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CONTENTS

Ataul Karim PATWARY, Hamimi OMAR, Shaharuddin TAHIR The Impact of Perceived Environmental Responsibility on Tourists' Intention to Visit Green Hotel: The Mediating Role Of Attitude DOI 10.30892/gtg.34101-612	9
MARLINA, SUMARMI, I Komang ASTINA, Singgih SUSILO Social-Economic Adaptation Strategies of Bajo Mola Fishers in Wakatobi National Park DOI 10.30892/gtg.34102-613	14
Sayed Mohibul HOSSEN, Mohd Tahir ISMAIL, Mosab I. TABASH The Impact of Seasonality in Temperature Forecast on Tourist Arrivals In Bangladesh: An Empirical Evidence DOI 10.30892/gtg.34103-614	20
Tshepiso Jonathan SETOKOE Community-Based Tourism: A Panacea for Community Development in Nqileni Village, Eastern Cape, South Africa DOI 10.30892/gtg.34104-615	28
Asima G. KOSHIM, Aigul M. SERGEYEVA, Kuat T. SAPAROV, Sveta K. BERDIBAYEVA Aizhan A. ASSYLBEKOVA Underground Mosques of Mangystau as the Objects of Religious Tourism DOI 10.30892/gtg.34105-616	33
MARWANTI, Siti HAMIDAH, Ezra Chica'al SANDYA Cooked Rice Innovation to Increase the Tourism Attraction of Pindul Cave DOI 10.30892/gtg.34106-617	42
Mohammad Badruzzaman BHUIYAN, Md. Aminul ISLAM, Md. Ziaul HAQUE, Chhanda BISWAS Moderating Effect of Technology Readiness on Adoption of Geotagging Technology Among Social Networking Sites (Snss) Users for Smart Tourism DOI 10.30892/gtg.34107-618	47
Anastasiia R. HRYNASIUK, Oksana V. NOVOSAD, Leonid V. ILYIN, Olga V. ILYINA, Iryna V. IERKO Attractiveness of Landscapes of Volyn Region (Ukraine): Theory and Practice of Evaluation DOI 10.30892/gtg.34108-619	56
Kholil Lur ROCHMAN, MISNO, Zahid MUBAROK, BUNYAMIN, BAHKUDIN Ngahuma (Planting Rice in the Fields) and Tilled Land Limitation of the Baduy Tribe in Indonesia DOI 10.30892/gtg.34109-620	63
Bakhyt AKTYMBAYEVA, Umyt KOSHKIMBAYEVA, Zarema ABISHEVA, Ulzhalgas TOKBERGENOVA, Markhaba TUMAZHANOVA Tourism Industry Development and Governance: A Comparative Stage Review of Kazakhstan's Experience for the Years of Independence, 1991-2020 DOI 10.30892/gtg.34110-621	69
Denis S. USHAKOV, Dmitriy N. KISELEV, Alexandr V. ZEZYULKO, Tatyana V. IMANGULOVA, Gulbaram A. KULAKHMETOVA, Raushan A. KULAKHMETOVA Organization of Network Basis for Transnational Tourism Activity DOI 10.30892/gtg.34111-622	77
Shirley Kha-Sien CHIA, May-Chiun LO, Zaidi Bin RAZAK, Yin Chai WANG, Abang Azlan MOHAMAD Impact of Destination Image on Tourist Satisfaction: The Moderating Effect of Information Technology (It) DOI 10.30892/gtg.34112-623	88
Rahmawati RAHMAWATI, Kiki OKTORA, Sri Langgeng RATNASARI, Ramadania RAMADANIA, Dio Caesar DARMA Is it True that Lombok Deserves to be a Halal Tourist Destination in the World? A Perception of Domestic Tourists DOI 10.30892/gtg.34113-624	94

Saida NIGMATOVA, Aizhan ZHAMANGARA, Bolat BAYSHASHOV, Nurganym ABUBAKIROVA, Shahizada AKMAGAMBET, Zharas BERDENOV Canyons of the Charyn River (South-East Kazakhstan): Geological History and Geotourism DOI 10.30892/gtg.34114-625	102
Amal KELFAOUI, Mohamed A. REZZAZ, Louardi KHERROUR Revitalization of Mountain Rural Tourism as a Tool for Sustainable Local Development in Kabylie (Algeria). The Case of Vakouren Municipality DOI 10.30892/gtg.34115-626	112
Maciej TARKOWSKI, Marcin POŁOM, Krystian PUZDRAKIEWICZ Bridging Tourist Attractions. The Role of Waterbuses in Urban Tourism Development: The Case of the Coastal City of Gdańsk (Poland) DOI 10.30892/gtg.34116-627	126
Achmad RIZAL, Izza M. APRILIANI, Rega PERMANA Social Morphology of Poverty in Tourism Area: A Thick Description Study in Parakansalak Village Of Sukabumi, West Java, Indonesia DOI 10.30892/gtg.34117-628	132
Diana Teodora TRIP, Carmen Florina FAGADAR, Daniel BADULESCU, Alina BADULESCU Entrepreneurship and Tourism Through the Lens of Sustainability. Charting the Knowledge Base Through Bibliometric Analysis DOI 10.30892/gtg.34118-629	140
Vasilisa GOROCHNAYA, Andrey MIKHAYLOV, Angelina PLOTNIKOVA, Anna MIKHAYLOVA The Interdependence Between Tourism and Innovation Activity in the Western Borderlands of Russia DOI 10.30892/gtg.34119-630	147
Mohamad Sapari Dwi HADIAN, Bombom Rachmat SUGANDA, Ute Lies Siti KHADIJAH, Rully Khairul ANWAR River Development as a Sustainable Geo-Tourism with a Participatory Stakeholder Approach DOI 10.30892/gtg.34120-631	155
Natapon ANUSORNTHARANGKUL, Yanin RUGWONGWAN Using Inquiry-Based Learning to Explore Respect of Cultural Base Design: A Case Study in Amphawa Tourism Community, Thailand DOI 10.30892/gtg.34121-632	164
Inna NESTERCHUK, Anna OSIPCHUK, Eduard BONDARENKO, Oksana TRUSIJ, Valentyna IVANENKO, Lyudmyla CHYZHEVSKA Reloading of Gastronomy Tours in the Conditions of Using the Right-Bank Polissia Gastronomy Potential DOI 10.30892/gtg.34122-633	170
Janice HEMMONSBHEY, Tembi M. TICHAAWA Stakeholder and Visitor Reflections of Sport Brand Positioning in South Africa DOI 10.30892/gtg.34123-634	177
Wenti Ayu SUNARJO, Vigory Gloriman MANALU, Wiwiek Rabiatal ADAWIYAH Nurturing Consumers' Green Purchase Intention on Natural Dyes Batik During Craft Shopping Tour in the Batik City of Pekalongan Indonesia DOI 10.30892/gtg.34124-635	186
Owais B. AL-GHARAIBEH, Ahmad Azmi M. ARIFFIN The Influence of Brand Attitude on Behavioral Intention in the Context of National Carrier's Service Failure DOI 10.30892/gtg.34125-636	193
Nikolett DROTÁR, Gábor KOZMA New Tendencies in Wine Tourism in Tokaj Wine Region (Hungary): The Decreasing Role of Tokaji Aszú as a Dominant Brand DOI 10.30892/gtg.34126-637	197
Anh Tuan PHAM, The Kien NGUYEN, Van Anh VU, Canh Huy PHAM, Trung Thanh LE, Thi Van Anh LE, Thi Hong Nhung NGUYEN, Khac Lich HOANG How Green Performance Stimulates Tourist Loyalty? Examining the Role of Relationship Quality in Vietnam DOI 10.30892/gtg.34127-638	202

Khođani MATSHUSA, Peta THOMAS, Llewellyn LEONARD A Methodology for Examining Geotourism Potential at the Kruger National Park, South Africa DOI 10.30892/gtg.34128-639	209
Totok Wahyu WIBOWO, Sigit Heru Murti Budi SANTOSA, Bowo SUSILO, Taufik Hery PURWANTO Revealing Tourist Hotspots in Yogyakarta City Based on Social Media Data Clustering DOI 10.30892/gtg.34129-640	218
Aneta MAREK, Anna WIŚNIEWSKA Culinary Tourism in Lower Silesia (Poland) in 2014-2017 DOI 10.30892/gtg.34130-641	226
Viktória SZENTE, Peter Onyonje OSIAKO, Mónika Zita NAGY, Attila PINTÉR, Orsolya SZIGETI Community Based Ecotourism in Hungary: Citizens' Perceptions Towards the Roma Community DOI 10.30892/gtg.34131-642	233
Asep MIFTAHUDDIN, Bambang HERMANTO, Sam'un Jaja RAHARJA, Arianis CHAN City Branding and its Variables: The Evidence from Indonesia DOI 10.30892/gtg.34132-643	240
Bence ZÁVODI, Géza SZABÓ, Levente B. ALPEK Survey of the Consumer Attitude of Tourists Visiting South Transdanubia, Hungary DOI 10.30892/gtg.34133-644	245
Guldana MINZHANOVA, Liudmila PAVLICHENKO, Sholpan KARBAYEVA, Lalita BIMAGAMBETOVA, Olesia RAZDOBUDKO The Green Space and Social Impact in Almaty City: A Cross-Sectional Data Analysis DOI 10.30892/gtg.34134-645	251
Daniela MATEI, Viorel CHIRIȚĂ, Maria Magdalena LUPCHIAN Governance and Tourism Resilience during the Covid19 Crisis. Case Study Bukovina, Romania DOI 10.30892/gtg.34135-646	256

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THE IMPACT OF PERCEIVED ENVIRONMENTAL RESPONSIBILITY ON TOURISTS' INTENTION TO VISIT GREEN HOTEL: THE MEDIATING ROLE OF ATTITUDE

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Abstract: Although the hospitality and tourism industries contribute considerably to every country's economy, at the same time, it has negative effects on the climate. Hotel industry operations consume enormous amounts of energy which eventually contribute to environmental degradation. Hotel operations do not only cause environmental issues, but customers also play a significant role in creating these issues. Scholars, mainly in this field, have investigated the causes of environmental degradation from the perspective of hotel operations rather than customers. Therefore, this study aims to examine the influence of perceived environmental responsibility on tourists' attitude and intention to visit green hotels in Malaysia. It further examined the mediating role of attitude in between perceived environmental responsibility and intention. The study used a quantitative research design and interviewed 393 international tourists in Malaysia using systematic random sampling. For analysis techniques, the study used Structural Equation Modelling by PLS-SEM. The study found that consumers' perceived environmental responsibility influences significantly on tourists' attitude and intention. It also revealed that consumers' attitude mediates the in-between perceived environmental responsibility and intention to visit green hotels in Malaysia.

Key words: perceived environmental responsibility, attitude, intention, green hotels, tourism, Malaysia

* * * * *

INTRODUCTION

Green practices in hotel refer to the adoption of the green system to operate the hotel operations that generally reduce the extra use of water and energy, more use of non-durable products, reduce unhealthy gas emission, water, oil and soil pollution (Lee et al., 2010). In recent years, several hotels have adopted the green practices for operating their business, as well as protecting the environment (Chandran and Bhattacharya, 2019; Wan et al., 2017; Rahman et al., 2012; Miao and Wei, 2016).

Many companies are motivated to invest in new environmental-friendly service and marketing strategies as the market's environmental consciousness is increasing rapidly (Chen and Chai, 2010). In the hotel industry, becoming green hotel is an underlying precondition to retain pro-environmental consumers who are more likely to buy and willing to pay for environmentally friendly lodging products (Chen and Tung, 2014; Han, 2015). Hotel industry ought to introduce environmentally sustainable accommodation by implementing green management techniques, eco-friendly standards and conservation practices to prevent adverse environmental effects (Han, 2015). If hotel managers pick and purchase a lodging-related commodity that represents the green needs of customers, they are responsible for implementing green strategies (Han and Kim, 2010). For instance, hoteliers should also consume a significant quantity of water, energy and disposable products that do not affect the environment (Han et al., 2010). While negative effects on the environment are evident in the hotel industry, the attitude of consumers towards green products remains unclear (Bohdanowicz et al., 2011). Environmentally friendly hotels aim to build green systemic changes that considerably decrease adverse environmental effects (Rahman and Reynolds, 2016; Lee et al., 2010).

It is achieved by the rigorous implementation of creative and successful Green practices such as solid waste reduction, energy and water conservation, and the recycling of all goods for the benefit of the environment (Greco et al., 2018; Han et al., 2010; Ham and Han, 2013). This study explores the effect on the attitude and intention of tourists to visit green hotels in Malaysia of their perceived environmental duty. It also explored the mediating role of attitude between environmental perceptions and intention to visit green hotels in Malaysia.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Intention

Behavioural intention refers to desire, ability or chance to do something (Ajzen, 1991), such as offering positive/negative advice, charging a premium, buying back or switching to another brand (Zeithaml et al., 1996). The behavioural intention identified by Warshaw and Davis (1985) is an intention of the person to perform a particular action or not. The goal of the present study is to explore consumers' intention to visit the green hotel. The previous research demonstrated that people are more likely to spend more money on the green hotel when they participate in a positive mouth-of-mouth activity (Han et al., 2009). Several studies (Chen and Peng, 2012; Lee et al., 2010) have found that customer attitudes towards positive green behaviour are a significant predictor of staying at a green hotel. The choice of customers to live in a green hotel is strongly affected by their perception of environmental effects and environmental responsibility (Han et al., 2010).

Attitude

Attitude has been the first component for measuring the intention of behaviour. Ajzen (1991) states that the attitude is "the degree to which a person has a favourable or unfavourable assessment or assessment of the behaviour" (p. 188). Attitude is the human tendency either

* Corresponding author

positively or negatively towards something (Ajzen, 1991). Therefore, the green hotel sector is more likely to increase favourable attitudes towards green hotels (Han, 2015). Thus, through different media, constructive effects are produced that can lead to a positive attitude. Hoteliers should, for instance, support green campaigns that lead towards long-term green consumption (Han et al., 2010). The Green Campaign eventually raises consumers' environmental consciousness, which encourages customers to take more social responsibility and prefer green hotels in the future. Jauhari and Manaktola (2007) for example, stated that when tourism enterprises have implemented their green practices, they have increased the consumer's attitude towards the green hotel or their intention for a green hotel (Jauhari and Manaktola, 2007).

Perceived Environmental Responsibility

Sense of responsibility means that one's own life integrates meaning and expectations of self-categorization into a set of standards of identity (Stets and Burke, 2000). Because of an individual's reflection on social interactions, perceptions and systems of society and community, the environmental obligation is socially formed and expressed (Gill, 2012; Islam and Patwary, 2013). Over the years, consumers acquired knowledge and understanding of environmental problems (Lee, 2008). Some people may nevertheless take part in such activities or actions as a symbolic feature to establish a reputation or even to establish an appearance to others or to obtain an identity at the adolescent stage of life (Hormuth, 1999). Since pro-environmental behaviour is a special kind of altruistic act, in which a person establishes self-identity or introduces itself to others in society (Hopper and Nielsen, 1991; Lee, 2008). An individual is free from harm when he/she takes responsibility for the environment (Babcock, 2009). However, several environmental responsibility research in the seventies and eighties were performed (Follows and Jobber, 2000). They expressed concern that during that time, the assessment of the environmental effect of a product focussed primarily on behaviours of non-consumption such as energy conservation and political activism.

Based on the discussions above, this study proposed the hypotheses:

H1: "Attitude positively influences consumers' intention to visit green hotels in Malaysia."

H2: "Perceived Environmental Responsibility positively influences consumers' attitude towards green hotels in Malaysia."

H3: "Perceived Environmental Responsibility positively influences consumers' intention to visit green hotels in Malaysia."

H4: "Attitude mediates the relationship between attitudes and consumers' intention to visit green hotels in Malaysia."

METHODOLOGY

The research implemented a quantitative research method to analyze the effect of perceived environmental responsibility on tourists' attitude. Systemic random sampling was used in this research, as the survey was conducted in several tourist spots in Malaysia. International tourists in Malaysia were the target respondents of this research. The study sample is 393, and the entire response from Malaysia. A Likert scale of one to seven points (Strongly Disagree to Strongly Agree) has been used to measure questions. The research used data analysis software Smart-PLS version 3 and SPSS 24. For measuring perceived environmental responsibility, five items were adopted from Paço and Rodrigues, (2016); Manzo and Weinstein, (1987). For attitude, eleven items were adapted from Han et al. (2010) and Chen (2014). For measuring intention, four items adapted from Han et al. (2010) and Chen (2011).

RESULTS

Demographic Information of the Respondents

For demographic distribution of the respondents, they are sorted in terms of gender, age group, marital status, and occupation. Distribution of gender among respondents is almost the same as male 194 (50.9%) and female 187 (49.1%). In the age group, majority of the respondents are 28-32 years old (22.6%), followed by 43-47 years (20.1%), 33-37 years (18.8%), 23-27 years (15.3%), 38-42 years (8.4%), 53 years and above (4.8%) and 18-22 years (3.6%). In terms of marital status, 69% of the respondents are married, 106(27%) are single, 12 (3.1%) are widows, and 4 (1%) are divorced. For occupation, more than half of the respondents are working in government sector (55.7%), followed by private sector (30.5%), students (5.9%), self-employed (5.6%), housewife (1.8%) and unemployed (0.5%).

Assessment of Measurement Model

In the measurement model of the study, the outer loadings are good enough to fit into the construct (Table 1 and Figure 2). Outer loadings of the study for attitude are ranged from 0.727 to 0.854. For intention, loadings are ranged from 0.816 to 0.900. For perceived environmental responsibility, the outer loadings ranged from 0.744 to 0.913.

Table 1. Construct Validity and Reliability

Construct/ Associated Terms	Loading	Composite Reliability	Average Value Extracted
Attitude			
ATT1	0.842	0.946	0.639
ATT10	0.741		
ATT2	0.802		
ATT3	0.773		
ATT4	0.820		
ATT5	0.832		
ATT6	0.766		
ATT7	0.854		
ATT8	0.824		
ATT9	0.727		
Intention			
INT1	0.878	0.918	0.738
INT2	0.900		
INT3	0.816		
INT4	0.839		
Perceived Environmental Responsibility			
PER1	0.851	0.937	0.750
PER2	0.908		
PER3	0.901		
PER4	0.913		
PER5	0.744		

As shown in Table 1, Average Value Extracted for three variables shown in acceptable range as it is 0.639, 0.738 and 0.750 for attitude, intention, perceived environmental responsibility, respectively.

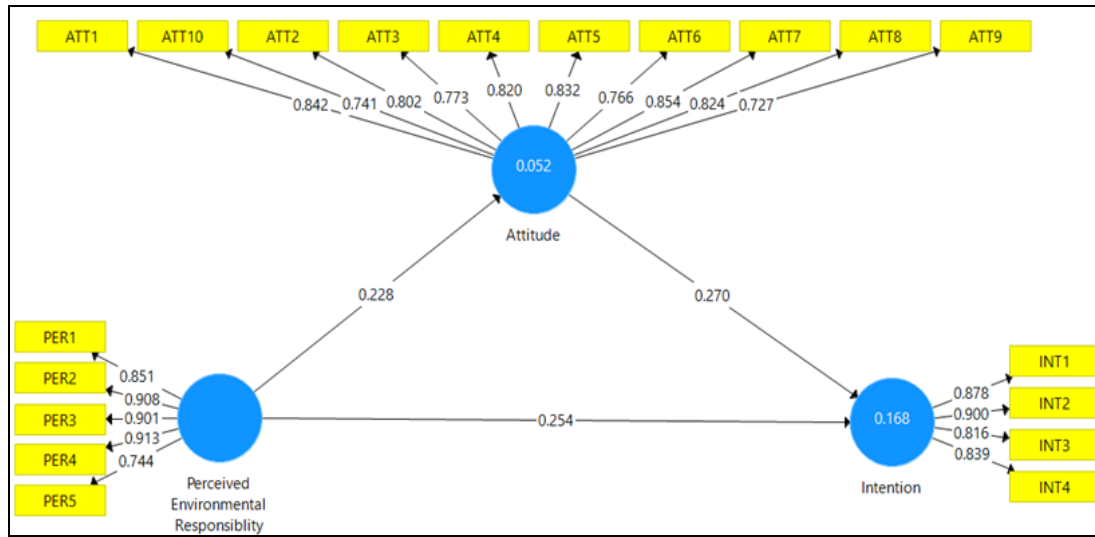


Figure 1. Measurement model of the study

The degree to which each latent variable is different from other models in the sample is discriminant validity (Hair et al., 2014; Patwary et al., 2020; Kamarudin et al., 2020). Two techniques, which are Heterotrait-Monotrait-Ratio (HTMT) and Fornell Larcker Criteria, were used to explain the discriminant validity.

Table 2. Discriminant validity Heterotrait-Monotrait Ratio (HTMT)

	Attitude	Intention	Perceived Environmental Responsibility
Attitude			
Intention	0.354		
Perceived Environmental Responsibility	0.237	0.337	

Table 3. Discriminant validity Fornell-Larcker Criterion

	Attitude	Intention	Perceived Environmental Responsibility
Attitude	0.799		
Intention	0.328	0.859	
Perceived Environmental Responsibility	0.228	0.315	0.866

Henseler et al., (2015) indicated that HTMT 0.85 and 0.9 standards for discriminatory validity should be identified. This research uses the more restrictive HTMT to test the legitimacy of discrimination. Tables 4 and 5 illustrate, in accordance with the Fornell Larcker criterion and the HTMT ratio, the results of the discriminating validity assessment and show that the model has justifiable discriminant validity.

In Table 4, Variance Inflation Factors is considered for testing the collinearity statistics. The highest collinearity counts for the overall model is 3.694, which is also acceptable. Other than that, all items in the study conceded very low collinearity which is good for model fitness.

Table 4. Collinearity Statistics (VIF)

Outer VIF Values	VIF
ATT1	3.618
ATT10	2.289
ATT2	2.973
ATT3	2.570
ATT4	2.861
ATT5	2.735
ATT6	2.416
ATT7	3.223
ATT8	2.770
ATT9	1.986
INT1	2.450
INT2	2.792
INT3	1.973
INT4	2.142
PER1	2.705
PER2	3.694
PER3	3.680
PER4	3.518
PER5	1.784

Assessment of Structural Model

The diagram in figure 3 is shown to demonstrate the structural model of the study. T-values of the model are showing high efficiency in the construct. The influence of the independent variable to the dependent variable is positively significant.

The bootstrapping method was performed in Smart PLS 3 to find the direct effects among the variables. The direct relationship of this study standardized into three, which are the influence of attitude on intention, the influence of perceived environmental responsibility on consumers' attitude, and the influence of perceived environmental responsibility on consumers' intention. The also posed an indirect relationship which is the mediating role of attitude in between attitudes and consumers' intention.

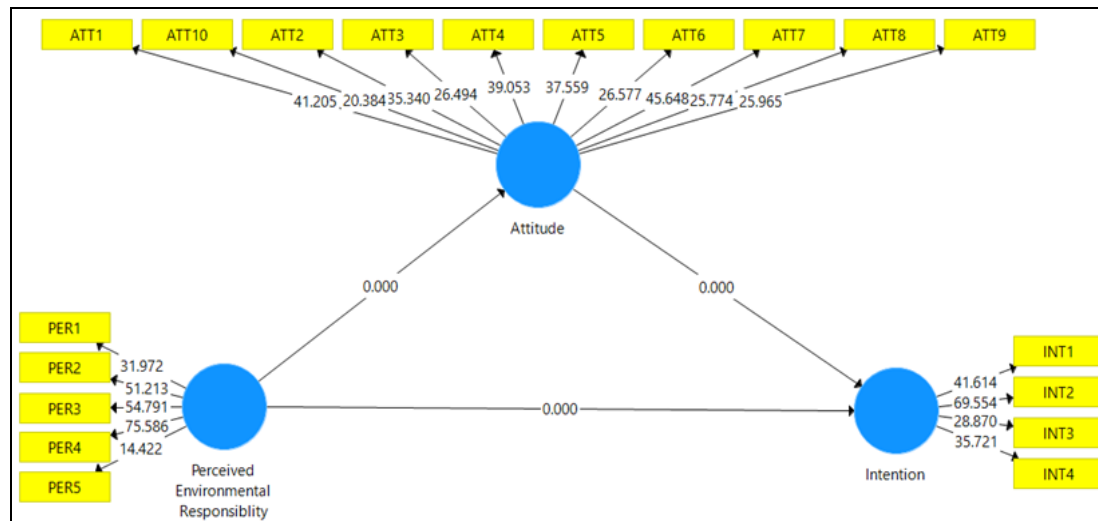


Figure 2. Structural Model of the Study

As shown in Table 5, attitude (T value= 5.311, p value= 0.000), and perceived environmental responsibility (T value= 4.328, p value= 0.000) have significant relationship with intention. Besides, Perceived Environmental Responsibility also has significant relationship with attitude (T value= 4.253, p value= 0.000).

Table 5. The direct and indirect effects of the study

Hypothesis	Relationship	Path Coefficient	t Value	P values	Supported
H1	Attitude -> Intention	0.270	5.311	0.000	✓
H2	Perceived Environmental Responsibility -> Attitude	0.228	4.253	0.000	✓
H3	Perceived Environmental Responsibility -> Intention	0.254	4.328	0.000	✓
H4	Perceived Environmental Responsibility -> Attitude -> Intention	0.061	3.165	0.002	✓

Table 5 also shows the results of the mediating effects of the study as this study considers attitude as a mediating variable between perceived environmental responsibility and intention. As shown in table 5, attitude plays a significant mediating role between perceived environmental responsibility and intention (T value= 3.165, p value=0.002).

DISCUSSION

The results of this study show that the relationship between consumer environmental perception and visiting green hotels is statistically significant. This indicates that the attitude in visiting green hotels in Malaysia has more impact on the environment. There are several studies supporting hypothesis findings (Lee, 2012; Johri and Sahasakmontri, 1998; Alom et al., 2019; Hassan et al., 2020).

The result also shows that consumers mediate the link between perceived environmental responsibility and tourists' behavioural intent in considering green practices in the Malaysian hotel industry. According to the theory, Kim (2011) pointed out that consumers with a high degree of environmental awareness should result in a positive disposition towards the environment, which would also be focused on buying goods which are deemed environmentally friendly. TPB and an extension TRA assert that the purchase intention of a person depends on his actions, and several others (Ajzen and Fishbein, 1980; Fishbein and Ajzen 1975). The hypothesis results show that attitude influences the behaviour of tourists concerning green practices in the Malaysian hotel industry in a significant way.

This finding is supported by Polonsky et al. (2012). According to TPB tenets, behavioural motives are known as the immediate precursor of behaviours (Ajzen and Fishbein, 1980), while convictions act as an immediate precursor (Ajzen, 1991).

CONCLUSION

An environmentally sustainable perception could lead to a positive attitude towards visits to green hotels. It was statistically achieved that the efforts of marketers towards adhering to offering useful information and environmental consciousness lead to formation of a favorable attitude among the consumers which further motivates them to consider these aspects by exerting a positive significant influence on their behavioral intention by taking into consideration the environmental aspects. It implies that managers must be putting in all efforts towards maintaining environmental protection across their marketing activities in order to ensure that consumers find their green products appropriate and fit starting from their initial assessment of products at the attitude formation stage to the intention development stage when consumers are planning to buy, and during the stage when consumers actually act upon.

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SOCIAL-ECONOMIC ADAPTATION STRATEGIES OF BAJO MOLA FISHERS IN WAKATOBI NATIONAL PARK

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Abstract: Considering the fulfillment of coastal communities' needs and welfare must be prioritized by the Wakatobi National Park management. The study aimed to describe the social adaptation of Bajo Mola community in the Wakatobi National area. The research method used descriptive qualitative with data collection through observation, in-depth interviews, documentation and literature review and analysed using triangulation models. The results showed Bajo Mola is one of the communities that lives depend on the sea. The total number of Bajo Mola fishers is 3,358 of 8,048 total people (41.72%). Based statistics data certain impacts on marine conservation, but the Wakatobi National Park area also has impacts on the socio-economic growth of the community. That Bajo Mola community interpreted the sea as a source of life. Since the regional autonomy formed on Wakatobi Regency and appointed as the Wakatobi National Park, the management has encouraged the community to be more creative using the marine resources. Even though traditional fisherman was still developing until now, the businessmen with the aquaculture innovations have supported the community to get the maximum profit. The strategy used was by processing dried fish, grouper farming, and having loing technology. Farming activities and loing technology have a positive impact on the Bajo community by facilitating fishers to sell their catch. Also, marketing access directs to be more extensive in foreign countries.

Key words: socio-economic adaptation, Bajo Mola, Wakatobi National Park

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INTRODUCTION

Humans can exploit natural potential in various ways to support the socio-economic welfare of the community. Economic activities by humans can form patterns of adaptation even to the coastal environment. The United Nations estimates that more than 600 million people (10%) of the world's population live in coastal areas and 2.4 billion people (40%) live within 100 km of the coast (United Nations, 2017). Coastal populations also depend on fishing at sea and harvesting land products for food needs, in cooperation with groups from the land, and that archipelago state consumes fish more than the public in general (Cisneros-Montemayor et al., 2016). Numbers showed the high dependence of the community on marine products that cause people to try to adapt for survival. According to Geertz (1981:42), the community dependence on sea products provides a distinct identity for coastal communities with certain lifestyles known as coastal culture communities. People as cultured beings in which culture is formed from the results of human creations, works and initiative. One of the main factors that form culture is the natural factor, the situation and condition of the natural environment indirectly shape the character of the people's personality, ecological intelligence, culture and traditions. Bakker revealed (1984:22) that culture is the creation, control and processing of human values of "man humanizes Himself in humanizing the world around him". The statement means the way humans use natural products or the environment, such as the physical environment and social environment, then developed so that it can obtain higher profits. Conducting conservation activities on nature and interacting perfectly between human beings as an integrated element (Moeis, 2008).

A culture that is formed physically by nature begins when humans settle in a place, so then created a group of people called a farming community and a fishing community (Koentjaraningrat, 1990). Common farming communities stayed in rural areas, while fishing communities stayed in coastal areas. In further developments, life was increasingly becoming more complex and diverse, and with many people discovered kinds of material and life support tools and their relationships with various other societies (Moeis, 2008).

Many Indonesian people live in the coastal community. Becoming a coastal community does not set automatically, but there is a potential that can be explored and used by individuals. The use of coast and sea is quite diverse, such as fish farming and other tourism potentials. Many areas can implement tourism based on the marine potential to encourage blue economy, including the empowerment of the Klatak Beach community by three fisher groups: Mina Klatak, Rayap Pereng, and Pereng Mania. The policies of fishermen groups and the Tulungagung Regency government have supported the creation of a blue economy (Sumarmi et al., 2020).

One of the tribes who use as a coastal community and known as the sea gipsy is the Bajo community. The Bajo people adapt to their environment in unusual ways of looking at the coast and the sea. Bajo people interpret the sea not only as a place to live and make a living but also as a place for their ancestor's spirits. Bajo people have a unique maritime culture system, which if traced, studied and developed can be adapted to the management of marine and marine resources (Wani and Ariana, 2018; Bennet, 2019). The interrelated relationship between the Bajo and the sea illustrates the ecological adaptation of the community in the management of the National Park area. The assumption that a sea is a place where their brothers create functional and emotional relations to the sea is as the functional

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relationship that is shown by the way the Bajo people understand the concept of sustainability for marine conservation. Bajo people consider the idea of sustainability by believing in God and have encouraged their self-conscious behaviour to manage existing resources. Another study finds that the Bajo tribe has a good arrangement in capturing the location of fishing area based on group behaviour (Bahtiar, 2012). The sustainability of the Bajo tribe in protecting marine resources is supported by regulating fishing time and the use of traditional boats called "Leppa or Sopek" (Artanto, 2017). Portraits of Bajo life were found on the coast of the Wakatobi archipelago, with the most community being on the coast of the fragrant island better known as the Bajo Mola community. The Bajo Mola community currently stands at 7,035 (BPS, 2019). A large number of residents can see the great potential of marine and fisheries so that it can have an impact on resource exploitation. The emergence of various cases that have not yet been resolved was destructive, illegal fishing, sand mining, visitors, fishing businesses, ineffective management of tourism, overexploitation of resources and technical problems such as government policies in conservation (Dirhamsyah, 2016; Sopari et al., 2014; Khasanah et al., 2019; Lewin et al., 2019).

Staying at Wakatobi National Park area with a large number of natural resources makes Bajo Mola people are required to participate in conserving the area. As an area with abundant natural resource potential, the preservation of the Wakatobi National Park needs to be done immediately. According to Turak (2003), quoted in Firmansyah et al., (2016) the potential has been exploited as a world biosphere reserve. Wakatobi is a biodiversity hotspot that has a function as a supplier of larvae for fish resources (SDI) and marine biodiversity (KHL). Also, to protect the area, it was appointed as a National Park and biosphere reserve in Indonesia (UNESCO, 2012). The establishment and zoning system certainly can have an impact on the economic activities of the community. The study needs to assess the socio-economic impact and community adaptation strategies to the selection of TNW.

METHOD

The study used descriptive qualitative methods with data collection techniques through observation, in-depth interviews, documentation and literature review. The study was conducted on the Bajo Mola community in Wakatobi Regency, Indonesia. The data were obtained from Bajo Mola fishers and local government. Data analysis was completed with a triangulation model to study the socio-economic adaptation strategy of the Bajo Mola community in the Wakatobi National Park area. To collect data, researchers interacted with informants or participants then reported the observation. The data analysis was obtained through the informants' answers based on the research focus. A qualitative researcher must analyze data from the beginning and avoid accumulating or collecting everything (Fatchan, 2015). Furthermore, the data analyzed based on observation, in-depth interviews, and documentation. The data analysis was used interactive data analysis by Miles and Huberman (1994) quoted in Moleong (2016), which is data reduction, data presentation, and conclusion. The research location can be seen in the following Figure 1. The research location can be seen in the following Figure 1.

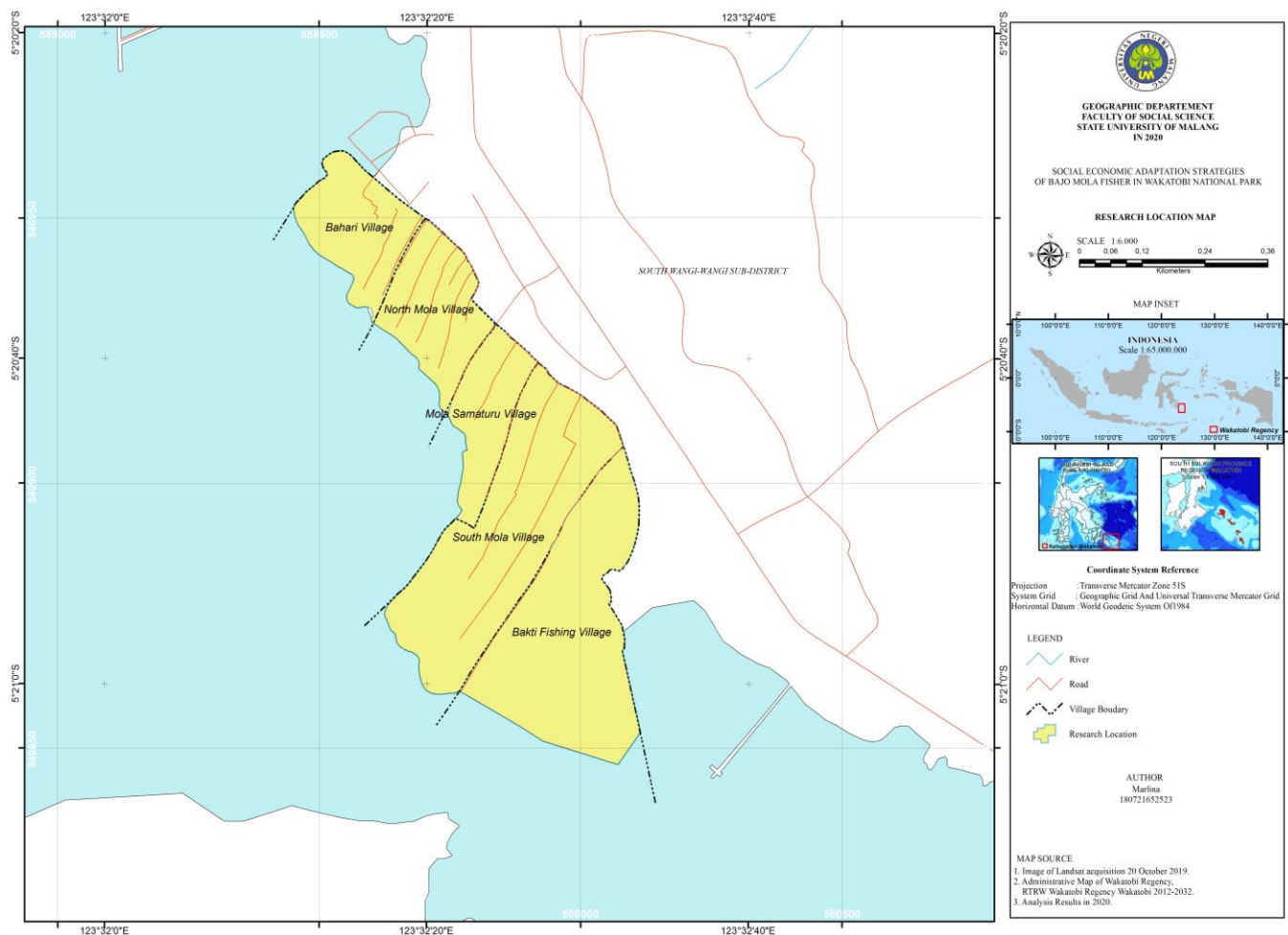


Figure 1. Location of Bajo Mola village, Wakatobi regency (Source: Map by Results of the research)

RESULTS AND DISCUSSION

Bajo Mola community in Wakatobi Regency are divided into 5 villages that are Bakti Fishing village, South Mola village, Mola Samaturu village, North Mola village and Mola Bahari village. The five villages are better known as Mola village or Bajo village in the

South Wangi-Wangi sub-district area. Based on the map (Figure 1) Mola village is an area on the coast of $\pm 8.3 \text{ Km}^2$ with the following boundaries; (1) the north side is bordered by the sea, (2) the east is bordered by Mandati III village, (3) the south is bordered by the sea and (4) the west is bordered by the Otowwe Island strait.

Physically Bajo Mola village is located on the coast of Mandati as reclamation area. The reclamation comes from a pile of rocks collected by residents through coral mining. This sea reclamation was carried out since the 1970s which resulted in reclamation, then made "land" and constructed residential area. Because of it, the Mola village area has an evenly distributed topography throughout the region of around 1-2 meters above sea level, which is relatively flat (between 0% - 5%). Climatology Conditions Mola Village is divided into two seasons that are the dry season (East season) which runs between April - August and the rainy reason (West season) which lasts from September to April with a daily temperature of $19^{\circ}\text{-}34^{\circ}\text{C}$ (BMKG, 2020). As bio-ecologically, the waters of the Mola consist of several important ecosystems, such as seagrass and coral reefs, as well as various types of marine life such as *baronang* fish, crabs, sea cucumbers, shellfish and other small fish. Recent data showed the rapid growth of Bajo people in Mola village so that it is proposed to become a new sub-district on Wangi-Wangi Island. Bajo Mola people have experienced many changes in their lifestyle, livelihood and rituals. Though The Bajo Mola area was divided into 5 villages, it does not reduce the uniqueness, characteristics, and culture and uniqueness of the Bajo people in each area. The division is only an attempt by the government to facilitate administration.

A. The economic conditions of the Bajo Mola community

Human life cannot be separated from its environment. It is because environmental factors have a major influence on human life. Deterministic adaptation explains how nature greatly influences humans who are very dependent on nature (Marlina et al., 2020). One example of deterministic adaptation is illustrated by the life of the Bajo Mola community in Wakatobi Regency, which is portrayed in the socio-economic aspect. Based result of research from the socio-economic point of view, the adaptation pattern of Bajo Mola people is shown by the dominance of 98% working as fishers. It is the only choice for Bajo people as fishing is a natural skill so that fishers are automatically the primary profession for Bajo people. For Bajo people working as fishers was begun since they were children so that the profession is gained from the experience of going to sea early on from their parents. The results of interviews with some fishing communities said that being a fisherman has a fairly economic impact, and the community's income is quite high. It is aligned with the data of 2019, showed a total of 3,358 people working as fishers (BPS, 2020). Mola village is a village based on maritime activities and fisheries. Most of Mola villager was working as fishers. The village was strived to be more advanced to improve the standard of living of the community. Therefore, it could impacts on the welfare of the population both facilities and infrastructure. Working as a fisherman is not only carried out by men, but some women often accompany and help their husband's work such as crafting, archery and providing fishing equipment and helping to find the bait. The types of occupation of the Bajo Mola community was shown in the following Table 1.

Table 1. The types of occupation of the livelihoods of the Bajo Mola Community (Source: Profile of 5 Bajo Mola villages, 2020)

No	Occupation	Village					Total	%
		Mola Selatan	Mola Utara	Mola Samaturu	Mola Bahari	Mola Nelayan Bakti		
1	Fisher	998	456	112	321	1.471	3.358	41.72%
2	Entrepreneur	26	15	42	8	35	126	1.56%
3	Service	10	5	-	-	18	33	0.41%
4	Civil servant (PNS)	10	15	13	4	5	42	0.52%
5	Police (TNI/POLRI)	2	1	-	-	-	3	0.03%
6	Unemployee	1.049	560	871	975	1.025	4.480	55.7%
	Total population	2.095	1.052	1.038	1.308	2.554	8.048	100%

Based on data obtained from the village profile in 2019, the total number of Bajo Mola fishers was 3,358 out of a total population of 8,048 (41.72%). In comparison, the number of Bajo people who have other types of work (not fishermen) is 204 people (25.5%). Whereas the population that unemployed is 4,480 people (55.7%) and categorized into 2 groups; 1) children from 0-14 years old age group and 2) Bajo Mola people who are physically and mentally unable to work. The following is a graph of the livelihoods of the Bajo Mola community out of a total of five.

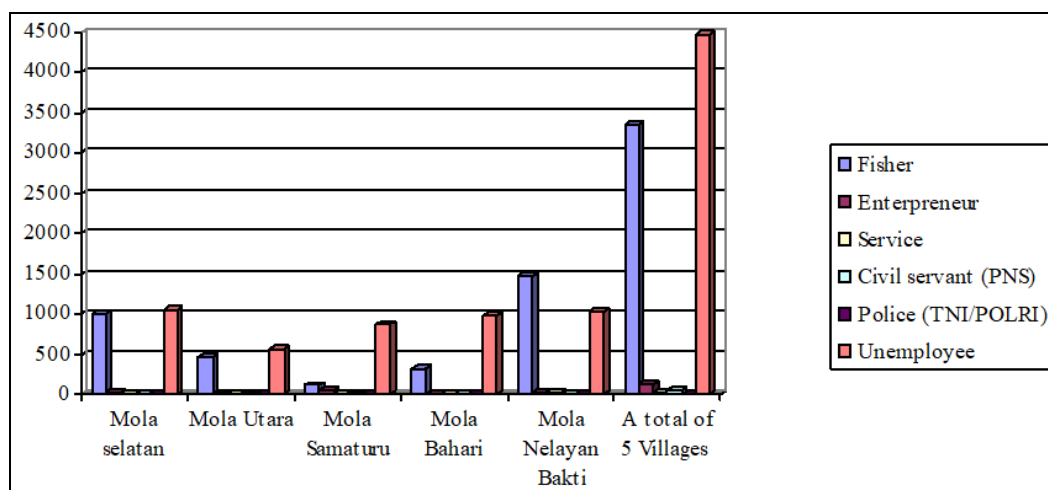


Figure 2. Graph of the livelihoods of the Bajo Mola Community (Source: Profile of 5 Bajo Mola villages, 2020)

B. Socio-economic adaptation strategy

The adaptation of the Bajo Mola community to its environment is shown by how the Bajo people perceive the sea. The sea for the Bajo

people is like a garden full of resources that are always fruitful and ready to be harvested. The relation between the Bajo people and the sea also influences the knowledge and life patterns of the Bajo people, which almost all aspects of their lives are highly dependent on marine resources. It relates to the deterministic paradigm that the nature of culture created by humans is inseparable from the influence of physical environmental factors such as climate, topography, natural resources and regional geography.

Adaptation is interpreted as an adjustment of living things with their environment. Human interaction with the environment is a process of adaptation of how humans can survive the changes in the environment. Ecological adaptation is an adaptation that takes place on certain cultural elements which include socio-economic, socio-cultural, social organization and technology.

The adaptation process in the Bajo Mola community is the result of a transformation process due to the impact of environmental changes, government policies and people's life patterns on the selection of Wakatobi as the national park. There have been many changes in adaptation to the Bajo Mola community from then until now. The rapid modernization and globalization also had a positive and negative impact on the lives of Bajo people. Bajo community adaptation has been going on for a long time until the selection of the Wakatobi islands as a national park area. Staying around the Wakatobi National Park was directly benefit for the Bajo Mola community. With abundant of marine products, the life of Bajo people who live in coastal areas has shaped the behaviour of Bajo people who are very dependent on marine products. Nearly 90% of the people earn a living as fishers, such as tuna, reef, squid and others.

The profession as a fisherman has a diverse economic impact on the community. The socio-economic condition of Bajo people is described as a socio-economic of fishing communities. Bajo Mola people are a society that lives both traditionally and modernly. It can be seen from the interaction among the people, which is so full of togetherness, and the culture that developed in Mola Village. There have been many changes in the socio-economic aspects of the Bajo Mola community since the formation of regional autonomy in Wakatobi Regency and the selection of Wakatobi as a national park. It encourages people to use marine resources creatively. Although traditional fishers still exist today, the existence of entrepreneurs with aquaculture innovations can support community activities to get the maximum profit. The existence of a zoning system and supervision of TNW management also requires people to be creative to fill the daily needs.

Table 2. Ecological adaptation development of the Bajo Mola community in economic aspects (Sumber: Research result of 2019-2020)

No	Adaptation	Life pattern (nomaden)	Life pattern (stay)		
			Stay at Mola (1960an-1970an)	Stay at Mola and fishing in Arafuru, Flores and Australia (1970-1990)	Regional Autonomy if Wakatobi and selection of Wakatobi National Park (1996- current)
1	Occupation	Overall as a fisher	As fisher and housewife As retail of catches	Some looking for alternative businesses	Some looking for alternative works, such as business, but still on using marine resources, also some as civil servants
2	Number of catches	Very Abundant	Abundant	Enough	Less, because of activity restrictions on certain zones and patrols around the reef.
3	Price of catches	Low and just to fill daily needs	Pretty low, because of transaction was based on trading goods.	Enough, because Mola people could trade with Mandati people	High, because of wide interaction with people outside Mola, such as Mandate, Wanci, and aboard
4	Marketing	Not yet done	Limited, because transaction was based on the person meet	Open, trade network has collaborate with suppliers	Wider
5	Distribution of work function	Not yet done	Involved family member	Involved distant relative, or Sawi fishers	Contract labor
6	Relation with exporter	Not yet done	Not yet done	Not yet done	Done, export to domestic and overseas
7	Relation with bank or owner	Not yet done	Not yet done	Not yet done	Done

Based on Table 2 known that Bajo people have experienced many changes, especially in the economic aspects. The changes that are felt are the livelihood, the number of catches, the prices of catches, marketing, distribution of work functions, relations with exporters and relations with banks or owners. The socio-economic situation has changed the traditional Bajo community towards the modern of Bajo community. However, these changes have brought a better economic impact on the lives of Bajo people. Bajo Mola community activities in the socio-economic aspects are completed by selling the catch at the Mola Central market or selling it at the Wanci Night market. The Bajo women are known for selling their catches at lower prices compared to non-Bajo fishers (people outside Bajo village).



Figure 3. The economic activities of the Bajo Mola community in the Central Mola market



Figure 4. A portrait of a Bajo people selling the catch at Wanci Market

By in-depth observations made by researchers, it appears that most of the Bajo people also hold the distribution of work functions in their family life. For example, the fisher who are husbands has a duty to find food for the family, while the wife supported the household. Many

housewives will wait for their husbands to come home from the sea by sitting in front of the house, looking at the boat, then welcoming the husband on the boat and taking the husband's catch, and they can manage the catch (there are some family that immediately get it to sell in the market, but there are also those that divide equally for households and to sell).

The development of adaptation in Bajo Mola society can be said to be in progress. The Bajo community stated that the past conditions were quite difficult, due to abundant sea products, but it has no price. Also, the low level of education and lack of government contribution has pushed the Bajo community to adapt to the sea. The current development demanded the Bajo people utilize natural products to obtain maximum profits. Some people started doing business with the technology and selling marine products, such as the grouper fishes. Also, there are other product processing innovations, especially tuna, namely *loing* technology. *Loing* technology is tuna processing technology by cutting with just taking the meat. The technology has been developing among Bajo people for the last five years.



Figure 5. Portrait of the development of marine product management

At present, the adaptation of the Bajo Mola community tends to be more profitable with some of the activities carried out by entrepreneurs to encourage more productive economic activities. Farming grouper fishes, processing tuna, and dried squid or other fishes have an impact on the high amount of marine product production. The results of fisheries modification are then managed by entrepreneurs to be exported to other regions and even abroad, such as Korea and Japan. A successful entrepreneur from Bajo has brought the products abroad to prove that Bajo can use sea products other than just for daily needs.

The entire Bajo Mola community has not fully implemented the modifications made. There are only a few Bajo people who have assets can carry out these activities, though these activities have had a positive impact on the entire Bajo community. Bajo Mola fishers, who used to catch fish only for their daily needs, began to improve because the catch can be directly sold to collectors or directly sold to the market. The support from banks and interactions with communities outside Bajo also has pushed the economic activities in large-scale. Also, the development of fishing technology towards modernity makes it easier for the community to fishing.

The development of the Wakatobi region since 2003 has influenced the lives of Bajo people. Bajo people thought that the expansion of Wakatobi Regency would cause the price of fish to increase to gain more money from the sale. However, in practice, the catch and selling results are not balanced. If the catches are few, then the selling value is high, while the catches are high, the selling value will be small.

Other factors also influence the catches of fishermen, such as weather factors. For example, in the east season, the catch is just a few or inadequate, but the operation cost required a lot, such as the price of bait, fuel (using diesel). For example, on one trip required fuel (Solar) around 30-40 liters / 2 tanks with a diesel price of Rp. 75,000, so the total costs are around Rp. 200,000 - Rp. 300,000. In order to get balanced results, it takes at least 15 kilograms to sell for 70,000- Rp 75,000/kg. Having a similar profession in the Bajo community has made different economic impacts. Financial management factors are the main source of these differences. Often poor financial management becomes a problem that worsens the economic condition of the family.

The needs are extensive, accompanied by financial management that is less and more adding to the economic burden on society. Then, entrepreneurs have a significant role in improving the economy. Although it is not applied to the whole community, the presence of entrepreneurs can encourage more productive economic activities. The catches can be sold to the collectors or the business.

The adaptation of the Bajo Mola community from the economic side is quite extensive, such as support from the bank, easy access to marketing events, technology and innovation on aquaculture and fish prices that have sharply increased. The study concluded that the ecological adaptation of the Bajo Mola community in managing resources is aligned with the deterministic paradigm, as nature influences the lives of the community. However, the Bajo Mola community could continue to make innovation with existing technology (Neserism).

CONCLUSION

The adaptation strategy showed the unique adaptation of the Bajo people to make a house above the sea. From an economic point of view, it is known that the Bajo Mola people have a fairly high income as fishermen. Economic modernization has turned some professions to

be businessmen and contributed to economic development. Due to the ease of buying and selling fishery products, getting funds from banks and the supports from every party have contributed significantly to improving the community's economy.

The study concluded that the selection of the Wakatobi as a National Park area could improve the socio-economic of Bajo Mola fishers life. However, there are restrictions on fishery activities in several zones, such as the Maritime Protection Zone. It also got support from other parties, such as banks, easy access to marketing, technology and innovations in aquaculture, and fish prices that have sharply increased.

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THE IMPACT OF SEASONALITY IN TEMPERATURE FORECAST ON TOURIST ARRIVALS IN BANGLADESH: AN EMPIRICAL EVIDENCE

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Abstract: In the present study, we aim to investigate how seasonality influences the climate changes on the outdoor thermal comfort for traveling to visit Bangladesh. Wherein, the effect of temperature on tourist arrival is assessed using SANCOVA and SARIMA model at seven attractive sightseeing diverse places in Bangladesh. The highest temperature has appeared in Khulna and Rajshahi with 35.53 °C and 35.85 °C and the lowest temperature was appeared in Rajshahi and Rangamati with 10.40 °C and 11.72 °C, respectively. This result also revealed that the temperature for Dhaka, Chittagong, Cox's Bazar, Khulna, and Sylhet has extreme values of decreasing, in Dhaka the temperature will be 25.140 °C on January 2023, in Chittagong 260 °C on January 2027, Cox's Bazar 26.490 °C on January 2030, in Khulna 25.610 °C on January 2023, and in Sylhet 26.560 °C on January 2020. Our findings also indicate that the tourism industry of Bangladesh is more vulnerable to seasonal variation and this seasonality has a 74% effect on tourist's arrival as well as a 98% effect on overall temperature in Bangladesh.

Key words: seasonality, temperature, modeling, forecasting, SANCOVA model, SARIMA model

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INTRODUCTION

“Tourism” is associated with the stays rendered by people other than their normal environment (Pablo-Romero et al., 2017). In raising economic sector, tourism is the fastest-growing segment in the world. It plays a significant role in many national and local economies (Fyfe et al., 2020). According to the World Travel & Tourism Council's (WTTC) investigation, it is visible that this sector contributes 10.4% of collective GDP and 10% of total service, or 319 million careers, in 2018 (WTTC, 2019). Climate has a significant effect on the tourism resources, tourism zone, tourism seasons, tourism supply and demand, etc (Fang and Yin, 2015). For destination selection, they are not only influential factors but are also important in altering activities and travel plans, during the trip. Temperature is one of the most crucial factors in climatic variables for tourism in summer and bones trembled in winter tourism (Wilkins et al., 2018). Nice weather conditions encourage outdoor tourists and entertaining activities and thus play a key role in the choice of tourism destinations (Grillakis et al., 2016).

LITERATURE REVIEW

From the view of the tourism industry, it is generally assumed that the climate of places greatly influences the likings and pleasure of tourists (Kovács et al., 2016; Witchayakawin et al., 2020). Due to its seasonality, this issue determines the availability and quality of certain open-air recreational activities (Hewer et al., 2016). Climate change may affect short-term and long-term cost repercussions for the tour operators and economies reliant on tourism (Dube and Nhamo, 2018). Climate variables such as temperature compete a vital role in tourism flows worldwide. This enhances tourism at the forefront of the economic segments to be affected by climate change (Pintassilgo et al., 2016). It is identified as a motivator factor for travel, in the area of tourism research (Li et al., 2018).

Tourists want to travel to a wide diversity of environments, including urban and isolated regions (Priego et al., 2015). It is dangerous and unpleasant to hike or involve in energetic hard work during high temperatures (Hoogendoorn and Fitchett, 2018). But it has a positive impact on the tourists in large numbers and feels enjoyable environments on an outing in cool areas (Jedd et al., 2018). Therefore, climatic resources contribute significantly to tourists' decision-making processes, travel, as well as the related allocation of tourism expenditures (Scott et al., 2016). Different types of tourism, such as tourism for beaches and natural sights are vastly affected by seasonality as it is considered as an input in designing the tourism product, such as wintertime sports, and water sports (Li et al., 2017). Climatic variables have an important effect as well as a significant relationship with the tourism stakeholders to choose the destination and planning to travel in different seasons (Zhang and Kulendran, 2017). Therefore, seasonality is an essential issue that should be addressed at policy, marketing, and operation levels.

Tourist destinations have begun to identify the complexities of destination, attractiveness, climate change, and develop strategic plans (Becken et al., 2015). The feasibility of forecasting depends on the instant application of a surveillance system (Pasetto et al., 2017). So, the importance of temperature prediction is addressed in several studies. Chen et al. (2017) used the SARIMA model to analyze the monthly mean temperature in Nanjing, China. Naing and Htike (2015) carried out a study to forecast Malaysian monthly temperature using random forests. Research has also been undertaken on the impact of weather on tourist activities, tourist satisfaction, and tourist safety. Temperature and rainfall fluctuations of West Bengal and Assam, India has been analyzed and forecast by using the ARIMA model (Pratiher et al., 2016; Patowary, 2017). Historical and memorials, a lot of resorts, lovely beaches, natural picnic spots, green forest, tea plantation, and different tribal people in hill tracts are the main attractions for the visitors in Bangladesh. In the country's north, it includes the biggest and most ancient archaeological site, the Buddhist monastery, and the temple city in Rajshahi. The south-east of Bangladesh features

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natural and hilly, such as the Chittagong Hill Tracts, including a lot of natural lakes and beaches, along with the longest sea beaches in the world, at Cox's Bazar. South-west Bangladesh boasts, Sundarbans, includes the largest mangrove forest in the world, as well as royal Bengal tigers, mottled deer, and the historically important Sixty Dome Mosque in Khulna. There are green tea plantations on small hills and natural national forests with wildlife are in the Sylhet division, the north-eastern part of Bangladesh. Natural waterfalls and migratory birds in the haor (wetlands) areas are also popular attractions during winter. However, the temperature forecast potentially influences the tourist destination for touring Bangladesh's tourist attractions.

Again, when we do forecast about any specific issue of a country such as war, flood, and pandemic, etc. then people from outside assume that the whole country is under crisis. Maybe some parts of the country are affected so we cannot say the whole situation is not in favour of traveling. Also, travellers spend their holidays for not a long period, and it is difficult to visits all the attractive tourists' spots within a short period of traveling. Besides these travellers from the different parts of the world are not the same in choice. Some like summer, some prefer rainy, and some love the winter season for traveling. Therefore, the main objective of this research is to find out the relation between seasonality in climate change and the tourism industry in Bangladesh. So far in our knowledge, there is rare studies have been applied to the SARIMA model to evaluate the temperature forecast on selecting the tourist destination in Bangladesh.

Rahman et al. (2017) have applied the ARIMA model for the future projection of climate change in Bangladesh. Wavelet-ARIMA model has been used by Nury et al., (2017) to measure the temperature of the northeastern part of Bangladesh. It is therefore our aim in this study was to determine the influences of the climatic variables on the outdoor thermal comfort for traveling to visit Bangladesh. Wherein, the effect of temperature on seven geographically diverse tourists' destinations in Bangladesh, was assessed by using SARIMA and SANCOVA model. More specifically to examine the impact of seasonality on tourist's arrival that contribute to the national economy of Bangladesh. More additionally some like beaches, some prefer archaeological sites, some want to spend in nature, and some loves adventure in hilly and forest area. So, another major aim is to model and forecasting the climatic variable of different tourists' spots of Bangladesh that might be helpful for travellers to discover Bangladesh in their convenient time and comfortable climatic variable all year-round. Which makes the wheel of the tourism industry active and profitable all year round.

METHODOLOGY

Study Area and data collection

The climate of Bangladesh splits the year usually into three seasons: between May to October is the monsoons or wet season; from October to February is called cool season; and the dry season between March to May. In a sense of comfort, it is better to visit in the cool season to discover Bangladesh. There is heavy rainfall at the time of monsoon season which makes it difficult to travel in some tourist areas. Primary data has not been used because it would take a lot of time and employs complicated mental exercise, so secondary data is used in the study. By realizing this, we collect temperature data for tourists' stations from Bangladesh Agricultural Research Council (BARC) and Bangladesh Meteorological Department (BMD). Monthly maximum and minimum temperature data of capital of Bangladesh, Dhaka, the northern part (Rajshahi), in the south-eastern part (Chittagong, Cox's Bazar & Rangamati), the south-western part (Khulna), and the north-eastern part (Sylhet) in Bangladesh are taken as study variables as shown in Figure 1.

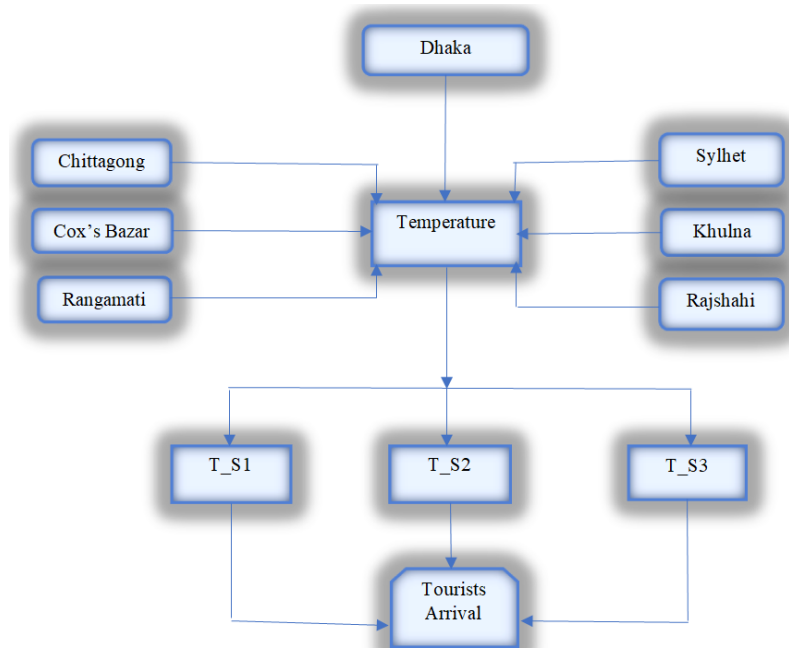


Figure 1. The Framework of the study

At first, we screen the missing values. We exclude the station from the modeling, which includes more than 2% missing value. Identification is another checking, for an equal amount of temperature along the year in the consecutive month. After checking and passing the above tests of these seven stations containing long-term data (more than 40 years) up to 2018 were used in this research. Therefore, maximum, and minimum temperature data from January 1972 to December 2018 was used for these stations.

Procedure of SARIMA Model

The present observation in the Autoregressive (AR) procedure of order p , is created by a weighted normal of past observations returning p periods together with parameters $\phi_1, \phi_2, \dots, \phi_p$ and organized with a random disturbance in the present time frame. We indicate this procedure as AR(p) and compose the equation as,

$$y_t = c + \phi_1 y_{t-1} + \phi_2 y_{t-2} + \dots + \phi_p y_{t-p} + \varepsilon_t \dots (1)$$

Every observation in the Moving Average (MA) procedure of order q is created by a weighted average of random disturbance returning to q periods with parameters $\theta_1, \theta_2, \dots, \theta_q$. For indicating, we write this procedure as MA (q) and compose the equation as,

$$y_t = \mu + \varepsilon_t + \theta_1 \varepsilon_{t-1} + \theta_2 \varepsilon_{t-2} + \dots + \theta_q \varepsilon_{t-q} \dots (2)$$

With moving average error terms, the Autoregressive schemes of the form are denoted by-

$$y_t = c + \phi_1 y_{t-1} + \phi_2 y_{t-2} + \dots + \phi_p y_{t-p} + \varepsilon_t + \theta_1 \varepsilon_{t-1} + \theta_2 \varepsilon_{t-2} + \dots + \theta_q \varepsilon_{t-q} \dots (3)$$

The above procedure is called ARMA (p, q) or Autoregressive Moving Average (ARMA) process of order (p, q). In general, if a time series is $I(d)$, then after differencing it d times we get an $I(0)$ i.e., stationary. Therefore, if we take difference a time series d times and then apply the ARMA (p, q) model to it, then the time series model is ARIMA (p, d, q).

Therefore, the ARIMA (p, d, q) the process can be written as:

$$\Delta^d y_t = \phi_1 \Delta^d y_{t-1} + \dots + \phi_p \Delta^d y_{t-p} + \varepsilon_t + \theta_1 \varepsilon_{t-1} + \dots + \theta_q \varepsilon_{t-q} \dots (4)$$

Where, c and μ are constant ε_t is assumed to be a normal random variable with 0 mean and variance σ_ε^2

p = number of autoregressive terms and q = number of moving average terms

d = number of differencing

$\varepsilon_{t-1}, \varepsilon_{t-2}, \dots, \varepsilon_{t-q}$ = errors in previous time periods

$\Delta y_t = y_t - y_{t-1}$, Δ^d indicates the d th difference of y_t and $\Delta y_{t-1} = y_{t-1} - y_{t-2}$ are the first differences of y_t and so on.

Where Δ^d indicates the d th difference of y_t . If the data shows a strong seasonal pattern, this indicates a high correlation between values observed during the same season in consecutive years. Considering (p, d, q) is the nonseasonal part and (P, D, Q)s is the seasonal part of the model then the Seasonal ARIMA model can be labeled as ARIMA (p, d, q) * (P, D, Q)s that could be written as:

$$\phi_p(L) \phi_p^s(L^s) (1 - L^s)^D (1 - L)^d y_t = \theta_q(L) \theta_q^s(L^s) \varepsilon_t \dots (5)$$

$$\phi_p^s(L^s) = 1 - \phi_1^s L^s - \dots - \phi_p^s L^{sp}$$

$$\theta_q^s(L^s) = 1 + \theta_q^s L^s + \dots + \theta_q^s L^{sq}$$

Where $\phi_p(L), \theta_q$ are as before, s is the seasonal period and D is the number of times the seasonal difference operator $(1 - L^s)$ is applied. Building an ARIMA model consists of four systematic stages (identification, estimation, diagnostic check, and application or forecast) (Hossen S.M. et al., 2020).

The SANCOVA model

Any regression model which contains the quantitative and qualitative variables together is called analysis of covariance (ANCOVA) model. These ANCOVA models are the augmentation of ANOVA models. This technique provides a statistically controlling effect of quantitative regresses control variables. To find out the impact of different seasons on tourists' arrival, we proposed a modified ANCOVA model named seasonal analysis of covariance (SANCOVA). One of the significant advantages of this model over other regression model is with it, we can measure not only the relationship and partial effect of the independent variable but also can compare the qualitative effect of the independent variable. At first, we divided the temperature data into three consecutive seasons, namely winter/cool, summer/dry, and rainy/wet seasons. Each season contains the average of the average temperature of seven tourists' spots in the respective season. Realizing the limitations of data availability, only three variables are considered in the present research. For finding the relation between tourists' arrival and seasonal effect, in that case, the arrival of tourists is taken as the dependent (endogenous) variable and three seasons are considered as independent (exogenous) variables. In this model number of variables must be included depending on the nature of the phenomenon and the purpose of the research under consideration. In this study total tourists' arrival is quantitative variables together with three seasons the climatic variables are considered qualitative variables. To find the seasonal effect on tourists' arrival, we consider the dummy variable for three seasons. So, we consider the seasonal analysis of the covariance (SANCOVA) model in the present analysis. Therefore, our proposed seasonal dummy variable regression model is as follows.

Let us consider our desire classical linear regression model,

$$\begin{aligned} Tourists_{it} = & \beta_0 + \beta_1 AVG(D + C + Cox + Ran + K + Raj + S) \sum_{i=1}^n Wet(June - October) \\ & + \beta_2 AVG(D + C + Cox + Ran + K + Raj + S) \sum_{i=1}^n Cool(November - February) + \beta_3 AVG(D + C + Cox + Ran \\ & + K + Raj + S) \sum_{i=1}^n Dry(March - May) + u_{it} \dots (6) \end{aligned}$$

$$Y_t = \beta_0 + \beta_1 S_1 + \beta_2 S_2 + \beta_3 S_3 + u_t \dots (7)$$

Where, Y_t = Tourist arrival

β_0 = Intercept,

β_1 = coefficient of Season 1/Wet temperature,

AVG = Average

D = Dhaka,

C = Chittagong,

Raj = Rajshahi,

S = Sylhet,

β_2 = coefficient of Season 2/Cool temperature,

Cox = Cox's Bazar, S_1 = Wet season,

β_3 = coefficient of Season 3/Dry temperature,

Ran = Rangamati, S_2 = Cool season,

u_t = error terms

K = Khulna, S_3 = Dry season,

From equation (7) our proposed SANCOVA model is, $Y_t = \beta_0 + D_1S_1 + D_2S_2 + D_3S_3 + u_t \dots(8)$

Where, Y_t = Tourist arrival; β_0 = Intercept; $D_1 = \begin{cases} 1, \text{when Season 1} \\ 0, \text{otherwise} \end{cases}$; $D_2 = \begin{cases} 1, \text{when Season 2} \\ 0, \text{otherwise} \end{cases}$; $D_3 = \begin{cases} 1, \text{when Season 3} \\ 0, \text{otherwise} \end{cases}$

u_t = error terms; D_1, D_2, D_3 are reference category

DISCUSSIONS

Model Identification

To check if the data is stationary and if there is any seasonality by which the data series were analyzed. Graphical analysis, Correlogram, and Unit root tests are used to test the stationarity of the time-series data. Dickey-Fuller (DF) and Augmented Dickey-Fuller (ADF) test is widely used to check the stationarity. If the series has no trend and the error terms are autocorrelated, then we cannot apply the Dickey-Fuller test. Another test of stationarity is Kwiatkowski-Phillips-Schmidt-Shin (KPSS) and Phillips-Perron (PP) test was used. The test results for the different stations are given in Table 1. To identify the suitable Autoregressive Integrated Moving Average (ARIMA) model, we use the Autocorrelation Function (ACF) and Partial Autocorrelation Function (PACF). From the ACF, we can count the number of significant autocorrelations, which is a useful estimate of the number of Moving Average (MA) coefficients in the model. On the other hand, from the PACF plot, we found the number of Autoregressive (AR) coefficients in an ARIMA model.

