 2020-2025 is 10 billion tenge	The planned investment volume for 2020-2025 is 5billion tenge
SNNP "Altyn Emel"	**SNNP "Charyn Canyon"**
Total area - 307,653 ha: - protected regime - 51,969 ha; - environmental stabilization - 71,303 ha; - tourist and recreational activities - 12,679 ha; - limited households. activities - 171,702 ha.	Total area - 307,653 ha: - reserve regime - 9,428 ha; - environmental stabilization - 13,147 ha; - tourist and recreational activities - 49,249 ha; - limited households. activities - 35,923 ha.
Tourist potential - 200,000 people.	Tourist potential - 190,000 people.
Tourist flow for 2021 - 10.1 thousand people.	Tourist flow for 2021 - 18.1 thousand of people.
Guest houses – 4	Guest houses – 4
Beds - 46	Beds - 54
The planned investment volume for 2020-2025 is 5billion tenge	The planned investment volume for 2020-2025 is 4.5billion tenge

In general, investments in the amount of more than 25 billion tenge have been attracted to form an infrastructure that meets the modern needs of tourists. The main investors are both domestic and foreign enterprises interested in the development of tourism in the area. For example, in order to increase the attractiveness of the Kolsai Lakes State National Park, which is an integral part of the cluster, a domestic investor was attracted, who plans to carry out geological and geodetic surveys and build tourist facilities worth more than 5 billion tenge by 2025. In virtue of the measures implemented on the basis of close integration ties between the main stakeholders interested in the development of tourism in the area, the attractiveness of the Almaty Mountain cluster compared to other tourist centers in Kazakhstan has increased significantly. Thus, according to the Bureau of National Statistics, in 2022, 7,335,162 tourists were served in Kazakhstan, where more than 26% of tourists account for the Almaty Mountain cluster (Figure 5). The main difference between a cluster in the tourism sector and all kinds of others (manufacturing, agro-industrial, service, etc.) is in its route territorial organization (Karanovich, 2019). The tourist route is one of the main elements that ensure the interconnection of the elements of the tourist cluster. In addition, the tourist route determines the order of interaction between the main subjects of the tourist cluster. To date, more than 80 tourist routes are being implemented on the territory of the Almaty Mountain cluster, covering more than 160 unique natural, cultural and historical sites that are of interest to tourists (Figure 6).

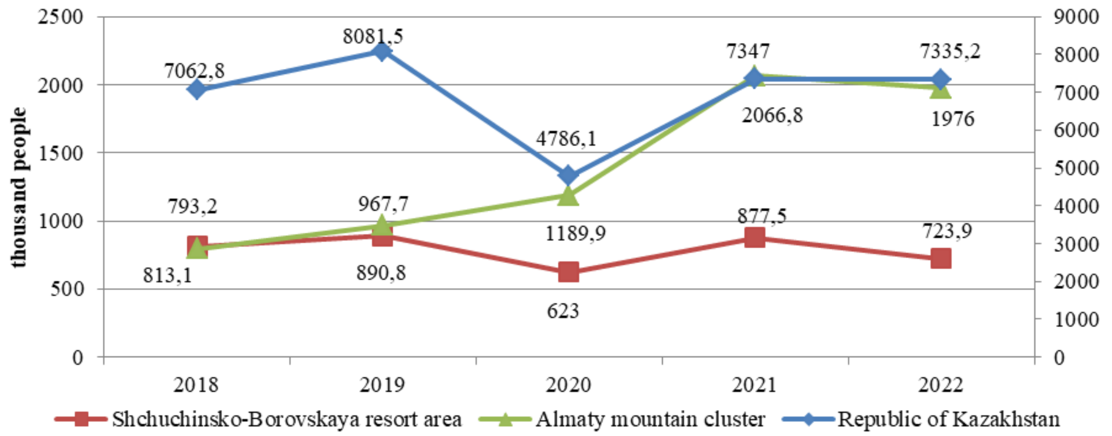

Figure 5. Number of tourists served in the main resort areas of the Republic of Kazakhstan for the period 2018-2022, thousand people (Source: the figure is based on data from the Bureau of National Statistics of the Republic of Kazakhstan)

However, there are a number of problems that prevent the formation of an active stable tourist flow in this direction. In this regard, there is an urgent need to determine the main branding approaches and create an attractive tourist image of the territory. It should be noted that one of the significant factors in the positioning and development of the territory, aimed at increasing its rating and competitiveness, its significant competitive advantage is the recognizable brand of the territory

(Kirillova and Gerasimova, 2019). Success in the formation of attractive territories primarily depends on how successfully the consciously formed brand of the place will correspond to it, i.e. its objective qualities, the expectations and demands of the consumer (tourist, investor, etc.), as well as the work of the cluster in general, to ensure the functioning of this brand (Chernyakina, 2012). In modern conditions, in many countries, one of the main criteria for the development of a tourist territory is the formation of a brand that meets the conditions of the area. For example, territorial branding, in other words, geo-branding, is one of the main tools of the UK tourism policy (Limonina and Karaseva, 2022). The country has developed a four-level system of territorial branding - from national to local. The word "GREAT" was chosen as the formalized brand (logo) of Great Britain. The name of the marketing campaign appears in the form of a logo, a national brand promoted abroad. The capital letters and the red "GREAT" typeface stand out on the billboards. It has become a kind of symbol of Great Britain. The Bureau of Tourist Marketing functions in the USA, one of the main functions of which includes the formation of brand books for the promotion of tourist areas (Melnikova and Kuznetsov, 2022).

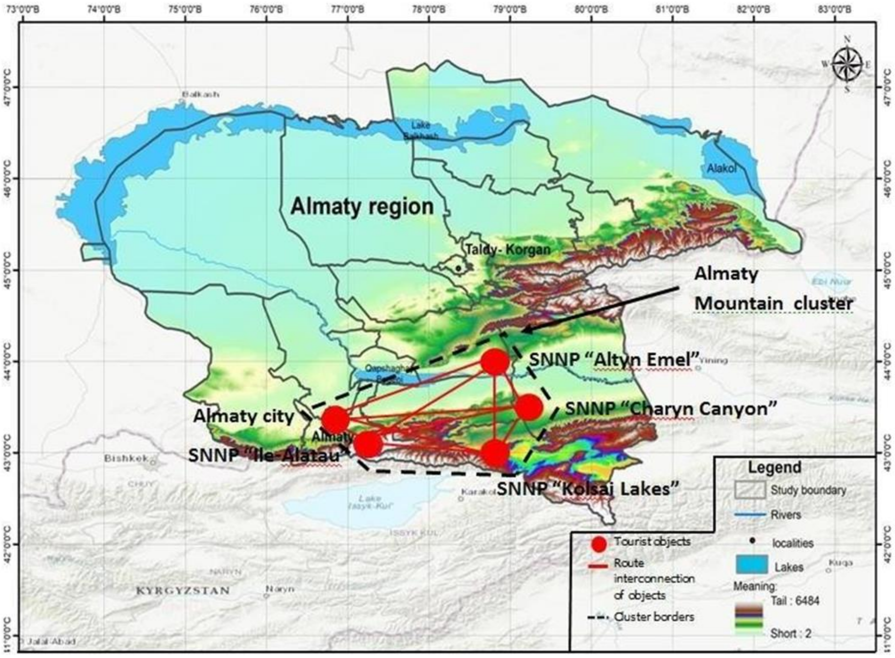

Figure 6. Almaty Mountain cluster and the relationship of its main elements
(Source: the figure was compiled by the authors based on sources)

Currently, the branding of tourist areas in the Republic of Kazakhstan is carried out mainly on the basis of a policy determined by the national operator JSC "NC "KazakhTourism" in accordance with the program documents and concepts approved by the Government. So, today, the brand book is based on the implementation of such activities as: the use of traditional brand promotion channels (television, radio, publications, outdoor video banners, etc.); preparation and display of informational videos and other video materials in the world's leading TV channels (CNN, BBC, National Geographic, etc.); involvement of public figures, industry agents of influence and opinion leaders (celebrities, bloggers, famous athletes, actors, singers, etc.); intensifying work with embassies and representative offices of countries of target markets in Kazakhstan on the promotion of Kazakhstani tourism; using the resources of the Kazakh diaspora and Kazakh students abroad to promote Kazakh tourism; intensification of cooperation and membership in major industry associations in order to promote the tourism brand among a professional audience, potential foreign investors and partners (World Tourism Organization (UNWTO), United Federation of Travel Agency Associations (UFTAA), International Hotel and Restaurant Association (IH & RA), World Tourism and Travel Council (WTTC), World Association of Travel Agencies (WATA), Asia Pacific Travel Association (PATA), World Tourism Forum (WTF), etc. In order to provide information support to tourists, Internet resources are active, which also refers to one of the main tools for branding a tourist area.

Thus, the e-Qonaq information system is being introduced, mobile applications are being developed aimed at improving the comfort of a guest's stay in the country's tourist centers, official pages on social networks have been created, where information is updated daily. In each regional administrative center, visit centers have been established that have personal websites where information about the tourist centers of the region, routes, excursion programs and events is posted. However, despite the work on the implementation of the above activities, the tourist centers of Kazakhstan, including the Almaty Mountain cluster, are little recognizable, especially among foreign audiences.

The developed measures are being implemented within the framework of the approved State program for the development of the tourism industry for 2019-2025. The country does not have a separate concept of tourism branding, which would be based on effective strategies for promoting the state as a tourist country.

It is known, that tourist area branding is implemented at three levels: national, regional and local (Turyspekova et al., 2022). If at the national level in the country branding is carried out in accordance with state programs and concepts, then at the regional level it is based on master plans approved by local authorities. Often, activities for branding tourist areas at the regional level, reflected in the master plans, are not coordinated with the measures implemented at the national level. In some regions, the tourism sector is considered as a secondary sector and certain branding measures are entirely formal. As another problem, it is worth noting that a number of tourist centers do not have clearly developed brand books that would reflect the main strategy for promoting the area as a tourist region. Quite often, it is branding measures at the local level that contribute to the transformation of the territory into a recognizable and attractive tourist center.

As already noted, the structure of the Almaty Mountain cluster includes the city of Almaty and 4 state national natural parks (Altyn Emel, Kolsai Lakes, Charyn Canyon, Ile-Alatau). Each component of the cluster has its own symbolic image

(Figure 7), but a single cluster logo has not been developed to date. The brand image is one of the most important elements of its structure, it largely determines the quality of brand perception by consumers (Kirillova and Gerasimova, 2019). The brand image is made up of a set of attributes that accompany the brand throughout its life, and includes two main components - tangible and intangible. If the material component is the territory or product for which the brand is being developed, then the intangible component traditionally includes such visual identifiers as the brand name, slogan, logo, brand colors that will be associated with it (Danylyshyn et al., 2020). The task of brand visualization is to ensure its recognition, create associations caused by the brand, various verbal and semantic constructs formed on its basis.

Each component of the cluster under consideration, based on the characteristics of natural, historical and cultural objects on the territory, can act as a dominant and be the center of attraction for tourists. The specifics of the location of tourist facilities on the territory is such that within the boundaries of the cluster, it is possible to implement both linear and circular, radial routes, where each individual section of the cluster can be the starting point of departure.

When developing a symbolic image of a cluster, it is worth paying attention to this aspect. In other words, the color scheme, the elements of the symbolic image of the cluster should form an idea for the tourist regarding the tourist facilities available on the territory and their characteristics. It should be noted that in the minds of consumers, a tourist brand is a kind of symbol, an image that carries a semantic load and is characterized by specific products, services, phenomena that really should match or, at least, approach the expectations of consumers (Bolkunov, 2016). In addition, the recreational environment and the existing infrastructure of the cluster make it possible to fully implement eco- and ethno-tours, active and extreme, adventure tours, passive types of recreation, etc. on the territory.

Logo of SNNP "Ile-Alatau" | Logo of SNNP "Altyn Emel" | Logo of SNNP "Charyn Canyon" | Logo of the SNNP "Kolsai Lakes" | Logo of Almaty city

Figure 7. Logos of the structural components of the Almaty Mountain cluster (Source: the figure was compiled by the authors on the basis of data from the official websites of the indicated national parks and the akimat of Almaty (www.ile-alatau.kz, www.altyn-emel.kz, www.charyn-park.kz, www.kolsai-koldery.kz, www.gov.kz/memleket/entities/almaty?lang=ru)

Practice shows that often when forming a brand of a territory, terms expressing the name of the area or individual characteristics of the territory, which form associative images or ideas of tourists about the area, play a superior role. Today, the associative vocabulary of the Almaty mountain cluster includes such high-frequency words as: Turgen, Charyn Canyon, Charyn River, Big and Small Almaty Lake, Shymbulak, Medeo, Singing Dune, Tanbalytas, etc. Using the basic terms, we have compiled an associative molecule of the Almaty Mountain cluster, which allows us to determine the verbalized and symbolic value of the cluster for visitors, and which should underlie the brand of this area (Figure 8).

The presented associative molecule is capable of reflecting the most important directions in the formation of the symbolic image of the Almaty Mountain cluster. It is the high-frequency terms of the associative dictionary that reflect the images of tourists about the area and what attracts them most in this area. In addition, the associative molecule can underlie the concept of building a brand at the local level and determine the main strategies for promoting the area.

The development and promotion of a local tourism brand is not limited to the creation of a graphic (logo) and verbal (slogan) designation and the search for communication channels for its promotion in various segments of the information space (Tiberghien, 2020). Tourism territory branding is, first of all, a set of measures that are aimed at promoting certain characteristics of the region to potential consumers (tourists, travel agents, investors in the hospitality industry) with the help of a properly created image, a key idea. Formation of a tourist territory brand is a long process and involves the implementation of a set of interrelated and combined measures. It is impossible to form a certain brand, especially territories, in one move or in one order (if private consulting or marketing firms are involved).

Branding at the local level is effective only if a well-thought-out branding strategy is developed, verified stages of strategy implementation are provided, the situation is constantly analyzed and corrective measures are taken, etc. In the development and implementation of the strategy, and in general in the preparation of the brand book of the tourist area, all stakeholders interested in the development of tourism in the area should be involved. Considering the specifics of the branding of the Almaty mountain cluster, it can be noted that, to a certain extent, the brand of the territory is formed spontaneously, and in most cases the brand is promoted by local travel companies that have developed and promoted 3- 4 day tours, mainly for domestic tourists. The analysis shows that there is a discrepancy in the priorities for promoting the brand of the area. The authorities that coordinate and regulate the tourism sector at the local level seek to promote the cluster as a multi-directional tourist center, where it is possible to implement tours of both an active and passive nature, while tourism companies mainly position it only as an ecotourism center.

Accommodation facilities are only interested in branding the areas where they are located. The contradictory nature of the projected and spontaneously formed brand, the lack of a comprehensive and constructive nature, the implemented activities have a negative impact on the formation of a holistic policy in the field of branding of the tourist territory, as aresult, today, it is not possible to fix a sufficiently clear and capacious message to the audience of potential tourists.

The study shows that today the main priorities in the field of building the brand of the Almaty Mountain cluster should be:

- formation of a brand book based on a detailed marketing, economic and socio-cultural analysis, where the philosophy, mission, values, uniqueness and position, competitive advantages of the brand of the territory should be clearly reflected. At the same time, it is necessary to pay special attention to the brand book guideline, i.e. a set of rules governing the use of the brand;

- identify the main strategies for branding the tourism cluster. At the same time, it is necessary to pay attention to the issues of brand identity, which involves the creation of a strong and memorable brand. In addition, when developing a brand promotion strategy, it is necessary to determine the level of loyalty and the degree of trust in the brand of potential visitors. It should be noted that the location branding strategy should also take into account the specifics of the integration and cooperation of subjects within the boundaries of the cluster. It is these aspects that should be a priority in the implementation of the strategy;

- it is necessary to create conditions for the conformity of the quality of services provided within the boundaries of the tourist cluster with the characteristics of the promoted brand. In other words, it is necessary to focus on the specific behavior of tourists who have already arrived for recreational purposes. The degree of satisfaction with their quality of services will affect the way in which it will notify its acquaintances - potential tourists about the area. In addition, one should not forget about the quality of related services, which also affects the tourist's perception of the territory;

- the brand should be promoted in both traditional and innovative ways and technologies. In this case, the role of digital technology and mobile gadgets is huge. Today, mobile gadgets are the main source of information for young and middle-aged people. Most services are ordered and purchased through mobile applications, less often through special software installed on personal computers. These technologies should be actively used in the branding of the tourist area. In extreme cases, this will allow a potential tourist to form an introductory image of a tourist territory, at best, arouse interest in visiting the territory, disseminating information about it in a close social environment, etc.

Of course, the definition of the above priorities and their implementation should be carried out with the direct participation of all stakeholders, from the local population to operators promoting tourism at the national level.

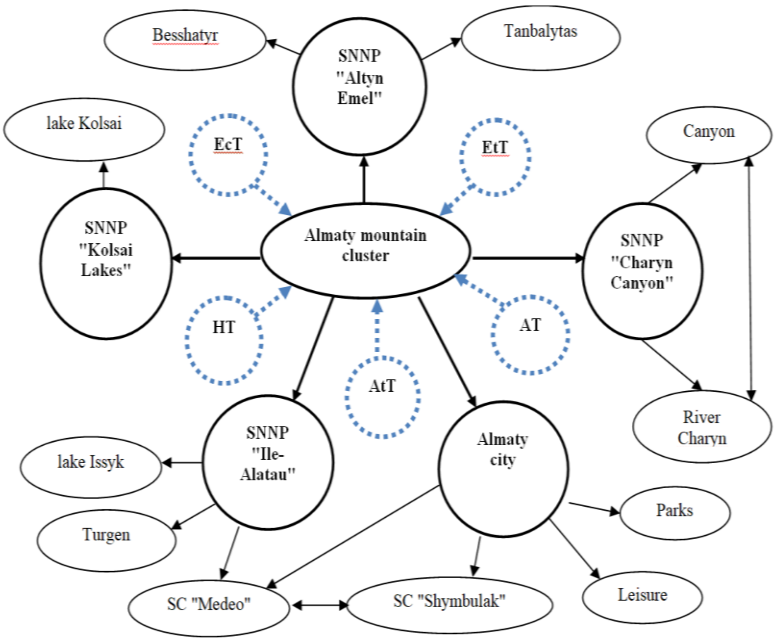

Figure 8. Branding elements (associative molecule) of the Almaty mountain cluster (EcT - ecological tourism, EtT - ethno- tourism, HT - health tourism, AtT - active types of tourism,AT - adventure tourism) (Source: the figure was compiled by the authors)

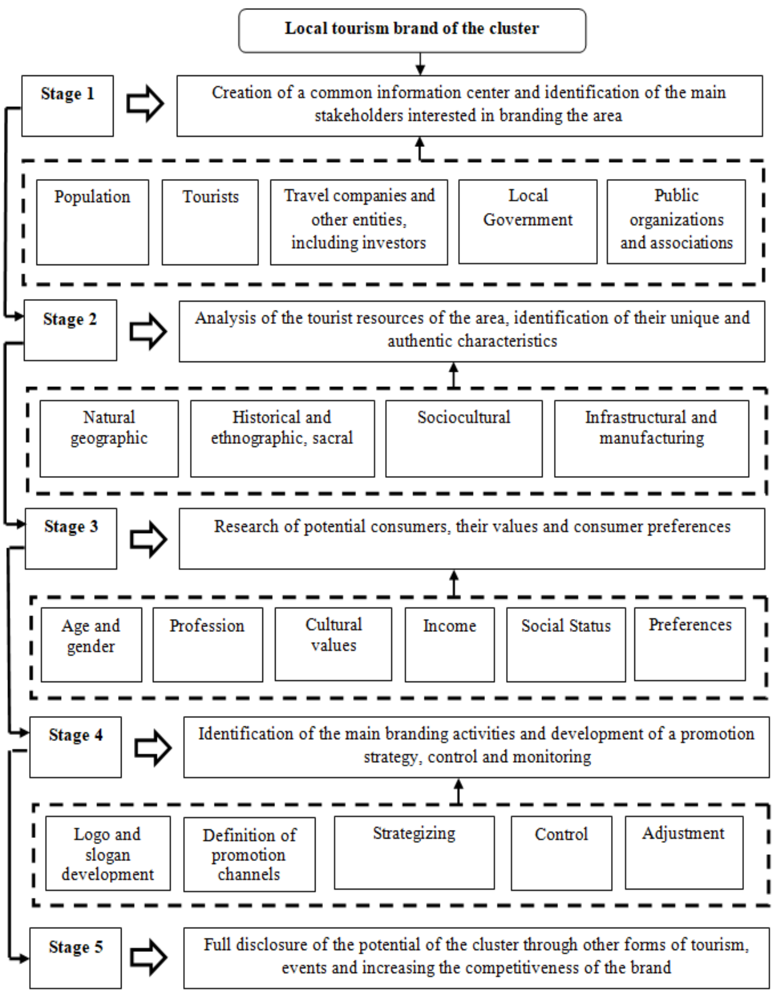

Figure 9. Algorithm for branding the Almaty Mountain cluster (Source: the figure was compiled by the authors)

The branding process should also be carried out on the basis of a well- defined plan that would be adaptable to changing conditions and would define the main stages of implementation (Figure 9).

CONCLUSION

Thus, despite the fact that clusters operating in the field of tourism increase their competitivenessdue to the formation of close cooperative and integration ties between the subjects of the cluster as part of the implementation of the tourist route, branding remains one of the main tools for awakening the interest of the tourist audience in the territory in general.

In modern conditions, the process of territory branding, especially where clusters operate, should cover all the characteristics of the area, as well as take into account the unique features of not only tourist sites, but also the specifics of integration ties between subjects. It should be noted that another key feature of the branding of tourist clusters is that these cluster formations are dependent on the degree of positivity of the image that is formed among the target audience of tourists. Unlike clusters operating in other sectors of the economy, the process of production and consumption of services in the tourism cluster is carried out within its geographical boundaries. In this regard, the demand for a tourist cluster in the eyes of tourists will always depend on how positively they are generally disposed towards this tourist area.