Table 1. Different test results for stationary

Sampling Station	Unit Root test								
	ADF	P-value	Elliott-Rotherberg-Stock DF-GLS test statistic	Phillips-Perron test statistic	P-value	Kwiatkowski-Phillips-Schmidt-Shin test			
						test statistic*	1% level	5% level	10% level
Chittagong (max)	-2.728	0.07	-0.968	-10.429	0.000	1.182	0.739	0.463	0.347
Chittagong (min)	-8.298	0.00	-0.254	-22.254	0.000	0.306	0.739	0.463	0.347
Cox's Bazar (max)	-2.272	0.182	-0.254	-16.303	0.000	3.307	0.739	0.463	0.347
Cox's Bazar (min)	-3.513	0.008	-0.030	-5.424	0.000	0.779	0.739	0.463	0.347
Rangamati (max)	-3.339	0.014	-0.846	-9.5308	0.000	1.233	0.739	0.463	0.347
Rangamati (min)	-3.672	0.005	-0.932	-4.790	0.000	0.922	0.739	0.463	0.347
Dhaka (max)	-4.544	0.0002	-0.374	-8.18	0.000	0.367	0.739	0.463	0.347
Dhaka (min)	-4.544	0.0002	-0.374	-8.180	0.000	0.367	0.739	0.463	0.347
Sylhet (max)	-3.599	0.006	-0.415	-9.78	0.000	1.804	0.739	0.463	0.347
Sylhet (min)	-3.301	0.015	0.160	-4.361	0.000	1.378	0.739	0.463	0.347
Khulna (max)	-4.871	0.000	-1.191	-7.156	0.000	0.482	0.739	0.463	0.347
Khulna (min)	-3.739	0.004	0.067	-4.633	0.000	0.406	0.739	0.463	0.347
Rajshahi (max)	-6.951	0.000	-0.369	-7.864	0.000	0.545	0.739	0.463	0.347
Rajshahi (min)	-3.804	0.003	-0.357	-4.617	0.000	0.097	0.739	0.463	0.347

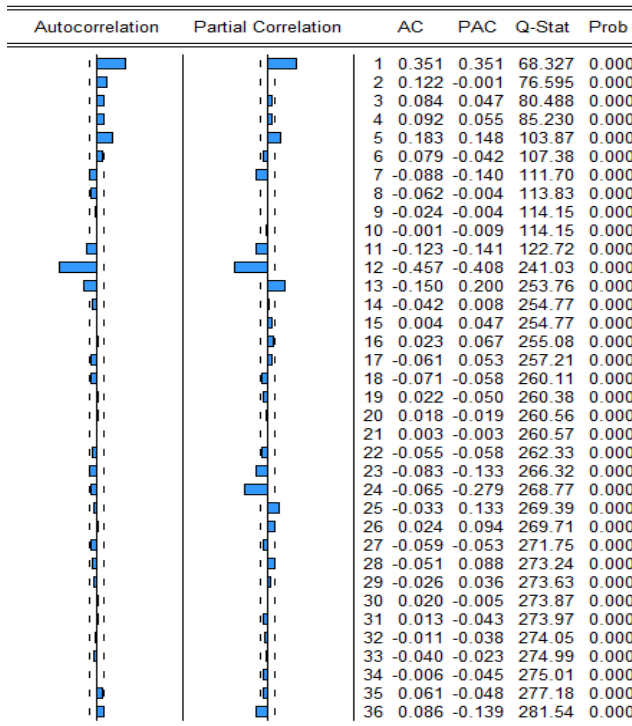


Figure 2 (a). The time series plot of temperature for Cox's Bazar is shown with ACF and PACF plots before regular difference

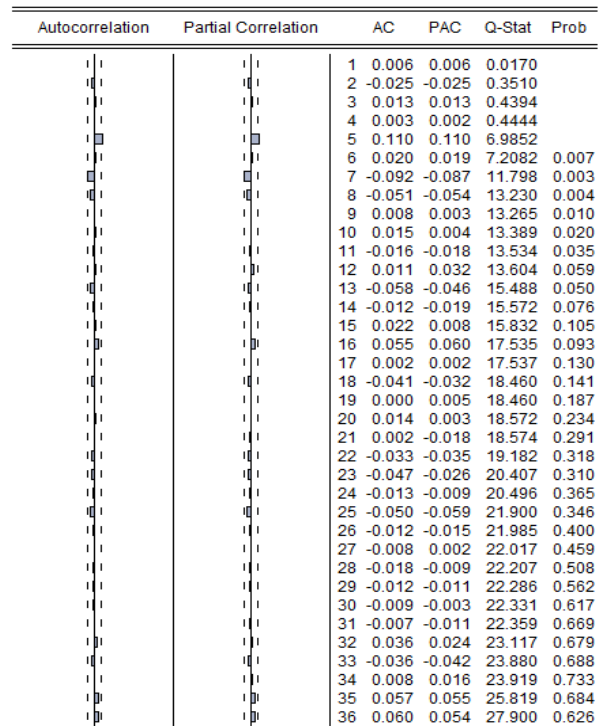


Figure 2 (b). The time series plot of temperature for Cox's Bazar is shown with ACF and PACF plots after taking the first difference

For example, the time series plot of Cox's Bazar station is shown with ACF and PACF plots in Figure 2(a). In Figure 2(b), we observed that AR and MA move in opposite directions having exponential decay. After taking the first difference, both ACF and PACF show a rapid decline and all the spikes are in standard error bounce. So, the series becomes stationary and it is an ARIMA model with the presence of seasonality in the time series data. For model identification, we take the seasonal difference. The seasonal difference of a time series is the series of changes from one season to the next. We have monthly data, in which there are 12 periods in a season, the seasonal difference of y at period t is $y_t - y_{t-12}$. Which is denoted by $\nabla_{12}y_t$. Where $\nabla_{12}y_t = y_t - y_{t-12}$.

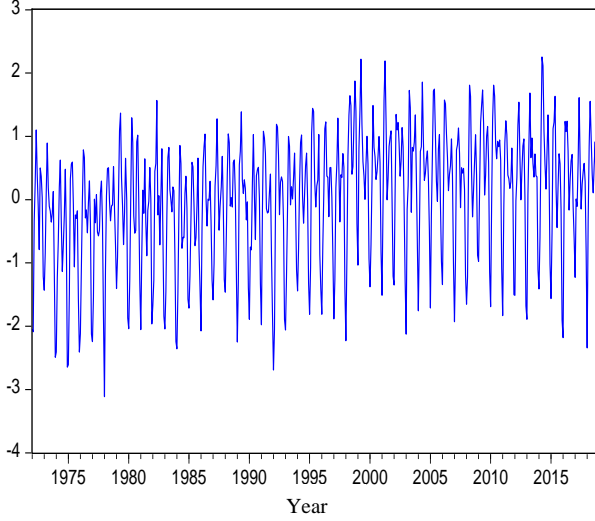


Figure 3(a). The seasonal difference of series before seasonal difference

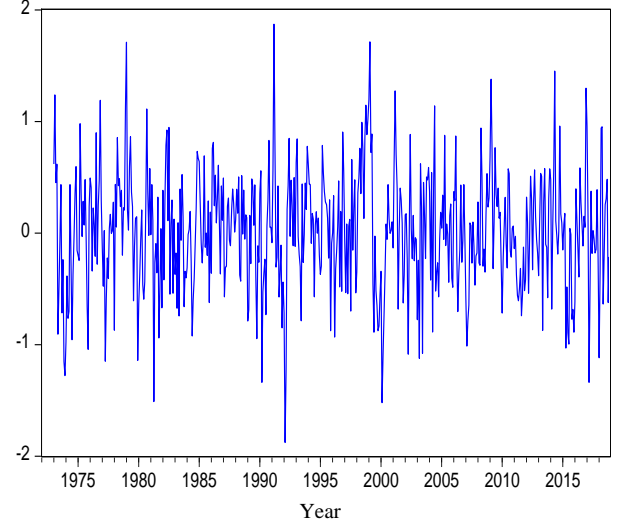


Figure 3(b). The seasonal difference of series after taking the seasonal difference

From the above Figure 3(a & b), we show that the seasonal differenced series seems to be stationary. Now we evaluate Seasonal Autocorrelation (SAC) and Seasonal Partial Autocorrelation (SPAC) of $\nabla_{12}y_t$ at different lags.

Diagnostic Checking

To know about the residuals are normally distributed or not, we will check the Histogram and Normality test. The Jarque-Bera test of normality is,

$$JB = n \left[\frac{s^2}{\sigma} + \frac{(k-3)^2}{24} \right]$$

Where, n = sample size, s = skewness, and k = kurtosis.

Histogram and Jarque-Bera test results (shown in Table 2) indicate that the residual is normally distributed. Therefore, the test results suggest that the model is fully specified.

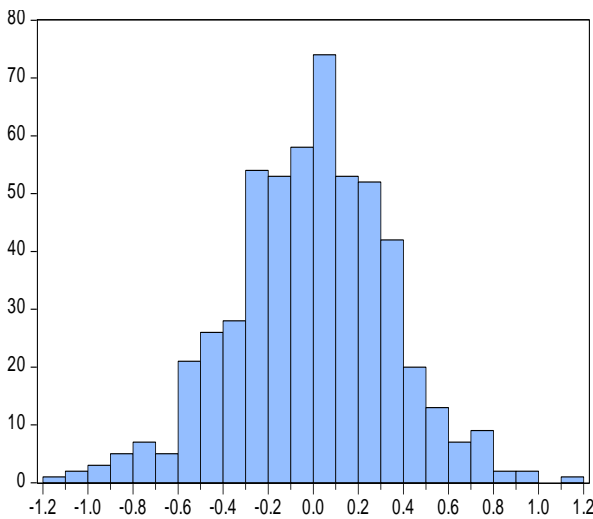
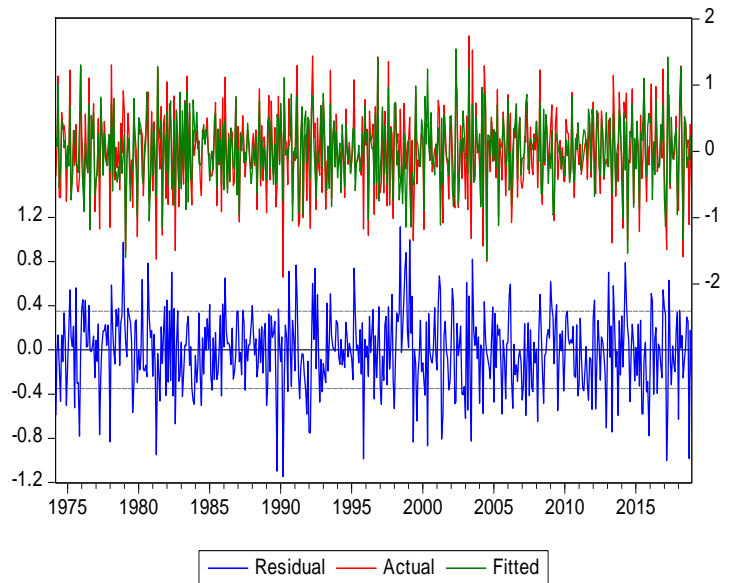


Figure 4. Histogram and Normality checking


 Figure 5. Actual fitted and residual plot for SARIMA SARIMA (1,1,1)×(1,1,2)₁₂

From Figure 4 and 5, it is observed that autocorrelation and Q-test for different lags support the hypothesis that there is no autocorrelation in the residual. Thus, the model is fully specified.

Modelling

For the presence of seasonality, with the help of Box-Jenkins (1976) and modified by Box et al. (2019) model building process, we have built the SARIMA model for the monthly temperature of seven geographically diverse locations in Bangladesh. There are a variety of statistical measures of forecasting error, mostly based on an average of the errors between the actual and forecast values at time t . They are:

Mean Absolute Error (MAE):

$$MAE = \frac{1}{T} \sum_{t=1}^T |Y_{actual} - Y_{forecast}|$$

Root Mean Squared Error (RMSE):

$$RMSE = \sqrt{\frac{\sum_{t=1}^T (Y_{actual} - Y_{forecast})^2}{\sum_{t=1}^T (Y_{actual} - \bar{Y})^2}}$$

Mean Absolute Percentage Error (MAPE):

$$MAPE = \frac{1}{T} \sum_{t=1}^T \left| \frac{Y_{actual} - Y_{forecast}}{Y_{actual}} \right| \times 100\%$$

For which model we get the lowest mean square error, we take the model as the best model. We use the best model for forecasting those are shown in Table 2.

Table 2. Different SARIMA models for different tourists' stations

Station	Model	Model Fit statistics				Jarque -Bera	P-value
		R-squared	RMSE	MAE	MAPE		
Chittagong (Max)	SARIMA (1,1,1) × (0,1,1) ₁₂	0.602	0.503	0.407	164.563	224.806	0.000
Chittagong (Min)	SARIMA (1,1,1) × (0,1,1) ₁₂	0.679	0.184	0.126	31.063	441.577	0.000
Cox's Bazar (Max)	SARIMA (1,1,1) × (1,1,2) ₁₂	0.672	0.471	0.314	71.491	5.983	0.050
Cox's Bazar (Min)	SARIMA (1,0,0) × (0,1,1) ₁₂	0.536	0.199	0.138	23.895	59.924	0.000
Rangamati (Max)	SARIMA (1,1,1) × (0,1,1) ₁₂	0.677	0.349	0.258	260.301	45.225	0.000
Rangamati (Min)	SARIMA (1,0,1) × (0,1,1) ₁₂	0.534	0.199	0.146	26.259	21.441	0.000
Dhaka (Max)	SARIMA (2,0,1) × (0,1,1) ₁₂	0.546	0.319	0.249	394.467	39.465	0.000
Dhaka (Min)	SARIMA (1,0,1) × (0,1,1) ₁₂	0.548	0.320	0.251	39.753	25.915	0.000
Sylhet (Max)	SARIMA (1,0,0) × (2,1,1) ₁₂	0.579	0.468	0.371	75.682	14.487	0.001
Sylhet (Min)	SARIMA (2,1,2) × (0,1,1) ₁₂	0.685	0.165	0.128	65.052	34.035	0.000
Khulna (Max)	SARIMA (1,0,0) × (0,1,1) ₁₂	0.510	0.289	0.230	48.586	73.913	0.000
Khulna (Min)	SARIMA (2,0,0) × (0,1,1) ₁₂	0.519	0.171	0.124	27.822	36.319	0.000
Rajshahi (Max)	SARIMA (0,0,1) × (1,1,2) ₁₂	0.314	0.263	0.369	90.721	54.701	0.000
Rajshahi (Min)	SARIMA (2,0,1) × (0,1,1) ₁₂	0.433	0.156	0.122	20.166	19.475	0.000

Estimation of SANCova model

Estimating the impact of seasonal effect on tourist's arrival we get the following Table 3.

Here, the multiple coefficients of determination (R^2) is 0.74. This result suggests that the independent variable explained the dependent variable by 74% of the total variation. That is seasonality has a 74% effect on tourist's arrival in Bangladesh. In Table 4, the multiple coefficients of determination (R^2) for all reference category is 0.98. This result suggests that the independent variable explained the dependent variable by 98% of the total variation. That is seasonality has a 98% effect on overall temperature in Bangladesh.

Table 3. Seasonal effect on tourists' arrival

Model	Standardized Coefficients	t statistic	P-value	R	R^2
Season 1	-0.042	-0.077	0.951	0.860	0.740
Season 2	-1.174	-1.610	0.354		
Season 3	0.898	1.224	0.436		

Table 4. Seasonal effect on annual Temperature

Reference category	R	R^2	β_0	D_1	D_2	D_3
Winter	0.992	0.983	22.14		0.918	1.052
Dry	0.992	0.983	29.02	-0.918		0.134
Wet	0.992	0.983	28.15	-1.052	-0.134	

Findings from the SARIMA model

Time series analysis and forecasting have become a major tool in numerous applications in meteorology and other environmental areas to understand phenomena, like temperature, humidity, and rainfall. To show the forecasting behavior of the Climate change of Cox's Bazar in Bangladesh, we mainly study the time series data and fit the appropriate time series model and then the forecast is based on the fitted model. After getting the series stationary, then we take the seasonal differences for the presence of seasonality in the time series data. Observing ACF and PACF we have fitted as SARIMA model.

For the monthly rainfall of Cox's Bazar, we have fitted SARIMA (1,1,1) × (1,1,2)₁₂ model and then estimate the parameters of the model. After getting the appropriate model we check the validity of the model using Residual diagnostics and stability tests. Normal probability plot and Jarque-Bera tests are used to check the normality of the residuals. Then we forecast up-to 2030.

Similarly, Observing ACF and PACF have fitted as SARIMA model for monthly temperature of Chittagong (max. & min.), Sylhet (max. & min.), Dhaka (max. & min.), Khulna (max. & min.), Rajshahi (max. & min.) and Rangamati (max. & min.) we have fitted SARIMA(1,1,1)×(0,1,1)12, SARIMA(1,1,1)×(0,1,1)12, SARIMA(1,0,0)×(2,1,1)12, SARIMA(2,1,2)×(0,1,1)12, SARIMA(2,0,1)×(0,1,1)12, SARIMA(1,0,1)×(0,1,1)12, SARIMA(1,0,0)×(0,1,1)12, SARIMA(2,0,0)×(0,1,1)12, SARIMA(0,0,1)×(1,1,2)12, SARIMA(2,0,1)×(0,1,1)12, SARIMA(1,1,1)×(0,1,1)12 and SARIMA(1,0,1)×(0,1,1)12 model consecutively and then estimate the parameters of these model. After getting appropriate model we check the validity of the model using Residual diagnostics and stability test. Normal probability plot and Jarque-Bera test are used to check the normality of the residuals. Then we forecast up to 2030.

From the above Figure 6, we found that the maximum temperature is slightly increasing approximately 1 °C but decreasing approximately 2 °C. The highest temperature will have appeared Khulna and Rajshahi with 35.53 °C and 35.85 °C respectively. It also shows that for Dhaka, Chittagong, Cox's Bazar, Khulna, and Sylhet have extreme values for decreasing temperature. This indicates that in Dhaka, the maximum temperature will be 25.14 °C on January 2023, in Chittagong 26 °C on January 2027, Cox's Bazar 26.49 °C on January 2030, in Khulna 25.61 °C on January 2023, and in Sylhet 26.56 °C on January 2020.

From the above Figure 7, we found that the minimum temperature is slightly increasing approximately by 1 °C but decreasing approximately by 2 °C. The lowest temperature appeared in Rajshahi and Rangamati with 10.40 °C and 11.72 °C respectively. It also shows that Dhaka has extreme values for decreasing temperature. This indicates that in Dhaka the minimum temperature will be 12.48 °C in January 2023 whereas the lowest temperature in Dhaka is 13.08 °C.

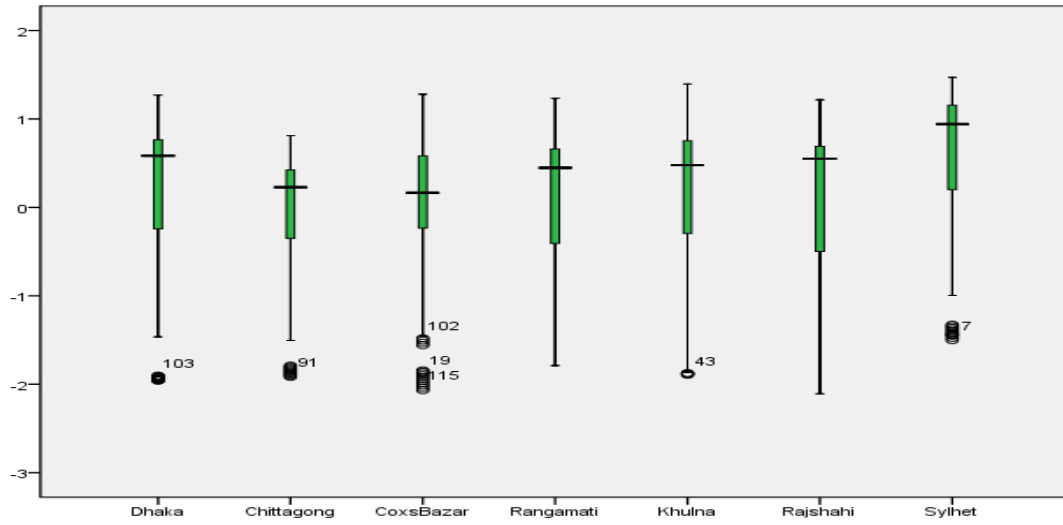


Figure 6. Comparison of forecasted maximum temperature between different tourists' stations

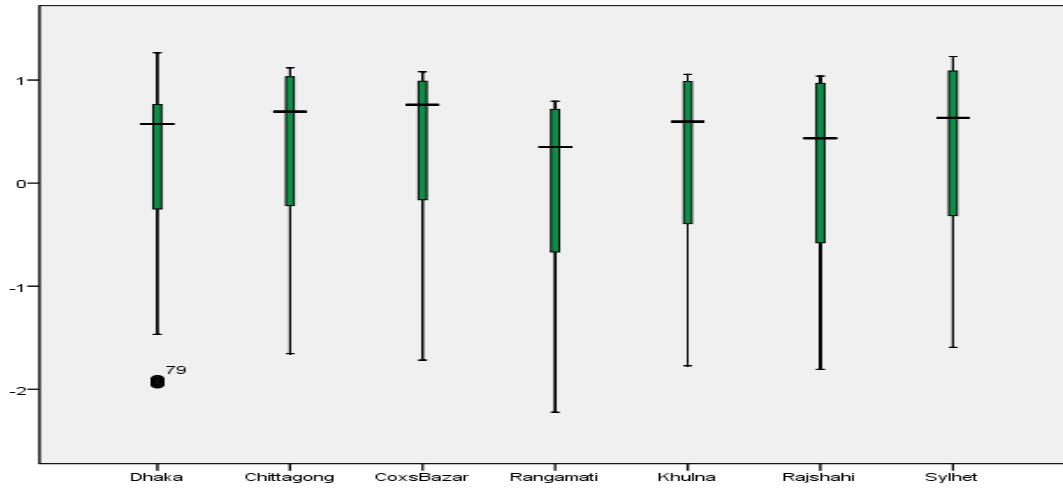


Figure 7. Comparison of forecasted minimum temperature between different tourists' stations

Findings from SANCOVA model

Here in the analysis, we found that the multiple coefficients of determination (R^2) for seasonal effect on tourists' arrival. is 0.74 and for seasonal effect on annual temperature is 0.98. This result suggests that the total seasonality has a 74% effect on tourist's arrival in Bangladesh. This result also reveals that seasonality has a 98% effect on overall temperature in Bangladesh.

Considering Winter season as the reference category

The mean value of the reference category is representing by β_0 called intercept term i.e., winter season. The intercept value β_0 represents the mean value of the reference category, i.e.; winter season. Hence, in the present analysis, the intercept value of the regression model is about 22.14°C, represents the mean temperature in the winter season.

β_2 tells us the mean temperature in the summer season is greater about 0.918 °C than the mean temperature of the reference category, winter season. β_3 provides the result that the mean temperature in the wet season is higher about 1.052 °C than the mean temperature of the reference category, winter season.

CONCLUSIONS

The temperature forecast is critical in Bangladesh because of its spatiotemporal variation and non-linear pattern in size. However, the estimation of temperature is urgency in Bangladesh for harvesting rainwater, flood management, water resource management, urban planning, and maximizing the irrigation system operation. In the present study, the SARIMA model was utilized to predict the temperature forecast in seven tourism attractions in Bangladesh. The highest and the lowest R^2 values were determined to be 0.685 and 0.314 in Sylhet and Rajshahi, respectively. This indicates that the developed SARIMA models accurately describe the temperature forecast in Bangladesh. This finding reveals that the developed SARIMA models could be utilized as a reliable mathematical tool to determine the temperature forecasting. The finding of this present study suggests that the SARIMA model can be used to carry out having more climatic parameters like wind speed and direction, wind pressure, drought, sea-level rise, solar radiation, and their impacts on human activity. Our findings also indicate that the tourism industry of Bangladesh is more vulnerable to seasonal variation and this seasonality has a 74% effect on tourist's arrival in Bangladesh. So, we can conclude that our proposed modified ANCOVA modeling named SANCova is better than any other regression model in the case of evaluating the seasonal effect on the national economy. It would be applicable and also possible to study climatic variables of a specific region of the country or in a specific season. The study also can carry out to estimate the effect of the climatic variable on tourist arrival, crop productions, and food security.

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COMMUNITY-BASED TOURISM: A PANACEA FOR COMMUNITY DEVELOPMENT IN NQILENI VILLAGE, EASTERN CAPE, SOUTH AFRICA

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Abstract: This article investigates the viability of community-based tourism (CBT) in support of socio-economic development and poverty alleviation through a case study in Nqileni Village, Eastern Cape Province in South Africa. This was done through data solicited using a qualitative research approach amongst residents of Nqileni village in the Eastern Cape Province of South Africa. The data collected was then analysed using NVivo system, version 11, which provided substance to the research through the creation of a comprehensive observation report. The results indicated a positive view of members of the community relating to the contribution of CBT to community development (socio-economics) and poverty alleviation.

Key words: community-based tourism, development, capacity building, poverty alleviation, community development

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INTRODUCTION

The 20th century has seen international organisation such as United Nations World Tourism Organisation (UNWTO), the World Travel and Tourism Council (WTTC), the World Bank, the World Trade Organisation (WTO) and the International Monetary Fund (IMF) take a keen interest in the diversification of development programmes (such as Sustainable Tourism for the Elimination of Poverty programme) that can induce macro-economic growth in less developed countries (LDCs) (Scheyvens, 2007; Zatapa et al., 2011). This is given credence by reasons provided by a UNWTO (2004) stating reason that make tourism a development tool that can relate well to the needs of the world poor, articulated as follows:

- tourism is consumed at the point of production, providing an opportunity for direct interaction, additional purchases, and indirect income;
- rural areas, where most of the poor population live, are often rich in capital assets of great value for the tourist industry, such as music, art, wildlife, or climate;
- tourism is labour-intensive, providing more job opportunities for women and young people and new types of jobs and skills;
- tourism contributes to strengthening the social capital of the poor;
- tourism promotes the creation of small and micro-entrepreneurs;
- tourism supports the construction of public infrastructure and the conservation of natural and cultural heritage, providing cultural pride, greater awareness of the natural environment, and a sense of ownership in the communities.

The pretty picture painted by the outlook mentioned above is not without limitations. Empirical evidence has shown that even in the best case scenarios, moderate gains are accrued by the poor in terms of direct earnings and supply chain from the total tourist turnover of destinations (Mitchell and Ashley, 2007: 35; Irazábal, 2018). This is seen to concur with reports by Pluss and Backes (2002) and Spencer (2018) indicating the evaporation of the supposed economic benefits through leakage due to expatriate salaries (lack of local capacity), repatriation of profits, and/or import of goods (foreign investments). Development that is embedded in a pro-poor development paradigm is primarily founded on the ability of the area's economy to grow, thereby allowing for institutional pro-poor development initiatives to assume shape for the benefit of all, including the poor (Saayman and Giampiccoli, 2016; Hall, 2011; Gossling et al., 2010; Mowforth and Munt, 2003: 342). This is in stark contrast with the realities of the poor, as little or no evidence has come forward of tourism being able to reduce poverty in areas acknowledged to be poverty stricken (Scheyvens, 2007; Pluss and Backes, 2002). UNWTO (2004) further makes a case for the previous authors stating that there have been significant declines in economies of LDCs where tourism was reported to have grown exponentially. Such has been affirmed by findings from the works of Sharpley (2009) and Manville and Kuhlmann (2018) indicating a per capita decline of 0.5% per annum since 2000, making the communities poorer than they were in the 1970s.

The limitations mentioned above can be attributed to unequal power relations that local communities (especially rural communities) often find themselves when dealing with external stakeholders (Zielinski et al., 2020a). This often deprives these communities a choice in the manner in which the communities can exercise authority in affairs of development within their habitat (Zielinski et al., 2020b). Such power relations are often based on the availability of resources such as finance, human and other social capital often endowed to external stakeholders (Zielinski et al., 2020a). The above bring an enquiry to the effectiveness of tourism as catalyst for destinations to generate revenue for governments of LDCs and enable capacity building (social and human) necessary to achieve consistent economic growth. This article will focus on community-based tourism (CBT), as one of the primary development strategies aimed at supporting the sustainable socio-economic development and of a rural community.

COMMUNITY - BASED TOURISM

The development of tourism in earlier times (mass tourism) brought with it a range of undesirable and unintended consequences. This demanded of governments, developers and other stakeholders to seek alternative forms of tourism that will provide similar benefits, yet be less negative on the environment upon which tourism was dependent on (Hall and Lew, 2009: 230; Cater, 1993; Murphy, 1985: 8; De Kadt, 1979). This led to the emergence of CBT as a development model aimed at developing communities and reduce poverty with minimal negative impact on the environment (Zatapa et al., 2011). In addition, the model has always been associated with tourism activities in small rural communities, ecotourism and managerial models from around the world (Zatapa et al., 2011). Tourism as an area of study has for over

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three decades been a subject of a growing literature in the realm of sustainable development and community-based tourism (Dangi and Jamal, 2016). This has not absolved the discipline from the challenge of a lack of a concise definition. This is seen in Zapata et al (2011) indicating the difficulty of defining community-based tourism stemming from the definition's dependence on "who is defining it" and "where the community ends and the individual interests start". Consequently, practitioners have recognised community-based tourism to be a model of locally operated tourism that is owned and/or managed by host communities with the sole purpose of the accrual of positive benefits for the broader community (Dangi and Jamal, 2016), thereby achieving sustainable tourism development and community development. This rings true the assertions of contemporary literature and policy documents premising CBT on three main criteria, namely:

CBT is located within a community (i.e. on communal land or with community benefits such as lease fees),

- Owned by one or more community members (i.e. for the benefit of one or more community members) and,
- Managed by community members (i.e. community members could influence the decision making process of the enterprise) (Spenceley et al., 2016).

This affirms Dangi and Jamal's (2016) acknowledgement of sustainable tourism being oriented towards long-term sustainability, CBT extends the orientation to local-level participation, practices and management of tourism development, thereby providing real and tangible benefit to the person on the ground.

The promotion of CBT initiatives as a mechanism for sustainable development came into prominence in the early 1990s following the publication of the Brundtland Commission's landmark publication 'Our Common Future' (Imbaya et al., 2019). This saw developing countries undertake to subscribe to an industry seen to be capable of producing much needed economic benefits to communities in the periphery that will in normal circumstances not be able to participate in their own development without external support (Yanes et al., 2019). Such undertakings' credibility has a longer history dating back to the time of Gandhi (Petric and Pivcevic, 2016).

This is pointed out by Mansuri and Rao (2004: 4) stating the root of CBT to come from the Gandhian notion of self-reliance as an antidote of the corrosive effects of exogenous development perpetuated by colonial rule of the time. This was followed by a change in behaviour of rural communities who saw need in collective action for the purpose of pursuing a common goal (such as community-based approaches to development) as advocated by the Gandhian philosophy (Petric and Pivcevic, 2016; Soubry et al., 2020). This gave rise to what the world perceives to be new development paradigms within the sustainability umbrella, that aim to support and encourage self-reliance and the empowerment of communities (Yanes et al., 2019).

The advocacy of community-based development makes it popular for initiatives to depend on the employment of social capital in the organisation and participation of the local populace in development processes from the conception of the plan to its implementation and management (Petric and Pivcevic, 2016). This not only ensures that development initiatives increase local employment and income generation, but also assists in the development of skills, institutions and the empowerment of local people (Imbaya et al., 2019). This further ensures the intended empowerment of the community to encourage a pro-active role through community ownership, self-regulation and community-based management of tourism, thereby making sure that the tourism process affords participants a fair and equitable share of the benefits harnessed from development initiatives (Sripun et al., 2017). The picture painted above indicates a tourism that allows for a positive outlook that tourism can bring to a community. However, the development and management of tourism at a community level brings with it a political dimension that can threaten the success of any intended initiatives (Sripun et al., 2017). This is further compounded by the lack of a homogeneity and the diversity of interests amongst members of the community within a destination (Hall, 2007). More specific are challenges faced by efforts aimed at employing tourism as a tool for community development and poverty alleviation including but not limited to the availability of skills, knowledge of markets in the designing and development of product that match the needs of the market, limited access to information, capacity and capital (Imbaya et al., 2019; Moscardo, 2008: 6).

Given the myriad of challenges mentioned above, the development of community-based tourism is often marred by the host communities' ability to meaningfully and fully participate in tourism initiatives aimed at their development (Yanes et al., 2019). This rings truth to an old English saying – "give a man a fish, he will eat for a day; teach a man to fish he will eat forever". This is given credence by an ongoing debate within tourism development research circles on ensuring community participation that will safeguard the maximisation of community benefits and the equitable distribution of such benefits among community members (Durkin et al., 2017). Such endeavours require the recognition of the community's right be involved in any development initiatives aimed at the transformation and development of the destination they call home (Lindstrom and Larson, 2016). This further brings to the fore the limited applicability of tourism as a panacea for community development and poverty alleviation in rural settings due to the nature of community-based development theories cost of implementation (Taylor, 1995; Blackstock, 2005; Okazaki, 2008). Such costs are often associated with and limited to economics, whereas these require taking note of a requirement on the part of developers to perform a balancing act that will enable stakeholders to manage competing demands from all corners including economic, social and environmental demands from not only the local community, but also from government and external players such as investors (Sripun et al., 2017). The introduction of sustainable tourism development as a new global standard saw many countries shift from conventional tourism to integrating concepts such as community participation, empowerment, transparency, fairness, equity and quality into their national regulations and development strategies (Yanes et al., 2019). Despite the different spaces (political and cultural) under which community-based tourism practices occur, tourism of this nature has always been grounded in its intention to benefits host communities through community development initiatives, capacity building, local control and local enterprise development, poverty alleviation and the creation of sustainable livelihoods (Dangi and Jamal, 2016). This can be achieved through a systematic approach which requires an inter-disciplinary, participatory and holistic engagement of all components, thereby allowing for development that enables self-help, partnership (with external players such as investors) and mentoring of the community (by external players such as donors) (Amerta, 2017), which mostly centres around the full and meaningful participation of the host community.

The participation of a community in this context can be viewed as a mechanism that can be employed in exercises aimed at readjusting the balance of power and further entrench the affirmation of local views against those of developers and/or local authorities, which ultimately allows for the creation of conditions fertile for successful participation and prevent manipulation of a community in the participation process (Tosun, 2000). Recent tourism development literature indicates the involvement of local communities to be an integral part of the tourism development agenda (Tuson, 2006; Aref et al., 2010; Muganda et al., 2013). In addition, involvement of locals in tourism development has been argued to produce further positive returns such as high satisfaction in relation to development initiatives and an even higher tolerance for tourists (Timothy and Boyd, 2003: 61; Tosun, 2003; Su and Wall, 2014). This sees Tosun (2000) citing Stone (1989: 207) in stating that the objective of community participation is to design 'development in such a way that intended beneficiaries are encouraged to take matters into their own hands, to participate in their own development through mobilising their own resources, defining their own needs, and making their own decisions about how to meet them'. This places the community in the centre of development, since community participation as a strategy requires resources owned by the community in order to fulfil the needs of the community (Tosun, 2000).

MATERIAL AND METHODS

A qualitative research approach that was reliant on a semi-structured interviews was employed for the study. The collection of empirical data was undertaken through the use of a non-probability purposive sampling technique at a rural village of Nqileni which houses the Bulungula Lodge, a tourism project owned and managed by the community. This project is a community-based tourism enterprise aimed at the development of the Nqileni community with initiatives in education, health and infrastructure (Bulungula, 2015). The chosen sample included interviews with five (5) members of the community in their capacity as community leaders (local headman, ward councillor, ward committee member, manager of Bulungula lodge and local economic development officer for Mbashe Local Municipality) together with 19 members of the general community (inclusive of local entrepreneurs, employees of tourism enterprises and residents not involved in tourism activities). The data was collected in the language of the local community (isiXhosa), which was then transcribed and translated into English and analysed using NVivo software version 11. Subsequent to the analysis, a comprehensive observation report was produced, allowing the researcher to present the findings and a discussion that will contribute to the body of knowledge within the community-based tourism arena.

RESULTS AND DISCUSSION

The empirical data collected for the study was subjected to analysis that produce themes indicative of community-based tourism being catalyst for socio economic development and poverty alleviation in Nqileni village. These themes were formulated following narratives from respondents in relation to CBT being a panacea for the development of Nqileni village. These include the development of community resources, capacity building through community participation and poverty alleviation. These have enabled the study to present and discuss the findings as per responses derived from respondents that participated in the study.

Development of community resources and infrastructure

A common narrative amongst the community of Nqileni village, in relation to CBT being a panacea of community development centred on the development of infrastructure and resources that followed the development of tourism in the village through the establishment of Bulungula Lodge. This brought forth a narrative that described development to entail access to basic services such as water and electricity, as well as proper roads and infrastructure, with the development of people and the Bulungula lodge also being a key constituent. The Lodge was constantly credited with several developments (such as the availability of running water, solar panels and a proper road connecting the village with other areas). Additional narratives of eradication of poverty and the sustainable realisation of self-reliance and self-sufficiency were also brought forward. These narratives have been consistent amongst respondents and are presented as follows:

"I think it would refer to people being developed and having access to water and electricity and proper roads."

"Before the establishment of lodge, we did not have infrastructure such as proper roads, running water and solar panel. The lodge has now made these developments possible."

"The first thing I can think of is the establishment of the lodge as it has brought about change in our lives. Before the lodge, we did not have jobs, but now there is something that we are getting, as small as it is."

The understanding of development by the general community of Nqileni village is given credence by assertions of Jeon et al., (2016), indicating the contribution of tourism to the development and sustainability of the local environment, through the accrual of benefits of improvement of the local infrastructure, the protection of the physical environment, and the enhancement of economic prosperity of the people. This is also seen to agree with the prescripts of the South African National Development Plan (NDP) (2011) in relation to the provision of basic services that enable people to develop the capabilities they need to take advantage of economic opportunities throughout the country and contribute towards the development of their communities through remittances and the transfer of skills.

Capacity building through participation

The community provides a unique perspective of the importance of community participation in rural development, which leads to the building of capacity of the community to develop. This is seen in articulations related to the community's undertaking to participate in development initiatives emerging due to the development of tourism in Nqileni village. They mention, among other things, the local community's participation in the development of infrastructure (such as construction of roads, provision of water and other social facilities) and the development of businesses that serve tourists and the community at large, thereby gaining the capacity to maintain the said infrastructure and sustain the business created. The respondents further allude to the engagements undertaken by the collective in terms of consultation of, and input given by, members of the community when it comes to development projects introduced to the village. This is stated as follows:

"The establishment of businesses by members of the community has been a key factor to community participation in the development of Nqileni village." *"I think it is important for people to be trained so that they can meaningfully participate in tourism."*

"Since the establishment of Bulungula lodge, providers of service to tourists have been trained in skills to aimed at serving the tourists."

"We now have creches at Bulungula Incubator and the teachers are member of the Nqileni village community"

"And having genuine meetings where there is an ability to shift your understanding of things. It's not just an information session. It's (Indistinct) giving the community an opportunity to have a say so in what it is"

"Um...it's a first consultation. I don't think you're gonna have community...genuine community participation that means nothing can happen in the village without consulting the community."

The narrative points to a symbiotic relationship between participation in development initiatives and capacity building, which has a transformative ability to influence the way people conduct their affairs. This gives credence to the work of Petric and Pivcevic (2016) stating a history of such undertakings to date back to the time of Gandhi. This is pointed out by Mansuri and Rao (2004: 4) stating the root of CBT to come from the Gandhian notion of self-reliance as an antidote of the corrosive effects of exogenous development perpetuated by colonial rule of the time. This rings truth to an old English saying – "give a man a fish, he will eat for a day; teach a man to fish he will eat forever". This then requires a change in behaviour of rural communities who saw need in collective action for the purpose of pursuing a common goal (such as community-based approaches to development) as advocated by the Gandhian philosophy (Petric and Pivcevic, 2016; Soubry et al., 2020). These are given credence by undertakings that are aimed at ensuring community participation that will safeguard the maximisation of community benefits and the equitable distribution of such benefits among community members (Durkin et al., 2017). Such endeavours require the recognition of the community's right be involved in any development initiatives aimed at the transformation and development of the destination they call home (Lindström and Larson, 2016).

Positive multiplier leading to poverty alleviation

Respondents elucidated on the role of tourism development in the economy of the area, and its concerted efforts in the alleviation of poverty. This is made evident in the credit given to the development of tourism for the creation of employment and the increase in

entrepreneurial concerns within the area. Such developments are indicated not to be limited to the tourism space, as other economic sectors (such as agriculture, fishery and retail, to mention a few) have seen a considerable injection of business following the development of tourism in the area. Furthermore, the development of tourism has also afforded community members with skills and talents in indigenous arts and crafts to enter the market space and generate an income through their wares. This has seen the emergence of a vibrant community of active participants in tourism related economic activities. This is presented by respondent narratives as follows:

"If it weren't for the lodge, we would be starving."

"Tourism plays a role of alleviating poverty. Before the establishment of Bulungula lodge, people were not employed and there was nothing to do. Now, we are able to put food on the table and use our talents to get an income."

"I have money now. I am able to send my kids to school."

"Tourism helps us financially."

"People are able to earn an income because of the tourists that visit here." "The revenue that we make out of what we get from tourists that come here assists us to achieve some of our goals."

"Because of tourism we are able to provide for our families. For example: There are people who have built their homes because there is tourism."

Even with the positive multiplier effect demonstrated above, there is however, a voice of despondency (isolated cases) that brought to the fore the limited direct employment opportunities provided by tourism (specifically the Bulungula lodge employing 23 people) in Nqileni village with a population of 1500. This gives a clear indication of the great unemployment challenges faced by rural areas, even with development initiatives of this nature. However, respondents further proclaim the beneficence of the community from tourism, irrespective of employment status, through a community trust (Bulungula Trust) established to ensure that every indigenous resident of the village benefits from the wholly community-owned and run Bulungula Lodge. This is stated to be a scheme that equitably distributes benefits and costs associated with tourism within the village. The issues tabled above are given credence by respondents' statements that follow:

"Ja, I don't know. It's a difficult question because I don't think tourism is the panacea to the rural development challenges. Uh...you know, like I said, the lodge employs 23 people. Nqileni has a population of 1500. So, it's not gonna solve all employment problems, you know. It's not the panacea to those things. But I think...I think if you do it well you can get good jobs, meaningful work, um...with good cross-world exposure. If you do it badly it can be horrible for communities. But if you do it well it can be good."

"Much as unemployment is a big problem in the area, those of us who are not employed do receive dividends from profits made by the lodge through the Bulungula Trust."

"I have personally benefitted from the proceeds of the lodge through having my daughter's school being paid for by the Bulungula Trust."

The findings on the role of tourism in the sustainable satisfaction of community needs, and the fight against uncertainty, is congruent with the discourse of sustainable tourism, as it rests upon the proper management of host community resources, with the aim to meet the fundamental criteria of promoting socio-economic wellbeing and livelihood of the local community, without compromising the satisfaction of the needs of the tourists (Malik and Bhat, 2015). This has been seen to be evident in the significant effect tourism expenditure has on many destinations, especially in the developing world, irrespective of whether the effect is direct, indirect or induced (Brida and Zapata, 2009). This can be exemplified by direct employment created by the Bulungula Lodge for local residents, together with locally owned and managed businesses established to serve tourists visiting the Nqileni village, with indirect benefits derived from local fresh produce providers selling vegetables, fruits, meat and fish to the Lodge for tourist consumption, and induced benefits realised with the establishment of the Bulungula Incubator, a Non-Governmental Organisation (NGO) established for purposes of community development established in 2007 as a result of the establishment of the Lodge in 2004 (Bulungula, 2016).

This is further affirmed by Dorobantu and Nistoreanu (2012), who state that the positive contribution to state revenue by tourist spending, together with the traffic of complementary goods (imports and exports) for the receiving area and the attraction of foreign investment, culminates into a multiplier effect that sees tourism contribute to the economic prosperity of the area. Such prosperous endeavours need to be undertaken with the assurance of equality, so as not to allow any exclusionary or discriminatory practices that could hinder people from participating economically, socially and politically in matters of development in society.

CONCLUSION

The contribution of CBT to community development has been evident through literature and empirical data presented and discussed in the study. Such contribution has been seen to ensure that development initiatives within the tourism space bring benefits that not only provide benefits at the moment of interaction, but allow for the community to derive sustainable attributes that can enable development that is endogenous and release the community from dependence on exogenously-based development initiatives. This can be seen in CBT's ability to stimulate an entrepreneurial culture that leads to the creation of employment, income generation, skills development and ultimately the empowerment of the local populace. The notion of CBT having ability to contribute in community development is not without limitations. Much as evidence indicates the positive contribution of CBT to community development, there is also a significant voice of opposition that asserts that the gains perpetuated by advocates of tourism being advanced as a tool for development are too miniscule for the investment communities are required to make. This makes it necessary for CBT initiatives to ensure proper management of the impacts of tourism on the economy, society and environment will bring benefits to Nqileni village. Such can be seen to assist in the levelling of the playing field as far as the distribution of benefits is concerned, thereby minimizing the voice of discontent amongst members of the community (note that these voices were few in the findings). The study recommends for benefits of CBT to be spread throughout the area and the community. This is important, because the resources utilised for the development belong to the community as a whole, and beneficence of one over the other can threaten the sustainability of the development. Instruments such as community trusts (such as Bulungula Trust in Nqileni village) that can ensure equitable distribution of benefits are recommended.

Finally, the study made no intention to claim authority on the ability of CBT to be a panacea for community development, but an attempt to investigate the manner in which tourism can be employed as a development option for rural areas that are in dire shortage of opportunity and ravaged by poverty. The study finally concludes with a recommendation of a need for a collaborative and focused approach that will enable more meaningful community participation in development initiatives such as CBT, which eventually result in community development. This is surmised from evidence obtained from the empirical data collected suggesting that if CBT is planned and implemented correctly, with proper consultations and involvement of community members, it can positively contribute to the development of a community.

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UNDERGROUND MOSQUES OF MANGYSTAU AS THE OBJECTS OF RELIGIOUS TOURISM

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Abstract: A distinctive feature of Mangystau is a significant number of underground mosques that have existed within the region since the X-XIII centuries. The purpose of the study is to analyze and assess the current state of underground mosques and the prospects for their use as objects for the development of tourism. The study was carried out as a result of the use of complex methods: dialectical, retrospective, systemic and logical analysis, as well as general scientific methods of comparison, analysis and synthesis. Underground mosques in Mangystau region play an important role in the development of tourism in Kazakhstan. The analysis shows that the objects carved into the rock are unique underground structures that differ in the peculiarity and history of their formation. The research results can be used in theoretical and methodological research on this topic. The research materials show that in the Mangystau region it is necessary to study the religious heritage using a rich resource base and develop new tour programs that will increase the region's tourism opportunities and the development of all types of religious tourism.

Key words: religious tourism, pilgrimage, Mangystau, holy places, underground mosque

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INTRODUCTION

Religious tourism has recently been included in the list of existing types of tourism, adopted by the World Tourism Organization. The need for people to worship revered saint places prompts them to make religious (pilgrimage) trips. Therefore, every year hundreds and thousands of tourists go on pilgrimage and sightseeing trips to holy places and religious centers. This tendency, associated with profound changes in the mass consciousness and spiritual life of society, first of all, with an increasing interest in the history of national cultures, is most clearly manifested at the turn of the two millennia in countries that have passed through the era of "state atheism", which is confirmed by the increase in the construction of mosques in the country in the early 2000s (Figure 1).

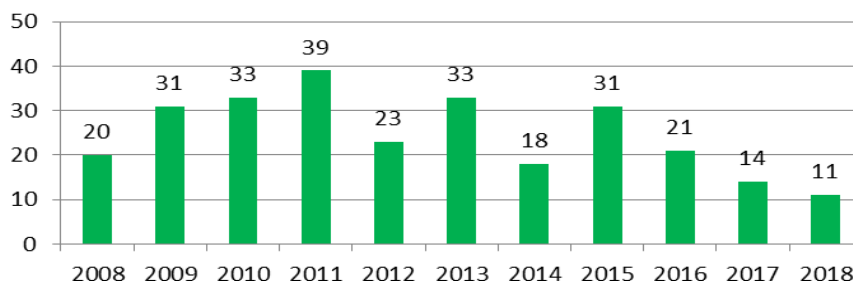


Figure 1. Construction of mosques in Kazakhstan in 2008-2018
(<https://easaily.com/ru/news/2019/09/23/mechetey-v-kazahstane-stroyat-bolshe-chem-bolnic>)

The tradition of pilgrimage trips to saint places is reviving not only among Muslims, but also among followers of other religions. At the same time, pilgrimage travels of representatives of various religions in recent decades have become a truly massive phenomenon that affects all spheres of social life (Josan, 2009). Religious tourism is an independent type of tourism associated with the provision of services, and the satisfaction of the needs of tourists traveling to holy places and religious centers, which is caused by motivations, as states, "a persistent

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tendency, chronic inclination to certain actions and experience certain types of feelings in certain situations” (Bond et al., 2015). Religious tourism has deep historical roots; the medieval pilgrims are considered ones of the first tourists (Guzhina and Guzhin, 2016). Religious travel pursues three main goals the first is visiting iconic places for this religion; the second is spiritual healing; the third is a simple interest in iconic places (Hristov, 2003). One of the most discussed issues among researchers is the classification of religious tourism, which has not yet been fully developed (Table 1).

Table 1. Classifications of religious tourism

Authors	Types of religious tourism		
Hristov (2003)	pilgrimage tourism	excursion focused religious tourism	
Guzhina and Guzhin (2016)	pilgrimage tourism	excursion tours on religious topics	special tours
Senin (1999)	pilgrimage tourism	religious-themed tourism	special tours, which brings pilgrims and sightseers together
Yakunin (2017)	pilgrimage tourism	religious-themed tourism	scientific tourism for religious purposes
Swatos et al., (2002)	pilgrimage tourism to holy places	religious tourist attractions related to historical or cultural events,	religious festivals
Rinschede (1992)	participation in religious ceremonies and conferences	excursion tours to local, regional, national and international religious centers	

According to some statements, it is divided into two types: pilgrim tourism and excursion-oriented religious tourism also proposes two types of this tourism: tourism motivated by religious considerations and tourism as a modern spiritual journey (Collins-Kreiner, 2018). In religious tourism includes attending religious ceremonies, and conferences, and visiting local, regional, national, and international religious centers. Other researchers divide religious tourism into three forms: pilgrimage, excursion tours on religious topics, and specialized tours that bring together pilgrims and sightseers (Senin, 1999). Also consider three types of religious tourism: “pilgrimage shrines, religious tourist attractions associated with historical or cultural events and religious festivals” (Swatos et al., 2002). Other researchers propose not to confuse the concepts of “religious tourism” and “pilgrimage”, explaining that the purpose of religious tourism is to gain new knowledge, while pilgrimage is purely religious in nature (Yakunin, 2017). A pilgrim is a “religious traveler”, and a tourist is simply a “vacationer” However, both groups are considered in a continuous classification that goes from pilgrimage based on faith to strictly secular tourism, although pilgrims pursue other goals - healing from diseases or solving their personal problems but still, “a religious space is a multifunctional place, in which, depending on the use and motives, you can find different forms of tourism” (Ilieş et al., 2018c; 2020, 1104).

The natural caves of Mangistau and Ustyurt were the prototype of the incredibly numerous and diverse artificial underground interiors, the creation of which has formed an unusually strong and long-lasting tradition. Like other peoples who adopted Islam, among Kazakhs Islam is closely related to ancient religious beliefs that were developed long before the appearance of Islam (the ancestors of the Kazakhs adopted Islam only in the IX century), which provides grounds for the development of religious tourism in the country. However, domestic science is in no hurry to widely and holistically study this type of tourism, as evidenced by the lack of scientific publications on this topic. The objects of religious tourism and pilgrimage have often been studied and researched mainly by historians, philosophers. Perhaps this is due to the fact that many geographers have not yet shown interest in religious tourism as an independent species, since the pilgrimage, as mentioned above, was a taboo subject, like religious education in general, since the religious issue in an atheistic state, within the USSR, it was not openly discussed. Cultural heritage, including religious artifacts, may be of interest not only to religious scholars, but also to a wider range of scientific specialties (Akhmedenov, 2020). This research is devoted to the analysis and assessment of the current state of underground mosques on the territory of the Mangystau region and the prospects for their use as objects of religious tourism. We examined 6 objects. The analysis shows that the objects of study carved in the rock are unique underground structures. The history of the formation of each object is explained. The underground structures were built at different times, but they have the same structure and the same purpose - they were used as mosques. The region has great opportunities for the development of religious tourism, for which some recommendations have been proposed.

MATERIALS AND METHODS

The main information base of our research is statistical, stock and cartographic materials, as well as materials of the Committee on Religion of the Ministry of Information and Social Development of the Republic of Kazakhstan in recent years. The authors used sources from the websites of tourist organizations, worked with materials from the Tourism Administration of the Mangystau region, used the website of the Spiritual Administration of Muslims of Kazakhstan. Part of the information about the objects of worship was collected during expeditionary research in 2012-2017 in the region.

Since religious tourism and pilgrimage in Kazakhstan is not yet fully recognized as an independent type of tourism, no scientific study of this type of tourism has been carried out, therefore, there is practically no publication in this sphere in domestic periodicals and on the Internet, except for single cases (Nurtazina, 2009; Plokhikh et al., 2019). In this regard, the work mainly used publications of researchers who studied the issues of pilgrimage and religious tourism, substantiating its importance for the popularization of the historical and cultural heritage of peoples, problems and development prospects, evaluating religious tourism as a segment of the modern tourism market (Terzidou et al., 2018; Timothy and Boyd, 2006; Scriven, 2014). The works of and others hold special interest, who viewed pilgrimage as a phenomenon of national religious culture (Cànoves et al., 2012).

In addition, the works of foreign researchers were analyzed, where the potential of religious tourism is studied (Ilieş et al., 2019). The management of religious tourism, a new research approach to religious tourism (Fernandes et al., 2012), questions development and support of religious tourism in a particular country, study of the internal environment of religious objects (Indrie et al., 2019; Ilieş et al., 2018) as well as other problems of religious tourism (Heidari et al., 2018). In this regard, this study was carried out primarily on the basis of a system analysis, where the objects of study (underground mosques) are considered as separate systems. A comparative typological method was also applied, the basic principles of which are to compare the types of underground mosques (on a slope, underground) according to the oldness of the structure (XII-XIX centuries) in time and space. Based on materials from museum and local libraries, the histories of the objects were studied. As a result of the observations of the authors and surveys of the population, statistics were obtained on the importance mosques visitors. The work was also supplemented by the use offield tripfield work (2012-2014, 2017) and cartographic methods.

The main purpose of this article is to assess the potential religious and cultural tourism in the Mangystau region. While we are talking exclusively about the underground mosques of the Mangistau region, visiting religious sites, events that we have added cultural to match the findings previous research that many tourists visit these places for cultural or educational reasons not strictly religious. The information for this article was collected through direct observation. Most of the the sites and purposes discussed in this study were visited at least once and at least one of the authors. We also used a number of scientific articles, websites, brochures and videos advertising local travel sites.

RESULTS DISCUSSIONS

On the territory of Kazakhstan, in particular in the South and West, there are more than 500 objects of significant confessional and cultural interest. Also, other regions of Kazakhstan have significant potential for the development of religious tourism as one of the most promising types of tourism activities, which has an important social role, both in our country and abroad. Each of them has its own special features and unique spiritual shrines, which create a unique spiritual and cultural image, which makes it possible for a variable approach to the formation of tourist routes of various territorial coverage, length, combination with other tourist resources and various accommodation facilities. Mangystau region, located in the west of Kazakhstan, is in the top 10 regions of Kazakhstan with a high potential for the development of tourist flow. In the last 5-10 years alone, the number of tourists, including foreign ones, who want to visit this territory has increased significantly. The territory of the region is the former sea bottom and the relief, composed of Cretaceous and Quaternary deposits, has unique forms, represented by drainless depressions, hollows, caves (Koshim et al., 2020).

Here is the largest number of monuments and places of worship in Kazakhstan. Mangystau is the land of 360 saints, 360 Sufis. 360 saints are the disciples of Khoja Ahmed Yassau, the founder of the Turkic branch of Sufism, who were sent to Mangyshlak to spread his philosophical teaching. Sufism in Mangystau quickly took root and until the end of their lives the messengers of Yassau glorified their teacher and subsequently each of them was buried on this land with honors, therefore Mangystau is called the "land blessed by the gods" (Kondybai, 2008, 150). During some time the names of many Sufis were forgotten, and the graves were lost in the desert expanses of Mangystau. Four "points" may have been lost or destroyed, but they are all interconnected and are a crystal, a spotter which reconstructs the position of the Earth's rotation along its axis around the Sun in 365-366 days. Light coming from one sacred place (one God - light) projects the rotation or transition of the Earth along the axis in 24 hours (day), then the Earth passes into the projection of a new light (the next holy place), etc. This is the functional predetermination of the fact that it was here, in Mangystau, that 360 disciples of the great teacher Khoja Ahmed Yassau came, who were famous for their "holy" deeds, spreading Sufi teachings, who left after their lives 366 holy places in the form of cultural and historical monuments, underground mosques, necropolises and madrasahs, and formed in a natural formation the structure of an energy-information crystal that builds up the time of the Earth's passage in orbit around the Sun. This is the structure of the spatio-temporal "observatory", which works as a single mechanism, rebuilding the flow of time.

Local residents and their descendants still sacredly honor these names: Yessen ata, Shopan ata, Shapkap ata, Sultan epe, Masat ata, Karaman ata, Koshkar ata, Man ata, Temir baba, Kanga baba and the very last Beket ata. The list goes on to 360 or more. Almost every corner of the Mangystau region has its own holy place. Only the vast majority of such places do not stand out in any way, do not differ from the environment. A lonely hill, a lonely gravestone stele and a saint erected on a pole, a pile of stones practically do not attract human attention. But many of these holy places have now turned into whole cemeteries, because the Kazakhs prefer to bury the dead next to the saints (Azhigali, 2014). But some of the places where the saints lived were well preserved thanks to their amazing structure in the form of underground caves, which they used as madrasahs. In our work, we do not aim to describe all the caves-mosques, we will limit ourselves only to those objects that are of the greatest interest and attract more tourists and those places that we have explored ourselves (Figure 2, Table 2).

All underground mosques were built during XII-XIX centuries and cut out in the rocks of chalk rocks, represented by limestones, marls and snow-white clays, which are widely developed throughout the territory of Mangystau. Such buildings served as protection in summer from extreme heat, in winter from strong winds and are considered especially revered places.

The name "Underground Mosques of Mangystau" first appeared in the collection "Monuments of Folk Art of Western Kazakhstan" (Mendikulov, 1987). Due to the lack of serious scientific research at that time, the name "Underground Mosques" has stuck to this day as an axiom. However, it is a mistake to call all underground structures, from single-chamber caves to multi-chamber complexes, by the same term. Scientific research shows that the fundamental feature of a mosque is the presence of a mihrab facing the Qibla. Therefore, it is suggested to include the rocky and underground structures of Shopan ata, Becket Ata, Shapkap Ata, Masat Ata as mosques. Although there is no mihrab in Sultan Epe and Karaman Ata, there is a prayer room, therefore they are referred to as mosques (Azhigali, 2002).

The most visited place by tourists is the Beket Ata mosque, but according to described rules, all pilgrims first visit the Shopan Ata mosque, which is on his way. And we, adhering to this tradition, begin the description with this mosque.

Table 2. Characteristics of underground mosques of in Mangystau (6 mosques)

Mosques	Shopan Ata	Beket Ata	Karaman Ata	Shapkap Ata	Masat Ata	Sultan Epe
Distance from Aktau (km)	180	245	60	145	130	150
Period of construction (century)	XII-XIII	XIX	XIII	XIII-XV	XIV-XV	XVI
Area size, incl. necropolis (m ²)	180	250	70	45	50	7
Number of rooms in the mosque	12	4	3	4	1	9
Room height (m).	2,0-2,3	2,5-3,5	2,5-2,7	2,5-2,8	2,5	2,0-2,3
Mihrabs	yes	yes	no	yes	yes	no
Number of pilgrims (thous./year)	200	200	70-80	150-170	50-70	100

Shopan-ata underground mosque (coordinates: N43° 32'49.86", E53° 23'35.46"), located 180 km north-east of the regional center Aktau is the most ancient cultural monument. Shopan-Ata translated from Kazakh means "shepherd". Shopan ata is the nickname of the great teacher, under which he was known and revered by supporters on the ideas of Sufism. Shopan ata was one of the 360 disciples of the leader and preacher Khoja Ahmed Yassau and therefore equated to the face of national saints of all Turkic peoples (Kamalova and Bermakhanov, 2018). The Shopan Ata underground mosque is located on the way to the Beket Ata necropolis. Near the necropolis there is a large area with about 4000 burials dating back to the X-XII centuries (Koshbauly and Kalmenov, 2009). Shopan-Ata was the spiritual mentor of Beket aty, a famous Kazakh religious figure and Sufist, who worshiped him until the end of his days.

The Shopan Ata Mosque was cut out in the massif of the adjacent rock with the aim of turning it into a religious center, as evidenced by 12 interconnected rooms. Each room is allocated for a specific type of activity: household needs, religious rites, educational teachings. The main room is rectangular, 7 meters long and 5 meters wide. Light enters the room through a round opening with a diameter of 1.5 meters. In the center of the room there are two wooden poles with a height of about 1.5-1.8 meters. The place where the poles stand is considered holy. The burial niche, where Shopan ata is buried, is on the left, significantly deepened into the thickness of the rock. At the western and southern walls of the main room, two spacious rooms were cut down, intended for pilgrims (Figure 3).

A well has been built at the base of the Shopan-Ata underground mosque. The second mosque is located east of the main one and was built a little later. It has a separate entrance, its prayer hall is located transversely and is oriented by the mihrab to the south. According to legend, after graduation, Khoja Akhmet gathered his disciples and announced to them that they should shoot arrows through the shanyrak and where the arrows fly, they will preach the ideas of Sufism. Shopan ata arrow, having flown to Mangyshlak, fell on a small mountain at

the foot of which, Shopan ata built an underground mosque. According to another legend, a mulberry tree grew from this arrow, which still grows and is considered sacred with healing properties, its age is about 800 years. The complex of the Shopan Ata mosque dates from the end of the XII - the beginning of the XIII century, which in 1982 was taken under protection as a historical and cultural object of regional significance and included in the list of historical and cultural monuments of republican significance.

Beket-ata underground mosque (coordinates: N43° 35 49.83", E54° 4'12.38"), located 280 km from the regional center Aktau in the northeastern direction. Beket ata was not one of the 360 messengers of Khoja Yassau, because he lived in another historical time, but he considered himself a disciple of a brilliant teacher and a follower of his teachings, and the people also consider him a disciple of Yassau, therefore his name was additionally included in the number of 366 saints. Becket Ata was born in 1750. At the age of 14, he came to venerate the ashes of Saint Shopan ata and received a blessing to attain knowledge. Having received his education in Khiva, he returned to his homeland and began to build underground mosques, where he founded a school and taught children Sufism, preached sermons.

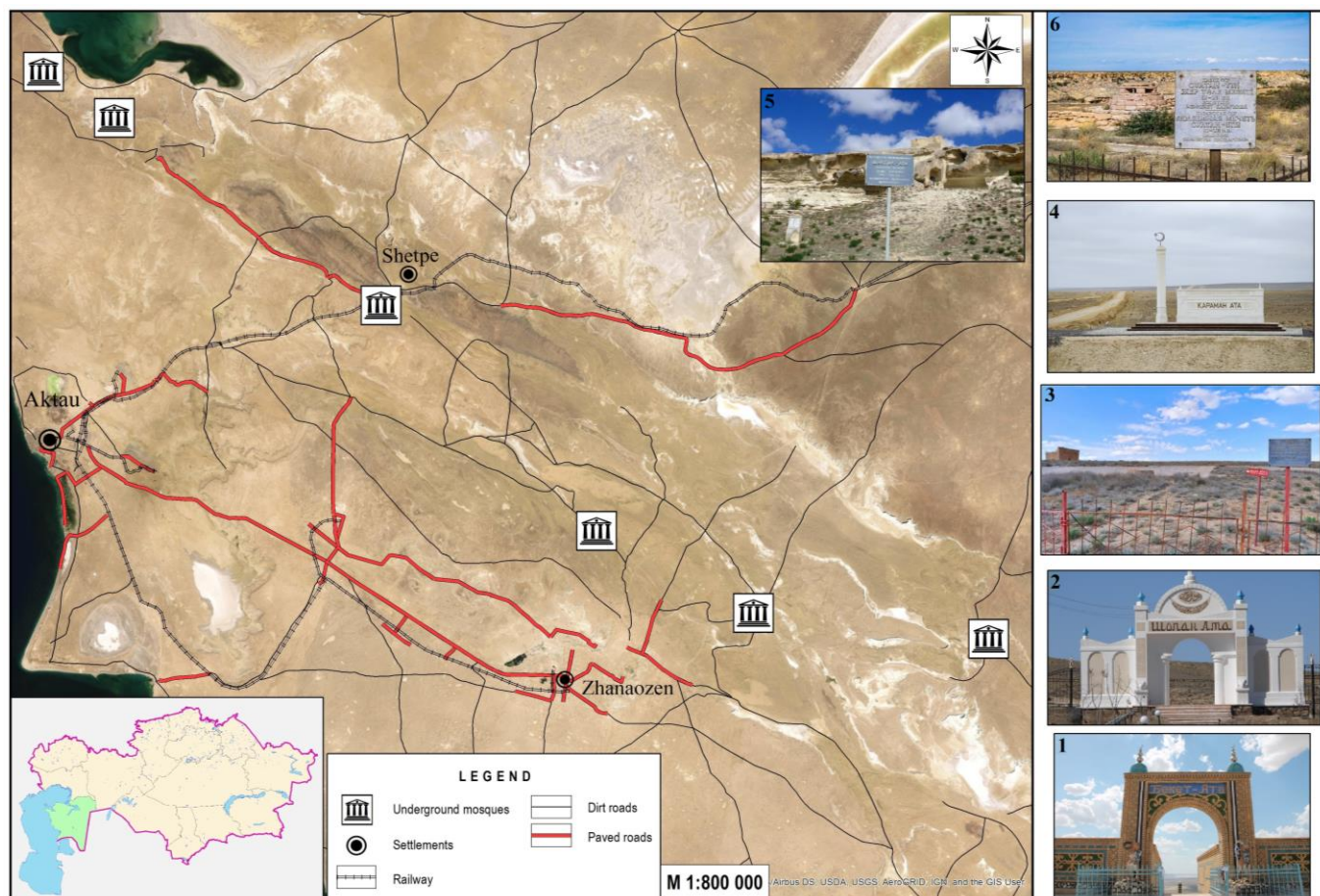


Figure 2. Sacred places of Mangystau (objects described in the document are indicated in red 1-underground mosque Beket Ata; 2- underground mosque Shopan Ata; 3- underground mosque Masat Ata; 4- underground mosque Karaman Ata; 5 underground mosque Shapkap Ata; 6- Sultan Epe)



Figure 3. Underground mosque Shopan ata on the left is the entrance of the Shopan ata mosque; right inside the Shopan ata mosque

During his life, he built four mosques in places of seasonal migrations of his kind. He was buried in the last underground mosque, carved into the high rock of the Oglandy tract. This mosque is considered its largest architectural building of the XIX century (Taimagambetov and Mamirov, 2012), later, which later became a center of pilgrimage and excursions, despite its inaccessibility (Figure 4).



a



b

Figure 4. Underground mosque Beket Ata - a) Type from afar underground mosque Beket Ata
b) Types of close underground mosque Beket Ata

Currently, the Beket Ata complex consists of two buildings: a guest house and the mosque itself. The guest house is located on the very edge of the plateau, in front of the descent to the mosque. Before going down to the mosque, you need to take a bath. The way to the mosque lies through a descent into a deep ravine with a depth of 1500 meters along a path made of shell tiles. The length of the descent is about 1.5 km. Below in the gorge, surrounded by steep rocks, there is a small oasis. The mosque is located in the rocky outcrops of soft chalk rocks of the Western Chinks, rising to a height of 10 m. The original appearance of the mosque is well preserved. The mosque consists of four interconnected rooms. The main room of the mosque is round in plan, the ceiling has the shape of a flat dome, which is illuminated by a skylight pierced in the center with a diameter of 1.5 m. Through this hole a wooden staff of Beket ata is installed, which determines the degree of its holiness. In general, the interior imitates the Kazakh yurt. The area of the room is about 10 sq.m. From this room, exits lead to an oval-shaped western room measuring 5x3 m, where there is a prayer hall with a mihrab on the south wall. On the southeast side there are two rooms, in one of them Beket ata himself is buried, in the other room the ashes of Akkuash, his sister are placed, where only women are allowed to tell about their difficulties and ask for help. The height of the rooms ranges from 2.5 to 3.0-3.5 m. The walls with several flat

niches for lamps are smoothly hewn. The floors in the rooms are leveled. Taking pictures or filming videos inside the mosque is prohibited, so no photos exist about the inner architecture of the mosque. There is an unusual acoustics of the mosque, through which the amazing audibility of the prayers being recited in all rooms is transmitted. There is no draft in the rooms, even with open doors. The strengthening of the entrance part of the retaining wall and the deep laying of the premises ensured the safety of this mosque, in contrast to other underground mosques.

Karaman-ata underground mosque (N 44° 06'07.83", E 52° 06'36.21") is located in the central part of the Mangyshlak peninsula, in the Mangistau region, 5 km west of the Kandybas tract. Karaman-Ata was one of three hundred missionaries who came to Mangyshlak to spread Sufism. Karaman - ata contains characteristic burial and cult structures: an underground mosque and a necropolis. The mosque consists of three main premises (Figure 5). This is the entrance room, the north-western wall of which collapsed and filled up the corridor, turning it into a gentle ramp, and the long room of the prayer hall, stretching from southeast to north-west (23 x 6 m), the western wall of which is slightly rounded.