One of the main aspects of branding cluster systems in tourism is the compatibility of a brand promotion event at the national, regional and local level. The process of branding a tourist area is quite a long and complicated process. Measures implemented at the national level should always take into account and support branding strategies and plans developed and implemented at the local and regional level. In some cases, the brand of a tourist area can be formed spontaneously under the pressure of consumer preferences of tourists and the activities of the local tourism business community to meet the needs of tourists. As the experience in the development of the Almaty mountain cluster shows, travel companies promote this area only as an ecotourism center, while at the national and regional level this territory is branded as a multidirectional center where it is possible to implement tours of both active and passive types of tourism.

The inconsistency of the implemented measures on the part of the main stakeholders leads to a decrease in the effectiveness of promoting it as a tourist area. In this case, it is necessary to note that the process of branding a tourist area, especially cluster structures, should be complex and structured, where each step should be justified and verified. In addition, branding should be considered as one of the main tools that can ensure the sustainable development of the region as a whole in the long term. When a brand of a territory or a tourist brand is created, it is rather difficult to predict exactly how and in what volumes it will bring commercial benefits. In this case, the effectiveness of territory promotion depends on branding methods. To date, a fairly good return is given by the integrated method, when tools are combined, both in the traditional way of promotion, and through digital and virtual systems.

In general, the process of branding a tourist cluster should pursue such goals as: ensuring an increase in the level of competitiveness of the territory due to the presence of a target audience of tourists in the information space, creating a holistic recognizable image of a tourist area, creating favorable conditions for the inflow of investment, developing and ensuring the sustainability of integration ties between all cluster members. Achieving these goals is the most important condition for the demand for the cluster among tourists and its sustainable development in the long term.

Author Contributions: Conceptualization, B.Zh. and S.P.; methodology, B.Zh., A.M. and Ye.S.; software, K.M. and L.M.; validation, B.Zh. and S.P..; formal analysis, K.M. and Ye.S.; investigation, L.M.; data curation, B.Zh., L.M. and Ye.S.; writing - original draft preparation, A.M. and L.M.; writing - review and editing, A.M. and Ye.S.; visualization, B.Zh.; supervision, Ye.S.; project administration, S.P. All authors have read and agreed to the published version of the manuscript

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 28.06.2023 Revised: 18.08.2023 Accepted: 12.09.2023 Available online: 28.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1165-1175
DOI 10.30892/gtg.49331-1115

EMOTIONAL PERCEPTION AND CULTURAL MOTIVATION ON LOYALTY TO A WORLD HERITAGE SITES DESTINATION

Jesús Claudio PEREZ GALVEZ*
Department of Statistics, Econometrics, Operational Research, Business Organization and Applied Economics, University of Córdoba, Córdoba, Spain, e-mail: dt1pegaj@uco.es

Pedro Antonio FUENTES JIMENEZ
UAGRM Business School in Santa Cruz, Bolivia, Santa Cruz, Bolivia, e-mail: fuentespedroantonio@gmail.com

Pablo RODRIGUEZ GUTIERREZ
Department of Statistics, Econometrics, Operational Research, Business Organization and Applied Economics, University of Córdoba, Córdoba, Spain, e-mail: d22rogup@uco.es

Miguel Jesús MEDINA VIRUEL
Department of Statistics, Econometrics, Operational Research, Business Organization and Applied Economics, University of Córdoba, Córdoba, Spain, e-mail: mjmedina@uco.es

Citation: Pérez Gálvez, J.C., Fuentes Jiménez, P.A., Rodríguez Gutiérrez, P., & Medina Viruel, M.J. (2023). EMOTIONAL PERCEPTION AND CULTURAL MOTIVATION ON LOYALTY TO A WORLD HERITAGE SITES DESTINATION. *GeoJournal of Tourism and Geosites*, 49(3), 1165–1175. https://doi.org/10.30892/gtg.49331-1115

Abstract: The aim of this paper is to contribute to the scientific literature in the field of tourism in Latin America (Sucre, Bolivia was named a World Heritage Site (WHS) by UNESCO). This study analyses the relevance of the cultural motivation and emotional experience of the tourist to positively influence the image or the perceived value of the heritage site visited. The research shall also analyse other relationships, such as the positive effect of the perceived value on the loyalty of tourists and the influence of the visitor's place of origin as a moderating variable in the formation of the image and loyalty to the destination. The analysis was performed by means of structural equation models (SEMs). The data were extracted through fieldwork consisting of interviews with visitors to the city. The results of the research revealed that the perceived value of a heritage destination not only depends on the functional and tangible aspects of the attributes but also on the emotional experience and cultural interest regarding the heritage site visited. Similarly, there is evidence of a relationship between perceived value and a loyal attitude and that it is moderated by the origin of the tourist, this being a great influence in the case of the domestic tourist.

Key words: emotional perception, heritage tourism, Sucre (Bolivia), Structure equation models (SEM), World heritage sites (WHS)

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INTRODUCTION

Each year, the United Nations Educational, Scientific and Cultural Organization (UNESCO) performs three types of registrations in the area of world heritage: World Heritage Site (WHS), Intangible Cultural Heritage (ICH) and, finally, the places that are World Heritage Sites but whose survival is at risk. These entries serve as an acknowledgement of the uniqueness and authenticity of specific places or tangible events and, at the same time, they lead to an obligation for their safeguarding and preservation by the public or private organizations that manage them, as a historical legacy for future generations. Notwithstanding, it also indirectly implies the appearance of a cultural asset that is the subject of assessment on the part of the tourist sector (Adie, 2017; Io, 2019). As such, in these destinations, a new tourist type may appear that feels strongly attracted to the heritage component, in addition to the emotional component, of the place and they could be known as heritage tourist. Accordingly, it would be necessary to restrict and analyse the type of emotional link that tourists have when visiting a specific place registered as a WHS, as they may feel motivated or attracted by their heritage component and others, therefore, do not (Nguyen and Cheung, 2014). Because of this, different pieces of work in the field of study of tourist behaviour (Lee et al., 2016) have made a call to develop comparative studies that examine the differences at a perceptual level of local and non-local tourists.

The main aim of this research is to empirically compare the influence of the emotional experience and the cultural motivation of the tourists' loyal attitude. Specifically, the purpose of this research is to test whether the emotional experience and motivation that tourists feel for culture when selecting their travel destination positively influence their perceived value and loyalty to the destination, i.e., the likelihood that they will return to the destination in the future or recommend it. The research was performed in a WHS destination, in this case, referring to the Historic City of Sucre in Bolivia. The suggested model intends to show evidence for the influence, on one hand, of the emotional link or perception and, on the other, of the

* Corresponding author

cultural motivation of the visitors of the perceived value towards the destination, which is analysed as a determining factor of their loyalty. At present, there are no studies that perform this type of tourism analysis in the city of Sucre (Bolivia).

LITERATURE REVIEW

1. Heritage tourism

In specific tourist destinations, the experience of the visitors may go beyond that of purely recreational aspects. In this case, Poria et al. (2006) suggest the existence of tourists that seek to achieve a unique experience by means of interaction with the cultural heritage of the destination visited. By doing so, the heritage tourist looks to understand and participate in the cultural wealth of the place, specifying this perception with specific visiting patterns (Poria et al., 2003), which would differentiate them from the tourist who does not emotionally comprehend the value of the heritage being visited. This leads to being in the presence of a key determining factor of the tourist's behaviour in the destination. These behaviour patterns, according to their attraction to the heritage of the destination, lead to study factors being required for management, work and safeguarding strategies of a specific WHS. On the other hand, it would also be necessary to properly manage this heritage (Al-Tokhais and Thapa, 2019), in order to guarantee its preservation and safekeeping.

Tourism that includes visiting the heritage of the destination as an important motivation started to develop in the 17th century, when the youth of the British nobility began to undertake cultural trips known as "Grand Tours". These visits to historic places sought to improve the education of these young aristocrats, with the idea of preparing them to be the intellectual elites of their time (Turner and Ash, 1991). In any case, with the improvements in transport systems and a better economic development, the visit to these places with a strong heritage attraction has been democratised, gradually increasing the flow of people, of different economic and social levels, that undertake trips looking to discover places like those registered by UNESCO (Correia et al., 2013). Accordingly, this entry means the recognition of the historic value of this place (Tucker and Carnegie, 2014) and, at the same time, an international brand of authenticity that generates attraction among cultural tourists (Hassan and Rahman, 2015; Mariani and Guizzardi, 2019). The scientific literature that has studied the relationship between tourism and the WHS specifies aspects such as the increase in the numbers of tourists, the improvement in the satisfaction and motivation towards the destination or the introduction of economically sustainable management measures in the same (among others, Nguyen and Cheung, 2014; Remoaldo et al., 2014; Antón et al., 2017; Al-Tokhais and Thapa, 2019). As such, it may specify an evident interaction among the heritage value, recognised by UNESCO and the tourist phenomenon (Lourenço-Gomes et al., 2014). This even leads to the birth of a sub-group of tourists within the type of heritage tourists that Adie (2017) refers to as WHS tourists.

Heritage tourism leads to, as such, the enjoyment and interaction with the historic and cultural legacy of the destination visited. From this, an authentic experience derives that the visitors perceive in environments that may be natural or cultural and that, at the same time, may be located in urban or rural areas (Nguyen and Cheung, 2014). Similarly, this type of tourist looks for an emotional connection with their own heritage and customs (Remoaldo et al., 2014) in this visit.

In this area, the UNESCO entry of a heritage as a WHS means a special recommendation for the increase of tourism in the place registered (Poria et al., 2013; Adie, 2017), seeking exclusive experiences in unique places (Timothy and Boyd, 2011; Park, 2014). Therefore, the scientific literature has shown interest in the empirical analysis of the relationship between tourism and world heritage, specifically in WHS. Thus, studies have been performed in Israel (Poria et al., 2003), Macao (Vong and Ung, 2012; Io, 2019), Vietnam (Nguyen and Cheung, 2014), China (Wang et al., 2015), Portugal (Ramires et al., 2018), Ecuador (López-Guzmán et al., 2019a; Serrano López et al., 2019), Perú (López-Guzmán et al., 2019b), Spain (Valvede-Roda et al., 2022, Pérez-Gálvez et al., 2019b), Bolivia (Pérez-Gálvez et al., 2021a) or Colombia (Pérez-Gálvez et al., 2021b). These research articles analyze the relationship between the valuation of the tourist attributes of the cities, the motivations of the visitors and their sociodemographic characteristics, with respect to satisfaction with the visit and loyalty to the destination. The aim of this paper is to contribute to the scientific literature in the field of tourism in Latin America (Sucre, Bolivia). This study analyses the relevance of the cultural motivation and emotional experience of the tourist to positively influence the image or the perceived value of the heritage site visited.

2. Motivation

Motivation, in general, is determined as a key factor when it comes to choosing the destination. In any case, there are different types of motivations when planning a trip, with culture being one of the main determining factors for the decision (Correia et al., 2013). Additionally, destinations present great diversity of heritage values, with there being many variables that influence them (Breakey, 2012). All of this specifies the existence of a strong competition among different cultures, especially those interested in attracting foreign tourism (Remoaldo et al., 2014; Kim et al., 2018). In these places, tourist demand is formed by the recognised cultural value (such as the WHS entries made by UNESCO), the services that are available to travellers (whose management falls on the same manager) and also the involvement of the local community itself in promotion and the interaction with tourists (Abuamoud et al., 2014). In this sense, Mariani and Guizzardi (2019) have recently studied these causal variables, concluding that the UNESCO entry as a WHS not only provides a motivation for a visit, it also provides an appropriate assessment of the destination, as well as depending on the activities of the organisations, public and private, that are responsible for the management of the destination.

In the efficient and sustainable management of a heritage destination, it is essential to identify and assess key factors in its development. Among those, the motivation of tourists stands out, their emotional perception and assessment of the visit, as well as the level of satisfaction achieved and the degree of loyalty reached. On the basis of this, public and private managers may plan, implement and assess strategies for the improvement, promotion and sustainability of the destination.

For Vong and Ung (2012), there are four motivational areas that influence the appropriate management of a heritage destination: its history and cultural legacy, the assistance services of the place, the heritage understanding available to the traveller and, finally, the different attractions that may be enjoyed. In similar terms, Vareiro et al. (2016) establish four groups of motivations towards heritage destinations: historic outlines and accessibility, entertainment and possibility of shopping, living with the local community and efficiency. Recently, Io (2019) specifies five dimensions of attributes that the tourist expects to enjoy in this type of destination: nostalgia and authenticity, consumption, arts and crafts, fun and cultural relevance.

Some researchers distinguish between heritage motivations and motivations of tourists in general (Nguyen and Cheung, 2014). Among these first ones, we have self-enrichment, learning about the place and knowledge of its culture. Regarding the second ones, we find entertainment and the search for diverse knowledge during the trip. For their part, Romao et al. (2015) distinguish three groups of motivational dimensions: businesses, cultural and entertainment. Additionally, Almeida-Santana and Moreno-Gil (2018) perform a grouping of the motivations towards the trip on the basis of the following factors: knowledge and culture, leisure and rest, sports, prestige and social relationships, entertainment and meeting other people.

3. Emotional perception

Currently, the research on heritage tourism follows two lines of study (Su and Wall, 2011). The first one analyses the concept and characterisation of tourism that visits a heritage destination. The second of these seeks to determine the relationship between the economic development derived from tourism and its balance with the necessary safeguarding of the cultural heritage of the destination. For their part, Timothy and Boyd (2003), indicate the existence of two ways of approaching heritage tourism: on the one hand, analysing the presence of tourists that visit a destination with a high historic-heritage component; and, on the other, studying the perception that visitors have of the heritage visited regarding their own personal heritage (Poria et al., 2003). Accordingly, among the visitors to WHS places, we may find tourists that only have a recreational experience of knowing a heritage place (internationally recognised) or involving an emotional re-encounter with the visitors' own cultural heritage (Poria et al. 2006; Trinh et al., 2016).

Using this idea, specific tourists do not perceive any relationship between the heritage of the place visited and their own cultural identity. This means that this tourist type is found in the destination as mere spectators (Saipradist and Staiff, 2007). Notwithstanding, this situation may change if the public and private managers of the place encourage activities of contextual interpretation of this destination, with a transcultural vision of the same (Saipradist and Staiff, 2007). This suggests that the places registered as WHS should be subject to strategies that reinforce historical and cultural understanding that may awaken emotional feelings on the part of the tourist (Poria et al., 2013). This is particularly necessary when we are in the presence of foreign visitors, with an important cultural gap between their place of origin and the destination (Tucker and Carnegie, 2014). The construct of emotional perception of the visitor in the WHS entries has been extensively analysed by Poria et al. (2003). These researchers have proposed diverse models of segmentation of tourists in the heritage destinations on the basis of two questions: first, the perception that the tourist has of the connection between the historical heritage of the destination and their own; and, secondly, the emotional relationship between the tourist and the destination. On the basis of this, these authors differentiate three segments of visitors: first, tourists that visit a heritage destination without a connection to their cultural heritage; second, tourists that perceive a connection between the historic legacy of the place and its cultural heritage; and third, tourists that are not aware that the destination is part of their cultural heritage (Poria et al., 2003). The analysis of the emotional perception is particularly important in the case of a foreign tourist. Accordingly, Kim et al. (2018) present an analysis of this perception in a WHS in Korea. For their part, Canale et al. (2019) analyse the perception that international tourists have of WHS sites in Italy. Similarly, López-Guzmán et al. (2019b) complete a segmentation of the international tourists addressing their emotional experience at a WHS in Perú.

4. Perceived value

Tourist destinations present a series of attributes that are determining factors in the choice of a place to visit (Lew, 1987), conforming with factors of attraction whose effectiveness shall be in terms of the quality perceived by tourists as they may provide them a series of profits. As such, the tourist experience is closely related to the availability in the destination of a series of attributes that allow the visitor to have this memorable experience of the trip (Tung and Ritchie, 2011; Kim, 2014). In any case, the perceived value of these attributes does not derive from their simple accumulation, it comes from an appropriate balance between heritage, cultural interaction, interpretation, infrastructure, opportunities for shopping and leisure, gastronomy or citizen safety, among others (Chi and Qu, 2008; Kim and Brown, 2012). A correct assessment of the attributes of the place being visited shall be a key factor in the conformation of tourist satisfaction and loyalty towards the destination, something that leads, in turn, to a first-class promotion factor (Ozdemir et al., 2012).

In any case, not all of the attributes of a destination provide it with competitive advantages, only those that respond to what the tourist expects and desires from the journey (Prayag, 2008). In this sense, diverse studies have been performed that analyse how the attributes of the destination manage the satisfaction of the tourist and create a positive image of the destination. As such, we would be in the presence of key factors that specify the tourist experience, the desire to repeat the visit, as well as the promotion of the destination when the traveller returns to their place of origin. Among these, citizen safety and the food of the destination are generally the ones indicated (Driscoll et al., 1994; Dwyer and Kim, 2003; Beerli and Martín, 2004; Chi and Qu, 2008; Crouch, 2011; Chandralal and Valenzuela, 2013; Kim, 2014).

In terms of the perceived value, scientific literature analyses the difference regarding domestic tourists and international tourists. In this sense, Io (2019) indicates that when the physical distance between the destination and the tourist's place of residence is greater, the greater the attraction they feel for the place. This also involves the relationship that exists between the perceived value and the authenticity of the place (Park et al., 2019). The previous scientific literature suggests that ethnocentrism and national pride may greatly alter the perceptions and assessments of a tourist destination (among others, Beeton, 2004; Butler et al., 2014). Thus, Kim and Jogaratnam (2003) have seen that local tourists rated their satisfaction with a destination as being significantly higher than international tourists. Similarly, Poria et al. (2006) have suggested that tourists that perceive a tourist destination to be part of their heritage stated having a greater interest and intention of visiting the destination. On the basis of the literature review performed, the following research hypotheses have been established:

Hypothesis (H1): The emotional perception of the visitors has a positive effect on the perceived value.

Hypothesis (H2): The cultural motivation of the visitors has a positive effect on the perceived value.

Hypothesis (H3): The value perceived by the visitors positively influences loyalty towards the destination.

Hypothesis (H4): The positive effect of the emotional perception of the perceived value is stronger among domestic visitors than international ones.

Hypothesis (H5): The positive effect of the motivation in the perceived value is stronger among domestic visitors than international ones.

Hypothesis (H6): The positive effect of the perceived value regarding loyalty towards the destination is stronger among domestic visitors than international ones.

METHODOLOGY AND STUDY AREA

1. Survey Design and Data Collection

This section presents the protocol followed during the collection of information (Figure 1 shows the flow chart). The target population is the tourists that visited the city of Sucre (Figure 2) between the months of November 2017 and March 2018, regardless of whether they stayed overnight or not in the city or if they visited other places in the department of Chuquisaca (Bolivia). A non-probability sampling technique was chosen, regularly used in this type of research, where the tourists surveyed are in the same space and time. Regarding the size of the target population, the number of tourists staying in hotel establishments in the city in the year 2017 was considered. Therefore, and according to data from the Bolivian National Institute of Statistics, a total of 143,294 tourists stayed in the city's hotel establishments in 2017.

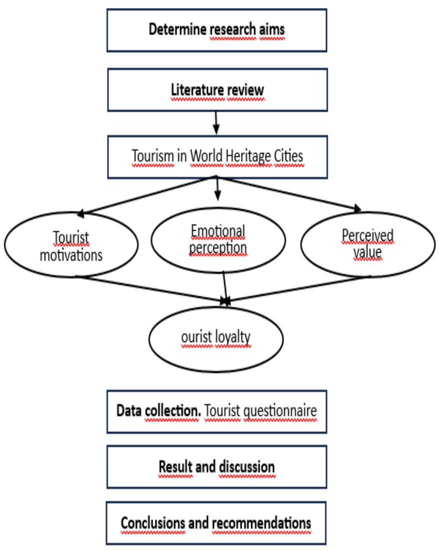

Figure 1. Flow chart (Source: Own elaboration)

Figure 2. The Location of Sucre (Bolivia) (Source: Google Earth)

A deliberate effort was made to obtain a representative sample that included a balanced number of domestic and international tourists. A total of 750 surveys were obtained, of which 529 were valid (Table 1). This number, according to Cohen (1992), is valid as a minimum sample required for the design and later analysis of a PLS-SEM. Additionally, the possibility of exploring the minimum sample size in relation to the number of relationships proposed by the model is established for this type of matter. Our structure equation model involves three relationships (Figure 3).

Therefore, a G* Power test was used (Faul et al., 2007) for a relevance level $\alpha=0.05$, an effect size $f2=0.15$ and three predictors gave a result for the level of 95.09% with a minimum sample of 111 individuals. As such, the value was appropriate (above the level of 80%) according to that recommended by Araujo and Froyland (2007).

Table 1. Technical sheet of the research (Source: Own elaboration)

Tourists stayed in the city's hotel establishments (2017)	143,294 people
Sample	529 surveys
Procedure	Convenience sampling
Performance period	November 2017 and March 2018
Sampling error	± 4.22% (indicative)
Confidence level	95.0% p=q= 0.5
Sample control	Implementation and monitoring of fieldwork by the authors of the research

A design of quantitative research has been followed for this study. The questionnaire as a measuring instrument is divided into different sections. A first part of the questionnaire collects the socio-demographic characteristics of the respondent (sex, age, education level, profession, nationality and income). A second part focuses on the measuring of cultural motivations to visit the destination (three items) (McKercher, 2002). The final part of the questionnaire collects the emotional perceptions experienced when considering the heritage visited (three items) (Poria et al., 2013). The fourth is focused on the perceived value with four items (Nguyen and Cheung, 2014; Almeida-Santana and Moreno-Gil, 2018). Finally, the questionnaire collects information regarding the loyal attitude towards the destination by means of two items (Sato et al., 2018). The items were classified on a Likert scale of five points with 1 referring to completely disagree and 5 being completely agree.