Figure 5. Underground mosque Karaman ata: on the left figure is the entrance of the Karaman ata mosque; right figure inside the Karaman ata mosque

The ceiling of the prayer hall is supported by two one-piece and three man-made columns. To illuminate the room, two circular light openings have been cut through the ceiling. The rooms are connected by a long corridor. The ceiling height in all rooms is low. The floors are covered with an alluvial mass of clay and sand that got in with water through the entrances and interstratal cracks in the soil. In the northeastern part of the mosque, there is a third round-shaped room, in which, according to legend, the crypt of Karaman ata is located. The general neglected state, apparently, is explained by the remoteness of the monument from settlements. This settlement is the only underground mosque of the XIII century, completely located underground. Kazakhs and Turkmens, who lived in Mangyshlak, considered the territory of the necropolis to be sacred land. All bloodshed was prohibited here, and in the event of conflicts, peace negotiations were held and oaths of purification were taken. At present, the main part of the Karaman-ata necropolis is surrounded by a metal fence. In the southwestern part, behind the fences of the necropolis, there are tombstones dating from the VIII - IX centuries, which are also an integral part of the monument. The total area of the protected area is 7.2 hectares. The pilgrimage to the necropolis and mosque continues to this day. A house is built not far from the pilgrims' complex.

Shakpak-ata underground mosque (N44 ° 26'0.67", E51° 8'20.40") is located 90 km north of the city of Aktau. The Shakpak ata mosque appeared in the X century. Then the existing underground temple was rebuilt in accordance with the new religion: a mihrab niche and cells for hermit monks were cut down in the western wing of the cave; in the niches on both sides of the entrance portal, depressions were cut for the burial of dervishes. The mosque acquired its appearance close to the present in the XIII — XV centuries (Baypakov, 2012). The mosque is located in the northeastern part of the Tupkaragan peninsula, along the slope of the chalk mountain Ungazy. Shakpak ata means "old man-flint", he is one of 360 saints who promoted Sufism, practiced healing magic. The Shakpak ata mosque, which has the shape of a Latin cross in its plan, was carved out in the thickness of a rocky promontory formed by the channels of two ravines descending along the slope of Mount Ungazy from the south to the northwest, to the Sarytas bay of the Caspian Sea (Figure 6).

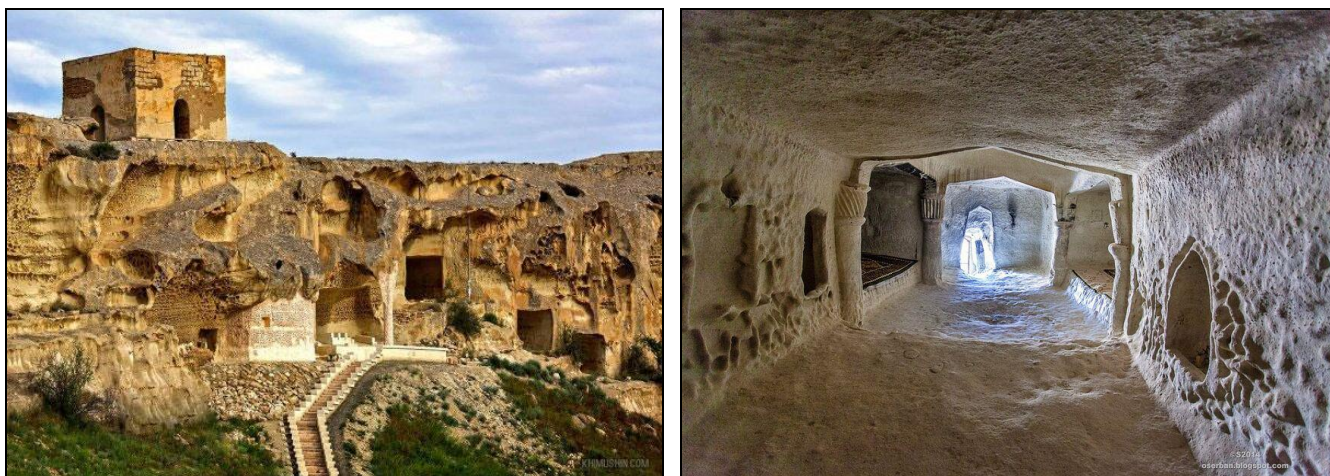


Figure 6. Underground mosque Shakpak ata: on the left figure is the entrance of the Shakpak ata mosque; right figure inside the Shakpak ata mosque

At the ends of the long branch of the cross, stretching from west to east, there are two entrances to the mosque: the western one, to which a staircase carved into the rock leads, and the eastern one, which has a service purpose. The portal niche of the main entrance has the shape of a triangular arch. Below, to the right and to the left of the entrance, there are burial niches, reinforced from below by retaining walls. Behind the doorway and the short passage behind it, there is a spacious 5 x 3 m room, the floor and ceiling of which are lowered towards the entrance. The transverse part of the cross is located closer to the western entrance of the mosque. The center of the room has a shape close to a square, the area is slightly more than 20 square meters, highlighted by a hemispherical dome and four corner columns. Between the columns there is an elliptical arch like. A skylight with a diameter of more than 1 m and a height of about 5 meters was cut down at the zenith of the dome. Outside, a square pavilion was erected above it, which served as protection from atmospheric precipitation and a minaret tower. At present, its upper part is destroyed, the height of the preserved walls is 4 meters.

The upper part of the room and the stairs leading upwards are destroyed. There are three window openings covered with arches, some parts are laid. The ends of the transverse hall are spacious rooms separated from the central room and slightly raised above the floor level of the central hall. The interior of the mosque has no decorative elements, except for the columns and arches of the main room. The Shakpak Ata Mosque is one of the most ancient underground structures, where columns and capitals were first used. In general, the columns, arch and domed vault organize the interior of the mosque into a single complex with a well-thought-out strict layout. The walls of two rooms and side rooms are aligned, which contain many inscriptions at different times, drawings of animals, open palms (a symbol of greeting), and plant patterns. Among the Sufis, the image of palms is considered a talisman that protects a sacred place and all those entering from impure forces. It is a symbol of touch, energy exchange, which is characteristic of the healing traditions in paganism. There are also Arabic hieroglyphs, which in translation are read as the names of 40 Sufi disciples buried in the vicinity of the mosque.

In Shakpak ata underground mosque there is an extraordinary acoustics in all rooms, no matter how many people are in them, everyone can hear the prayer readings alike. Places associated with the memory of Shakpak ata are surrounded by an aura of mystery and enigma. Immediately you find yourself in another dimension of time and space, life and death. The entire mosque is located in a monolith "underground", they acted more like sculptures, and not like builders. In the concept of the temple carved into the rock, the ancient idea of the complete merging of the temple-sanctuary with nature found expression. The mosque is very unique in every detail, and so far the only one discovered and explored on the territory of Kazakhstan and Central Asia (Astafiev and Petrov, 2017).

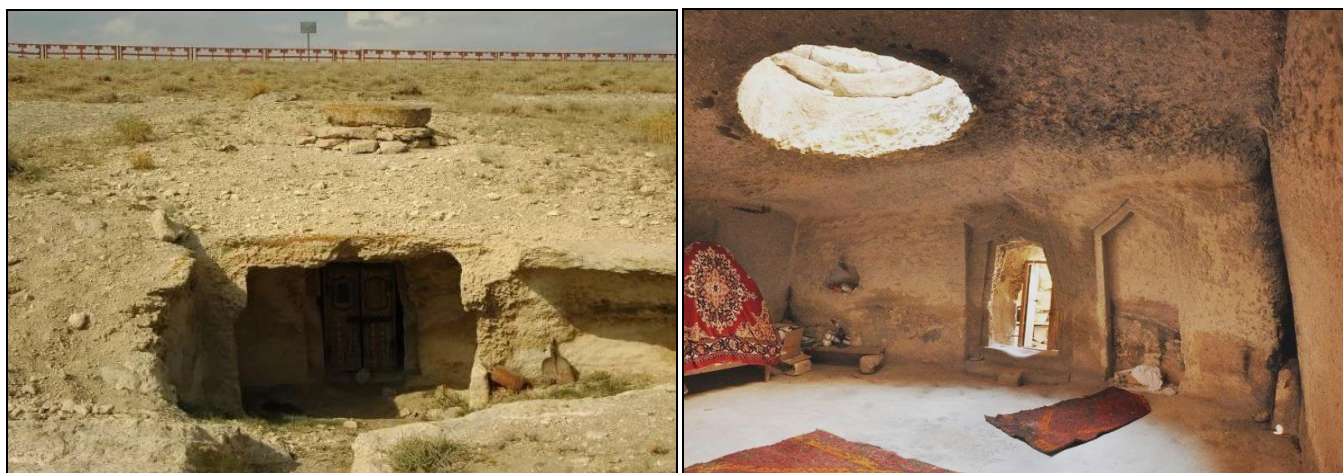


Figure 7. Underground mosque Masat Ata: on the left figure is the entrance of the Masat ata mosque (<https://ruh.kz/geo/mangystau/masatata/>); right figure inside the Masat ata mosque

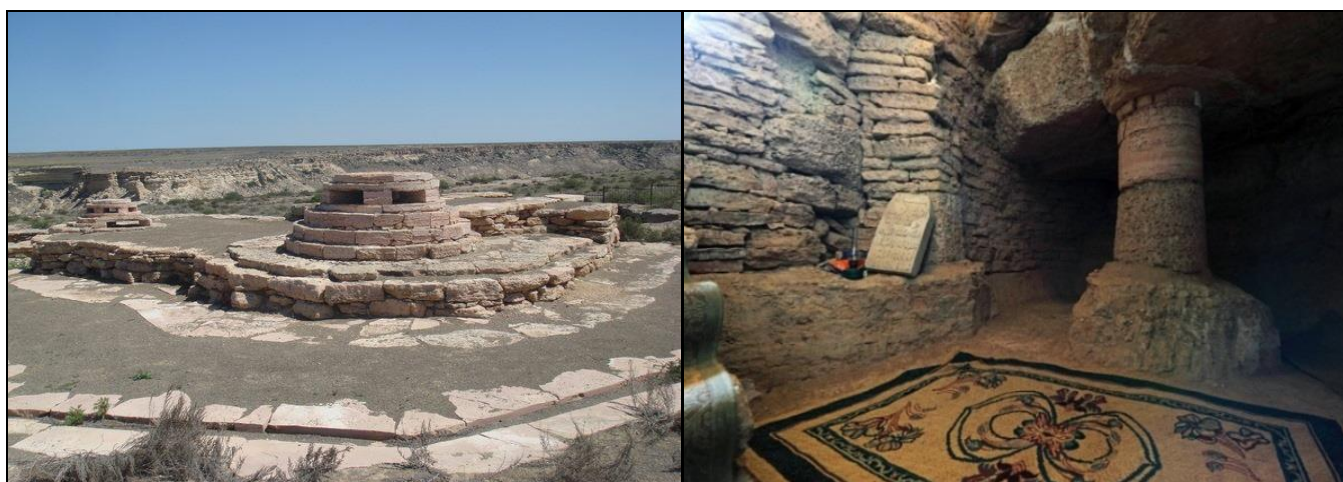


Figure 8. Underground mosque Sultan Epe: on the left figure is the entrance of the Sultan Epe mosque; right figure inside the Sultan Epe mosque

Masat ata underground mosque (N 43°41' 37.58", E 52°52' 56.33") is located 130 km east of the regional center Aktau. Next to the underground mosque is the Masat aty necropolis. The necropolis contains about 1000 different ancient burials dating back to the XIV-XVII centuries (Baypakov, 2012). The mosque, in comparison with other architectural monuments, has been well preserved, its original appearance has not been destroyed (XVIII-XIX centuries). The underground mosque was carved into dense sandstone. The entrance to the cave is supported on both sides by shell bricks, apparently due to subsidence. The interior of the mosque is shaped like a yurt like other

mosques. The main room is quite spacious, 8x4 in size, 2.5-2.8 meters high. Above, in the center, there is a round light opening with a diameter of just over 2 meters, perhaps this is an unfinished building of the room, since the openings in many mosques have a diameter of no more than one meter, mainly for light penetration. The walls of the mosque are not finished, rough, in some places niches of shallow depth are carved out. From the entrance to the left in the wall, a mihrab is knocked out to the entire height of the wall in the form of an arrow, indicating the direction towards Mecca, those who wish can pray. The floor of the room is made of clay and covered with small woolen rugs - koshma. Next to the mosque, on a flat stone, there is a trail in the form of a drain, more than 10 meters long, leading to an abandoned well, the water of which may have been used for household needs (Figure 7).

There are many folk legends about Masat ata (Kondybai, 2008a.). One of the folk legends speaks of the ability of Masat ata to fly. Another tells about a legend, when Masat ata performed namaz, the enemy caught him by surprise, sneaking up and chopped off his head.

Nature, indignant at this insidious act, reacted by the fact that the earth began to melt, despite the fact that Masat ata was headless, he got up, jumped on a horse, took a few steps on the molten stones and disappeared, so the burial of Masat ata does not exist. But his footprints and the footprints of his horse were imprinted on the stone, and where they end there is an underground mosque. In this matter, we do not want to prove scientifically that these are the same traces or not, but the fact is that they still exist. But the question arises of how these traces could have remained on the stone, here we must not forget about the higher forces of nature, which are sometimes not comprehensible to the human mind. Currently, the Masat Ata monument has been protected by the state since 1982.

Sultan epe underground mosque (N 44°28' 18.97", E 51°0' 36.72") is located in the Sarytas Bay, 95 km north-east of the city of Aktau. Sultan-epe is the son of the well-known Central Asian mystic poet Hakim-ata (Suleiman Bakyrqani), a student of Ahmed Yassau and Ambar-ana. According to legend, Sultan-epe is the patron saint of people drowning in the water and fishermen. According to some sources, it is known that he lived in the XII-XIII centuries. The underground mosque was built in the XVI century by the boy Khairulla, a student of a Sufi, to whom Sultan-epe appeared in a dream and promised that on his behalf the stones would themselves fold into the building (Kondybai, 2008a). Indeed, the stones of the mosque look simply folded without mortar (Figure 8). The mosque consists of 9 rooms with stone and skylights, as well as small rooms. The entrance hall ends with a kind of steep staircase, made of raw stone slabs of various sizes. The height of the stairs is about 2 meters. The staircase descends into a small rectangular hall with a height of 3 meters, the walls of which are made of soft marly clay with a high vault and a skylight that leads to a narrow room. The complex has three skylights, two round in plan, and the third square. The floor was a dense layer of reddish clay with calcareous rubble or the surface of the next rock layer. The thickness of the layer of marly clay is 0.1 - 1 m, which determines the height of the underground galleries. Structurally, the mosque was built into the sides of the channel on the surface of the previously settled slabs, while when creating the underground part, the ends of the slabs served as the walls of the galleries. In some places, these walls were propped up to the mainland surface by masonry for resistance from further subsidence.

There is a gorge with steep rocks next to the mosque. In warm weather, it is covered with green thickets and filled with the chirping of birds. Near the cliff there is a well with a depth of 8 m, with cold and clear water. Here the Guardian of Water - the spirit of Water "dwells", therefore, when there was a shortage of water in this region, there was always water in the well. The Sultan epe underground mosque is an ancient holy place of worship for local residents. His remains rest near the Caspian Sea between the areas of Ashymuryn and Oira.

CONCLUSION

There are many different religions in the world, each of which has its own history and has a countless number of monuments and attractions. The underground mosques of Mangistau are phenomena that reflect the genesis of the development of art and the culture of the Kazakh people. These ancestral cult buildings served as symbols of generic unity for the transmission of the noble spirit of the clan to descendants in the future. They connected the transfer of qualities from ancestors to descendants with a single network and created conditions for the continuity of different generations. Through them life experience and knowledge are transmitted, they were and are light landmarks for those who were, are on the way, and will still travel in the future, because visiting these graves is a kind of ritual, which is accompanied by the reading of prayers and surahs from the Koran and this rite has been passed down from generation to generation for many centuries.

The authorities of the Mangistau region are working on the preparation of a dossier for nominating underground mosques to the UNESCO World Heritage List. The requirements for the selection of monuments to the World Heritage List, which already contains more than a thousand sites from 167 countries of the world, have become much stricter. Among them, the inconclusiveness of the wording and insufficient evidence of the outstanding value of the candidate objects, the lack of integrity and authenticity, the lack of an effective security and management system can be presented as a reason for rejecting the nomination or returning it for revision. Besides, these underground mosques are located far from the city, at a distance of 60 to almost 300 km and only some have infrastructure (Beket-ata and Shopan-ata).

Thus, based on the study of underground mosques in Mangystau, the following conclusions can be drawn:

- Mangystau region differs from other regions in that it has the largest number of historical sites and places of worship in Kazakhstan;
- underground mosques are monuments of religious architecture of the region, some of which are known outside the country (Beket ata);
- underground structures differ in the time of construction (from the XII to the XIX centuries), and the internal structure of the premises were used as a mosque or madrasah because of the presence of a mihrab and a prayer room;
- all underground mosques are under state protection.

For the development of religious tourism it is necessary:

- to use underground mosques with other types of tourism (with business and educational, scientific tourism) to create interest to these places;
- to create a program for the development of infrastructure (a highway, hotels, souvenir shops);
- participation and active role of local authorities in supporting religious tourism;
- attracting commercial structures, entrepreneurs and other citizens interested in the development of tourism business, not only to Beket ata and Shopan ata, but to other underground mosques that can bring income. Religious tourism does not depend on the time of year and holds a great interest among the population, as epochs change, ideologies collapse.

Left by the authorities without moral care, people turn to spirituality, which, most often, leads them to the mosque. Religion, penetrating deeply into social life, opens up new opportunities for tourist flows that "can meet the needs of both believers and other tourists".

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COOKED RICE INNOVATION TO INCREASE THE TOURISM ATTRACTION OF PINDUL CAVE

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Abstract: Food tourism has a vital role in sustainable tourism. However, there are still many local culinary products that have not been widely requested by tourists. This study aims to find a recipe for rice product innovation as one of the culinary icons in Pindul Cave, to find out people's acceptance of nasi pindul (pindul rice). This research uses a research and development approach from Borg and Gall, which is simplified into three steps. The first step, preliminary study to identify various rice recipes, then analyzed through FGD with expert judgment. The FGD produced three rice recipes that could be developed. Through expert opinion, one relevant recipe is chosen to be developed. The second step, development of the recipe chosen with the substitution of local ingredients namely cassava. The last step, testing the recipe with a sensory test and customer satisfaction test. The results of the study revealed that innovation in culinary products in Pindul Cave Tourism is Pindul Rice. Pindul rice is made from savory white rice mixed with grated cassava, wrapped in leaves and grilled, with a side dish of fried or roasted chicken side dish, supplemented with chili sauce and raw vegetables. Reasons for choosing cassava as a mixture in pindul rice are cassava as a local food that is easily obtained, cheap, easy to process; can improve the business and competitiveness of culinary businesses; and pindul rice has the potential to become a culinary icon of Pindul Cave tourism which have impact increase the selling price of cassava and finally improve the welfare of the surrounding community. It could be interpreted from its research that pindul rice can be accepted and have a big potential to be liked by tourists based on a sensory perspective.

Key words: culinary, tourism, innovation, food tourism

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INTRODUCTION

The development of Goa Pindul (Pindul Cave) tourism, a tourist destination in the Special Province of Yogyakarta, Indonesia, has increased local economic activities. One of the benefits is providing opportunities and employment for the community by developing local culinary entrepreneurs. However, local food products do not yet have a clear market segment. Therefore, it is necessary to create culinary products. Zainal et al. (2010) explained that the demand for tourists for authentic flavors and culinary experiences had become a primary attraction. In practice, tourism objects seek to develop their unique identity and distinctiveness. This trend can be seen from most of the attractions that have made a pretty hard effort to promote their local culinary so that it becomes a cultural development activity that is its mainstay (Zainal et al., 2010). The development of rice-based culinary products in this research is based on menus that have been commonly served in Pindul Cave. However, the food menu does not show location characteristics. Rice served as in general, and the difference is only in the presentation of vegetables and side dishes that use traditional food menus that are still simple.

This is not in line with the increasingly critical demands of consumers about food. Soeroso and Susilo (2014), in their research results, explained that people who travel prefer to eat dinner outside the hotel to see the city (90.67%) and enjoy local Indonesian specialties (82.67%) (Figure 1). Consumers are accustomed to demanding special food menus, immortalized, and then uploaded on social media. Nelson (2016) culinary tourism, describes a trip that is motivated by the interest of tourists in finding out about the special food that is in that place. Some tourists argue that culinary tourism provides the primary motivation and is part of the hope that tourists can visit to enjoy culinary.

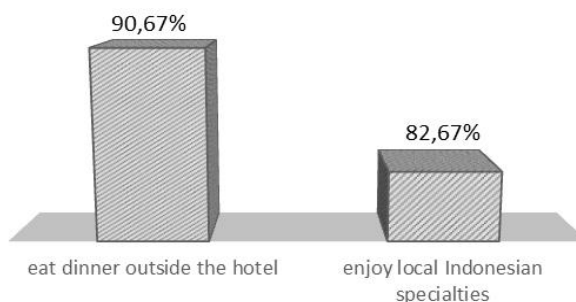


Figure 1. The prefer to eat dinner consumers (Source: Soeroso and Susilo, 2014)

According to Miroso and Lawson (2012), despite the increase in local food and food-related behavior in general, the development of local food is currently minimal. Previous research has investigated that increasing food and domestic tourism is influenced by several perspectives, such as culture, environment, and others (Björk and Kauppinen-Räsänen, 2014). This opportunity makes the potential for the development of local culinary combined with the right processing techniques. Therefore, food providers are demanded to be creative and

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always innovate in serving their food menu. Karim et al. (2017) show the benefits of culinary imagery are very positive, and it is a challenge to develop these images in terms of promotion, information dissemination, education, and acceptance among consumers. The quality of food taste, sensory aspects of food, and the variety of food served are fundamental to creating attraction. In addition to the value of taste, health value is also an essential consideration for tourists to choose food (Kim and Eves, 2012). Local food is food that is produced and developed following the potential and resources of the region and local culture. Regional food diversity currently has great potential to be developed into a culinary business based on economic potential. The experience of feeling originality, novelty, and locality is an essential aspect of the food experience (Sthapit et al., 2017). Food experience for tourists is not a supportive experience but is the culmination of the experience (Mahfud et al., 2018; Mahfud et al., 2019; Zhang et al., 2019). The attention of residents and tourists shows an increasing interest in locally grown and produced food (Ritchie and Tung, 2011). Silkes et al. (2013) found that tourists' strong appreciation of the local food experience gave rise to its charm. The experience gained through local food enhances a strong impression of the destinations visited.

Gunung Kidul has local food potential, which is considered capable of increasing the economic value of the community. Gunung Kidul area, in general, has local food potential in the form of cassava, *canna edulis*, and other types of cassava (Natalia, 2015). The popularity of local food has grown substantially in the last decade (Bianchi, 2017), so that it hopes to foster creativity in new food products based on local ingredients. Cultivating creativity in food processing occurs through a continuous learning process. This means that self-awareness must be raised to the mastery of knowledge, skills, attitudes, or affective as the power to change, or grow human resources development. In this way, the food organizer will have the strength to develop a better food business, mastery of culinary work more professionally, and perseverance to succeed. The main motive for eating can be classified into three forms, namely culinary tourism, gastronomy, and nature. Food as a secondary motive is known as culinary tourism (Yusoff, 2019).

Things that can be used as a basis for consideration in developing culinary is the need to know how the tendency of consumer behavior towards food. Sam (2015), states that five main trends can influence consumer behavior towards food. The five trends are: 1) from mass-produced to personalized. Generally, consumers want products that are processed by a small scale to ensure quality and to feel a closer relationship with the brand they choose, 2) better-for-you ingredients. Consumers will always increase their concern for the ingredients, 3) all things hot and spicy. The tastes of consumers towards food that tend to be tasty and spicy, 4) mix-and-match your favorite flavors. Consumers will look for exciting products, which are favored foods and have a mixture of flavors, 5) packaging drives the sensory experience. Another package from another, which provides a unique and powerful sensory experience (Choe and Kim, 2018).

An essential factor for the success of culinary activities or food products is one of them through recipes. The recipe gives careful and precise instructions on various matters, including composition and proportion of ingredients, how to treat the ingredients, techniques used, and work procedures used. The goal is so that people, in general, can do the same thing as desired recipes (Hamidah and Komariah, 2013). Mak et al. (2012), several things that determine the factors that influence consuming local food are cultural and religious factors, socio-demographic, motivation, personality, and experience. It is also recognized in several studies that food selection is influenced by cultural and religious background (halal food). The local food consumption model according to Kim et al. (2009) is divided into sub-factors; motivational factors (exciting experiences, escape from routine, health problems, learning knowledge, authentic experiences, togetherness, sensual attraction), demographic factors (sex, age, education), physiological factors. The value of taste or quality of local food, emotional value, and epistemic value has a positive effect on tourists for local food so that it will affect tourist destinations for culinary tourism (Choe and Kim, 2018). Of the many articles that have been published, research on rice development to support local tourism is still minimal. Research on this continues to be done to increase the amount of variety and quality of local food as a significant supporter of domestic tourism.

To maintain quality and produce foods that are relatively awake from time to time, required a standard recipe. Standard recipes will determine the standard of taste, appearance, portion, and other provisions. The function of a standard recipe is so that consumers get the same food state over time, quality, and satisfaction. The perception of food quality for consumers is a natural and healthy food processing process (Grunert and Aachmann, 2016). The purpose of developing this rice is to raise the image of local food so that it stands parallel to the staple food menu of the community. This effort also aims to develop products as culinary icons of the Pindul cave in the Special Province of Yogyakarta, Indonesia, which needs support from the tertiary institution as a co-partner.

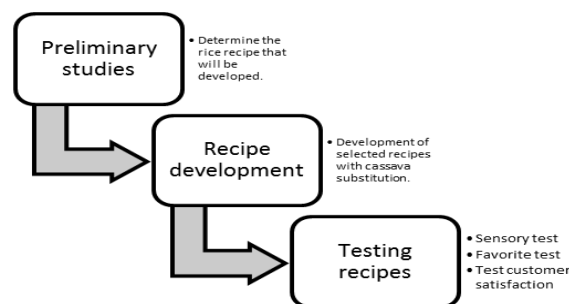


Figure 2. Cooked Rice development model as one of the Pindul cave tourism icons (Data source: Primary data)

MATERIAL AND METHODS

The research model of the development of a local food-based culinary business uses an Research and Development approach from Borg and Gall which was simplified by Sukmadinata (2008), this research was carried out in 3 steps (Figure 2): 1) a preliminary study by identifying various rice recipes. Then the recipe is analyzed through Forum Group Discussion activities with expert lecturers and resource persons. Output in the form of three rice recipes that can be developed. Through a literature study, food potential and advice from experts were chosen one relevant recipe for development, 2) Development of the recipe chosen with the substitution of local ingredients in the form of cassava. Cassava was selected because of its abundant potential, cheap, and easy to obtain. 3) Testing recipes with sensory tests and customer satisfaction tests. Test the results of development using experiments and analyzed through the Focus Group Discussion. The research output is a recipe for developing rice with the support of process technology and products.

There are several models that can be used as a Research and Development model. The Research and Development model whose main activities are taken from Richey and Klein, 2009. The basic assumption of development is because the research aims to obtain the recipe for the development of pindul rice with the support of process and product technology. Respondents are women who are members of the Family Welfare Empowerment group which is part of the Pindul Cave management, catering lecturers, and managing the Pindul Cave tourism object. Focus Group Discussion was conducted three times guided by open instruments. The data obtained were semi-structured in the form of conclusions from the active participation of participants during the discussion.

RESULTS

Preliminary studies

Through preliminary studies, the research team has identified rice recipes that will be used for development. The recipe collected was analyzed through the Focus Group Discussion (FGD) activity to find three relevant recipes to be developed. The FGD involved a research team, food lecturers, experts, and leaders in Pindul Cave. The three FGD recipe results are then analyzed again based on strengths, weaknesses, development opportunities, and expert advice based on consumer demand today. The FG results are in the form of a recipe that has been through an analysis process whose results indicate that the formula is indeed relevant to be developed and easily adapted by the community for their culinary business.

Recipe Development

The recipe selected was based on analysis, and FGD was developed by substituting local ingredients. The substitution material used is cassava. This selection is because cassava is easy to find and low prices. The development of this recipe also aims to find a new standard innovation rice recipe as a culinary icon of Goa Pindul tourism. This recipe is made with an excellent proportion and composition of ingredients. The hope is to become a standard recipe so that it can be easily adapted by local culinary entrepreneurs, raising the level of local food, and empowering local people.

Pindul Rice Recipe Design

The design of this recipe design aims to create a new standard recipe for Pindul Rice by using local raw materials. The results of this new recipe design there are several choices, namely a) Savory red rice mixed with grated cassava, wrapped in banana leaves and burned; b) Savory white rice mixed with grated cassava, wrapped in banana leaves and baked; c) Non-savory red rice mixed with grated cassava and filled with spicy anchovies, wrapped in banana leaves and baked d) Non-savory white rice mixed with grated cassava and filled with spicy anchovies, wrapped in banana leaves and baked. The composition of the boiled rice testing material can be seen in Table 1.

Table 1. The composition of Pindul rice innovation ingredients

Pindul Rice 1	Pindul Rice 2	Pindul Rice 3	Pindul Rice 4
Savory red rice mixed with grated cassava	Savory white rice mixed with grated cassava	Non-savory red rice mixed with grated cassava and filled with spicy anchovies	Non-savory white rice mixed with grated cassava and filled with spicy anchovies
			

The results of the study showed that Pindul Rice 1 had a composition of ingredients in the form of brown rice, savory from coconut milk, and grated cassava. The advantages of brown rice are low sugar, but the texture is hard, the taste is less savory, and coconut milk is less pervasive. Grated cassava is very visible, so the color contrasts with rice. Not everyone likes brown rice. In the aspect of the portion is considered too large. Therefore, the first recipe Pindul rice is deemed to be inappropriate as the standard recipe for Pindul rice. Also, Pindul rice 2 has a composition of ingredients such as savory white rice and grated cassava. The advantage of the Pindul rice two recipes is the taste is almost the same as tasty rice in general. The color of white rice camouflages grated cassava color. The use of coconut milk gives a savory flavor. In the aspect of texture, this recipe produces a soft and fragrant texture. By considering the results of the assessment, the recipe two rice recipe is deemed to be appropriate as a standard recipe. The results of the study on the third recipe (rice pindul 3) showed that Pindul rice 3 had a composition of non-savory red rice filled with anchovies chili. The combination of brown rice and anchovy chili is considered not suitable when viewed from the aspect of taste. Besides, Pindul rice 3 is considered to have a hard texture, spicy flavor, and too large portions. Thus, Pindul rice 3 is not suitable if used as a standard recipe. Other findings, Pindul rice 4 has characteristics almost similar to white rice in general. So this recipe gives the impression there is no innovation from the recipe in general because it is considered the same as white rice. Therefore, Pindul rice 4 recipe is deemed not suitable if it will be used as a standard recipe for culinary cave tourism.

Construction Technology

The intended technology constructs are standard processing techniques concerning tools, fireplaces, time, final results, and presentation. This is intended to maintain the quality of the product from time to time, or what is known as the production management of Pindul rice products.

Food Business Constructions

The food business that will be developed is to develop existing food businesses. This means that food businesses that are already underway are being developed further for the better, the application of sanitation and hygiene, and an attractive presentation. Culinary development efforts by combining the views of the community with suggestions from researchers then formulated and obtained the right design as a food business construct. The goal is to standardize and facilitate adoption by culinary entrepreneurs, especially local mothers' groups.

DISCUSSION

Description of Location of Gunungkidul Regency

Gunungkidul Regency is one of the districts in the Yogyakarta Special Region Province. As the largest regency in the province of Yogyakarta, Gunungkidul Regency has enormous natural tourism potential to be preserved and used for the welfare of the people. Most of the regencies located in the south of Yogyakarta are highlands. Gunungkidul Regency is located between 110 ° 21'-110 ° 50 East Longitude and 7 ° 46' - 8 ° 09 South Latitude. The North is bordered by Klaten Regency and Sukoharjo Regency, Central Java Province, the South is bordered by the Indonesian Ocean, and the West is bordered by Bantul Regency and Sleman Regency, and in the East it borders Wonogiri Regency, Central Java Province. Gunungkidul Regency has an area of approximately 94 1,485.36 Km or ± 46.63% and the total area of Yogyakarta .

Pindul cave is a tourist attraction which is located in Bejiharjo sub-district pindul cave is a tourist attraction which is an attraction from every direction. In addition to natural tourism, the Pindul cave also provides culinary tours which have become a typical icon of the area. Many tourists are interested in visiting Pindul cave. Access is easy to reach and prices are still relatively cheap so that many tourists visit. Most of the tourists will visit and visit on a trip. The type of tourism that is mostly carried out during their stay is community-based tourism, as well as sun. Findings useful for organizations working with volunteers to include in their programs (Carvache-Franco et al., 2019).

Pindul Rice Development

The development of rice is more about empowering the potential resources of the culinary business so that it grows into a more advanced culinary business, easier to control products and services according to predetermined standards. The patterns chosen are: emphasizing the learning process, interactive participation, treating culinary business groups as partnerships and giving a big role to change and encouraging the emergence of creative ideas for culinary development based on local food into superior culinary support for tourism.

Through trials in the Laboratory of Culinary Education, Universitas Negeri Yogyakarta found recipes that were not much different from the initial construct. When testing products in the field, get advice in the form of a) Pindul Rice Products are excellent, and portions need to be adjusted to prices and consumers. b) It has been mutually agreed between researchers and food businesses that the superior product of rice is savory white rice mixed with grated cassava, wrapped in leaves and burned. c) flattened rice menu Pindul, namely: rice pindul served with side dishes in the form of tilapia, catfish, and chicken with fried or grilled techniques, supplemented with sambal and raw vegetables. d) Pindul Rice Products have been tested with limited consumers. Sensory test results and customer satisfaction tests can be seen in Table 2. Based on sensory test results, it is known that the characteristics of rice pindul in terms of color has an average of 3.41. Pindul rice is considered to have met the criteria of respondents in terms of color. In terms of flavor, an average of 3.88 was obtained, which means that the respondent could accept and like boiled rice from its flavor. Texture gained an average of 3.06.

The taste of pindul rice two (recipe 2) was very favored by respondents, which were indicated by the average obtained at 4. Overall, the average was 3.94. It can be concluded that pindul rice can be accepted and liked by respondents in terms of sensory. That is because Gunung Kidul District has six food crop commodities, namely rice, cassava, corn, beans, and soybeans (Figure 5). Of the six products, cassava ranks third with 45,350 hectares, and almost all regions have yields of cassava.

Table 2. Sensory test results for Pindul rice 2 (Data source: Primary data)

Characteristics	Mean	Note
Color	3.41	Like
Flavor	3.88	Like
Texture	3.06	Like
Taste	4	Very Liked
Total	3.94	Like

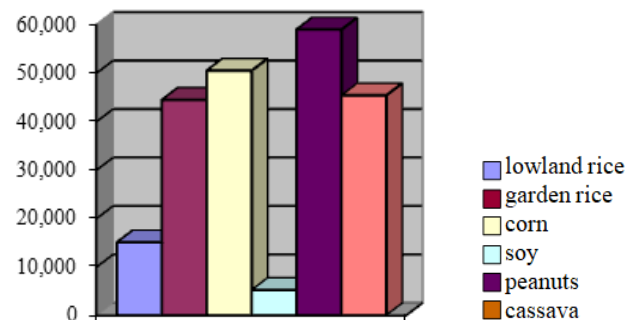


Figure 3. Diagram of Harvest Area in Food Crops in Gunung Kidul District, 2019 (Source: Gunung Kidul Central Bureau of Statistics, 2019)

Table 3. Test results for preference for pindul rice and Tilapia (Data source: Primary data)

Characteristics	Mean	Note
Color	2	Dislike
Taste	2.75	Dislike
Texture	3.5	Like
Flavor	3.5	Like

Table 4. Test results for preference for Pindul rice and catfish

Characteristics	Mean	Note
Color	3	Like
Taste	2.88	Dislike
Texture	2.67	Dislike
Flavor	2.83	Dislike

Sensory test results and customer satisfaction are supported by a favorite test on a side dish that is tilapia with fried or grilled techniques equipped with raw vegetables, and chili sauce is presented in the Table 3.

Preference test on tilapia as a companion menu for rice spinners can be seen that the characteristics of tilapia in terms of color have a mean of 2. Tilapia is considered by respondents not to meet the criteria to be liked. The taste aspect has an average of 2.75. Meanwhile, the Aspect of texture and aroma have the highest rating acquisition of 3.5. This is one proof that the pattern of fish consumption in DIY is still in the low category. Based on data from the Department of Maritime Affairs and Fisheries, Indonesia only consumes fish as much as 50.49 kilograms (kg) per capita per year from the target of 54 kg. Whereas in the Yogyakarta area, in 2019, the level of fish consumption is only 24.05 kg per capita per year. Compared to Japan, the level of fish consumption is 100 kg per capita per year. The level of fish consumption in Indonesia still lags far below other countries that have small fisheries resources. Nations in Asia that consume more fish than other nations that have an extreme level of work ethic, as shown by Japan and South Korea, are always showing their innovations in various fields (Djunaidah, 2017). Therefore, a breakthrough is needed to support government programs to increase fish consumption.

Preference test, Catfish, is considered to have met the criteria in terms of color as a complementary menu of pindul rice. This is proven by an average gain of 3. But in terms of taste, texture, and aroma with each average of 2.88, 2.67, and 2.83 were assessed by respondents as not being able to meet the criteria to be liked (Table 4). Preference test results, it can be seen that the color aspect has an average value of 2.88, megona, or vegetable salad assessed by respondents as not fulfilling the criteria as a complementary menu of pandul rice. The aspect of taste was assessed by respondents not yet fulfilling with an average acquisition of 2.5. Meanwhile, the aspect of texture and flavor each had an average acquisition of 2.88. This value also implies the texture and flavor of megana are not preferred (Table 5).

Table 5. Test results for favorite pindul rice and vegetable salad (megana)

Characteristics	Mean	Note
Color	2.88	Dislike
Taste	2.5	Dislike
Texture	2.88	Dislike
Flavor	2.88	Dislike

Table 6. Test results for preference for pindul rice and chicken (Data source: Primary data)

Characteristics	Mean	Note
Color	2.75	Dislike
Taste	3.25	Like
Texture	3.25	Like
Flavor	3.25	Like

Preference test results, chicken dishes preferred by respondents as a complementary menu of pindul rice. This is evidenced by the average value of aspects of aroma, texture, and taste of 3.25 each. And 2.75 from the color aspect (Table 6). The side dish favorite test as a complementary menu of pindul rice can be seen that the characteristics of chicken are considered to be more preferred by consumers, this is indicated by the aspect of taste, texture and flavor preferred by an average of 3.25. Meanwhile, fish dishes are preferred from two aspects namely texture and flavor with an average of 3.5 each. Catfish dishes is only preferred in the average color aspect 3. While megana (vegetable salad) is less liked by consumers. Sensory test and preference test are supported by consumer satisfaction test which can be seen in Table 7.

Table 7. The results of customer satisfaction tests on the pindul rice (Data source: Primary data)

No.	Aspect	Mean	Max score	Achievement (%)	Rank
1.	Taste	4.47	5	89.41	1
2.	Colour	4.24	5	84.71	2
3.	Flavor	4.12	5	82.35	4
4.	Texture	4.47	5	89.41	1
5.	Form/design	4.12	5	82.35	4
6.	Portion	3.88	5	77.65	6
7.	Cooked level	4.18	5	83.53	3
8.	Packaging	4.12	5	82.35	4
9.	Deliciousness	4.06	5	81.18	5
10.	Price match	4.06	5	81.18	5
Total		41.71	50	83.41%	

Consumer satisfaction with pindul rice has reached 83.41%. Based on the achievement ranking of each item of a statement submitted, the first rank was achieved in the aspects of food flavor and food texture. Then sequentially continued with food color, cooked level, form/design, packaging. In the last rank, the elements of deliciousness and suitability of prices with food quality.

CONCLUSION

This study concludes that consumers prefer pindul rice made from savory white rice mixed with grated cassava, wrapped in leaves, and burned. The rice is rice that can be used as one of the culinary icons of Pindul cave tourism. The impact is that the tourism sector in Gunungkidul, a district of Indonesia, is increasingly known not only for its tourist attractions but also for its local culinary specialties. Culinary businesses very easily develop the results of the research because local food is plentiful, inexpensive, and easily processed. Furthermore, it will also increase the selling price of cassava for local people. Suggestions for future research include 1) the need to standardize processes to ensure consistency of product and service quality; 2) the need for sanitation hygiene training, marketing, business management, and bookkeeping to strengthen the business base of local communities.

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MODERATING EFFECT OF TECHNOLOGY READINESS ON ADOPTION OF GEOTAGGING TECHNOLOGY AMONG SOCIAL NETWORKING SITES (SNS) USERS FOR SMART TOURISM

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Abstract: More recently social networking sites (SNSs) users are extensively using the emerging geotagging technology for tourism motivation. The study aims to examine the relationship between determinants of geotagging technology and intention to adopt geotag technology as well as the extent to which technology readiness moderates the link between determinants of geotagging technology and intention to adopt geotag technology. Data were collected from a sample of 356 university students by using convenience sampling technique. Partial least square structural equation modelling has been used to measure the results. The empirical outcome uncovers that social influence, performance expectancy and facilitating condition are the factor that have direct impact on SNSs user's willingness to adopt geotag for smart tourism experience. The present paper enriches UTAUT model by understanding the association between two variables namely effort expectancy and performance expectancy as well as the moderating role of the technology readiness. The findings of the study will assist to SNSs service providers by understanding the moderating role of technology readiness in the relationship between determinants of geotagging technology and intention to adopt geotag technology.

Key words: Geotagging technology, SNSs, UTAUT, technology readiness, tourism

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INTRODUCTION

Though the information exchange was unidirectional in traditional internet systems, the flow of information is bidirectional in recent years (Öz, 2015). By the advent of Web 2.0 technology, social media has exploded as a modern, innovative and creative aspect of human life. Recently, the amount of people who are unceasingly using the internet has touched to 4.39 (57% of total population) billion in the world. 3.48 billion people are using social media actively that represent 79% of total internet users in the world. Around 94% active social media users use mobile phone to access different social networking sites (SNSs) that accounts for 3.26 billion people in the world (World Digital Report, 2019). Predominantly, the developing countries are experiencing significant usage of social media. The figure is 310 million for India, 34 million for Bangladesh, 47 million for Iran, and 6.2 million for Sri Lanka (World Digital Survey Report, 2019). This clearly means that in the developing countries such as Bangladesh, there are mere possibilities to exploit and implement the geotagging service among social network users (SNSs). In addition, social media providers offer a range of options attributable to a number of social media services such as text messenger, location-based services (LBS), social media games and social media payments. The four categories for these services are connectivity, information, entertainment and transactions. Location providers can also obtain a user site and push the related resources and information to the user depending on the customer's position across different social media services (Zhou, 2017). It will lead to better customer experience and encourage the plan to conduct (Zhou, 2013). LBS means "any operation that recognizes an entity's geography" (Junglas and Watson, 2008). A survey from Pew revealed that nearly 74% of matured mobile owners have ever utilized LBS for information such as getting road directions, using maps, and other related data (Pew Research Center, 2019).

Users of the technologies like social networking sites, location-based tracking and GPS (global positioning system) are commonly used to add or identify geolocation data with images and tags (Luo et al., 2011). More common tagging sites for location information for any user are Facebook, Instagram which are associated with their social network understanding of location (Haffner et al., 2018). Facebook, as well as a venue for improving tourist experience by presentation and self-identity, has been recognized as the biggest and fastest site for posting and sharing pictures (McLaughlin and Vitak, 2012; Rainie et al., 2012). Moreover, location becomes a commodity of its own in geo-surveillance (Rzeszewski and Luczys, 2018). In addition, there are currently no experiments in nature to examine the moderating impact of traveler technology readiness to use technology on their geographical experience. The aim of this paper is to examine the moderating impact of technology readiness and to store the research gap by using the well-known UTAUT model for embracing new technology. In this way, the research pursued two goals: to study the moderating impact of technology readiness on different connections between various constructs of a well-known theoretical model, namely UTUAT, and to define the effect of different UTUAT factors on the application of geotagging technologies among users of social networking sites. The following are the distinct parts of this study: the next section discusses literature followed by creation of hypotheses. This is accompanied by the data interpretation and discussion section. Afterward, this study offers implications for future scholars and practitioner for ongoing expansion and research of geotags. Finally, the paper ends with conclusions.

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LITERATURE REVIEW

Reviews on geotagging in social networking sites use

The websites for social networking allow users to share different content created by users, such as photography, video, email and other electronic term, these generates positive word-of-mouth. Geotagging is a service which allows the users to publish physical locations and objects that are connected through a digital process (Amitay et al., 2004; Erickson, 2009). Geographical identification metadata information (e.g. images, photos, rich site description (RSS) data, text messages, quick response (QR) codes, etc.) are incorporated into social media data by geotagging strategies (Chong et al., 2018). By the use of geo-tagging technologies, individuals will upload images to SNSs, the location of the tag and the destination of the photo to notify peer groups (Kurashima et al., 2013). Information plays a vital role to minimize the risk significantly and to make decision effectively (Lewis and Chambers, 1999). SNSs would greatly improve the data discovery expertise that help users to conduct the searching process more rapidly and efficiently, optimize and distribute the appropriate shots (Chung et al., 2017). Additionally, geotag usefulness is recognized in order to track global occurrences (Rattenbury et al., 2007) or spatial visualization of tags (Crandall et al., 2009). With the increased use of GPS monitoring systems, users can identify the position and events similar to the user's nearby locations (Zheng et al., 2010). Using SNSs, in general Facebook, users can monitor, personalize, upload and arrange their digital images using geo-tagging technologies (Hampton et al., 2012). It also enhances the exposure of posted images and provides opportunities for further distribution of visual content (Besmer and Lipford, 2010). To create a bridge between this gap, the current research selected users of SNSs using geo-tagging technologies as the target group. Moreover, the Internet has been the most powerful marketing tool for tourism businesses, as tourism has traditionally been considered the leading online retail market (Akehurst, 2009). More recently, social media offers effective and immersive tourism advertising and networking facilities (Zeng and Gerritsen, 2014). Chin et al., (2020) explored that perceived value has appropriately moderated the relationship of destination attractiveness resources and destination images. As a result, the sharing of image and location data using geo-tagging schemes has resulted in new experiences for users of social networking sites. Due to the generation of vast user-generated content (UGC) by geo-tagging technology and its close association with the tourism industry, it is clear that the adoption of geo-tagging technology for tourism experience is being investigated, in particular among users of social networking sites.

This topic is being studied in many information systems and spatial studies owing to emerging technologies. Several researcher from a range of backgrounds focused on spatial photography and the ability to inspire student study in the post-field area (Welsh et al., 2012), population and voluntary location-based information in social media (Haffner et al., 2018), position information in daily life (Rzeszewski and Luczys, 2018), the role of geographical information attainment (Tussyadiah and Zach, 2012). In comparison to other studies, the authors found some studies that investigated the effect of apparent enjoyment, the way users perceive that how easily these technologies can be used, readiness of travelers to incorporate geotagging technologies using the technology adoption model (TAM) (Allam et al., 2012; Chung et al., 2017). Hasan et al. (2020) used theory of planned behavior and explored that the assertiveness, subjective standards and enthusiasm pointedly influence the traveler contentment and domestic tourist behavioral goal. Besides, Haque et al. (2020) integrated personal innovativeness of IT (PIIT) in Unified Theory of Acceptance and Use of Technology (UTAUT) to search the geotagging technology implementation among social networking sites users. They found PIIT accurately describes the personal features of social networking sites users and all constructs except effort expectancy of UTAUT have significant influence on the adoption of geotagging technology among social networking sites users. Haque and Khan (2020) unveiled that technology readiness is an influential element of UTAUT model and the use of geo-tagging technologies has an important effect on users of social networking sites. In comparison, however, the user intention of the SNS users is specifically related to geotagging technology, to the knowledge of the authors. Based on the viewpoints of SNSs users, this broad research vacuum in assimilating the application of geotagging is filled by the current review.

Technology readiness (TR)

Parasuraman (2000) introduces and describes the conception of technological readiness. This means that, in their everyday social and economic lives, people want to use modern technology. The crucial importance of fashion technology is perceived in business life. Therefore, the technical availability of travelers needs to be assessed using geographic identification techniques. Geotagging technologies enhance the traveler's experience and embrace the vision of travelers for use on different journeys. The importance of technical preparation has become a fundamental phenomenon in the use of innovation and has been studied in several studies. For this reason, Liljander et al. (2006) has confirmed the beneficial effects of the technical preparation using the latest aviation technology. In addition, Kim et al. (2012) examined the importance of technology readiness in hospitality and tourism environments, where customers can be separated from services and services typically depend on service providers. Although some studies have focused on user technology readiness in different contexts, Chen and Li (2010), Mady (2011) and Chung et al. (2017) highlight the availability of travelers, in order to regulate the substantial impact of technological readiness on geotagging conditions of acceptance. This study introduces the technology readiness as a moderator in the UTUAT framework and aims to explore the significant moderation effect of TR in the acceptance of geotagging technology among users of social networking sites.

Research framework and hypotheses

When travelers enjoy the novel technology and consider it useful for their travel purpose, they will adopt the new technology to enhance their smart tourism experience. Earlier researchers suggested different conceptual models to review relevant to IT/ARE adoption, as well as the Technology Acceptance Model (Davis et al., 1989), IS success Model (DeLone and McLean, 1992), Theory of planned behaviour (Ajzen, 1991), Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003). Among these, UTAUT devised by Venkatesh et al (2003) acknowledged being one amongst the foremost effective model to explain the perceptions of consumers towards the introduction of emerging technologies (Qingfei et al., 2008). In view of UTAUT's robustness, this paper followed it as an overarching philosophical construct in order to examine and replenish the void on top of research queries. Four basic constructs are hypothesized by the theoretical model (Figure 1) developed during this research: Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI) and Facilitating Condition (FC). In certain instances, however, only a subset of the UTAUT constructs were implemented by researchers and the possible moderating variables were overlooked (Al-Gahtani et al., 2007; Armida, 2008). Since the primary UTAUT comprises the constructs of PE, EE, SI and FC and offers a comprehensive description to predict the adoption of technology such as SNSs users, additional variables may be needed depending on the particular context of technology usage outside the four key constructs (Marchewka, 2007; Venkatesh et al., 2012; Dwivedi et al., 2017; Hoque and Sorwar., 2017).

Performance expectancy (PE), Effort expectancy and social influence (SI) to Intention to adopt geotagging technology (IAGT)

Venkatesh et al. (2003) has described that PE is the the extent to which a person feels that using the method would encourage him or her to make improvements in organizational effectiveness and work performance. Venkatesh et al. (2003) has further defined that EE is the

extent to which a person can easily use the system effectively. The social influence illustrates how a person is influenced to assess by one's own peer groups and the behavior of his or her colleagues or other leading experts of organizations. The social influence controls the way of human behavior to a great extent. A number of researchers found PE, EE and SI are prominent factors of users' behavioral intentions (BIs) in various contexts, i.e. in the implementation of technology in work settings (Venkatesh et al., 2003); adoption of health based information systems (Pai and Huang, 2011); adoption of health (Hoque and Sarwar, 2017), mobile banking adoption (Oliveira et al., 2014); and also acceptance of SNSs for sharing user generated content (UGC) (Herrero et al., 2017). In the case of the implementation of web-based training programs by workers in Jordan, Alrawashdeh et al. (2012) anticipated that EE has a critical effect on the PP. Furthermore, another study (Herrero et al., 2017) projected that Effort Efficiency has substantial influence on Performance expectancy in implementation of SNSs for sharing UGC. The following theory, then, is suggested:

H1: There is a positive impact of Performance Expectancy on the Social Networking Sites users' willingness to accept geotagging technologies.

H2: There is a positive impact of Effort Expectancy on the Social Networking Sites users' willingness to accept geotagging technologies.

H3: Effort Expectancy has a positive influence on the Performance Expectancy of SNSs users to use geotagging technologies

H4: Social Influence has a positive impact on the Social Networking Sites users' intention to adopt geotagging technology.

Facilitating conditions (FC) to Effort expectancy and Intention to adopt geotagging technology (IAGT)

The degree to which a person assumes that there is an organizational and technological framework to facilitate the use of the system is specified by facilitating conditions (FC) (Venkatesh et al., 2003). FC is the valid indicator of use behavior and has been developed by IS/IT research in a number of settings, including adoption of information resources (McKenna et al., 2013); acceptance and use of digital whiteboards (Tosuntas et al., 2015); acceptability of smartphones for health-related services (Oliveira et al., 2014); e-health adoption (Bhattacharjee and Hikmet, 2008). "FC is a direct indicator of EE in the context of e-government" (Dwivedi et al., 2017). This association is also asserted in Australian occupational therapists embracing and using ICTs (Schaper and Pervan, 2007), in Jordanian training programs which were based on the internet (Alrawashdeh et al., 2012) and in Indonesian airlines, e-services were also investigated (Urumsah et al., 2011). We also consider FC to help users quickly comprehend and discover geotagging technologies through these assertions. The hypotheses that can be developed based on this discussion are:

H5: FC has a positive effect on the SNSs users' intention to adopt geotagging technology.

H6: FC has a positive effect on the SNSs users EE of geotagging technology use.

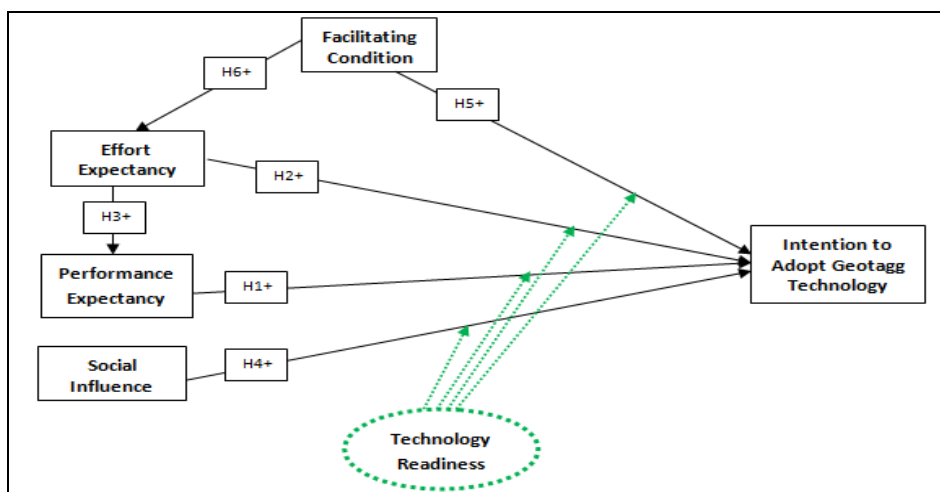


Figure 1. Research Model

The moderating influence of technology readiness

Thus consumers of technology will convey differing views about products and services dependent on technology (Dabholkar, 1996). These paradoxical viewpoints will go along with those from a technical to a technological spectrum (Mick and Fournier, 1998). The word "Technological Readiness" (TR), defined by Parasuraman (2000) as a tendency of using modern technologies to achieve home as well as work objectives. It is a general state of mind composed of multiple workers and intellectual inhibitors who collectively decide if modern technology is appropriate for use (Parasuraman, 2000). The TR model was used in many contexts such as self-service technology (Elliot and Meng, 2009); in construction sectors (Jaafar et al., 2007); in wireless technology (Chor and Kannan, 2006); in internet applications (Taylor et al., 2002). Parasuraman and Colby (2001) observed, owing to their technological preparedness, that technology-based commodity markets are broken down into five segments and that at various times each TR segment entered the industry. In the current research, TR is a key factor in that segments of technology-aided activists can be created for SNS users for tourism with the implementation of geography technology. A significant clarification of why a particular segment of SNS users assigns greater (or lesser) value to a specific function of overt turnout can be found in the values behind any TR segment. TR is a key moderator for the connection between UTAUT variables and the plan to implement geo-tagging technologies. It is proposed that in these partnerships we assume respondents with low or high TR to differ, which indicates the following hypotheses:

H7: The relationship of performance expectancy, effort expectancy, social influence and facilitating condition with intention to adopt geotagging technology exhibited in H1, H2, H4 and H5 will be moderated by Technology readiness of SNSs users for adoption of geotagging technology.

METHODOLOGY

Research setting

In this research, the target demographic for this empirical review is SNS users' especially the younger citizen of Bangladesh. Since convenience sampling provides cost efficiency, it is commonly used in research into IT systems (Eze et al., 2011). The research even employed a screening

method for convenience. A substantial part of the study is made up of the younger Bangladeshi people, who are students of various universities (Table 2). They were ideal for tasks such as knowledge seeking and gaming as well as basic communication because of their comfortable use of technology. In addition, respondents were told at all points during the analysis of their rights to revoke their participation (Hoque, 2016).

Measurement

Earlier reports involve all calculation elements in this study. In order to adapt this study to geotagging technologies in tourism context, the calculation metrics have been tailored. Scales developed by Venkatesh et al. (2003) and Herrero et al. (2017) are adopted to measure the performance expectancy and effort expectancy with three and four items respectively. Social influence and facilitating condition are measured three items each adopted from Venkatesh et al. (2003). Five things developed by Lee et al. (2012) and Parasuraman (2000) have been adapted for calculating technology readiness. The geo-tagging technology intention to adopt is assessed across three objects from Lin and Hsieh (2006) and Davis et al. (1989). Details of the measuring elements and the literature source for each constructs are given in Table 1.

Table 1. Summary of Measurement Items

Construct	Corresponding Items	Items Sources
Performance expectancy (PE)	PE1: Geotagging is incredibly useful in distributing smart tourism material in SNSs PE2: The use of geotagging facilities would increase my performance in the use of intelligent tourism SNSs. PE3: I can accomplish what is essential to me for intelligent tourism with the geotagging facility of the SNSs.	Venkatesh et al., 2003 Herrero et al., 2017
Effort expectancy (EE)	EE1: Geotagging is an easy method to report material for intelligent tourism in SNSs. EE2: Geotagging is convenient for me that can be used to publish material for intelligent tourism on SNSs. EE3: It is convenient for me to be able to use geo-tagging technologies EE4: The use of geo-tagging to report material for the smart tourist activity in SNSs is transparent and easy to understand.	Venkatesh et al., 2003 Herrero et al. (2017)
Social influence (SI)	SI1: People who affect my actions are of the view that I should use the geo-tagging service for the smart tourism experience in SNSs. SI2: People that holds importance in my life believe that I can use geotagging to smart tourist SNSs SI3: People whose views I respect choose to use geotagging services in SNSs for the intelligent tourism experience	Venkatesh et al., 2003
Facilitating conditions (FC)	FC1: I have the tools required to use geotagging technologies in SNSs for intelligent tourism experience. FC2: I have the requisite expertise to use geotagging technologies in SNSs for intelligent tourism experience. FC3: When I have trouble using geotagging for intelligent tourism experience in SNSs, I can get help from others.	Venkatesh et al., 2003
Technology Readiness (TR) Driver	TR1. In general, as it happens, I am the first to learn geotagging technology for intelligent tourism experience in my circle of friends. TR2. Without support from others for a smart tourism experience, I will typically find high-tech devices and new facilities. TR3. I notice that I have fewer issues using geotagging technologies in SNSs for smart tourism experience than other citizens. TR4. For Smart Tourism experience in SNSs, I recommend using the most advanced geotagging technology available. TR5. The technology of geotagging allows me greater freedom of mobility.	Parasuraman, 2000 Lee et al., 2012
Intention to adopt geotagging technology (IAGT)	IAGT1. During SNSs usage, I have high intentions to use geotagging service for smart tourism experience. IAGT2. I would suggest to my friend the geotagging technology to publish material on SNSs for intelligent tourism experience IAGT3. I assume that I will use the geotagging service to publish information on SNSs for smart/intelligent tourism experience.	Davis et al., 1989 Lin and Hsieh, 2006

Questionnaire design and data collection

The study used a two-part structured questionnaire. Part A includes information on the population, internet and SNSs use, while part B includes measurement elements for the various structures previously validated. The construction indicators are measured by a 7-point Likert scale, with response choices ranging from (1) 'strongly disagree' to (7) 'strongly agree.' The study confirms the recommendation (Roscoe, 1975) that the sample size in the structural equation modeling should be more than 10 times the measurements. The study therefore employed 356 sample sizes, more than ten times that of the measuring elements. The collection of data was carried out between April and May 2019. 370 of the 450 questionnaires distributed, representing an answer rate of 82.22 %, were returned. Some 14 questionnaires were excluded because of a lack of information, leading to a total of 356 usable responses.

Data analysis

Data was compiled into Smart PLS (3.0) applications and entered in Microsoft excel. A computational methodology for interpreting data and a commonly used tool for evaluating the relevance of all proposed model-specific studies with empirical data (Haque et al., 2019) is structural equation modeling (SEM). It gives comprehensive representation of multivariate regression. The relationships between latent constructions and estimation, calculated by various metrics, is typically discussed. "The path model is a large version of multiple regression model where different multiple regressions are concurrently measured." (Cohen et al., 2013).

RESULTS AND DISCUSSIONS

Demographic profile of sample

Demographics represent the male are major part of sample 60 % (215) than female 40 % (141). It exhibits the socio-economic aspect of Bangladesh where males are more active participant to survey than female. Considering the academic data of the survey, it is explored that in terms of the academic qualifications 320 (90%) attained bachelor degrees; 22 (6%) attained Higher secondary degree; 5 (1%) attained master degrees; 5 (1%) attained below higher secondary degrees, 2 (1%) attained Ph.D. and 2 (1%) attained others degree. Based on age group, 282 (79%) of them were between 20 and 30 years years old, 50 (14%) under 20 years old, 20 (6%) between 31 and forty years old, and 3 (1%) between 41 and 50 years old. As far as social networking sites (SNSs) use experience, 41 % has 1- 3 years SNSs use experience which is followed by 34% who have 4- 6 years SNSs use experience. On the other hand, 15 % have more than 7 years SNSs use experience and 10 % have less than one-year use experience. One or more SNS channels may be used by each participant and hardware in the case of SNSs and their hardware. Therefore, the column frequency is greater than the sample. A majority of people interviewed in the survey used Facebook (38%) in Bangladesh, followed by YouTube 28%, and Google+ 11%. In case of hardware use most of respondents use (60%) use smartphone followed by laptop 20 % and desktop 12 % (Table 2). While interpreting the data, demographic variables were viewed as control variable.

Measurement model

Bagozzi et al. (1991) claimed that before the hypothesized relationship was investigated internal reliability and convergent significance of the measurement model must be checked. In order to test internal reliability, composite reliability and Cronbach alpha have been commonly used. In order to meet the internal reliability, composite reliability and alpha Cronbach should have a value above 0.70.

“Convergent validity is considered to be satisfactory when measurement constructs have an average variance extracted (AVE) of at least 0.50 and items loading are above 0.70” (Hair et al., 1995). Table 3 depicted the alpha of Cronbach, the average variance extracted (AVE) and the composite reliability, while Table 4 for each construct indicated the item loading in bold format.

Table 2. Profile of the Respondents

Variable	Description	Frequency	Percentage
Gender	Male	215	60%
	Female	141	40%
Age(years)	Below 20 years	110	31%
	20 - 30 years	222	62%
	31 - 40 years	20	6%
	41 - 50 years	3	1%
	51-60 years	0	0%
	Above 60 years	1	0%
Education level	Below Higher Secondary	5	1%
	Higher secondary	22	6%
	Bachelors	320	90%
	Masters	5	1%
	Ph.D.	2	1%
	Others	2	1%
Social Networking Platform	Facebook	470	38%
	You tube	348	28%
	Google+	136	11%
	LinkedIn	31	3%
	Twitter	105	8%
	Pinterest	8	1%
	All	50	4%
	Other	89	7%
Hardware use	Smartphone	511	60%
	Laptop	173	20%
	Desktop	102	12%
	Tablet	11	1%
	All	29	4%
	Other	23	3%
SNSs use Experience (Years)	Less than 1 year	37	10%
	1- 3 years	145	41%
	4 - 6 years	122	34%
	7 - 9 years	46	13%
	More than 9 years	6	2%

Table 3. Measurement Model

Constructs	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Intention to adopt geotagging technology	0.921	0.950	0.864
Effort Expectancy	0.932	0.952	0.831
Facilitating conditions	0.906	0.941	0.842
Performance Expectancy	0.931	0.956	0.879
Social Influence	0.930	0.956	0.878

Table 4. Cross Loadings

	IAGT	EE	FC	PE	SI
IAGT1	0.931	0.536	0.518	0.581	0.573
IAGT2	0.921	0.526	0.517	0.595	0.537
IAGT3	0.936	0.569	0.542	0.608	0.572
EE1	0.544	0.922	0.734	0.747	0.684
EE2	0.522	0.914	0.678	0.753	0.673
EE3	0.573	0.907	0.706	0.726	0.694
EE4	0.494	0.904	0.710	0.708	0.683
FC1	0.522	0.733	0.920	0.637	0.630
FC2	0.501	0.717	0.919	0.595	0.640
FC3	0.534	0.684	0.913	0.640	0.656
PE1	0.604	0.734	0.616	0.936	0.687
PE2	0.625	0.754	0.644	0.943	0.700
PE3	0.571	0.775	0.652	0.934	0.703
SI1	0.554	0.678	0.671	0.685	0.930
SI2	0.552	0.722	0.632	0.689	0.938
SI3	0.588	0.706	0.661	0.714	0.942

Legend: IAGT= Intention to adopt geotagging technology; EE= Effort Expectancy;
FC= Facilitating conditions; PE= Performance Expectancy; SI= Social Influence

Cronbach's alpha values were between 0.906 and 0.932, and their composite reliability ranged between 0.941 and 0.956, which satisfy internal reliability requirements. The load value is between 0.904 and 0.943, and the AVE is between 0.831 and 0.879, which mean the load value is above the mentioned level. The apparent variables thus follow the convergent criterion for validity (Biswas et al., 2020).

On the other hand, the discriminant validity was tested using two measures. First, “the correlations among constructs should be below the cut-off of 0.85” (Biswas, 2005). Second, “the square root of AVE should exceed the correlations of a construct with other latent constructs in the model” (Fornell and Larcker, 1981). The program values show that the square root of AVE was higher than the respective correspondence and that all the correlations between latent structures were below the cut-off point of 0.85 (Table 5). This indicated that the requirements for discriminant validity should be achieved and that the study model follows the requirements for the measurement model.

STRUCTURAL MODEL

Assessment of variance explanation through research model

The study found that research model significantly explains the variance. Figure 2 shows the (R^2) explanation power for each dependent variable. R^2 value implies the percentage of total variance of the dependent variable explained by the independent variable. This research found that the predicting power (R^2) of dependent variable such as intention to adopt geotagging technology was 0.458, performance expectancy 0.647 and effort expectancy was 0.601. All R^2 value exceeds the recommended cut of criterion of 10% proposed by Falk and Miller (1992). So our model explains 45.8 % of the variance in the intention to adopt geotagging technology, 64.7 % variance in performance expectancy and 60.1 % of variance of effort expectancy in adoption of geotag among SNSs users for smart tourism experience. Furthermore, we also checked predictive relevance (Q^2) to examine the substantive effect of our research model.

Table 5. Correlation matrix, Square root of AVE

	IAGT	EE	FC	PE	SI
IAGT	0.930				
EE	0.585	0.912			
FC	0.566	0.775	0.918		
PE	0.640	0.804	0.680	0.938	
SI	0.603	0.750	0.699	0.743	0.937

Table 6. Predictive Relevance

	SSO	SSE	$Q^2 (=1-SSE/SSO)$
IAGT	1,071.000	668.318	0.376
EE	1,428.000	747.681	0.476
FC	1,071.000	1,071.000	
PE	1,071.000	488.405	0.544
SI	1,071.000	1,071.000	
TR	1,785.000	1,785.000	

Legend: IAGT= Intention to adopt geotagging technology; EE= Effort Expectancy; FC= Facilitating conditions; PE= Performance Expectancy; SI= Social Influence

Other statistical analysis was conducted to explore its statistical significance (Q^2). Cohen's (1988) indicated 0.02 is a 'tiny,' 0.15 represented a 'medium,' and 0.35 was a 'large' impact. The intention to adopt geotagging ($Q^2 = 0.376$), the performance expectancy ($Q^2=0.5434$ and the effort expectancy ($Q^2 = 0.476$) was suggested in our model to be high in effect. The predictive validity of this model has also been verified (Table 6). Furthermore, we investigated the significant impact of our test model for Cohen's (1988) effect size (f^2). It is defined as "the degree to which the phenomenon is present in population." Cohen's (1988) suggested f^2 values of 0.02, 0.15, and 0.35 are small, medium, and large, respectively. Thus, our model suggests that intention to adopt geotagging technology ($f^2 = 0.125$), had small effect sizes, whereas performance expectancy ($f^2 = 1.834$) and effort expectancy ($f^2 = 1.508$) had a large effect size.

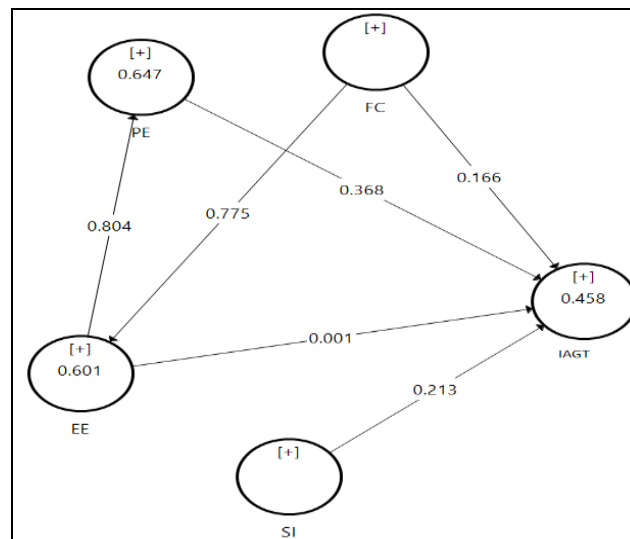


Figure 2. Validated research model for Geotagg adoption

Hypotheses results and discussion

The thesis used Smart PLS 3.0 to evaluate the connections between the various components of the proposed models of research. Figure 2 displays both trajectory coefficients. The findings in hypotheses suggest that the performance expectancy of the geotagging technology is a good impact ($\beta = 0.368$, $t = 4.681$, $p < 0.001$) on intention to adopt geotagging technology, so H1 can not be dismissed. While geotagging technology uses much of the time to upload images and exchange locations with users of SNSs, it focuses more on the useful aspects. This conclusion is close to other analyses of technology adoption, such as adoption of geotagging technology (Haque et al., 2020; Haque and Khan 2020). Hypothesis 4 is known because the social influence also suggest significant impact on intention to adopt geotagging technology ($\beta = 0.213$, $t = 2.508$, $p < 0.05$). This data reflects Bangladesh's socio economic situation, with the bulk of the population affected by their employers, peers and others. This finding was decided on with UTAUT's SNS sharing application (Herrero et al., 2017). This finding was accepted.