2. Data Analysis

The proposed structure model has been assessed using the application of the approximation of Partial Least Squares (PLS) (Chin and Newsted, 1999) and the results obtained are compared by the estimated path coefficients. The study uses a three-stage approach for the analysis: assessment of measuring models, assessment of structural model and a multi-group analysis (MGA) for the case of checking the hypothesis referring to the case of domestic and foreign visitors.

RESULTS AND DISCUSSION

In this section, the reliability of the measurement model and the proposed structure model is checked. To do so, the SPSS (v.24) statistical programme and Smart PLS (v.3), a programme based on structure equation models, have been used.

1. Sociodemographic Profile

This section presents the main sociodemographic profiles of the sample obtained (Table 2). The profile of the respondents shows that the majority are men (55.0%). By age, young visitors stand out. In terms of educational level, the tourists surveyed show a high level of education. In terms of profession, the respondents are mainly divided between: businessmen (20.6%), self-employed workers (19.7%) and civil servants (16.6%). In the distribution by nationality, 50.5% of the tourists surveyed were Bolivian and the remaining 49.5% were foreigners. Finally, in terms of the income level of the family unit, the visitor profile is middle or lower-middle income. Finally, regarding the income level of the family unit, those corresponding to the range between $500 and $1,000 (26.7%) stand out, followed by those earning less than $500 (20.4%), closely followed by those earning between $1,000 and $1,500 (16.1%), those earning between $1,500 and $2,500 (15.7%), those earning between $2,500 and $3,500 (11.3%) and, finally, those with income greater than $3,500 (9.8%).

Table 2. Sociodemographic Profile (Source: Own elaboration)

GENDER		AGE		LEVEL OF EDUCATION	
Men	55,0%	Under 30 years of age	49,0%	Primary education	0,9%
Women	45,0%	30-39 years old	33,3%	Secondary education	17,2%
		40-49 years old	9,3%	University education	57,5%
		50-59 years old	5,7%	Master/PhD	24,4%
		60 years old or more	2,8%		
PROFESSIÓN		NACIONALITY		INCOME	
Businessmen	20,6%	National	50,5%	Under $500	20.4%
Freelance works	19,7%	International	49,5%	From $500 to $999	26.7%
Civel servants	16,6%			From $1,000 to $1,499	16.1%
Employees	15,2%			From $1,500 to $2,499	15.7%
Students	14,6%			From $2,500 to $3,499	11.3%
Others	13,3%			Over $3,500	9.8%

2. Global measurement model

2.1. Evaluation of the reliability and validity of the measurement model

In the first stage of the analysis, the acceptability of the measurement models should be confirmed (Hair et al., 2016). For the assessment of the measurement model, the reliability and validity assessment of the different constructs is required (Henseler et al., 2016). The reliability study of the latent variables of the model involves both the individual reliability of each one of the items that composes each one of the constructs, as well as the internal reliability or consistency of each one of them. The analysis of the validity requires two stages: convergent validity and discriminant validity (Chin, 2010; Hair et al., 2011). The measurement model used in the study uses four constructs: emotional perception, motivation, perceived value and loyalty to the destination.

Regarding the assessment of the reliability model, the factorial loads are calculated for the reflective scales. Each factorial load is compared with a limit value. In a general way, the value of the factorial loads should be located above 0.7 to be considered acceptable (Hair et al., 2011). Considering the previous consideration, the practical entirety of the factorial loads of the individual items is greater than 0.7 for each one of the latent variables. The reliability of the construct specifies whether the items that measure a construct are similar in their scores (Chin, 2010; Hair et al., 2011). With this purpose, the Composite Reliability (CR) is used as a more appropriate measure (Chin, 1998). In general terms, the values greater than 0.6 are considered appropriate for specifying levels of reliability (Nunnally and Bernstein, 1994). In every case, these thresholds are surpassed. With the aim of assessing the convergent validity of the measurement model, the average variance extracted (AVE) from the LVs should be greater than 0.5 so that the convergent validity is acceptable (Chin, 2010; Hair et al., 2011). Table 3 shows that the average variance extracted (AVE) of each one of the measurement model constructs is greater than 0.5.

Table 3. Reliability and validity of the measurement model (Source: Own elaboration)
Note: All loads reflective measurement model are significant at the 1% base on a two-tailed test [t (0.01;10,000) =2.577]

Constructs / Associated items	Loads	CR	AVE
Emotional perception (EP)		**0.71**	**0.634**
My visit to the historical heritage of the city has contributed to my education (**EP1**)	0.746		
My visit to the historical heritage of the city moved me (**EP2**)	0.849		
My visit to the historical heritage of the city made me feel good (**EP3**)	0.790		
Motivation (MO)		**0.73**	**0.653**
To know the city's wealth of monuments and history. (**MO1**)	0.854		
To get a deeper knowledge of the city's heritage (**MO2**)	0.849		
To attend cultural events (**MO3**)	0.714		
Perceived value (PV)		**0.735**	**0.561**
The city's wealth of monuments and history (**PV1**)	0.79		
Monuments and art conservation (**PV2**)	0.83		
Beauty of the city (**PV3**)	0.711		
Accessibility to emblematic buildings and monuments (**PV4**)	0.652		
Destination loyalty (DL)		**0.736**	**0.791**
I would recommend the visit if someone asked me for advice (**DL1**)	0.887		
After my experience, I think I will return again in the future (**DL2**)	0.891		

Additionally, the discriminant validity indicates to what extent each construct or latent variable is different from other constructs in the model (Hair et al., 2016). The Fornell-Larcker criteria examines the amount of variance that a construct captures from its indicators (AVE) regarding the amount of variance it shares with other constructs (Chin, 2010; Hair et al., 2011). Additionally, a greater criteria analysis is used in the calculation of the Heterotrait-Monotrait Ratio (HTMT), which represents the relationship of the correlations among the indicators that measure the same construct and the correlations among indicators of different constructs that measure different phenomena (Henseler et al., 2016). In order to establish the existence of the discriminant validity of the values obtained, they should be located beneath the HTMT ratio. As seen in Table 4, each one of the measurement models reaches an appropriate discriminant validity using the Fornell-Lacker criteria as well as the HTMT ratio.

Table 4. Evaluation of discriminant validity (Source: Own elaboration)

Fornell-Larcker criteria				
Constructs	**EP**	**MO**	**PV**	**DL**
EP	0.796			
MO	0.523	0.808		
PV	0.538	0.542	0.749	
DL	0.346	0.222	0.37	0.889
Discriminant Validity (HTMT)				
Constructs	**EP**	**MO**	**PV**	**DL**
EP				
MO	0.729			
PV	0.739	0.743		
DL	0.473	0.303	0.501	

2.2. Evaluation of the structural model

Having tested the validity and reliability of the measurement models, the starting point for the measurement of the structural model is located in the study of the overall goodness of fit of the model (Benitez et al., 2020), that is to say, identify the possible collinearity problems in the structural model. Accordingly, and in agreement with Hair et al. (2016), there are multi-collinearity indications where the VIF value is lower than 5. As can be seen in Table 5, all the values are found to be below this number and move between 1 and 1.376. The assessment of the path coefficients may be understood as standardised regression coefficients (Hair et al., 2016). In Table 6 and Figure 3, the coefficients of the different proposed hypotheses are shown for the structural model using a bootstrap of 10,000 resamples (Streukens and Leroi-Werelds, 2017). The assessment of the path or trajectory coefficients may be understood as standardised regression coefficients (Hair et al., 2016). These results suggest that emotional perceptions, as well as motivation, influence the perceived value almost identically. As such, H1 and H2 are accepted. In addition, the perceived value influences the loyalty of the visitor to the destination, which is confirmed by H3.

Table 5. VIF values of the structural model (Source: Own elaboration)

Constructs	EP	MO	PV	DL
EP			1.376	
MO			1.376	
PV				
DL				1

Table 6. Structural model (N = 529) (Source: Own elaboration) Note: Significant coefficients. * p<0.05

Path	Coeficient		T-test
Emotional perception -> Perceived value	**0.350**	*	7.407
Motivation -> Perceived value	**0.360**	*	7.206
Pereceived value -> Destination loyalty	**0.370**	*	8.433

Table 7. Predictive power of the structural model (Source: Own elaboration)

	R^2	R^2 adj.
Perceived value	0.383	0.381
Destination loyalty	0.137	0.135
	Q^2	
Perceived value	0.200	
Destination loyalty	0.102	

In the following, it attempts to assess the predictive power of the model, to do so, the coefficient of determination R2 and the Stone-Geisser test, Q2, is calculated. The first of these represents a measure of predictive power, while the second one is used as measurement criteria for the predictive relevance of the reflective dependent constructs (perceived value and loyalty towards the destination). In Table 7, the results can be observed.

Thus, for R2, it may be considered that the results are acceptable from a predictive point of view (Chin, 1998). On the other hand, if Q2>0, it can be claimed that the composites of the model possess predictive power (Chin, 1998). In accordance with the results obtained, perceived value and loyalty towards the destination display values above zero.

3. Moderating effect of the tourist's origin: Multi-group analysis (MGA)

An intermediate goal of this research is to analyse the place of origin of the tourist as a moderating variable in the formation of perceived value and loyalty towards the destination. To do so, starting from a proposed structure model, it proceeds to a multi-group analysis (MGA) distinguishing between domestic and foreign tourists. For the MGA analysis, according to Henseler et al. (2016), it proceeded to test the measurement invariance of the composite models or MICOM.

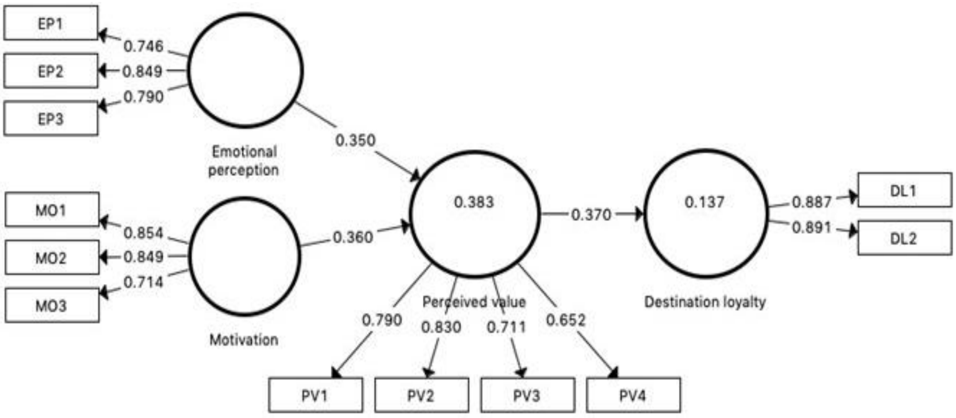

Figure 3. Global Model (Source: Own elaboration)

The use of MICOM is required in order to check that the existence of differences between the two groups of tourists is due to the grouping criteria (origin of the visitors) and not due to potential differences that may exist in the measurement models. MICOM is a process that consists of three stages (a) specification of the configuration's invariance; (b) specification of the composite's invariance; (c) equality of variances and means. In accordance with the MICOM process, the measurement of the partial invariance in both groups is established (domestic and foreign visitors) (Table 8), which is necessary for a later understanding of the differences at MGA level for the SEM-PLS results (Henseler et al, 2016).

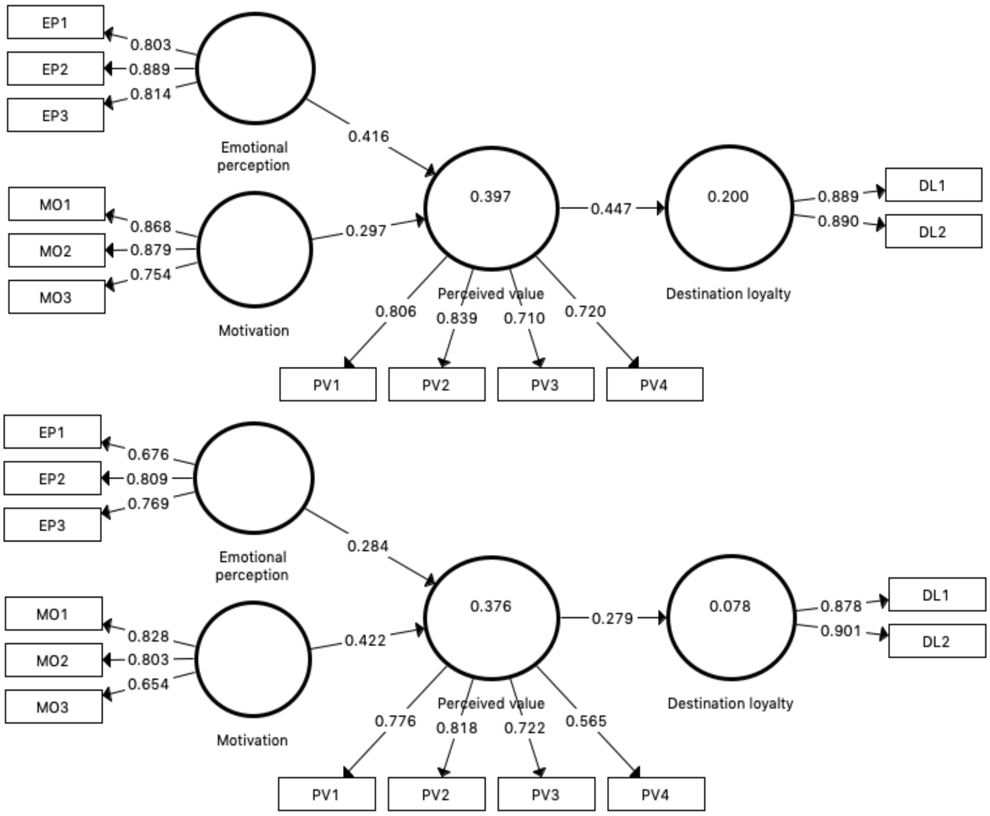

Figure 4. Results of the analysis for national and foreign visitors (Source: Own elaboration)

Table 9 and Figure 4 show the results of the structural model and the test for the hypothesis ensemble (H4 – H6), that measure the purpose of the origin of the tourist on the relationships complex among the determining factors PE, MO with the VP construct; and the relationship between VP and LD, by means of the use of a bootstrap of 10,000 resamples and 5,000 permutations. The results show that the Emotional Perception (PE) and Motivation (MO) have a positive and significant effect on the Perceived Value of local visitors as well as foreign ones. Similarly, the Perceived Value is found to be positively related to greater levels of Loyalty to the destination of both groups of visitors.

Table 8. Results of Invariance Measurement Testing Using Permutation (Source: Own elaboration)

Constructs	Configural invariance	Compositional invariance (correlation = 1)		Partial measurement established
		C=1	Confidence interval	
EP	Yes	0.997	[0.992, 0.331]	Yes
MO	Yes	1	[0.994, 0.963]	Yes
PV	Yes	0.998	[0.995, 0.381]	Yes
DL	Yes	1	[0.990, 0.734]	Yes

	Equal mean assestment			Equal variance assestment			Full measurement invariance established
	Differences	Confidence interval	Equal	Differences	Confidence interval	Equal	
EP	-0.125	[-0.142, 0.143]	Yes	0.136	[-0.213, 0.210]	Yes	Yes
MO	-0.271	[-0.143, 0.144]	No	0.468	[-0.192, 0.196]	No	No
PV	-0.201	[-0.143, 0.144]	No	0.187	[-0.221, 0.216]	No	No
DL	-0.081	[-0.140, 0.141]	Yes	0.083	[-0.230, 0.223]	Yes	Yes

In accordance with Table 9, H4 and H5 are rejected, as a result of which the origin of the visitors does not imply any change regarding the effect that the perceived assessment holds over the destination. Regarding H6, the existence of relevant differences between the perceived value and loyalty towards the destination is accepted, due to which the perceived value has a more intense influence on loyalty towards the destination in the case of domestic visitors.

Table 9. Hypothesis test results (Source: Own elaboration) Note: Significant coefficients. *p <0.05, **p <0.01

Hypothesis	Relations	National	Foreign		National	Foreign
Hypothesis 4	EP → PV	0.416**	0.284**		[0.286, 0.539]	[0.143, 0.409]
Hypothesis 5	MO → PV	0.297**	0.422**		[0.152, 0.424]	[0.289, 0.547]
Hypothesis 6	PV → DL	0.447**	0.279**		[0.332, 0.541]	[0.138, 0.399]

	Path Coeficient Difference	P-value difference (One-Tailed) Permutation testv	Supported
Hypothesis 4	0.132	0.089	**No**
Hypothesis 5	-0.125	0.100	**No**
Hypothesis 6	**0.167**	**0.028***	**Yes**

CONCLUSIONS AND RECOMMENDATIONS

The results of this work indicate that the perceptions of value of the visitors do not only depend on functional and tangible aspects of the attributes of the destination but also on the emotional and experiential characteristics (Jamal et al., 2011). Thus, the suggested structure equation model confirms the importance of the emotional experience (H1) and the cultural motivation (H2) of the tourist to positively influence the image or perceived value of the heritage visited. Similarly, the model shows the positive effect of the perceived value regarding the loyalty attitude of the tourists (H3). Accordingly, any action that increases the perceived value by tourists of a WHS destination shall improve its loyalty level.

The reliability analysis and validity of the structure equation model shows a load factor greater than 0.7 for each one of the indicators or elements that compose the latent variables, placing reliability and AVE above the minimum values of reference (0.6 and 0.5, respectively). In terms of discriminant validity, the results obtained are also optimal. The relevance of the predictive potential of the model, measured using the R2 coefficient, is moderate for the perceived value (R2 coefficient = 0.372) and something lower for the loyalty attitude (R2 coefficient = 0.177). As in the research of López-Guzmán et al. (2019b), Pérez-Gálvez et al. (2019a), González-Santa Cruz et al. (2019) and Menor Campos et al. (2020), the results show the relevance of the emotional experience of the tourist as a key factor in obtaining a favourable image of the destination. Similarly, these also support the conclusions of the studies by Lee et al. (2007); Yoon et al. (2010); Castellanos-Verdugo (2016) regarding the positive influence of the perceived value on tourist loyalty.

Another of the relationships analysed by the research is the influence of the visitor's place of origin as a moderating variable in the formation of the perceived value and loyalty towards the destination. In this case, the MGA analysis performed has not been able to verify that the origin of the tourist has a significantly different effect on the perceived value of the heritage visited, therefore addressing their emotional perception (H4) as well as their cultural motivation (H5). What the MGA verifies is that the relationship between the perceived value and the loyalty attitude is moderated by the tourist's origin. Thus, the perceived value of the heritage visited has a greater influence in the case of a domestic tourist (H6).

The indicators adopted in this research show the importance of the emotional experience of the place visited on tourist loyalty. The main practical application of this research is to contribute to the understanding of the assessment of tourists to the heritage visited with the aim of conceiving tourist and cultural products that best satisfy their needs and, at the same time, are compatible with the sustainable management of the historic and monumental heritage.

In this sense, and with the aim of continuing to improve the value of the city of Sucre as a cultural destination, it becomes necessary to establish measures that favour the understanding of the historic and monumental heritage that is visited, with the aim of favouring tourist experiences that are emotionally deep. Favouring the emotional link with the heritage visited may contribute to the extension of the stay of the visitor, increasing satisfaction and improving loyalty to the destination, especially that of foreign tourists. The main limitation of this research is that the study is only based on demand, which means that it would be difficult to transfer the results to other groups of stakeholders such as the local community or tourist businesses. In future research, it is recommended to reinforce the research that addresses tourist activity from the offer point of view. Therefore, it should be considered possible to generate applications that are more closely related to the behaviour of the destination, especially regarding foreign tourists.

This research contributes to the existing academic literature regarding the links between the tourist and the historic and monumental heritage visited and their tourist loyalty. In addition, information is provided that may enable a better understanding of the needs of tourists, searching for the improvement of the competitiveness of the destination, by means of loyalty, and increasing the support of the tourist fabric of the city of Sucre.

Author Contributions: Conceptualization, J.C.P.G. and M.J.M.V.; methodology, J.C.P.G. and P.R.G.; software, P.R.G. and P.A.F.J; validation, P.R.G.; formal analysis, M.J.M.V. and P.R.G.; investigation, J.C.P.G. and P.R.G.; data curation, M.J.M.V.; writing - original draft preparation, M.J.M.V. and J.C.P.G.; writing - review and editing, P.A.F.J.; visualization, M.J.M.V.; supervision, J.C.P.G. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 26.06.2023 Revised: 20.08.2023 Accepted: 12.09.2023 Available online: 29.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1176-1184
DOI 10.30892/gtg.49332-1116

THE IMPACT OF GROUP FACEBOOK USER-GENERATED CONTENT ON CONSUMER PURCHASE INTENTION – A CASE IN TOURISM INDUSTRY

Nguyen Thanh TUNG
Dalat University, Faculty of Tourism, Dalat, Vietnam, e-mail: tungnt@dlu.edu.vn

Nguyen Quoc BAO
Dalat University, Faculty of Tourism, Dalat, Vietnam, e-mail: baonguyendlu@gmail.com

Nguyen Thi Phuong THAO
Dalat University, Faculty of Economics & Business Administration, Dalat, Vietnam, e-mail: thaontp@dlu.edu.vn

Nguyen Van ANH*
Dalat University, Faculty of Tourism, Dalat, Vietnam, e-mail: anhnv@dlu.edu.vn

Citation: Tung, N.T., Bao, N.Q., Thao, N.T.P., & Anh, N.V. (2023). THE IMPACT OF GROUP FACEBOOK USER-GENERATED CONTENT ON CONSUMER PURCHASE INTENTION – A CASE IN TOURISM INDUSTRY. *GeoJournal of Tourism and Geosites*, 49(3), 1176–1184. https://doi.org/10.30892/gtg.49332-1116

Abstract: Consulting social networks has become a common practice for tourists when planning their trips. However, there is a relative scarcity of scientific literature on this topic. The purpose of this study is to test the model of predictors of group Facebook user-generated content on tourists' purchase intention. To accomplish this, online surveys were conducted, gathering data from both tourists and individuals planning to travel. The theory of Planned Behavior and Information Acceptance Model were adapted and empirically examined by using Confirmatory Factor Analysis and Structural Equation Modeling. Results and findings reveal significant and meaningful relationships between various factors of Facebook user-generated content and tourists' purchase intention. Additionally, the study offers practical suggestions for hospitality management, administrative teams, and Facebook businesses to effectively leverage user-generated content for attracting online tourists.

Key words: Facebook marketing, eWom travel, user-generated content, online group, travel online

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INTRODUCTION

Online community has been increasingly receiving the trust of consumers when consulting for information to make purchasing decisions or to experience hospitality services (Hajli, 2018). The online community allows user accounts to share their own opinions, experiences, and practical experiences in many forms on the public forum. Once looking to book a hotel or search for a restaurant, consumers tend to rely on opinions, reviews or information provided by relevant online communities (Moliner-Velázquez et al., 2022). Besides, after the consequences of the global Covid-19 pandemic, hospitality agencies tend to prompt tourists to share their reviews on online social media, fostering a secure atmosphere for specific destinations (Wut et al., 2022). Launched in 2004, Facebook has been still proving its strong attraction to be one of social networks with the highest number of users in the world with nearly 3 billion monthly users. According Statista (2023), the number of Facebook users in Vietnam in 2023 is around 66 billion. User figures, shown here regarding the platform Facebook, have been estimated by taking into account company filings or press material, secondary research, app downloads and traffic data. Not only stopping at a simple application, Facebook is also ambitious in entering the e-commerce market, with the launch of a series of new features through each development stage such as Fanpage, Facebook Group, Marketplace, Facebook Shop and most recently the Metaverse virtual reality platform.

In fact, there are some previous studies have discussed the interdependent relationship between Facebook and factors related to the hospitality industry (Van, 2017; Ngoc et al., 2019). Although these authors have focused on researching individual business-owned Facebook Fan pages, they have not extensively explored the nature, function, and distinguishing features of Facebook Groups - an online community that is considered superior to other Facebook features. Facebook Groups are online communities designed to connect individuals who share similar interests, goals or issues. However, there have been limited studies that have systematically examined Facebook Groups in-depth.

On the other hand, according to statistics by June 2021 of NapoleonCat (a tool to measure social network indicators), the total number of Facebook users in Vietnam is nearly 76 million people, accounting for more than 70% of the national population, Facebook, therefore, is a leading social network in Vietnam. Consequently, it is necessary to study the motivation behind the process leading to behavioral intention through User-Generated Content (UGC) on Facebook groups about tourism. This is the basis for proposing solutions to build, consolidate and develop Facebook communities about tourism in order to properly meet the needs of searching, evaluating and choosing the right service of customers.

* Corresponding author

The purposes of this investigation are: 1) finding factors of UGC in affecting customers' purchase intention; 2) identifying key drivers of UGC contributing towards enhancement of customers' purchase intention in hospitality sectors; 3) proposing some suggestions for enhancing online community about tourism on the Facebook Group platform from the perspective of tourists based on the results and findings of this research.

LITERATURE REVIEW

Theoretical background

Information Acceptance Model (IAM): to explain how an individual is affected in the process of receiving/using ideas or information, Sussman and Siegal (2003) considered UGC in a dual theoretical model dubbed the Information Acceptance Model. The process of evaluating and accepting knowledge can be conceived as a form of information influence, whereby individuals affected by information received from others would evaluate the practical usefulness of the information at varying degrees. The IAM model consists of four variables: argument quality, source credibility, information usefulness, and information adoption. IAM is highly appreciated by many scholars when applied in UGC studies (Cheung et al., 2008; Shu and Scott, 2014).

Theory of Planned Behavior (TPB): developed from theory of reasoned action by Fishbein and Ajzen (1975), TPB by Ajzen (1991) has been widely accepted and used in studies with the aim of predicting the intention to use and specific behavior of individuals. Hansen et al. (2004) tested both TRA and TPB models, the results showed that the TPB model explains customer behavior better than the TRA model. Furthermore, in the context of research in Vietnam, several studies have demonstrated that TPB is more suitable in predicting consumer behavioral intentions. According to TPB, three factors that affect the intention to perform a behavior are: (1) "Attitude towards behavior" is an individual's positive or negative assessment of the performance of a behavior. Attitudes often form from an individual's beliefs about the consequences of engaging in a behavior as well as the results of that behavior. (2) "Subjective norms" are social pressures on individuals, leading to behavior. Subjective norms come from the expectations of people around (relatives, colleagues, friends...) for an individual in complying with certain standards as well as the individual's motivation in complying with the standards to meet the expectations of those around. (3) "Perceived behavioral control" is an individual's perception of the ease or difficulty of performing a particular behavior. This depends on the availability of resources and opportunities to perform the behavior

The combination of IAM and TPB: while IAM tents to focus on the characteristics of information, TPB is used to invoke to explain other factors related to information behavior. Thereupon, combining IAM and TPB models made it more complete when studied the impact of online word of mouth on the purchase intention of social network users (Chi and Nghiem, 2018).

Through the literature scanning process, the research direction on the Facebook Group online community and their impact on issues related to service and tourism activities remains quite new. In predicting customers' intention to use UGC to plan their future travel program, Julian et al. (2012) proposed and tested variables related to the intention to use UGC on online communities to plan their travel. The results are also consistent with the extant findings of the TAM hypothesis (Davis et al., 1989) where perceived usefulness still has a significant impact on behavioral intention. However, some other research results show that a large proportion of internet users still do not use UGC on online communities for travel planning (Cox et al., 2009). This shows the need to better understand the impact factors of UGC leading to the service choice intention of tourists in particular and consumers in general. The feasibility of the research model has provided a theoretical basis for the author to prove the hypotheses about the impact of perceived usefulness on the acceptance of information and its influence on the intention to plan travel program.

UGC and factors affecting customer behavior:According to Krumm et al. (2008), UGC "comes from regular people who voluntarily contribute data, information, or media that then appears before others in a useful or entertaining way, usually on the Web, for example, restaurant ratings, wikis, and videos''. In a more understandable sense, UGC is any form of content (images, video, text, audio) uploaded by users to the online platform through media to share information about products, services or suppliers. In another research, UGC is material created by online users, posted to the Internet through highly interactive (non-media) online exchange communities (Presi et al., 2014). With great influence on consumers, UGC is shared mainly on social networking platforms such as: Facebook, Twitter, YouTube and Instagram. This concept does not address the commonly shared topic of UGC, the author emphasizes that the main channel of appearance of User Generated Content type is non-media sharing communities (i.e., many participants can receive information from many sides, and can contribute, share and discuss on a public forum) is different from media (only one message transmitter and many recipients, for example: magazines, television broadcasters, pictures, newspapers, etc.). This concept clearly indicates that one of the popular means of non-media is social networking.

Factors related to information sender (source of information): UGC information sources play an important role in consumer decision-making activities. The higher the sender's experiential knowledge, the more interesting the information is to the receiver and the greater the impact on the receiver (Bansal and Voyer, 2000). Moreover, Brown et al. (2007) found that in the online environment, trust lies closely to the hidden environment but bears some unique attributes due to the nature of the environment and consumers seem to rate trustworthiness of UGC in relation to the website, as well as the person providing information. Information posted by consumers is more reliable than information given by marketers (Dellarocas, 2003). Furthermore, Sen and Lerman (2007) revealed that UGC review messages are more influential and online consumers are always trying to find the messages which evaluate the product that best suits their needs because consumers often trust their peers more than advertising or marketing. As a result, consumers increasingly tend to make decisions based on reviews created by other consumers.

Factors related to message of UGC: Sweeney et al. (2008) suggested that a UGC message that includes cognitive and affective elements is most effective when it is clear, informative, rich in content, and has strong dispersal power. The quality of the information is an important factor that people use to evaluate the information being transmitted. UGC quality directly affects recipients' attitudes, especially in online communities. If the UGC is perceived as having strong argumentative power, the recipient will develop a positive attitude towards the information and believe it to be trustworthy. Park et al. (2007) explained that high-quality message, which includes specific, objective and reasonable information, increases purchase intention. When consumers search for online reviews, the number of UGCs makes the reviews more visible to users. Reading as many other people's reviews as possible about a certain brand can reduce consumer anxiety when making a purchasing decision because consumers assume that more people choosing to buy a product with multiple reviews will help them feel more secure when choosing products (Thao and Anh, 2020; Cheung et al., 2008). Besides that, properties of UGC should be taken into consideration. UGC properties can be positive, neutral or negative. Many previous studies have shown that negative UGC has a much stronger influence than positive UGC. Negative UGC has been reported to spread faster than positive UGC.

UGC about travel on Facebook groups: According to Simms (2012) X and Y Generation are very eager to share travel experiences on Facebook. In a survey by Gretzel et al. (2007), 82% of users responded that they use Facebook in planning their trips. Travel service experience cannot be assessed before consumption, so experience sharing is very influential on tourists' travel consumption behavior (Buhalis, 1998; Litvin et al., 2008), social networks are effective means and reliable source for consumers. Facebook's public mode allows everyone to receive UGC on the forum, but they also allow users to share experiences, write reviews, post photos and videos of their travel with many built-in features (such as attaching location, sharing photos on map, check-in) (Xiang and Gretzel, 2010). UGC about travel on Facebook is trusted by consumers (Haralabopoulos et al., 2016). Moreover, tourists' trust rate will be higher for UGC if the published reviews provide the right needs and interests of tourists (Ayeh et al., 2013). The free act of collecting UGC on the social network Facebook will lead to the community of individuals in the perception and behavior of travel (Kim et al., 2014). On travel Facebook groups, UGC is primarily related to hospitality service, travel, and users’ real experience. After actually experiencing a service or a certain travel itinerary, members post various types of articles such as checking-in places, sharing feelings, reporting the journey, drawing experiences, or giving reviews. UGC not only provides information related to a tourist destination, but also provides an incentive for visitors, a basis for planning and organizing an entire trip in the future (Nezakati et al., 2015).

Intention to consume travel services: According to Ajzen (1991), behavioral intention is an indication of an individual's willingness to perform a certain behavior and it motivates an individual to be willing to perform the behavior. Intention is a measure of the ability to perform a behavior in the future. Behavioral intention is the willingness to perform a certain behavior and this concept also asserts the direct influence of intention on behavior. Later on, to predict intention to use online User-Generated Media (CGM) to plan future travel, Julian et al. (2012) proposed and tested variables related to technology consumers' intention to do something, namely the intention to use user-generated content on online community to plan their travel. This study shows the important role of perceived usefulness, ease of use, perceived enjoyment in predicting tourists' attitude and intention to use CGM for planning. Pleasure and ease of use have a greater impact in the context of using CGM for travel planning. At another aspect, Binder et al. (2017) studied on the influence of UGC on Facebook on choosing travel destination, they compared two groups of tourism majors and amateurs in Austria. Research results show that, when searching for information to make travel plans, the thing that people notice the most on Facebook is images (51.7%), followed by videos (27.7%). The authors concluded that UGC on Facebook influences the decision to choose a traveling destination. However, they also affirmed that tourism motivation and new information sources definitely determine the intention to consume travel services of tourists.

Hypotheses development: In this study, if only the original IAM model is applied, the factors affecting the acceptance of information are limited only by the characteristics of the information. However, the users’ intentions and behavior towards the adoption of the information also need to be carefully considered. Therefore, the Theory of Intended Behavior - TPB model should also be invoked to explain other factors related to behavioral intention. Combine 4 variables: Argument quality, Source credibility, Information usefulness, and Information adoption (from IAM) and 3 variables: Attitude towards behavior, Subjective norms, and Perceived behavioral control (from TPB) to help this study objectively determine in a general way the influence of UGC on the tourists’ intention to choose services on the online community platform Facebook Group. Moreover, based on the success of the research conducted by Chi and Nghiem (2018) when they combine IAM and TPB to a wider conceptual model on the study of the influence of electronic word of mouth on the purchase intention of social network users, that create a stronger basis for us to apply the similar combination in this research. With the review of above literature and significant conceptual frameworks above, it is concluded that this research should examine relationship between Group Facebook UGC and tourists’ purchase intention with the following factors: Argument quality of UGC, Source credibility of UGC, Information usefulness of UGC, Information adoption UGC, Attitude towards using UGC, Subjective norms towards using UGC, Perceived behavioral control towards UGC, and Tourists’ purchase intention

Argument quality of UGC: previous studies have shown that the quality of online reviews has a positive impact on consumers' purchase intention (Park et al., 2007). According to Petty and Cacioppo (1986), the quality of information is considered to be the degree of persuasion of that information. When an individual is able and motivated to make a thorough assessment of the content of information, the arguments and data conveyed in the information content would have the effect of convincing the recipient of the information to believe in the information posted. Therefore, this study hypothesizes that:

H1: Argument quality of UGC positively affects Information usefulness of UGC

Source credibility of UGC: according to Wathen and Burkell (2002), UGC reliability is a prerequisite in the process of persuading an individual. If consumers think that reviews posted by an individual are highly trustworthy, they would perceive reviews to be more useful than reviews posted by one with lower trust. Therefore, this study hypothesizes that:

H2: Source credibility of UGC positively affects Information usefulness of UGC

Attitude towards using UGC: attitudes towards the use of UGC are formed from an individual's beliefs about his or her experience participating in receiving UGC from the online community such as the positive effects this content has, responding to user needs. If travel consumers have a positive attitude towards UGC, they would perceive the usefulness of the reviewers higher than those with a negative attitude (Hansen et al., 2004). Hence, this study hypothesizes that:

H3: Attitude towards using UGC positively affects information usefulness of UGC

Subjective norms towards using UGC: Subjective norms are social pressures on individuals that lead to behavior. Subjective norms come from the expectations of people around (relatives, colleagues, friends...) for an individual in complying with certain standards as well as the individual's motivation in complying with these standards to meet the expectations of those around. When people around want social media users to use UGC about travel on the online community to plan a trip, then the opinions of surrounding people positively influence the information usefulness of UGC (Ajzen, 1991). Accordingly, this study hypothesizes that:

H4: Subjective norms towards using UGC positively affects information usefulness of UGC

Perceived behavioral control towards UGC: This refers to an individual's perception of how easy or difficult it is to perform a behavior (Ajzen, 1991). It comes from the confidence of the individual who intends to perform the behavior and the ease and favorable conditions for performing behavior. The ability that individual recipients of information find it easy and convenient to approach UGC when needed would help users feel the usefulness of UGC (Ajzen, 1991; Jun, H., 2008). Therefrom, this study hypothesizes that:

H5: Perceived behavioral control towards UGC positively affects information usefulness of UGC

According to Ajzen's TPB (Ajzen, 1991), behavioral intention is directly influenced by "attitude", "subjective norm" and "perceived behavioral control". In the context of thriving online communities, consumers' attitudes towards UGC adoption have been shown to have a positive influence on their purchase intention (Yoh et al., 2003). In addition, Lin (2007) concluded that subjective norms reflect consumers' perceptions of the influence of reference groups on trust in using UGC; Moreover, with a Southeast Asian country that upholds the community culture, the phenomenon of an individual's behavioral intentions being influenced by surrounding people is possible. Also, for UGC on the Facebook Group community, perceived behavioral control describes consumers' perceptions of the availability of necessary resources, knowledge, and opportunities in order to get ready to choose products and services that suit their needs. Hence, perceived behavioral control has been shown to have a positive impact on consumers' online purchase intention (Lin, 2007). Accordingly, this study hypothesizes that:

H6: Attitude towards using UGC positively affects tourists' purchase intention.

H7: Subjective norms towards using UGC positively affects tourists' purchase intention.

H8: Perceived behavioral control towards UGC positively affects tourists' purchase intention.

Information usefulness of UGC: Information usefulness refers to an individual's judgment that the use of UGC information contributes to an effective decision (Cheung et al., 2008). Other researchers argued that information usefulness can be seen as a major component in predicting information acceptability and even purchase intention (Sussman and Siegal, 2003) as people tend to incorporate information which they consider to be useful. Especially in the social network environment, customers will be faced with a large amount of electronic word of mouth information (Chu and Kim, 2011), so their ability to accept and apply when they find something useful is high. Subsequently, this study hypothesizes that:

H9: Information usefulness of UGC positively affects information adoption UGC

Information adoption UGC: Social media users, whether knowingly or unknowingly, leave a large amount of information on the internet, and many previous studies have also shown that UGC has significant influence on consumers' purchase intention (See-To and Ho, 2014). If consumers perceive a review/comment to be reliable and helpful, they would accept the information and to be more confidence to use UGC before making a purchase decision (Sussman and Siegal, 2003; Cheung et al., 2008). Therefore, this study hypothesizes that:

H10: Information adoption UGC positively affects tourists' purchase intention.

RESEARCH MODEL

Based on the literature and hypotheses adaptation, the conceptual model for this research is presented as Figure 1.

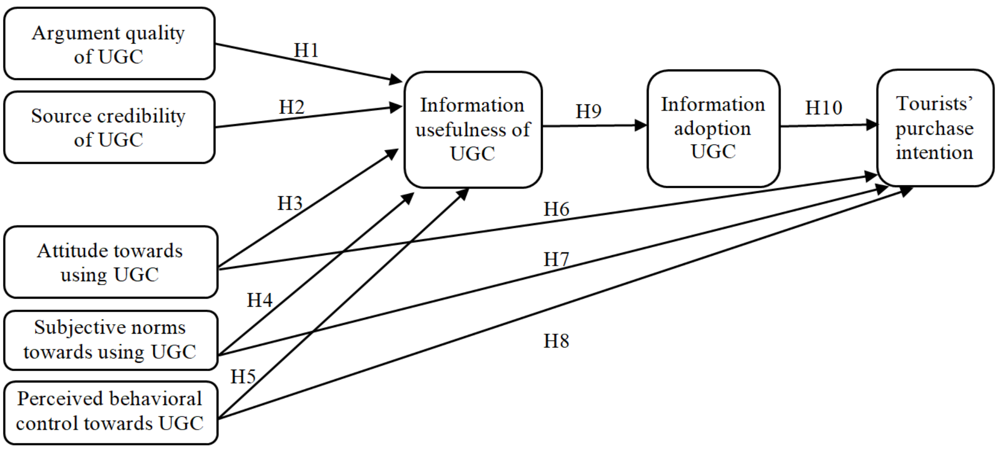

Figure1. The adapted conceptual model

RESEARCH METHODOLOGY

Questionnaire Design and Data Collection

This study is conducted following the quantitative approach with the aim of analyzing numerical data to explore the effects of Group Facebook UGC on tourists' purchase intention. Target population of this research is Facebook users who are interested in Facebook groups about tourism. They were random Facebook users who interacted (viewed, posted, commented, shared, dropped emoticons, etc. on the three big Facebook groups about tourism: Ghien Dalat, Review Tat Tan Tat, and Ranh Dalat. Survey was by using online questionnaires (Google Form) with 17 independent variables, 5 mediator variables, and 3 dependent variables. According to Trong and Ngoc (2008), the sample size for quantitative research to study relationship should be at least 5 times of variables. Using their method, a sample of minimum 5×25=125 participants is sufficient. Due to large population estimation, the researcher decided to survey 20% bigger than the minimum number of needed respondents to cover the significance of statistical analyses. Therefore, nearly 160 direct structured questionnaires are delivered to targeted respondents as mentioned above. After eliminating numbers of questionnaires which was uncompleted or not satisfied conditions of the research, 153 fully done samples were accepted for the study.

Questionnaire design: the "questionnaire was designed through the following stages: the first step in the design of the questionnaire is to establish the attributes that are relevant to the variables; next, ask for the opinions of experts who have the deep expertise and experience to establish the trial questionnaire and to explore the issues around the research topic; then, edit the questionnaire and conducted the trial survey with the sample size of 15 respondents via direct interviews; last, finalize the questionnaire. The questionnaire was translated into Vietnamese before delivering. The questionnaire includes two sections: section 1 is aimed to collect demographic information and section 2 is designed to include factors of independent variables, mediator variables, and dependent variable. The structured questionnaire design is based on measured variables derived from the literature reviews for all 8 factors: Argument quality of UGC, Source credibility of UGC, Information usefulness of UGC, Information adoption UGC, Attitude towards using UGC, Subjective norms towards using UGC, Perceived behavioral control towards UGC, and Tourists' purchase intention. Most of the questions are set as statements with five-point Likert scale which was equivalent" to "1 = strongly disagree", "2 = disagree", "3 = neutral", "4 = agree", and "5 = strongly agree". Coding and analyzing: data collected from the population were analyzed by SPSS version 22.0.0.0 and AMOS version 20 to generate the descriptive and inferential statistics. For the purpose of running statistical software, the variables Argument quality of UGC, Source credibility of UGC, Attitude towards using UGC, Subjective norms towards using UGC, Perceived behavioral control towards UGC, Information usefulness of UGC, Information adoption UGC, and Tourists' purchase intention are coded as followings: AQ, SC, AT, SN, PB, IU, ID, and PI, respectively.