Facilitating condition has a favorable effect on the intention to adopt geotagging technology because statistically meaningful effects are obtained with the program ($\beta = 0.166$, $t = 2.358$, $p < 0.05$), so we acknowledge H5. These results are relevant to the Haque et al. (2020) findings, which showed that facilitating condition are directly affected to adopt geotagging technology. The research suggested two new directions among explanatory UTAUT variables (e.g. performance expectancy to effort expectancy (H3) and effort expectancy to facilitating condition (H5), separate from original UTAUT model (Venkatesh et al., 2003). For both proposed relationships ($\beta = 0.804$; $t = 26.653$; $p < 0.001$; and $\beta = 0.765$, $t = 24.500$; $p < 0.001$) methodological research resulted in statistically relevant values. Then hypothesis 3 and hypothesis 5 are firmly endorsed. Interestingly, new proposed path between the predictor variables such as facilitating condition to effort expectancy was significant in adoption of geotagging technology among the SNSs user for tourism experience. This finding is consistent with other IT adoption studies in different contexts (e.g. Alrawashdeh et al., 2012; Dwevedi et al., 2017; Urumsah et al., 2011 Schaper and Pervan, 2007). More interestingly, the acceptance of the geotagging technologies among SNS users is also important in the other proposed route between two explanatory UTAUT variables, such effort expectancy to performance expectancy. These findings are similar to Chung et al. (2017), where performance expectancy of use has an impact on perceived utility (root variable of performance expectancy). But the

predicted effect of effort expectancy on geotagging purpose was not explicitly optimistic ($\beta = 0.002$, $t = 0.010$, $p < 0.05$). H2 has not however been sponsored. However, this has indirectly influenced the purpose of geotagging technology by success standards (Table 7 for details). The findings indicate that performance expectancy has a greater impact than effort expectancy on the decision to adopt geotagging technology. This result, which coincides with the acceptance of the UTAUT application (Hoque and Sarwar, 2017), typically has greater repercussions than effort.

Table 7. Structural relationships

Hypothesis	Relationship	Std. Beta	T Statistics	P Values	Comments
H1	PE \rightarrow BI	0.368	4.681***	0.000	Supported
H2	EE \rightarrow BI	0.001	0.010	0.992	Not Supported
H3	EE \rightarrow PE	0.804	26.653***	0.000	Supported
H4	SI \rightarrow BI	0.213	2.508*	0.012	Supported
H5	FC \rightarrow BI	0.166	2.358*	0.019	Supported
H6	FC \rightarrow EE	0.775	24.500***	0.000	Supported

Legend: p: significance: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 8. Moderating effect of Geotags use frequency

Path	Std. Beta	t-statistics	Decision
PE* TR \rightarrow IAGT	0.095	2.694	Moderated
EE* TR \rightarrow IAGT	0.055	1.967	Moderated
SI* TR \rightarrow IAGT	0.098	2.372	Moderated
FC* TR \rightarrow IAGT	-0.013	0.397	Not Moderated

Moderating effect of SNSs users Technology Readiness

In the analysis the moderation impact of the metric variables was tested using Smart PLS 3.0. In order to do so, we analyzed the association effect on the outcome variable of the moderating variable and the independent one. For PE, EE, SI, and FC the analysis was carried out separately as the preparation for SNS's users to take geotagging technologies differently moderates their relationship. The interaction effect of performance expectancy and SNSs user technology readiness (PE \times TR) on intention to adopt geotagging technology is statistically significant ($\beta = 0.095$, $t = 2.694$, $p < 0.05$). The product effect of effort expectancy and SNSs user's technology readiness (EE \times TR) on intention to adopt geotagging technology is also statistically significant ($\beta = 0.055$, $t = 1.967$, $p < 0.05$). Significant interaction effect of SI and SNSs user's technology readiness (SI \times TR) on intention to adopt geotagging technology ($\beta = 0.098$, $t = 2.372$, $p < 0.05$) was also attained. Finally, the interaction effect of facilitating condition and SNSs user's technology readiness (FC \times TR) on intention to adopt geotagging technology is not statistically significant ($\beta = -0.013$, $t = 0.397$, $p > 0.05$) (Table 8 for details).

Most importantly, SNSs users' technology readiness significantly moderates the different interrelationship of PE, EE and SI with willingness to adopt geotagging technology. These results are concurrent with many other research findings Borrero et al. (2014) where they found technology readiness moderates the social and psychological factors to adopt SNSs for student's movement. These findings also confirm the outcome of (Lin and Chang, 2011; Dabholkar and Bagozzi, 2002) where they found moderating effect of TR in different IS/IT adoption studies. Therefore, technology readiness can be conceptualized as a moderator of UTAUT to adopt the technology at individual level and adoption of geotagging technology for smart tourism experience.

Theoretical and managerial contributions

This research has important implications for philosophy and management. In the first instance, the research extended SNS's users technology readiness as moderator in the Unified theory of acceptance and use of technology. The study introduced association between two explanatory variables of UTAUT namely effort expectancy and performance expectancy and found strong empirical evidence regarding this association. Moreover, it also proved that there is an interrelationship between two predicting variables of UTAUT model namely FC and EE. These will enrich the model and add new aspect for future knowledge. This strengthens the model and introduces additional elements of future awareness. This study, on the other hand, will direct decision makers from the tourism industry regarding the numerous geotagging factors that impact SNS users in smart tourism experiences. Finally, this study will provide appropriate policy making indications to SNSs service providers regarding the acceptance and use of geotagging for smart tourism experience.

LIMITATIONS, FUTURE RESEARCH DIRECTIONS AND CONCLUSIONS

This research is not free from weaknesses. The research employed non-random sampling methods, including convenience sampling. Random sampling methods may be used in forthcoming studies. The study used cross-sectional details. For prospective investigators, longitudinal evidence may be used to clarify the phenomenon in greater detail. The students were the target demographic of the study. Future studies will combine both classes of individuals, which further generalizes findings. After all, this study used the Unified theory of acceptance and use of technology (UTAUT) paradigm to clarify the purpose of SNS users to implement geotagging technology for intelligent tourism. It analyzed the performance expectancy; social influence and facilitating conditions are significant precedents for the implementation among SNS users of geotagging technology for tourism purposes.

It also found that facilitating condition prominently affect the effort expectancy and effort expectancy properly affect the performance expectancy of UTAUT model for adoption of geotag technology among the SNSs users. It presents the socio-economic status of Bangladesh where people believe that proper infrastructure of information technology will enhance the uses of technology. It also discussed readiness to use technology as a vital moderator for SNSs users' smart tourism experience for implementation of geotagging technology. The outcome of this study will offer significant itinerary for future scholars. It also guides the decision makers of tourism industry in designing the appropriate policy for adoption of geotagging technology for smart tourism experience.

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ATTRACTIVENESS OF LANDSCAPES OF VOLYN REGION (UKRAINE): THEORY AND PRACTICE OF EVALUATION

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Abstract: This research aims to identify the most valuable territories in terms of aesthetics. Objective and subjective methods were used to assess the attractiveness of the landscapes of the Volyn region. As a result of the evaluation, four degrees of the attractiveness of the landscapes were selected. The results of a comprehensive evaluation of the aesthetical attractiveness of landscapes of the region were obtained for the first time. Cartographic materials based on the studies were established. Evaluation of the landscape's aesthetic appeal is relevant to the rational planning of economic activity territorial organization, especially for the development of the environmental activity.

Key words: recreation potential, scenic landscape complexes, attractiveness of landscapes, Volyn region

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INTRODUCTION

A comprehensive assessment of the recreational potential of the site is needed to optimize its use. Today, the development of tourism has begun to differentiate people's preferences and work in narrower directions. Therefore, there is a need for a more detailed study of the recreational suitability of the territory for a particular type of tourism. When choosing a holiday destination of any type, most recreationalists prefer places with attractive scenery. Due to this, a detailed study of the landscapes of the territories and the selection of the most attractive sites is necessary to further design of the recreational complexes (Chkalova et al., 2019; Kapitonov, 2019).

Volyn region is rich in various natural resources, which determines its high recreational potential. These are climatic, biological, hydrological, landscape resources, healing water sources, therapeutic muds, etc. Water resources of the Volyn region are represented by 132 rivers with a total length of 3414 km and more than 235 lakes (Hrynasiuk, 2014). The most attractive lake complex is Lakes of Shatsk, which includes 24 lakes, the largest of which are Svitiaz, Pulemetske, Luky, Pisochne. Volyn is one of the regions with the strongest forest fund in Ukraine. The current level of afforestation is on average 34.3%. The oak-pine forests are very widespread, they are two-tier, up to 30 m high. Spa resources are represented by deposits of medical-peat mud, sapropels and mineral waters. The Volyn region has high potential of natural recreational resources, which causes a high coefficient of conservation of the territory of the region. Nature reserves, national nature parks, tracts, and botanical gardens are among the objects of the nature reserve fund (Komilova et al., 2020). Monuments of history and culture of Volyn region are attractive sites for sightseeing on tourist routes. In addition, they complement the landscape paintings that are open to observers. Historical, cultural, recreational and tourist resources are represented by a complex of historical, architectural, archeological, artistic, and literary monuments. The architectural and urban monuments of Volyn region include Lutsk Castle (Lubart Castle), Radziwill Castle and numerous sacred sites. Archeology monuments are widespread in Lutsk, Manevitsky, Vladimir-Volyn and Kiverts administrative regions (Dunets et al., 2019; Yudaev et al., 2019). Therefore, the assessment of the attractiveness of landscapes of the Volyn region can ensure a more rational use of natural complexes in the organization of tourist and recreational activities (Provalova et al., 2019; Singgalen et al., 2019). A lot of research is devoted to problems of aesthetic evaluation of landscapes.

However, there is no single and universal method for assessing the attractiveness of landscapes. Developed methodologies fall into two categories, objectivist and subjectivist. The first involves explaining the objective criteria of aesthetic appeal, which lie in the physiognomic characteristics of the landscape, the second – points to the subjective nature of beauty, exploring the features of landscape aesthetic preferences in different groups of people (Dyrin, 2006). The objective approach to assessing the aesthetic attractiveness of landscapes is by far the most recognized and widespread. However, it views the evaluated landscape as, first and foremost, a summation of visually significant components, not as the only image that is reflected in the mind of the observer (Dyrin, 2006). Such approach was utilized in the research of Kochurov and Buchatskaia (2007), Konishchuk and Skakalska (2019), Nazarov and Postnikov (2002), Essl et al. (2017), Orjuela et al. (2020), Rathnayake et al. (2020), Strzelecki et al. (2020), Dudek (2017; 2018), Mazhitova et al. (2018).

The subjective approach is based on the proposition that the landscape should be judged as a whole, not a collection of individual parts. In doing so, the researcher focuses on the relatively subjective opinion of people about their impressions regarding the aesthetic appeal of a particular landscape. The subjective approach, on the one hand, is impeccable from the point of view of the reliability of the

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results because it clarifies the opinion of large populations (Dyrin, 2006). The use of this approach is found in the works of Kabdrakhmanova et al. (2019), Pissolito et al. (2020), Chou et al. (2018), Meo et al. (2015), Sallam et al. (2017), Kane (1981), Coldwell and Evans (2018). Practical aspects of assessing the aesthetic properties of landscapes require regions with high recreational potential. This determines the purpose of the article, which is to identify the most aesthetically valuable landscapes of the Volyn region. The main objectives of the study are: to consider theoretical approaches and a system of criteria for assessing the attractiveness of landscapes; to analyze the physical and geographical conditions of landscape complexes; identify the most attractive ones.

METHODOLOGY

Volyn region has favorable natural conditions, rich in tourist and recreational resources and, therefore, has every reason for successful development of tourism. Subsoil and terrain features of the study area are quite interesting and are associated with anthropogenic icing. Common morphosculptures determine the attractiveness of the terrain and play a leading role in the formation of landscapes. The climate is favorable for the development of recreational activities. Sufficient rainfall has led to the development of dense river and lake networks, wetlands, and the formation of forest vegetation. The natural landscape, historical and cultural recreational resources of the Volyn region largely determine the formation of the landscape frame of the territory of this region. Studying and identifying of the most attractive landscapes requires the development of the system of taxa that will highlight the natural systems on landscape by aesthetic properties. In our opinion, the universal unit of territorial division is a complex of landscapes, proposed by researchers A. Orjuela et al. (2020). According to them the complex of landscape is "... area, which is characterized by a physiognomic diversity based on main qualitative and quantitative indicators of the landscape, namely: by the terrain, surface water, vegetation and the nature of human activity. Some landscapes on the evaluated area can be quite varied. Landscape complex is selected by not all possible landscapes in the area, but only by the most expressive landscapes, that are opened from a specially selected points of view called landscape approaches. A complex of landscapes is a typological unit".

O.D. Dyrin noted that typologically identical landscapes form similar images of areas. These views of the same types cause similar feeling in their perception in the observer and, obviously, have the same aesthetic potential. Therefore, based on this assertion there was allocated such taxonomic units as "landscape and scenery complex that is a set of basic visual characteristics of the landscape, forming its specific image. Landscape and scenery complexes – a particular spatial and geographic realities that are different in terms of perception and physical features of the landscape formation of a locality" (Dyrin, 2006, 15). On the basis of field and office studies, relying on the visual landscape features, considering the dominant components of the landscape, which have a significant impact on its landscape and aesthetic properties and based on the geological and geomorphological structure of the region 3 types of landscape and scenery complexes were allocated (including 12 kinds of landscape complexes that are characterized by specific features and characteristics (Figure 1).

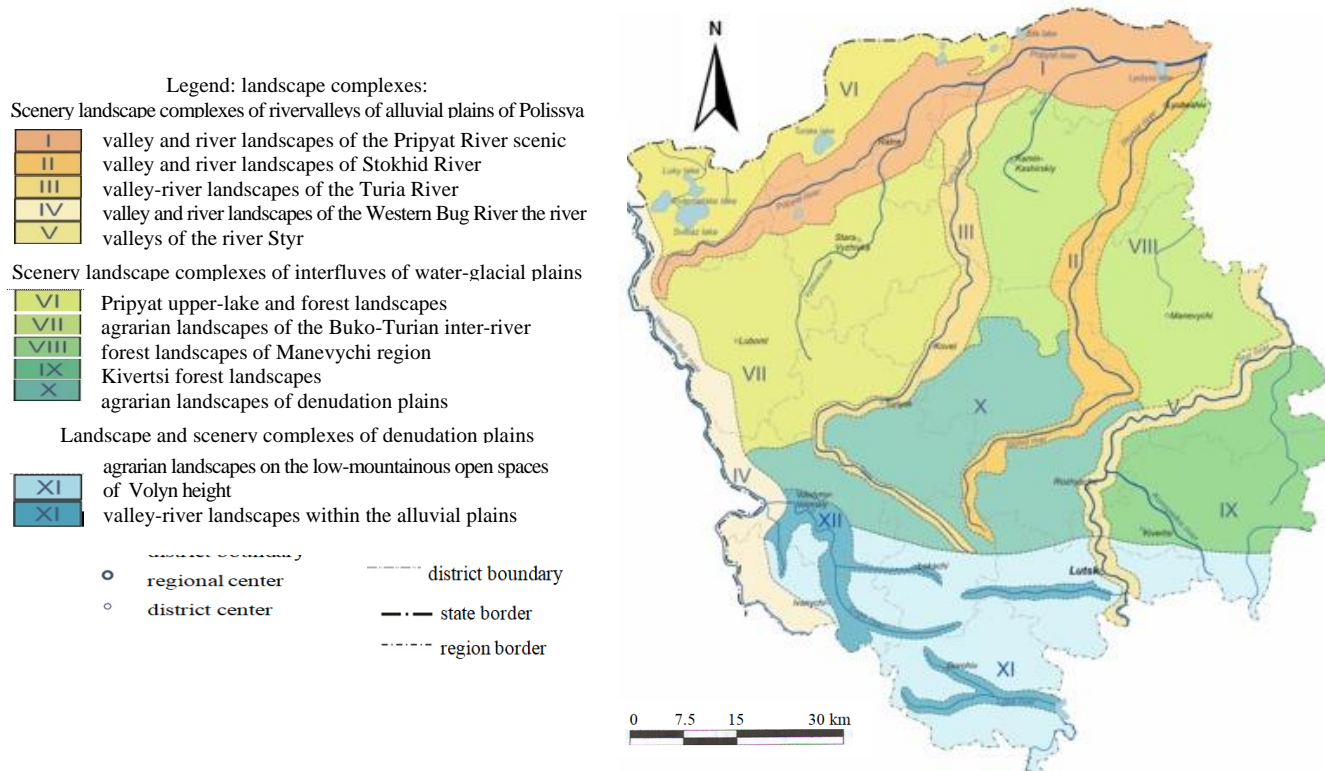


Figure 1. Landscape and scenery complexes of Volyn region (Source: developed by authors)

1. Landscape and scenery complexes of river valleys of alluvial plains of Polissya is river-valley landscapes formed in floodplains and terraces above the floodplain of the main arteries of the region, situated on open and halfopen mostly flat and slightly dissected surfaces surrounded by meadow and marsh vegetation, occasionally surrounded by forests. The visual appeal of the territory conditioned by the combination of flat terrain and meanders of rivers. Typical wooden houses, sacred buildings and agricultural fields complement the landscape picture.

2. Landscape and scenery complexes of interfluvies of water-glacial plains that are presented by lake, forest and agricultural landscapes of Polesia lowlands. The area has high aesthetic potential: little altered natural landscapes, which harmoniously combine extensive forests with spacious swamps, diversity of vegetation creates a kind of coloring of the area, and attractiveness of numerous lakes with clean clear water enhances the topography, each lake has a different configuration of the coast, an area of water surface, a kind of form of basins. A large number of recreational areas is confined to this area. Agricultural landscapes are most attractive in the middle of summer, when sown fields are combined with individual forest plantations in slightly wavy relief, create some variety by contrast colors.

3. Landscape and scenery complexes of denudation plains is a river-valley landscape of small rivers and agricultural landscapes on slightly hilly watershed areas of Volyn upland. The visual perception of landscapes depends on a combination of agricultural areas with relief, vegetation with the valleys of small rivers. In the formation of the landscapes participating elements of the cultural landscape. Numerous historical, cultural and natural monuments create a kind of coloring of area. Overall, the area is characterized by a large landscaped expressiveness, where dominates the combination of open and half-open spaces with small forested areas and slightly hilly watershed areas, with dominant agricultural land and water bodies in them.

RESULTS AND DISCUSSION

Priority assessment of landscapes occurs in the cameral environment.

Table 1. Scale for assessing the attractiveness of landscapes (Source: authors' own calculations)

Characteristic	Scale of points	Max. points
Relief		
Characteristic of relief	Flat-plain – 0; Slightly hilly – 1; Hilly – 2	2
The presence of pronounced forms of relief	Absence of forms – 0	3
	Embankment, dam, quarry – 1	
	Gully, beam, dunes, strands, shafts – 2	
	Cliff, deflection of deposits, well-defined terraces and floodplains – 3	
Water objects		
The presence of reservoirs	No – 0; One – 1	1
Lake area, km²	< 0.1 – 0	2
	0.11–0.5 – 1	
	> 0.51 – 2	
The length of the lake, km	< 2.0 – 0	2
	2.1 – 5.0 – 1	
	> 5.1 – 2	
Width of the lake, km	< 0.5 – 0	2
	0.51 – 1.0 – 1	
	> 1.1 – 2	
The peculiarity of the lakes	The presence of hydraulic structures – 0	2
	Pier availability – 1	
	Presence of islands, river mouths – 1	
Shape and size of rivers and canals	Dry river beds, channels – 0	2
	Middle rivers – 1	
	Big rivers – 2	
Shore line	Not expressed or overgrown coastline – 0	2
	Grassy coast (without good approach to the water) – 1	
	Sandy coast with beach – 2	
Wetland	Present – 0; Not present – 1	1
Other water features	Yes – 1; No – 0	1
Flora and fauna		
Forested area	Absent – 0	3
	1 – 15 %, more than 85 % – 1	
	16 – 30 %; 61-85 % – 2	
	31-60 % – 3	
Vegetation diversity	The advantage of one type of vegetation in the landscape – 1	2
	Mixed vegetation type – 2	
The presence of attractive natural objects	The presence of pronounced forms of relief – 1	5
	Availability of forest clearings – 1	
	Water availability – 1	
	Berries, medicinal plants, “mushroom places” – 1	
Specific composition of the forest	Deciduous – 1; Conifers – 2	2
Presence of living creatures	Yes – 0; No – 1	1
Visibility	Bad – covered with vegetation or hidden – 0	1
	Good – traces, forms landscape – 1	
Human activity		
Remoteness from settlements	Nearby (within a radius of 5 km) – 0	1
	Far (within 5 km radius) – 1	
Anthropogenic load	Degraded – 0; Changed – 1; Minor changes – 2; Unchanged – 3	3
Availability of structures	Availability of reclamation, engineering structures, transmission lines, landfills – (-1)	1
	Old settlements and ruins – 1	
Historical identity and authenticity		
The presence of cultural sites	None – 0	3
	Churches, authentic buildings, battlefields, graves – 1	
	Castles, ancient settlements, ancient monasteries – 2	
Security sites and territories		
Presence of protected objects and areas of natural origin	Landscapes, nature reserves – 1	2
	Nature and Biosphere Reserves, National Nature Parks – 2	
Presence of security objects and territories of artificial origin	Absence of monuments – 0	1
	Presence of botanical gardens, dendrological parks, parks and monuments of landscape art – 1	
Use of the territory for recreational purposes		
Suitability of the territory for recreation	Inconvenient (difficult to access or heavily used in business) – 0	1
	Convenient (extensively used on the farm, easily accessible) – 1	
Availability of rest places	No – 0; Yes – 1	1
Availability of tourist routes	No – 0; Yes – 1	1

By analyzing the selected landscape complexes, utilizing 1:100000 topographic maps, as well as Google Maps and Google Earth computer programs, we identified potential landscape approaches that are points in the terrain, which can serve in the process of viewing the landscape. Such landscape approaches were elevation of relief, treeless hills, coasts of lakes, etc. The assessment was carried out according to the criteria of landscape attractiveness at the places of laid landscape points. Using an objective approach in developing methods for assessing the attractiveness of landscapes, the major natural components, all possible or most common ones in a particular area are taken into account. Considering more properties of objects when evaluating them does not always improve its performance. Obtaining a convincing assessment of them is the best combination of the considered properties of the objects (Ezdina, 2017; Tulbayeva et al., 2017; Zhupyshcheva et al., 2019).

Based on the study of different approaches to the assessment of landscapes, we have developed our own methodological approach to determine the aesthetic attractiveness of landscapes of the Volyn region (Hrynasiuk, 2013; 2014). The developed technique allows us to distinguish the components that form the landscape environment of the studied area and to evaluate their manifestation according to certain criteria of attractiveness. The manifestation of certain indicators corresponds to a certain number of points (Table 1).

The second method, which assesses the attractiveness of landscapes, is based on a subjective approach. Its essence is to evaluate landscapes by the set of qualitative indicators and the degree of their manifestation. To determine the most attractive landscapes of the Volyn region, we used the polar estimation method developed by Kane (1981). Its essence is to assess the emotional perception of the landscape by the respondent. The bipolar sequence is designed to use the mean response of least 10 people as a measure of that Views attractiveness. Responses can be elicited either on-site or from color slides (the use attractiveness). A view score can range up to 100 points, and two scenes that differ in score by more than 5 points are, significantly different at the 0.05 level of probability (Kane, 1981). Two types of forms are employed to calculate a bipolar score. The first one (Table 2) is used by each respondent to record his or her emotional responses to the scene being evaluated. The form consists of 21 adjective-pairs, 14 of which seem to be significant. The other seven bipolar are decoys placed in the form to help prevent the viewer from detecting any kind of pattern in his or her selections. The 6 arrangement of all 21 pairs-some with their attractive end at the left, others with their attractive end at the right – is also designed to help hinder patterns responses (Kane, 1981).

Table 2. The bipolar semantic differential scales (Kane, 1981) (Source: authors' own calculations)

wet	1	2	3	4	5	6	7	dry
unemotional	1	2	3	4	5	6	7	emotional
ugly	1	2	3	4	5	6	7	beautiful
interesting	1	2	3	4	5	6	7	boring
bright	1	2	3	4	5	6	7	dull
obvious	1	2	3	4	5	6	7	mysterious
harmony	1	2	3	4	5	6	7	discord
cold	1	2	3	4	5	6	7	warm
soft	1	2	3	4	5	6	7	hard
frustrating	1	2	3	4	5	6	7	satisfying
private	1	2	3	4	5	6	7	public
static	1	2	3	4	5	6	7	dynamic
dislike	1	2	3	4	5	6	7	like
unstimulating	1	2	3	4	5	6	7	stimulating
full	1	2	3	4	5	6	7	empty
pleasant	1	2	3	4	5	6	7	unpleasant
weak	1	2	3	4	5	6	7	strong
disruptive	1	2	3	4	5	6	7	peaceful
colorful	1	2	3	4	5	6	7	colorless
disordered	1	2	3	4	5	6	7	ordered
simple	1	2	3	4	5	6	7	complex

Mean responses for each of the 14 significant bipolars are recorded on the second form (Table 3), and these in turn are used to calculate the vista score. Weighting factors take into account both the relative importance of each adjective-pair and which end of each bipolar correlates with attractive landscape (Kane, 1981; Zhigir, 2020). The sum of points obtained from the calculation of values can range from a minimum of 49 (the least attractive landscape) to a maximum of 343 points (the most attractive landscape). In order to turn this range into a 50-point scale (so that 50 points correspond to the most attractive landscapes), the total score (S) should be divided by 6.86. At the final stage of assessing the attractiveness of landscapes, the obtained results allow us to identify potentially attractive areas, for this purpose we have developed a classification of estimates. The maximum number of points that the landscape can receive is 50 (Table 4).

Table 3. The score calculation form for the bipolar technique (Kane, 1981) (Source: authors' own calculations)

	Number of Responses							Mean Value (m)	Weighting Factor	Score
	1	2	3	4	5	6	7			
unemotional/emotional									(8.0-m)	
ugly/beautiful									5(m)	
obvious/mysterious									3(m)	
harmony/discord									5(8.0- m)	
cold/warm									4(m)	
soft/hard									3(8.0- m)	
frustrating/satisfying									5(m)	
private/public									2(8.0-m)	
dislike/like									5(m)	
unstimulating/stimulating									3(m)	
full/empty									(8.0- m)	
pleasant/unpleasant									5(8.0- m)	
disruptive/peaceful									4(m)	
disordered/ordered									3(m)	
Total Score (S):										

Table 4. Classification of landscapes by aesthetic value (Source: authors' own calculations)

Rank value	Aesthetic value	Score
I	The most valuable landscapes	40-50
II	High value landscapes	25-39
III	Landscapes of average value	15-24
IV	The least valuable landscapes	0-14

The data obtained from the evaluation of the attractiveness of landscapes utilizing two methods is summarized in Figure 2. The analysis of the diagram shows that the results of assessing the attractiveness of landscapes have insignificant differences, although, it is worth noting that the data obtained by a set of qualitative indicators is of higher importance (Fedyunin et al., 2018; Prokofieva et al., 2017).

Comparing the methods used to evaluate the attractiveness of landscapes, it is worth noting that the method of assessment by factor-component structure is more analytical and objective. It provides not only an assessment of the attractiveness of the landscape, but also details the reasons for such an assessment. The technique of assessing the aesthetic qualities of landscapes provides less useful information, but instead it can be used when working with photographs, as well as to correct the results obtained after evaluating the factor-component structure. To identify differences in the estimation by the two methods, the results were analyzed based on the Spearman correlation coefficient calculation. Thus, comparing all the results of the assessment of landscapes of the Volyn region, it was found that the relationship between the method of evaluation by factor-component structure and the method of qualitative indicators is more than significant. In our case, the correlation coefficient is $r = 0.91\%$, which indicates a high correlation between the selected estimation methods. The regression equation in this case takes the form shown in Figure 2, where I – valley and river landscapes of the Pripyat River; II – valley and river landscapes of Stokhid River; III – valley-river landscapes of the Turia River; IV – valley and river landscapes of the Western Bug River; V – the river valleys of the river Styr; VI – Pripyat upper-lake and forest landscapes; VII – agrarian landscapes of the Buko-Turian inter-river; VIII – forest landscapes of Manevychi region; IX – Kiverts forest landscapes; X – agrarian landscapes of denudation plains; XI – agrarian landscapes on the low-mountainous open spaces of Volyn height; XII – valley-river landscapes within the alluvial plains of Volyn height.

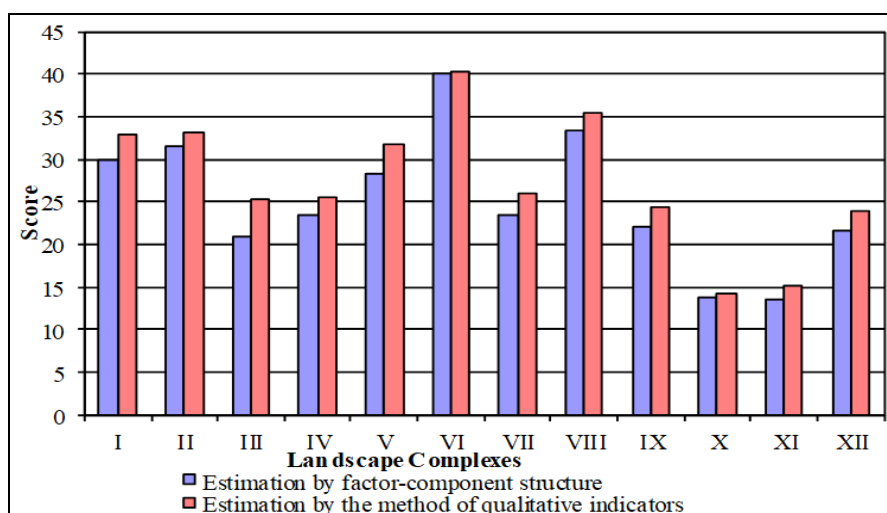


Figure 2. Results of attractiveness assessment of landscape complexes of Volyn region (Source: developed by authors)

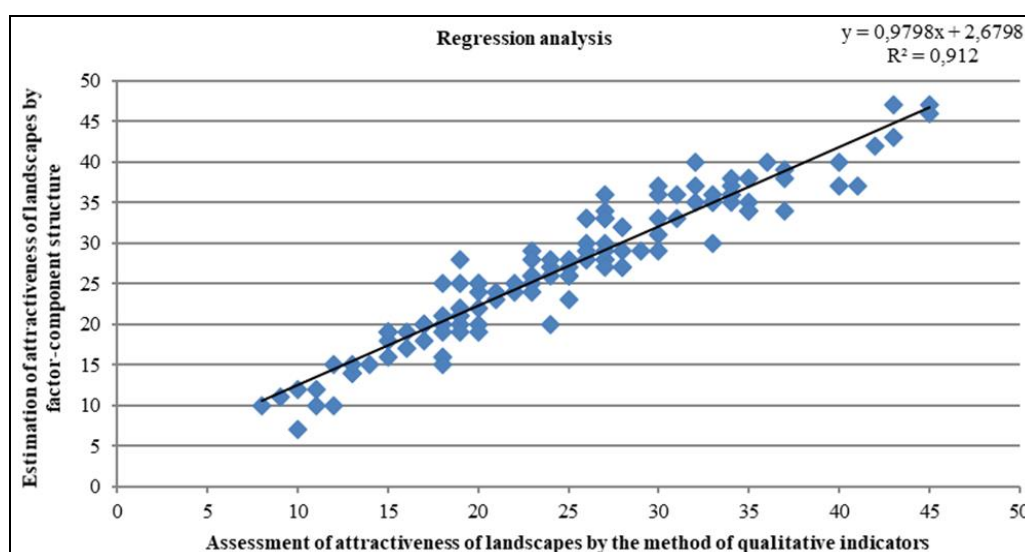


Figure 3. Relationship between the method of evaluation by factor-component structure and the methodology of qualitative indicators (Source: developed by authors)

As a result of assessing the attractiveness of the landscapes of the Volyn region by the selected criteria and by the methods of mathematical statistics, areas with the appropriate degree of attractiveness of landscapes were allocated and a map was generated (Figure 4).

CONCLUSIONS

According to our estimates, the territory of the Upper Prypyat Landscape Complex has the most attractive landscapes. The natural conditions here have created an attractive environment, characterized by high resource potential of the coastal recreational frame. Water features that are located within the landscape play the greatest role in shaping the landscape. Much of the study area is occupied by landscapes of high value. These include the landscape complexes of the valleys of the Prypyat, Stochod, Stir, and Manevychi forests. These are natural landscapes characterized by rich vegetation, the presence of large lakes and rivers, which are well visible in the landscape. Mainly these are protected areas whose landscapes are the least altered, making them valuable in aesthetic terms.

The landscapes of the valleys of the Western Bug, Turia and small rivers of the Volyn highlands, agrarian landscapes of the Buzo-Turian rivers and Kivertsi forest landscapes are of medium value. These are mostly landscapes with poor vegetation, whose landscapes are homogeneous and monotonous. Significant economic development of the area has affected the landscapes by reducing their attractiveness through deforestation, land drainage, and the conversion of handle lines for agricultural use. Such landscapes do not have significant aesthetic potential, although they are rich in biotic resources.

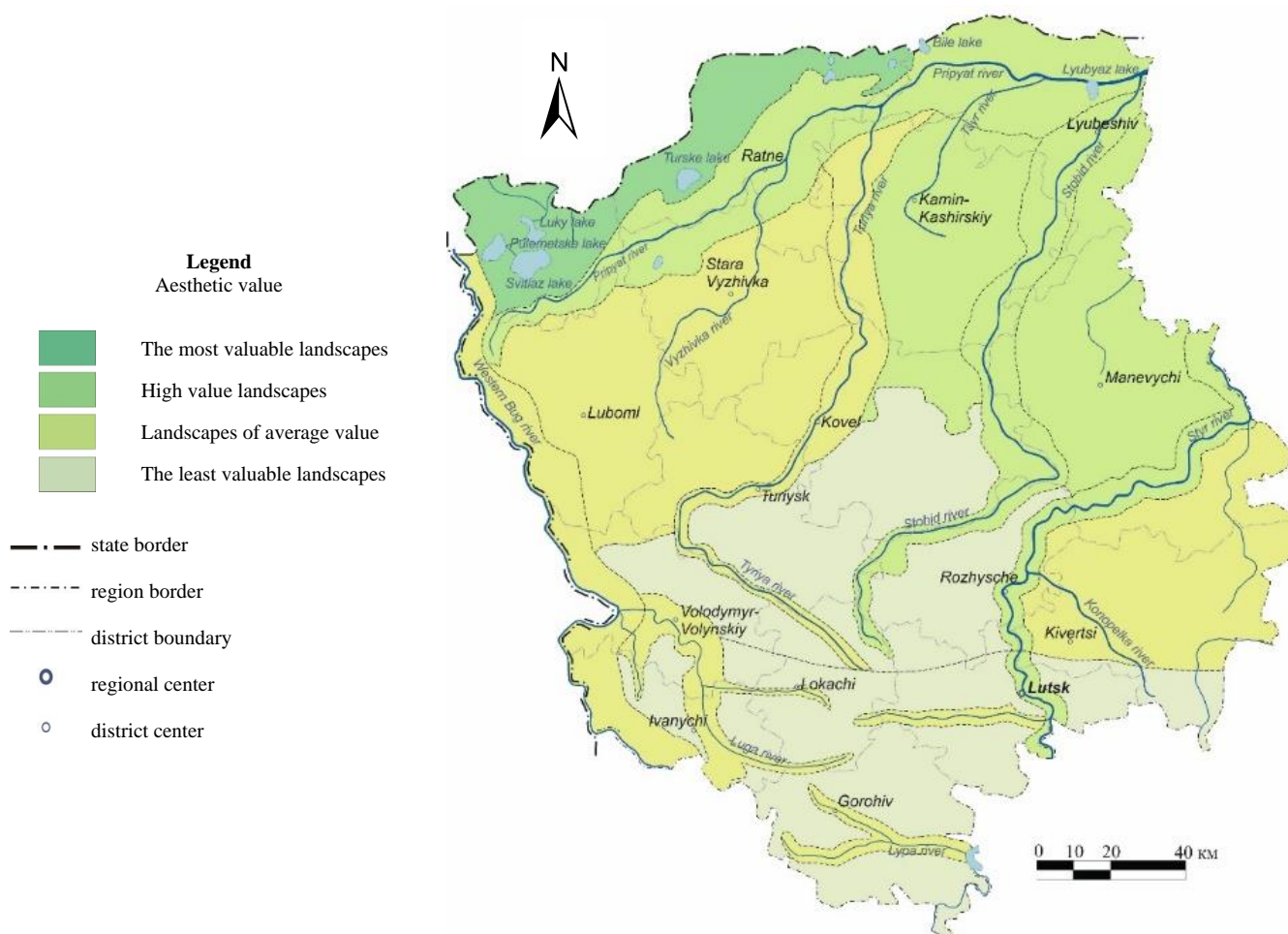


Figure 4. Aesthetic appeal of landscape and landscape complexes of Volyn region (Source: developed by authors)

The presence of cultural and sacred objects increases the attractiveness of landscape complexes. The agrarian landscapes of the low-hilly adjoining expanses of Volyn height and the denudation undulating plains turned out to be the least attractive landscape complexes. These are mainly areas that are heavily used in agriculture, lacking naturally significant water bodies and forest plantations. Landscapes are characterized by the greatest variety of landforms, which creates a multifaceted nature, which makes it possible to view different agricultural fields. Such landscapes have a positive effect on the landscape perception of the person, but their attractiveness is seasonal and peaks in the period of reaching the harvest. Assessments of the landscape attractiveness are necessary for the rational use of attractive territories in the organization of tourist activities.

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NGAHUMA (PLANTING RICE IN THE FIELDS) AND TILLED LAND LIMITATION OF THE BADUY TRIBE IN INDONESIA

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Abstract: Baduy are traditional native Indonesian tribes living in the southeastern part of the province of Banten, and they are considered as a tribe reliable in upholding ancestral traditions. One of their customary laws is the obligation to ngahuma (planting rice in the fields) as a form of worship and harmony. The main purpose of this research is to describe whether the Ngahuma customary law will continue in the dilemma of land limitations. This recent study will propose several solutions related to their customary law sustainability and their economic needs. The descriptive qualitative method was employed as a tool for examining Baduy tribe-related phenomena. Using participatory observation, interviews, and literature study, this exploratory research examines and analyzes traditional activities, obligations, ngahuma in the context of the baduy community. This research study utilized four key informants and three validators to achieve thematic saturation. Based on our findings, we conclude that the Baduy population increases even though the land for ngahuma remains the same. Moreover, ngahuma is a traditional customary obligation that cannot be violated. Some solutions have been found, such as buying or renting land outside customary land, limiting the fallow (do not use the land before replanting), and dividing land to family members. However, several problems remain; for example, unfertile land conditions and lack of rice for the community. Finally, researchers offer solutions and expected the local government of the Lebak Regency to provide new land for the Baduy tribe.

Key words: Baduy Tribe, Ngahuma, tilled land, land limitation, Harmony

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INTRODUCTION

Baduy is one of the unique Indonesian tribes living in the province of Banten. As an indigenous Indonesian ethnic group, they have a stronghold belief in the ancestral tradition (Sutisna, 2019). Today, the Baduy people are still consistent with their customary beliefs, rejecting all forms of modernization, refuses to use modern equipment. Their community is also refusing all forms of transportation and all media communications and its taboos to study in the formal educational institutions (Bukhori-Muslim, 2015). Obedience to a mirrored custom is the beginning of the beliefs with the philosophy *“Long must not be cut, Short must not be joined, mountains cannot be destroyed, valleys must not be destroyed. Great-grandmother must not be changed, if you slash/cut, if you cut it, it must match the size, if you slough off, then it must be appropriate as it is, if you speak you must be right, wrong is wrong, right is right, you cannot lie, you cannot take sides”* (Mohammad, 2017, p.21) Furthermore, it was emphasized by their primary tasks for nurturing and guiding the queen/king and leader, cleaning and praying and maintaining the balance of nature, affirming and confirming wiwitan (religious belief system of Baduy people), it is not being given the task to enliven the State. One of the customary laws that become the obligation of worship is ngahuma, which is planting rice in the fields (Iskandar and Iskandar, 2017b). As a traditional leader from the village of Cibeo Baduy Dalam, Jaro Sami states that Ngahuma is one of the traditional obligations that must be carried out until doomsday (Khomsan and Wigna, 2009). Therefore, they have their terms *“Even though there is only one coconut shell seed, ngahuma still must be done.”* This local wisdom is undoubtedly a form of Baduy cultural wisdom because it is analyzed more deeply that ngahuma is very closely related to the fulfillment of their daily needs, especially rice. Even if their crop yields are small, of course, it will not be able to meet their needs (Iskandar et al., 2018c). However, this is still maintained by the Baduy people. The preservation of culture or custom (ngahuma) is impressive (Putri et al., 2019) as a form of local cultural wisdom of the Baduy people (Hidayati et al., 2020).

Whereas other customary legal systems, especially for Baduy Dalam, they are not allowed to trade, because according to them, trading activities lead to lies and deception (Solikhah, 2020). So far, in the three Baduy Dalam villages, no one has opened a shop to trade; even if some sell, they are people from outside the Baduy village (Tou et al., 2010). This culture is maintained as a form of Baduy leadership that has charismatic and obeyed by the community. Obedience is from the impact of a representative and recognized leadership (Hakiki, 2015).

The problem is that their numbers are increasing while the land area remains the same (Taryana, 2020). Land management pattern using fallow systems (do not use the land before replanting) for one year, resulting in reduced soil fertility. This practice has an impact on their diminishing income. Will their customary law continue to deal with this dilemma? What solutions can be made to keep their customary law sustainable and their economic needs also met?

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MATERIALS AND METHODS

Method

A qualitative descriptive approach was used in this study as the research methodology. Descriptive qualitative research produces descriptive data in the form of written or oral words from people and observable behavior (Huberman and Miles, 2002). This research's object was the Baduy people and their ngahuma customary obligation (planting rice in the fields). Data collection techniques used in this study were observations of participation, interviews, and literature study. An observation approach for social and behavioral activities, social status, the tradition of ngahuma obligations (planting rice in the fields), and their culture also employed to collect the data (Becker et al., 2002). This study explores the most common data collection methods, with interviews between informants and interviewers consisting of seven people interviewed representing each group and primary source. The secondary data was reserved from literature study in the form of books, scientific works, or writing-related to texts relevant to the theme studied, visual documents relating to photographs of the Baduy community's cultural activities, especially the obligation to ngahuma (planting rice in the fields).

An inductive approach was utilized to generate meanings from the data set collected to categorize patterns and relationships (Thomas, 2006). Additionally, to develop a comprehensive understanding of phenomena, we used the triangulation method, which consisted of grouping data, analyzing data, and conclusions (Jonsen and Jehn, 2009).

RESULTS DISCUSSIONS

Ngahuma as a Customary Legal System of Baduy People

Baduy Dalam is the past Baduy people's living culture who approaches the original heir of the culture and their tribal ancestors' mandate. The term original heir only refers to the level of obedience and awareness of their community in maintaining their customs and consistency to shut themselves away from negative foreign cultural influences (Utomo et al., 2020). The argument that reinforces this assumption is that there is a specific stipulation of the Baduy Dalam village area, which is only located in 3 villages, namely Cibeo, Cikartawana, and Cikeusik fixed, strict legal boundaries and is binding on all parties and all aspects of their lives. Including the boundaries and cubication of the area, which became the authority between the three villages (Ardan, 2008). Baduy Luar is a Baduy community prepared as a guard, cantilever, filter, protector, and at the same time as an intensive friendship connector with outside Baduy as a form of appreciation, cooperation, and active participation in state activities to show that they are one of the same ethnic groups. They have equal rights and obligations with other Indonesian citizens (Ichwandi and Shinohara, 2007). The Baduy tribe firmly holds Pikukuh Karuhun, a doctrine that requires them to do various things as their ancestors (Nadroh, 2018). Pikukuh Karuhun requires them to (1) Pray for the Well-being and Safety of the World Center and the Universe (*Ngabaratapakeun - ngabaratanghikeun*); (2) Preserve the Continental Heritage Site (*Sasaka Domas*); (3) Take care of the Queen guides the noblemen (*Ngasuh Ratu Nyayak Menak*); (4) Respect the Guriang (ancestral spirits) and perform the *Muja*; (5) Preserve and maintain the Custom of the *Bulan Kawalu* (Eight-Month); (6) Organize and respect the Ngalaksa customary ceremony; (7) Perform the Seba Ritual once a year, at the beginning of the Custom Calendar year; (8) Farm (*Ngahuma*).

Ngahuma or cultivating rice is one of the pillars of the Wiwitan (religious belief system of Baduy people), so under any circumstances, they must perform ngahuma (Sodikin, 2017). According to an interview with Jaro Sami, one of the Baduy Dalam community leaders stated that "ngahuma is a traditional obligation that must be carried out until the end of the world. It is true that if more people increase, the land will decrease because even though the land decrease, ngahuma must be carried out, this should not be abandoned even until doomsday".

This opinion is supported by other Baduy community leaders, who stated, "according to our customary law, even though there is only ONE SEED, ngahuma is mandatory, and it cannot be abandoned even until the world is doomed, because of the necessity of these rules for residents. Moreover, it is included in the wiwitan traditional harmony (Interview on Friday, April 19, 2019).

Referring to the customary law, it is compulsory for all members of the Baduy tribe to ngahuma, planting rice in the fields. As a worship ritual, ngahuma is a manifestation of worship to Nyi Pohaci as the guardian goddess of rice (Holil, 2020). As a tribe, Baduy respects rice because rice is always utilized in almost all of their rituals. Rice is so sacred to their community; hence, in every process of planting, maintaining, harvesting, and storing up to consuming, it must be following the rituals tradition of worshipping the goddess of rice and fertility. So, it is not surprising if ngahuma is part of the wiwitan pillars because if there is no more rice planting, there will be no more worship to Dewi Sri (Barendregt and Wessing, 2008). This reason also makes the prohibition, especially for Baduy Dalam, to trade. The logical reason is that trading activities contain many lying elements, so they are prohibited from selling or trading. This prohibition is somewhat more lenient for Baduy Luar; now, almost every Baduy Luar villager opens a stall in their house. This habit is following what has been stated by Hakiki (2015) that there are no trades of Baduy; they mostly grow rice in the fields or farms (Figure 1).



Figure 1. The Baduy Ngahuma Tradition (Source: research documentation by the author, 2019)

The problem that arises is that their land never increases while the population continues to grow. Thus it forces them to change their farming systems. If they had shifted cultivation in the past, and the time lag for returning to work on the land was five years now, their land is getting narrower. The time lag is only one year, even in some locations of huma planted continuously. The impact is low rice fertility, so

that the crops are also low. Even in recent years, there have been crop failures. This condition will make their rice needs nutrition fulfilled so that in the last few years, they have bought rice from outside or government assistance; it is called Raskin (rice for the poor). Consistent with the opinion of Permana et al., (2017), which stated that space for the Baduy tribe in the future would be limited. Further, the increasing population of the tribe will be a problem in the future.

Baduy Dilemma: Between the Obligations of Ngahuma and the Limitations of Huma Land

The Baduy dilemma faced today is the increase in their population, but the land remains the same. Even though they should do ngahuma, will this customary law continue to survive or slowly be modified or violated? According to the expert, when a law cannot adopt the community's needs, the law will be abandoned or modified. This circumstance is what happened to the Baduy. The obligation to make the Baduy luar flock to buy land outside of customary land cumulatively reached almost 1,200 hectares in 2019 (Mulyadi et al., 2019).

More than half of Baduy-Luar residents work outside the customary land in 10 subdistricts; they are Leuwidamar, Muncang, Subang, Bojongmanik, Cirinten, Gunungkencana, Cimarga have even reached Sajira, Cijaku, and Malingping (Kismartini and Pujiyono, 2020). Mostly, they rent land or join for profit sharing, while the Baduy-Dalam people are forced to start shortening the rest period (fallow) of their land. Simultaneously, they were minimizing the area of their cultivation because it is shared relatively due to the increasing number of families required to work in the fields. While other livelihoods as an alternative income are also restricted, including openly trading in residential areas, this polemic and dilemma are quite frightening to their future survival if there is no solution from the government and different point of view from them. The term Baduy Dalam food self-sufficiency and Baduy prosperous with their customary choices are no longer relevant (Chalil et al., 2018). This problem has arisen since 2015; traditional leaders began actively discussing the need for additional land for their needs, which were conveyed at certain events. both on peduliawan Baduy or Negara, and at the Seba Gede May 28, 2017, at the Multatuli pavilion in Lebak Regency, "Jaro Saija and Tanggungan 12 represent the Baduy party openly propose a formal return to the local and central government regarding the addition of 1000 hectares to their customary land area".

The root of the problem is that every family in the Baduy tribe is required without exception for farming (ngahuma) (Iskandar, 2007a). In April 2018, the number of patriarchs had reached 3,395; in Baduy Dalam, there are 308 HHs. If at least each HH needed half a hectare to farm, in 2018, it would require 1,697.5 Hectares of vacant land, while Baduy Dalam would require 154 Hectares. Currently, in 2019, there are more than 3,500 households, meaning that this year requires vacant land to be cultivated into a HUMA is 1,750 hectares. The difference in the need for one year's vacant land is 53 hectares (Iskandar and Iskandar, 2017b). Simultaneously, the 2,136.58 hectares of cultivated land in the Customary Land area continues to be used as new settlements. Currently, in 2019, they have reached 67 villages. The Baduy Dalam residents are prohibited from farming outside the Baduy Dalam Customary land. According to their claim, the area of arable land and for Baduy residents is not more than 700 hectares for three villages because the 3000-hectare land has been designated as "*Leuweung Kolot*," which should not be used for farming. Referring to this fact, there are several aspects of the study of the main problems in the Baduy tribal dilemma, especially the legal aspects of the obligation of ngahuma in the Baduy tribe (Field note, 2019):

1. The need for fertile vacant land is increasing in line with population growth and the household head.
2. The availability of vacant land outside customary land is increasingly difficult, especially in customary land, which is impossible to increase.
3. The narrower the land used for farming, the less certain crops will be.
4. The shorter the rest period (fallow) of the land, the less the level of fertility.
5. The cost to work on Huma is considerable, but income is decreasing because soil fertility is increasingly lost, and the land is increasingly narrow, and seasons are uncertain.
6. The need to eat increases and income decreases because of the population growth, and another prohibition of the Baduy people from trading.

Concerns about nature and the changing times according to Ayah Karmain s, one of the Baduy Dalam community leader, he stated that what influenced their ethnicity was so powerful that they were forced to face problems and dilemmas; crushed if one does, destroyed if one does not (*maju asup jurang mundur asup jungkrang*) (Field note, 2019). The fulfillment of necessities of life, especially food, is increasing. However, at the same time, it is increasingly difficult to obtain because of the harsh competition. While the land that provides the crops in the customary land area is getting narrower and decreases its' fertility, on the other hand, the tightness, rigidity of customary law also leads to dilemmas and problems for them. This condition is worsened by the modernization & globalization through advances in communication technology internalization) which increasingly penetrate their territory. The multicomplex of life problems they face has led to difficult decision-making. It is eventually forcing them to adapt themselves ion n the process of dynamism, cultural hybridization, and adoption of modern lifestyles. However, they are aware that slowly but surely, it will undermine their social and cultural order without even noticeably shifting step by step. The customary law's legality follows the positive law & modern lifestyle.

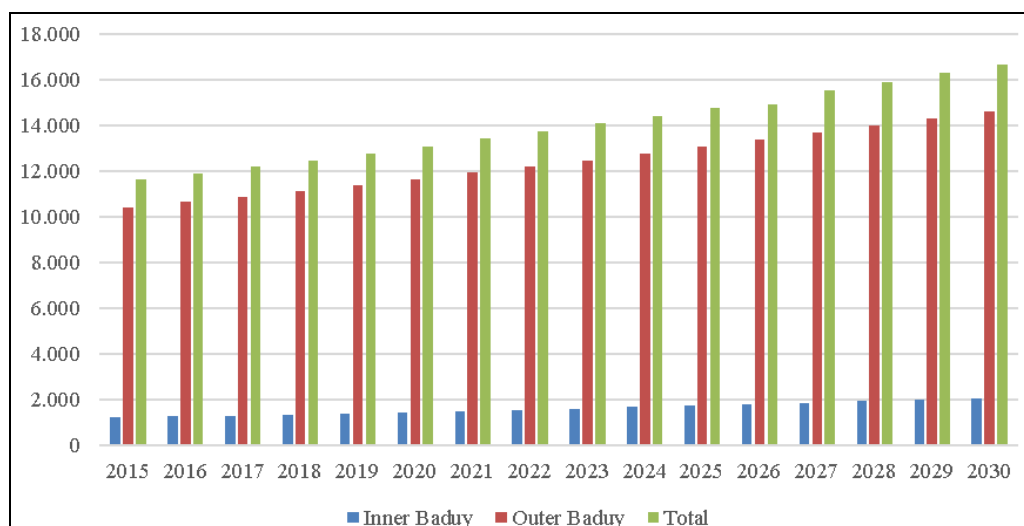


Figure 2. Estimated Growth of Baduy population 2015-2030 (BPS, 2019)

There have been many customary prohibitions and taboo, which they change by breaking the rules. They have now become habits that are applied in their daily lives. The resistance between meeting the needs of a comfortable life with the standardization of customary rules becomes a unique story that is prolonged and hereditary, especially in the Baduy Dalam traditional community. Suppose the stagnation and rigidity of customary law do not allow for social engineering. In that case, predictions and forecasts of food shortages will hit their tribes; they are just waiting even the authors dare to speculate & predict the extinction of Baduy culture and customary law can occur more quickly and horrifically. According to fears, Mr. Jaro Tangtu Sami stated that it would be found in the years to come: "Baduy but different Baduy" (Field note, 2019). Prediction of population growth based on average population growth in the next 15 years is as follows:

Referring to this estimation graphic (Figure 2), then, in Baduy Dalam: $308 - 152 = 166$, the percentage increase in 15 years is $166/308 \times 100\% = 53.9\%$. means per year, 53.9% divided by $15 = 3.6\%$ / year. While Baduy luar: $3,087 - 1,535 = 1,552$, then the percentage increase in 15 years is $1,552 / 3,087 \times 100\% = 50.3\%$, meaning per year, $50.3\% : 15 = 3.4\%$ per year.

Based on Figure 3, In April 2015, the number of heads of households had reached 3,395; in Baduy Dalam, there are 308 heads of households. If at least each household head needs half a hectare to farm, this year will need 1,697.5 Hectares of wasteland, in Baduy Dalam needs 154 Hectares. Currently, in 2019 the number of heads of households has more than 3,500. It means that this year needs wasteland to be cultivated into a Huma is 1,750 hectares. The difference if the need for one year's wasteland is 53 hectares. Simultaneously the arable land area of $\pm 2,136.58$ hectares in the Ulayat area continues to be used as a new settlement and currently (2019) has reached 67 villages. Baduy Dalam residents are prohibited from a farm outside of Baduy Dalam ulayat land. The area of arable land and for Baduy Dalam residents based on their claim is not more than 700 hectares for three villages because 3000-hectare land has been pegged as "Leuweung Kolot" that can not be used for farming.

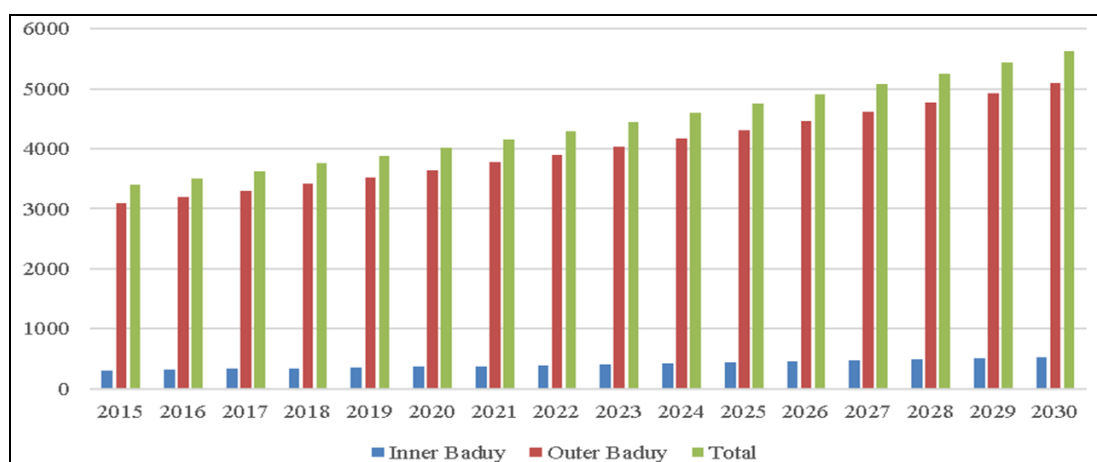


Figure 3. Estimated Growth of Baduy Household in 2015-2030 (BPS, 2019)

The limited land makes the Baduy residents no longer use the fallow system (resting the land that has been tilled); this started in 2016. The effect is that the land is farmed continuously so that the level of soil fertility decreases, and the possibility of crop failure is increased. The following table shows the fallow system predictions that will end in 2022 if there is no additional land. Even if there is an additional land, it is not significant, but it still makes the system out of control.

Table 1. The Need for Land for Farming of Baduy Residents If One head of household Needs ½ Hectares
(Land area of Ulayat for settlement & arable farming 2.136.58 hectares) (Data source: BPS, 2019)

No	Year	Number Of Head Of Households	Land Requirements/Year	Increased Land Requirements/Year	Land Resting Period (FALLOW)
1	2015	3.395	1.697,5 Hectares	-	-
2	2016	3.511	1.755,5 hectares	58 hectares	Fallow starts unstable
3	2017	3.631	1.815,5 hectares	60 hectares	Fallow starts unstable
4	2018	3.755	1.877,5 hectares	62 hectares	Fallow becomes more unstable
5	2019	3.883	1.941,5 hectares	64 hectares	Fallow becomes more unstable
6	2020	4.016	2.008 hectares	66,5 Hectares	Fallow Uncontrolled
7	2021	4.153	2.076,5 hectares	68,5 hectares	Fallow Uncontrolled
8	2022	4.295	2.147,5 hectares	71 hectares	Cannot be able to fallow
9	2023	4.442	2.221 hectares	74 hectares	Crisis zone land
10	2024	4.594	2.297 hectares	76 hectares	Crisis zone land
11	2025	4.751	2.375,5 hectares	78,5 hectares	Crisis zone land
12	2026	4.914	2.457 hectares	81,5 hectares	Crisis zone land
13	2027	5.082	2.541 hectares	84 hectares	Crisis zone land
14	2028	5.256	2.628 hectares	87 hectares	Crisis zone land
15	2029	5.435	2.717,5 hectares	89,5 hectares	Crisis zone land
16	2030	5.621	2.810,5 hectares	93 hectares	Crisis zone land

Based on Table 1 it seems that in the next three years from 2019, wasteland stock for Ngahuma needed for Baduy residents in play at land is not available. Based on the data in 2022, the estimated land need/ year for ngahuma increases to 2,147.5 hectares while available land is only $\pm 2,136.58$ hectares and even for settlements and arable land. Therefore, the total population reaches 13,755 inhabitants; the number of heads of households is 4,295. The land's impact can not be given time to rest (Fallow), so that land fertility decreases, and the fatal result is crop failure. They will be faced with a fundamental & principle multi-crisis with such a situation.

In the following year, the population and head of households are not decreasing but also increasing. This situation demands additional land cubication of about 74 hectares. In 2023 the need to be 2,221 hectares and have entered the Crisis Zone minus tens of hectares, and

every year the minus continues to increase (Table 2). Crop failure means that rice income is reduced even to zero, and this situation indicates the food shortage disaster (rice) already, while and will continue to occur with increasing intensity.

Table 2. Land Needs For Farming Specifically For Baduy Dalam Residents If One Head of Household Needs Half a Hectare (Ulayat Land area for settlement & arable land \pm 700 hectares) (Data source: BPS, 2019)

No	Year	Number Of Head Of Households	Land requirements/year	Increased land requirements/year	Land Resting Period (Fallow)
1	2015	308	154 hectares	-	4 years
2	2016	319	159,5 hectares	58 hectares	4 years
3	2017	330	165 hectares	60 hectares	4 years
4	2018	342	171 hectares	62 hectares	3 years
5	2019	354	177 hectares	64 hectares	3 years
6	2020	367	183,5 hectares	66,5 hectares	3 years
7	2021	380	190 hectares	68,5 hectares	3 years
8	2022	394	197 hectares	71 hectares	2 years
9	2023	408	204 hectares	74 hectares	2 years
10	2024	423	211,5 hectares	76 hectares	2 years
11	2025	438	219 hectares	78,5 hectares	1 year
12	2026	454	227 hectares	81,5 hectares	1 year
13	2027	470	235 hectares	84 hectares	fallow starts unstable
14	2028	487	243,5 hectares	87 hectares	fallow starts unstable
15	2029	504	252 hectares	89,5 hectares	fallow becomes more unstable
16	2030	522	261 hectares	93 hectares	fallow becomes more unstable

CONCLUSIONS

Alternative Solutions for the Baduy

Based on field studies and observations of estimated land needs, it is proven that the demand for land continues to increase in line with population growth and the head of the household. Hence, based on statistics, there is only one solution required to increase the number of land cubication for the baduy community, while other alternatives are currently complicated to implement. However, when it is assessed with the theory of social engineering and social intervention, several solutions are still possible to slow the coming of a disaster of food shortages and cultural extinction (fade up). This proposition is appropriate with Iskandar's et al. (2018c) research findings that the Baduy community must immediately assess the ecological needs to fulfill the land needs in the middle of the existence of ngahuma.

The first solution applied for Baduy Luar residents is by allowing ngahuma outside of ulayat land with a system of leasing or buying privately owned land, which has been running for a long time. Do not be surprised if the Baduy Luar residents are found spread of in the fields and even settled family life in areas outside the Baduy with nyaung-nyaung makes saung huma at their place of farming. This solution is faced with obstacles and challenges that are in the outer areas of Baduy's companions. The land is getting narrower because it is used by settlements and projects to use and extract natural resources, and not all Baduy Luar residents can buy land.

The second solution offered by custom is by reducing the area of farms like ngahuma land, each family from half a hectare to a quarter hectare. This solution is more commonly done by the residents of Baduy Dalam with the principle of justice to avoid resistance and commotion or strife among residents because the primary reason of Baduy Dalam residents is prohibited to ngahuma outside the Baduy ulayat land. In an interview, Jaro Sami stated, "Our thoughts and concerns are the crisis of land that still do not gain even increasing narrows and lost its fertility due to the number of population that working on the land for ngahuma is increasing". In the past, one / a family can work on one hectare. One hectare has been divided up by eight tenants because the crop size decreases, or the yields are also getting smaller, and even many have experienced famine due to crop failure. In the future, many citizens will crazy cause do not have anything (Ungrateful because low). The third solution is an external solution through social engineering and social intervention by outsiders Baduy, that is, groups of Baduy observers, both sympathizers and academics, and researchers concerned with Baduy, including the most competent and primary, are the government / the State. They overshadow their future fate and protect people and society.

The Fourth solution stated by the Baduy Dalam Customary Figure mentions: more population means land decreases since even only a little field must be obliged ngahuma; if possible, it must be helped/assisted by the government as a way out. One of the solutions that can be taken by the government is to expand the customary land owned by the Baduy community through the customary ulayat land expansion program; the second is another assistance in the form of a crisis response program using money, rice, or dishes. If more solutions are not taken, the baduy community will face confusion regarding ngahuma, which has been carried out from generation to generation as a tradition. However, the stomach needs to be filled with food, that is a fact. When someone offers a solution to apply for an old-fashioned forest is opened for ngahuma (farming). Based on the elderly speech, it cannot be changed at all or opened because later, if the forest is destroyed, there will be disasters everywhere because it is a natural lung for the whole world; it is not a covered forest. However, a forest entrusted by the Almighty if the forest is closed can be opened, if the forest entrusted from beginning to end can not be opened for anything if the term forestry Is the same as forest cover can be opened. However, the forest in wiwitan is entrusted forest from ancestors that cannot be disturbed by anyone; it can curse its impact on the country, others, and even everywhere. (interrupted questions from the author: for five years, there have been reports about crop failures according to Mr. Jaro?). Crop failure is due to the shortage of land due to the second natural season/weather conditions. The point is still reduced income caused by reduced land area, originally one hectare then to be three-quarters of a hectare then half a hectare to a quarter hectare, the ground is getting narrower. Baduy Dalam people ngahuma must be in the Baduy Ulayat land. Can it move outside? It should not be able at all, and it cannot be the slightest policy because stepping over the BaduyLuar is therefore not allowed. Even though the term is only the seed of sabatok is still carried out in the Baduy Dalam region. Indeed if the government does not assist these people, many will be crazy because they are poor. There will undoubtedly be many who fade in carrying out customary law, many who do not obey customary law, and cooperation culture will break/fall apart due to being too far away. If it is far away, then cooperation will not be active anymore. If this situation is left, then the name of custom destruction can start from food destruction thoughtfulness and fears of the coming disaster of food shortages. The destruction of cultural customs for a while in the past five years can still be resolved. However, for the next five years and so on ... it feels we are increasingly pressed ... "

Referring to some solutions offered, the writer tends to choose the final solution: the government should extend assistance in the form of land grants that will be used as ngahuma for the Baduy community. Positively, this affects the Baduy legal system, which undergoes modification. If their legal system prohibits ngahuma outside ulayat land, then it is time for this legal system to be modified. The prohibition

for Baduy Dalam to ngahuma outside of kajeroan land needs to be modified by allowing them to ngahuma outside their territory. This consequence is a challenging situation for Baduy, who has lived for centuries with their legal system. However, on the other hand, the obligation of ngahuma and the need for rice income also became a problem that they faced.

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TOURISM INDUSTRY DEVELOPMENT AND GOVERNANCE: A COMPARATIVE STAGE REVIEW OF KAZAKHSTAN'S EXPERIENCE FOR THE YEARS OF INDEPENDENCE, 1991-2020

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Abstract: Kazakhstan has the rich potential for tourism due to its rich culture, geographical and biological diversity, history, rugged mountains, gorgeous lakes, rivers, deserts, and has a lot of attractions and sites that satisfy the needs of domestic tourists as well as international tourists. However, the country has not yet achieved its incredible tourism potential, while tourism development in Kazakhstan began since 1990s. Therefore, the aim of this article is to examine the genesis and formation of the tourism industry in Kazakhstan and it considers how the situation in the tourism industry has regressed or progressed historically since independence. In addition, the article indicates what changes have taken place in the tourism industry in Kazakhstan over the past decade, as well as how the tourism industry has been influenced by government policy and incentive mechanisms. A systematic literature review is carried out that analyses published studies, evaluates contributions and summarises knowledge. The data for this article was collected from the National Committee on Statistics, Kazakhstan Tourism Association, National Committee on Tourism Industry as well as the official information portal of the Republic of Kazakhstan on tourism. National regulations, programs, international and national reports have been used as a theoretical and methodological base for analysis and review. The formation of tourism industry from the moment of gaining state independence is divided into three period stages including 1990s, 2000s and 2010s. The article outlines the main problems that hinder the development of the tourism industry in Kazakhstan, and on this basis, some policy recommendations are proposed. The tourism sector has to adopt a principal part in conserving and improving the situation in order to safeguard tourism's largest commodity, and assure the on-going success of the industry. Communities and tour operators must form a powerful association and acknowledge each other's crucial involvement. To attain the required objectives, strong collaboration among the national, provincial, and local governments, private sectors, and other concerned organizations is compulsory.

Key words: tourism industry, tourism development, international arrival, tourism growth, Kazakhstan

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INTRODUCTION

Tourism is a societal, cultural, and monetary factor that involves the movement of persons to countries or sites outside their homes for individual or business/professional aims. It is multidimensional commercial activity which has great job generation capacity through its labour-intensive nature, revenue creation via tax collection generally from the hotel sectors, earnings of massive foreign exchange and prelation of cross-cultural apprehension and cooperation, business opportunities for entrepreneurs, and economic development of the country (Abishev, 2010; Abubakirova et al., 2016). Over the last few decades, global tourism has gained prominence in several economies worldwide. Tourism may also be a source of income to students, parents, retirees, and many other people by providing part-time jobs (Kuralbayev et al., 2016; Koshim et al., 2020). The function of global tourism is significant in encouraging global peace by inducing intermediation and forming a channel among cultures. Global tourism also helps destination countries at the micro level to increase the degree of family earnings by the following two means. The history of global tourism can be divided into four stages: Stage 1: before the beginning of the 19th century - the prehistory of tourism; Stage 2: the beginning of the XIX century - the beginning of the XX century - the emergence of specialized enterprises for the production of tourist services; Stage 3: the beginning of the XX century - before the Second World War - the beginning of the formation of social tourism; Stage 4: after the Second World War - the modern stage - mass tourism, the formation of the tourism industry as an intersectoral complex for the production of goods and services for tourism (Achilov, 2017). At this stage that tourism acquires a truly massive character, from a luxury item it becomes a need for the majority of the population of highly developed industrial countries (Kuralbayev and Ydyrys, 2016; Chlachula, 2019).

To a certain extent, this was facilitated by a reduction in working hours, and, accordingly, an increase in free time. A powerful leisure industry is being formed with its own institutions, product, and production cycle, methods of organization and production management.

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The historical prerequisites for tourism in Kazakhstan are the formation and development of the Great Silk Road, the beginning of the formation of which dates back to the third millennium BC. This system of caravan roads, which in ancient times and in the Middle Ages crossed Eurasia from the Mediterranean to China, served as the sources of the emergence and development of trade and cultural ties between peoples, states, regions located in the zone of Great Silk Road (Kuralbayev and Abishev, 2017; Koshim et al., 2019). The largest shopping centers were built, where travelers from different countries stayed. The cities had trade buildings and caravanserais. Accommodation of all traveling people in yurts became simply impossible, inns began to appear, and often the most necessary services were offered including accommodation, food, water. To organize overnight stays for caravan participants along trade routes, special accommodation points were created including caravanserais, which had premises for people and pens for camels and horses. All this was surrounded by a fortress wall, which protects from natural elements, as well as from robbers.

Information about the territory of Kazakhstan before the beginning of the 18th century is scarce. The information came by chance mainly from Russian merchants and ambassadors. Peter First organized expeditions to the western part of Central Asia. In the first half of the 19th century, some of the outskirts of Turkestan began to be visited by scientists-travelers. However, the central part of Central Asia remained practically unknown, both in terms of geographical characteristics and economic opportunities. With the accession of Kazakhstan to Russia, an active study of its vast territory began. At this time, the borders of Russia were already in contact with the Central Asian khanates. Central Asia was annexed to Russia in the 19th century. In 60-70s scientific expeditions organized by the Russian Geographical Society and the Society of Natural Science moved to Kazakhstan (Mukhambetov et al., 2014; Koshim et al., 2019).

During the period when Kazakhstan was part of the USSR, tourism as a sector of the economy was not considered at all. Tourists were made only for the purpose of recovery, recreation and excursions (Tiberghien and Garkavenko, 2013). Domestic tourism significantly prevailed over international tourism, since the difficulty of obtaining visas and closed borders significantly complicated its development. At that time, the main tourist areas of the USSR were the historical centers of Russia and Central Asia, then the Crimea and the Baltic states. In the same period, all the most valuable things that Kazakhstan had (a large territory with a wide range of natural and recreational resources, cultural wealth and historical heritage) remained in the shadows, unknown, the country's attractions were practically not advertised, which entailed a lack of demand and tourist interest (Ziyadin et al., 2019). Tourism in Kazakhstan during the Soviet period was one of the elements of the system of cultural and educational work that performed an ideological function and, despite its dominant role, was financed on a leftover basis, and also had no significant economic impact. The aim of this article is to examine the genesis and formation of the tourism industry in Kazakhstan and it considers how the situation in the tourism industry has regressed or progressed historically since independence. In addition, the article indicates what changes have taken place in the tourism industry in Kazakhstan over the past decade, as well as how the tourism industry has been influenced by government policy and incentive mechanisms.

METHODOLOGY

There are three general kinds of literature reviews. The most common is theoretical background: this is the section of a journal article that gives the theoretical foundations and context of the research question, and helps to bring the research question into focus. Within an article, this section is most commonly labeled literature review, theoretical background, or something similar. Second is the literature review as a chapter of a graduate thesis. It is designated as thesis literature review. The third kind is stand-alone literature review, a journal-length article whose sole purpose is to review the literature in a field, without any primary data (that is, new or original) collected or analyzed.

At most, results from the reviewed studies might be analyzed as the data for the literature review; however, a stand-alone literature review article does not collect or analyze any primary data. When a stand-alone literature review is conducted using a systematic, rigorous standard, it is called a systematic literature review. A systematic literature review is a straightforward methodology often applied in the social sciences and this study investigates and presents surf tourism research normatively and quantitatively. While this type of documentary analysis may satisfy the natural curiosity of those in the discipline, it is particularly useful to future research, graduate students, and faculty whereby the knowledge of research productivity facilitates an understanding of scholarly output. Although a key feature of the systematic review is the aim for comprehensive coverage of a field of study, it is a primary research activity in its own right.

Fundamentally, a systematic review covers a wide-ranging search for relevant studies on a specific topic, and those identified are then evaluated according to a pre-determined explicit method. In contrast to single studies taken in isolation, the systematic and statistical summary of a determined body of research results in a research synthesis, a methodology which is highly progressive. In the context of tourism, the key to systematic review is that the criteria for the inclusion or exclusion of studies in the review is explicit from the outset, and while others may not agree with the inclusions, the criteria for such inclusions, and thus the scope of the review, are clearly delimited. A systematic literature review is a means of evaluating and interpreting all available research relevant to a particular research question or topic area or phenomenon of interest. The research papers summarised in the review are referred to as primary studies, while the review itself is a secondary study. The accumulation of evidence through secondary studies can be very valuable in offering new insights or in identifying where an issue might be clarified by additional primary studies. Performing a systematic review involves several discrete activities, which can be grouped into three main phases: planning; conducting the review; and reporting the review. Systematic literature reviews are primarily concerned with the problem of aggregating empirical evidence which may have been obtained using a variety of techniques, and in potentially widely differing contexts. Systematic literature reviews can and are conducted with varying standards of rigor, ranging from little more than an annotated bibliography to scientifically rigorous syntheses of a body of primary research.

STAGES IN TOURISM DEVELOPMENT IN KAZAKHSTAN OVER THE YEARS OF INDEPENDENCE

With the beginning of a new page in the development of the country, with the adoption on December 16, 1990 of the Declaration of State Sovereignty, Kazakhstan (at that time still the Kazakh SSR) took the first step towards the development of the tourism industry. In August 1991, the Ministry of Tourism was established. With the acquisition of independence in the Republic of Kazakhstan, the foundation was laid for the regulation of tourist activities and the revival of the historical and cultural heritage of the people. The development of tourism in the country began to be regulated by: the Law of the Republic of Kazakhstan "On Tourism" dated July 3, 1992 No. 1508-XII; by decrees of the President of the Republic of Kazakhstan: "On the implementation of the Tashkent Declaration of the heads of the Turkic-speaking states, the project of UNESCO and the World Tourism Organization for the development of tourism infrastructure on the Great Silk Road in the Republic of Kazakhstan" dated April 30, 1997, No. 3476; "On the State Program of the Republic of Kazakhstan on Revival of the Historical Centers of the Silk Road, Preservation and Continuous Development of the Cultural Heritage of the Turkic-speaking States, Creation of Tourism Infrastructure" dated February 27, 1998, No. 3859.

The adoption of these documents had a positive impact on the development of the Kazakhstani tourism market (Zaman et al., 2016). According to Kazakhstani National Statistics (KNS, 2020), the direct contribution of travel and tourism is USD 3.14 bn (1.70% of GDP)

and it is predicted to increase by 2.1% (USD 4.5 bn) in 2021 and expected to grow by 3.1% to USD 7.6 bns of GDP by 2030 (Table 1). During the independence, the total tourist arrivals increased from 202,000 in 1996 to 9.58 m in 2019 (Table 1). The main source of visitors is traditionally the ex-soviet countries, accounting for 91.7% of arrivals and 70.6% of spending. Visitors from other countries made up 8.3% of the total visitors but 29.4% of the spending. Domestic tourism is also on the rise, with 4.7 m trips in 2019, up 7.0% over 2018. Overnight trips accounted for 94.0% of domestic arrivals in 2019. The total budget for tourism in 2018 was 1.4 bn, rising to 1.6 bn in 2019. The increased funding is intended to improve the infrastructure of tourist destinations, investment attractiveness, and holding international and domestic events to attract tourists. The direct contribution of travel and tourism in 2019 was 3.2% of total employment, predicted to increase by 4.5% in 2021 and in 2030 increase by 5.5% of total employment. Leisure tourism has increased by 2.5% and is the largest sector of the tourism industry in Central Asia. Leisure travel generally consists of taking a vacation from work or everyday life. During vacation, the traveler typically aims to relax, experience new cultures and locations, and broaden their mindset and more, depending on the type of travel chosen. National leisure tourism spending in Kazakhstan reached USD 1.8 bns in 2019 (KNS, 2020).

Table 1. Development of the tourism sector in Kazakhstan

Year	Number of tourists	Receipts, USD	Contribution to GDP, %	Receipts per tourist, USD
1996	202,000	258.00 m	1.20%	1.277
1997	284,000	350.00 m	1.60%	1.232
1998	257,000	454.00 m	2.10%	1.767
1999	394,000	394.00 m	2.30%	1.000
2000	1.68 m	403.00 m	2.20%	239
2001	2.69 m	502.00 m	2.30%	186
2002	3.68 m	680.00 m	2.80%	185
2003	3.24 m	638.00 m	2.10%	197
2004	4.29 m	803.00 m	1.90%	187
2005	4.37 m	801.00 m	1.40%	184
2006	4.71 m	973.00 m	1.20%	207
2007	5.31 m	1.21 bn	1.20%	229
2008	4.12 m	1.26 bn	0.94%	305
2009	3.77 m	1.19 bn	1.00%	314
2010	4.10 m	1.24 bn	0.83%	302
2011	5.69 m	1.52 bn	0.79%	268
2012	6.16 m	2.15 bn	1.00%	350
2013	6.84 m	2.37 bn	1.00%	346
2014	6.33 m	2.24 bn	1.00%	354
2015	6.43 m	1.83 bn	0.99%	285
2016	6.51 m	2.04 bn	1.50%	313
2017	7.70 m	2.36 bn	1.40%	306
2018	8.79 m	2.65 bn	1.50%	302
2019	9.58 m	3.14 bn	1.70%	358

One of the key factors in the development of the tourism industry in the country after gaining independence was the entry of the Republic of Kazakhstan into the UN World Tourism Organization as a Full Member, as well as the conclusion of the first international agreements on cooperation in the tourism field. At the same time, it is important to note that in most cases the initiators of the signing of these agreements were the governments of foreign states, which call the republic a promising partner and see it as rich in tourism potential. Tourism in many aspects has become a leader in the formation of market relations in Kazakhstan (Bozhko, 2017; Kairova et al., 2018). As international and domestic experience shows, tourism in a short time can become one of the most profitable spheres of the economy. World experience also shows that the market economy is the most favorable economic environment for the development of tourist activities. This means that the process of development of tourism activities is inseparably linked with the expansion of the scope of market relations.

To identify the most promising direction for the development of the tourism industry in Kazakhstan, the formation of tourism industry over the past decade should be considered and analyzed and to be more precise, from the moment of gaining state independence. This analysis will provide a clear picture of the trends in the current development of the industry, as well as the changes that have already taken place. Therefore, it makes sense to consider each stage separately. After the adoption of the Constitutional Law on the State Independence of the Republic of Kazakhstan on December 16, 1991, the development of the tourism industry in the country can be divided into three time periods indicated in the following Table 2.

Table 2. A stage review of tourism industry development and governance

	Economic aspect	Law aspect	Political aspect	Social aspect
Stage One (1990s)	The process of disclosure and privatization in tourism has begun. Growth of indicators for incoming and outgoing tourism, the opening of new travel companies, an increase in the profitability of the industry.	Resolution of the Cabinet of Ministers of the Republic of Kazakhstan "On the Development of Tourism and Sports in the Republic of Kazakhstan", the Law of the Republic of Kazakhstan "On Tourism", "Regulation on Licensing, Certification of Tourist and Sports Activities".	Opening of borders for incoming and outgoing visa formalities, influx of foreign investors.	Participation of travel agencies in sponsorship.
Stage Two (2000s)	Stagnation of indicators for incoming tourism, decline in indicators of domestic tourism, an increase in the number of firms specializing in shop tourism.	"National Program for the Development of Tourism in the Republic of Kazakhstan" and the licensing system for tourism activities has been revised.	The decline in business activity of foreign citizens.	Participation of a number of companies in sponsorship events.
Stage Three (2010s)	Changes in the structure of tourism types, decline in incoming tourism indicators, increased competition, use of marketing and advertising means.	Rules for licensing tourism activities in the Republic of Kazakhstan, Resolution of the Government of the Republic of Kazakhstan dated December 29, 200 No. 1947 "On priority measures for the development of the tourism industry", Law of the Republic of Kazakhstan No. 211-II "On tourism activities in the Republic of Kazakhstan".	Further simplification of visa formalities, integration processes in tourism activities.	Benefits for pensioners, large families are used, tourist monuments are being restored.

STAGE ONE (1990s)

The beginning of the independence of the Republic of Kazakhstan is characterized by the rapid development of international tourism. In connection with the emergence of the possibility of free travel abroad, during this period, mainly outbound tourism is developing, the share of which largely exceeds incoming and out going tourism (Macerinskiene and Sakhanova, 2011; Tleubayeva, 2018).

The first stage became a turning point in the development of tourism in Kazakhstan, the transition to a market economy contributed to a change in the structure of the tourism industry, an increase in the number of travel agencies, the emergence of new laws, norms and rules that create conditions for the development of private entrepreneurship in tourism. This stage should be given special attention, since it is characterized by an extensive growth in tourism indicators in the republic. To improve the quality and further development of the tourism industry, the Cabinet of Ministers of the Republic of Kazakhstan approved the "Regulations on licensing, certification of tourism and sports activities", which decided: "State, public and commercial organizations engaged in tourism activities must obtain licenses from the Ministry of Tourism, Physical culture and sports of the Republic of Kazakhstan". It should be noted that the introduction of this licensing made it possible to regulate tourism activities in the country, and, as a result, it was possible to observe an improvement in the quality of service for tourists both in the country and abroad. It is also impossible not to note the strictly conducted inspection and supervision of tourist services, which allowed the state to control the quality of the services offered and, as a result, to increase the responsibility of tourist enterprises for the reception, accommodation and customer service. Attaching great importance to the role of tourism in the development of international cooperation and the formation of a strong economy, the Cabinet of Ministers of the Republic of Kazakhstan adopted a "Resolution on the Development of Tourism and Sports", the purpose of which was "... to free enterprises and organizations that channel profits from production activities to the development of tourism, physical culture and sports, reconstruction, construction of tourist and sports facilities, as well as those carrying out their construction, from the payment of taxes on profits in the part that is aimed at these purposes; to exempt tourist and sports facilities from value added taxes received from services of a tourist and sports nature" (Varavin and Kozlova, 2018; Thapa, 2019).

At the first stage, there was a significant increase in the number of travel companies. If until 1991 only 3 organizations were engaged in tourism in Kazakhstan ("Kazakh Republican Council for Tourism and Excursions", "Intourist", BMMT "Sputnik"), then in 1994, 589 tourist organizations were registered in Kazakhstan. Outbound tourist flows were focused on Poland, China (interest in shopping tours prevailed) and Bulgaria (for recreation). The countries generating tourist flows to Kazakhstan during this period were Great Britain, Germany, China and the USA. The share of tourism in GDP during this period was in 1991 - 0.03%, in 1992 - 0.09%, in 1993 - 0.06%, in 1994 - 0.08%. The volume of outbound tourism in the period from 1992-1994 has grown three times. If in 1992 there were 233 990 tourists who left the republic, then in 1994, respectively, 700 492 tourists. The number of tourists visiting the republic during this period has doubled, since, 236,044 foreign tourists were received in Kazakhstan in 1992, and, 450,718 tourists in 1994. The reforms carried out, mainly the simplification of visa formalities, the opening of the borders of Kazakhstan for foreign investors, contributed to the rapid growth of, first of all, international tourism. Especially fast rates are typical for the indicators of sending citizens of Kazakhstan abroad. Much attention was paid to business trips of foreign tourists to Kazakhstan, which is associated with an increase in investment activity in the republic.

STAGE TWO (2000s)

The second stage of transformation in tourism took place in the context of stabilization at the macro level mainly because stable commodity, oil and gas prices on international markets (Karatajev et al., 2016; Koshim et al., 2018; Aktymbayeva et al., 2020). The country is rich in energy resources and in better economic and energy position compared to other former Soviet Union countries (Karatajev and Hall, 2020). It should be noted that international tourism in the Republic of Kazakhstan until the 90s existed as one of the most ideological spheres of activity. This stage is characterized by stagnation in inbound tourism indicators, as well as a decline in outbound tourism indicators. In the article "Formation of the tourism industry in the Republic of Kazakhstan" the author highlights the following factors, which, in his opinion, predetermined the very extensive growth of inbound tourism indicators in the country: simplification of visa formalities, removal of restrictions on the exit of citizens of Kazakhstan; accelerating the process of processing travel documents; the emergence and increase of the social stratum of the population, which has the financial capabilities to travel abroad; reorientation of trips of citizens of Kazakhstan from the domestic tourist market and the market of the CIS countries to the foreign market due to the rise in prices for vouchers to local resorts, growth in transport tariffs; use of foreign travel to solve material and everyday problems, replenishment of the Kazakhstani market of consumer goods (Esenov et al., 2018; Allayarov et al., 2018). At this stage, a number of international agreements on cooperation in the field of tourism were concluded: between the Republic of Kazakhstan and the Republic of Iran; between the Republic of Kazakhstan and the Republic of Pakistan; The Ministry of Tourism, Culture and Sports of the Republic of Kazakhstan and the Ministry of Youth, Sports and Tourism of the Republic of Moldova; Ashgabat agreement on cooperation in the field of tourism with the CIS countries; between the Government of the Republic of Kazakhstan and the Government of the Republic of Uzbekistan on deepening cooperation in the field of culture, healthcare, science, education, tourism and sports; between the Ministry of Youth, Tourism and Sports of the Republic of Kazakhstan and the State Committee of the Kyrgyz Republic on Tourism and Sports; between the Ministry of Youth Affairs, Tourism and Sports of the Republic of Kazakhstan and the Ministry of Industry and Trade of the Hungarian Republic.

During this period, the following international agreements on cooperation in the field of tourism were concluded: between the Ministry of Youth, Tourism and Sports of the Republic of Kazakhstan and the State Committee of the Kyrgyz Republic on Tourism and Sports; between the Ministry of Youth, Tourism and Sports of the Republic of Kazakhstan and the Ministry of the Arab Republic of Egypt; between the Government of the Republic of Kazakhstan and the Government of the State of Israel; between the Government of the Republic of Kazakhstan and the Government of Georgia; between the Ministry of Education and Culture of the Republic of Kazakhstan and the State Agency of the Kyrgyz Republic under the Government of the Kyrgyz Republic on cooperation in the field of tourism, physical culture and sports; between the Government of the Republic of Kazakhstan and the Government of Turkmenistan; between the Government of the Republic of Kazakhstan, the Government of the Kyrgyz Republic and the Government of the Republic of Uzbekistan on cooperation in the field of tourism. At the end of the 90s of the last centuries, a number of separate events were held to form the tourism industry of the republic. On February 27, 1998, the Decree of the President of the Republic of Kazakhstan No 3850 "On the State Program of the Republic of Kazakhstan" Revival of historical centers of the Silk Road, preservation and successive development of the culture of the Turkic-speaking states, development of tourism infrastructure was issued, the National Company Silk Road - Kazakhstan was created. Also, in 1998, travel companies of Kazakhstan presented the republic at the International Tourism Exchange in Berlin. In January 1999, the state management of tourism was transferred to the Ministry of Transport, Communications and Tourism of the Republic of Kazakhstan. In September 1999, the Ministry of Transport, Communications and Tourism, together with the Ministry of Foreign Affairs of the Republic of Kazakhstan, adopted an interdepartmental Program of Activities of the Embassies of the Republic of Kazakhstan on the development of relations in the field of tourism, aimed at attracting investments in the tourism sector, increasing the tourist flow, as well as protecting interests and rights Kazakh

tourists abroad (Baiburiev et al., 2018; Akbar et al., 2020). In the period from 1999 to 2000, the following international agreements on cooperation in the field of tourism were concluded: between the Ministry of Education, Culture and Health of the Republic of Kazakhstan and the State Administration for Tourism; between the Government of the Republic of Kazakhstan and the Government of the Turkish Republic; between the Government of the Republic of Kazakhstan and the Government of the Republic of Bulgaria on cooperation in the field of tourism. The state concept of tourism development, including the issues of improving its infrastructure, significantly differed from those adopted throughout the world. Therefore, at this stage, the changes were difficult and inadequate.

STAGE THREE (2010s)

The third stage began in 2000 and continues to this day. In general, it was this stage and the current policy in the field of tourism that gave impetus to progressive changes. A feature of this stage is the reform of the legal framework in the field of tourism and the development of a new concept of tourism development. State support for the first time is manifested in the financial support of the industry (Dikareva and Koroleva, 2017; Mamutova, 2020). At this stage, the activation of tourism activities at the state level begins. The Resolution of the Government of the Republic of Kazakhstan dated December 29, 2000 No 1947 "On priority measures for the development of the tourism industry" was adopted. This document focuses on such issues as the simplification of visa formalities when entering the Republic of Kazakhstan, the organization by the Agency of the Republic of Kazakhstan for Tourism and Sports of international exhibitions and fairs, the use of incentives for tourists on tariffs for transport services, the formation of a loan program for tourist organizations for 2001 -2005 years. Almost the first steps outlined by this decree were taken in 2002, and from 25 to 27 April in the city of Almaty the second Kazakhstan International Tourism Fair "Tourism and Travel" - KITF was organized, in which about 80 tourist organizations took part. The outlined processes are associated with the international tourism market, the intensification of the activities of all structures of the tourism sector was noted, in particular, participation in the International Tourism Exchanges in the cities of Berlin and London, the Moscow, Tashkent International Exhibitions and the International Tourism Forum in 2001 (Artykbaev et al., 2019; Artykbaev et al., 2020).

In 2000-2003, an action plan for the formation of the tourist image of Kazakhstan was carried out. As part of the implementation of this plan, with the participation of the Agency of the Republic of Kazakhstan for Tourism and Sports, the Spanish television company "CROMA Television" organized and filmed a documentary video about the history, culture and customs of the country. The documentary film consists of 4 parts characterizing the picturesque places of the republic, infrastructure, historical sites, folk art, traditions and customs. The film was broadcast on the European Plus channel. The premiere screening of the documentary film "Kazakhstan: a journey into the heart of Eurasia" was held at the Embassy of the Republic of Kazakhstan in the Kingdom of Spain with the participation of the President of the Republic of Kazakhstan N.A. Nazarbayev. In addition, CROMA Television, commissioned by the Agency of the Republic of Kazakhstan for Tourism and Sports, produced an advertising video about the tourism opportunities in Kazakhstan.

In the tourist activity of Kazakhstan, there has been a tendency of integration into the world tourist market. Integration processes on the section of the Great Silk Road are especially strengthening in terms of tourism development. For this reason, the Agency of the Republic of Kazakhstan for Tourism and Sports has developed the State Program "Revival of the Historical Centers of the Silk Road, Preservation and Continuous Development of the Cultural Heritage of the Turkic-Speaking States, Creation of Tourism Infrastructure". Based on this program, in April 2002 in the city of Turkestan, a regional seminar was organized on the theme "Development of tourism on the Kazakh section of the Great Silk Road" (Panzabekova, 2018; Movkebayeva et al., 2020). At the seminar, an assessment was made of the state of development of this tourist complex. Among the positive aspects, one can note such as the restoration of cultural and historical sites, the construction of a hotel and a guest house, the reconstruction and construction of roads, the development of new routes by such tour operators as OJSC "Akmola-tourist", as well as the search for investors and the development of investment projects, part of which were submitted for consideration during the investment summit "Eurasia – 2000".

At the same time, negative aspects were also noted, among which the following can be highlighted: the entertainment infrastructure is not fully provided, the difficulty of obtaining a visa and the high cost of visas. On June 13, 2001, the country adopted the Law of the Republic of Kazakhstan No. 211-II "On tourist activities in the Republic of Kazakhstan", which defines the economic, social, organizational foundations of tourist activities in the country. This resolution clearly defines the category and conceptual apparatus in the field of tourism, discloses the main terms and concepts used in the field of tourism, delimits the areas of activity of state and local authorities, and defines the principles and features of licensing of tourism activities in Kazakhstan. The resolution also addresses issues related to contractual relations, professional training of specialists in this industry, the rights and obligations of tourists, insurance in the implementation of tourist activities. At the third stage of tourism development, the licensing system for tourism activities in the Republic of Kazakhstan was also revised, since on September 14, 2001, the Rules for Licensing Tourism Activities in the Republic of Kazakhstan were adopted, according to this provision, the licensing system was more stringent and it became much more difficult for a travel company to obtain a license. By the Decree of the Government of the Republic of Kazakhstan dated December 29, 2002 No. 1445, the Program for the Development of the Tourism Industry for 2003-2005 was approved. The developed program presented a specific action plan aimed at state regulation and support of tourist activities. All the issues under consideration can be grouped as follows: improving the quality of tourist services through the development of standards in the field of tourism; development of tourism infrastructure with the attraction of foreign investment; professional development of personnel for tourism workers; improving the medical system and ensuring safety in tourism; improvement of statistics and accounting of indicators of the tourism industry; ensuring a positive image through active participation in international fairs, exhibitions and stock exchanges, creating booklets and brochures about the tourist resources of Kazakhstan; ensuring environmental protection and balance of ecology (Mussina, 2018; Tiberghien, 2019).

Another important impetus for the development of the tourism industry was the recognition of the tourism industry as one of the priority sectors of the economy among seven cluster initiatives. As part of the development of the tourism cluster in the republic, priority directions for the development of tourism were identified, such as business, environmental, cultural and educational, as well as extreme types of tourism. Based on this, by the Resolution of the Government of the Republic of Kazakhstan dated June 25, 2005 No. 633 "On approval of plans for the creation and development of pilot clusters in priority sectors of the economy", a plan was approved for the creation and development of a pilot cluster "Tourism" in the city of Almaty and the Almaty region. Taking into account the importance of creating a tourism cluster, in 2005 the Government of the republic allocated funds to conduct marketing research of the tourism potential of the regions of Kazakhstan in order to determine the further development strategy of the tourism industry. To carry out these studies, the company "IPK International" was involved, which occupies a leading position in the development of strategies and the promotion of tourism products on the world market of tourism services.

At the last stage, it is possible to differentiate the development of tourism at the enterprise level, depending on its dimension. Large enterprises that use the differentiation strategy as their basis have a fairly wide range of services offered, diverse travel geography and offer

different countries and regions, thereby insuring themselves against possible failures and economic risks. The results of the polls conducted by the author among large tour operators showed that the main problem in their activities is obtaining entry visas to a number of states, in particular to America, France and other countries of the Schengen agreement. The main problem of small travel companies is the lack and limited financial resources, which negatively affects their activities. In general, the analysis of tourism activities in Kazakhstan made it possible to systematize and present the specifics and features of tourism development at each stage.

Based on the above analysis, we can conclude that the most active in terms of reforming the legislation on tourism in Kazakhstan were the first and third stages, and in economic terms, the greatest rise in indicators is observed in the second period. If we consider the issues of the political aspect, then we can state the fact that the decisive were the first and third periods, which opened up opportunities for the development of international tourism. If initially social factors were not so important for tourist activity, then later we observe that they began to be given some attention (Rakhmatullayeva et al., 2015; Aliyeva et al., 2019). The development of the economy of Kazakhstan, the implementation of a set of measures for the industrial and innovative development of the country contribute to the active attraction of foreign capital. Therefore, there are all the prerequisites for attracting foreign and domestic investment in the development of the tourism industry, the formation of a high level of tourism management in order to ensure clear coordination of actions of the central and regional levels of government, to promote the development of private initiatives; creation of an information space for the industry, development of an effective system for promoting Kazakh tourism products to foreign and domestic markets; adoption of the necessary regulatory legal acts on investment and taxation. These are the main directions of cluster tourism development, planned for implementation within the framework of the developed regional master plans. Thus, over the years of state independence of Kazakhstan, a number of important events were held to form the national tourism industry of the republic, 22 international agreements were concluded in the field of cooperation in the field of tourism, which have a huge potential for social efficiency.

PROBLEMS FOR FURTHER DEVELOPMENT

In May 2019, the Government approved The Programme for the Development of the Tourism Industry for 2019-25. The Programme is designed to improve the availability and quality of tourist services and products, as well as the quality of life of the population of the country by developing places of tourist interest and upskilling human resources for the sector. It also focuses on the growth of external and internal tourist flows, increasing investment in the tourism industry by creating a favourable tourist climate, and promotion of the tourist potential of Kazakhstan in both domestic and international markets. Kazakh Tourism JCS used the Programme to guide its marketing and promotion and to attract investment in tourism. Although Kazakhstan has a favourable geopolitical position, with significant natural and recreational resources and world cultural and historical heritage sites, the country is an emerging tourism destination and is not yet competitive against popular countries for tourism and travel. The government recognises that the quality of tourist infrastructure, openness of bilateral service agreements, complexity of the visa regime, and low quality of roads are areas for further improvement. The 2019-25 Programme is focusing on resolving these issues and aligning performance with international standards. This work is developed in the context of wider legislation designed to transform the economy of Kazakhstan and includes significant institutional and economic reforms as well as sector development and specialisation. To achieve these targets, the institutional framework has been strengthened, national and local executive bodies formed, working alongside the National Tourism Organisation, Kazakh Tourism JSC, and additional co-ordination measures developed to deal with the cross-cutting nature of tourism, which is estimated to link 30 different sectors in Kazakhstan. Low levels of investment inhibit the industry's development and restrict potential growth. In 2017, the country attracted KZT 295.7 billion in fixed capital investment in tourism, 36.6% more than in 2016. In 2018, total investment increased by 65% compared to 2017 and amounted to KZT 447.3. However, many major investment projects are still not able to be implemented due to a lack of state support mechanisms and a lack of long-term and affordable finance for the industry.

In order to attract investors to the tourism industry, the government is carrying out the following work: ensuring the necessary engineering and transport infrastructure are brought to investment projects; creating a preferential regime for investors, including the provision of in-kind grants and exemptions from corporate income tax, land and property tax. The minimum threshold has been reduced from KZT 4.7 billion to KZT 4.7 million for tourism projects; a programme has been launched to provide SMEs with financial resources for investment projects in the tourism industry at a preferential rate of 6%. The core priority of the Ministry of Culture and Sport and the government is to increase tourist flows and attract a larger share of the international market. The number of tourism related businesses has been increasing by 10% to 15% each year, but regional tourism development is unco-ordinated. For example, formal regional strategies are not in place to enable the development of the most promising destinations and products.

The Programme for the Development of the Tourism Industry for 2019-25, aims to position Kazakhstan as one of the 50 most attractive countries for travel in the world by 2025. This will be achieved by reference to the following indicators: increase the contribution of tourism to the country's GDP from 5.7% to 8%; increase the number of people employed in the tourism industry from 440 000 to 650 000; increase the number of overseas tourists from the 830 000 to 3 million; increase the number of domestic tourists from 5 million to 8 million; increase the volume of tourism services rendered from EUR 256 million to EUR 630 million; increase tourism investment from EUR 700 million to EUR 1.4 billion. The implementation cost of the Programme is KZT 2.2 trillion, more than half of which is financed by the Government, while the remainder comes from the private sector. Kazakhstan is an emerging tourist destination with limited tourism infrastructure, weak product and services offers, and does not have a high image in global tourism markets. Priority measures, such as visa reforms, air access and high quality accommodation, are a critical part of the current tourism plan. Research has indicated that Kazakhstan has over 100 potential 'tourism magnets' and 'points of tourism growth'. Due to limited resources, and the need for significant investment in each, these have been prioritised at both national and regional levels. This has resulted in the development of a comprehensive map of potential sites and opportunities by the Committee of the Tourism Industry. Various selection criteria underpinned the selection process for these sites, including uniqueness, historical and cultural significance, and availability of accommodation. The development of the accommodation and hospitality sector is a significant challenge given a lack of skills, the remoteness of many providers and the difficulty in tracking the quantity of stock at national or regional levels using official statistics. A framework for the operation of the sector is currently being developed including a National Hostels Standard, which is being implemented on a voluntary basis. In 2019, the government created a specialised educational institution - The International University of Tourism and Hospitality – as a model of international and national best practice in the training of tourism personnel. The University aims to improve the training system and increase the competence of personnel in the tourism industry to meet international standards.

Kazakhstan as a tourist destination is certainly attractive for foreign tourists and the local population. Nevertheless, there are a number of constraining factors that hinder the full development of tourism in the country. These mainly include: 1) lack of information about the tourism potential of the Republic of Kazakhstan in the international market; 2) lack of qualified personnel in the tourism sector

- including some discrepancy between educational programs and labor market requirements, production needs and employers' expectations; 3) insufficient development of transport infrastructure (Kantarci, 2007; Kantarci et al., 2017; Aliyeva et al., 2020). In order to solve existing problems, as well as to further improve this industry, the head of state, N.A. Nazarbayev, the Concept for the Development of the Tourism Industry of the Republic of Kazakhstan until 2020 was developed and formed. This Concept is aimed at the sustainable development of the tourism industry through the creation and modernization of infrastructure, the formation of the image of Kazakhstan to increase its attractiveness as a tourist destination (Aktymbayeva et al., 2020).

The main reason hindering the development of the tourism product of the Republic of Kazakhstan is its lack of publicity and poor promotion in the international market. In this regard, the National Tourism Development Company will be established. The primary task of the company is to develop an image strategy, which provides for the creation of a travel brand (Akhmedenov, 2020). The formation of the image of the Republic of Kazakhstan will be implemented, firstly, by creating a specialized online platform that reflects all the country's tourist offers and provides online booking functions. Further, the promotion of tourist destinations will be carried out through mobile advertising and placement of banners on websites, as well as in popular social networks of the planet (for example, Facebook, Trip Advisor and others). Secondly, tourist offices, visit centers and information bureaus of the Republic of Kazakhstan will be opened in key markets, namely: at the first stage, one representative office will be created in Russia, one in Hong Kong and one for Western Europe. In the future, a more complete coverage of the Asian market is planned, as well as an increase in the number of representative offices in Europe. Thirdly, offsite events will be created, for example, study tours across Kazakhstan for representatives of the media and foreign specialists of the tourism industry in order to inform and familiarize themselves with the country's tourism products (Yegemberdiyeva et al., 2020).

In order to achieve high quality and competitiveness of the tourism product of Kazakhstan in the world market, it is certainly necessary to solve the problem of personnel in the country. To train employees of the tourism industry, opportunities will be created for the further development of higher, technical and vocational education, as well as trainings in the field of tourism, support for vocational training systems and schools in the tourism and hospitality industry. For this, from the second half of 2013, Nazarbayev University and the Austrian company will be involved, with which a Memorandum of Understanding has already been signed. The additional need for personnel will be replenished through retraining and advanced training in short-term training centers, including in preparation for the International Specialized Exhibition EXPO-2017 in Astana. It is the largest event, a symbol of industrialization and an open area to showcase technical and technological advances. Holding EXPO-2017 will serve to significantly promote the Republic of Kazakhstan and its capital at the international level. To ensure control over the quality of tourist services, qualification standards will be drawn up for workers in the tourist industry (guides, travel agencies and translators). The successful development of the tourism industry is due to the presence of a high quality and developed transport system that connects places of tourist interest. In order to improve transport infrastructure, first of all, the improvement of existing and construction of new airports will be carried out, as well as airports in the cities of Astana, Almaty and Chimkent will be expanded in order to increase their capacity. Then, new high-speed trains will be put into operation to open international connections with non-CIS countries and, accordingly, to minimize the duration of travel between them. Road transport development projects include the completion of the Western Europe - Western China international transport corridor, as well as roadside infrastructure. All these activities will contribute to the further development of both domestic and inbound tourism, which ultimately will lead to a significant increase in the attractiveness of the national tourism product and the integration of Kazakhstan into the system of the world tourism market.

CONCLUSION

Tourism today occupies one of the most important positions in the world economy. The systematic solution of the problems of increasing the attractiveness of the regions of the republic for tourists, the development and implementation of additional programs for the development of tourism in the regions, their timely financing and the modernization of the existing infrastructure will significantly increase the attractiveness of all tourist regions of Kazakhstan in the future. In the first part of the work, we examined how the tourism industry in the country developed before and after gaining state independence. The Republic of Kazakhstan has objective prerequisites for active integration into the world tourism market. During the years of state independence, a number of important events have been carried out in the country: joining the World Tourism Organization in 1993, introducing a certification and licensing system, which have become a kind of mechanism for controlling and monitoring the proper provision of tourist services.

During this period, 22 international agreements on cooperation in the field of tourism were concluded, which are socially effective. An important aspect, undoubtedly, is the participation of the Republic of Kazakhstan in international tourism forums and exhibitions, for example, in Berlin, London, Moscow and Tashkent, as well as holding its own annual exhibition "Tourism and Travel". It is also important that in 2005 the "Tourism" cluster was created as one of the most priority directions in the state economy, and the company "IPK International" was involved in conducting a marketing analysis of the country's tourism industry.

The main problems of tourism development in the country are highlighted: a poorly developed image of Kazakhstan, a lack of qualified personnel in this area, as well as an unsatisfactory state of the transport infrastructure. The President of the Republic of Kazakhstan developed a Concept for the Development of the Tourism Industry until 2020, which provides for ripe problems, and also suggests ways to solve them. Kazakhstan really needs well-thought-out advertising, because even the citizens themselves are often not aware of the country's potential. The policy of the state aimed at creating the image of Kazakhstan, with a serious approach and implementation of the planned measures, will give a positive result very soon. Attracting foreign professionals, such as the Austrian company WIFI International, which provides training programs and interactive training courses, will help achieve a high level of education for personnel working in the tourism sector. And the participation of the Kazakh international university Nazarbayev University will help to regulate the compliance of curricula at all levels of education.

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ORGANIZATION OF NETWORK BASIS FOR TRANSNATIONAL TOURISM ACTIVITY

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Abstract: From the standpoint of the system theory, transnational corporations are open complex socioeconomic systems functioning under the low predictability of the external environment. This article offers the investigation of brand-new forms of corporate management organization, taking into account the peculiarities of transnational companies' operations at today's global tourism market. The method of the analysis of scientific researches of this problem was applied. The transnational dynamics of corporate networks was studied. It was also investigated the business zoning and adaptation as the reorganizational strategy of transnational corporations.

Key words: networking, organizational structure, intensity of consumption, economic incentives, value chain

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INTRODUCTION

Retrospective analysis of transnational corporations (TNCs') activity in the tourism sector allows determining several major approaches to their organizational structures based on divisional management and also creation of alliances and unions (e.g., strategic business zones, centers of responsibility, centers of investment, etc.) inside a corporation. Both these models have been actively used by transnational companies in the near past. Determined drawbacks of these models along with the growing necessity to consider the specificity of tourism as a separate type of commercial activity require setting the brand-new principles of organizational structures' formation – the so-called adaptive models (Dunets et al., 2019; Chkalova et al., 2019). Divisional structure of management dates back to the 1930s, it emerged as a natural consequence of growing scale and diversity of businesses performed by large companies. Another reason for its emergence was the necessity to increase the efficiency of management and coordination between territorial structural units of TNCs. Divisional structure of transnational corporate management is based on the use of divisions built by the product or territorial principle. This type of structuring is very much autonomous in nature: each division is allowed to have own account of profits and losses along with the full cycle of managerial functions (planning, production organization, internal control, financial management, own HR policy, marketing, distribution, etc.). In some sense, each division can be treated as an independent business or a separate firm at its market (Ushakov, 2006; Shevyakova et al., 2019).

Modern features of the development of social production, as well as increasing and accelerating processes of globalization, lead to changes in the market conditions of regional economies. As a result, they accelerate the processes of globalization. For Russia's economy, which is huge and heterogeneous, and which crosses over a large variety of different resources, it is important to solve the existing problems to ensure the effective transformation of the socio-economic space. In order to solve this problem, it is necessary to create a conceptually new model of a self-developing and self-sustaining economic system, which is designed to ensure the effective social and economic development of the regions. In addition, it is necessary to develop decisively the problems caused by the territorial isolation of the regions of the Russian Federation (Singalen et al., 2019; Zhigir, 2020). As a proposed model, a cluster-network approach to the organization of the socio-economic space of the territories of the Russian Federation might be considered. Cluster-network structures represent the network relationship of spatial location of economic entities in the interfaced territories. Additionally, the development of outside clusters would allow for the organisation of the socio-economic space within the territories. That would lead to the creation of processes of joint interaction, which in turn is strengthened, creating favourable conditions for the development of corporate, network and local mega-structures and mega-economies within territories. As a consequence, these create an environment for the spread and active development of Centres of Global Economic Growth (CGEG). Such CGEG contribute to a cumulative impact on internal and external entities (Kala et al., 2017; Kostyukhin, 2019; Fedyunin et al., 2018b). In the sector of tourism and hospitality divisional structure of TNCs was first implemented relatively late – during 1960s-1980s already. It was applied along with the multibranded strategies (when each segment of consumers was getting their own brand, thus, artificial competition was taking place between tourist and hotel brands belonging

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to the same corporation). Traditionally, managing one brand was solely the responsibility of one division which had all necessary powers and competences for that. Further transformation of the division-based organizational structure of tourist TNCs contributed to the widening gap between corporate brand and corporation's material basis (the latter includes hotels, transport, office spaces, etc.). And since consumer preferences are highly dynamic in their changes under the multifactor impact of tourism business development, managers of middle and lower levels obtain a much more important role than the top management (Van et al., 2017; Mussapirov et al., 2019). World corporate practice in the field of tourism knows the cases of complete change of brand affiliations (hotels in the first place) within the framework of one common corporate marketing or optimizational policy (Provalova et al., 2019; Fedyunin et al., 2018a).

Switch of brands owned by a transnational corporation is an instrument which increases company's flexibility and its operational capacity at the world market. This is one of the reasons why franchising got so much popularity since the early 1990s, in hospitality and tour agencies' subsectors in the first place. This mechanism has helped reducing the costs as opposed to, for example, transiting hotel management to another structural unit of the same corporation (Panfiluk and Szymańska, 2017; Sarma et al., 2019). Within the frameworks of its divisional structure transnational corporation creates groups of subdivisions for better coordination of operational activities of corporation. At the same time, corporate headquarters is able to concentrate more efforts on solving general corporate tasks (selecting the development strategy, portfolio management, strategic planning, relations with key stakeholders and investors, communication with state authorities, standards compliance and control, etc.). Organizational structure of a transnational corporate is based on a smart combination of territorial and product principles. Balance between these two principles has been solved differently at different periods of time.

At earlier stages territorial principles was the dominating one (Figure 1), but with the course of time organizational structure has been getting more and more oriented on specificity of particular brands, rather than on territorial affiliation of a particular sub-department (Figure 2).

This sort of transformation can be explained by the following:

- Growing universalization of departments' activities in various parts of the world, introduction of common corporate standards in management and quality provision, unification of all business processes and control over them, standardizing requirements to all employees (manager level).
- Ongoing globalization of the tourist market which leads to gradual unification of consumer preferences worldwide. Tourists today, no matter what is their country of origin, tend to have very similar expectations when it comes to hotel accommodation and tourist services.
- Heterogeneity in geographical presence of certain brands belonging to the same corporation due to specificity of demand at different regional tourist markets.
- Wider spread of Western standards in management education. Also, many corporations have their own corporate schools for preparation of top managers for their hotels and tour agencies.
- The necessity to coordinate strategies at various regional markets so that they are in compliance with the general strategy of the brand itself.

Consequently, the process of corporate organizational structures' evolution has led to blurred territorial affiliation of corporate divisions and more active establishment of horizontal connections between geographically distant representative offices affiliated to the same brand product. Similar transformations have been observed in the segment of tour operating too. Nearly all transnational corporations have chosen the strategy of multicountry tour operating covering several destinations of mass tourism (Tulbayeva et al., 2017; Prokofieva et al., 2017). Thus, the organizational structure of such corporations simply had to follow this trend too. Recognizable by consumers' brands were integrated into the very structure of tourist TNCs so that clients could clearly see that these companies are offering vacations at nearly any country on the world map of tourism.

MATERIAL AND METHODS

Any department within such a structure manages its business process strictly within the framework set by the related brand or regional market, and also being limited by its own managerial competencies. Thus, it is quite obvious that organization of the divisional structure in management of tourism corporations rest on the classical linear-functional principles. Another specific feature of the divisional management of a corporation is that certain functions and business processes require quite high qualification level (Goldsmith and Flynn, 1992; Padilla et al., 2019). This is because these functions and processes directly determine the future of corporation (for example, financial accounting and reporting, preparation of human resources, marketing and strategic planning). For this reason, these vital functions belong to separate structural elements, ignoring the usual hierarchy. Results of these functions' performance could be later used by any division of the corporate structure. As we can see in Figures 1 and 2, product and territorial divisions within corporate structure coexist with separate other departments – those responsible for corporate planning, HR supply and development, international relations, financial and marketing departments. Clearly, performance of these separate departments is highly important for all other divisions, no matter where they are located and what type of consumers they serve to. Under such structuring certain business processes will surely intersect (Muradl and Ahmadov, 2019). For example, marketing department provides necessary information for strategies' development by two different divisions – the first one is managing Novotel chain, while the second one is managing Sofitel. In both cases the marketing department, while providing these data, takes into account the specific features of both these products/brands. Then it's turns of the department responsible for corporate planning which takes efforts to improve production processes at both these brand groups, while the financial department develops the system of indicators to access these improvements and other achievements in business terms.

Finally, yet another important source of hyper-profit formation for tourist TNCs is already mentioned (and not once) scale effect. This effect means, first and foremost, that the prime cost of a tourist product can be reduced with the growing volumes on the global scale. To sum up, all of the considered above models applied to move corporations to the zone of stable and high profit prove, yet another time, that transnational corporations today really have colossal advantages in comparison with small and mid-sized businesses operating in the tourism sector. Let's outline all these advantages in a more visual way (Figure 1). On the one hand, this intersection of business processes within the general corporate structure and presence of the departments with general corporate roles serves as the basis for the corporate construction as such. Together they also serve as some sort of kernel which does not allow departments to be too independent and autonomous in their functioning (Vlasov et al., 2018; Prause and Atari, 2017). On the other hand, with the course of time corporations often change their vision in this regard: on the background of mergers and acquisitions gaining much popularity, ongoing diversification of business and the necessity to search for new incentives (both external and internal) for further growth, directors of territorial and/or brand divisions eventually get more powers (though more responsibility too). To the advantages of the divisional structure of corporate management belong:

- More opportunities for parallel management of several brands with numerous employees and also more opportunities for convenient management of geographically distant divisions.
- Capacity to pay enough attention to a specific brand or product (e.g., particular hotel chain). In this case a huge corporation is able to provide the same amount of attention to a particular product as a smaller company would. This means that corporation is no giant with feet of clay – it can be flexible and quick in reaction and adaptation to changing market conditions.

- Growing orientation of TNCs on the end result by means of direct responsibility of divisions' directors for what's going in their offices.
- Reduction of levels in top management, stricter division of responsibilities, partial shift of responsibility for income on the middle level of management, decentralization of managerial decision-making, improvement of intracorporate communications.
- More opportunities to attract high-class professional as consultants or for full-time work, especially when it comes to strategically important decision-making (this becomes easier because the core departments are common for the whole corporation).

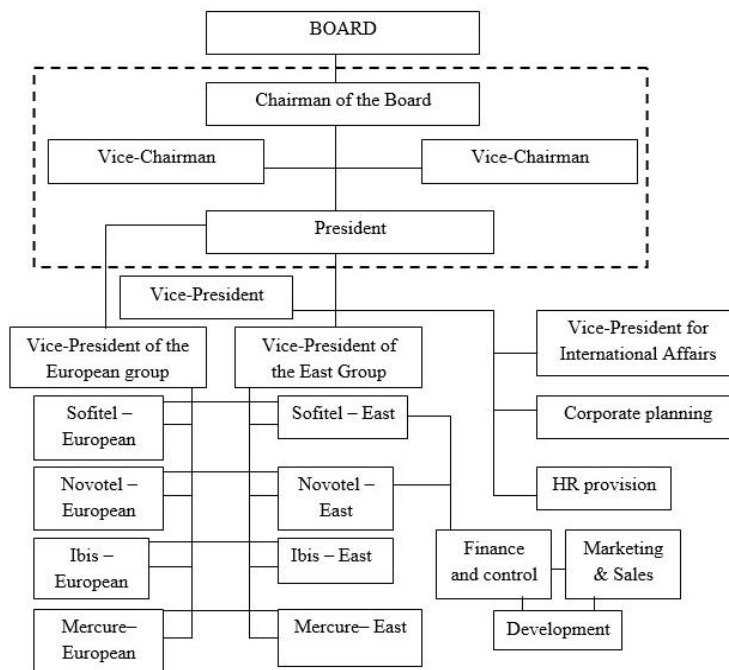


Figure 1. Fragment of the organizational structure of the Accor company, as of 1983 (Source: developed by authors)

However, divisional structure of TNCs also has its drawbacks and bottlenecks. For example, some of the business processes are merged, while they belong to different divisions and departments. This may cause growth of tensions due to intracorporate competition between divisions (Movsesyan, 2001). There is nothing worse than such kind of corporate relations since this sort of competition can quite severely damage the unity and the wholeness of a corporation. Inclusion of the already existing business (for example, as a result of merger) into the divisional structure would require its restructuring due to the necessity to transfer part of functions and processes to the general corporate departments (Batkovski et al., 2018; Šišulák, 2017). For example, as in the case of Accor, already mentioned above, all process related to staff preparation, financial issues and accounting, marketing, etc. were transferred to central departments. At this, there is no guarantee that processes delegated now to general corporate structures would take into account the specificity of a particular brand or key features of a particular regional market since managers working in this general departments are rather detached from the particular division.

These and other bottlenecks of the corporate division-based structure became the key cause of their gradual transformation and formation of the brand-new basis for intracorporate relations. First of all, in the end of the 1990s already vertical relations inside corporate structures started to experience serious changes. Initially, all operational units were reporting to director general. In certain cases, he would closely manage also all departments of the core, while operational management of the production and distribution departments was transferred to his deputy. However, even such division of responsibilities and powers was not enough since there were too many operational departments (Gulyaev, 2003; Mikhaylov, 2018; Mingaleva et al., 2017). Thus, many TNCs chose to have one more, special level of management – groups of vice-presidents, each being responsible for several departments, while all most important decisions were consulted and controlled within a group, the latter also coordinating all activities of the included departments with the rest of a corporation. In our visual example above, we can see the key functions of groups' directors within the hotel chain Accor. Initially, group vice-presidents were viewed as the representatives of the Board and as the key source of information for director general concerning the results of a particular business zone and its development prospects overall. Thus, group vice-presidents were seen not as representatives of separate business directions with their specific interests but as members of corporation's top management, sharing by default the common vision on corporate business and working in the best interests of the corporation as a whole. However, these rather idealistic expectations turned out to be very much unrealistic (Herasymovych, 2018).

First of all, the very system of centralized investment resources' distribution made group vice-presidents fight for the specific interests of their own divisions only. In the absolute majority of all corporations there are always quite strict rules and limits on capital use according to the levels of management. The overall level of rights on capital investments depended on the size of a particular company, strategic importance of certain divisions in it and (not that seldom) personal features of the departments' and groups' managers. The larger was the volume of accessible for investment capital in a particular division – the more claims the head of that division would have concerning own powers and responsibilities for freer use of these capital investments. Secondly, borders of group directors' responsibility for the performance of their divisions were not fully clear (Ushakov, 2006). In many corporations this uncertainty about responsibilities has led to a situation when group directors started to take the responsibility for the operational level as well, and very soon this caused mass changes in titles: group directors were now named group presidents, and they also got a new right along with the new name – the right to form own managerial team. The logic behind these transformations is rather simple. Huge diversified corporations were already quite widespread in the tourism sector, and their structural units were engaged in essentially very different types of activities (different in product features, segments of serviced consumers, types of servicing, distribution channels, etc.). At the same time, it is nearly impossible to determine where are the borders between the markets and business processes belonging to these numerous divisions. Any new intersection in processes between territorial and/or product divisions has inevitably led to the growth of intracorporate competition (e.g., one division could easily lure consumers from another division). Such inside competition is clearly a threat to corporation's unity and business survival as such (Kantemirova et al., 2018).

Under such condition's top management of the diversified tourism corporations was forced to leave some space for potential doubling of managerial functions within the framework of nearly fully autonomous territorial and/or product divisions (autonomous in both strategic decision-making and market behavior). Corporate top management finally admitted that centralization is not working anymore, thus, group directors were granted full presidential authority, including the right to shape the managerial hierarchy within their divisions (Lenskiy, 2001; Stepaniuk, 2018). Therefore, the divisional structure of TNCs turned into the integration of autonomous departments, under which all business processes were fully independent, while the processes identical in their form and content but belonging to different divisions got the opportunity to develop in parallel to each other independently.

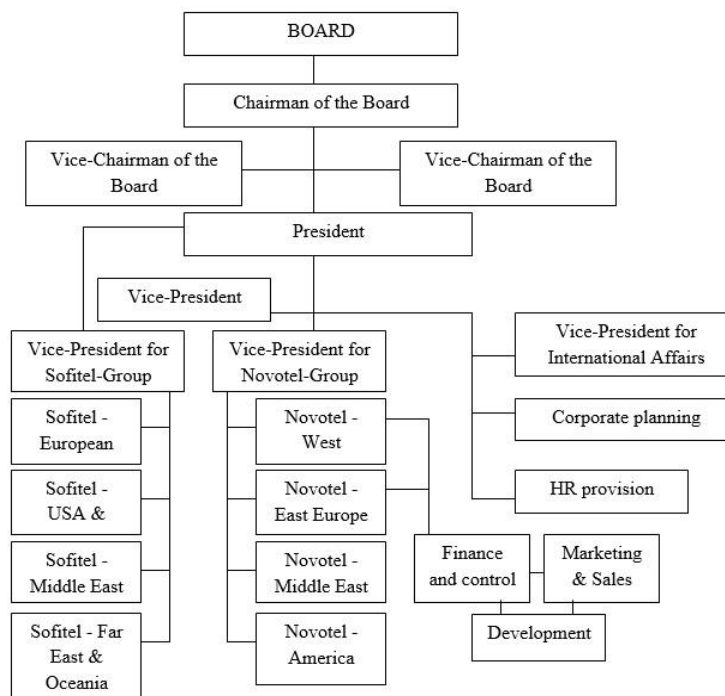


Figure 2. Fragment of the organizational structure of the Accor company, as of 1991 (Source: developed by authors)

For example, such transformations taking place within the organizational structure of the Accor company have led to the appearance of parallel departments of marketing or distribution as well as parallel financial and R&D departments for each brand of this company. Despite the seeming irrationality (similar processes repeated in parallel are supposed to reduce the overall efficiency of management) such an organizational structure overall increased the position of each structural unit and promoted their further development. Presidents of the groups were forced to find newer internal and external opportunities for optimization of their hotel/agencies' services' production.

Transition from traditional division-based structure of TNCs into an integrated holding of quite independent productions has allowed these huge businesses participate in the processes of mergers and acquisitions more actively. This is one of the reasons why the very end of the 20th century saw the peak in popularity of this type of deals. Having nearly perfect conditions for business merger, well-established relations between the core and the presidents of the groups, common standards of work and management, common system of performance indicators and nearly absolute isolation of business processes within the related division, TNCs became now able to merge new businesses quicker than ever before, no matter what their size is. At this, there was no need to carry out significant modernization of the already existing structures (merged one and the one performing the merger), and this fact became the key achievement of this new type of corporate structure based on the concept of strategic business zone.

RESULTS AND DISCUSSION

Business Zoning as the Concept of Corporate Organizational Strategizing

Strategic business zone became the new principle of organizational structuring of tourism TNCs due to growing diversification of offers and also due to the growing necessity to strengthen own presence at the global market. Already in the 1990s corporations working in tourism started to feel the limits of their profitability, and this forced them to participate more actively in various mergers and acquisitions so that to reach more synergy effects and thus strengthen own global presence and growth. Moreover, the factor of limited growth also forced large businesses try finding new internal opportunities to increase the production efficiency. At that time TNCs spent really a lot of time of their top managers on searching for means and ways to optimize business processes, to adapt better to the market and thus guarantee own future growth.

In the early 1990s, due to all these transformations, nearly all tourism and hotel corporations introduced the concept of strategic business zone. SBZ (strategic business zone) is the department inside a corporation which has its own fixed resources, own competitors and own strategy of market behavior. The preliminary situation in which a department can form its SBZ normally looks as follows:

- availability of own mission of functioning and own business concept;
- functioning at an open market, that is, supplying a larger share of the produce to clients outside the corporation, not inside it;
- presence of specific competitors.

Transition to the SBZ concept automatically meant the end of the corporate division-based system. In the result of the internal revision, it turned out that certain departments or even the whole operational groups were serving only the internal needs of corporations, thus not contributing to better market positioning of the company in general. Besides that, when top management of a corporation made this key decision – to switch to the new principle of organizational structure modelling, based now on strategic business zones, the company was automatically losing its previous basis for all activities. As a result, structural groups became allowed to have their own mission and vision, and also to use freely the resources available to them, to develop own strategy of market behavior, not even taking into account the views from other units

within the same corporation. Therefore, in the course of the 1990s most of tourism TNCs were switching from the division-based hierarchy to being vertically integrated holdings, the latter being essentially the unions of nearly fully independent businesses. According to this model, each strategic business zone (that is, each autonomous part of a corporation engaged in creation of a certain product) was defined quite exactly. At this, business processes of several SBZ were not intersecting though some parallelism and functions' doubling were treated as acceptable. Each business zone had its development strategy, introduced and later adjusted/corrected by the inside management of this SBZ. It also had its own resources (both tangible and intangible), and purposes of these resources' application were treated as the internal affairs of an SBZ. Finally, every zone has its own circle of consumers. Some of strategic business zones inside the same corporations could be in competition with each other, could steal clients from each other and thus strengthen own market position by means of "brotherly" resources.

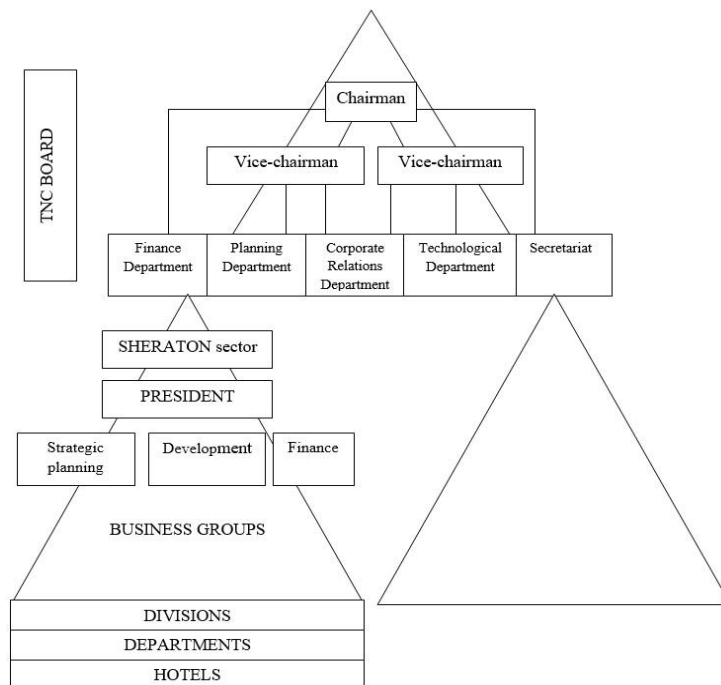


Figure 3. Fragment of the organizational structure of Starwood Hotels (Source: developed by authors)

American tourism & hospitality corporation Starwood Hotels would be a good example in this regard. This company was managing 20+ brands, all very much known among travelers. The list of these brands included Regis, The Luxury Collection, Sheraton, Four Points by Sheraton, Westin, and some others. One of Starwood Hotels' acquisition was globally known brand Le Meridien. Hotel brands within the structure of the same corporations are usually managed on the principle of full autonomy and independence from each other. Brand management is headed and supervised by the president who has all the freedom to choose his/her team of other managers along with the full freedom to determine the structure and the hierarchy of management. All interrelationships between SBZ and corporation's top management or between different SBZs inside a corporation have their strict rules and regulations. For example, in the case of Starwood Hotel several mechanisms are applied to maintain the unity of the TNC and prevent its disintegration: all business plans of SBZs must be approved by top management. These business plans look like a contract between Starwood Hotels on the one side and its separate strategic unit on the other (e.g., Sheraton). Under this contract, the headquarters promises to provide means and resources necessary for brand development, while the SBZ managing this brand guarantees that certain level of performance indicators would be achieved. Thus, adherence to this business plan determined the fate of a structural unit (in the worst-case scenario this unit would be sold or restructured. Also, all further career of its president also depends on the performance under this "contract" (Figure 3):

- Introducing the general corporate Code of Business Conduct. This document clearly describes all procedures related to closing deals, all details related to project preparation and its later assessment as well as many other business procedures, mostly related to the level of managing separate units.
- Direct participation of managers in stocks' ownership. This mechanism has got extremely popular in the recent decade especially. At Starwood Hotels over 1,5 thousand managers own a certain number of stocks.
- Establishment of the Board of SBZ presidents to unite all managers of the top level (noteworthy, this is NOT a corporate board, this institution functions separately). There might be also other functional collegiate bodies, for example, separately for financial managers, marketing ones, HR offices' heads, etc. Introducing all these additional units into the structure of Starwood Hotels and also providing them with enough authority in the field of general corporate strategies' development proved to be helpful in prevention of disintegrational movements.
- Annual overview of achievements and problems in the fields of general development and human resources' preparation.
- Internal selection of candidates on high-level positions inside departments.
- Practicing rotation of mid- and high-level management between SBZs.
- Carrying out general corporate monitoring of consumer satisfaction separately for each product of each SBZ. Tight corporate control (including financial one) over the activities of each strategic business zone.
- The common system of preferences and pensions for all corporate employees, from all departments and strategic zones.

One of the key advantages from applying the concept of strategic business zones in the organizational structure of a TNC concerns the appearance of additional opportunities for growth, and what is most importantly – all these extra opportunities are intracorporate in their origin. Under the conditions of intracorporate competition SBZs are prone to be more active at the market, increase the quality of their product, be more attentive with clients' loyalty. Moreover, corporation's board often provokes this competitive fight from the inside. For example, a corporation may buy out the key competitor at a particular market and thus relocate the competition to the inside field. As compared to divisions, strategic business zones are more capable to optimize their internal processes, they are usually more active and more

interested in achieving a certain level of performance indicators. This is mostly because they have the freedom in resources' distribution and further use. SBZs are also more innovative and ambitious; they demonstrate more initiative and overall, have a rather high entrepreneurial spirit as opposed to the departments that are in direct dependence from the Board, or as compared to divisions used for corporate structuring previously. Introduction of strategic business zoning into the organizational structure of tourism or hospitality sectors TNC contributes to business diversification and wider offer since mid-level managers in SBZs are usually more initiative and business-oriented and they also have enough power to introduce changes. Generally speaking, strategic business zoning stabilizes corporate performance and improves its financial indicators. In simple terms, one sole business, no matter how big and strong, would find it more difficult to survive under the dynamic conditions of today's business, as compared to a large integration of very much independent businesses. Corporate organizational structure based on strategic zones is more horizontal rather than divisional. Therefore, it is also more flexible and quicker in adapting. Absolute majority of strategic tasks are solved on the mid level of management (the so-called presidents of strategic business zones). Since business plan of a zone looks more like a commercial contract between a zone and the Board and also because presidents of zones own stocks of corporations (that is, they participate in ownership), the level of personal responsibility for the quality of results is really high. Finally, organizational structure based on the principles of strategic zoning is a perfect environment for inclusion of new enterprises purchased through M&A deals. Interestingly, newly purchased businesses can be from radically different sectors, very distanced from the already existing SBZs. For example, the already mentioned Starwood Hotels, if needed, is quite able to purchase (and without any financial troubles or necessity for reorganization) a tour operator, or an airline, or a ferry company (as part of related diversification) or even a steel plant, an automobile concern (non-related diversification).

Adaptation as the Reorganizational Strategy of TNCs in Tourism

The concept of adaptive management goes back to the early 1980s when, on the one hand, competition between international companies at the international markets of commodities and services became especially severe. Companies that were planning to win in this competitive fight were expected to demonstrate much higher efficiency, higher quality of products and services, quicker reaction to market changes, etc. On the other hand, it soon became quite obvious that traditional hierarchy in management is not able to comply with these changed and much higher requirements (Mikhailushkin and Shimko, 2005). The key features of adaptive structures are the following: absence of bureaucratic regulations in management activities, no clear labor division by types of work, blurred borders between the levels of management and the smaller number of these levels, individual responsibility of each employee for common results. Besides that, adaptive organizational structure may have the following features too:

- the ability to change form relatively quickly and easily as per changing external conditions;
- orientation on speeded-up implementation of complex projects and programs and solving the most complicated issues overall;
- limited timing, that is, adaptive structures are formed on a temporary basis, for solving a particular task and completing a project;
- along with that, temporary authority bodies are also created (Holstein, 1990).

The middle levels of management in tourism TNCs have experienced the most radical changes. This is quite explicable due to several reasons: dynamic changes in the external environment of the international tourism market and the objective need to orient all activities of departments and sub-departments on more narrowly divided groups of consumers, growth of competition at the tourism market (including the competitive fight between brands belonging to the same corporation). Adaptive structure of mid-level management within transnational corporations is based on the following principles:

- team cooperation;
- more value is given to highly qualified specialists, including those who are professionals in their field but do not have competences, skills or knowledge in the fields of operational or strategic management;
- project management;
- maximal client orientation of all business processes;
- autonomous work in teams which excludes bureaucracy and hierarchy.

Overall, adaptive organizational structures are supposed to become flatter – the minimum of bureaucracy and hierarchy and the maximum of opportunities and freedom to use unconventional approaches, creativity and own initiative. However, absolute deregulation of intracorporate relations is hardly possible since this may eventually lead to organizational collapse as such: the corporation would turn into several teams or project groups that are fully autonomous, with nothing resembling a coordination center. Adaptive model of organizational structure of the contemporary transnational corporation in the tourism sector is supposed to combine in itself the maximal attention to the production process with care about own employees which includes the creation of the most comfortable conditions for them to demonstrate the initiative and apply their creative skills. Introducing the adaptive model of organizational structure in a tourism TNC, its top management would need to draw clear lines between various types of activities – managerial, standardized operational and creative, initiative. This is of vital importance for determining the place and the role of an employee performing a certain kind of activities within its general organizational structure. Considering the specificity of tourist services' production in particular, we can outline the major fields where the whole range of creative, managerial and operational works are performed. To such fields belong: virtual, technological, material and intangible fields. Overlapping of activities' types (creative, managerial and operational) inside a tourist TNC on the fields of corporation's presence shows that the share of creative labor is decreasing, while the shares of managerial and operational labor are growing in parallel to the movement from virtual field to the material one (Figure 4).

Looking at Figure 4, we can make a conclusion that creative and initiative groups (teams) are mostly busy with the problems of virtual presence and technological development of an organization. Their inclusion at the level of intangible assets' management is of vital importance, while on the level of material assets the larger share of responsibility and actions is the responsibility of operational-level employees. This division is quite adequate considering the peculiarities of today's tourist services' production and current state of demand at the tourism market. The larger share of tourist product consumers these days are citizens of economically stable countries (EU, USA, Canada, Japan, China), thus, most of them have rather postmaterialist values, the central of them being individual servicing and having an individual approach to every consumer. Tourism corporations today are supposed to develop own new methods and technologies of individualized servicing all the time. Flows of international tourists are only growing, and the absolute majority of these tourists have their own access to many virtual technologies. Thus, corporate marketing and brand management have to keep up with this high level of technological awareness among current and potential clients. Consumers are interested in having an individual approach in the process of destination choice, they want to feel real care about their choice and to see that a tourism company takes individuality into account while designing a personal tourist product – and a contemporary tourism TNC is supposed to guarantee all of these.

Interestingly, the other side of tourist production, which is consumption of a tourism product (with its maximum proximity to the material base of tourism overall) is nearly fully regulated by standardization and unification of consumer preferences due to the influence of globalization on tourism business and economies worldwide as a whole. Organization of client servicing is the most standardized part of

corporate activities; it does not require active application of creativity or initiative. At the same time, corporate performance in the technological and virtual sectors requires the inclusion of teams capable of creative thinking so that to outstrip the development of competitors by means of own development of technologies and their consequent application in real business practice.

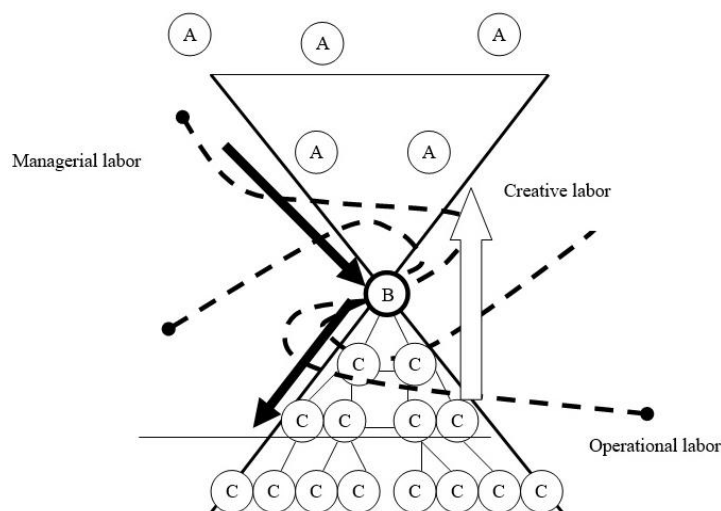


Figure 5. The X model of organizational structure for a department inside TNC
Note: A – project teams and project groups, B – managers, C – operational level specialists (Source: developed by authors)

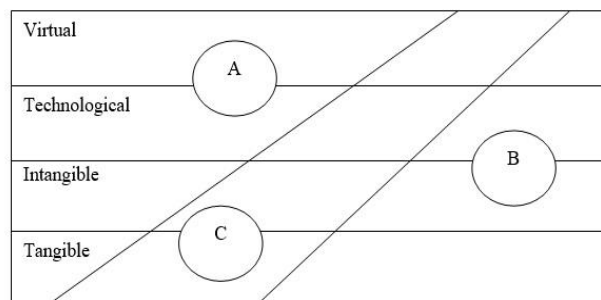


Figure 4. Types of labor activities in various fields of tourism TNC
Note: A – the zone of creative, initiative activity;
B – the zone of operational activities;
C – the zone of managerial activities
(Source: developed by authors)

Taking into consideration that every department of a corporation has all three types of activities, we can assume that the model of an adaptive organizational structure for transnational corporation may look like the one in Figure 5 (let's call it X model). In this X model of organizational structure, the upper inverted pyramid is responsible for a larger share of creative and initiative activities, here belong the most active project teams and project groups of a corporation (A). This model does not assume that project teams/groups are supposed to fit into some sort of rigid hierarchy. These categories of employees do not have direct supervision or any other administrative impact imposed on them. Most comfortable conditions are provided so that these teams/groups would perform the entrusted to them mission and come up with the solutions of both internal and external problems the corporation is facing. Interaction between these teams is not strictly regulated, same as their composition. The latter should be flexible enough to respond to changes in the course of solving a particular problem. On the other hand, the result achieved is the key task of such teams since it serves as the guidance on further actions for managers at level B (in Figure 5).