Table 1: Summary of the variables

Given names	Number of items	Cronbach's Alpha
AQ	3*	.877
SC	4*	.886
AT	4*	.888
SN	3*	.803
PB	3*	.825
IU	2*	.890
ID	3*	.928
PI	3*	.878

* items that have corrected item-total correlation > 0.3

Table 2. Rotated component matrix

	Component							
	1	2	3	4	5	6	7	8
AT03	.907							
AT01	.858							
AT04	.840							
AT02	.825							
SC01		.892						
SC02		.856						
SC03		.856						
SC04		.811						
ID02			.949					
ID03			.925					
ID01			.908					
AQ03				.939				
AQ02				.901				
AQ01				.810				
PI02					.931			
PI03					.864			
PI01					.840			
PB02						.873		
PB03						.864		
PB01						.799		
SN02							.845	
SN01							.840	
SN03							.830	
IU02								.918
IU01								.902

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.
KMO index = .807 and Sig. of Bartlett's test = .000

Reliability and Factor Analysis

As demonstrated in Table 1, all factors have Cronbach's Alpha indexes in the interval [0.75; 0.95], meaning that these factors experience relative high reliable measurement (Trong and Ngoc, 2008). In addition, the KMO equals to 0.739 > 0.5 proved that factor analysis is appropriate with the data (Kaiser, 1974). As the Sig. of Balett's test equaled to 0.0, so the null hypothesis that the observation items are not correlated within the factor is rejected. On the other word, this claimed that the data used into analysis were totally suitable, the test was statistically significant. All items (observation variables) in those factors have corrected item-total correlation higher than 0.3 meaning that those factors have high internal consistency". Thus, all of the observation variables can be then used for exploratory factor analysis (EFA).

Output from EFA analysis was presented on Table 2. Principal component analysis and varimax with Kaiser normalization were applied to verify the scale value and determine the Pattern Matrix. According to Nunnally (1978), the KMO index = 0.807 (> .5) and Bartlett's test = 0.00, hence the EFA analysis was consistent with the collected data. No item (factor) was loaded lower than 0.5. This totally meet conditions of convergent validity and discriminant validity. Eventually, eight factors were extracted out of eight input factors and still remained the similar order. For this reason, these eight new extracted factors were then remained based on meaning of observations items (observation questions in questionnaires). They were then grouped into factors and recodes as followings, respectively: Argument quality of UGC (AQ03, AQ02, AQ01) – AQ; Source credibility of UGC (SC01, SC02, SC03, SC04) – SC; Attitude towards using UGC (AT03, AT01, AT04, AT02) - AT; Subjective norms towards using UGC (SN02; SN01; SN03) – SN; Perceived behavioral control towards UGC (PB02, PB03, PB01) – PB; Information usefulness of UGC (IU02; IU01) – IU; Information adoption UGC (ID02, ID03, ID01) – ID; and Tourists' purchase intention (PI02, PI03, PI01) - PI.

RESEARCH FINDINGS AND DISCUSSIONS

Confirmatory Factor Analysis (CFA)

CFA is a factor analysis technique. CFA analysis aims to confirm whether a scale is accurate and satisfactory. CFA test is used to prove the fit of the model; at the same time, when the observing variables were included in the CFA analysis, it is also assumed that the observing variables had belonged to which factor in the EFA analysis. The function of the CFA at this time is to assess whether the observing variables within that scale are appropriate and meet the standards. The results of the CFA analysis (Figure 2) show that the Chi-square/df = 1.439 (< 3), GFI = 0.855 (> 0.8), TLI = 0.944 (> 0.9), CFI = 0.954 (> 0.95) and RMSEA = 0.054 (< 0.08); therefore, it can be said that the model fits the research data. At the same time, the normalized weights are all greater than 0.5 (Table 3). It is statistically significant that the items achieve convergent values. As for, with the results of CFA analysis, the main factors are included in the analysis, which are: AQ, SC, AT, SN, PB, IU, ID, and PI.

Table 3. Output of CFA

Relationship			Regression coefficients
AT03	□	AT	.845
AT01	□	AT	.825
AT04	□	AT	.793
AT02	□	AT	.799
SC01	□	SC	.932
SC02	□	SC	.846
SC03	□	SC	.829
SC04	□	SC	.652
ID02	□	ID	.924
ID03	□	ID	.920
ID01	□	ID	.860
AQ03	□	AQ	.894
AQ02	□	AQ	.783
AQ01	□	AQ	.844
PI02	□	PI	.874
PI03	□	PI	.818
PI01	□	PI	.832
PB02	□	PB	.751
PB03	□	PB	.866
PB01	□	PB	.735
SN02	□	SN	.802
SN01	□	SN	.787
SN03	□	SN	.691
IU02	□	IU	.899
IU01	□	IU	.892

Test hypotheses by Structural Equation Modeling (SEM) analysis

SEM is a statistical analysis technique developed to analyze multidimensional relationships between multiple variables in a model (Haenlein and Kaplan, 2004). Multiple relationships between variables can be represented in a variety of simple and multiple regression equations. Thus, the authors perform SEM analysis to study the influence of independent factors on the factors Information usefulness of UGC and Tourists' purchase intention, and the influence of factor Information usefulness of UGC on the factor Information adoption UGC, and then, the influence of factor Information adoption UGC on factor Tourists' purchase intention. The authors transformed the model had been obtained from the results of CFA to the SEM. Inheriting from the results of CFA, it can be easily seen the results of the SEM linear structure model are consistent with the research data. That is illustrated through indicators such as: Chi-square value/df = 1.515 (<3), GFI = 0.846 (>0.8), TLI = 0.935 (>0.9), CFI = 0.944 (>0.9) and RMSEA = 0.058 (<0.08). The results show that the model has a good fit index, meeting the criteria according to statistical regulations (Figure 3).

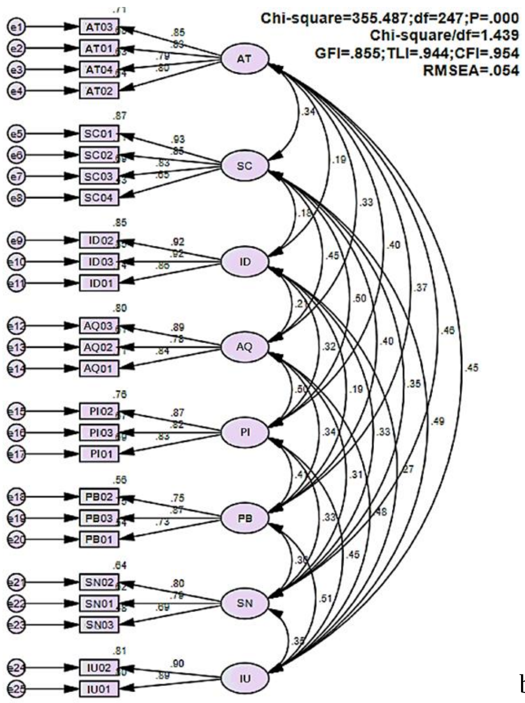

Figure 2. Standardized Regression Weights

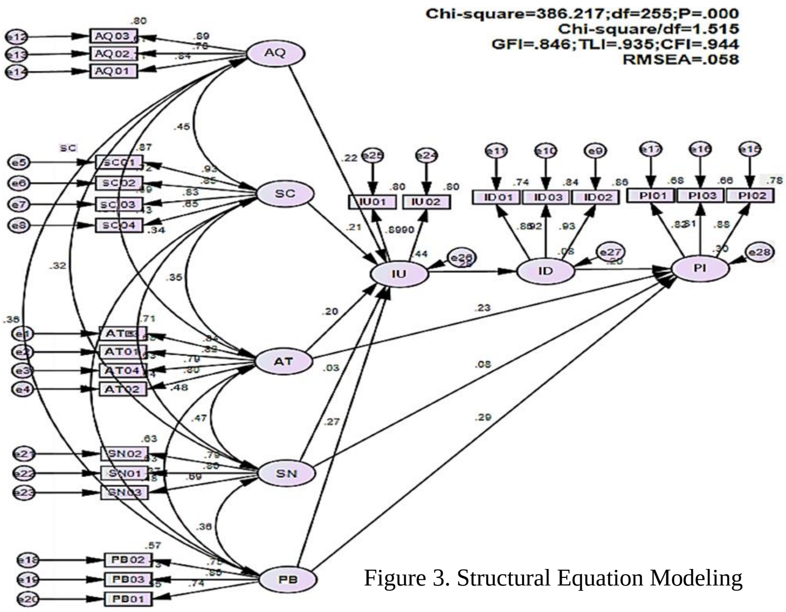

Figure 3. Structural Equation Modeling

It can be seen from the Table 4: Attitude towards using UGC, Perceived behavioral control towards UGC, Source credibility of UGC, and Argument quality of UGC positively and directly affects information usefulness of

UGC with weights of regression coefficient are 0.223, 0.247, 0.202, and 0.246, respectively, with P-value <0.05. This means that hypotheses H3, H5, H2, and H1 are accepted. However, there is not enough statistical evidence to show the relationship between Subjective norms towards using UGC and Information usefulness of UGC due to P-value = 0.787 (> 0.05), hypothesis H4 therefore is rejected. It is also affirms that Attitude towards using UGC, Perceived behavioral control towards UGC with weights of regression coefficient are 0.225 and 0.228 (P-value <0.05). Nevertheless, once again, there is no relationship between factor Subjective norms towards using UGC and Tourists' purchase intention with P-value = 0.441 (> 0.05), meaning that the hypotheses H6 and H8 are accepted, and hypothesis H7 is rejected. Consequently, in short, factor

Table 4. Synthesized output of SEM

Relationship			Unstandardized regression coefficients	P-value	Hypothesis	Result	Standardized regression coefficient	Rounded regression coefficient
IU	<---	AT	.223	.030	H3	Accept	.196	.20
IU	<---	SN	.031	.787	H4	**Reject**		
IU	<---	PB	.247	.004	H5	Accept	.269	.27
IU	<---	SC	.202	.021	H2	Accept	.206	.21
IU	<---	AQ	.246	.013	H1	Accept	.218	.22
ID	<---	IU	.268	.001	H9	Accept	.282	.28
PI	<---	AT	.225	.018	H6	Accept	.232	.23
PI	<---	SN	.082	.441	H7	**Reject**		
PI	<---	PB	.228	.002	H8	Accept	.293	.29
PI	<---	ID	.179	.012	H10	Accept	.201	.20

Subjective norms towards using UGC must be removed from the proposed model.

Similarly, Table 4 also shows that Information usefulness of UGC has a direct and positive impact on Information adoption UGC, then, Information adoption UGC has a direct and positive impact on Tourists' purchase intention. Thus hypotheses H9, H10 are accepted. Following is the confirmation of conceptual model and degree of influence (Figure 4):

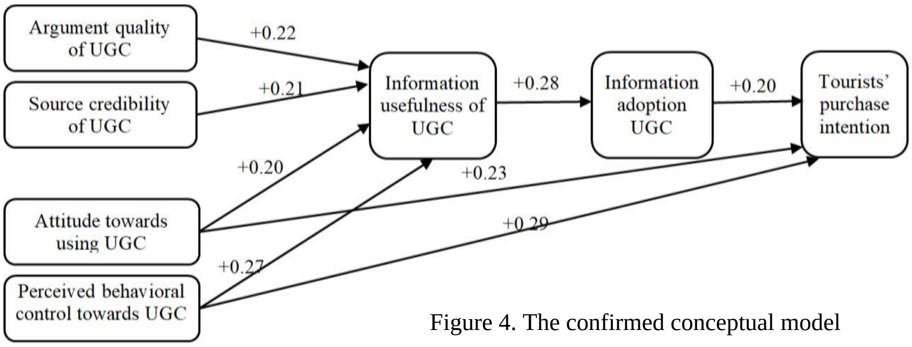

Figure 4. The confirmed conceptual model

DISCUSSIONS AND RECOMMENDATIONS

Discussions

In this study, the proposed model is a combination of IAM (Sussman and Siegal, 2003) and the TPB model (Ajzen, 1991). The IAM explains the characteristics of the UGC, while the related components of the TPB represent consumers'/tourists' behavior towards the UGC. Thus, influencing factors are determined with good theoretical and systematic characters. This helps to build a more basic empirical model. The results of the thesis have illustrated facts related to influences of UGC to tourists' purchase intention. While the elements of UGC have an indirect positive influence on tourists' purchase intention through 2 factors Argument quality of UGC, Source credibility of UGC, behavioral factors of UGC directly and indirectly affect tourists' purchase intention through 2 factors Attitude towards using UGC and Perceived behavioral control towards UGC.

Implications

Argument quality of UGC indirectly affects Tourists' purchase intention and directly affect Information usefulness of UGC. This proves that UGC on Facebook groups about travel provides intending tourists many useful information, then this helps them satisfy their needs and intentions for their future trips. Thus, in order to improve quality of UGC, Facebook group admins should not only encourage members to post purely written reviews, images, and videos to the Facebook group but also enhance the use of Facebook Group tools such as creating sub-groups, creating chat groups right in the group (Chats), hosting a Q&A/ Poll, livestream, etc. Besides, in order to get quality "reviews", administrators should have high quality reviewers like Tikokers, travel experts, or travel bloggers, etc. posting on their Facebook group.

Source credibility of UGC indirectly affects Tourists' purchase intention and directly affect Information usefulness of UGC. Accordingly, the thing tourists consider important besides the quality of information is the reliability of the UGC. Therefore, to enhance the credibility of UGC on travel Facebook groups, the admin team can review and collaborate with frequent travelers, encourages them to objectively self-assess their experiences on Facebook group. Besides, sources of information from local/indigenous people will provide interesting and deeper perspectives on local values, objective experiences, and constantly updated information about new places or products or services that worth experiencing.

Attitude towards using UGC directly affect Information usefulness of UGC and Tourists' purchase intention. So, when travel consumers have a positive attitude towards the use of UGC, they will perceive the usefulness of reviews higher. Moreover, the positive attitude of travelers towards the reference of UGC for their travel plan also helps urge them make final travel decision. Therefore, administrators need to classify content groups through sub-groups, topics by hashtag so that members can easily access UGC in an overview and systematic way. This helps intending travelers feel comfortable referencing, comparing between different service groups. Having the opportunity to compare and contrast, users have more diverse options, confidently make the right decision for their travel intentions.

Perceived behavioral control towards UGC directly affect Information usefulness of UGC and Tourists' purchase intention. When consumers feel fully self-sufficient opportunities, available to be able to use UGC online, they will perceive the usefulness of reviews higher. Moreover, the easy perception of personal behavior control for UGC also easily helps them make the right, reliable and fast decisions for their travel intentions. So, Facebook admin team should, in order to enhance level of perceived behavioral control towards UGC, have articles pinned in the remarkable section of the Facebook group to guide the operation of using the functions, thoroughly deploying the tools through simple, easy-to-understand instructions. As well, the admin team also needs to have plans to exchange benefits so that members are motivated to participate on Facebook groups. Since then, the recipients themselves will feel that accessing UGC content on Facebook groups is very interesting, diverse and useful; then they can confidently decide with their own intentions through UGC information about DVDL products. The probability that tourists choose tourism products and services through UGC on Facebook groups is very high, but almost for the next time. That means they need more time to search for more options to get the most general view of interested service. Admin team of Facebook group should: focus on developing group content according to a specific direction and purpose; if the Facebook group is built for business purpose like Ghien Dalat and Dalat Review Tat Tan Tat, the admin team needs to balance the types of content and produce really quality, trustworthy and accurate reviews; and, enhance the ability of admin team in orienting, controlling, spreading and connecting people.

Limitations

Conducting this research, besides the contributions to the empirical field, it is inevitable to cope with the limitations and difficulties. Initially, research results may be limited by location because the analysis data is only in some big cities. Secondly, the data collection method was purposive sampling. This is a non-probability sampling method, so there are natural limitations when it comes to generalization. Thirdly, the role of subjective norms in this study has not been verified because the scale is not reliable. Even so, this may be an important factor when it is considered in the cultural characteristics of the Asian market. Future studies, therefore, should take this factor in to consideration.

Author Contributions: Conceptualization, A.N.V. and T.N.T.; methodology, T.N.T. and B.N.Q.; software, A.N.V. and T.N.T.P.; validation, T.N.T. and B.N.Q.; formal analysis, A.N.V. and T.N.T.P.; investigation, B.N.Q. and T.N.T.; data curation, T.N.T.P. and B.N.Q.; writing - original draft preparation, T.N.T.P. and T.N.T.; writing - review and editing, A.N.V. and T.N.T; visualization, B.N.Q.; supervision, A.N.V.; project administration, A.N.V. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The research undertaken was made possible by the equal scientific involvement of all the authors concerned.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 24.06.2023 Revised: 22.08.2023 Accepted: 14.09.2023 Available online: 29.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1185-1194
DOI 10.30892/gtg.49333-1117

REIMAGINING TRAVEL INTENTIONS TO CHINA IN THE POST COVID-19 ERA: EXPLORING THE ROLE OF PERCEIVED SAFETY, ELECTRONIC WORD OF MOUTH AND DESTINATION IMAGE

Shiva HASHEMI
Faculty of Hospitality & Tourism Management, UCSI University, Kuala Lumpur, Malaysia e-mail: shiva@ucsiuniversity.edu.my

Karpal Singh Dara SINGH[*]
Graduate School of Business, Universiti Sains Malaysia, Penang, Malaysia, e-mail: karpal@usm.my. kirpal005@yahoo.com

Muhammad Ali MUGHAL
School of Management, Universiti Sains Malaysia, Penang, Malaysia, e-mail: alimughal1990@gmail.com

Shaian KIUMARSI
Graduate School of Business, Universiti Sains Malaysia, Penang, Malaysia, e-mail: kiumarsi78@gmail.com

Citation: Hashemi, S., Singh, K.S.D., Mughal, M.A., & Kiumarsi, S. (2023). REIMAGINING TRAVEL INTENTIONS TO CHINA IN THE POST COVID-19 ERA: EXPLORING THE ROLE OF PERCEIVED SAFETY, ELECTRONIC WORD OF MOUTH AND DESTINATION IMAGE. *GeoJournal of Tourism and Geosites*, 49(3), 1185–1194. https://doi.org/10.30892/gtg.49333-1117

Abstract: The past decade has seen the rapid proliferation of theory, literature, and research, in the field of tourism disaster and crisis management, however empirical studies linking Covid-19 to destination image are limited and have not been well understood. Nations are certainly gearing up to pursue various tourism recovery strategies in the hopes of tourism activity returning to normal. As informed by the S-O-R theory this study tests an empirical model that investigates the influence of Iranian's perceived safety and electronic word of-mouth (eWOM) on destination image and travel intention to China in the post Covid-19 era. Data were obtained from a sample of 305 respondents in Shiraz, Iran. The findings revealed that perceived safety and eWOM were able to predict destination image which subsequently had a positive effect on intention to travel. Additionally, destination image significantly mediates the relationship between perceived safety, eWOM and behavioural intention. The study certainly adds to the dearth of literature pertaining to destination image and tourist behavioural intention in a post Covid-19 context from the lens of the SOR paradigm. The study confirms the validity and salience of the SOR framework as a theoretical cornerstone in uncovering tourist behaviours and responses; whose use within tourism related research is gaining traction.

Key words: SOR Theory, perceived safety, eWOM, destination image, intention to travel, Post Covid-19

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INTRODUCTION

Safety and security are the primary conditions for tourism development of a destination, region, or country, and thus are some of the basic determinants of its growth (Mawby et al., 2021). International tourism is highly sensitive to safety and security issues (Hashemi et al., 2018) as safety concerns strongly influence tourists' decision-making processes (Yi et al., 2020). Travelers select destinations that best match their needs, offer the most benefits, and have the lowest possible costs or risks. If a tourist feels insecure or threatened at a specific destination, an overall negative impression is likely to result (Pan et al., 2021). Over the past few decades, the tourism industry has been seriously undermined by a growing lack of safety and security caused by crime, terrorism, food safety, health issues and natural disasters (Estevão and Costa, 2020). The prospect of these consequences underscores a compelling motivation for the tourism sector to seriously reimagine tourist travel intentions and adeptly strategize for crisis management. Hence, organizations should adopt a proactive stance to swiftly manage and navigate crises within their control as substantiated by the study of Yozcu and Cetin (2019).

Recent researches indicate that the most important apprehensions for tourists relate to safety and security (Preko, 2021; Mawby et al., 2021; Zou and Mawby, 2020). Five main areas of safety and security include; crime, terrorism, food safety, health issues, and natural disasters (Yozcu and Cetin, 2019). The growing lack of safety and security by such risks i.e. natural disaster, political instability, terrorism, crime, food hygiene amongst other factors have undermined the tourism industry. Hence, the perception of travel safety and security has become a major determinant in travellers' decisions to visit a place (Poku and Boakye, 2019). In December 2019, a novel coronavirus, now commonly known as the COVID-19, emerged in Wuhan, China, causing pneumonia and acute respiratory failure. This highly contagious virus has been spreading rapidly worldwide with more than 50 countries being currently affected (Wang et al., 2020). Therefore, this highlights the importance of this current study which reviewed tourism crisis based on coronavirus in the China context, which may also be of interest to other countries. The goal of this study is derived to guide the direction and scope of the

[*] Corresponding author

study reported herein, which examined a proposed model in the realm of travel decision making to China. Therefore, this research seeks to understand whether perceived safety and electronic word of mouth (eWOM) can affect destination image and subsequently affect travel decision-making amongst tourist in era of post Covid-19.As inbound tourists will play a vital role in China's future tourism development, it is considerable to examine the destination image from the perspectives of Iranian's (as part of the tourism market) intending to travel to China in the era of post Covid -19.

Given the context, this research aims to adopt the stimulus, organism, response theory (SOR) to investigate peoples travel intention to China in the post covid-19 era. The use of SOR model in exploring tourist related behavioural responses are limited (i.e. Hashemi et al., 2023), although it's use has been observed in purchase related contexts (Abbasi et al., 2019). In addressing these gaps, the SOR theory has been used to model the relationships between perceived safety, eWOM, destination image and travel intentions. While researchers have begun delving on the various aspects of tourism recovery in the post pandemic era, research exploring an integrated framework consisting perceived safety, eWOM, destination image and travel intentions remains limited. Examining the interaction of these factors in the post Covid-19 era can provide a deeper understanding of their combined impact. Therefore, the objectives of this study are to firstly investigate whether perceived safety and electronic word-of-mouth (eWOM) can influence destination image that is formed in the minds of people planning to travel to China in the post Covid19 era.