Mid-level managers stay in close contact with all needed for them project teams and groups, and the upper hand would always have the latter, especially when it comes to strategizing. And the managers of mid-level, in their turn, are responsible for further development of algorithms and procedures to implement the developed strategy in real business practice. Department manager is the immediate supervisor in relation to operational level specialists (C): he/she plans and organizes their work by means of creating an organizational structure adapted as per particular task and the managerial decision delivered from the higher level. The same department manager is also responsible for developing the system of motivation and incentives as well as control supervision. Finally, operational level specialists within our X model are traditionally responsible for efficient (timely and in full volume) performance of all posed assignments as per their competences and authority. With each other, these operational level specialists can be in both vertical and horizontal type of relations.

As it was already noted above, pyramid of operational specialists and that of project teams cooperate with each other (sometimes excluding managers from this cooperation). Occasionally, mutual rotation of staff between these pyramids may take place. Interestingly, promotion of an operational specialist to the upper level for further inclusion in a project may happen without direct participation of the related manager (white arrow in Figure 5), while moving a project team member back to the operational level nearly always involves participation of a manager (black arrows in the same Figure 5). Manager can easily return the "freed" member of team to his/her previous position of the operational specialist or can offer an alternative position but also within the organizational structure of the lower pyramid, taking into account the qualifications of this employee and the current strategic/tactical level necessities. The suggested here X model of the adaptive organizational structure for a corporate department does the following:

- It makes sure project teams and project groups are included into the overall structure of management. Under any of the previously applied models this integration would have had very low efficiency (due to inability of teams to influence the decision of managers and also due to very different attitude to responsibility of consultants and experts).

- It draws the line between three types of activities in any department – operational, managerial and creative. Moreover, it determines how they interact and prioritize in relation to each other.

- It guarantees that the organizational structure overall is headed by high-class professionals in the related field, which are members of project teams and project groups, however, it also makes sure managers have strong decisive powers.

- It provides extra opportunities for career promotion and staff rotation (both can be upon manager's decision just as with traditional career growth and also by the decision of a certain project team). In such a way, operational level specialist gets more chances for own development, while his/her department gets the much-needed flexibility along with the capacity to quickly mobilize the best human resources in case if a serious problem emerges.

- It reduces the number of levels between top management and workers of the operational level (due to the opportunity to interact directly and also due to use of mutual rotation between the operational level on the one side and project teams/groups on the other). In such a way, this type of structure becomes much flatter as compared to traditional hierarchical structures.

Figure 5 shows the proportional organizational structure, in it the size of two pyramids is more or less the same. In real business practice though the actual size of these pyramids (and thus, also the number of the employed in each of them) are different. It would be quite logical to assume that in the virtual and technological fields of corporate activities the number of project teams' members (the upper inverted pyramid) outweighs the number of other employees, while in the material field of corporate activities the situation is exactly the opposite.

As we have shown it in Figure 6, organizational structure, its shape and contents would be changing when changes take place in corporation's presence in a particular field (it is mostly material vs. virtual in our case with global tourism). Black arrows in Figure 6 show how managerial unit is gradually moving down to the basis of organizational structure. This is yet another proof that the department functioning primarily in the virtual field of TNC activities would be much flatter and flexible due to minimization of the operational specialists' number (and thus – due to less levels in management of the lower pyramid in our model). On the other hand, the department present mostly in the material field of activities would become more rigid in its hierarchy, more upward. Also, it would be much more regulated in all of its activities, the latter, in their turn, being strictly compliant with all standards.

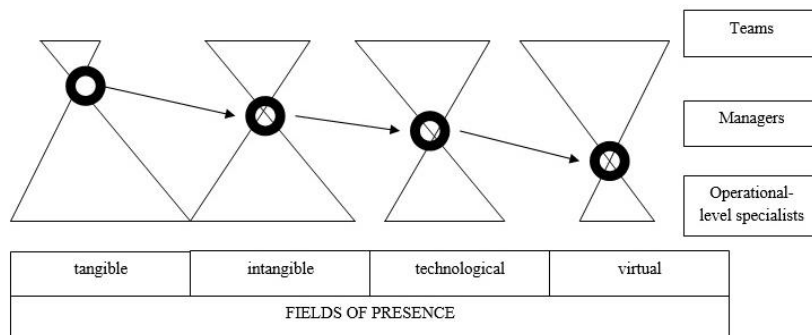


Figure 6. Transformation of the X model of organizational structure due to changes in department's presence (Source: developed by authors)

Transnational Dynamics of Corporate Networks

After we have considered the X model of adaptive organizational structure for a department as a unit within transnational corporation, it would be logical to determine also the model of interaction for all such units' functions within the same transnational corporation as a joint open socioeconomic system. As it was already determined above, general corporate strategy of development, uniting all structural units of a TNC, belongs to the responsibilities of top managers which in this X model take the central seat. Manager (or several of them) are supposed to concentrate all their efforts on the interaction of creative staff and operational level professionals. Managers also represent the interests of the related department in its interaction with other structural units and the core of a TNC. In other words, managers are responsible for maintaining the unity of a corporation in the course of full-swing interaction between various structural units with each other and with the core. Thus, managers serve as the guarantee for company's wholeness, for successful implementation of its general strategy, for protection of all stakeholders' rights, etc. Generally speaking, organizational structure of any tourism corporation has come its long way from a traditional, rather simplified geometry to a complex, highly sophisticated network (Taylor, 2013), in which managers stand at the crossroads of all connections. Therefore, we can state that today network structure of transnational corporation and networking principles in production processes' organization become the only efficient method of management which would be compliant to the requirements of the global market. In the first place, network structure is helpful because it can reduce the number of levels in the management structure and it can also increase the flexibility of a corporation. Among quite many preconditions which provoked the speedy development of network structures among tourism TNCs we need to mention high dynamics of environmental changes and the necessity for quicker adaptation of companies to these changing conditions. Top management of today's tourism TNCs does not have the right to range departments as more or less important – thus, it does not provide immediate access to the middle level of management to coordinate them too. The rate of changes is too high, and all transnational corporations have to adapt to these quicker changes. This automatically means they can coordinate only at the highest level of management. Moreover, dynamic nature of the external environment factors leads to the same dynamism in priorities and importance of corporate activities carried out by various structural units (division/business zones). This means that a certain business zone which used to be secondary and/or not really relevant always has a chance to get much higher incomes so that to become the "champion" of a corporation (who is supposed actually to provide corporation's leapfrogging development). Since under current conditions it would be useless to range structural units, it is quite obvious that they can be "ranged" more or less equally, however, taking into account the following positions:

- Constant complication of both production and commercial activities, leading in its turn to complication of internal business processes and interactions. As the experience of many tourism corporations shows, launching and maintaining stable interaction between the departments as well as fixing business processes to certain regulations and competences seem to be inefficient. All interactions between structural units of a corporation must be open and free, each structural unit should have direct access (or the opportunity to have it) to all communication channel inside the company. Moreover, every structural unit should have the right and the capacity to initiate new channel, and if needed – this newer channel can be internal or external, with the immediate environment.

- Constant expansion of company's presence at the global tourism market. Contemporary tourism TNC should have all opportunities to expand its presence up to the limits of the market itself, including those opportunities related to buying out other forms of businesses (hotel chains, tour operators, agencies' network, etc.). Merging new forms of businesses, including those not involved directly in tourism services' production (the so-called non-related diversification) would be possible only in the case when the TNC has network structure. Network is able to "connect" the newly merged enterprises and organize their productive interaction with other businesses quicker than any other form of structuring. And noteworthy, this will not require large-scale and costly restructuring or other form of optimization.

- Growing autonomy in production activities of corporate structural units. This is one of the ways to increase company's competitiveness overall. As it has been already proved above, granting more autonomy to departments and strategic business zones inside a corporation (up to the level of independent development of their own business plans, determination of own mission, managing independently own resources, etc.) only increases the efficiency of activities overall. And thus, it also increases product competitiveness at both local and global markets. Absolute independence inside a corporation is not possible, of course, however, network structure itself promotes autonomy of all structural units, allowing them not only participate actively in the already existing corporate network but also create new networks (for example, the network of own loyal clients or the network of the affiliated tourist agents).

- Rapid development of computer technologies and global communications. Technological changes, those in telecommunications first of all, have allowed contemporary corporations, on the one hand, to "lose grip" in managing departments, thus letting structural units float freely. On the other hand, progress in communications has also allowed maintain strict (and often invisible) control over all activities inside structural units or between them. Intracorporate computer network is often the exact copy of general organizational network. This allows the

corporate Board not to wait for a certain reporting period but simply check any activity of any structural unit, any time and from any location. Moreover, such monitoring can track down all activities to the level of a particular manager. These forms of control allow keeping all employees on a short leash, even if these employees are working on the opposite side of the planet, thousand miles away from the headquarters. This is also yet another reason why middle level of management and monitoring become not that necessary.

Finally, traditional horizontal and vertical interactions inside TNCs have been seriously transformed in the recent decade. The already classical relations “boss – subordinates” are being substituted by the relations of two (or more) co-owners of business, with a different set of authority and capacities (this is especially applicable for the case when manager and Board member are both shareholders of their enterprise). In this situation the employment contract of a manager can be understood as a standard purchase contract, under which professional knowledge of one person is being sold to others. Classical organizational structure used to be based on horizontal relations which in their turn were based on information exchange procedures, consulting and best practices’ exchange. These forms of relations inside companies are being pushed out today by strategic partnerships, alliances and various other forms of unions. Therefore, today vertical relations inside a tourism TNC are turning into the interaction of two co-owners, both being financially interested in the success and further development of their common business since both depend on the business outcome of the chosen strategy implementation. At the same time, horizontal interactions between corporate departments are becoming similar to the relations between separate independent enterprises, they may have legal contracts signed with each other. Terminal units of contemporary TNCs become some sort of ports open for inclusion of new elements into the corporate network through the mechanisms of transnational alliances of various levels (Mikhailushkin and Shimko, 2005). For example, a network may unite suppliers of tourist services (hotels, airlines, etc.) with tour operators so that to implement a certain tourist project (popularization of a new destination, entering new market or widening own share at the older one, etc.). Once this project is over – its participants become disengaged so that to become elements of a new chain, for a new business project. Since all functions in this case are performed on the contractual basis, any participant involved in a deal can be easily substituted, if necessary. In the long term, this also leads to lower total costs of the network structure in general.

With an eye on changes in the external environment, corporation’s board forms certain value chains which include nodes to coordinate all activities for higher efficiency of projects’ implementation. Priority rate of a certain project predetermines the volume of investments carried out by the Board into the terminal units of a corporate network. Value chains are highly dynamic in nature, they are easily created, and can be same easily liquidated. Terminal units of a network inside the organizational structure of tourism TNC are interested in own independence and autonomy in actions. On the other hand, they are no less interested to be included and actively engaged in value chains formed by the corporate Board, since every new value chain is also an object of active and heavy investments from the Board. For this reason, terminal units try to look radically different on the background of all other network structure. They actively demonstrate their capacities and competences, they eagerly share knowledge, they are always ready to cooperate with other terminal units so that to increase the efficiency of business processes, etc. Network structures today rely more not on the administrative but rather on the market forms of resources’ flows’ management. The logic behind networking as an organizational structure for a TNC is that it forms its own, internal market and even the whole own market economy inside the company. The specific feature of such a market economy is that relations are being set not between fully independent from each other economic agents but between departments of the same corporation (though they also have quite high level of autonomy). This may sound strange but creating a network tourist TNC tries to localize market relations with the aim to resist the negative impacts from the external environment. On the one hand, network structuring allows TNCs participate more actively in all global trends, making the most of all advantages and chances for profit growth that the globalization offers. On the other hand, it demarcates inside-the-network relations from the rest of the world, thus contributing to corporation’s stability while it reacts to various external manifestations.

The effect of localization created by the network structure, allows corporation reduce all business risks significantly and also guarantees the inclusion of the most trusted partners into the network. All interactions between the structural units of a network corporation are limited by the corporate “inside world”, with its internal market protected from damaging actions of the outside participants. It is not that important which terminal unit is interacting with which structural department within the frameworks of a value chain formed by the Board. It is much more important that all partners are equal participants of the internal corporate market, any of them can be easily controlled and sanctioned if needed, while strictness and totality of these corporate reactions would be much stronger than that of national authorities. Localization as a consequence from introduction of network organizational structure allow corporations protect themselves from various political and economic attacks of national states. Network-based unions can easily impose pressure on national authorities, lobby own interests in governments, for example (and in the first place), in the issues concerning taxation and export-import operations. Network organizational structures provide all their members with a range of useful instruments which are used to neutralize the effects from state economic regulation. Apart from the already mentioned above advantages from markets’ localization granted by network organizational structure of contemporary tourist TNCs, we need to mention also the potential advantages stemming from segmentation and monopolization of markets. One of the barriers for entering the sector (and leaving it) is limitation on participation in local networks. For example, if a tourism company or a hotel fails to get included into the network of sectorial TNC – this may lower its competitiveness significantly and may even make its further presence at a certain market impossible as such. On the other hand, inclusion in a network structure becomes the recipe for success, though it also leads to some sort of competitive selection between market subjects since in order to be welcomed in a network all companies are supposed to comply to a range of certain criteria introduced by the Board. Such selection is traditionally used by transnational tourist corporations when they are entering new markets or when they are trying to optimize their internal business processes. Fragmentation of one common market space is caused by the network structure of relations inside a corporation and it has one more highly important dimension: lack of common legal spaces and thus, deficit of legal rights as such (Ushakov, 2017). Network-based TNC has its own rights and rules, and for all participants of these network relations intragroup norms are more meaningful than those imposed from the outside.

Contemporary tourism TNC can be thus presented as an open network in which terminal units are represented by departments and strategic business zones while the overall framework is constructed on the basis of X model. Location of terminal units cannot be exactly specified and regulated (as it is in hierarchical organizational structure) due to the fact that their interactions between each other and also with the Board is in the first place determined by the contents and the meanings inside value chains of the projects introduced and implemented by top management. This dynamic character of all organizational interactions inside a corporation is caused by the necessity to boost flexibility under the constantly changing conditions at the tourism market, and project approach to all interactions thus becomes integral part of all daily practices. Another reason why dynamic flexibility is so needed is because inside a corporate network there are numerous departments, sub-departments and project groups that are performing the same type of works on a regular basis.

The latter goes against the traditional principle of labor distribution and also prevents the formation of stable production-related interactions in transnational tourism business. For example, a tourist TNC may own several airlines, several hotel chains and a wide network of agencies. All these hotels, or all smaller tour agencies perform essentially the same functions, moreover, often they are competing with

each other. When the Board is planning to launch another promising project (thus – creating a new value chain as well), it may add to this chain (or exclude from it) any network component as it deems fit, provided performance indicators of a particular structural unit match the requirements set to potential participants of this newer project. Presence of several similar departments within the general network structure is very convenient in this context since there is always a possibility to substitute one department with another. This is yet another contribution to flexibility and adaptive features of a corporation. Availability of choice also means the Board always has alternative variants at the table when considering new strategic projects and new value chains. This also gives the Board enough space for production restructuring and optimization (for example, reorganization of departments, sale or closure of those terminal units which cannot be used anymore in any of the available value chains). At this, unity of a transnational corporate network is maintained due to the following:

- Each structural group or strategic business zone has its own top managers which together form the human frame of a company. It is these managers that maintain formation and functioning of a network structure. In geometrical terms, structural units are the dots connected with each other via intracorporate interactions which are the edges of this structure. Well-tuned horizontal and vertical connections are regulated by the intracorporate contracts and strategic partnerships, both serving to provide stability of a corporate network. Using skills and competences of top managers, the Board implements the general strategy, adding the needed departments to its general projects.

- Corporate code of conduct is closely followed and is equally applicable to all (managers, creative staff, operational-level professionals). A complex system of ethical and professional rules regulates the behavior of all employees and also, indirectly, propagates general corporate values and priorities.

- The key role of the Board is constant development and implementation of general corporate projects along with new value chains. Once a new project along with its value chain are approved, the Board is supposed to decide which departments and units to include into this project. Depending on the importance of a project for corporation as a whole, the Board would also decide on the form and the frequency of reporting along with the system of indicators to be used by managers of structural units. In other words, the Board decides on the “length of the leash” for each division and each strategic business zone.

- TNC has all the instruments to increase/decrease entry/exit barriers in its corporate network as per particular participants.

- Transparency of intracorporate relations and external interactions.

Therefore, the model of corporate network structure has the following key features: minimal number of levels in management; dynamic internal interactions; non-regulated horizontal interactions; wide spread of strategic partnerships and contractual relations on horizontal levels of interactions inside a network; absence of fixed labor distribution inside a corporation; network structure serving as some sort of frame in which managers are the elements uniting departments and strategic business zones; overall openness of corporate network. Transnational corporations operating in tourism are not that different from various other corporations in their today’s network structure. They also implement the networking approach, even outside the frameworks of own company, in relation to external environment as well. For example, they have network-like interaction with independent intermediaries, consumers of tourism product and even with state authorities. Let’s take independent intermediaries, for example. They organize the distribution of tourist product of a TNC and they are predominantly small and mid-sized businesses since larger intermediaries (e.g., agent networks or popular Internet portals) would be of interest for a TNC too but not as partners – rather as potential objects for buying out and further integration into the network.

In relation to intermediaries among small and mid-sized business tourist corporations apply their usual networking practices, using the instruments of exclusive or regional representation, and also franchising and retailing schemes. In this case corporations tend to be rather generous in their investments or other forms of support for intermediary structures. Corporations are interested to raise their own agents and later form independent agent networks so that to boost the efficiency of sales and expand global representation. At later stages corporations may return to their usual methods, that is, buying out fully functioning businesses (with their independent brands or those already using their corporate brand, for example, according to a franchising deal). In the field of interactions with client’s tourist TNCs also use networking with all related instruments. For example, they often found some sort of clubs of loyal clients, using their client loyalty programs. This form of interaction with clients help disseminate information about tourist product further, and this dissemination often takes place under the conditions of commission fee for the already active client (the most popular example is referral program, when clients recommend a company to other people, getting a discount or some sort of bonus in exchange).

For a multiproduct and diversified corporation (and most of TNCs in tourism are like this today) it is quite easy to implement all described above activities. They already know how to attract their client and how to make them stay, thus making this client loyal. Smaller tour operator has very little to offer to its regular clients. For example, if a small tour operator offers a hotel discount – most probably, this would be a discount for one hotel only, not a chain of hotels (which would have been a larger choice for a client). Smaller tour operator would not be able to discount on the flights of large airlines either. It can offer a bonus dinner in a restaurant affiliated to a particular hotel – but it cannot offer a supermarket discount or a discount for gas at a local gasoline network. At the same time, a transnational company would be quite able to offer all of these and many other discounts and in such a way to encourage both partners and their clients (the latter being also the clients of this corporation) to purchase more. Networking with clients is integral part of functioning for any transnational company, including those working in tourism. The circle of their clients includes millions of people in dozens of countries worldwide, and for each individual among these millions the corporation is ready to offer something personal and special so that to boost the intensity of further consumption of services. And even in their relations with state authorities’ transnational corporations are still able to use networking. TNCs can “implantate” their corporate interests into the state machinery. However, this would be possible only if a company finds at least one minor gap in the “legal fence” which traditionally stands between the state and the business. For example, there might be a public officer, for some reason, loyal to corporate ideas and values. In the future, this officer might find enough incentives to organize the whole system of lobbying, at all level of state administration, so that the interest of a tourist TNC are duly noted by the state or municipal authorities. Obviously, the higher is the rank of this “personally interested” public officer – the larger would be the gap for potential corporate lobbying and the larger network this public officer would be able to create so that to impose the interests of this corporation.

CONCLUSIONS

Forming their internal network structure, contemporary TNCs in the tourism sector are actually shaping their own market which automatically becomes an integral part of the global market due to the size of transnational corporations and the scope of their operations. The internal market inside a corporation is always protected from all potential negative influences from the outside (competitors’ actions, fluctuations in consumer demand, changes in state regulation, etc.). It is protected thanks to all advantages of localization and also due to the capacity of a corporation to intrude in any activity of its “independent” partner.

Once a client has joined the network of a particular corporation – they have two options for further movements: either to increase the intensity of consumption, making use at the same time of various preferences and incentives provided by the corporation in return; or to

overcome the exit barriers (for example, if a client wants to change the tour operator, they would need to spend some time on search for information on the alternatives, on the analysis of this information, plus there is always a risk related to such a switch, etc.). Clients with dominating economic incentives would always choose the first of these options since this variant is obviously easier and does not require spending additional time and resources on it. Representatives of local and/or state authorities, cooperating (in some way) with a tourist TNC are also free to leave the network. However, in many cases this would automatically mean leaving the public post as well. And this condition is a serious exist barrier! Finally, representatives of local small and mid-sized businesses which once got access to the resources of a corporate network would never be really free again. Exit barriers created specifically for them simply destroy all further opportunities for independent economic activity. For example, there might be huge fines for leaving the network or moratorium on all future independent business operations may be specifically mentioned in a contract.

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IMPACT OF DESTINATION IMAGE ON TOURIST SATISFACTION: THE MODERATING EFFECT OF INFORMATION TECHNOLOGY (IT)

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Abstract: Tourism is a multifaceted field and in order to understand its complexity, none of its components should be excluded. Based on the opinions and thoughts of tourists, this research aims to determine to what extent the destination image has an impact on the satisfaction towards that destination. Survey data was collected from tourists who visited key tourist attractions in Kuching, Sarawak. SmartPLS 3 was applied to assess the developed model based on path modeling and bootstrapping. The results revealed that political images, cultural images, and infrastructure factors on destination image are positively related to tourist satisfaction. It was found that information technology (IT) does not play any moderating role in the relationships between destination image and tourist satisfaction. Results further indicated that the tourism industry can be improved for getting satisfaction among tourists by offering a better development on significant destination image in Sarawak.

Key words: destination image, tourist satisfaction, information technology, tourism, Sarawak

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INTRODUCTION

Tourism plays a main role in contributing to economic growth which is an integral part of economic, social, regional and physical development. In 2018, tourism performance of the world grew 5% of international tourist arrivals which successfully reached to the 1.4 billion arrivals as well as generated USD 1.7 trillion of export earnings from tourism (UNWTO, 2019). Based on the fact, the tourism industry is one of the most important contributors to the growth of Malaysia (Kushwah and Chaturvedi, 2019). The tourism industry is the third-largest contributor in Malaysia which is accounting for more than 7.0% of the country economy. In 2018, the tourism industry has generated revenue with a total of RM 11.0 billion for Sarawak as well as contributed 7.5% to Gross Domestic Product (GDP) of Sarawak (DOSM, 2018). Based on the statistics provided by the Ministry of Tourism, Arts and Culture Sarawak, the visitor arrivals into Sarawak were decreased from 4.9 million in 2017 to 4.4 million in 2018. Sarawak consists of various resources, indigenous long-house cultures and famous with its colonial White Rajahs which could be the base for a formidable extraordinary interest tourism industry (Douglas and Douglas, 1999).

Moreover, countries that experience low levels of tourist satisfaction witness significant reductions in tourism businesses. Tourists will not revisit the same destination if they feel dissatisfied, which may cause a significant decline in the tourism economy (Khoshnevis Yazdi et al., 2017). The global competitiveness of the tourism industry has underlined the importance of destination image as one of the best ways to strengthen the competitive advantages of a destination as well as increasing the quality of tourism destination. Park et al. (2019) demonstrated that tourists reported lower satisfaction level with destination quality as well as its image after they have revisited the destination. This underlines the need for a better understanding of the factors that influence tourist satisfaction and revisit intention which are needed for developing a desirable destination in a region (Zainuddin et al., 2016). In this regard, the power of destination image is acknowledged universally due to its effect on perception, consequent behavior, and destination choice of tourists (Zhang et al., 2018). This connotation has accelerated tourism authorities and tourism destinations to constantly develop sustainable destination image among the tourists (Bornhorst et al., 2010; Buhalis, 2000; Pike and Page, 2014). Various ways could enhance tourists' visitation and one of them is through information technology.

The use of information technology may influence the stereotypical images of people to a certain destination and hence, information system (IT) is used as a moderator in this research to identify whether it has an impact on destination image delivery on tourist satisfaction. In short, this research examines the direct impact of destination image (political, economic, environmental, cultural and infrastructure) towards the tourists' satisfaction. The present study investigates tourists who visited Kuching Waterfront, Damai Beach, and Sarawak Cultural Village in the city of Kuching, Sarawak. By understanding the potential strengths and vitality of Sarawak tourism destination through destination images among tourist, this enables researchers to identify the main thrust in developing a tourism destination *competitiveness for Sarawak*.

LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

Social Exchange Theory and Tourist Satisfaction

Social exchange theory explains a framework which indicates how individuals are contingent on rewarding actions from others

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(Emerson, 1976). Subsequently, this theory has been commonly implemented to consider the perceptions, attitudes and satisfaction level of tourist towards tourism (Coulson et al., 2014). According to Casaló and Romero (2019), social exchange theory has been employed in their research to examine the influence of social media promotions on the perception of tourist that generates value for tourists, simultaneously, encourages tourists to create value as a reward that benefits firms as well. In short, this study constructs destination image as materials and resources in tourism that involved in an exchange process with tourist satisfaction by using information technology to accelerate the benefit and rewards among both parties. Hence, travelers are likely to choose a destination for traveling when benefits, security accrued, feelings and gifts from such a destination are better than something they preferred. In deciding tourism destinations, revisit intention and tourism products, tourists will consider their satisfaction as the paramount importance and therefore, tourists satisfaction is considered as a major concept in tourism (Chen and Tsai, 2007; Prayag, 2009; Upadhyaya and Vij, 2020). As such, most of the studies indicated that tourist satisfaction is an important factor in choosing a destination (Castro et al., 2007; Roy et al., 2016; San Martín et al., 2019; Song and Cheung, 2010; Wu et al., 2018). Since satisfaction is generally regarded as a crucial factor among tourists and every tourist have their personal preferences and opinions, it is vital to place tourist's satisfaction as principal importance in tourism research.

Destination Image

Destination image is defined as the impressions towards a place (Hunt, 1975) and was first considered as an important factor in the destination selection process in 1970 (Mayo, 1975). Most researchers qualified that a place with the positive and unique image possess a high possibility to be chosen as a vacation destination by tourists (Baloglu and Love, 2005; Toral et al., 2018; Um and Crompton, 1990). The importance of destination image has been summarized as understanding the impact of destination on tourist satisfaction for building favorable brand image to improve destination's attractiveness and thereby enhance economic development in that destination (Hankinson, 2004; Hwang and Lee, 2019). Hence, destination image has been considered as the fundamental of tourism development for promoting a tourism place by accessing the destination image to potential tourists strategically. However, attaining tourist's satisfaction is challenging as destination image varies with different experiences in terms of educational, emotional and social (Prayag et al., 2017). Furthermore, political condition, destination environments, pricing, travel costs, festivals, history, accessibility and hospitality are attributes employed to measure a destination image (Chi et al., 2008; Echtner and Ritchie, 1991; Girma and Singh, 2019; Zhou, 2014). The power of destination image has been acknowledged universally because of the extreme effect on subjective perception, consequent behavior and destination choice of tourists (Zhang et al., 2018). Therefore, this research employs political image, economics image, environmental image, cultural image, and infrastructure factor as the sub-components of destination image, in investigating their relationships with tourist satisfaction.

Political Image

Rosenberg et al. (1991) discovered that the favorable political image has been always used in a country as an effective component for shaping the appearance and in manipulating the vote. Public image is defined as a political image which is commonly introduced to the native population (Fatehi-Sedeh and Safizadeh, 1989; Pan, 2019). Abdou (2017) concluded that tourists tend to consider personal safety and security issues, trust and confidence level towards travel destination. While Oosthuizen and Ferreira (2019) recommended that tourism industries are encouraged to highlight the political condition of the destination for potential tourists as a marketing tool that provides a safe environment within destinations. Additionally, the political image that portrays the negative political environment of destination will have a negative image that may impact the sustainability of tourism development (Akbar et al., 2020). Therefore, this research aims to confirm the formulated hypothesis:

H1: There is a positive relationship between political image and tourist satisfaction.

Economic Image

Economic image is explained as individuals' impression and perception on the cost, the value of products or services and in term of money (Zeithaml, 1988). On the other hand, Ghose and Johann (2018) concluded that the reasonable price of a destination is not significant enough to influence tourist satisfaction. Moreover, Setiawan et al. (2020) elucidate that price fairness is regarded as an economics image for tourists and played an important role to build trust between both travelers and destination. Simultaneously, technological and market innovations which work together with a purpose of shared economy has been widely explored, and these show a strong impact on distribution, consumption, and production of tourism goods and services, as well as, significantly impinging on the supposed beneficial strategy of tourism's development and tourism destination governance (Yu and Duverger, 2019). A positive tourism experience is linked with a higher recommendation by tourists, and hence, it helps to result in a higher possibility of revisit intention (Hashemi et al., 2019). Therefore, this research formulates the following hypothesis:

H2: There is a positive relationship between economics image and tourist satisfaction.

Environmental Image

Jin et al. (2015) highlighted that environmental image refers to the individual's impression and perception towards a place when tourists travel to a certain tourism destination. The quality of a destination environment effectively attributes an image within the travelers which are also developing tourist's loyalty and a better satisfaction level to such destination (Lai, 2018). The contribution of a superior tourist environmental experience is to strengthen tourist's future revisit intention as well as to associate with tourist's willingness for giving recommendations to others about the destination that they are satisfied with (Meng and Cui, 2020). However, due to the different interests of tourists, the different result of environmental images among tourists results in an inconsistent tourist satisfaction towards the same destination (Martin et al., 2019). For instance, an urban environment setting of a destination results in a high satisfaction level of tourists who prefer urban setting, while tourists who prefer rural tourism significantly shows a low level of satisfaction (Lam-González et al., 2019; López-Guzmán et al., 2017). With that, this study aims to confirm the formulated hypothesis:

H3: There is a positive relationship between environmental image and tourist satisfaction.

Cultural Image

Cultural image refers to the impression and experiences in the mind of an individual to interpret characteristics of a destination's literature, ethics, clothing, language, architecture, cuisine, arts and music (Chieng, 2019; Wells and McFadden, 2006). Ling et al. (2010) found that food contributes towards an image that strengthens the desire of tourist's repeat visitation to experience the unique food culture within destinations. Hashemi et al. (2019) stated that the destination image of heritage which works as a tourist's perception positively affects satisfaction level and revisit intentions among tourists. Additionally, Hidayat et al. (2020) confirmed that festivals celebrated at destinations influence tourist satisfaction. Therefore, the following hypothesis is formulated:

H4: There is a positive relationship between cultural image and tourist satisfaction.

Infrastructure Factor

Tourism infrastructure works as an innovation tool for a destination to enhance better goods and services for tourist as well as increase the destination quality (Liu et al., 2017). Past studies (Chi and Qu, 2008; Isa et al., 2018) concluded that unique and excellent infrastructure images such as accommodation facilities, accompanying facilities, communication facilities, and accessibility significantly accelerates a good image contribution among tourists towards a destination. Moreover, the infrastructure of destination image has been verified as the most significant element that influences tourist satisfaction to ease various tourism activities which can be accessed within destinations and tourists (Khuong et al., 2020). Therefore, the following hypothesis is developed:

H5: There is a positive relationship between infrastructure factor and tourist satisfaction.

Information Technology

IT is the storing, processing, and dissemination of pictorial, graphic, vocal and any information by using a microelectronics-based association of telecommunications and computing (Longley and Shain, 1985). The most significant benefit associated with the steps into the technologies is the enhancement in the relevant information supply as well as the reduction of production costs in innovation fields or sectors (Sher and Lee, 2004; Wu et al., 2006; Von Hippel, 1994). Moreover, IT provides the impulse in the formation of interest and motivation as well as to satisfy tourists based on visual cues and to visit the destination physically (Marasco et al., 2018). By utilizing IT, this simplifies and increases the utilization of technology for tourists as well as other innovations within tourism industries (Kim et al., 2020). Indeed, IT provides access to both the demand and supply of tourism industries by enhancing the competitive advantages. This underlines that IT possesses a strong relationship between tourism destinations and tourist satisfaction (Okumus et al., 2019). Therefore, this research aims to confirm the formulated hypothesis as follows:

H6: Information Technology (IT) moderates the relationship between the destination images and tourist satisfaction.

MATERIALS AND METHODS

This research aims to assess tourist's satisfaction who are traveling in Kuching, Sarawak which depends on the tourist's destination image. The setting of this study was at Damai Beach, Sarawak Cultural Village and Kuching Waterfront. This research employs purposive sampling technique for choosing non-Sarawak resident visitors at the age of 18 and above years old to participate. G*Power (version 3.1.9.7) software has been used to calculate the minimum sample size (Faul et al., 2009). Based on the calculations, a minimum sample size of 92 was needed for this research. In total, 223 sets of questionnaires were distributed to the targeted tourists in the selected sites, in which 196 sets were returned, which indicated an 88% response rate. The questionnaires of this study were modified from past researches in adapting the Sarawak tourism context. The present survey questionnaires consist of Section A (Demographic Information) with 6 statements, and Section B which included Part I (Destination Images) and (Imagine the following situation) with a total of 25 statements, Part II (Destination Loyalty) with 8 statements, and Part III (Revisit Intention) with 6 statements. Additionally, the 5-points Likert scale has been used in Part I and Part III, while, Part II conducts 7-points Likert scale for assessing its statements. SmartPLS 3 has been used for data analysis in path modeling and followed by bootstrapping model (Wetzels et al., 2009).

Table 1. Respondents Demographic Profile

Demographic Variable	Category	Respondents (N = 196) Frequency	Percentage
Age	18-24 years old	17	8.7
	25-44 years old	88	44.9
	45-64 years old	73	37.2
	65 years old and above	18	9.2
Gender	Male	88	44.9
	Female	108	55.1
Marital Status	Single	105	53.6
	Married	86	43.9
	Divorced/Separated/Widowed	5	2.6
Educational	High school or less	47	24.0
	University Degree	118	60.2
	Master/PhD	31	15.8
The country of residence	Europe	51	26.0
	Asia	64	32.7
	North America	31	15.8
	Australia	19	9.7
	Latin America	18	9.2
	Africa	13	6.6
Average household income (per year)	Less than \$29,999	19	9.7
	\$30,000 - \$ 59,999	61	31.1
	\$60,000 - \$ 89,999	59	30.1
	\$90,000 - \$ 119,999	36	18.4
	\$120,000 or more	21	10.7

Table 2. Result of Measurement Model

Construct	Items	Loadings	CR	AVE	Cronbach's alpha
Political Image	B1_Q2_IV_P	0.956	0.953	0.870	0.925
	B1_Q3_IV_P	0.943			
	B1_Q4_IV_P	0.898			
Economic Image	B1_Q5_IV_Ec	0.832	0.902	0.698	0.861
	B1_Q6_IV_Ec	0.707			
	B1_Q7_IV_Ec	0.923			
Environmental Image	B1_Q8_IV_Ec	0.864			
	B1_Q9_IV_En	0.921	0.905	0.761	0.874
	B1_Q10_IV_En	0.881			
Cultural Image	B1_Q11_IV_En	0.811			
	B1_Q13_IV_C	0.786	0.922	0.799	0.899
	B1_Q14_IV_C	0.960			
Infrastructure Factor	B1_Q15_IV_C	0.926			
	B1_Q18_IV_In	0.732	0.829	0.618	0.701
	B1_Q19_IV_In	0.858			
Tourist Satisfaction	B1_Q20_IV_In	0.763			
	Mean_Lo	0.967	0.961	0.925	0.920
	Mean_Re	0.957			
Information Technology	B1_IT_Q1	0.821	0.866	0.765	0.703
	B1_IT_Q2	0.925			

FINDINGS

Assessment of the Measurement Model

Confirmatory factor analysis was conducted to examine the reliability, discriminant validity and convergent validity that assessed the measurement model for this study. As revealed in Table 2, items' factor loadings are greater than 0.7, as suggested by Hair et al. (2013). Moreover, the entire composite reliability (CR) shows above the minimum point of 0.7 (Chin, 1998), while the average variance extracted (AVE) demonstrated the figure at least 0.6 which is greater than the suggested minimum point of 0.5 (Bagozzi and Yi, 1988; Fornell and Larcker, 1981). These figures inferred that the result of the measurement model has complied. As depicted in Table 3, the bolded square root of all AVEs is higher than the other entries (correlations). Therefore, this discriminant validity of the constructs is fulfilled.

Assessment of the Structural Model

Table 4 and Figure 1 show the results of hypotheses testing. The path coefficients are vital to be significant in research, whereas the value of R^2 can change irregularly. Depends on the study area, as the suggested value of 0.19, 0.33, and 0.67 are deemed as weak, moderate, and substantial (Chin, 1998). As described in Table 4, there are three hypotheses out of six were supported, that is, H1, H4 and H5. The

results revealed that political image ($\beta = 0.500$, t -statistics = 7.293), cultural image ($\beta = 0.259$, t -statistics = 3.900), and infrastructure factor ($\beta = 0.314$, 7.116) are positively significant and related to tourist satisfaction. Other than that, the finding of H2, H3, H6 do not resonate well with the results of the past researches. As shown in Figure 1, the R^2 value of this research is 0.701 that deemed as substantial.

Table 3. Discriminant Validity of Constructs

Construct	1	2	3	4	5	6	7
1. Cultural Image	0.894						
2. Economic Image	0.382	0.835					
3. Environmental Image	0.499	0.701	0.872				
4. Information Technology	0.010	0.050	0.047	0.874			
5. Infrastructure Factor	0.265	0.352	0.252	-0.035	0.786		
6. Political Image	0.502	0.488	0.388	-0.04	0.510	0.933	
7. Tourist Satisfaction	0.493	0.296	0.187	-0.171	0.596	0.713	0.962

Table 4. Path Coefficient and Hypothesis Testing

Hypotheses	Relationship	β	t-values	p-values	Decision
H1	Political Image \rightarrow Tourist Satisfaction	0.500	7.293	<0.001**	Supported
H2	Economics Image \rightarrow Tourist Satisfaction	-0.058	0.874	0.191	Not Supported
H3	Environmental Image \rightarrow Tourist Satisfaction	-0.187	2.382	0.009	Not Supported
H4	Cultural Image \rightarrow Tourist Satisfaction	0.259	3.900	<0.001**	Supported
H5	Infrastructure Factor \rightarrow Tourist Satisfaction	0.314	7.116	<0.001**	Supported
H6	Information Technology \rightarrow Tourist Satisfaction	-0.131	2.578	0.005	Not Supported

Note: * $p < .05$,
** $p < .001$

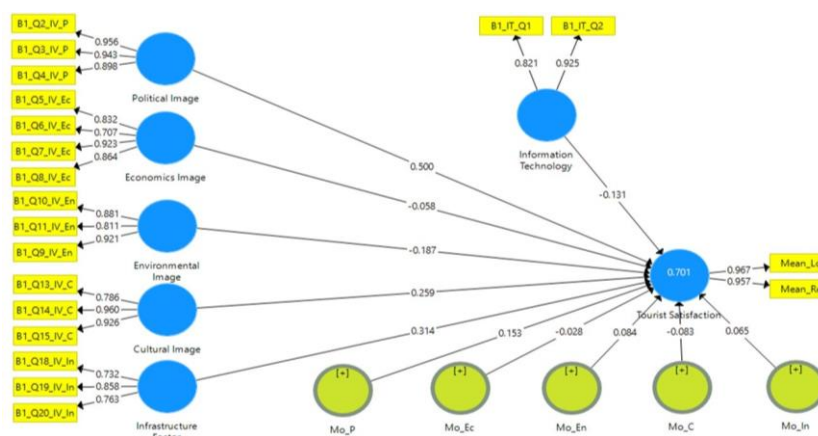


Figure 1. Research model with path coefficient and p-values

RESULTS AND DISCUSSION

The main objective of this research is to determine the relationship between destination image on tourist satisfaction and information technology (IT) as the moderator. As there are no known studies on how information technology moderates the relationship between destination image and tourist satisfaction. The findings have added information in this research that generated insight into potential strategies and future opportunities in tourism development of Sarawak. In analyzing H1, the result of this study supported past findings studies which stated that political image of tourist impacts in tourist destination selection process for vacation (Hankinson, 2005; Jalilyand et al., 2012; Seddighi and Theocharous, 2002; Sönmez and Sirakaya, 2002). King (2009) also confirmed that the political image consists of a positive relationship towards tourist revisit intention and destination loyalty which indicates tourist satisfaction. Moreover, it was believed that destination image plays a major role in tourists' satisfaction which is associated with tourists' loyalty towards a destination (Bhat and Darzi, 2018). Therefore, the political image on the destination image significantly showed a positive relationship with tourist satisfaction in this study. The analysis of H4 in this research showed that cultural image of destination image displays a positive relationship towards tourist satisfaction. As such, H4 aligns with the previous study by Coban (2012) and thereby validates that cultural image among tourist significantly impacts tourist satisfaction. Besides, the past study verified that festivities of a destination influence tourist satisfaction, while the event quality of the festivals does not significantly impact the level of tourist satisfaction (Hidayat et al., 2020).

As a result, cultural image is significant in enhancing destination image among tourist, which in turn, improves the attractiveness of tourism destination by presenting cultural aspects of destination effectively. Past studies (Chi and Qu, 2008; Isa et al., 2018) concluded that unique and excellent infrastructure factors such as accommodation facilities, accompanying facilities, communication facilities, and accessibility significantly accelerates a good image contribution among tourists towards a destination. Moreover, the infrastructure of destination image has been verified as the most significant element that influences tourist satisfaction that would ease various tourism activities to be accessed within destinations and tourists (Khuong et al., 2020). Therefore, H5 is supported. The present study has extended the research in destination image towards tourist satisfaction in Sarawak with information technology as the moderating variable. Through the findings of this research, it was also revealed that information technology does not influence the relationship between destination image and tourist satisfaction. Therefore, the findings of this study have added to the body of knowledge for managing tourism industries in Sarawak.

CONCLUSION

In summary, the political image, cultural image, and infrastructure factors significantly showed a positive relationship with tourist satisfaction in this study. This study has provided us with additional comprehension on destination image and how each dimension (i.e. political image, economic image, environmental image, cultural image, and infrastructure factors) impacts the satisfaction of tourists.

The findings of this research underlined social exchange theory as a relevant theory to govern the outcome of destination image towards tourist satisfaction based on the fundamental rule of "costs vs benefits". The results accentuate that the political image, cultural image, and infrastructure factors on destination image are significant in ensuring tourist satisfaction. Moreover, from this study, the results contributed to

the literature on destination image from the Sarawak tourism context. From the practitioner's perspective, the findings provided a better understanding of the tourism industry to verify and comprehend the effectiveness of tourism development to positively conduct a favorable destination image that would enhance tourists' satisfaction. The data from this study is gathered from the non-residence of Sarawak based on their travel experiences. Hence, the findings are useful to recognize the current destination image perceptions among tourists towards Sarawak tourism, that would enable local authorities to conduct strategic planning in Sarawak tourism development. There are several limitations highlighted in this research. Firstly, the sample size with a total of 198 tourists in this research does not reflect the results of several tourists who are travelling in Sarawak. Secondly, this research is designed to investigate tourist satisfaction without any specific set of pre-experiences or after-experiences of visitors. Hence, the results of this study do not represent consistency in terms of experiences among tourists. Future studies may carry out a specific setting on targeted respondents either pre-experiences or after-experiences visitors to participate in research with a similar topic. To conclude, future studies may expand the scope of the study to increase the numbers of respondents and subsequently generate better findings for representing tourist satisfaction towards destination images of Sarawak.

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IS IT TRUE THAT LOMBOK DESERVES TO BE A HALAL TOURIST DESTINATION IN THE WORLD? A PERCEPTION OF DOMESTIC TOURISTS

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Abstract: Lombok is a tourist destination that presents interesting diversity for tourists. During its development, Lombok has applied the concept of halal tourism which includes services, serving halal food, spiritual needs, communication, and other matters related to halal branding. This study focuses on informants' perceptions of the relationship between tourism index, experience quality, and revisit intention of tourist destinations in Lombok. The study was conducted by surveying 87 tourists who came from Indonesia, specifically Muslims, those who have stayed in Lombok and have visited at least in the last 24 months. The most suitable informant unit in the sample is purposive. We use the PLS analysis model to simplify data processing. The findings of the study are divided into 3 hypotheses which explain that the season index has a significant effect on experience quality. Furthermore, experience quality has a significant effect on revisit intention, and the tourism index has no significant effect on revisit intention. The novelty of this study lies in the uniqueness of the object, analysis model, and variables that have been designed so that it is very interesting in its presentation and is a distinct difference from other studies.

Key words: tourism index, experience quality, revisit intention, halal tourism, Lombok

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INTRODUCTION

Islam is considered to be the fastest-growing religion in the world. At least 10% of Europeans are expected to embrace this religion by 2050. Islam is predicted to become the largest religion in the world at the end of the 21st century. Seeing the rapid growth of Islam, tourism is a good opportunity to be caught and worked on, so that at this time many countries are developing tourist areas with the concept of halal tourism. Because there are several rules in Islam that must be carried out by its adherents, a concept of halal tourism that is friendly to Muslims is needed (Satriana and Satriana, 2018; Battour and Ismail, 2016; Suradin, 2018). Halal tourism can be defined as a tourism concept designed to make it easier for Muslim tourists to fulfill their spiritual needs while traveling. The needs in this case, for example, are halal food, places of worship, and bathrooms that are separated for men and women (Azam et al., 2019; Vargas-Sánchez and Perano, 2018).

Lombok's reputation as a halal tourist destination is very well known at international and regional levels, Lombok is indeed very suitable to be developed as halal tourism, besides Lombok has extraordinary natural beauty, the majority of Lombok's population is also Muslim, in Lombok, there are also very many mosques that even get predicate as the land of a thousand mosques.

The study will see whether Lombok deserves to be named the number 1 halal tourist destination in Indonesia according to the perspective of domestic Muslim tourists, by looking at how domestic Muslim tourists assess Lombok halal tourism, using the same indicators used by GMTI, including access, communication, environment and services which we later call the Tourism Index. This study is also an extension and adaptation of previous studies by Khoiriati et al. (2016) which highlights the branding and value of halal tourism in Lombok, Indonesia. In addition, Ainin et al. (2020) also discussed the concept and potential of halal tourism.

Why do we need to confirm the achievements that have been obtained by halal tourism in Lombok through the eyes of domestic Muslim tourists? There are several reasons that are important to do, including the recognition of domestic tourists on the conditions of halal tourism in Lombok which will further confirm or strengthen the results of the assessment of an award obtained from external parties. Then, the results of the assessment by domestic tourists will increase the confidence of domestic tourists about the actual conditions.

LITERATURE REVIEW

Tourism index

Tourism index or also known as travel image is a term that conditions the perception of tourists which includes aspects of service, taste, cleanliness, beauty, service facilities, and several other factors for an object during tourist activities (Suharto et al., 2019). Since the 2000s, various studies have discussed the factors that make geographical indicators the choice and destination of tourists in visiting. Apart from that, there are also several reasons for potential tourist attraction. In presenting it, Pablo-Romero et al. (2016), Dwyer and Kim (2003), Omerzel and

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Mihalic (2008), Crouch and Ritchie (1999), Croes and Kubickova (2013) and Darma et al. (2020) have focused on models that measure production through certain empirical methodologies, competitiveness, and tourism objectives. Thus, there are gaps and weaknesses in the general definition of the image of travel so that it becomes part of future studies. Universally, a definition that is accepted by all circles is not yet available. The definition must be sufficiently descriptive for understanding and adoption. From an individual and psychological point of view, the fact is that perception and image are highly correlated with travel. Perceptions of goal attributes and emotional viewpoints (feelings) about a tourist object can be the most sensible definitions from a future perspective (Martín and Bosque, 2006; Madden et al., 2016; Whang et al., 2016).

Experience quality

There are two categories of service to quality cues related to functionality and emotional experience cues. Experience with products and results tends to the aspect of functionality. In fact, moments of truth and peace of mind are more dominant than experiences that tend to be associated with emotions. The quality of the customer experience must be measured through an affective (feeling) perspective because cognitive judgments are more significant on environmental stimuli and as primarily for the quality of the customer experience. The quality of the customer experience must measure the overall superiority of a brand emotionally after a cognitive assessment (Edvardsson, 2005; Rais et al., 2016). Evaluation of the quality of experience tends to be holistic or gestalt rather than at tribute-based, so that the focus in evaluation is aimed at self (internal), but not on the external service environment (Ratnasari et al., 2020).

The scope of experience is more general than specific regarding the nature of benefits as an experience and symbolic than its function and affective psychological representations are certainly not based on cognition or attitudes (Chen and Chen, 2010; Höglström, 2011). Some researchers believe there is a two-way perspective on service quality and visitor satisfaction because they do not recognize the difference between quality performance and experience quality in tourism. The quality of the intended service attributes is under the control of the supplier, whereas the latter indicates not only the attributes provided by the supplier, but their attributes are also brought to chance by visitors in the recreational experience (Cole and Scott, 2004; Crompton and Love, 1995).

Revisit intention

The concept of intention to revisit comes from behavioral intention. Intentions include repurchase intentions and word-of-mouth is a situation where everything is connected from a behavioral point of view. In terms of tourism or recreation, the intention behaves as an intention to revisit the object within a certain time and the intention to come several times. Other factors involved in evaluating behavioral intention are through a desire to recommend to others and positive word of mouth. The intention of repeated visitors to a particular object can be influenced by the performance of the venue itself, for example by promotional efforts and news spreading about new attractions. Therefore, the intention to visit again can be interpreted as continuous satisfaction rather than the initiator of the decision-making process. This can be described as a strong likelihood of revisiting tourist attractions, whether or not with a positive attitude towards service providers (Oliver, 1997; Wu et al., 2015; Baker and Crompton, 2000; Bigné et al., 2005; Bintarti and Kurniawan, 2017; Aziz et al., 2012; Choo et al., 2016; Han et al., 2009; Um et al., 2006). In-depth, the intention to revisit tourist destinations is the willingness to visit repeatedly. Destination development is marketed to tourists so that they are interested in understanding and encouraging their intention to visit again. This becomes more efficient because the cost of retaining visitors is much lower than the cost of attracting new visitors at the same time (Seetanah et al., 2020; Soleimani and Einollahzadeh, 2018).

METHODOLOGY

Conceptual framework and hypothesis

A set of concepts and previous studies that can be developed in a logical and connected manner is a focus to form a theoretical framework. This is necessary so that this study can be sustained more measurably. The definitions and concepts that have been described previously, can provide a solid foundation, connect these concepts, and unify them through a logical connection with the study that is being carried out (Lara et al., 2020; McGregor, 2018; Grant and Osanloo, 2014). The following is the conceptual framework that we developed (Figure 1).

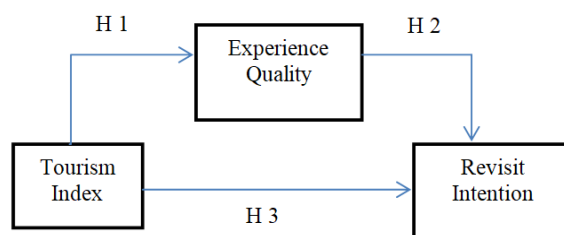


Figure 1. Variable design

Based on this conceptual framework, this study will prove the following hypotheses:

- H1: There is a significant influence between tourism index and experience quality.
- H2: There is a significant influence between experience quality and revisit intention.
- H3: There is a significant influence between tourism index and revisit intention.

Measurement

This study is included in the category of explanatory research, where the researcher tries to explain the influence of the three predetermined variables (Maria et al., 2019). The data is obtained from an online survey of domestic tourists who have visited all tourist objects in Lombok, provided that they are Indonesian citizenship and are Muslim, have visited a maximum of 24 months ago, are over 17 years old, and have at least stayed in Lombok.

Sample

Conditions that have been designed, so that respondents can answer all questions posed in the questionnaire. The questionnaire was arranged using an ordinal scale (1 to 10), provided that 1 strongly disagrees and 10 strongly agrees. The questionnaire needs to be tested for validity and reliability before using online surveys (Indriastuti et al., 2020). The survey was conducted from April to June 2020 which consisted of a number of participants who volunteered to fill out a questionnaire of 95 informants, but 87 of them met the criteria for respondents. Then, the data were

processed using descriptive statistics and Partial Least Square (PLS). Descriptive statistics to explain demographics and respondent answers and this analysis model are suitable to be used to explain the relationship between the variables studied (Purwadi et al., 2020; Darma et al., 2020).

Table 1. Demographics (Data source: Distributed questionnaires)

	Category	Frequency	%
Home town	Jabodetabek	11	12.6
	Non Jabodetabek	76	87.4
	<i>Total</i>	87	100.0
Educational background	Diploma	7	8.0
	Bachelor	39	44.8
	Master	23	26.4
	Doctoral	18	20.7
	<i>Total</i>	87	100.0
Age	17 - 25 years	4	4.6
	26 - 35 years	20	23.0
	36 - 45 years	26	29.9
	46 - 55 years	24	27.6
	> 55 years	13	14.9
	<i>Total</i>	87	100.0
The main job	Government employees	27	31.0
	Company employees	28	32.2
	Entrepreneur	22	25.3
	Student	5	5.7
	Others	5	5.7
	<i>Total</i>	87	100.0
Spending	< IDR 3.000.000	11	11.5
	IDR 3.000.000 – IDR 7.500.000	38	43.7
	IDR 7.500.0001 - IDR 15.000.000	22	25.3
	IDR 15.000.0001 – IDR 25.000.000	6	6.9
	> IDR 25.000.000	10	11.5
	<i>Total</i>	87	100.0
Last visit	< 6 months	19	21.8
	6-12 months	12	13.8
	12-18 months	10	11.5
	18-24 months	15	17.2
	> 24 months	31	35.6
	<i>Total</i>	87	100.0
Long time visiting	< 3 days	11	12.6
	3-7 days	62	71.3
	> 7 days	14	16.1
	<i>Total</i>	87	100.0
Number of visitors	Self	5	5.7
	1-5 people	53	60.9
	6-10 people	13	14.9
	> 10 people	16	18.4
	<i>Total</i>	87	100.0
With whom	Couple	5	6.9
	Family	28	32.2
	Friends / colleagues	39	44.8
	Community	10	11.5
	Alone	5	4.6
	<i>Total</i>	87	100.0

Based on the 87 informants who were interviewed, they were divided into several classifications (home town, educational background, age, the main job, spending, last visits, long time visiting, number of visitors, and with whom). Table 1 also describes that most of the visitors came from outside Jabodetabek (Jakarta - Bogor - Depok - Tangerang - Bekasi) as many as 87.4% with an undergraduate educational background reaching 44.8% and aged 36 - 45 years, namely 29.9%. In addition, they are predominantly working as company workers by 32.2% and 43.7% of the tour costs that have been spent on tourist destinations in Lombok, on average, reaching IDR 3,000,000 - IDR 7,500,000. As additional information, among these informants, the last visit was more than the last 24 months, namely 35.6% with an average visit time of 3 - 7 days as much as 71.3%. The largest number of visits in Lombok is in the range of 1 - 5 people, 60.9% and 44.8% of them spend time on vacation there with friends (colleagues).

Findings

The assumption test carried out in this study aims to determine whether the data has met the assumptions so that further analysis can be carried out. The assumption tests carried out in this study are the missing data test, outlier test, and linearity test. The following are the results of the assumption tests that have been carried out. Data on the Experience Quality, Revisit Intention, and Tourism Index variables as many as 87 data have met the assumption of missing data because the data does not contain missing data or complete processed data, so Table 2 explains that this model can be continued to the next test.

Table 3 shows that the data used has a z score between ± 4.00 , which means that the questionnaire unit of 87 tourist informants has fulfilled the outlier test assumption and there are no outlier data. Therefore, because it has met the data missing assumptions and outlier data, further testing can be carried out. Then, the data quality test used two stages, namely validity and reliability tests. Validity is a measure that shows the level of validity or validity of an instrument. Validity is a standard measure that shows the accuracy and validity of an instrument. An instrument is said to be valid if the instrument is able to measure what you want to measure (Latan et al., 2019).

Table 2. Results of missing data assumptions Source: Result of PLS analysis

Indicators	N		Indicators	N	
	Valid	Missing count		Valid	Missing count
EQ_1	87	0	RI_1	87	0
EQ_2	87	0	RI_2	87	0
EQ_3	87	0	RI_3	87	0
EQ_4	87	0	RI_4	87	0
EQ_5	87	0	RI_5	87	0
EQ_6	87	0	TI_1	87	0
EQ_7	87	0	TI_2	87	0
EQ_8	87	0	TI_3	87	0
EQ_9	87	0	TI_4	87	0
EQ_10	87	0	TI_5	87	0
EQ_11	87	0	TI_6	87	0
EQ_12	87	0	TI_7	87	0
EQ_13	87	0	TI_8	87	0
EQ_14	87	0	TI_9	87	0
EQ_15	87	0	TI_10	87	0
EQ_16	87	0	TI_11	87	0
EQ_17	87	0	TI_12	87	0
EQ_18	87	0	TI_13	87	0
EQ_19	87	0	TI_14	87	0
EQ_20	87	0	TI_15	87	0
EQ_21	87	0	TI_16	87	0
EQ_22	87	0	TI_17	87	0
EQ_23	87	0	TI_18	87	0
EQ_24	87	0	TI_19	87	0
EQ_25	87	0	TI_20	87	0
EQ_26	87	0			

Table 3. Outlier data Source: Result of PLS analysis

Z Score	Min	Max	Z Score	Min	Max
ZEQ_1	-3.94226	1.16832	ZRI_1	-2.43853	1.03937
ZEQ_2	-2.61879	1.30939	ZRI_2	-2.66517	1.13597
ZEQ_3	-3.61645	1.24540	ZRI_3	-2.90081	1.09450
ZEQ_4	-3.05551	1.20913	ZRI_4	-3.13602	1.06142
ZEQ_5	-2.00136	1.23504	ZRI_5	-3.30307	1.17829
ZEQ_6	-3.11547	1.31753	ZTI_1	-2.36389	1.78245
ZEQ_7	-3.15879	1.22655	ZTI_2	-3.05982	1.38751
ZEQ_8	-1.92961	1.51047	ZTI_3	-3.22324	1.61162
ZEQ_9	-2.06955	1.40633	ZTI_4	-3.43804	1.46539
ZEQ_10	-3.60523	1.34722	ZTI_5	-3.02247	1.39164
ZEQ_11	-2.53689	1.39032	ZTI_6	-3.43462	1.45249
ZEQ_12	-1.96208	1.55029	ZTI_7	-2.76526	1.62027
ZEQ_13	-2.34474	1.46109	ZTI_8	-2.52468	1.65339
ZEQ_14	-2.60170	1.39738	ZTI_9	-3.18486	1.28422
ZEQ_15	-2.29874	1.43242	ZTI_10	-3.31587	1.26319
ZEQ_16	-3.10386	1.31089	ZTI_11	-3.04273	1.23842
ZEQ_17	-2.69727	1.05733	ZTI_12	-2.42212	1.36789
ZEQ_18	-2.51816	1.28531	ZTI_13	-2.91737	1.49674
ZEQ_19	-3.48593	1.24352	ZTI_14	-2.54068	1.44920
ZEQ_20	-2.55557	1.40683	ZTI_15	-3.87190	1.26113
ZEQ_21	-3.64651	1.38028	ZTI_16	-2.85049	1.16234
ZEQ_22	-3.78718	1.66385	ZTI_17	-2.71073	1.48809
ZEQ_23	-2.99371	1.53590	ZTI_18	-2.97337	1.14579
ZEQ_24	-2.20770	1.55838	ZTI_19	-2.65085	1.25803
ZEQ_25	-2.81655	1.62718	ZTI_20	-2.75193	1.51251
ZEQ_26	-3.05699	1.57412			

Validity as an aspect of measurement accuracy. A valid measuring instrument is not only able to produce the right data but also must provide an accurate picture of the data. Meanwhile, reliability is the extent to which measurement results using the same object will produce the same data (Pamungkas et al., 2018). Table 4 shows the results of the validity test carried out by measuring discriminant validity by looking at the cross-loading value of the research data. The data can be said to be valid if the indicator has the greatest cross-loading value when paired with the dimensions of its partner compared to other dimensions in the measurement, so from this value, it will be seen the ability of the indicators in the questionnaire questions to reflect their respective dimensions and variables (Hiong et al., 2020).

The next stage is to test the reliability to determine the level of consistency of each indicator in measuring the construct variables. This test can be done by calculating the value of Cronbach's alpha and composite reliability. Composite reliability (ρ) with a cut-off value of more than 70%, then the indicator group is said to be good. Meanwhile, the indicator is said to be reliable when Cronbach's alpha is above 60% (Lau et al., 2019). All indicators have been proven reliable in measuring the latent variables. This can be seen from the value of the variables and dimensions having Cronbach's alpha value and the composite reliability value above the provisions. After that, the test also determines the significance of the relationship between the variables and their dimensions. This needs to be done considering that the research model uses the second-order model (Table 5). The outer model path coefficient in Table 6 explains that the tourism index has an influence on experience quality and experience quality also has an influence on revisit intention. On the one hand, the tourism index has no influence on revisit intention. The acquisition of R-square shows the strong or weak influence of the independent variables on the dependent variable. Table 7 shows that the tourism index has a weak effect on experience quality, experience quality has a moderate effect on revisit intention, and tourism index has no effect on revisit intention. The F-square achievement shows the size of the relationship between the independent variables and the dependent variable. This test shows that the tourism index has a small relationship with experience quality, experience quality has a large relationship with revisit intention, and tourism index has no relationship with revisit intention (Table 8).

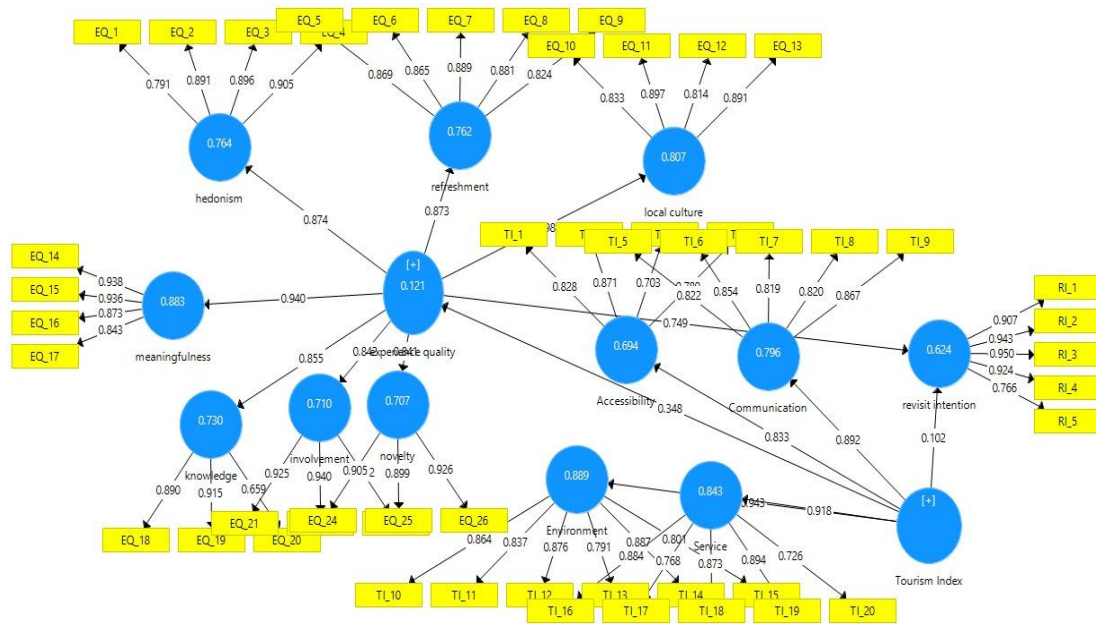


Figure 2. PLS algorithm

Table 4. Convergent validity test Source: Result of PLS analysis

Variables	Dimensions	Indicators	Outer loading	AVE	
				Dimensions	Variables
Tourism Index	Accessibility	T1	.828	.637	.562
		T2	.871		
		T3	.730		
		T4	.780		
	Communication	T5	.822	.700	
		T6	.854		
		T7	.819		
		T8	.820		
	Environment	T9	.867	.712	
		T1	.864		
		T11	.837		
		T12	.876		
		T13	.791		
		T14	.887		
	Service	T15	.810	.692	
		T16	.884		
		T17	.767		
		T18	.873		
T19		.894			
T2		.726			
Experience Quality	Hedonism	EQ1	.791	.761	.594
		EQ2	.891		
		EQ3	.896		
		EQ4	.950		
	Refreshment	EQ5	.869	.750	
		EQ6	.865		
		EQ7	.889		
		EQ8	.881		
	Local Culture	EQ9	.824	.738	
		EQ1	.833		
		EQ11	.897		
		EQ12	.814		
	Meaningfulness	EQ13	.891	.870	
		EQ14	.938		
	Knowledge	EQ15	.936	.688	
		EQ18	.890		
		EQ19	.915		
		EQ2	.659		
Involvement	EQ21	.925	.844		
	EQ22	.940			
	EQ23	.892			
Novelty	EQ24	.950	.828		
	EQ25	.899			
	EQ26	.926			
Revisit Intention		RI1	.970	.811	.811
		RI2	.943		
		RI3	.950		
		RI4	.924		
		RI5	.766		

Figure 2 illustrates the study model is a reflexive indicator (principal factor model), where the covariance of the indicator measurement is influenced by the latent construct or reflects the variation of the latent construct. This model is able to explain that each indicator is a measurement of the error imposed on latent variables.

The direction of cause and effect is from the latent variable to the indicator because these indicators are a reflection of the variation of the latent variable (Henseler et al., 2009). This means that changes in latent variables can cause an increase in all of its indicators.

Table 5. Test composite reliability Source: Result of PLS analysis

Variables and dimensions	Cronbach's Alpha	CR
<i>Tourism Index</i>	.958	.962
Accessibility	.880	.875
Communication	.893	.921
Environment	.919	.937
Service	.887	.918
<i>Experience Quality</i>	.972	.974
Hedonism	.894	.927
Involvement	.980	.942
Knowledge	.769	.866
Local Culture	.881	.919
Meaningfulness	.920	.943
Novelty	.896	.935
Refreshment	.917	.937
<i>Revisit Intention</i>	.940	.955

Table 6. Path coefficient Source: Result of PLS analysis

Relationships	T values	P values
Tourism Index -> Experience Quality	3.059	.002
Tourism Index -> Revisit Intention	1.607	.109
Experience Quality -> Revisit Intention	14.204	.000

Table 7. R-square test Source: Result of PLS analysis

Relationships	R-square	Effect
Tourism Index -> Experience Quality	.121	Weak
Tourism Index -> Revisit Intention	.000	Nothing
Experience Quality -> Revisit Intention	.624	Moderat

Table 8. F-square test Source: Result of PLS analysis

Models	Effect Size	Remarks
Tourism Index – Experience Quality	0.138	Small
Experience Quality – Revisit Intention	1.311	Big
Tourism Index – Revisit Intention	.000	Nothing

The Q-square test was conducted to determine the ability of the model to predict the relationship between variables presented in the study. Based on Table 7, the Q-square value can be calculated with the following formula:

$$\begin{aligned}
 Q^2 &= 1 - (1 - R^2) \times (1 - R^2) \times (1 - R^2) \\
 Q^2 &= 1 - (1 - 0.1212) (1 - 0.6242) (1 - 0) \\
 Q^2 &= 1 - ((1 - 0.14641) \times (1 - 0.389376) \times 1) \\
 Q^2 &= 1 - (0.985 \times 0.610 \times 1) \\
 Q^2 &= 1 - 0.6 = 0.4 = 40\%
 \end{aligned}$$

From these calculations, it can be seen that the Q-square value indicates that the magnitude of the diversity of the studies that can be explained by the structural model is 40%. This means that the representation of the structural model is able to map 40% of the actual conditions and there is a factor of 60% outside the model used and still needs to be explored again. It can be seen that the structural model of this study has good predictive relevance because the Q-Square value shown has exceeded the value of 0.35.

Assessment of goodness of fit needs to be done to see the goodness of the model through consideration of the AVE value score and also the R-Square value by doing calculations. The criteria for the GoF small (0.1), GoF medium (0.25), and GoF large (0.38). The GoF acquisition reached 0.685 which is classified as strong because it has a score of more than 0.38 (the fit model is good). Alexopoulos (2010) and Guillera-Aroita (2016) highlighted the difference with CBSEM, for the goodness of fit value on PLS-SEM must be searched manually. Schermelleh-Engel et al. (2003) also added that the criteria for the GoF small (0.1), GoF medium (0.25), and GoF large (0.38). The GoF acquisition reached 0.685 which is classified as strong because it has a score of more than 0.38 (the fit model is good).

$$GOF = \sqrt{AVE \times R^2} = \sqrt{0,655 \times 0,717} = \sqrt{0,469635} = 0,685$$

Table 9 highlights the hypothesis that the tourism index has a significant effect on experience quality (accepted), experience quality has a significant effect on revisit interest (accepted), and tourism index has a significant effect on revisit intention (rejected).

Table 9. Probability Source: Result of PLS analysis

Relationships	Path	T statistics	P values	Hypothesis
Tourism Index → Experience Quality	.348	3.059	.002	Accepted
Tourism Index → Revisit Intention	.102	1.607	.109	Rejected
Experience Quality → Revisit Intention	.749	14.204	.000	Accepted

DISCUSSIONS

Indonesia as a country where the majority of its people embrace Islam, the trend of halal tourism is still not very popular, and still has pros and cons in society. This is because the Indonesian people still have a narrow understanding of the concept of halal tourism. The perception that develops in the community is that when a tourist area is developed with the concept of halal tourism, the tourist area only prioritizes Muslim tourists and subordinates tourists to other religions (Triyawan and Carolina, 2018; Hakim et al., 2017). Indonesia is predominantly Muslim, so the attributes required for halal tourism are less important, for example, halal labels, non-halal labels of food sold in shops, and halal labels for food in restaurants. In fact, this is also very important to increase the sense of security and comfort of tourists during tourist visits (Battour et al., 2018). Halal tourism is a tourism concept that has the potential to continue to be developed considering the very rapid growth of Islam. In addition, spending by Muslim tourists is estimated to reach US\$ 2 billion by 2020. Now many countries in the world such as Hong Kong and Singapore are competing to improve and improve their tourist facilities so that they can be friendly to Muslim tourists (Rusli et al., 2019; Peristiwo, 2020). Indonesia also does not want to be outdone, since 2019 together with Malaysia, Indonesia has occupied the first position as the most popular halal tourist destination based on the Global Muslim Travel Index (GMTI). Lombok is Indonesia's mainstay halal tourist destination. Lombok in 2015 received an award as the world's best halal tourist destination from The World Halal Travel Summit and Exhibition (2019) and was ranked 1 in the "Indonesian Muslim Travel Index" (Subarkah et al., 2020).

In the Lombok region, there are various types of tourism that have become a mainstay during the last few periods, including beaches, mountains, hills, parks, local hamlets, small islands, and waterfalls. These tourist destinations include Kuta Beach, Selong Belanak Beach, Tanjung Aan Beach, Bangko-Bangko Beach, Tangsi Beach, Mount Rinjani, Pergasingan Hill, Namada Park, Sade Hamlet, Senggigi Beach, Gili Trawangan, Gili Air, Gili Meno, Gili Nanggu, Gili Layar, Tiu Kelep Waterfall, and Sendang Gile Waterfall. The fifteen objects are still being developed, especially in terms of providing facilities and infrastructure to support halal tourism activities (Maulidi, 2019; Taqwiem et al., 2020).

CONCLUSIONS AND SUGGESTIONS

Referring to the empirical findings, we conclude that the first hypothesis and the second hypothesis are acceptable, while the third hypothesis has been rejected. The results reveal if the season index has a significant effect on experience quality and experience quality has a significant effect on revisit intention. However, the tourism index did not have a significant effect on revisit intention.

These results are in line with and supported by several previous studies that explain the relationship between season index, experience quality, and revisit intention in different tourist destinations in several countries (Ramdhani and Astuti, 2019; Nguyen, 2020; Purnama and Wardi, 2019; Viet et al., 2020; Lin et al., 2018). This study has limitations on the number of samples, the survey period, and the variables used so that future researchers are expected to consider these three things so that the discussion is more varied. For the government, academics, and tourism destination managers, they can work together in determining the right program to increase the dimensions and indicators related to this variable model. A good policy certainly refers to the perception of positive suggestions from tourists, so that tourism potential in Lombok can be optimized in a sustainable manner.

Conflict of interest

We declare no conflicts of interest at a later date and this study is aimed at various parties.

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CANYONS OF THE CHARYN RIVER (SOUTH-EAST KAZAKHSTAN): GEOLOGICAL HISTORY AND GEOTOURISM

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Abstract: The Charyn River is located in South-East Kazakhstan, 195 km east of Almaty. The river valley cuts through Paleozoic rocks and loose sandy-clay deposits of the Cenozoic and forms amazingly beautiful canyons, the so-called "Valley of Castles". This place is actively visited by tourists from all over the world. However, Charyn canyons have not only tourist but also scientific value. Deposits with fossil fauna and flora are exposed here, and there is evidence of unique tectonic processes that took place in this area. Years of research have made it possible to describe in detail the stratigraphy of the region and outline new tourism routes that open up unknown pages in the history of South-Eastern Kazakhstan.

Key words: Charyn River, Charyn canyons, Kazakhstan, Paleozoic, Cenozoic, paleolandscapes

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INTRODUCTION

As world practice shows, one of the most effective and promising ways to preserve the pristine uniqueness of natural landscapes and geosystems is rational tourism and recreation nature management. In order to optimize the use of natural and recreational resources and with account taken of the anthropogenic load of recreation and tourism, an assessment of the natural and recreational potential of the territory is carried out. Assessment issues were dealt with in different periods by Russian (Dunets, 2019; Kuskov, 2005; Ushakov, 2020) and Kazakhstani scientists (Makashev, 1983; Erdavletov, 2000; Vilesov, 2009; Erdavletov, 2010; Berdenov, 2016; Beketova, 2019; Aktymbayeva, 2020;), and by foreign authors as well (Ilies and Grama, 2010; Wendt, 2020; Ilies, 2017). Due to the physical and geographical location, the peculiarities of the geological and geomorphological structure and landscape diversity, the South Kazakhstan region has sufficient natural resource potential for the development of recreation and such types of tourism as ecotourism, "green" (agritourism), water tourism and other types. The works of the following scientists are devoted to the study of the landscape biodiversity of the geosystems of the South Kazakhstan region: Kulibaev (2006); Ilies and Grama, 2010; Suraganova (2013); Ilies et al. (2017, 2018); Herman et al., 2019; Akbar (2020); Kerimbay (2020); Indrie et al., 2020; Marcu et al., 2020; Suleimenov et al., 2020. Natural and recreational resources as a basis for the development of tourism and recreation are considered in the works of Akhmedenova (2017), Dunets and Zhogova (2019) and others. Landscape refugium are a relief or other natural objects in which, due to the unique combination of landscape-forming factors and low economic development, characteristic and rare relict geosystems for the region have been preserved. The idea of refugiums has long been established in Western and Russian biological science and literally means "shelters" - areas of the earth's surface where one species, or more often a whole group of living forms, survived an unfavorable period of geological time during which these forms disappeared in other spaces (Kerimbay, 2020). Charyn canyons have not only tourist but also scientific value. Deposits with fossil fauna and flora are exposed here, and there is evidence of unique tectonic processes that took place in this area (Kozhamkulova et al., 1978; Kostenko, 1978; Baybulatova and Kostenko, 1981; Zhilkibaev, 1982; Tyut'kova, 1988; Aubekeroev et al., 1990; Bayshashov, 2005). Geological and paleontological studies have made it possible to describe in detail the stratigraphy of the region and outline new tourism routes that open up unknown pages in the geological history of South-Eastern Kazakhstan, which are presented in this article.

MATERIALS AND METHODS

The Charyn River is located in South-Eastern Kazakhstan, approximately 195-200 km from Almaty city, the ex-capital of Kazakhstan.

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The Charyn River basin is located in the territory of 42°40' - 44°00' Northing and 78°30' - 80°35' Easting. The River Charyn is the left tributary of the Ili River and therefore belongs to the Balkhash lake basin. The Charyn River is about 427 km long, the river basin area is 7,720 km², the average annual water consumption is 37 m³/sec. Within the Kazakhstan territory, it is the longest and most water-rich tributary of the Ili River (Figure 1). Charyn originates in the Ketmen mountains. At the source, it is called Shalkodesu, downstream, opposite the salt lake Tuzkol, it receives the name Kegen and takes on the left its largest tributary Karkara (its source is in the Terskey Alatau mountains) and less significant – Ulken Taldybulak. After merging with another left tributary of the Kensu, it becomes Charyn. Orta Merke and Shet Merke, the first left tributaries of the Charyn, originate in the Kungei Alatau Mountains. The last and only right tributary of the Charyn is the Temirlik River with a length of about 60 km. Its origins are in the Ketmen Mountains. The average annual water consumption in the upper reaches is about 2 m³/s. The Temirlik River is fed by atmospheric precipitation, melted snow and groundwater. The river cuts deep into the Ketmen foothill plain and flows into a canyon for 25 km. It is less deep than the Charyn canyons in the Aktogay and Moyintogay gorges, and the slopes of the Temirlik canyon are not so steep and high.

The unique landscapes of the Charyn canyons are widely known among domestic and foreign tourists. Particularly popular with tourists is a section of a river valley with grandiose canyons, the so-called "Valley of Castles". However, there are no less interesting canyons and gorges along the river, located in the Paleozoic and Cenozoic sediments, which are rarely visited by tourists.



Figure 1. Map of the Charyn River basin (space image Google Earth)

In the Charyn River valley, the "canyon section" changes the appearance of the valley. In the upper part of the section, just above the Shet Merke estuary, the river flows in a deep rocky gorge, reaching a depth of 300 metres in some places. It is located at the junction of the Kuluktau and Kungei Alatau mountains. This gorge is called Moynak ("isthmus" in Kazakh). The canyon in the Jalanasha depression is getting wider and its slopes are smoother, and the riverbed here occupies only part of the canyon bed. This canyon, actually its western part on the left bank, is called Aktogay Canyon. The right bank is called Zhylysay ("warm ravine" in Kazakh). The length of Aktogay-Zhylysay canyon is about 20 km. The canyon has clear river terraces and floodplains. Along the river bed, floodplain forests with a typical arid climate set of plants grow: poplar, ochre and various shrubs. These ribbon groves are called Aktogay ("light forest" in Kazakh).

Down the Aktogay, the Charyn River cuts not only through the Neogene deposits, but also the hard-rocks of the ancient peneplain. In this section, the canyon is very narrow with steep sides. The riverbed takes almost the entire width of the canyon. After steep rocky ravines and chasmy bizarre Neogene-Quaternary canyons of the Kurtogay and Moyintogay gorges, the valley loses its expressiveness and, for about 40 km after its exit from the mountains, its steep slopes (as it approaches the Ili River) come to nothing. In its lower course, the river becomes flat and wide - this place is called Sarytogay (yellow forest). The chain of Charyn canyons ends here. Several manches of the Charyn River flow into the Ili River forming a huge delta which pushes Ili to north for 18 km. In 2004, by decree of the Government of the Republic of Kazakhstan dated February 23, No. 213, on an area of 93,150 hectares (since 2009, 127,050 hectares), the Charyn State National Natural Park was organized. According to the approved and published data, there are three main protected objects and three tourist routes (Charyn ash grove, Charyn canyon "Valley of Castles" and burial grounds and burial mounds). Research materials included geographical maps of the Republic of Kazakhstan, materials of geological and paleontological studies. Based on the

method for assessing the recreational potential of the territory (Stepanova, 2010), the analyzed region is differentiated into Geosites. However, at least six tourist routes can be identified in the valley of the Charyn River.

RESULTS DISCUSSIONS

Geological and geomorphologic structure and paleolandscapes.

The area crossed by the Charyn valley is part of the neotectonic structure of the North Tien Shan, which over the past 1.5 million years formed a complex system of mountains and intermountain basins. These are, from south to north (downstream the Charyn river): the Kungei Alatau mountains, a highly elevated neotectonic block, to north of which is the intermountain Zhalanash depression, then there are the Toraigyr mountains, an elevated neotectonic block, further to north is the Sogety intermountain depression. The Boguty Mountains, an elevated neotectonic block, separate the Sogety depression from the large Ili depression along which flows the Ili River. This sequence of tectonic structural changes is typical for the left bank of the Charyn River. The system is different on the right bank of the Charyn. It is one large negative structure. It is the Ili depression, and the Sogety and Zhalanash depressions are its smaller secondary parts. Both latter intermountain depressions open into the Ili depression, forming a negative structure between the Toraigyr and Boguty mountains and the Ketmen range. The Charyn River paved its way to the western edge of this negative structure, part of the Ili depression.

The history of the Zhalanash depression begins in the Neogene or at the end of the Paleogene, when tectonic movements conditioned the sinking of the tectonic block. During the Neogene-Quaternary time, according to geophysical data, more than 1500 m of loose deposits accumulated in the Zhalanash depression. Its geological history proceeded under changing climate and growing altitudes of the watershed relief parts. Initially, there was an accumulation of Miocene and Pliocene deposits in the locked depression, surrounded by relatively sparsely dissected, non-contrast relief. This phase sediments were characterized by a set of lacustrine clays and marls and by sandy and gravel-pebble deposits of relatively small amounts interlaid with lacustrine fine-grained sediments. Lacustrine and lacustrine-alluvial deposits formed the central and northern part of the Zhalanash depression. The cuts in the southern part are composed of boulder and pebble deposits. Accumulation of boulder and pebble thickness of over 300 m is related to the activity of the Kegen River pre-valley, which formed a continental delta in the Zhalanash depression. Whereas in the Miocene and Early Pliocene there was a relative equilibrium between paleo-Zhalanash lake and the continental delta of the the Kegen river pre-valley, in Pliocene, with increase of the absolute height of the mountains, the accumulation of coarse-fragmentation material was reinforced, and by the final stage of Neogene sedimentation, the lake ceased to exist, and the boulder-pebble material carried by the Kegen valley became the dominant type in the Zhalanash depression.

This history of sedimentation can be well read from the cuts on sides of the Charyn canyon within the Zhalanash depression. In the south part of the depression, the canyon sides (headstream) are composed of boulder and pebble. In the central and north parts of the Zhalanash depression, the sections' lower and middle parts are filled by lacustrine clays and marls, above they are intertwined with lenses and layers of sand-boulder-gravel deposits, and boulder gravels of the Pleistocene complete the section (Figure 2).



Figure 2. The scheme of geological sites of the Charyn river canyon (Source: SAS Planet)

Route 1 - The Moinak gorge

This is picturesque place with deep rock canyons. They are composed of volcanic rocks of the Paleozoic (Lower Carboniferous) (Figure 3 (B)). The age of the rocks is about 350 million years. In the upper reaches of the Charyn River, in 2012, the Moinak hydroelectric station was put into operation, with the regulating Bestyube reservoir (Figure 3 (A)). This is the highest hydroelectric power station in Kazakhstan and Central Asia. Below the reservoir, the river flows into a rocky gorge. In the canyon crevasses, the spruce *-Picea schrenkiana* subsp. *tianschanica* (Rupr.) Bykov, finds refuge, feeling very comfortable on slopes shaded and wetted by water splashes. Vacationers, who love mountain scenery and turbulent mountain rivers, are heading here. The uppermost part of the section is composed of loess laid in the piedmonts of the Kungei Alatau Mountains. The loess surface bears traces of erosive fragmentation in the form of troughs of north-west flow (across the Zhalanash depression). These ancient troughs have no channels and do not coincide with the direction of the modern Charyn river valley, which cuts through this drainage system. Probably, accumulation and subsequent erosion of loess occurred in the final stage of the first half of the alluvial cone (continental delta) of the Kegen River, discharging its waters in the north-west direction. A chain of river cuts begins from the mouth of the Kensu River (left tributary of the Charyn River) and extends for about 80 km to a point of 17 km below the Charyn bridge on the Almaty-Shonzhа motorway. The absolute height of the valley floor at the beginning of the canyon chain is 1,700 m while at the end it is 650 m. Consequently, the height difference between them is just over 1000 m.

Route 2 - The Kopaly (Aktogay) gorge

Down the Shet Merke estuary, the Charyn River overlooks the expanse of the intermountain Zhalanash depression (Figure 4 (A, B)). It cuts into the Cenozoic loose clastic thickness 150-200 m deep. It consists mainly of the Neogene proluvial alluviation interlaid with lacustrine sediments. The Neogene thickness is covered by alluvial (riverine) Lower Quaternary sediments of boulders and gravels. The largest boulders reach 0.5 m in diameter. Lower Quaternary conglomerates from the surface are overlapped by loess of the same age (Tyut'kova, 1988; Aubekeroev et al., 1990). The Cenozoic sediments of the Zhalanash depression contain numerous remains of ancient animals, among which notable are rodents, bones of ancient elephant, horse and antelope (Kozhamkulova et al., 1978; Bayshashov, 2005). The bone remains were first discovered here in 1977 by the team of the Paleozoology Laboratory at the Institute of Zoology (Almaty, Kazakhstan). This location is also known in literature as Kopaly or Aktogai (Figure 5, 6). In 1990, a group of geologists and palaeontologists analysed and described the site section using known palaeontological and geological data (Aubekeroev et al., 1990).



A) Bestyube reservoir



B) The deep rocky canyons of the Moynak Gorge, formed by lower Carboniferous volcanic rocks

Figure 3. Scenic views of Moynak gorge (foto authors)



A) The alluvial sediments of the Zhalanash depression



B) The Zhalanash depression

Figure 4. Scenic views of the Zhalanash depression (Photos of authors)

The main paleontological artefacts have been found in the Zhalanash depression. According to paleontologists, they are located in the section formations described from bottom to top as per deposition stages (Tyut'kova, 1988; Baybulatova et al., 1981; Kozhamkulova et al., 1987; Aubekeroev et al., 1990; Jamangaraeva, 1993).

Formation 1. Identified here are: rodents and lagomorphs *Hypolagus sp.*, *Ochotona aktogaiensis*, *Ellobius sp.*, *Villanya patenyi*, *Mimomys haplodentatus*; mollusks *Planorbis*; stoneworts *Chara molassica* var. *Kirgizensis*.

Formation 2. Identified here are: rodents and lagomorphs *Ellobius sp.*, *Cricetulus sp.*, *Meriones sp.*, *Clethrionomys mirus*, *Prologurus pannonicus*, *Allophajomys pliocaenious*, *Mimomys haplodentatus*, *Pachycrocuta brevirostris*; predators *Canis etruscus*; rhinoceros *Dicerorhinus sp.*; odd-toed *Equus cf. stenonis*; artiodactyl *Leptobos cf. etruscus*, *Gazella sp.*, *Gazellaspira sp.*; proboscidean *Archidiscodon sp.*, *A. gromovi*; fish *Carassius sp.*, *Rutilus sp.*; molluscs *Subzebrinus costatus*, *Macrochlamys kasnakowi*; stoneworts *Chara molassica* var. *kirgizensis*, *Chara cf. vulgaris* L. f. *lata* Krassav., *Hornichara narinensis*.

Formation 3. Identified here are: rodents and lagomorphs *Clethrionomys kretzoi*, *C. miricus*, *Prolagurus pannonicus*, *Allophajomys pliocaenious*, *Microtus cf. hintoni*; *Gastrocopta theeli*, *Vertigo alpestris*, *Ponsadensis semenovi*, *Diacus ex. gr. ruderatus*, *Pupilla cf. bigranata*, *Pseudonapaeus sp.*; predator *Canis sp.*

This is one of the largest paleontological locations of the Late Pliocene Ili Formation. The Neogene sections in the northern part of the Zhalanash depression are an inexhaustible source of information on Neogene fauna and flora. Dozens of sites with bone remains of ancient

elephants, horses, antelopes and numerous large and small mammals have given scientists decades of research into fossil fauna and flora. The organisation of the open-air museum will make it possible to organise an excursion for tourists. Traces of seismotectonic cataclysms are also interesting. Tectonically induced faults in the rocks, their movement and, in some cases, the inversion of the layer, have a great influence when viewing the Kopaly area. Changed climatic conditions and desertification in the area lead to the accumulation of early Pleistocene loesses, which cover the thickness of boulder and pebbles and are clearly visible in cuts along the canyon sides. Only in the Middle Pleistocene does the situation in the Zhalanash depression change. The increase in the height of the mountains and the neotectonic movements that led to even greater relief contrast have caused the valley to break out towards the Ili Depression. The valley cuts deep into the Quaternary and Neogene sediments, and erosion processes lead to the formation of several erosion levels-steps, typical not only of the Zhalanash depression but also of the eastern periphery of the Toraigyr mountains. A floodplain and two floodplain terraces are observed in a deep canyon along the river banks. They are composed of mountain alluvium - boulder and pebble deposits interspersed with layers of sand and loams. In the instrumental parts of the canyon there are powerful removal cones of periodically acting valleys. In total, they form three levels of nested removal cones. This feature of the canyon structure is characteristic of the entire deep-cut Charyn River valley.



A. General view of The Kopaly (Aktogay) gorge



B. The valley of the Charyn River in the Aktogay tract, a view of the Neogene-Quaternary deposits



C. The contact of Paleozoic rocks with the Cenozoic loose-detrital stratum on the right side of the canyon



D. Neogene Quaternary sediments in the Kopaly

Figure 5. The Kopaly (Aktogay) gorge (Photos of authors)

Our own palinological studies of loess sections has shown that loess contains quite complete spores-pollens spectra of both steppe and forest-steppe types. This has led to the belief that in the early Pleistocene, quite a rich vegetation cover was restored here, and the vertical belt existed in the mountains. There are pollen grains of coniferous (spruce, pine), broad-leaved (linden, maple, oak, elm) and small-leaved species and shrubs (birch, alder, willow). Participants of plant groups at the time were also shrubs: barberry, jujuba (*Oleaster*, Wild Olive. - *Eleagnus angustifolia* L.), rosehip. The presence of juniper (*Juniperus*) and fir (*Abies*) was also noted. Such a set of plants, where broad-leaved plants (linden, maple, oak, elm) and conifers (juniper, fir) could co-exist with the togai desert vegetation, is unlikely and requires further study of the section, in order to separate redeposited, inwashed and autochthonous pollen in the spectrum. Charyn Canyon in this section was well explored by man. Parking sites of the ancient man of the Ashelian and Mousterian epochs, Bronze Age and Early Iron Age have been preserved in the Zhalanash Canyon and may be an object for tourist visits. Piedmonts of the Trans-Ili Alatau were always the place of human settlement. Traces of human activity here have survived to this day in the form of remnants of dwellings, burial structures, kurgans, etc. The Charyn canyon was well mastered by humans. Stations of Ashelian and Mousterian ancient man of the Bronze and the Early Iron Ages were preserved in the Zhalanash depression and can be used for tourist visits. Primitive stone tools by the Stone Age ancient

man were found here dated 500-700 thousand BP. These are the oldest findings of its kind in the territory of Kazakhstan. The Paleozoic foundation uncovered by the Charyn River is represented by effusive carbonaceous rocks. They are opened on sides of the Zhalanash depression.



A. Late Pliocene deposits in the Aktogay Gorge

B. Palaeontological finds of a tooth of *Equus cf. stenonis* from Late Pliocene deposits in the Aktogay Gorge

Figure 6. Late Pliocene deposits in the Aktogay Gorge and palaeontological finds of a tooth of *Equus cf. stenonis* (Photos of authors)

Route 3 – the Kurtogai gorge

North of the Zhalanash depression, downstream, the valley paved its way to the periphery of the Toraigyr Mountains. Separated from the Zhalanash depression by a fault, the Toraigyr Mountains in this site are losing their height and along the eastern periphery are connected to the ancient surface of peneplain, elevated in separate blocks to different heights but still located near the modern day surface, while in the Zhalanash, Sogety and Ili depressions the peneplain surface sunk to a depth of several hundred meters to 1.5 km. The canyon sides are mainly composed of Carboniferous effusives and Ordovician granites broken by faults that can be clearly seen from lightened colouring of the rocks and different heights at which the tectonic blocks (key-driven tectonics) were elevated. And only the section's uppermost part on elevated blocks is composed of loose Neogene and Quaternary deposits (Aubekeroev et al., 2007). On the right bank of this section, seen is a vast sloping foothill plain developed on a thick loose cover functioning as intermountain depression. The sloping surface of the plain has been paved with numerous dry valleys cutting through Quaternary loess sediments as well as Neogene clays and patums (the rock is a typical sedimentary unsorted breccia or conglomerate breccia). Below the bridge over Charyn, on the motorway between Almaty and Narynkol (Raimbek), the canyon is called Kurtogai gorge (Figure 7). It has some remarkable features. At the base of its left side, beneath the Cenozoic thickness, dark grey limestone of the Paleozoic Carboniferous period is exposed. The limestone is saturated with petrified brachiopod shells (bottom sea molluscs). The visible horizon is only few metres thick. Rested on ancient limestones is a Neogene Formation represented by lacustrine deposits (limestone, marl, clay) and proluvial unsorted cemented clay, sandy and crushed rock deposition. The entire Neogene thickness has reddish and yellowish tones. Its thickness is a few tens of meters. The uppermost cover horizon is represented by grey cemented pebbles (conglomerates) of the Lower Quaternary age (Aubekeroev et al., 1990; Aubekeroev et al., 2007).



A. The contact between Paleozoic rocks and the Cenozoic friable strata

B. The Kurtogai gorge

Figure 7. View of The Kurtogai gorge (Photos of authors)

Paleozoic limestone with brachiopod shells (Figure 8) indicates that the sea was warm about 300 million years ago (Chabdarov et al. 1971; Krasnoborodkin, 1985). For about 23 million years, the Neogene was dominated by arid subtropical climate and landscapes reminiscent of modern savannahs. Early Neogene, in the Miocene, lakes were widespread here. At the end of the Neogene and in the Lower Quaternary, the climate sharply cooled down, and glaciers began to appear in the mountains. Full-flowing rivers began to carry sandy rocky

material into the Zhalanash depression and form the abovementioned conglomerates. The downstream Kurtogai gorge changed dramatically: the river leaves the Zhalanash depression and crashes into the eastern spur of the Toraigyr range. Here it flows in a wild rocky gorge 300 m deep. Paleozoic (Carboniferous) volcanic rocks are exposed along the slopes, and the gorge bottom is fully filled by the water current. At the point where the river enters the Toraigyr rocky massif, the contact of Paleozoic rocks with the Cenozoic loose clastic thickness is clearly visible on the right side of the canyon. The tectonic structure is impressive: the rock block rises above the Cenozoic sediments, horizontal layers of which bend upwards at the contact, indicating the active rise of the Toraigyr. In Toraigyr, the rocky gorge stretches for about 8 km. From there, Charyn enters the expanses of the Ili depression and again cuts deep into the Cenozoic and Paleozoic deposits. Here is another section of the canyon, Moyintogai, which stretches from the northern foot of the Toraigyr to the place where its last right tributary Temirlik flows into Charyn.



A. General view of Paleozoic limestone of Charyn region



B. Paleozoic limestone with brachiopod shells of Charyn canyon

Figure 8. Paleozoic limestone with brachiopod shells (Photos of authors)



Figure 9. Charyn The "Valley of the Castles" of Charyn canyons (zen.yandex, 2019)

Route 4 - Valley of the Castles

At the point where the Charyn emerges from the deep rocky gorge that cuts through the Toraigyr, a deep sai, the "Valley of Castles", opens into it from the left, from the west, which is most frequently visited by tourists (Figure 9). Along the sides of this deepest gully, weathering processes, temporary water currents and strong winds have sculpted fanciful rocks resembling castle ruins, human and animal figures. The Neogene patum of this bay contains significant quantities of crushed rock - a product of the destruction of the northern macro-slope of Toraigyr. Also noteworthy are whitewashed lenses of lacustrine deposits, represented mainly by marls (clay-lime rock). In the "Valley of the Castles", Neogene deposits overlay a rocky shallow bed formed by effusives (volcanic rocks) of the upper Paleozoic (Carboniferous) period (Chabdarov et.al. 1971; Krasnoborodkin 1985). These dark rocks are clearly visible on the right side of the valley, especially at the outlet to the Charyn where it is 200 m deep. Desert trees and shrubs - saxaul (sexeuil), chingil (shengel), karagan (karagan), turpentine (tuyesinir), ephedra (kylsha) - grow on the bottom of the Say. Curlew is a prickly, stunted shrub with small leaves. In spring, its white-pink flowers exude a strong honey scent. Along the banks of the Charyn, there are turanga or poplar multifoliolate, willow, oleaster (jida). Along the banks of the Charyn River one can meet: turanga (poplar), multifoliage poplar (oak, tobylgy), honeysuckle (ushkat), tamarisk (zhingyl), wild rose (ytmury), and others. "The Valley of Castles" descends to the Charyn River. On the riverbank there is a camping with guest houses, yurts (nomadic houses) and places for tents (Figure 10).

Route 5 – The Sarytogai gorge

Downstream, after the Sugety depression, the valley rounds the Mount Boguty from the east. The valley becomes wider and cut into the relief decreases. The valley acquires a transverse chest-shaped profile. The slopes of the valley are smoothed out. Several channels

appear in the floodplain. There are many remnants of ancient fauna. It is in this section of the valley that the remains of an ancient elephant, primitive horse, antelope, bull and other large and small animals were collected and studied for the first time; the remains of ostrich shells were found. The valley is cut into sediments of the Ili and Khorgos Formations, composed of clays, loams, lenses of sandstone and fine pebbles. In the valley, Quaternary sediments formed a floodplain, the first and second terraces above the floodplain. The sides of the valley cut through numerous dry valleys and ravines. The floodplain and its terraces are composed of clays, loams, layers of sand with gravel and pebble (Kostenko, 1978). Alluvial cones of dry valleys can be seen everywhere in the valley's sides.



Figure 10. The camping area on the Charyn riverbank (Photos of authors)



A. Neogene and Quaternary sediments of Charyn canyons (Photos of authors)

B. General view of the ash-tree grove of Charyn region (zen.yandex, 2019)



C. Sogdian ash trees (Photos of authors)

Figure 11. The Sarytogai gorge and the Ash-tree grove of Charyn region

The river bed gets shallow. Down the Temirlik mouth, the Charyn canyon is called Sarytogai. It becomes wider and cuts into Neogene and Quaternary sediments to a depth of about 100 metres. The Sarytogai canyon is known for its relict ash-tree grove, which

covers about 800 hectares (Figure 11). The relict Sogdian ash-tree grove covers approximately 800 ha. The Sogdian, or potamophilous, ash-tree grove exists since the Neogene when the climate in these places was warmer than it is today. At the time the canyon did not exist, and the ash-tree grew under subtropical climate, along the banks of small rivers throughout the south of Kazakhstan. And when it cooled down in the Quaternary, it settled on the shelter of the Charyn canyon, which began to form at the beginning of the Middle Pleistocene, about 350,000 BP. The Ash-tree grove is a cherished nature haven of the Almaty region.

Across the Boguty Mountains and down, the valley has a similar geological but varying geomorphological structure. On this basis, the sections of the valley crossing the eastern tip of the Boguty Mountains and the Charyn valley itself within the Ili depression are identified as independent sections. Passing the Boguty Mountains, the Charyn River paves its way on the southern part of the Ili depression. The river formed a land delta composed of sandy clay alluvium, then it flows into the Ili River. In the place where the Charyn River enters the Ili River valley, the Ili depression has a section that is characteristic to the entire depression. The top of the section is composed of alluvial deposits of the Ili river valley, its floodplain and two terraces.

The alluvium consists mainly of fine sand, loam and clay. Influenced by arid climate, with weak vegetation cover, the terraces and floodplains are constantly exposed to aeolian processing, which shaped the aeolian relief - dunes, bumpy and heapy terrain - observed on their surface and along sides of the Ili depression. The aeolian sand is fine, well breezeed, composed mainly of quartz and quartz-fieldspar. Below the Pleistocene sediments in the Ili depression lie the Khorgos (Eopleistocene), Ili, Santash and Shol-adyr deposits. The following tectonic stages are distinguished in the Pleistocene when occurred maximal block movements (Kostenko, 1978): Khorgos, Koiba, Baky and Almaty. These tectonic stages define important milestones in the history of Semirechie geological development. During the Quaternary period, intensity of tectonic movements, which had both continuous and intermittent character, caused quickening of vertical movements. Rising, the Alpine massifs gradually involved the adjacent parts of plains, therefore the Quaternary and older Neogene and Paleogene deposits of the foothills are sloping, not horizontal. All these morphologically different relief macroforms are linked by the largest rivers valleys of the Semirechie: Ayagoz, Lepsy, Karatal, Aksu, Koks, Ili, and Chu.

Route 6 - the Tuzkol lake

It is one of the gems of the Charyn basin. The lake is located about 10 km southeast of the Karasaz settlement, between the mountains of Yelshin Buirek and Tizgen Karatau, at an absolute height of 1,950 m. Its area of about 6.6 km² varies by seasons and years. The lake stretches from northeast to southwest for about 5 km. Its depth is only a few tens of centimeters. The years are remembered when the lake was nearly all dry. The shores are murshy and sludgy with stains of salts. Alkaline soils stretch along the coast.

They are the highest ones in our region. The lake is unusually salty, the most salty in the mountains of Kazakhstan. Its salinity is extremely variable depending on the water inflow. It can reach 225 g/l, that is, almost the same as in the Dead Sea of the Arabian Peninsula. The salt deposition is continued in the lake; in the past, the salt was extracted and carried to the surrounding villages and even to the Issyk-kul region. The shoreline Tuzkol muds have curative properties (Figure 12).



A. North side

B. South side

Figure 12. The Tuzkol lake of Charyn canyons (authors)

CONCLUSION

Thus, by studying the geological formations of the canyons of the Charyn River, it is possible to visually reconstruct the geological and paleontological chronicle of this unique territory. Furthermore, it is possible to trace the entire long history from the moment the first land islands appeared in the Paleozoic to the formation of arid mountains in the Neogene and Quarter, with their unique flora and fauna. The Charyn canyons can be classified as monuments of geological history: they are national treasures that require special attention, protection, and study. Well-developed infrastructure (including modern roads, equipped campsites and guest houses), close to the large city of Almaty (where there is an international airport), increases the attractiveness of this National Park for scientific tourism, and also makes it possible to use these unique natural and geological sites for scientific and educational purposes.

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REVITALIZATION OF MOUNTAIN RURAL TOURISM AS A TOOL FOR SUSTAINABLE LOCAL DEVELOPMENT IN KABYLIE (ALGERIA). THE CASE OF YAKOUREN MUNICIPALITY

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Abstract: Our study focuses on the planning and revitalization of mountainous rural tourism to generate income for many rural communities. It targets a community of Great Kabylie in the heart of Djurdjura massif in the eastern part of Tizi-Ouzou province in Algeria. Tourism in these mountainous areas could contribute to rural development, given that it covers 80% of the region and records 13913 tourist overnight stays. Rural tourism can be a valuable tool for local development in the Yakouren municipality. This paper is based on a literature review, field surveys, descriptive and analytical approach to revitalizing mountainous rural tourism in Yakouren, and revealing its potential through various methods, including Butler's theory, SWOT analysis, and elaboration of an indicator grid, and calculation of tourist traffic. From the results, we identified eight segments that attract tourists and five segments that villagers request. Finally, in a conceptual approach, we discuss the impact of this market on rural areas structure and propose some ideas to overcome it. As a result, through constant promotion, Yakouren can benefit from an increase in tourist traffic. Rural tourism in this mountainous community can be an essential source of income, but it requires investment.

Key words: Yakouren, Great Kabylie, mountainous rural tourism, mountainous zones, local development, revitalization, tourist traffic, investment

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INTRODUCTION

Kabylie region features rich geographical landscapes shaped by its vast mountains. Within this context, mountainous rural tourism (MRT) can be seen as an opportunity to develop the natural and cultural resources of this region (Darbellay and Stock, 2012). Also, over 50 million people worldwide spend their vacations in the mountains every year (FAO, 2005). These tourists are attracted by landscapes, communities' lifestyles, fresh air, and the wide variety of leisure activities available away from their daily stress and challenges. Such mountain tourism generates increased economic benefits, improves the local community's life quality, and can support some disadvantaged and non-industrialized areas (Slusariuc and Bică, 2015). In developed countries, mountainous rural tourism is considered an excellent complement to the declining agricultural sector, incapable of sustaining rural residents' needs (Tazim and Robinson, 2009). From the 1970s onwards, rural tourism in mountain areas was integrated with developed countries' planning strategies and, since the 1990s, in developing countries. Algeria ranked 4th among African destinations and occupied the 111th position on the international tourism scene (Belkhiri, 2018). It accounts for nearly 1.5 million tourist arrivals every year. This represents only 1% of international tourist arrivals in the Mediterranean area (SDATW, 2015). Plus, according to the latest report on the Travel and Tourism Competitiveness Index (TTCI), Algeria is still lagging behind in the field of tourism, ranking 118 out of the 136 countries surveyed, forcing the country to assign a new dimension to the MRT, one of the leading tourism trends in the current market (PAW, 2012). Algeria is expected to exploit its potential and orient its tourism offer towards rural tourism in mountain areas. Its impact will be very positive and progressive for sustainable local development with a multiplier effect that will add value to the local economy (Sonko, 2013).

Tizi-Ouzou province holds nearly 1400 villages located in mountainous areas. Tourism in Kabylie and, more particularly in Yakouren, is today poorly exploited, despite all the region's potential. This is due to a lack of security a few years ago (black decade), preventing several festivals from being celebrated (Houanti et al., 2015), coupled with the absence of economic (reception and accommodation) and administrative infrastructures (Yesguer, 2009). However, these localities still attract many visitors every year and, in all seasons, either individually or as part of organized tours, fascinated by the variety of tourism potentialities. According to local authorities of the Tourism and Handicrafts Department (DTA, 2017), tourist sites in this province recorded 91 332 arrivals, of which 2632 were foreigners and 88 700 Algerians from other regions of the country. Tourist arrivals would be much higher if good reception facilities were provided. This work is based on an opportunity to change the image of Kabylie from seasonal mass-tourism to a permanent mountainous rural tourism destination. This paper empirically demonstrates the importance of synergies between rural and mountain tourism. It also determines the position of Yakouren's potential and examines the applicability of the life-cycle model. Finally, and for all these reasons, we wanted to draw attention to Yakouren to preserve its wealth and avoid disturbing its ecosystem and transform it into a high-quality tourist destination. These ideas, approaches, and conclusions apply to many fields, different forms of tourism, and local or regional scales.

LITERATURE REVIEW

Mountainous Rural Tourism: a model for Yakouren municipality

Rural tourism in the mountains is a domain exposed to many open questions in tourism research (Partalidou and Iakovidou, 2008). This research area focuses on strategy development and neglects its implementation and its impact on the inhabitants (Awasthi, 2018). In Algeria,

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mountainous rural areas rarely benefit from the country's tourism sector. However, rural tourism is a diversification strategy that can trigger local development in isolated communities (Wolfgang et al., 2014). Over the last few years, tourists have shown a growing interest in mountainous rural tourism, representing a type of integration between the attractions, accommodation, and facilities presented in a community life structure based on traditions and authenticity (Sudarmiatin et al., 2017). Rural tourism is considered a driver of economic and social development (Guzmán-Parra et al., 2015), increasing daily (Torres-Delgado and Palomeque, 2018), since it is acknowledged as a key approach to rural development and poverty reduction (Gao and Wu, 2017). This MRT has two main characteristics: it employs the inhabitants and involves the recycling and upgrading existing rural infrastructure and heritage resources (Lane and Kastenholz, 2015). According to previous studies, to properly plan and enhance communities' attractiveness, authorities must attach greater importance to the development phase of the destination (Lundberg, 2015) to avoid its stagnation, which leads to social, economic, cultural, and environmental problems (Agarwal, 2002). The studies of (Kotler and Keller, 2006) highlighted that in a mountainous rural environment, any planning process manages five resources: "Man" representing the human resource that manages the tourist sites, "Money" the financial resource that supports the functioning of mountainous rural tourism projects, "Methods" to guide the management of tourism and the "Material" through the natural, cultural and agricultural resources that will be transformed into a tourist attraction, to ensure and develop tourist villages of quality. For better cost-effectiveness and an excellent contribution to the public sector, rural tourism development in mountain areas requires additional expertise to understand why tourists are motivated to engage in distinct tourism market segments.

Demand segmentation

Several studies on rural tourism are available in the literature (Cho et al., 2014). According to (Pesonen, 2013), market segmentation is a strategic marketing tool capable of generating local development. Through its use, we can understand the diversity of tastes and preferences to identify different tourism products and services most suitable for our market. Regardless of the development approach used to revitalize mountainous rural tourism, local villagers' rights must be taken into account since they live there and influence the social environment (Grunwell and Ha, 2014). This requires an analysis of offers, service providers' governance systems, stakeholders' experience, and consumption dimensions regarding mobility, structures, and partners (tourism offices, transportation companies, and accommodation). These concepts ensure the implementation of a sustainable development approach (Marsac et al., 2012).

1. Resident segmentation

The attitude of residents reflects the mindset or disposition of residents towards a tourist destination. It typically refers to the effect of their thinking, feeling, and behavior (Solomon et al., 2013). According to the study of (Yves, 2011), three categories of residents are involved in destination hospitality: staff in contact with tourism organizations, non-tourism organizations in contact with tourists more or less frequently, and finally, the local population. Moreover, residents view territorial tourist hospitality as sharing their territory with foreign tourists (Cinotti, 2009). Hospitality constitutes an essential factor in the selection of destinations. To build the right hospitality image, a region must focus on the communication of its tourist offer and the development of its tourist and cultural activities, while addressing security, infrastructure, and logistics (Cottet et al., 2015). Also, resident attitude as a psychographic segmentation variable can be attributed to academics and tourism practitioners' growing interest in monitoring and managing the host community's perceptions and reactions regarding economic, social, and environmental impacts (Weaver and Lawton, 2013). Specifically, economic impact focuses on the extent to which tourism activities increase employment, host community living standards, infrastructure development, generate income for local communities, and attract new investment opportunities (Zuo et al., 2017). Socio-cultural impact examines a range of benefits related to cross-cultural understanding, increased cohesion and community spirit among residents, recreation and entertainment, and preservation of local culture.

On the other hand, environmental impact involves problems such as pollution, traffic, overcrowding, and noise (Ribeiro et al., 2017). Residents play an important role in market segmentation and the environmental conservation of tourist destinations. Thus, to facilitate this sustainable tourism development, it is crucial to identify how and when residents adopt pro-environmental behaviors (Shanyong et al., 2020).

2. Tourist segmentation

A better understanding of tourists' motivation and behavior is valuable for marketing experts when creating an offer (Papatheodorou, 2006) and for planners in the decision-making and proposals that meet tourists' needs. 21st-century research on tourists' motivations when visiting mountainous rural areas revealed that relaxation, fresh air, tranquility, health, and greenery are the countryside's main attractive factors (Countryside Commission, 1995). Other motivations have been added, including seeking authenticity and tradition, learning, engagement in social contacts, especially with residents, spending time with family (Park and Yoon, 2009). According to a study by (Kim, 2005), rural tourism market segments in mountain areas are divided into three categories: active tourists who engage in mountain-oriented activities, passive tourists who are more focused on visiting cultural sites and relaxing, and those whose main motive is to visit family and friends. On the other hand, (Devesa Fernández et al., 2010) distinguished four rural tourists. The first group seeks tranquility in nature, and the second group visits cultural sites, the third group prefers to consume local food and drink and spend time in natural parks. In contrast, the last group tends to visit friends and families or spend vacations in their own homes. These motivations influence tourists' behavior in the destination, but also their satisfaction with the provided services.

Attraction elements

The most popular tourism motivation classification is the push and pull model (Crompton, 1979), stating that the destination choice is influenced by two forces: 'push factors' push individuals to leave their homes and 'pull factors' pull individuals toward a destination. Seeking knowledge, relaxation, and family bonding are referred to as push factors, while natural and historical environment preferences, costs, facilities, safety, and accessibility are known as pull factors (Jang and Wu, 2006). According to (Heitmann, 2011), push factors are more identified as psychological motives, with the individual's motivation, while pull factors are specific destination's attributes that attract tourists. Despite the different motives, some authors (Frochot, 2005; Pesonen and Komppula, 2010) agree that mountainous rural tourists are attracted by the beautiful landscapes, outdoor activities, local community hospitality, and opportunities to be actively involved in their lives, experience good food, and connect with their families. Finally, tourism attractiveness is mainly influenced by attractions, tourism infrastructure, and transportation, which are components of tourism potential crucial to its development in a given area (Kaczmarek et al., 2010) as they enable good tourist traffic management.

Tourist traffic indicators

Tourist traffic is the temporary displacement of people away from their permanent residence (Kurek and Mika, 2008). It is a key component of tourism development strategy and planning (Hontuş, 2014). The analysis of tourist traffic is based on supply and demand while calculating the

most representative tourism indicators: the number of tourists per day, the number of overnight stays, average stays, tourist traffic density, and Coefficient of Use of Accommodation Capacity (Hontuş, 2013). However, intense tourist traffic and excessive exploration of sites (national parks, forests, nature reserves) lead to the degradation of natural and cultural resources (Uglis and Jęczyński, 2017). Indeed, this excessive concentration of tourist traffic causes overcrowding of attractive places, over-advertising, and aggressive marketing, which lowers the aesthetic quality of tourists' experiences and leads to higher service prices. To this end, the increase in traffic needs adequate legislation to preserve these places (Marek and Wieczorek, 2015) and avoid its social impact by changing residents' attitudes towards tourists (Szromek et al., 2019).

Opinions of tourists/residents

Numerous papers and research are available on residents' and tourists' attitudes, opinions, and perceptions. Although relevant studies are widely available, they are not commonly shared and conclusive (Gómez, 2019). According to (Kavitha and Durairaj, 2018), the structural equation model's results contribute significantly to understanding tourist and customer expectations leading to their satisfaction. In fact, tourists' satisfaction is based on the comparison of their pre-trip expectations and their post-trip experiences. It is the mental assessment and comparison between what customers expect and what they receive (Shavanddasht et al., 2017). According to the study (Servidio and Nicoletta, 2012) on emotional and motivational factors towards a tourist destination, when comparing two sets of images, tourists considered the first set of images as stereotypical, while the second set invoked more emotional and motivational attributes, which increased their interest in visiting the represented places. Opinions and perceptions of tourism impacts at the local level are varied and heterogeneous. However, it is essential to understand how residents perceive tourism development and how their demographic characteristics and socio-economic context influence their opinions (Gómez, 2019). These opinions are important in determining potential tourists' choices (Asghar et al., 2018). Moreover, there are currently many apps and systems that can automatically extract, classify, and present real-time opinions useful and easy to interpret for tourists (Facebook, TripAdvisor, Expedia, Booking, Airbnb). Based on some experts' opinions, a satisfied tourist communicates the information to other potential tourists, who will plan their vacation in that same place. However, a dissatisfied tourist negatively influences other tourists interested in that area (Hontuş and Tindeche, 2019).

Development projects

Cottage accommodations are most common in the mountains, ranging from one to three stars, and guest houses provide domestic and commercial hospitality. Plus, some authors identify ecovillages as rural businesses (Jackson and Svensson, 2002) that combine environmental sustainability, agricultural activities, and tourism services. They are designed around four pillars: ecological, social, cultural, and spiritual concepts. According to (Jackson, 2004), ecovillages are a significant tourism industry development aspect reflecting ecological features with intrinsic balance, leading to sustainable lifestyles. The importance of the forests in society is today evidenced by the numbers of its visitors. Moreover, forests play a multitude of functions, and their consideration leads to sustainable development that society truly adopted at the end of the 20th century (Colson et al., 2009). Sustainable tourism development requires durable mobility, ensured by enlightened planning and policies. According to (Tinet, 2019), cable cars are transportation means reflecting mountain populations' lifestyles. They provide valuable services to rural inhabitants and contribute significantly to the accessibility of mountain villages. Accordingly, the tourism code listed cable cars as an ecological means of transport to preserve the mountainous environment (Schneider and Clément-Werny, 2012).

TALC: Theory of tourism area life cycle (BUTLER)

Tourist attractions are often fragile and require careful management. Hence, many authors started investigating the loading capacity and sustainability of tourist sites over time. Professor Richard Butler, a Geographer and tourism professor, developed a model known as the Tourist Area Life Cycle Model (TALC), based on the product life cycle concept. The model is also a descriptive structure for analyzing, studying, and forecasting any destination (Butler, 2006). Moreover, the number of visitors and infrastructure availability are the key factors indicating a particular destination's development. In the TALC model, destination development is described in six stages, the exploration stage followed by the involvement, development, consolidation, stagnation and decline is shown in Figure 1. The last stage of decline is further divided into rejuvenation or stabilization. Each of these different stages is unique. During the exploration stage, the new tourism product is introduced to a limited number of tourists (Debbage, 1990), and word-of-mouth promotion is widely used. Visitors' numbers begin to increase during the involvement phase, a change in social life is noticed, and residents provide facilities and services.

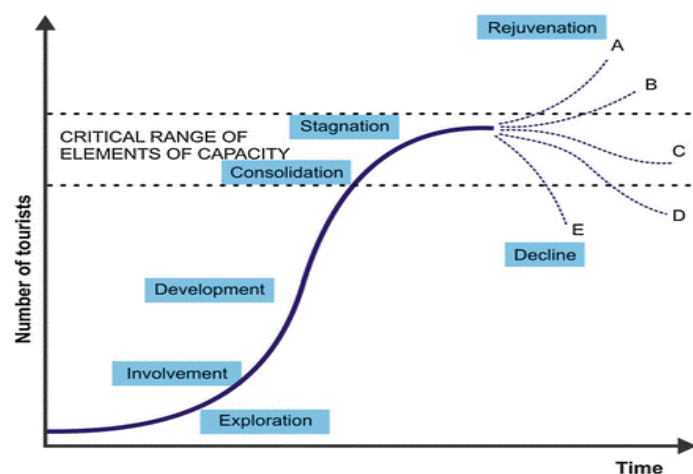


Figure 1. A destination life cycle stages (Source: BUTLER, 1980)

The development phase begins when tourist numbers increase rapidly. The local cultural and natural resources are well-developed and sophisticated facilities with advertising are implemented (Lee and Jan, 2019), and employment opportunities multiply. In the consolidation stage, the tourism industry becomes a major element of the local economy, visitor numbers increase significantly, and individual facilities and services become reduced with significant promotional actions (Lundtorp and Wanhall, 2001). The destination enters a stagnation phase, a critical point because visitor numbers are at their peak, and social, economic, and environmental problems are increasing.

From the stagnation point, two possibilities may arise (decline or rejuvenation). In the decline phase, visitors' numbers start falling, and the market is in decline. At this stage, additional advertising is required. During the rejuvenation, new attractions or natural resources must be found. According to Butler's (1980) model, tourist destinations exit the fifth stage, either declining or regenerating. Our study area is in its development phase, where the destination is transformed to accommodate a significant number of tourists (Sedmak and Mihalic, 2008). At this stage, local involvement is required to contribute to its planning and management program through the funding of the necessary facilities (Moore and Whitehall, 2005), to avoid the stagnation and decline phases and boost its image (Lundberg, 2015).

The synergy of mountainous rural tourism in Yakouren

Based on previous studies, rural tourism is compatible with various types of tourism, including cultural tourism (Matei, 2015), ecotourism (Sakhile and Urmilla, 2016), geotourism (Ateş and Ateş, 2018), and in our case, with mountain tourism. However, rural tourism requires support from mountain tourism to increase its synergy potential and needs long-term financial and technical assistance to effectively contribute to sustainable local development (Sharpley, 2002). Besides, the synergy needs to integrate six main sections: rational exploitation, development, design, rural economy, protection, and marketing (Ateş and Ateş, 2018). They must be taken into account in the planning process to promote the destination. To achieve this synergy, it is necessary to highlight the state's efforts, local communities, and tourism professionals and sponsors, while integrating local inhabitant in addressing issues that delayed tourism development (Sonko, 2013). It is also essential to control tourists' flow in these regions through the territorial organization, creation of tourism infrastructure, and the functional territorial zoning (Dunets et al., 2019). This will enhance these regions' natural and cultural heritage and preserve the practices and traditions of their inhabitants.

STUDY AREA

Yakouren municipality is located in the mountainous region of Tizi Ouzou province (Great Kabylie) at the foot of Djurdjura massif, 151 Km from the capital Algiers, 76 Km from Béjaïa province, and 46 Km from the coastal city of Azeffoun. Yakouren is limited to the North by Akerrou and Ait Chafaa and Zekri; to the South by the municipality of Ifigha and Idjeur; to the West by the municipality of Azazga; to the East by the municipality of Adekar is shown in the following Figure 2. It covers an area of 79.30 Km² and is accessible from the national road (R.N. 12) connecting the city of Tizi-Ouzou to the city of Béjaïa and represents a major vector of exchange. It accounts for 12,649 inhabitants (2017) distributed over 26 villages.

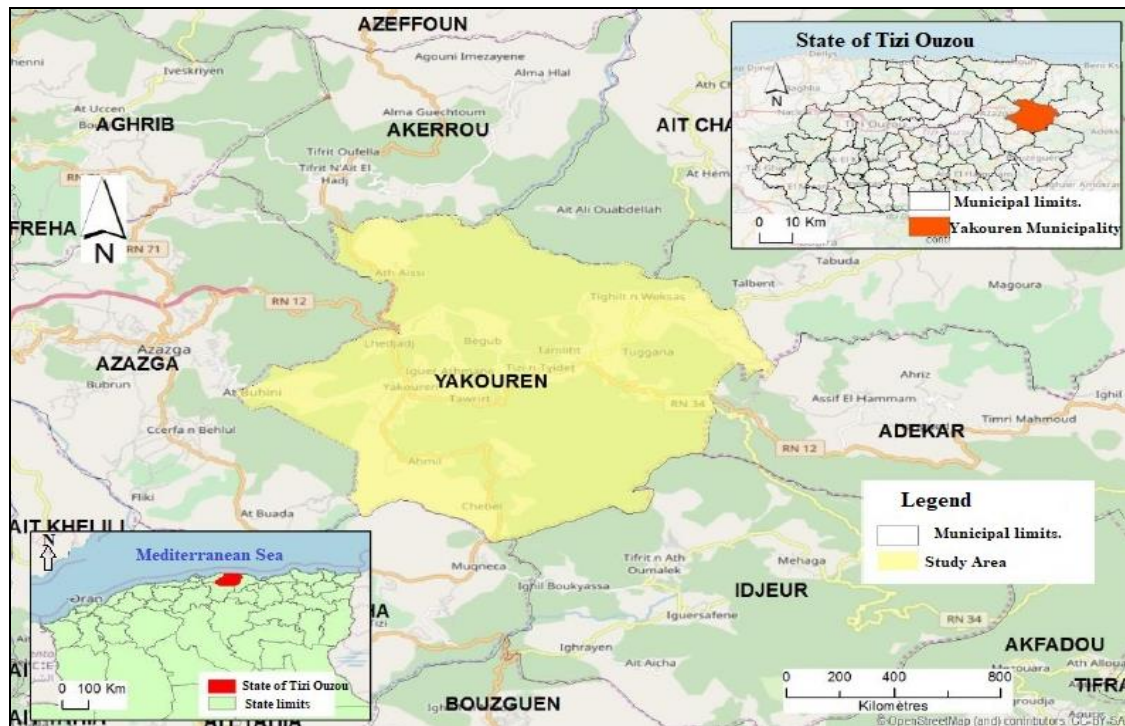


Figure 2. Location of Yakouren municipality in Tizi - Ouzou Province (Source: Prepared by the authors, 2020)

METHODOLOGY AND STUDY OBJECTIVE

Methods used to collect data include field surveys in Yakouren's tourist sites (589 valid surveys with an error margin of $\pm 8.9\%$ and 98% confidence level), interviews, and literature search (literature review, books). First, we quantitatively and qualitatively assessed our study area's potential using the SWOT analysis technique to evaluate its development potential. This technique is an analytical tool widely used by managers and strategic planning experts (Valentin, 2001), given its key role in enhancing and promoting rural tourism in mountain areas. Then, we investigated the feeling of belonging (Schmitz and Bruckmann, 2020) among the residents of Yakouren towards the various tourist sites in the region to identify their motivations to develop these assets. Finally, we examined the tourists' positions and motivations regarding recognizing tourism heritage while highlighting their opinions to determine the attraction and enhancement features. Some of the questions guiding our analysis include the following:

- How can rural mountain tourism be revitalized based on its touristic assets to reach sustainable local development?
- How does tourism planning promote Yakouren's local development?
- How can the tourist attractiveness of this small North African Switzerland be improved?
- What are adequate tourism projects to revitalize Rural Mountain Tourism?

To complete our sample, we adopted Butler's theory to elaborate a grid of indicators and then calculate the tourist traffic in the only existing reception infrastructure in the study area, the Tamgout Hotel, using only the most important indicators. Moreover, our methodology

aims at achieving a mutual synergy of rural and mountain tourism. Consequently, we determined and positioned the development phase of Yakouren according to the destination's life span (TALC). Our research also considers tourist traffic analysis as an essential aspect strongly influencing the revitalization and sustainability of tourism development in supply and demand (Hontuş, 2013). If this aspect is not addressed, it will be difficult to implement our planning program. Finally, seven tourism projects were chosen and mapped using the following software: Arc Gis, Auto CAD, Google Earth, and GIS (Geographic Information System). Based on the results of the survey analysis, we determined the most suitable design models for Yakouren's specific features while at the same time protecting its environment and authentic villages.

RESULTS AND DISCUSSIONS

This study examines Yakouren's tourism potential as a strategic zone in the Kabylie region since the colonial era, particularly its attractiveness, accessibility, facilities, and activities. Based on (Hadacha and Tebbaa, 2015) results, the factors leading to the failure of any sustainable form of tourism include lack of preliminary studies of tourist demand in line with sustainable tourism offers. For our case study, we chose the TALC approach to analyze and develop Yakouren's model to predict its long-term development. This current situation is due largely to the lack of promotion and investment incentives in this area, considered one of the drivers and pillars of any local development. To revitalize mountainous rural tourism, its integration is necessary for all planning and development tools like the Master Plan for Development and Urban Planning (PDAU), the Land Use Plan (POS), and the Master Plan for Tourism Development of Tizi-Ouzou province (SDATW). For this, a new approach must be implemented to guarantee a viable economy, provide income for the local population, and preserve nature and culture while improving tourists' service quality. Integrating sustainability into mountainous rural tourism's planning strategy is an essential element ensuring quality (Mutalib et al., 2018). The main tourist attractions in the municipality are the Beni Ghobri forests known as "Yakouren forest", the Akfadou forest, the sacred wood "Bois Sacré" (Figure 4) natural sites, fauna (the Barbary macaque) (Figure 5) and flora, cultural heritage and activities, handcraft products, quiet villages with only one tourist infrastructure which is the Tamgout hotel, known as a climatic station, an ideal site for tourists seeking a relaxing break. The results of our research indicate that the municipality holds the potential of a national strategic tourist area. Based on the life cycle model (TALC), Yakouren is in its development stage. In the next phase, it is crucial to intervene to change the lifespan of this destination. According to our field survey, many tourists visit Yakouren on weekends and during cultural events.

However, domestic tourist arrivals dominate this tourism growth with many non-resident Algerians (the Algerian expatriate) with a relatively low number of foreign tourists mainly marked by the various international office workers in Algiers (embassy staff, UNESCO, NGOs) interviewed during our surveys. The rest were completed in the villages to identify the tourists' socio-demographic profile, their motivations, accommodation capacity and level of comfort, the progress of their stay, and their expectations to measure their satisfaction with various services, and to define problems experienced during their stay and more particularly to better understand the demand by determining the market segments and categorizing them accordingly. Based on the results, eight distinct segments that attract tourists to Yakouren were identified, and five segments that the local population requires for its development. Data from the local tourism office indicate a lack of tourists visiting natural sites and villages. Many factors are believed to cause this deficiency, as poor marketing, need for cooperation with travel agencies, the low quality of community service managers, and the necessary intensive coordination of all tourism stakeholders, ranging from village chiefs. The field study results also show that the average number of visitors to the tourist village of Boumensour (Figure 3) on a type is less than 100 people/month. In high season, the average number of tourists is 300 (Local office, 2019).



Figure 3. Boumensour Village



Figure 4. The forest of the sacred wood "Bois Sacré"



Figure 5. Barbary macaque colonies (Source: Taken by the authors 2020)

The following figures illustrate the main results of our survey:

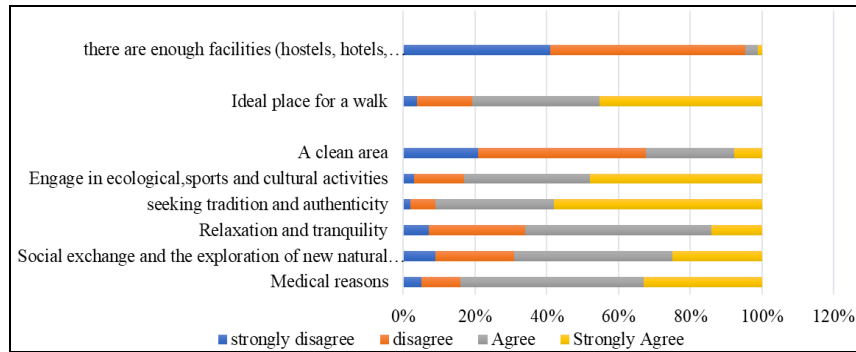


Figure 6. The main motivations of the Tourists

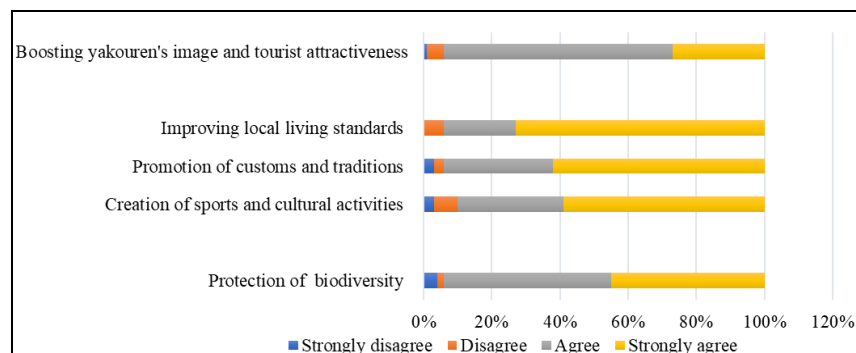


Figure 7. The main motivations of the residents

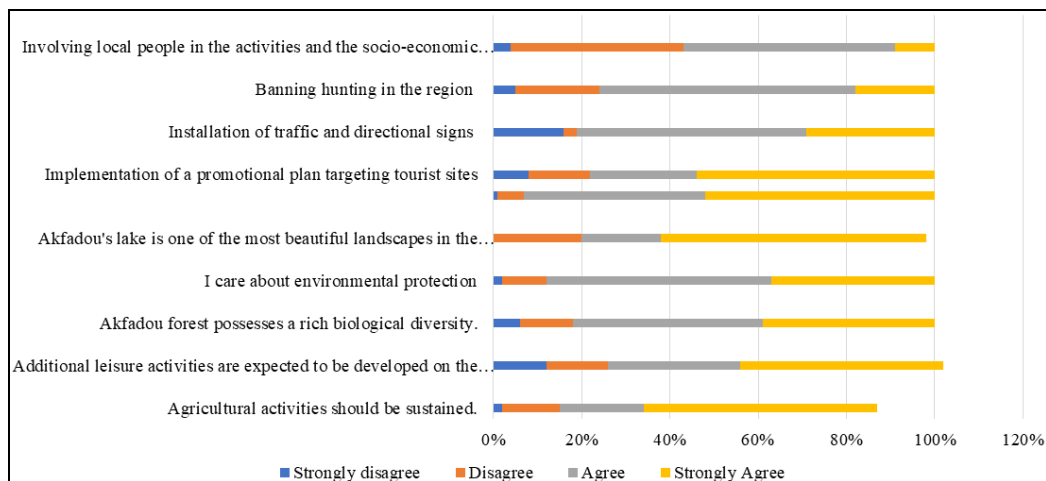


Figure 8. Opinions of tourists

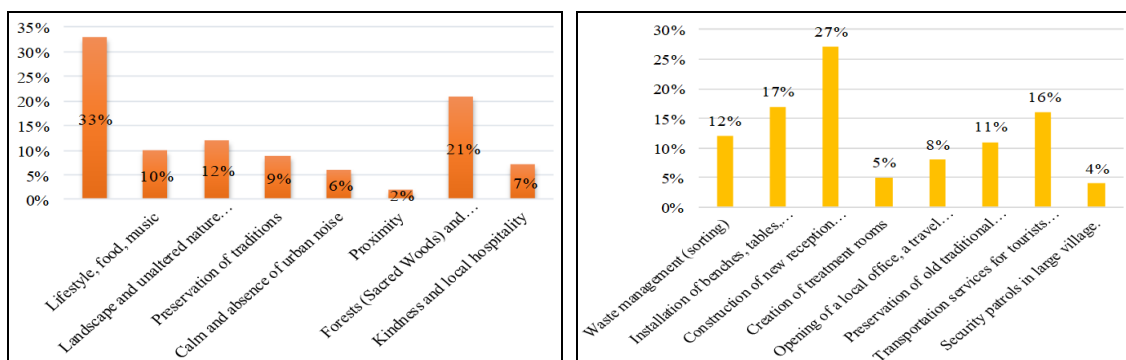


Figure 9. Attraction and enhancement features for Yakouren

Based on our survey results, most visitors come to Yakouren forests because of their peaceful environment and landscape. The forest provides a perfect vacation site, 50 minutes away from the city, ideal for walking far from the urban noise. Our analysis reveals that 33% of the tourists are interested in cultural sites and handicraft exhibitions (Figure 9), and 21% prefer forests and mountains (Figure 9). This suggests that landscape attractiveness is a fundamental criterion in evaluating tourist destinations (Schmitz and Vanderheyden, 2016). 12% of

tourists agree that landscape and unaltered nature are significant elements of attraction, and most of them (97%) confirm that this region's historical heritage is poorly preserved and severely degraded. They also expressed their concerns regarding waste management, with (12%) tourists being in favor of selective waste sorting. They were pleased to learn that part of the Akfadou forest was included in the Djurdjura National Park, classified as a Biosphere Reserve (Idir, 2013). However, 95.3% of visitors highlighted the scarcity of tourist infrastructure (hotels, restaurants, and cafes), and 72% supported the preservation of agricultural activities in the area (Figure 8). The surveys indicate that visitors who agree (58%) and those who agree (33%) are seeking tradition and authenticity (Figure 6), and 82% acknowledge the high biodiversity of Akfadou Forest and believe it is the most beautiful place in the region. 26% of interviewees rejected any development of leisure activities on the various tourist sites. 16% of the visitors expect the area to benefit from transportation services designed for tourists such as cable cars, horse-drawn carriages, and bicycles. About 10% of tourists choose these sites to discover local people's lifestyles, food, music, and customs to satisfy their cultural curiosity, an essential aspect of the tourist experience. Surveys reveal that 94% of residents want to improve the local lifestyle by integrating accommodation, food, entertainment, and transport infrastructures (Figure 7), and 94% (agree and agree) of the same residents wish to improve this region's tourism attractiveness to place it on the national market. 19 % of interviewees rejected the idea of installing road signs in the forests to protect it, and 88 % expressed environmental protection awareness.

Evaluation of Yakouren's tourism potential using SWOT analysis

In Table 1 below, We quantitatively and qualitatively assessed our study areas potential using the SWOT analysis to evaluate its development opportunities. SWOT analysis is a key tool in the assessment of any destination. This technique helps to develop an effective strategy to maximize strengths and opportunities and minimize weaknesses and threats.

Table 1. Evaluation of Yakouren's tourism potential using SWOT analysis

		Assets	Weaknesses
NATURAL POTENTIAL	1	▪ A mountainous Mediterranean climate; the mountains collect therapeutic springs to treat kidney diseases; rich and diverse fauna, and home to the Barbary macaque	▪ Springs and fountains degraded; the monkeys at tourists' food and waste
	2	▪ A dense forest, covering about 80% of its total area; an abundance of oaks: Zen, cork (considered as the 1st national production), are typical of this region; rich water resources like thermal springs, wells, and rivers; with waters well known for their multiple virtues	▪ A low rate of investment considering its rich forests; open sewage systems are running through the forests
	3	▪ A tremendous floral variety, including many rare medicinal plants not found in other regions; scenic landscapes, open-air museums	▪ Absence of signs; No access roads to enjoy the wetland view; absence of professional services on-site like guides
		Opportunities	Threats
	1	▪ Transform these landscapes into a dream destination by creating resorts for nature lovers and artists (poet, painter)	Numerous forest fires and deforestation events; pollution by human waste
	2	▪ Create hiking trails in the mountains (summer, spring), ski resorts (winter), outings, expeditions, and camping; implement tourism projects while preserving the forest image: recreational forests, campsites...	Snow and other natural hazards (e.g., landslides) blocking roads leading to these mountains; loss of plant species
	3	Invitation of national and international scientists and biologists to highlight the biodiversity and the medicinal plant species diversity; create spas from the thermal springs	▪ Pollution of some rivers originating from the surrounding mountains; the passage of water fountains across the discharge points that join the sewage system
TRIMONIAL POTENTIAL	4	▪ Creation of "Barbary macaque village" to protect and control the species	Endangered colonies of Barbary macaques
		Assets	Weaknesses
	1	Rock painting; archaeological sites	Some paintings were destroyed in the fires
	2	Villages combine traditional and old buildings, a cultural mix between Berber and Islamic culture, local pottery, traditional jewelry, and textiles	A lack of activities, events, and cultural animations in the region (music festivals - theatrical activities); a lack of rehabilitation, protection, and classification of its sites; absence of signs and information
		Opportunities	Threats
	1	Establish a proper tourist itinerary in the archaeological sites;	Complete loss of paints if site degradation continues
	2	Funding, organizing fairs and exhibitions to promote local products and increase their markets and distribution scales; invite tourists to attend events introducing traditions of the region: wedding celebrations, touiza, timecheret and religious holidays, like Ashoura and nabawi maulid	Abandoned potential tourist sites Local pottery is threatened by Tunisian pottery that dominates the market

Tourist traffic indicators

From the perspective of implementing proper planning in Yakouren, we chose to estimate the tourist traffic at the only existing infrastructure "Tamgout Hote". The most representative indicators are total accommodation capacity of hostels, tourist traffic density, tourist office indicator, employment indicator, the average length of stay, index of demand variation in time, evolution of tourist demand, index of tourist demand distribution, an indicator of demand variation in time, an indicator of the accommodation capacity development and index of customer evolution (Hontuş, 2013).