Secondly, the study seeks to investigate if destination image can influence people's travel intentions to China in the post Covid-19 era. Finally, the study seeks to investigate the mediating effects of destination image in the relationships between perceived safety, eWOM and travel intentions in the post Covid-19 era. The study hopes to advance existing understanding of different stimulus (i.e. perceived safety and eWOM), organism (destination image that is formed in the minds of travellers) and its ability to influence a response (i.e. people's intention to travel). Specifically, the study may provide policy makers and destination marketers sound insights on factors that has an impact on destination image and travel intentions and efforts that can be taken to enhance perceived safety and eWOM so as to create a positive destination image and foster travel intentions. The subsequent section of the paper discusses the underpinning theory, the hypotheses as well as puts forth the proposed research model.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Underpinning Theory-Stimulus Organism Response (S-O-R) Model

Researchers have used the S-O-R framework (Mehrabian and Russell, 1974) to characterize tourist' decision-making processes in a variety of scenarios. Along with its widespread application in the online context and various other domains, the SOR framework has been used to explain consumer online purchasing behaviour (Abbasi et al., 2019). Furthermore, this approach has not been applied to tourism-related behavioral objectives to a great extent (Hashemi et al., 2023).

Thus, it would be worthwhile to explore the framework's appropriateness in the perspective of Iranians' tourists' travel intentions in the post-COVID era. According to the SOR paradigm, environmental cues have the potential to arouse individuals, hence changing the inner organismic emotions that mediate their approach or avoidance reactions. Stimuli are a collection of features that influence customers' perceptions and operate as the beginning point for the decision-making process in the SOR framework. As such, this study will employ perceived safety and electronic word of mouth as triggers to elicit an intention to travel as a response via destination image as an emotionally formed idea (Figure 1).

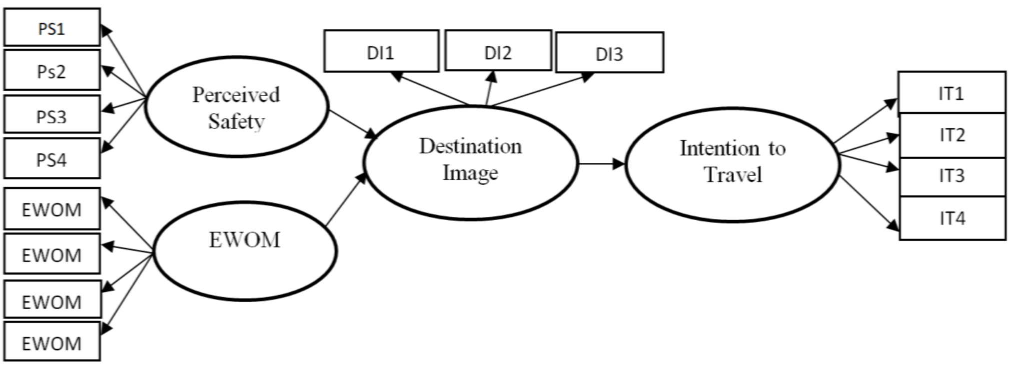

Figure 1. The proposed hypothesized hierarchical model of perceive safety, eWOM, destination image and intention to travel

Recent Studies Deploying the SOR Model in Tourism Context

Some of the most recent studies deploying the SOR paradigm to investigate tourist reactions and behaviours include; Que et al. (2023), Sahin and Kiliclar (2023), Baber and Baber (2022) and González-Rodríguez et al. (2022). In their study Que et al. (2023) used the SOR theory to examine the relationships between destination source credibility (as a stimulus), destination image and place attachment (as the organism) and tourist environmentally responsible behavior (as the behavioural response). Their study found that destination source credibility indeed had an influence on destination image and place attachment, which subsequently had an effect on tourist environmentally responsible behavior. Their study also found that destination image and place attachment had mediating effects on the relationship between destination source credibility and tourist environmentally responsible behavior, amongst which place attachment emerged as a more powerful mediator than destination image. The study was however conducted amongst domestic tourist visiting three different tourist destinations in China with data sets collected separately on three different times (i.e. first study: March – June 2017, second and third study: August – November 2021). The study also did not take into account international tourist perspectives more so in the post Covid-19 context where perceptions of safety and destination image may have differed than before Covid-19; which is what the present study seeks to examine.

The study of Sahin and Kiliclar (2023) is one of the first studies to adopt the SOR model to examine gastronomic behaviours. The study investigated the influence of gastronomic experiences (stimulus) on food consumption emotions (organism) and experiential value (organism) and its subsequent effect on behavioural intentions. Based on data received from 491 foreign tourist visiting Turkey, the study found that gastronomic experiences had a positive influence on experiential value and food consumption emotions, with only experiential value having a significant influence on behavioural intention of tourists. The study demonstrated the applicability of the SOR framework to measure food tourism related behaviours, further amplifying SOR framework's salience in tourism related research context. Conversely, Baber and Baber (2022) utilized the SOR model to investigate the effect of social media marketing and e-reputation (an outcome of eWOM) on destination image and its implications on tourist visit intentions. Based on data collected from 209 domestic and international tourist staying at five-star hotels at Khajuraho (a UNESCO heritage site in India), the study found that both social media marketing and e-reputation had a significant influence on destination image. The study also found the destination image fully mediated the relationships between social media marketing, e-reputation and visit intentions. The study of Baber and Baber (2022) was conducted in the post Covid-19 era and took into account the effect of e-reputation in enabling people to form destination image. E-reputation is formed from various means including a tourist destination's web content, social media marketing strategies and most importantly experience based user generated content which is how electronic word-of-mouth (eWOM) is spread, leading to e-reputation. This is the main object of the present study which seeks to investigate the direct impact of eWOM on destination image and visit intention amongst travelers in the post Covid-19 era. Baber and Baber (2022) further proposed the need for future researches to explore the influence of different variables on destination image and travel intentions.

In another recently published research article, González-Rodríguez et al. (2022) also adopted the SOR paradigm to analyze the influence of eWOM source credibility (as stimulus) on travellers' willingness to visit a destination and online involvement (as a response) through perceived risk and information usefulness (as organism). Based on data of 209 respondents, the study found that eWOM source credibility was able to reduce travellers perceived risks that is connected with the destination visited. Conversely tourist with lower perceived risks tend to feel a higher information usefulness deriving from eWOM and thereby eliciting their online involvements and intentions to visit a destination. The study of Gonzalez-Rodriguez et al. (2022) once again has validated the saliency of SOR framework in predicting tourist behavioural responses towards eWOM and destination visit intentions. However, their study involved primarily domestic tourist in China and was carried out during pre-pandemic phase between March to November 2019. A study involving foreign tourist intending to visit China in the aftermath of Covid-19 may tell a different story, which is what inspireS the present research endeavour.

Perceived Safety

In the tourism context, safety and security are the most important travel considerations (Korstanje and George, 2020). The importance of safety at tourist destinations cannot be overemphasised to enable tourist to achieve their travel objectives i.e. leisure, food, cultural, history, heritage or simply for business. Safety is a vital construct as it has a remarkable effect on passengers' decision-making process in selecting a destination (Bae and Chang, 2021; Korstanje and George, 2020). With a continued emphasis on safety in the tourism industry, it makes logical sense why there has been a steady increase in research concerning the topic (Caber et al., 2020; Bae and Chang, 2021). As proof of this growing interest, there is now at least one international journal dedicated to issues of safety in the context of tourism and hospitality, with many journals having special issues dedicated to the topic. Research in the field of travel and tourism is diverse, the work surrounding security and safety in the context of tourism is also quite varied including topics such as health epidemics, food security, natural disasters, terrorism, war, political instability, cross-cultural differences, and petty crime (Zou and Meng, 2020). Safety as perceived by tourist has often been considered as an important determinant to measure destination image (Ban, 2016). In a relatively recent study involving 410 outbound Chinese tourist visiting Taipei, Hsu et al. (2017) found that perceived safety had an impact on tourism destination image. In another recent study, Rahman et al. (2023) found that perceived risks associated with the safety of tourist destination had a positive impact on destination image and the selection of a destination by tourists. Given the consensus among scholars that safety concerns largely impact tourist decision making (Woodside and King, 2001; Mawby et al., 2021), the research posits that:

HI: Perceived safety has a positive influence on destination image.

Electronic word of mouth (EWOM)

The advances of information technology and the emergence of online network sites have profoundly changed the way information is exchanged and have transcended the traditional limitations of WOM (Hernández-Méndez et al., 2015).These days consumers share their product-related experiences on the internet through email, bulletin boards, chat rooms, forums, fan clubs, brand, and user groups (Bigné et al., 2016). Internet has led word of mouth to be simultaneously ubiquitous and removed the necessity of physical presence (Assaker and O'Connor, 2021); a trend is known as eWOM. Ababneh (2022) argued that the transmission of favourable eWOM was attributed to tourism destination operator's ability in carrying out their marketing activities in a manner that allows accessibility, interactivity and is seen as credible. The study of Jalilvand and Samiei (2012) found that online WOM communications has a significant impact on attitudes toward visiting destination and intention to travel. Jalilvand (2017) investigated the influence of information sources including word-of-mouth (WOM) and mass media on destination image, tourists' attitude and consequently, on travel intention at historical attractions of Shiraz, Iran. Their findings indicated that WOM and mass media had a positive influence on destination image and WOM was found to have the most significant influence on destination image and attitude than mass media. Therefore the following hypothesis is put forth:

H2: eWOM has a positive influence on destination image.

Destination Image

Destination image is crucial and plays many roles in the decision-making process, because all decision-making factors, such as time, money, and family, are based on the image of each destination to satisfy the decision maker's motivation (Khan et al., 2020; Abbasi et al., 2021). Also, the familiarity and the complexity of the images held plays a large role in this decision-making process. Moreover, consumer's decision-making process is complex and it's very difficult to identify. Studies indicate that the image of a destination influences tourist behaviour and the stronger the relationship between the image of the destination and customer needs and desires; the more likely they are to have purchase intentions for that destination (Bronner and de Hoog, 2020). The evaluation of destination image has been the subject of much attention in social science literature. In a relatively recent study, Rahman et al. (2023) found that destination image indeed was a strong predictor of tourists' motivation to travel. Past studies (Bronner and de Hoog, 2020; Kyriakaki et al., 2020; Abbasi et al., 2021) have confirmed that destination image influences tourist in the process of choosing a destination, the post evaluation of their trip and their future intentions to travel. In a study investigating post-crisis destination image (i.e. post Covid-19), Rapti and Gkauna (2022) found that the combination of factors such as positive views about an area, tourist friendly environment and most importantly the reassurance that a destination has been classified as safe had the highest impact on potential tourists visit intention. Against the backdrop of past studies, the study proposes that destination image is indeed an important predictor of tourists' intention to travel in the post Covid-19 era and hence postulates the following hypothesis:

H3. Destination image has a positive influence on intention to travel.

EWOM, Destination Image and Intention to Travel

Abubakar et al. (2016) employed a sample of 308 customers in Cyprus and suggested the following results: (i) e-Referral does influence brand image, (ii) eWOM influences brand image, and (ii) eWOM and brand image influence purchase intention. Xie (2014) studied the impact of promotional videos, online reviews, and travel notes on destination image changes and found that the three forms of information significantly changed destination image. Busby et al. (2013). examined film tourism and destination image concepts. They found that television plays an important role in the creation of a heritage destination image. Without direct personal experience the images of a place are formed by information provided by the media and other secondary or external sources. Hence, the type, quality, and quantity of information available to the individual would determine the type of image he would be likely to develop. In a study involving domestic tourist in Indonesia, Andriani et al. (2019) found that destination image had a significant and positive mediating effect on the relationship between eWOM and tourist visit intention. In another fairly recent study, Nechoud et al. (2021) found that destination image had a mediating effect in the relationship between perceived credibility of eWOM and intentions to visit a tourist destination. In yet another recent study, Farrukh et al. (2022) found that while eWOM had a direct effect on tourist travel intentions within the medical tourism context, destination image proved to exert a positive mediating effect on the link between eWOM and intention to travel. Hence, based on the foregoing discussion the following hypothesis is postulated:

H4: Destination image mediates the relationship between EWOM and intention to travel.

Perceived Safety, Destination Image and Intention to Travel

With frequent outbreaks of health-related crises in recently (Covid 19), tourists now consider safety as one of the most important elements when formulating their travel decision making and choosing safe destination. Accordingly, many studies (Hsu et al., 2017; Chaulagain et al., 2019; Khan et al., 2017) have documented the relationship between perceived safety and travel intentions, whereby the safer people felt, the higher their likelihood to visit a destination. Perceived safety reflects peoples' feelings and indicates their level of confidence to overcome uncertainties (Chaulagain et al., 2019). Past studies have found that individuals' perceived risk associated with certain crisis events (hurricanes, outbreaks of infectious diseases, and terrorist attacks) is related to their evaluation of the overall safety and travel decisions during times of crisis (Cahyanto et al., 2014; Rittichainuwat and Chakraborty, 2009). Albeit limited studies reporting the mediating effects of destination image on perceived safety and intention to travel, in a recent study Hsu et al. (2017) found that destination image was fully able to mediate the relationship between travel safety and tourist decision making. In a recent study, Purwanto et al. (2022) found that destination image was able to mediate the relationship between risk factors and visitor's intention to visit a destination. In yet another relevant study, Lu and Atadil (2021) found that US travellers had low travel intentions to China during the pandemic phase, while safety and security issues had the highest impact on destination image formation which led to low travel intentions. Since research in the post pandemic phase is limited, the study postulates that:

H5: Destination image mediates the relationship between perceived safety and intention to travel.

RESEARCH METHODOLOGY

The research targeted respondents from the Shiraz city of Iran. This place is located in the southwest of Iran and is the capital of the Fars Province. The respondents had to be 18 years old and above and must be amongst those who had at least travelled once overseas for holidays. Roscoe (1975), whose guidelines on sample size selection have been used for the past decades, posits that a sample size greater than 30 and less than 500 is most suitable for most behavioural studies.

Hence, the study targeted a sample size of 320 respondents. The study deployed a non-probability sampling approach as the respondents were chosen from amongst the general population living in Shiraz, Iran. The study specifically utilized the snowball sampling strategy (one of the approaches under non-probability sampling strategy). Since the study deployed a quantitative method in uncovering the relationships between the variables, the questionnaire was deemed as a suitable research instrument to gauge target respondents' perceptions and perspectives. Although edited to be appropriate in the context of tourism, the measurement scales presented in the questionnaire were acquired from past studies with established reliability and validity. The measures for perceived safety were adapted from Woosnam et al. (2015), while the scales to measure eWOM were adapted from Abubakar (2016). As for the mediating variable (destination image), the measures were adapted from Jalilvand et al. (2012). Finally, four items measuring intention to travel were adapted from Andriani et al. (2019).

The questionnaires were designed according to two sections i.e. Section A comprised demographic questions while Section B, contained questionnaire items that were organized according to the variables of the study. While section A used a nominal scale, section B items were ordinal in nature and anchored on a seven-point point Likert-scale allowing respondents to state the extent to which they 'very strongly disagreed (1) or very strongly agreed (7)' with the statements.

However, before the official survey was distributed to respondents, a pilot study took place using seven stakeholders in order to assess the face and content validity for all the questionnaire items in the study. Based on feedback and constructive suggestions, the questionnaire underwent minor adjustments. The data collection began in February 2023 and ended in March of the same year. The researchers distributed 335 questionnaires to the local community located in Shiraz, Iran. Of the 335 questionnaires distributed, 320 were returned and 15 questionnaires not fully completed. Hence, the total usable responses stood at 305 respondents which were close to the targeted respondents of 320. To test the hypotheses, the authors used partial least squares and SmartPLS 3.3.2 tools for data analysis (Ashaari et al., 2021; Ramasamy et al., 2020; Ringle et al., 2015). Because of the current study's prediction - oriented function, which aims to investigate how well exogenous constructs can predict endogenous constructs, this variance-based SEM technique has been given priority over covariance-based SEM statistical approaches. Figure 2 summarizes the steps deployed in the research methodology.

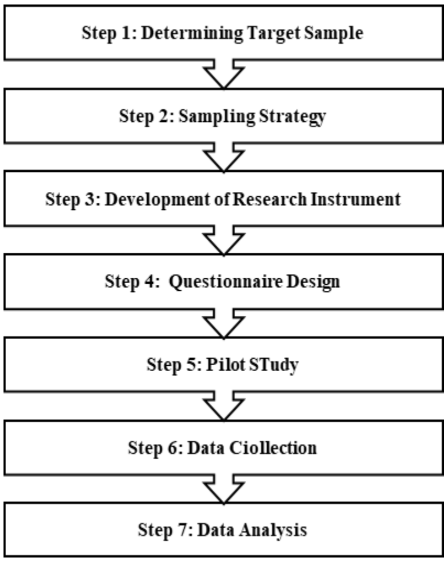

Figure 2. Steps in the Research Methodology

Profile of respondents

The table below depicts the summary of the demographic profile of respondents followed by a brief description. A total of 305 useable responses were collected and deemed fit for data analysis. Among them (51.6%) were females whereas (48.4%) were male respondents. As for age, the majority of respondents (40.3%) were between the age 18-30 years followed by (32.8%) were between the age 31-40 years. Regarding educational level, majority of the respondents i.e. 115 were having master's degree closely followed by 105 respondents who had only certificate / diploma. Moreover, concerning marital status of respondents, 57.3% of respondents were married whereas 42.6% were single.

Common Method Bias

When it comes to behavioural research, the problem of traditional process bias (CMB) is inevitable (Podsakoff et al., 2003). Therefore, the researchers used Harman's single-factor analysis to address these issues. The overall variance tested by a single factor was found to be 40.781 percent, which is less than 50%, according to the Harman single factor test (Podsakoff et al., 2003).

Table 1. Summary of Demographic Profile of Respondents

No	Items	Category	Frequency	Percentage
1.	Gender	Male	157	51.6%
		Female	148	48.4%
2.	Age	18 – 30 years	123	40.3%
		31 – 40 years	100	32.8%
		41 – 50 years	70	22.9%
		>51 years	12	4%
3.	Educational Level	Bachelor / Masters	115	37.7%
		Certificate/Diploma	105	34.4%
		High School	85	27.9%
4.	Marital Status	Single	130	42.6%
		Married	175	57.3%

RESULTS

Measurement Model

As directed by Hair et al. (2019), this study tests the inner model (validity and reliability of the constructs, factor loadings, composite reliability (CR), average variance extracted (AVE), and the Hetrotrait-Monotrait ratio (HTMT). Table 1indicates the outcomes of the outer model. Factor loadings, CR, and AVE are all above 0.7, 0.7, and 0.5, according to the performance (Hair et al., 2019, for further reading see Ashaari et al. (2021). The measurement model's results show that all of the constructs in the sample are reliable, and the studied objects account for more than half of the variance in the construct. As a result, the constructs' convergent validity was established. In addition to convergent validity, the current research looked at the outer model's discriminant validity using Henseler et al. (2015) HTMT criteria. Since all HTMT values were less than 0.85 (Table 3), there were no problems with discriminant validity in this analysis. This confirms that the examined constructs are distinct from the other variables investigated in the analysis.

Structural Model

A nonparametric bootstrapping procedure of 2000 iterations was used to evaluate the validity of the hypotheses (Hair et al., 2019). Table 3's findings show that all of the direct relationships are supported. Similarly, the findings backed up the conceptual model, describing 31.6 percent of behavioural intention and 32.4 percent of destination image, respectively. In addition to R^2, the current analysis looked at the effect size (f^2) according to Cohen's guidelines (1998). The researcher used Stone and Geisser's model to examine the predictive relevance of the path models used in the study (Q^2). The findings show that the Q^2 for all endogenous constructs are greater than zero (Fornell and Cha, 1994), i.e. BI (0.220) and DI (0.220). (0.226). Table 4 also shows the effects of the significant route coefficient, R^2, and effect size tests.

The problem of lateral collinearity was also explored in this analysis. According to Kock and Lynn (2012), lateral collinearity issues may lead to researcher misinterpretation, so it was decided to investigate. Researchers say that an outer VIF value of 10 or higher indicates a possible collinearity problem (Mason and Perreault, 1991; Shieh, 2010). Table 4 indicates that there was no concern about multicollinearity because all of the variance inflation factors (VIF) were found to be within the appropriate range, i.e. less than 10.

Table 2. Convergent Validity and Reliability
AVE: Average Variance Extracted; CR: Composite Reliability

Construct	Items	Loadings	CR	AVE
Perceived Security	PS1	0.776	0.89	0.575
	PS2	0.795		
	PS3	0.707		
	PS4	0.735		
	PS5	0.735		
	PS6	0.798		
E-word of Mouth	EWOM1	0.719	0.905	0.658
	EWOM2	0.781		
	EWOM3	0.821		
	EWOM4	0.862		
	EWOM5	0.863		
Destination Image	DI1	0.828	0.911	0.719
	DI2	0.865		
	DI3	0.847		
	DI4	0.852		
Behavioural Intention	BI1	0.892	0.911	0.719
	BI2	0.844		
	BI3	0.787		
	BI4	0.865		

Table 3. Discriminant Validity

Construct	1	2	3	4
1. Behavioural Intention				
2. Destination Image	0.638			
3. E-word of Mouth	0.625	0.592		
4. Perceived Security	0.470	0.595	0.829	

DISCUSSION AND IMPLICATIONS

This study sought to examine the impact of perceived safety and eWOM on destination image and subsequently how destination image impacted Iranian tourist intention to travel to China in the post Covid-19 era. Additionally, the study also examined the mediating effect of destination image on both perceived safety and eWOM in relation to intention to travel. Deducing from the results, perceived safety was significantly related to destination image (H1).

Table 4. Path Coefficient and hypothesis testing (Note: ***p<0.001)

Hypothesis	Path	Beta	t-value	p-value	f^2	VIF	Decision
H1	PS→DI	0.308	3.798	0.000***	0.068	2.06	Yes
H2	EWOM→DI	0.306	4.462	0.000***	0.067	2.06	Yes
H3	DI→BI	0.562	12.583	0.000***	0.462	1.00	Yes
H4	EWOM →DI → BI	0.172	3.944	0.099	0.246	0***	Yes
H5	PS → DI →BI	0.173	3.585	0.092	0.253	0***	Yes

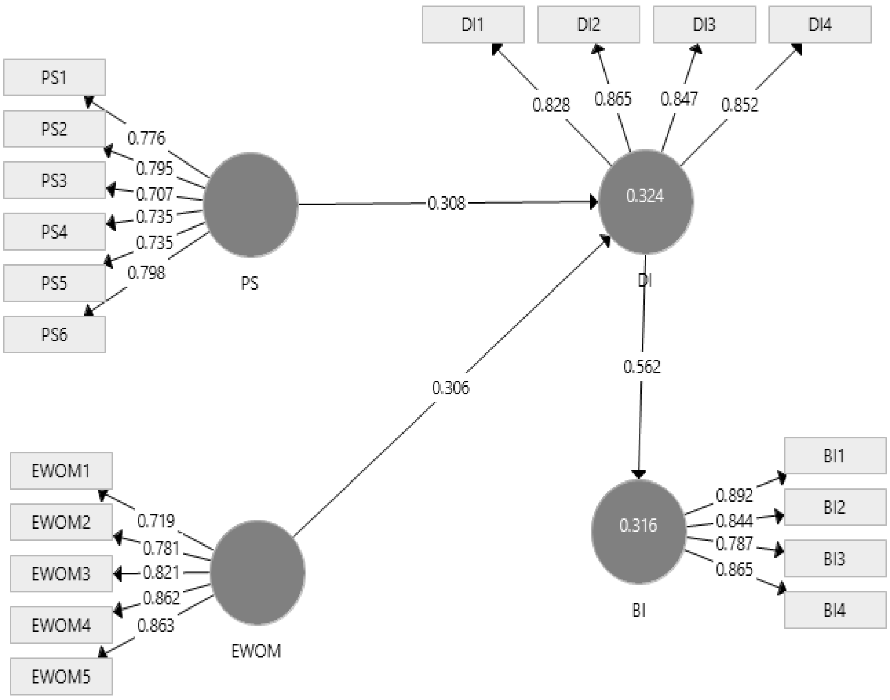

Figure 3. PLS-Path analysis of Beta value and R-square values

The results meant that the destination image of China in the post Covid-19 era will continue to be affected by the perception about safety held by Iranian tourist. Our findings were consistent with the past findings of Hsu et al. (2017). As for hypothesis 2, the study found that eWOM was able to influence destination image consistent with past studies of Jalilvand (2017) and Jalilvand and Samiei, (2012). Undoubtedly, the various sources of information contributing to eWOM is an important precursor to China's destination image in the eyes of tourist in the post Covid-19 era. The findings of the research revealed that destination image was significantly related to tourist intention to travel (H3) with the highest predictive impact. Our results conform to a host of past studies (Bronner and de Hoog, 2020; Kyriakaki et al., 2020) indicating that decision making and future intentions were highly hinged on the image of the particular tourist destination.

In the path relationship for mediating variable (H4 and H5), significant mediating relationships were evidenced. The study found that destination image was successfully able to mediate the relationship between eWOM and intention to travel. Our findings were consistent with the past studies of Nechoud et al. (2021), Andriani et al. (2019) and Farrukh et al. (2022). The final hypothesis (H5) was also supported as destination image fully mediated the relationship between perceived safety and intention to travel which was consistent with the past study of Hsu et al. (2017). This meant that in the post Covid-19 era, tourists are going to continue to be concerned about the destination image of China, and the perceived safety of the locality prior to making their decision to travel. Our study demonstrated the importance of perceived safety and eWOM as predictors of destination image thereby enriching the existing literature on destination image; particularly contributing to the dearth of literature available on perceived safety and destination image. The study also contributes to the existing literature by providing empirical validation on the role of destination image as a mediator in the link between eWOM and visiting intention as well as the link between perceived safety and visiting intentions. The role of destination image particularly in the post Covid-19 era is likely to impact tourist destinations of all nations affecting tourist behavioural intentions. The way the pandemic is contained successfully is going to also affect perceived safety which may have a strong bearing on the image of the destination as well as the resulting behavioural intention consistent with current literature suggesting that people are only willing consider a destination when they felt that the destination is safe and is free from harmful elements (Chaulagain et al. 2019). Hence our study confirmed that perceived safety and eWOM are indeed important stimulus in influencing how people viewed and felt about certain destination which created a certain image in their minds which is our study have been contextualized as destination image (organism), which subsequently affected their intention to travel to the destination (response).

This study provided empirical support to the destination image and behavioural intention model proposed in the study that was based on the S-O-R framework. Although various studies have utilized S-O-R in consumer behaviour and tourism related contexts, studies using the S-O-R model to predict the combined effects of perceived safety, eWOM, destination image and its subsequent effect on behavioural intention in the post Covid-19 era remains limited. Our study therefore supports the applicability of the S-O-R model in explaining tourist behavioural intentions through our findings which revealed that both perceived safety and eWOM (as stimulus) had an effect on destination image (organism) which in turn had a full mediating effect between perceived safety, eWOM and behaviour intention (representing response) in the S-O-R model.

As for managerial implications, our study confirmed that perceived safety, electronic word-of-mouth (eWOM), destination image, and travel intention are indeed vital factors that can influence travellers' behavioural intentions and decision-making processes. Understanding the relationship between these variables can help tourism organizations and destinations devise effective marketing strategies. As perceived safety is crucial, nations are expected to ensure that they have successfully been able to contain and curb the further spread of the virus in order instil confidence in the tourism sector for the benefit of tourist and various tourism players alike who have been struggling to revive their business due to intermittent lockdowns and mobility restrictions following new waves of the virus reported in many nations around. Governments should take appropriate efforts and make the required investments in safety measures which should be effectively communicated to potential travellers through various communication channels (traditional and electronic). This can include implementing sound and reliable security protocols, enhancing emergency response systems, and creating safety awareness campaigns. By virtue of committing to visitor safety, destinations can alleviate tourists' concerns and enhance their perceived safety and thereby create a favourable impression (destination image) amongst potential travellers. By prioritizing safety measures, effectively communicating them, and creating a safe environment, destinations can enhance their image, alleviate traveller concerns, build trust, stimulate positive travel intentions, and support sustainable tourism. Understanding and addressing the importance of perceived safety is crucial for destination marketers and managers to attract and retain tourists in an increasingly competitive global tourism industry.

Conversely, destination managers and government agencies should leverage on eWOM as a promotional tool for destination, tourism products and service recommendations. Since post disaster communication via social media has been proven to be an effective tool to enhance destination image and visit intention (Hunag et al., 2023), managers should fully exploit social media by way of creative and captivating videos to reinforce positive eWOM and boost destination image to influence tourists travel intentions (Nechoud et al., 2021). Collaborative promotional efforts with social media influencers and famous vloggers (i.e. Nas daily) may be a strategy worth exploring to attract and influence the current generation of travellers that mostly represent the millennials. Apart from being able to create a compelling content that aligns with a nations unique selling points, influencers are able to amplify the reach of positive eWOM owing to their large online following. However, destination managers should ensure that any form of social media reviews, videos or sharing of tourist experiences on social media should be credible as past studies have established that perceived credibility of eWOM can significantly influence behavioural intentions (Teng et al., 2017; Nechoud et al., 2021). Post disaster communication via social media has been proven be an effective tool in destination image and destination management literature. Engaging with travellers through these channels, sharing authentic stories, and promoting user-generated content can create a positive buzz and solicit favourable eWOM. Encouraging travellers to share their experiences through images, videos, and reviews can create a sense of authenticity and trust. Tourism organizations can run social media campaigns or contests that encourage users to share their content using specific hashtags or tagging the destination's official accounts. This user-generated content can serve as powerful testimonials, showcasing the destination's attractiveness and safety to a wider audience (Kim and Wang, 2020).

CONCLUSION AND FUTURE RESEARCH

In an attempt to investigate Iranian tourist perceptions pertaining to destination image and their intentions to travel in the post Covid-19 era to China, the study found that perceived safety and eWOM were both important determinants of destination image. The study also found that destination image had a positive effect on tourist intention to travel. The study also indicated that relationship between perceived safety and tourist intentions to travel in the post Covid-19 era is also mediated by destination image. Likewise, destination image also had a mediating effect in the relationship between eWOM and tourist intention to travel. However, the study is certainly not without its limitations. The conceptual model was developed and tested in the context of Iranian tourists who may consider travelling to China in the post Covid-19 era.

The results therefore should be treated with caution when drawing generalizations. The conceptual model should be subjected to further research involving tourist from western counterparts and high-income nations where outbound tourism is growing in order to obtain further validation. A comparative study involving tourists from Western, Asian and African nations will shed better light in truly understanding tourist behavioural intentions and perceptions of destination image in the post Covid-19 era. Future studies could also consider a moderated-mediation approach by adding a moderator such as government commitment and perceived risks. Since Covid related travel restrictions have been lifted and travel and tourism have picked up pace, longitudinal studies tracking changes in perceived safety, eWOM, destination image and travel intentions overtime could provide more insights and perspectives into the evolving nature of post-pandemic tourism behaviour and hence provide a better understanding of the recovery trajectories. As social media influencers have been commonly deployed by companies offering various consumer products and services including tourism, studies specifically investigating the role and impact of social media influencers towards destination image and tourist behavioural intention (Raafat et al., 2023) will certainly be a worthwhile research endeavour.

Author Contributions: Conceptualization, S.H. and K.S.D.S..; methodology, K.S.D.S. and S.K.; software, S.K. and M.A.M.; validation, M.A.M. and S.H.; formal analysis, S.K. and M.A.M.; investigation, S.H. and S.K.; data curation, K.S.D.S. and S.H.; writing - original draft preparation, K.S.D.S. and S.H.; writing - review and editing, K.S.D.S.; visualization, K.S.D.S.; supervision, S.H.; project administration, K.S.D.S. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: The authors would like to extend their deepest appreciation to UCSI University in Malaysia.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 29.06.2023 Revised: 23.08.2023 Accepted: 14.09.2023 Available online: 29.09.2023

GeoJournal of Tourism and Geosites
ISSN 2065-1198, E-ISSN 2065-0817

Year XVI, vol. 49, no. 3, 2023, p.1195-1203
DOI 10.30892/gtg.49334-1118

EXAMINING THE GLOCAL FORCES THAT DETERMINED THE MICE TOURISM RECOVERY POST-COVID-19 PANDEMIC

Refiloe Julia LEKGAU
School of Tourism and Hospitality, College of Business and Economics,
University of Johannesburg, South Africa, e-mail: rlegkau@uj.ac.za

Tembi Maloney TICHAAWA*
School of Tourism and Hospitality, College of Business and Economics,
University of Johannesburg, South Africa, e-mail: tembit@uj.ac.za

Citation: Lekgau, R.J., & Tichaawa, T.M. (2023). EXAMINING THE GLOCAL FORCES THAT DETERMINED THE MICE TOURISM RECOVERY POST-COVID-19 PANDEMIC. *GeoJournal of Tourism and Geosites*, 49(3), 1195–1203 https://doi.org/10.30892/gtg.49334-1118

Abstract: The paper focuses on the determinants of MICE tourism recovery post the COVID-19 pandemic. Using the case of South Africa, empirical data were collected by way of in-depth interviews with 19 key stakeholders in the MICE sector. The study findings reveal five key determinants of the recovery, (1) change in focus of geographical markets, (2) varied recovery of the different economic industries, (3) limited airline access and connectivity, (4) destination image and (5) level of confidence of MICE attendees to travel. The paper's theoretical significance lies in its timely contribution to studies on MICE tourism recovery and resilience, focusing on the developing nations' context. Further, the findings of the study, which delineate the recovery process of MICE events post-COVID-19 provide insights into building a resilient MICE sector.

Key words: COVID-19, crises, MICE tourism, recovery, resilience, South Africa

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INTRODUCTION

The meetings, incentive travels, conferences, and exhibitions (MICE) sector is recognized as an important part of international tourism (Rogerson, 2015). Indeed, these events are strongly sought after to develop local industries (both tourism and non-tourism) and boost the national economy (Kim et al., 2022; Welthagen et al., 2022; Kourkouridis et al., 2023). In South Africa, the National Convention Bureau reported the MICE sector to have contributed US$13.6 billion to the country in 2019 (South African Tourism, 2022). However, similar to the rest of the world, South Africa was severely affected by the pandemic, with the country's COVID-19 regulations stifling the entire tourism system (Rogerson and Rogerson, 2022). While government interventions and the focus on domestic tourism had helped reduce the impact of the pandemic, the MICE events sector was forced to not only pause operations but re-alter their structure to comply with regulations (Dragin-Jensen et al., 2022).

Bartis et al. (2021) point out that the sector was one of the most regulated tourism activities. In fact, from the very start, the (changing) regulations in place had restricted the hosting of in-person MICE events, as for the most part, the sector was limited to hosting events with only 50 and 100 persons (maximum) capacity (Lekgau and Tichaawa, 2022). An early nationwide study by Republic of South Africa National Department of Tourism (NDT), Tourism Business Council of South Africa (TBCSA) and International Finance Corporation (IFC) (2020) reported that from March to June 2020, the MICE subsector lost approximately US$49.8 million in revenue due to cancellations, while 75.4% of permanent employment had relied strongly on reduction of operational costs, deferments (as opposed to cancellations) of events and adjusting business models to include virtual (and later hybrid) events (Lekgau and Tichaawa, 2021).

Notably, the adaptations of the industry, as well as the easing of travel regulations worldwide, have shifted the focus to MICE recovery efforts (Dillette and Ponting, 2021; Lekgau and Tichaawa, 2021; Seraphin, 2021). Beyond its importance to the economic contribution to a destination, MICE tourism recovery plays a greater role in broader economic recovery (International Labour Organisation [ILO], 2022). In focusing on recovery, however, it is important to consider Rogerson and Rogerson's (2022) warning that the pandemic's impact will be experienced for many years to come, particularly within the broader tourism system. Since the start of the pandemic, there has been much speculation and many predictions of when MICE tourism will recover to pre-2020 levels (see for example United Nations World Tourism Organisation (UNWTO), 2020; SAT, 2022). Understandably, the erratic COVID-19 environment, together with the unfolding impacts of the pandemic on the economy and society, and the emerging local (e.g. energy crisis) and global concerns (such as the Ukraine and Russia war) have played a role in the pace of the MICE sector recovery. In the current study, we explore and unpack the factors influencing the recovery of MICE tourism in South Africa. The study is premised on the notion that MICE tourism recovery is situated within and influenced by (global) macro-level dynamics,

* Corresponding author

thereby making the recovery a complex and multifaceted process. As argued by Mena-Navarro et al. (2022), the success of the MICE sector is not dependent only on national development efforts (i.e., effective tourism policy formulation and implementation) but also on the effective response to both local and international dynamics and factors. These factors, we postulate, play a role in the recovery process of the MICE sector.

LITERATURE REVIEW

Before the COVID-19 pandemic, MICE tourism was a fast-growing economic sector in both developed and developing regions (An et al., 2021; Chan et al., 2023). Several studies have explained the interconnectedness to the globalised world which has resulted in MICE tourism being one of the most dynamic and leading aspects of global activities (Rogerson, 2015; Tichaawa, 2017; 2021; Draper and Neal, 2018). Indeed, the widening of economic relations, advancements in modern air travel and technology, the growing importance of the knowledge economy, and the increasingly connected networks of cities and urban areas represent some of the reasons for the expansion of the MICE sector (Rogerson, 2015; Weru and Njoroge, 2021). Accordingly, the sector has grown to be an important part of business operations with literature averring the attendance of MICE events to be related to information sharing, problem-solving, decision-making, participating in educational discussions, and sharing common interests (Becken and Hughey, 2022). It is important to note that such reasons are often dependent on the type of MICE event (Becken and Hughey, 2022; Kim et al., 2022).

The MICE sector is established to be a tool for economic development and strengthening tourism destinations (An et al., 2021; Santos et al., 2022). Understandably, a significant portion of the MICE tourism research considers the role of government (at various levels) in the development of the MICE sector (see for example Weru and Njoroge, 2021; Mena-Navarro et al., 2022; Kourkouridis et al., 2023). In the same breath, there has been a significant amount of research acknowledging the impact of MICE tourism on tourism and (broader) economic development, with reasons cited including destination branding benefits, tourism growth (and buffer against seasonality), job creation, strong multiplier effects on local economies, tourism-induced urban regeneration as well as the contribution of this form of tourism to expanding knowledge of economies and assisting local businesses (Rogerson, 2015; Marais et al., 2017; An et al., 2021; Suwannasat et al., 2022; Welthagen et al., 2022; Kourkouridis et al., 2023). These studies underscore the importance of the sector and justify numerous public investments toward developing attractive MICE destinations. This is particularly evident in the case of sub-Saharan Africa (a growing MICE region), in which Rogerson (2015) notes the investment in infrastructure, conference and facilities, business hotels and the establishment of convention bureaus. Additionally, Kourkouridis et al. (2023) mention the impact of MICE visitor spending on local goods and services.

According to Kim et al. (2022), the MICE sector represents the socio-economic and cultural aspects of the host destination and thus requires the support of key stakeholders, including governments, suppliers, and visitors. As such, the MICE sector of a destination cannot be examined in isolation from its host country (Kim et al., 2022). This is seen in the numerous studies that have examined the factors that determine the site selection for MICE events, in which destination attributes play a crucial role in the selection process and destination competitiveness (see for example Nolan, 2020; Welthagen et al., 2022). While the discussion of destination competitiveness and site selection factors are beyond the scope of the current study, it is important to note that the overwhelming assertion is that competitiveness is determined by both tourism-related factors as well as a wider range of factors that influence tourism service providers (Welthagen et al., 2022). It could be postulated that the recovery of a destination post-COVID-19 is determined to a certain extent by its competitiveness and how it responds to global dynamics and forces, which is explored in the current study.

Becken and Hughey (2021) opine that MICE tourism is a resilient sector. Indeed, studies published on the sector during the pandemic revealed that despite the halt of most MICE tourism activities, the need for MICE events was seen through its continuation during virtual platforms (Becken and Hughey, 2021; Dillette and Ponting, 2021; Lekgau and Tichaawa, 2021). MICE events represented one of the most regulated sectors of tourism (Dillette and Ponting, 2021) during the pandemic, more especially in South Africa where all restrictions on the sector were lifted only in mid-2022 (Lekgau and Tichaawa, 2022). Nevertheless, virtual events became the most widely used means of hosting events from 2020 to 2022 (Hooshmand et al., 2022). Notably, Kim et al. (2022) highlighted the importance of the traditional mode of MICE events (i.e., high human touch), extending the contribution by Becken and Hughey (2021) who suggested that virtual events were most effective when the goal was sharing information while nurturing relationships (amongst stakeholders) and that advancing business interests requires in-person events that provide opportunities for immediate feedback and a personal atmosphere. Indeed, "human connectivity will always be at the forefront of human needs" (Steriopolous and Wrathall, 2021:81) and events are essential in meeting this need (Seraphin, 2021; Yamashita and Oshimi, 2023), which underlines their resilience to changes in the external environment.

MICE events are recognized to lie at the heart of international tourism (Rogerson, 2015; Tichaawa, 2017), which necessitates some examination of international tourism during COVID-19. International tourism was arguably one of the hardest-hit sectors, with the UNWTO (2020) reporting that by mid-2020, all countries had imposed travel regulations to varying extents. To make the situation even more challenging, the slow and gradual reopening of destinations was regulated with travel restrictions, such as mandatory COVID-19 testing, quarantining, and later proof of vaccinations and/or negative COVID-19 test (Gössling, et al., 2021; Kim et al., 2022; Chan et al., 2023). Moreover, in broadening the challenges of international travel, Kim et al. (2022) go further to add that many countries would suddenly change their travel restrictions and quarantine policies in line with the state of the COVID-19 pandemic. As such, the recovery of international tourism is arguably complex, as seen in the projected timelines of recovery which are constantly changing as per the changes in the global tourism system. This undoubtedly affects the MICE sector of many destinations.

METHODOLOGY

Research design

In addressing the research question, 'What determines the recovery of the MICE sector during COVID-19?' the current study employs a purely qualitative research design which allowed the researchers to gain a comprehensive understanding of the study context. Using the qualitative approach allowed for the in-depth exploration of the factors determining the recovery of the MICE sector and enabled the researchers to set up the context of the study phenomenon and understand the environment that MICE stakeholders were planning for their recovery. The study was inductive-driven, as the factors affecting the MICE sector recovery were identified from the data collected.

Data collection

The target population for this research was representatives of the respective subsectors of the MICE industry. Bueno et al. (2020) approach the structure of the MICE sector using the tourism distribution channel, presenting that the sector can be broadly divided into three subsectors, being demand (clients), supply side, and intermediaries (i.e., MICE planners). More recently, Bartis et al. (2021) expanded on the supply side to include support structures, such as convention bureau and industry associations, and government bodies. Data were collected from interviews with representatives of the MICE sector. Specifically, the study included MICE event planners, MICE suppliers, professional associations, and governing authorities. A mixture of purposive and snowball sampling was utilized, where representatives of industry associations and event planners were approached, interviewed, and thereafter provided information about other potential participants who could address the research question.

The potential participants were individuals that worked closely with the initial participants identified. In total, the study conducted 19 interviews virtually, using Microsoft Teams, from February to May 2021. The interview duration averaged approximately an hour. With the permission of the participants, the interviews were recorded and thereafter transcribed verbatim. Table I below lists the participants interviewed and their role in the country's MICE sector.

Table 1. Participant codes

Code	Participant	Province
P1	Representative from SITE (Society for Incentive Travel Excellence)	Western Cape
P2	Representative from SA Event Council	Western Cape
P3	Professional Conference Organiser	Western Cape
P4	Representative from ICCA	Western Cape
P5	International conference venue manager	Western Cape
P6	AV Supplier	Western Cape
P7	AV Supplier	Western Cape
P8	Trade show organizer	Gauteng
P9	Representative from the Association of African Exhibition Organisers	Gauteng
P10	Representative from the National Department of Tourism	Gauteng
P11	Trade show organizer	Gauteng
P12	Owner of exhibition stand supplier	Gauteng
P13	Representative of the South African National Convention Bureau (Bidding support personnel)	Gauteng
P14	Venue supplier (Cape Town International Convention Centre)	Western Cape
P15	Venue supplier (hotel group)	Gauteng
P16	Representative from Johannesburg Convention Bureau	Gauteng
P17	Representative from the Southern African Association for the Conference Industry	Gauteng
P18	Representative from South African National Convention Bureau (destination marketing personnel)	Gauteng
P19	International convention venue manager	Western Cape

Instruments

The interview questions were open-ended to provide for in-depth discussions and probing to explore the current shift in MICE events, due to the pandemic. The interview questions focused on understanding the impact of COVID-19 on the operations of the MICE sector, the opportunities and challenges arising from the pandemic's effect on the sector, and the long-term changes adopted.

Data analysis

The transcriptions were uploaded on Atlas.ti version 9 for analysing the qualitative data. The software allowed for coding and grouping of similar codes to create themes. The analysis of the results revealed five key determinants, which relate to (i) changes in key MICE markets, (ii) the recovery of other economic sectors serviced by the MICE sector, (iii) the global destination image of South Africa, (iv) the recovery of international travel and, (v) the significance of boosting travel confidence in attending MICE events in South Africa. These key determinants are presented and discussed in the following section of the paper.

Findings and discussions

Changes in geographical MICE markets

While virtual events are one of the most well-known diversification and adaptation strategies, the discussions with participants of the study revealed that the gradual reopening of the MICE sector in South Africa led to changes and refocus of the key markets, shifting to local and regional markets. Such views are exemplified by the following response:

A lot of industry people are speaking to [i.e. about] focusing on the domestic market and regionally on the African market. So, maybe, get African companies to travel or African associations to come to the destination. That is what a lot of the world is doing, at the moment, focusing on local and focusing on regional in their area until next year, when borders are more open, and more people have been vaccinated. (P8)

The immediate shift to the domestic market coincides with many studies on COVID-19 and tourism as one of the common recovery measures implemented by many destinations globally (Bartis et al., 2021; Dragin-Jensen et al., 2022; Kim et al., 2022). Interestingly, the focus on the domestic market raised a number of concerns and challenges. On one hand, some participants viewed the transition to the domestic market as an opportunity. Specifically, a representative of one of the governing MICE authorities mentioned the lockdown (more especially the 'hard lockdown' in which people could only leave their homes for essentials goods and services) increased the need to travel:

So it made us realise as an organisation, the importance of doing it the other way around, which would be which becomes domestic, to get your low-hanging fruit. From this, when things are getting stabilised, then Africa will be open. Then after Africa, you can then look at the globe at large. And the communication we needed to send out to say [that] most of these [MICE] companies have always been looking at Europe as a source market for [their] business, Asia, and America. But what this [COVID-19] has done is forces MICE businesses to start looking at South Africans as the first bet, because they are tired also of being indoors, they want to move they want to get out. [P18]

The findings indicated that many of the participants had refocused their business on the domestic market. However, a few of the participants cautioned that the targeting of the domestic market required some MICE destinations in the country to re-examine how they had repositioned their MICE offerings. Speaking to the need to change the perception of the domestic market, one participant, representing the leading conference association in Cape Town mentioned:

And we've had to look for new markets, if I can call it that, there's been a huge focus on domestic travel and domestic tourism. So that has been, that has been a great, I think, specifically for Cape Town, it's been a great opportunity to change people's perception of Cape Town, a lot of locals think of Cape Town as an incredibly expensive destination. So I work very closely with Cape Town Tourism [organisation] to try and change that perception. (P5)

On the other hand, some participants raised concerns about the focus on the domestic market, with particular reference to the differences in spending power as compared to international markets. For example a respondent had this to say:

….another thing is that we've had to drop our average daily rate quite considerably to be able to accommodate the local market. And so that has been quite a challenge because we need to try and keep that average daily rate at a level that we can slightly push it up again. By not being greedy but covering overheads [costs]. [P15]

While international markets hold more economic opportunities for the MICE sector, the study, together with studies such as Bartis et al. (2021) and Weru and Njoroge (2021), raised concerns that the tourism industries (specifically the MICE sector) in the region had become dependent on international tourists and the pandemic re-emphasised their inherent vulnerabilities and the missed opportunity of the sector to diversify its offerings to local and regional (African) markets. This could suggest this market should be a priority not only in the recovery strategies and efforts but in building sector resilience.

Variation in MICE sector recovery

Some participants of the study added that within the MICE sector, recovery may differ according to the type of MICE events and economic sectors they serve. Regarding the former, a number of the participants noted exhibitions and conferences to be a MICE subsector that may recover at a quicker pace owing to the purpose and nature of such events. For instance, a representative of the exhibition sector had this to say:

There's been so many job losses as a whole in the country. And they come from different industry sectors. So, all of that affects the economy, because there's less demand for products. And if there's less demand, there are those companies that can't supply, and they're not buying from their manufacturers so that ripple effect on the economy is huge. And then it affects us on the bottom line, because they [are] operating on a skeleton budget, skeleton staff, just to survive, so we are not a top priority for them right now, but we still have to nurture that relationship. Because that exhibitor could start growing again, and, when it's time to come back on, they will come back on. So that is a big part of it. We have to look at those sectors and watch the recovery in those sectors. (P9)

The findings indicate that while MICE events comprise a key business activity, the growing popularity of virtual meeting platforms, coupled with that many businesses are facing (and recovering from) the economic consequences of the pandemic, mean that there will be differences in how various types of MICE events recover, according to the functions and objectives concerning these event types. Exhibitions, for instance, have the main purpose of bringing several stakeholders for a specific industry together for several reasons and form an important part of businesses' communication strategies (Qi et al., 2019; Shereni et al., 2021). Accordingly, with many businesses recovering from the pandemic, these events become important to rebuild and grow professional relationships. Also, trade shows will become crucial in rebuilding market demand. In the same light, some of the participants mentioned that certain sectors of the economy may recover much faster and therefore have a greater demand for MICE events. For instance, a trade show organiser stated:

My take on it is that you will have certain sectors, which are quite strong at the moment, that will still have big exhibitions and big conferences. So, the likes of the mining industry is very strong. They will have these big events.

And there'll be a lot of traction on that. The industries that have been really impacted by COVID, like the tourism sector, talking very much business tourism and leisure tourism – they're going to have very small shows, and they're not going to have a lot of budget. So, you're going to have a situation [in] that certain sectors will be very strong and have big shows, and some will be a lot smaller. (P11)

The participants mentioned that broader economic recovery would be varied and, therefore, MICE organisations serving economic sectors that have been severely impacted by the pandemic (such as tourism) may have a longer path to recovery. Furthermore, beyond the geographical classification of markets, some participants added that recovery would also differ according to the type of business (i.e., government, corporate and associations).

In this regard, participants agreed that international markets would be the last to recover (for several reasons), and association markets would kickstart the MICE activity, as explained by a representative of the national convention bureau*, …the associations is where the demand is coming from. The associations still need to be financially viable and conferences and meetings are a huge part of their revenue* (P18).

Destination image of South Africa

The study found that the pandemic had increased the perceived risk in South Africa as a long-haul MICE destination. The recovery of the sector depends, to a certain extent, on the destination image of South Africa. The participants explained that unfortunately there had been several events that had adversely affected the global perception of South Africa. During the middle to the latter parts of the pandemic, the country was red-listed by the global community:

And then the other problem is that obviously with our borders, now being open and we being on the third, three top countries that you should not visit. We have been red-flagged [along with] Brazil, [and] India, are some of them. (P7)

Furthermore, in December 2020, South Africa discovered another variant of the virus which lead to the erroneous labelling of it as the 'South African variant', which further degraded the image of South Africa, particularly as an international MICE destination. Many participants concurred that this affected the willingness of international travellers to come to the country, as seen by an exhibition planner's assertion, *Because the variant we have, all our international visitors and exhibitors won't be able to attend* (P12). Widely, crises and disasters adversely affect the image of the affected destination (Hopkins, 2021; Weru and Njoroge, 2021). Indeed, Neuburger and Egger (2021) found the increased risk perceptions to have affected travel behaviours. In the case of the MICE sector, Becken and Hughey (2021) and Kim et al. (2022) discovered that many businesses stopped all forms of corporate travel for MICE events owing to this increased risk in travelling and potential cost implications. In the current study, South Africa's red list status as well as ensuing crises in the country had a detrimental effect on the international MICE image of the destination, and subsequently hampered recovery efforts. Concurring with such assertions, one participant underlined:

I think the international market is probably going to be the one with the slowest recovery, because of all the travel bans. You know, our major markets are from the US, the UK, Europe, and a bit of Australia, and New Zealand. So if most of those markets are going to have travel bans to South Africa, so that affects us badly. It doesn't help that the PR around is around COVID, the South African variant, it doesn't help us either, that puts us on a big back foot. Because people don't say it's the C1235 variant, they actually say the South African variant, but there are 1000s other variants around the world. And now, all of a sudden, people are scared to come to South Africa. (P11)

This association of South Africa with the COVID-19 variant required the scientific community as well as the tourism industry stakeholders to contest this association. In addition to the variant, South Africa's destination image was also negatively affected by the Durban civil unrest in 2021, which undermined the efforts that were in place to change the global perception of South Africa, with one participant lamenting, *Unfortunately, the so-called SA variant … the recent unrest as well, those slowly put us at the at [i.e. on] the back foot of the work that we are doing for recovery* (P9). It is important to consider that this is against the backdrop of the continent's prolonged negative image and perception (Weru and Njoroge, 2021). Interestingly, MICE events are continuously used to favourably position destination images.

International air travel

Undoubtedly, the recovery of the MICE sector relied on the recommencement of international tourism. To a large extent, the participants concurred on the importance of this sector in the recovery of the MICE economy in the country, as well as in stimulating broader tourism recovery, as seen in the responses below:

I hope, because we want internationals to come to South Africa. I mean, even like business tourists. When internationals come to South Africa for business, they spend a lot of money. They spend in foreign currency, like euros and dollars, and they also, when they come to South Africa for business, they extended their trip for leisure as well. So I do feel that, if the borders are open and with international conferences, it will help in travel and tourism, and just the whole of Cape Town as a destination. It was really – it really helped our situation. (P6)

The study participants were of the view that access to the country constitutes one of the reasons for the delay in the resumption of international MICE event activity in the country. Importantly, many participants highlighted the effect of the pandemic on the aviation sector and the consequences to international tourism as well as the various border regulations in many countries during COVID-19. Referring to the latter, one participant reflected:

But it's more in terms of the governments internationally not allowing their travellers to travel. So, in the UK, at the moment, it's illegal to travel. You're not even allowed to travel within the UK and let alone to travel internationally until I think it's May or June [2021], sometime there, that you're allowed to travel. The reality is that, like coming out of Germany, for example, when you go back to Germany, you have to quarantine. Everywhere across Europe, when you go back from anywhere, you have to quarantine, and often that is at [the] people's own expense, so they're not going to travel right now. Yeah, not until international governments change the plans on [i.e. of] how we [are] 281 facing travelling as an entity. So, until that happens, you're not going to get any movement of people to any degree. (P17)

The findings presented align with previous studies that also found that international border restrictions have made travel complicated and demanding, thereby affecting tourism systems (Seraphin, 2021; Gössling and Schweiggart, 2022). The MICE sector operates in the global economy and relies on (eased) international travel. However, the past two years of COVID-19 were characterised by the emergence of variants and subsequent waves of infection (Gössling and Schweiggart, 2022; Santos et al., 2022). In many countries, including South Africa, this meant imposing more regulations on the travel and tourism sectors. This made the resumption and recovery of the MICE sector very complicated owing to the different regulations placed by different countries on international travel. As seen in the response above, many participants argued the need to move away from closing (or tightly regulating) international travel as an immediate response to the various COVID-19 waves. This is because while substantial uncertainty existed about the pandemic, MICE events require substantial planning times for delegates, more especially international delegates.

In addition, airline access was noted by many participants to be another factor affecting the recovery of international tourism. A representative of SAACI summed it up as:

And another thing, that's something that I think all of us experienced, depending on where you are located in the country, airline access has also become problematic. So, the fact that we, for a large extent, only have to fly Safair and now Airlink has tried to pop up wherever they can. Airlink is going to come back online, in [the] coming week’s time. I mean, our international routing has been something that the other countries has [i.e. have] experienced, so we’re not unique in our challenges. So, our approach has been that we need to drive local meetings, get people to meet locally. And that's why I mean, I sort of keep saying that hybrid is an option to do that. (P1)

Many international and national airlines ceased their operations during COVID-19 (Smith, 2021). Sun et al. (2021) elaborated that changes in travel demands, vulnerabilities in profit-driven airlines, and border control measures represented some of the challenges facing this sector. This impacted international MICE travellers adversely. Gradually, airlines are resuming their operations and flights to the country, however, the sector is now facing increased costs in air travel, which is in part due to the global economic situation. This emphasises the relationship between air transportation and tourism recovery.

Boosting confidence

Overwhelmingly, the study’s participants believed the recovery of the sector (particularly in-person events) could only truly begin with the distribution of COVID-19 vaccinations. This is supported by the following observation:

But I think that we are seeing now, there's going to be a few shows that are within the UK, for example. They're going to be doing a few UK marketing events from, I'd say, probably September, October time, again, when they feel that there's more of a group of people that have been vaccinated, and [who] will be happy to get together. (P11)

Studies such as Gössling et al. (2021) and Hall et al. (2020) opined that the administration of the vaccination represented a turning point for tourism during the pandemic. As such, many participants pinned their hopes for MICE recovery on the uptake of the vaccine in South Africa and other parts of the world. The underlying contention was that the vaccination would assist in restoring confidence in the tourism industry as well as boosting the confidence to travel. Such contentions are exemplified in the quotes presented below:

So, I think there is going to be more travel, but people need confidence, right? They just need to be confident that they can travel. So, that's where the vaccination programmes are so critical. (P18)

With the vaccinations, people will say if Africa gets 20 million people vaccinated, it will boost the confidence of people coming to South Africa, international travel in South Africa, etc. And I think those are the major things. I think the vaccinations, the travel restrictions, and the gathering restrictions, if those are lifted or done with, I think that will aid in the recovery. (P9)

The vaccination was opined to tackle the risk perceptions related to MICE events as well as lessen the complicated process of international travel. Largely, the participants believed the vaccination was crucial in boosting the confidence of the MICE demand to attend in-person events, which re-emphasised their continued assertions of MICE events as organised and safe spaces during the pandemic but the public perception of gatherings was a major setback for the recovery of the sector. As alluded to in the above quote, the attractiveness of a destination was further reliant on the rate of vaccinations in the country. Unfortunately, despite the role of vaccinations to return to normal (i.e., the ability to meet and interact in person), the study found a general hesitation concerning the vaccinations. WHO contended that the most effective way to manage the virus was through achieving herd immunity (Williams et al., 2021). This was met with several debates surrounding vaccinations, such as whether to make them mandatory. Some participants cautioned against such policy measures, with one drawing examples of civil disputes of such measures:

So, you can't make vaccination mandatory, because that's something that the country had not considered yet. But, in other parts of the world, I mean, I use the football example. But you can also research and check, and see some of the citizen marches and sort of, not necessarily unrest, but marches that took place from the anti-vaxxers, or the rest of the population. Because, should we have gone and visited France, and you wanted to go to a coffee shop, they'd have requested proof of vaccination. So on that part, definitely a policy change. (P17)

Indeed, the matter of making vaccinations mandatory gave rise to numerous debates globally (Gössling et al., 2021; Wang et al., 2021; Williams et al., 2021). Interestingly, some of the participants noted that the next step towards recovery was based on individuals’ willingness to be around large crowds. Taking a football match as an example, one participant responded:

I think it's a societal issue. We've been using the UK as an example. If you are a football fan, there was the Barclays Premier League, which is watched by many people around the globe, [and] you might have seen the Tottenham and

Manchester City game, in one of many other cases. But we've been using that is [i.e. as] an example. They had 6,000 people in the stadium now. You then have to ask yourself a question: as an individual, 'if I'm vaccinated, will I go to a game like that?' So, if you had the privilege of having a ticket to go to the game, a fully paid expense, if you are not from that country, would you go, not knowing if anybody else has been vaccinated in that stadium, for instance? (P17)

As such, there will continue to be hesitance amongst many individuals in attending any form of gathering. In responding to this, some participants stressed the importance of simply starting to travel, *So, it's about that restarting. Once you do that, it's easier to remember why you're doing it and get ... back to the habit of doing it* (P18). Nevertheless, the vaccinations played a large role in easing the restrictions on the MICE sector, as by early 2022, the government of South Africa had allowed for 50% capacity within MICE venues and by June of that same year, all restrictions were lifted.

Moreover, some participants acknowledged the importance of consistent marketing and communication during the crisis to assist in destination recovery. In terms of marketing, one participant mentioned the need for collaborative marketing within MICE tourism in South Africa:

So that's going to be a whole education and marketing awareness drive recovery. I think South African tourism would have to do because as a PCO, besides telling our clients and besides telling the delegates, it would have to be [done] on a much bigger, top-level scale than anything else. It's I think a lot of money is going to have to be pushed into marketing from a government point of view. (P3)

Drawing an example from Dubai, a representative of the destination marketing department within the SAT mentioned:

We asked: what makes us different? We went to the likes of WTM [World Travel Market]. We asked them, "Okay, help us understand [how] you pull ... off this." They said, "The reason we were even able to stage the show, it's because we had the backing of Dubai and the country. We had all our ducks in a row. Our messaging, since the pandemic started, has been out there to say, 'We are open, all you need to do meet our requirements', which is around vaccination. Come with a COVID test there [that] is negative, go on quarantine and if need be." So, it's the messaging has always been there. So, I think what most of the countries missed, was to remain top of mind about communication. And communicating where are we as far as the virus [goes]. (P18)

Crisis communication is essential in assisting destinations in combatting crises affecting their tourism industries as well as minimising (or avoiding) negative destination images and stereotypes (Hopkins, 2021; Neuburger and Egger, 2021). The current case study found that while there was some communication around the COVID-19 pandemic in the country and how it is being managed, the quote above alludes to a missed opportunity in maintaining destination image during the pandemic which would have assisted in fast-tracking recovery once the sector had reopened. Understandably, there are limits to how the sector can position itself within the global market (regarding minimising risk perceptions and boosting traveller confidence) owing to circumstances that are beyond the control of the sector.

CONCLUSION

The current study sought to explore the recovery process of the MICE sector with a focus on South Africa. The findings revealed that the lockdown measures employed to minimise the spread of the COVID-19 in most destinations led to a refocus on domestic and regional markets which had previously not been a strong priority. This refocus may require the repositioning, certainly in the case of the South African MICE destination image to these markets. Additionally, the study found that there would be differences in the recovery of MICE event typologies according to their specific functions and purpose. Similarly, the recovery of the markets served determined the recovery of different MICE businesses. As the restart of the MICE sector recovery depends on international tourism, factors such as airline connectivity and availability were found to be challenging in the reopening of international travel. The study found that some of the key priorities in sector recovery are related to the destination image (which has been adversely affected by numerous local events) and boosting travellers' confidence to attend MICE events in the country. This is further supported by the presence of South Africa in global MICE events to entice more MICE business to the country.

The study presents theoretical and managerial contributions to the event management field. With regard to theory, the study contributes to the scarcity of literature surrounding the event recovery process following a global crisis. For much of the pandemic, the events sector had arguably paused most of its operations, as large-scale events were largely restricted globally. As such, this is one of the few studies that examined the reopening and recovery of a niche events sector (MICE). More importantly, the focus on a developing nations' perspective was equally important owing to the importance of the sector to tourism and economic development, as well as the differences in which the pandemic was managed. The study thereby illustrates the emerging factors that affected MICE sector recovery, which to a varying extent, could comprise factors determining MICE tourism recovery of other destinations in similar contexts.

This study, therefore, advances the knowledge of the MICE sector in a developing nations context. Furthermore, the current study contributes to the ongoing research on resilience within the events sector. As such, the study can provide insight into the transition period of the MICE sector which could be valuable lessons for building and embedding MICE sector resilience, which is of importance to MICE event managers to ensure their business sustainability.

In this regard, the authors argue the lessons learned in recovering from the pandemic could assist in lessening the vulnerability of the sector to the next crisis.

It is important to note that a limitation of the study is its focus on five determinants of MICE event recovery.

This is ascribable to the period in which data were collected, as the five determinants presented emerged as important considerations at that time. The authors suggest future research be directed toward emerging determinants of recovery as all COVID-19 regulations have been removed. Specifically, a longitudinal study could provide valuable insight into the various phases of MICE sector recovery.

Author Contributions: Conceptualization, R.L and T.T.; methodology, R.L. and T.T.; software, R.L. validation, R.L; formal analysis, R.L. and T.T.; investigation, R.L. and T.T..; data curation, R.L.; writing - original draft preparation, R.L. and T.T.; writing - review and editing, R.L. and T.T.; visualization, R.L. and T.T.; supervision, T.T.; project administration, T.T. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study may be obtained on request from the corresponding author.

Acknowledgments: This paper is a component of a doctoral thesis completed at the University of Johannesburg, South Africa. The financial support of the University of Johannesburg is acknowledged.

Conflicts of Interest: The authors declare no conflict of interest.

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Article history: Received: 30.06.2023 Revised: 28.08.2023 Accepted: 15.09.2023 Available online: 29.09.2023

GeoJournal of Tourism and Geosites

Year XVI, no. 3, vol. 49, 2023

ISSN 2065-1198
E-ISSN 2065-0817