Tourist traffic indicators at Tamgout Hotel in Yakouren

The following indicators (Table 2) were analyzed and interpreted through (Hontuş, 2014):

Table 2. Tourist traffic indicators at Tamgout Hotel (Datasource: DTAT.O, 2019)

Indicators	2019	2018	2017	2016	2015
Number of nights	13913	9019	8849	4605	2073
Total Number of tourists	118761	104765	91332	47700	34358
Number of Algérien tourists	108798	98803	88700	46220	32546
Number of foreign tourists	9963	5962	2632	1280	1812
Accommodation	150	150	150	150	150
Accommodation capacity	5047	3827	3369	1523	1213

Tamgout hotel capacity:

$Scp = LP / LC$ (LP): Places in the Tamgout hotel. (LC): total hosting capacity

$S_{cp} 2019 = (150/5047) * 100 = 2.97\%$.

$S_{cp} 2015 = (150/1213) * 100 = 12.36\%$.

According to the pension rate at the Tamgout Hotel, the accommodation capacity of 150 places remained unchanged since the hotel's construction due to the lack of investment and the failure of public policies in the tourism sector. On the other hand, the pension accommodation capacity has continuously decreased since 2015, reaching a share of 2.97% in 2019.

1) Tourist Traffic Density:

12649 (population in 2017); 12203 (population in 2015). (Source: PDAU, 2017)

$Td = Arrivals (A) / inhabitants (P)$

$Td\ 2017 = 91332\text{ tourists} / 12649\text{ inhabitants} = 7.22\text{ tourists} / \text{inhabitants}.$

$Td\ 2015 = 34358\text{ tourists} / 12203\text{ inhabitants} = 2.81\text{ tourists} / \text{inhabitants}.$

$Td = Arrivals (A) / area (S)$

$Td\ 2019 = 13913\text{ tourists} / 79.30\text{ km}^2 = 175.44\text{ tourists} / \text{km}^2.$

$Td\ 2015 = 34358\text{ tourists} / 79.30\text{ km}^2 = 433.26\text{ tourists} / \text{km}^2.$

The tourist flow is higher than the population density, with an increasing rate from 2.81% (2015) to 7.22% (2017). As a result, there is a high tourist demand with strong pressure on the site's carrying capacity. This indicator measures one of the social and environmental issues associated with tourism traffic caused by tourism pressure on the population and the size of the study area.

2) Indicator "tourist office":

$Ft = L/POP * 100$ (L): number of places; (P): population

$Ft\ 2017 = (150/12649) * 100 = 1.18\%$.

$Ft\ 2015 = (150/12203) * 100 = 1.22\%$.

The tourist office indicator depends on the population number. As the population increases, the tourist office indicator slightly decreases. In our case study, this indicator decreased by 0.04% between (2015-2017).

4) Employment indicator:

$G = (NP/LP * Z) * 100$ (G 0): occupancy rate; (NP): number of overnight stays; (LP): number of hotels; (Z): Number of accommodation days.

$G2018 = (9019 / (56 * 365)) * 100 = 44.12\%$.

$G2017 = (8849 / (45 * 365)) * 100 = 53.87\%$.

$G2016 = (4605 / (32 * 365)) * 100 = 39.42\%$.

It indicates the supply usage during a given period at the installed capacity. This indicator depends on the number of overnight stays and hotels. In 2017, we noted a significant evolution of the employment indicator pensions compared to 2016 to a value of 53.87%. This is due to a large number of valid nights, especially during the summer season, known by several festivals such as "the festival tells art," "festival of Kabyle jewelry," "festival of pottery" in 2018, the value has declined to 44.12%.

5) Average length of stay: $D = \text{number of overnight stays} / \text{number of arrivals}$

$D2019 = 13913 / 118761 = 0.11\text{ overnight stays} / \text{tourists}.$

$D2015 = 2073 / 34358 = 0.06\text{ overnight stays} / \text{tourists}.$

According to the calculated average length of stay, we note a constant rate with a few disturbances, and then in 2019, a strong evolution with 0.11 overnight stays/tourists.

6) Index time variation in demand: $ICE0-i = (CE0-i / CE0) * 100$; $ICE0-i = CIi / CI0$ (ICE 0-i): external demand variation index; (ICI 0-i): internal demand variation index; (CI): Domestic tourism demand

$ICI\ 2019 = (108798 / 98803) * 100 = 110.1\%$.

$ICE\ 2019 = (9963 / 5962) * 100 = 167.10\%$.

$ICI\ 2016 = (46220 / 32546) * 100 = 142.01\%$.

$ICE\ 2016 = (1280 / 1812) * 100 = 70.64\%$.

The results indicate that most tourists are Algerian, with a low rate of foreigners rising significantly in 2019. Also, domestic tourism demand is much higher than foreign tourism demand. This is due to several factors, such as lack of infrastructure and promotion. It is important to note that in 2016, the demand started to grow and then decreased in 2019 with a share of 110.11%. However, foreign demand increased in 2016 and then decreased in 2019 with a rate of 167.10%.

7) The evolution of tourism demand:

$\Delta Ct = (CGi / CG0) * 100$ (CGi): International tourism demand in (i); (CG0): International tourism demand (0).

$\Delta Ct\ 2019 = (13913 / 9019) * 100 = 154.26\%$.

$\Delta Ct\ 2016 = (4605 / 2073) * 100 = 222.14\%$.

It shows that the demand for tourism in 2016 was very high. However, in 2019, the tourist demand in the Yakouren municipality decreased.

8) Global Tourism Demand Index Distribution: $Ii = CI / CG * 100$; $CE / CG * 100$.

(C.E.): External tourism demand. (CI): Internal tourism demand.

$Ii\ 2019 = (108798 / 118761) * 100 = 91.61\%$.

$Ie\ 2019 = (9963 / 118761) * 100 = 8.38\%$.

$Ii\ 2015 = (32546 / 34358) * 100 = 94.72\%$.

$Ie\ 2015 = (1812 / 34358) * 100 = 5.27\%$.

We can see that most tourists are Algerian tourists compared to the meager rates of foreigners. The domestic tourist demand is, therefore, much higher than the foreign tourist demand.

9) Indicator accommodation capacity development:

$\Delta Ct = (LCi / LC0) * 100$ $\Delta Ct\ 2017 = (150 / 150) * 100 = 100\%$. (LCi): annual places (i). (LC0): annual accommodation (0). There are 150 beds. This hosting capacity development indicator remained constant since its implementation.

10) Index of customer evolution "2016-2019":

$\Delta TP = (TP_i / TP_0) * 100$ (TP_i): tourists in hotels in (i); (TP₀): tourists in hotels in (0).

$\Delta TP_{2019} = (118761 / 104765) * 100 = 113.35 \%$.

$\Delta TP_{2018} = (104765 / 91332) * 100 = 114.70\%$.

$\Delta TP_{2017} = (91332 / 47700) * 100 = 191.4\%$.

$\Delta TP_{2016} = (47700 / 34358) * 100 = 138.83\%$.

Between 2016-2017, customer numbers increased by 53%. In 2018, a 77% decrease in customers with an increase in tourists to 104.765 tourists was observed.

11) Evolution of overnight stays index:

$\Delta NP = (NP_i / NP_0) * 100$ (NP) : overnight stays.

$\Delta NP_{2018} = (9019 / 13913) * 100 = 64.82\%$.

$\Delta NP_{2015} = (2073 / 4605) * 100 = 45.01\%$.

The number of overnight stays increased, and as of 2018, it decreased significantly to 64.82%.

Development perspectives and proposals:

Yakouren is renowned as an excellent tourist and leisure destination. Every day, visitors from all regions come to its forests to enjoy the fresh air and get fresh water from the famous and popular "fresh fountain". Children enjoy taking pictures and having fun with the Barbary Macaques. Craft and commercial activity developed along the RN12 spontaneously and informally. The strong human pressure (poorly managed mass tourism) makes the environment vulnerable, and the population very poor (60% unemployment rate). This is due to limited resources, insufficient economic entities in mountainous areas, and various environmental and socio-economic challenges (Kherrou et al., 2018). Therefore, for better management and rational exploitation of resources, it is necessary to implement equitable tourism that preserves nature, respects society, and sustain traditions and cultures. The revitalization of this mountainous rural tourism requires integrating the Corporate Social Responsibility (CSR) approach, especially in ecologically vulnerable destinations (Paul and Séraphin, 2015) such as Yakouren, to ensure its sustainability. To define our development proposals, we have focused on regulatory laws, field surveys, and potential analysis to determine the development projects best suited to our study area's characteristics. We selected seven tourism projects that were mapped using Google Earth coordinates and GIS software (Figure 10). We considered residents' suggestions on our development proposals to ensure sustainable results and meet the tourism demand. We included a proposal for a cable car system, wilderness hiking trail (Figure 11), an ecological accommodation "Ecovillage" (Figure 12), a relaxation and wellness center, a picnic area, and a botanical park (Figure 13). Some examples that might fit the study area features are presented below:



Figure 10. Map of all proposed planning projects in the municipality (Source: author's elaboration)

The aim is to preserve and improve the environment and living conditions of Yakouren inhabitants and tourists, ensure its sustainable local development, involve the local population in the activities, and foster socio-economic benefits (employment opportunities). Developing rural mountain tourism by building a tourism dynamic supported and managed by the populations and all the actors and ensuring heritage preservation as a tourism resource. The proposed actions must be carefully distributed on the territory of yakouren, to ensure coherence between the actions and the identity and strengths of the region and to guarantee sustainable economic benefits for all the actors of tourism in the Tizi-Ouzou province.



Figure 11. Proposed itinerary for a hiking trail (Source: author's construct)



Figure 12. Ecological accommodation development plan Ecovillage (Source: author's elaboration)

CONCLUSION

This area's tourist offer shows a discrepancy between its touristic potential and its limited infrastructures, both quantitatively and qualitatively. To address Yakouren's tourism development challenges, it is necessary to promote socio-economic development based on its potential to generate dynamic tourism products in the future. Rural tourism in the mountains can contribute significantly to its economic prosperity by creating local vitality. It can also generate social benefits, highly favorable to its cultural and natural heritage recognition, and promote its local culture. This type of tourism's contributions improve the inhabitants' quality of life and increase their enthusiasm and respect for their culture and heritage, offering them opportunities to preserve it. If appropriate and effective measures are adopted and implemented, mountainous rural tourism could become a tool for reviving local development. This study can serve as a reference for a sustainable tourism development initiative in the municipality and inspire other municipalities in the country.

The necessary actions required to revive the mountain rural tourism sector

Mountain rural tourism development is crucial for the Yakouren region. Therefore, a sustainable development approach based on a synergy between mountain tourism and rural tourism must preserve its heritage and ecological, social, and economic stability. The guidelines of this new strategy are based on:

1. Creating a suitable climate for tourism development

It is necessary to adapt the site to the expectations of tourists and meet their needs. Roads must be improved and the existing road

network rehabilitated, construction of new hospitals to meet growing demand, public services quality must be improved, and tourism investment must be encouraged. Transport, an essential element of the tourism system, is part of this development process. It must be assigned an important place in development policies. Governments must focus on transport that provides access to neighboring destinations. The reduction in time-distance and cost-distance associated with inadequate transport will lead to a loss of potential customers. Yakouren municipality lacks infrastructure for accommodation. Therefore an increase in accommodation capacity, quantity, and quality of hotel facilities, hygiene, and cleaning of tourist services (sanitary facilities, restaurants, accommodation) is essential; it is necessary to build traditional hostels by renovating some of the old houses, reclassification of hotels to ensure a correlation between the number of stars and quality of provided services, price control of the different tourist services, the construction of rural cottages and guesthouses and guarantee the collaboration and coordination between the different direct or indirect actors of the tourist activity. To revitalize mountainous rural tourism, professionals involved in tourism need to operate in a complementary and close way; in other words, it is necessary to educate all stakeholders in the Tizi-Ouzou province, including the local office, to work in partnership around a common objective, namely the development of mountain rural tourism, as it represents the primary goal of the whole community including all the villages of Kabylie (Figure14).



Figure 13. Development plan proposal for a Botanical Park (Source: author's elaboration)



Figure 14. View from the village Boumensour (Source: Taken by the authors, 2020)

2. Heritage Valorization

To enhance the value of traditional villages, it is essential to revitalize and transform them into the region's active components. Cultural heritage tourism is a form of tourism designed to discover the cultural and architectural heritage. It should be seen as a tool to achieve sustainable

development and incorporate the fundamental values for project authenticity and heritage protection. Strengthening the planning of cultural events related to heritage since it is also a factor contributing to cultural vitalization of traditions and values through the ancestral heritage such as (the feast of the Kabyle jewel of Ath-Yenni, the pottery feast, the olive feast, the carpet feast, the feast of traditional burnous) can be seen in (Figure 15). Handicraft is one of the components of our cultural identity, both in the Yakouren municipality and on the national territory; This activity must be preserved and promoted as a cultural, economic, and social heritage, and above all, as an essential element of tourist attraction.

The measures for the preservation and development of this traditional art include: adopting a marketing approach to attract more tourists through various tools such as appropriate signs on sites along the main roads, detailed monographic guides, creating a cultural map identifying the villages and cultural events, restoring, preserving and maintaining the attractions with heritage potential, both tangible and intangible, and collecting all the traditional art elements and placing them in traditional art museums. Support cultural and craft activities, and multiply fairs, exhibitions, celebrations, and craft festivals. Ensure local products' permanent promotion to compete with foreign products invading the Algerian market due to globalization. Focus on training, particularly for those involved in the handicraft sector, which require an education focused on valorization, creation of labels, and promotion. Address the rural migration of youth by involving them in cultural and tourism activities, notably through fiscal incentives and facilitating credits intended for the modernization of existing workshops and the creation of new ones. Promote traditional cuisine closely linked to agricultural practices that local women are fond of.

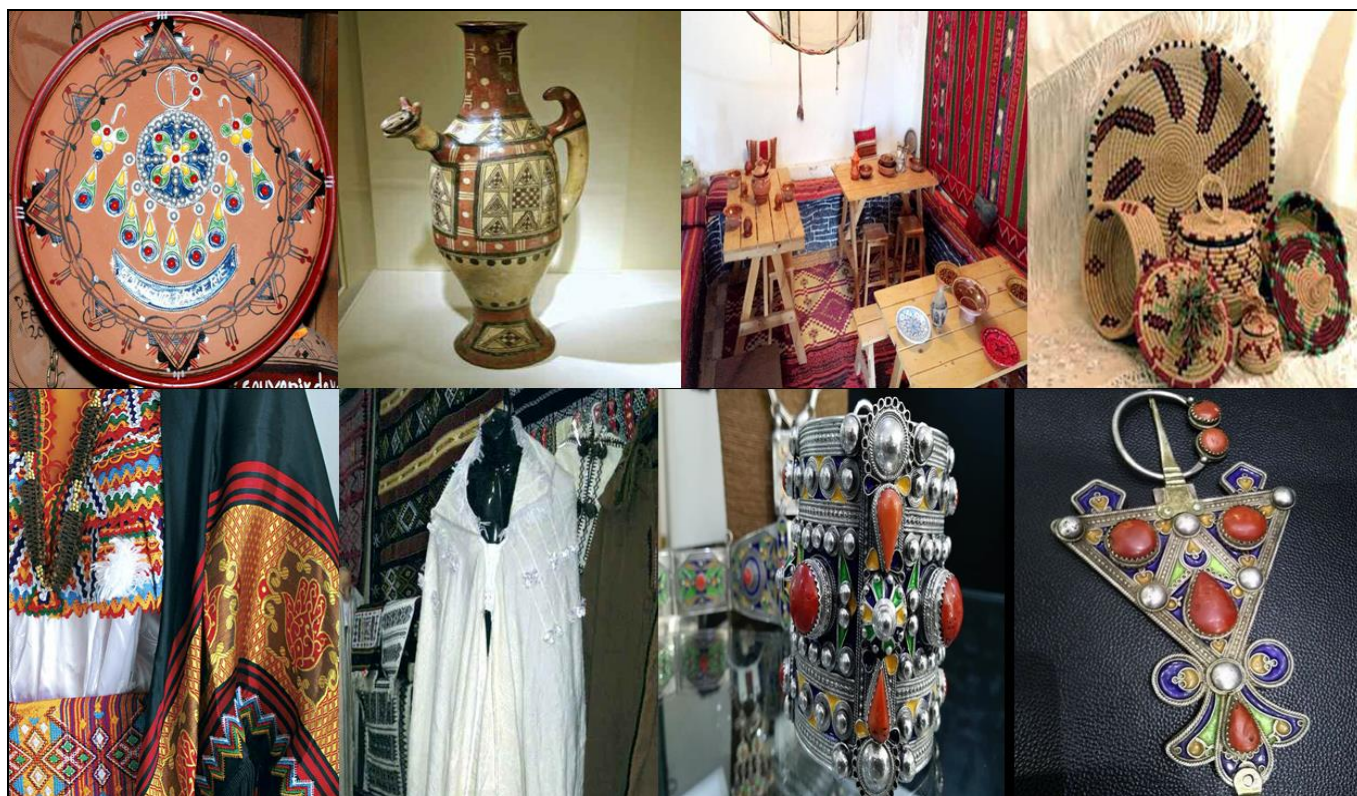


Figure 15. Kabyle handicrafts (pottery, jewelry, basketry, traditional clothing) (Source: Taken by the authors)

3. Enhanced use of new information and communication technologies (ICTs)

It is essential to boost the use of ICTs in public administration to ensure the information available anywhere and anytime. It is also necessary to increase ICT use in tourism businesses by expanding online services since the internet has become one of the most practical and rapid booking tools among tourists. Finally, citizens' use of ICT equipment and networks must be expanded.

4. Qualification and professionalism:

All workers in the sector, including reception agents, guides, and travel agencies, must be trained. By launching a public awareness campaign and integrating tourism education into school programs, it is possible to stimulate the entire population to support the concept of tourism and build the foundations of its culture. An appropriate training program, updating, and renewal of professional expertise in the sector to improve tourism management skills are essential. Tourism professionals should be trained to focus on the entire process of tourism-related actions (design, sales, marketing, reception), and the quality and professionalism of services.

5. Marketing approach

It is necessary to create an official website for the municipality providing all the necessary information and presenting all future tourism opportunities and projects attractively. Road signage should be improved, and a map representing all assets should be placed at the entrance of each village to attract curious visitors. It is also essential to stimulate the press's interest by organizing more events (sports, cultural, scientific). It is advisable to invite foreign journalists and facilitate their work by reporting or broadcasting about the town.

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BRIDGING TOURIST ATTRACTIONS. THE ROLE OF WATERBUSES IN URBAN TOURISM DEVELOPMENT: THE CASE OF THE COASTAL CITY OF GDAŃSK (POLAND)

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Abstract: Identification of the role of the waterbus system in the development of tourism in a large coastal city – a tourist center of international importance. Cartographic materials, qualitative and quantitative data on the waterbus system, spatial development and tourist traffic were used. Quantitative temporal and spatial analyses were conducted, including GIS analyses. Service of the tourist traffic is the dominant function of the waterbus in Gdańsk. This is determined by three categories of factors: (i) the seasonal nature of the system and a low level of integration with the public transport system; (ii) low potential demand for transport services due to the fact that most of the stops are far away from large residential or work centers; (iii) proximity of most of the city's main tourist attractions to the stops. The obtained results are helpful in programming the development of public transport systems, especially in large tourist coastal cities. The conditions of spatial development are of key importance for shaping the dominant function of the waterbus.

Key words: tourist attractions, waterbus, urban tourism, public transport system, Gdańsk

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INTRODUCTION

The aim of the article is to identify the role of the waterbus system in the development of tourism in a large coastal city, such as Gdańsk, which is also a tourist center of international importance. The basic premise for undertaking the research is the fact that the system has been operating for a relatively short time (since 2012) and has not been sufficiently covered in the subject literature yet. Few works directly related to the discussed system appeared shortly after its launch, and they have a limited empirical value (Cieśliński and Chromniak, 2013; Kizielewicz, 2014). On the other hand, in later works, the issue of servicing tourist traffic was not the main point of focus (Miszevska-Urbańska and Apollo, 2016; Połom et al., 2020). Moreover, organizational and functional dissonance is also conducive to taking up the issue. Formally, Zarząd Transportu Miejskiego (the Municipal Transport Authority) is the operator of this transport. Therefore, waterbuses are part of the public transport system. At the same time, they operate during the tourist season, which indicates that their main function is to handle tourist traffic. The problem of the dominant function of public transport in tourist cities is recognized in the literature (Le-Klähn and Hall, 2015). The following analysis attempts to indicate the conditions and factors determining the primary function of the water tram system in the city Gdańsk. The spatial scope of the analysis covers the territory of this city. In particular, the areas in the vicinity (1000 m radius) of waterbus stops were taken into account. The main period of the analysis covers the years 2012–2018.

Waterbuses are a type of city public transport. This fact places the present analysis in the new mobilities paradigm that has been developing for less than two decades. It integrates the issues of urban transport, anthropogenic climate change and energy transformation (Sheller and Urry, 2016). It is part of the research stream devoted to sustainability, and in particular to sustainable accessibility (Gil Sola et al., 2018). In this perspective, waterbuses are one of the means of transport aimed at reducing the dominance of private cars in the modal split.

Waterbuses are not a common form of urban transport. The structure of the hydrographic network is of fundamental importance for their development – both in terms of the navigability of individual reservoirs and their location in relation to areas concentrating daily migrations. Cheemakurthy et al. (2017) identified 23 cities in the world where this measure plays a significant role in the transport system. In thirteen cases, these systems were large scale (>7 lines, high number of stops); six were in the medium scale group (4–6 lines, medium number of stops), and four in the small scale category (1–3 lines, limited number of stops). These authors also distinguished three basic types of ferry systems: type A (linear) – routes where boat services traverse along a river or water body stopping at multiple destinations connecting points of interest along a waterfront; type B – shorter routes with two or three stops either in a simple river crossing or triangular three-point stop configuration; type C – routes linking suburbs with the inner-city area by long, low-frequent connections. The role of city ferries in increasing the cohesion of the transport system and transport accessibility in coastal cities is relatively often undertaken in scientific research (Ercoli et al., 2015; Sandell, 2017; Chen et al., 2017; Bignon and Pojani, 2018; Große et al., 2018). Another thread concerns the directions of development of this type of transport.

On the one hand, the role of technical innovations in the development of urban passenger shipping is emphasized. In particular, the importance implementing an electric/hybrid drive is emphasized, which allows for a deep reduction of operating costs and an increase in the comfort of travel and operation (Gagatsi et al., 2016; Guarnieri et al., 2018). This approach is dominant in cities in highly developed countries, capable of mobilizing sufficiently high investment outlays. On the other hand, the leading role of transformations of urban

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regimes in the field of urban transport is emphasized, resulting mainly in optimization and organizational and structural transformations only supported by technical innovations (Bandyopadhyay and Banerjee, 2017; Ghosh and Schot, 2018).

Many port cities also have intense tourist traffic. Public transport is oriented towards its service to varying degrees (Le-Klähn and Hall, 2015). Urban passenger shipping seems to play a special role in this field. In some cities, it even specializes in servicing tourist traffic. The degree of specialization depends on the overall tourist attractiveness of the city, the nature of the places connected by the shipping lines (to what extent these are places of residence and work and to what extent of spending leisure time), and the competitiveness of other types of urban transport (Tanko and Burke, 2017). Based on the literature review, Tan and Ismail (2020) indicate that the existing transport modes in the destination will affect tourist movement, especially in terms of the designated route of transport and walkability to tourist attractions. As further analysis shows, these factors will be of key importance for the operation of waterbuses in Gdańsk.

Case study – Gdańsk

The city of Gdańsk is located in northern Poland on the Gulf of Gdańsk, which is part of the Baltic Sea (Figure 1). It is one of the most important tourism centers in Poland; it is also ranked as an important European center. It has a competitive accommodation base in terms of the volume of resources, quality and prices (Obrochta, 2019). Annually, the city is visited by 2–2.5 million visitors. In 2017, the number of visitors and tourists was estimated at 2.7 million. Of these, two-thirds (1.7 million) were tourists, i.e. people using accommodation (Bęben et al., 2018). During the three summer months – June, July and August – the city was visited by about 837,000 guests, i.e. about 30% of the whole-year number of tourists and visitors (Pomeranian Scientific Institute, 2017). The above-mentioned study shows an image of the average tourist as a rather young person (less than 44 years old), most often with higher education, with a rather good financial situation, coming for at least a few days with accompanying persons, mainly for leisure, which takes the form of sightseeing and walking.



Figure 1. Location of the city of Gdansk (Source: own elaboration)

Within its current administrative borders, there are waterways and fairways using the hydrographic system based on the Martwa Wisła with the Kanał Kaszubski, the Wisła Śmiała, the Nowa Motława and the Stara Motława rivers. Gdańsk is a city with a thousand-year history, in which its coastal and riparian location has always been of paramount importance. The spatial development of the city initially concentrated along rivers and canals, and then covered the coastal zone of the Gulf of Gdańsk. Rivers and canals in Gdańsk are currently used mainly by passenger vessels of a tourist and recreational nature. The greatest concentration of the tourist traffic is in the Śródmieście area, with quays for local and regional passenger shipping and yacht harbors. In 2006, the first waterbuses were launched in the Gdańsk urban region. The initiative of the municipal authorities was aimed at increasing the attractiveness (frequency of routes and ticket prices) of coastal tourist shipping. However, it was not until 2012 that reorganization was carried out, involving the launch of two waterbus lines operating in the inner waters of Gdańsk. As part of the project co-financed from the EU funds, 10 waterbus stops were built. In this way, the system's elementary infrastructure, which is the subject of this analysis, was created.

MATERIALS AND METHODS

The research procedure was divided into three basic stages (Table 1) aimed at achieving specific research goals. At each stage, a set of appropriate research methods was applied, adequate to the problem and available sources. In the first stage, the focus was on the supply side of the waterbus system. The research was based, to the necessary extent, on quantitative data, which enable defining the system size and its operational capacity. The assessment of this parameters was the first to identify the role of waterbuses in urban transport system.

Table 1. Research stages, relevant detailed aims, materials and methods (Source: own elaboration)

Stage	Research objective	Materials and methods
1	Characteristics of waterbus operation supply (system size and type, type and number of vessels, passenger capacity, frequency of routes)	Materials: data of the transport operator (Municipal Transport Authority, 2018a) and the results of the expert opinion on the operation of waterbuses (Gdańsk Economic Development Agency, 2018). Methods: qualitative and quantitative temporal and spatial analyses.
2	Identification of spatial determinants of a demand for waterbus transport (hydrographic conditions; distribution of inhabitants, workplaces and tourist attractions as well as investment areas)	Materials: geodetic and cartographic data from public resources (Geoportal, 2018; Gdansk Development Office, 2018); data with high spatial resolution on the number of inhabitants, workplaces (Gdansk Development Office, 2016), location of tourist attractions (Bęben et al., 2018). Methods: GIS analysis.
3	Defining the importance of tourists function of waterbus system (passenger traffic intensity by stops and importance of tourist attractions located close to waterbus stops)	Materials: data of the transport operator (Municipal Transport Authority, 2018b), reports on tourist traffic (Bęben et al., 2018). Methods: quantitative analysis of passenger traffic and survey results data.

In the second stage, the spatial determinants of a demand for waterbus services were identified. These studies were carried out based on spatial data and the related quantitative data using GIS methods and tools. In the third stage, the intensity of passenger traffic compared to the nature and the importance of tourist attractions within a radius of 1000 m from waterbus stops were analyzed. Research indicates (Gurgul, 2018) that this is an acceptable walking distance radius of accessibility to attractions in waterside zones. The compilation of partial results obtained at the described stages of the research enabled achieving the main objective of the article –defining the role of waterbuses in servicing tourist traffic in the analyzed city.

RESULTS AND DISCUSSION

The results were discussed in relation to the specific research objectives (Table 1). First, the supply side of the waterbus system in Gdańsk are presented, and then the focus is shifted to the spatial determinants of the functioning of this system. Finally, the results of the analysis of the passenger traffic and the distribution and importance of tourist attractions close to waterbus stops are presented.

The waterbus system in Gdańsk consisted of two lines, thirteen stops and three vessels. In comparison to other similar systems, it should be classified as small scale (Cheemakurthy et al., 2018). The nature of the used fleet and the degree of filling indicate the heterogeneity of the waterbus system in Gdańsk. In consistency with the proposal by Cheemakurthy et al. (2018), line F5 represents type A (linear) routes, where boat services traverse along a river or water body stopping at multiple destinations connecting points of interest along a waterfront. By contrast, line F6 corresponds to type C, linking suburbs with the inner-city area by long, low-frequent connections. In the years 2012–2017, the waterbus lines operated with a frequency of 3 connections a day, and since 2018 the number of connections on the F5 line was doubled. So far, operator tenders have been announced twice for the years 2015–2017 and 2018–2020. In both cases, the company Żegluga Gdańska was selected. *Sonica* and *Sonica I* ships, which are characterized by a low superstructure allowing them to sail under permanent bridges, were specially purchased to operate the line. The vessels can take 40 passengers and 5 bicycles. A larger ship with a capacity of 140 passengers and bicycles operates on the F6 line since 2018.

The length of the F5 route is approx. 12.8 km, and one-way cruise time takes approx. 98 min. The length of the F6 route is 14.3 km, and it takes comparable cruise time of approx. 100 min. The volume of the transport service offered by the waterbus system compared to other public transport modes showed very low. Leading urban transport operator uses 252 buses and 135 tram sets. Almost every tram can carry more passenger than most giant waterbus vessel (Gdańsk Buses and Trams, 2020). Public transport network consists of 10 tram and 65 bus lines serving 730 stops – also located in neighbouring municipalities (Municipal Transport Authority, 2020).

The tourist function of waterbuses is forced by unfavorable, from the point of view of the functioning of the municipal public transport system, spatial conditions. Near the stops of both routes, there are no significant urban population centers and workplaces, which is a key barrier to development (Thompson et al., 2007). The only major concentration is the city center. However, this is an area with good transportation links to other parts of the city, including those located close to the waterbus stops (Figure 2). Therefore, both types of transport are competitive. Considering the small scale, the fact that waterbuses only operate during the tourist season, that they run very infrequently and that travel costs are relatively high, it should be considered that actually they are not part of the urban public transport system.

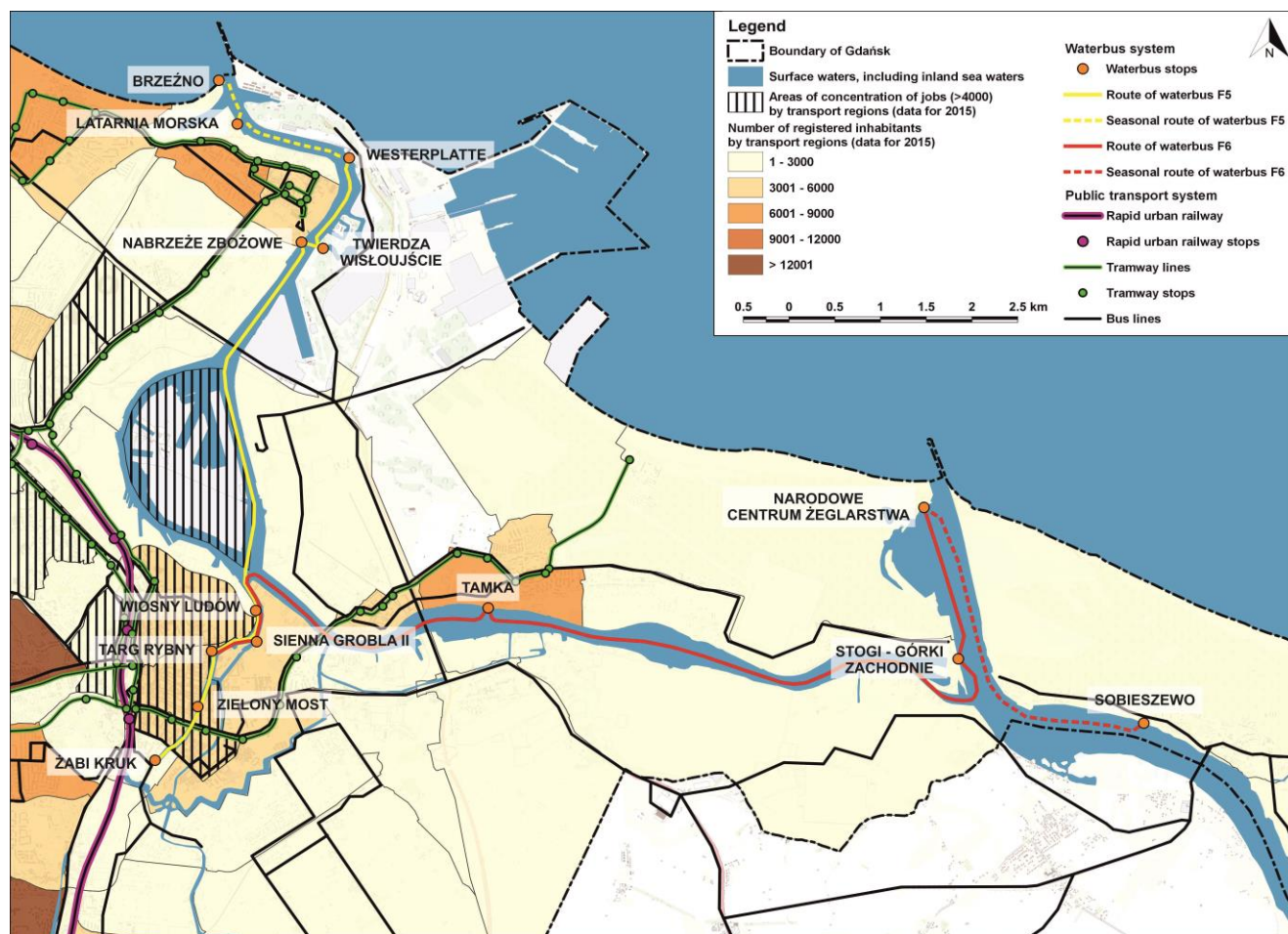


Figure 2. Spatial patterns of population and workplaces along waterbus routes in Gdańsk
(Source: own elaboration based on Gdańsk Development Office, 2016; Gdańsk Development Office, 2018)

The tourist function results not only from the low accessibility of stops to places of residence and work. Primarily, it results from the high attractiveness of the vicinity of stops for recreation and tourism (Figure 3). The waterbus also offers competitive connections in terms of travel time compared to other means of public transport. The latter often have to take a roundabout route to use sparsely situated bridges. Waterbuses have a particularly large advantage in serving attractions located on the opposite banks of the mouth of the Vistula.

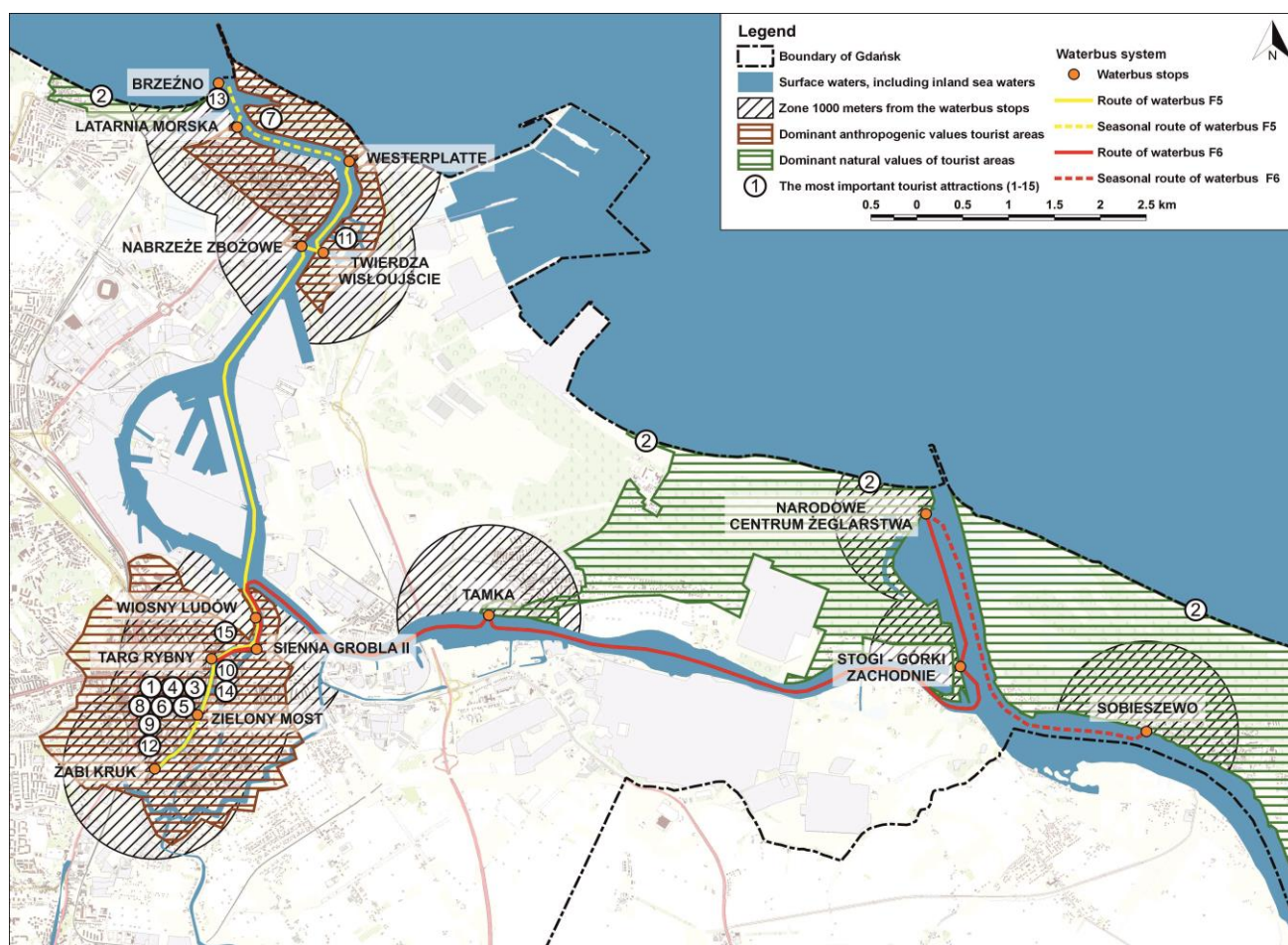


Figure 3. Spatial patterns of tourist's attractions along waterbus lines in Gdańsk. (Source: own elaboration based on Geoportal, 2018; Bęben et al., 2018)

Table 2. The number of passengers on the waterbus lines in 2012–2018 (Source: own elaboration based on materials of Gdańsk Economic Development Agency, 2018; Municipal Transport Authority, 2018b)

Year	Number of passengers	YoY increase (%)
2012	11,375	–
2013	25,794	127
2014	31,801	23
2015	43,885	38
2016	47,240	8
2017	48,367	2
2018	65,627	36

Table 3. The average number of waterbuses passengers per day by lines and directions in Gdańsk in 2018 (Source: own elaboration based on materials of the Municipal Transport Authority, 2018b)

Line F5: waterbus stops	Direction: Westerplatte		Direction: Zabi Kruk	
	Embarking passengers	Disembarking passengers	Embarking passengers	Disembarking passengers
Zabi Kruk	59,0	0,0	51,3	0,0
Zielony Most	50,1	0,3	20,8	0,2
Targ Rybny	15,6	1,8	24,5	8,7
Wiosny Ludów	1,0	0,9	1,9	0,8
Nabrzeże Zbożowe	0,8	2,1	2,0	0,8
Twierdza Wisłoujście	0,6	3,6	0,2	2,4
Westerplatte	5,8	54,0	2,1	41,9
Latarnia Morska	0,6	13,6	0,9	31,1
Brzeźno	0,0	57,4	0,0	17,8
Total	133,5	133,5	103,8	103,8
Line F6: waterbus stops	Direction: Narodowe Centrum Żeglarsstwa		Direction: Targ Rybny	
	Embarking passengers	Disembarking passengers	Embarking passengers	Disembarking passengers
Targ Rybny	119,5	0,0	113,0	0,0
Wiosny Ludów	0,2	0,1	13,7	0,6
NCŻ	0,9	12,9	0,7	0,1
Sobieszewo	0,0	107,6	0,0	126,7
Total	120,6	120,6	127,5	127,5

The waterbus system's size and capacity supply and land use of areas around stops impact passenger traffic. Since the launch of the waterbus lines in 2012, the number of passengers has been increasing dynamically (Table 2). The average level of filling waterbuses with passengers throughout the entire season was approx. 54.5%. A high percentage of filling was recorded for line F5, which was served by two small vessels with a capacity of 40 passengers – 79.1% on average, while for line F6, which was served by a much larger vessel with a capacity of 140 passengers, the average filling rate was 36.0%. The popularity of individual waterbus stops on both lines varied (Table 3). For line F5, most of the passenger exchange concentrated at six stops at the opposite ends of the route – three in the historic downtown and three in the coastal strip. It was similar in the case of line F6. The end stops (downtown and the coastal strip) were also the most popular. Both types of areas – the historic downtown and the coastal strip concentrate the most important tourist values. Thus, the structure of passenger exchange indirectly indicates the dominant tourist function of waterbuses.

Annual surveys of tourists and visitors (Bęben et al., 2018) identify the places most frequently visited by them. Among 22 sites and attractions mentioned in the report, visited the most during their stay in 2017, there were as many as 15 situated near (distance up to 1000 m) the waterbus stops. The above-mentioned sites usually have cultural values – this is, of course, the historic downtown, as well as museums and theaters located in its area or nearby (Table 4, Figure 3). Gdańsk beaches are a highly appreciated value, and the only natural one. Close to stops, there are three well-known bathing areas: Brzeźno, Górki Zachodnie and Sobieszewo. The beaches of the latter one are slightly farther away (about 1.5–2 km) from the waterbus stop. As evidenced by the data on passenger exchange, this stop is still very popular. It seems that trips to Sobieszewo, due to the time and frequency of cruises, are usually all-day. The greater distance between the bus stop and the beach is not such a big barrier, especially as the large tram capacity on this line is conducive to taking bicycles. Aside from the main considerations, it is worth noting that the areas located by the water are an attraction not only for tourists and visitors to Gdańsk, but also for its inhabitants. As the research by Gurgul (2018) shows, as many as 79% of the respondents confirmed that they spend time by the water near their place of residence. The average distance covered for this purpose is 1 km. The areas around the Motława and its moat, as well as the coastal strip from Jelitkowo to Górki Zachodnie, are definitely the most popular. Less, but noticeable interest is recorded by the Vistula quays adjacent to residential area, namely in Nowy Port and Wisłoujście, Przeróbka and Sobieszewo. All these places are located close to waterbus stops.

Table 4. Sites and tourist attractions most frequently chosen by respondents in Gdańsk in 2017 which they intended to visit during their stay (multiple choice question), located in the vicinity (up to 1000 m) of ferry and waterbus stops (Source: Bęben et al., 2018: 32–33)

Tourist attraction (the numbering below is consistent with the reference numbers of items on Figure 3)	Total	Visitors	Tourists	Domestic	Foreign
1. Historic Center (Old Town)	89.91%	84.29%	93.52%	89.09%	93.91%
2. Beach	44.34%	27.35%	55.24%	40.65%	62.30%
3. Crane (going inside)	14.51%	5.51%	20.29%	13.41%	19.91%
4. St. Mary's Basilica (going inside)	23.37%	10.10%	31.87%	21.10%	34.43%
5. Artus Court	11.56%	3.88%	16.49%	11.63%	11.24%
6. Main Town Hall	18.86%	9.90%	24.61%	19.03%	18.03%
7. Westerplatte	20.69%	9.69%	27.75%	19.46%	26.70%
8. Uphagen's House (going inside)	7.26%	2.14%	10.54%	6.39%	11.48%
9. Gdańsk Shakespearean Theatre	7.97%	2.24%	11.65%	7.02%	12.65%
10. Soldek (going inside)	8.29%	1.84%	12.43%	7.93%	10.07%
11. Wisłoujście Fortress	7.26%	1.53%	10.93%	6.49%	11.01%
12. National Museum (including Memling's Last Judgment)	8.73%	2.65%	12.63%	7.64%	14.05%
13. Lighthouse in Nowy Port	4.86%	0.61%	7.59%	4.13%	8.43%
14. National Maritime Museum	6.46%	2.45%	9.03%	5.62%	10.54%
15. Museum of the Second World War	12.52%	8.88%	14.86%	11.77%	16.16%
Other (specify)	3.59%	6.63%	1.64%	3.94%	1.87%

CONCLUSION

The conducted research procedure clearly showed that the dominant function of the waterbus in Gdańsk is the service of tourist traffic. This is determined by three categories of factors. Firstly, the nature of the system – seasonal, with a relatively low frequency of connections, a separate fare system, using vessels not fully adapted to the effective handling of daily transport flows. Secondly, a low potential demand for transport services due to the remoteness of most stops from large clusters of places of residence or work, as well as the lack of competitiveness of this offer (travel time and cost, frequency of trips) in comparison to travel by tram or bus. Thirdly, the proximity to most of the city's most important tourist attractions to the stops as well as the significant competitive advantage of waterbuses (travel time) over other means of public transport resulting from the spatial structure of the water and road network. Waterbuses compensate for the lack of bridges that would facilitate movement between tourist attractions located on opposite banks of the river.

The obtained results are helpful in programming the development of public transport systems, especially in large coastal cities which are also important centers of tourist traffic. The determinants of spatial development seem to be of key importance for shaping the dominant function of the waterbus. The main limitation of this study is impossibility to find out the opinion of waterbus users. Direct passenger survey, however difficult in given circumstances, would allow deepening the research and nuancing the knowledge about the reasons for using waterbuses, travel directions or the assessment of the transport service itself. The broader question of transport as a factor of tourist satisfaction with destination place (Carvache-Franco et al., 2018; Mashapa et al., 2019) seems to be impressive research field. This is also the suggested direction for further research. A particularly interesting issue seems to be the extent to which the waterbus system itself and the possibility of seeing interesting, sometimes otherwise inaccessible parts of the city from the water (shipyards, port quays) constitute a tourist attraction in itself. In addition, in the light of the gradual modernization of inland navigation systems in the world, it is worth undertaking research on the directions of such modernization, taking into account local conditions and factors that may be different depending on the city.

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SOCIAL MORPHOLOGY OF POVERTY IN TOURISM AREA: A THICK DESCRIPTION STUDY IN PARAKANSALAK VILLAGE OF SUKABUMI, WEST JAVA, INDONESIA

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Abstract: This research discusses ecological relations in rural areas with the people, thereby placing it within the village's poverty frame for a long time. By taking the case in Parakansalak Village, Sukabumi District, West Java, Indonesia, this research is expected to contribute to poverty studies related to natural resources and the environment. Noting the Indonesian people's great work is poverty alleviation, this research tries to provide a rationale for several villages still in the puddle. Thus, the research method used is the ethnographic method so that the strong character gets what Clifford Geertz calls thick descriptions. The results of this study reveal the facts why this is so by raising several basic things, namely: a) associated with citizens as farmers who have a level of dependence on the land that is their source of livelihood in agriculture, b) in terms of agricultural land production which is very dependent in climate, c) the level of production is not enough to provide benefits for the fulfillment of the needs of farmers because of the absence of agricultural land - because the land is only limited by a handful of citizens, and d) creating a social structure that is fully agreed with the land, thus creating poverty as a form of social morphology. The impact of spatial production as a form of social morphology illustrates poverty conditions in Parakansalak Village.

Key words: poverty, farmers, social morphology, Parakansalak village

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INTRODUCTION

Tourism is a sector of global economic activity used by various countries to increase their economic growth participation. Sakata and Prideaux (2012) states that tourism development and economic growth have a mutual relationship to alleviate poverty. Ashley et al. (2001) stated that tourism is an effective means of reducing poverty. Pro-Poor Tourism (PPT) has a significant effect on the opening of new job opportunities, an increase in income, the community's welfare, the growth of actors in micro-economic activities, and a reduction in the number of poor people. There is a direct relationship between economic and non-economic benefits for the poor in implementing PPT, and the positive impact of tourism on the poor (Ashley and Roe, 2002; Matarrita et al., 2010; Sakata and Prideaux, 2012; Graci, 2013; Mlambo and Ezeudji, 2020). While Scheyvens (2009) states that tourism is not sufficiently evident in reducing poverty, it is still necessary to strengthen indicators in theory and economic concepts to show that tourism can reduce poverty. Mbaiwa (2005) even states that tourism does not contribute to poverty alleviation because of the dominance of the tourism sector by a foreign investment so that foreigners dominate the strategic position while local people only work in a low-income position so that tourist visits do not have a significant effect on reducing poverty. The study of poverty has a long history. It can be traced back to the work of Charles Booth. His extensive survey of economic conditions in London during the last decades of the 19th century and depicting a series of social deprivation maps have been recorded as the first modern social surveys (O'Day and Englander, 1993). However, concerns with poverty surveying and registering could have begun much earlier in the nineteenth century, with Engel's *The Condition of the Working Class in England in 1844* and Mayhew's *London Labor and the London Poor in 1861* (Hillier, 1998; Hillier, 2002). In analyzing the spatial configuration of poverty, a detailed analysis of local variations is essential. Although some studies from population experts and geographers relate to household-level statistics, and in some areas, detailed information regarding this data is publicly available (Hillier, 2002; Benenson and Omer, 2003). In some regional cases, this data is not publicly available due to privacy and confidentiality concerns (Boyle and Dorling, 2004). Previous studies have focused on poverty, except that it has concentrated more on poverty's social causes than its morphological effects (O'Day and Englander, 1993).

The geographic income deprivation pattern shows that the level of deprivation in each district or city in a particular group and the environmental scale varies (Gumilar et al., 2018). In these studies, analysis of the spatial aspects of deprivation and poverty is based on the census (Noble et al., 2000; Orford et al., 2002; Ballas, 2004). Several recent studies have also used multiple geographic scales to inform local policies (Hillier, 2002; Neil et al., 2018). In certain conditions based on the perspective of morphology, several regional factors such as the natural environment, regional culture, economic development, rural forms, local laws, development needs, all of which color the spatial characteristics of rural areas based on (Gill et al., 2008; Neef and Neubert, 2011; Eames et al., 2013; Anna et al., 2017; Neil et al., 2018).

The idea of this research departs from empirical reality about villages that are still covered with welfare issues. So the concentration of this study is on poverty that occurs in the village and the relationship between poverty with social structures that specifically depart from social morphology. The deprivation that occurs in Parakansalak Village is closely related to the reading of the social morphology. To further strengthen poverty in a review of social morphology, some complexities can be translated as physical space and social space.

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Physical space is related to the physical environment (for example, land, land area, and land conditions) and regional climate. In comparison, social space is connected to community demographics (for example, employment and income). Between physical space and social space, it is then constructed socially and adaptively as time goes by, creating social structure. This social structure reinforces how poverty can be maintained in such a way since then and continues today. As mentioned earlier, all of that moves in the spaces, which ultimately formulates a social structure in the form of Poverty in the Parakansalak Village.



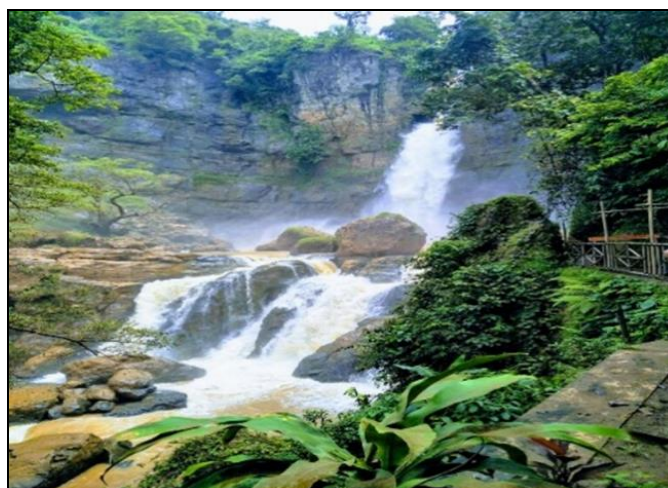
a. Situ Sukarame



b. Batu Bacan



c. Batu Karut



d. Curug Sawer



e. Situ Gunung



f. Karang Numpang

Figure 1. Favorite tourist spots in Parakansalak Village

Tourism has been perceived as a meaningful diversification of the economy. More importantly, tourism is professed as being able to alleviate poverty among the poor, the majority of whom live in tourism resource-rich areas (Ashley and Roe, 2002; Scheyvens, 2009; Matarrita et al., 2010; Sakata and Prideaux, 2012; Graci, 2013; Mlambo and Ezeuduji, 2020). Therefore, tourism becomes an ideal candidate for poverty alleviation in Indonesia due to its labour-intensive nature, enabling it to employ disadvantaged community members with very little formal training, e.g., women and youth. Besides, tourism utilizes the poor's natural and cultural resources to utilize these resources for their benefit. However, tourism is a private sector business and, therefore, is controlled by market forces. By its

very nature, tourism is geared to serve the tourist's and investors' interests and, therefore, does not automatically improve the community's poorer members (Sakata and Prideaux, 2012; Graci, 2013; Rizal et al., 2020). From the formulation of the problem, this study was built from the nature of the relationship between poverty, rural communities, and the idea of social morphology. The holistic of these concepts results in an explanation that can holistically answer what the research questions formulate. The purpose of this study is focused on answering the questions that have been raised, namely, to analyze and understand the conditions of poverty in rural areas caused by social morphological conditions in Parakansalak Village, Sukabumi District, West Java.

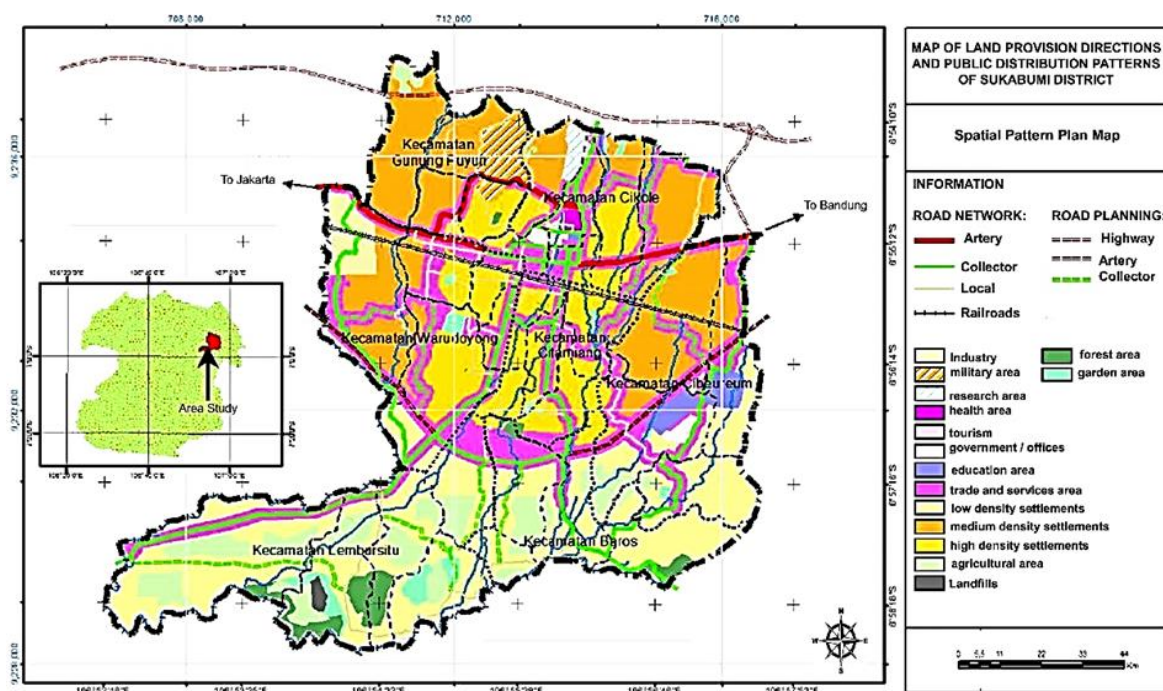


Figure 2. Map of Parakansalak Village in Sukabumi District, West Java Province

Parakansalak Village is part of the Parakansalak sub-district, Sukabumi District (Figure 2). This village is the youngest village that was definitively newly established in 2007 before it was part of the Lebaksari Village. Historically in 2005, Lebaksari Village had experienced social upheaval that smelled of local politics, namely the rise of protests directed at the Lebaksari Village apparatus by residents of several hamlets in the upper part of this village, one of them is Parakansalak Hamlet. This was triggered by residents' dissatisfaction with some of the hamlets who thought that development in the village of Lebaksari experienced stagnation, and the welfare of the residents did not increase significantly. In 2005 a temporary village government was formed before it was ratified in 2007 when the village already had a definitive set. Since 2007, it was the birth of Parakansalak Village, which has taken place in the village administration until now.

Parakansalak Village had many tourist objects that are domestic tourist destinations in Indonesia. This tourist village has a stunning natural panorama (Figure 1). The village is surrounded by heterogeneous forests covered with pine and resin trees, and there is also a stretch of tea garden, which makes the scenery in this village even more exotic. The cold and fresh air adds to the attractiveness of this tourist village. This village is one of the most popular and favorite tourist spots among Indonesian photographers.

MATERIALS AND METHODS

This study used a qualitative approach that begins with the assumption and use of theoretical and conceptual interpretation frameworks that shape or influence the study of research problems related to the meaning imposed by individuals or groups on a social or human problem. This research takes the type of in-depth qualitative description (thick description).

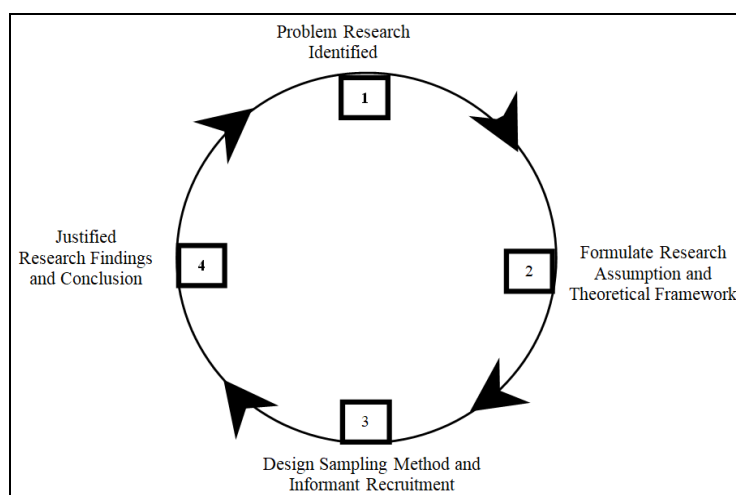


Figure 3. Methodology Research Framework

This research focuses on the form of villagers' poverty regarding spatiality's social morphological aspects, namely the social use approach in public space and in-between spaces and villagers' social activities.

Parakansalak sub-district after the transfer of the central government and capital of Sukabumi district to Palabuhanratu City, the location of the Parakansalak sub-district government area is to the north of the government capital city of Sukabumi district, with a non-rice field area of 5,669.68 hectares, rice field: 757.60 hectares, the total amount: 6,426.68 hectares. Geographical relationship, in terms of land conditions in the working area of the Parakansalak sub-district government, the situation is sloping and hilly with an altitude from sea level of more than 700 m to 900 m, with an air temperature of at least 18 degrees Celsius and a maximum of 28 degrees Celsius with average rainfall (Parakansalak sub-district office, 2019). The population living permanently in the working area of the Parakansalak sub-district government is spread across six villages that are, on average, presented in a balanced way. The details are as follows: Parakansalak Village: 7,488 people; Lebaksari Village: 6,134 people; Sukakersa Village: 6,666 people; Sukatani Village: 5,909 people; Bojongasih Village: 6,106 people; Bojonglongok Village: 6,913 people. They represented a combination of the regularity of income, work status, and industrial occupation (because some fields were seasonal and thus irregular) (Parakansalak sub-district office, 2019).

The spatial information calculation methods in this study involve (1) the length, curvature, and direction of the linear features, (2) the area, perimeter, and shape of the planar features; (3) topology, order, distance, and orientation of spatial relationship among spatial entities; (4) distribution center, shared space, distribution density, and distribution axis of spatial distribution. This research chooses rural settlements promoted by different topographical and geomorphological conditions, other regional cultural characteristics, and various leading agribusiness in the Sukabumi District in terms of selecting samples. At the same time, the homogeneous distribution of examples within the Sukabumi District was also focused on ensuring that the study could reflect the morphological characteristics and problems of rural settlements in all villages to the utmost extent (Figure 1). The study will eventually digitize critical areas in both the latter maps, each of which covers a significant Parakansalak sub-district area, including a prosperous and poor village. We aim to compare and analyze change over the years, separating the field surveys and comparing them with the most recent census. We have sought to contend with the theoretical and methodological challenges of analyzing the relationship between spatial and social factors.

Concerning data collection, qualitative data are the primary choice. Data collection is based on triangulation, where interviews, documents, and unique mapping are combined. A combination of qualitative and quantitative data is possible (Eisenhardt, 1989; Davis and Eisenhardt, 2011). Data analysis is conducted via the search for within-case patterns and cross-case patterns. Systematic procedures are undertaken to compare the emerging constructs and relationships with the data, eventually leading to graph theory (Hillier, 1998).

The interview guide's instruments were the interview guide, a recording device, and the interview result recording sheet. This instrument is used to assist in collecting data. Interview guidelines were used to interview three informants: first, key informants, namely the head of Parakansalak Village, who were considered to have general information regarding the research area. Second, the main informant, namely the leader of the farmer group who is deemed to have detailed information regarding the condition of the farmer and the village area, and third, the supporting informant, namely the agricultural extension agent, with the consideration of having additional relevant information related to the main informant. The recruiting informants' pattern analyzed the informants' role in collecting research data to produce relevant information (Patton, 2002). Data obtained from the three informants are used as comparative data, which are considered to improve data quality and draw research conclusions from the data. Data were taken from public and private data, informants' materials, official village, and government publications. The data was measured, coded, and triangulated. Iteration between cases and theory and considering the relevant literature provided the basis for developing a theoretical framework (Figure 3).

RESULTS DISCUSSIONS

Social use approach in public spaces

Sociologist William Whyte's (1980) research is one of the primary studies on social use in public space. It is based on direct observation to study the use frequency of individual squares in New York in the usual and ordinary way. Whyte (1980) placed cameras to capture the pedestrian flow and social gatherings in the streets. The main results showed that users were the main attraction factor for other users. The users chose the spaces already occupied and dense by preferring the outer limits or borders for passive activities. Whyte (1980) concluded that places are correlated with the number of areas to sit on and their proximity to the street. Several studies confirmed Whyte's results, wherein other users' visibility is an essential factor in space occupation (Whyte, 1980; Jingnan et al., 2007; Paroda, 2012; Ray et al., 2012).

These activities take place in favorable weather conditions. Social activities depend on others' presence in public spaces (Rola et al., 2002; Daraba, 2015). They can be children's games, greetings, discussions between people, ordinary activities of all kinds, and passive contact, defined as watching and hearing others. These activities can also be described as "resulting" actions because they occur spontaneously due to movement and people's presence in the same spaces. Sociologist states that a social activity takes place when two people meet in the same area, see each other, and listen to each other, all of which are forms of contact and social interaction (Collins, 1983; Collins, 1993; Guy, 2010; Dael et al., 2012; Shen et al., 2013; Schmidtraub et al., 2017; Rizal et al., 2019).

Open spaces vary from squares to intermediate spaces with linear forms with a certain degree of social freedom, for example, streets, roads, and alleys. The intensity of social activities in the street can be ensured in areas with reduced traffic and available facilities. High-concentration residential neighborhoods where public spaces are inadequate to push people to use the roads as a means of interaction. Rizal et al. (2020) find a strong relationship between spatial configuration, accessibility, and social interactions. These factors can be facilitated by accessibility and spatial design. The fluidity of pedestrian movement can contribute to the increase of encounters between urban space users. Snapp et al. (2002) emphasize the importance of in-between spaces as a support for social life and their development of social interactions between users. Poverty is a concept that never runs out for discussion. Even though the conditions alleviation programs also never subsided by the government, often the results are still far from encouraging (Whyte, 1980; Jingnan et al., 2007; Paroda, 2012; Ray et al., 2012; Rizal et al., 2019; Rizal et al., 2020). So indeed, it takes interdisciplinary knowledge to translate what is meant by poverty.

The problem of poverty in rural areas in this study is interpreted as a form of culture related to rural community life. This problem is also reinforced by Clifford Geertz's expression of a culture that contains complex networks that have both signs and symbols in the form of routines and habits (Zhang et al., 2011; Vuillot et al., 2016). These routines and traditions exist in various mental construction states based on social experience, are local and specific, and depend on the party doing it (Yuan, 2018).

On the other hand, social morphology is also strongly associated with spatial or spatial ideas, like Aminah et al. (2015). They say that space is defined by the relationship between the entities contained in it. The most exciting and influential theory of space that forms this research work is a spatial organization with daily life structure related to poverty in rural areas. It is reinforced that the import of mixer processes from the production of blank physical space and not the direct upshot of the epitope of physical space (Zhang et al., 2013). Translating the village community at this time, we will be confronted with so many sociological and political-administrative definitions that

will relate to one another. However, for the sake of this research, understanding the village community refers more to the sociological aspect while still not ignoring its political-administrative understanding. Direct interviews certainly make the whole picture. The interview is a step in finding knowledge and experience of a phenomenon in a particular setting and holistic setting. This set consists of a holistic accumulation of behavior, perceptions, actions, and various critical supporting elements. From the results of the village social mapping conducted at the beginning of this study, it is known that the number of residents' livelihoods can be described in the following table.

Table 1. Livelihoods of Parakansalak Village Communities (Source: Parakansalak sub-district office, 2019)

No.	Livelihood	Percentage
1.	Agriculture	87
2.	Government / public services	1
3.	Trading services	3
4.	Skill/carpentry services	5
5.	Other Services (motorcycle taxi, driver, pedicab driver)	2
6.	Industrial Sector	0
7.	Other sectors (informal labor, helpers)	2
	Total	100

The data above is based on the Parakansalak village government statistical report data. The data can reflect residents' views regarding their social conditions related to residents' work in Parakansalak Village. The data also shows how residents perceive themselves as a large collective with a main livelihood in agriculture (Daraba, 2015). There are 2 (two) categories of farmers in this village, namely the first category of very small landowners, and the second, smallholder farmers or farm laborers in large numbers. Farmers, as the majority work, present a very striking picture of the economy and life. The landowner farmer is a wealthy citizen who can easily be marked by their lovely large building. Small and semi-permanent houses tend to be slums and are characterized by the limited or narrow place, and the yard is poor farmers, aka residents whose jobs are as farm laborers. Parakansalak Village, with its position in the mountainside area, has environmental conditions characterized by forests and hills with a little flat area. On top of the landscape of forest lands like that, citizens from the beginning of history began to develop their lives so that physical space was formed and lived. Living in the sense that citizens begin to occupy (live and live) by utilizing natural forest resources so that the forest environment's life is complicated with humans' presence (Paroda, 2012; Daraba, 2015). Life is a back effect on people or people who occupy the forest environment that bring significant benefits to humans or their citizens - meaning that the environment with the forest's natural resources provides services that can support the people who inhabit it.

The physical environment in this area, once a jungle, is starting to open because of the interest in making settlements and farming (Aminah et al., 2015; Daraba, 2015). The living space and physical environment process are evident from a physical stretch of the landscape or area gradually changing from the wilderness into agricultural lands and residents' dwellings.

This situation continues until the number of citizens continues to grow, and utilizing the natural environment in this region is intensified by people who start to occupy it (Paroda, 2012; Daraba, 2015). With the limitation of the area and tandem with the growing number of residents, there was an intensification of land by the Parakansalak community. However, the land intensification carried out by the residents did not experience high progressivity because they learned from the experience of agriculture over time that in this region, taking into account the climate is only ideal for certain types of plants, such as rice, corn, tobacco, onions, and chilies (Aminah et al., 2015; Daraba, 2015). But whatever it is, basically, since their existence in the Parakansalak region that utilizes the physical environment explicitly with the practice or intensification of agriculture, there has been a production of space in the Parakansalak environment by its citizens.

This spatial production takes place with far-reaching consequences for their spatial practices in such a way as the manifestation of spatial actions makes the villagers read as agricultural communities (Whyte, 1980; Jingnan et al., 2007; Paroda, 2012; Daraba, 2015; Aminah et al., 2015). More clearly will be explained further on the production of this space in the next sub-discussion subjects.

Social Morphology and the Poverty of Parakansalak Residents

Agriculture, with all its forms of practice, is an effort of Parakansalak villagers to produce their living space. The most crucial area for their existence is how the Parakansalak region's landscape is used in such a way as agriculture for the fulfillment of its economic needs through the planting of seeds of productive plants by processing plots of land (Jingnan et al., 2007; Paroda, 2012). Such spatial production through agriculture is evident from the actions of residents who had begun by opening up forest areas or commonly referred to as land extensification, which is an effort to improve agriculture by expanding new agricultural land. Thus, the spatial production continues from land extensification with traditional techniques that are no longer possible, leading to the land intensification.

However, this intensification attempts to increase agricultural output by optimizing existing agricultural land because land clearing has not been possible since the Sukabumi regional government imposed village administrative boundaries. In intensifying agriculture, they use the methods generally carried out by farmers, namely trying to cultivate the land following their planting interests, making irrigation to present water needs for plants, they also choose the seeds to be planted, they also fertilize and if there is their pest will soon eradicate (Zhang et al., 2011; Vuillot et al., 2016). What they do in agricultural terms is often referred to as five farming.

The important thing done by the Parakansalak villagers in the production of their agricultural space is to pay attention to the climate. This factor becomes very important for agricultural businesses (Daraba, 2015). Indonesia will be divided into two seasons, namely the rainy season and the dry season. These two seasons determine plant types to be planted as their agricultural strategy with their respective climates.

In addition to climate factors, they also read commodity factors increasing demand in carrying out their agricultural space production activities (Aminah et al., 2015). These two general factors make their land management and spatial production efforts seem very typical from year to year due to their dependence on both aspects, climate and commodities (Jingnan et al., 2007; Paroda, 2012; Daraba, 2015).

From the pattern of the growing season, it is seen how their production of agricultural space is very dependent on the presence of climate or season. The dry season, which usually falls from April to October, will be widely used by villagers by growing crops such as tobacco, corn, onions, and chilies. In the rainy season, which falls from November to March, many of their lands will be used for rice. In the dry season, in particular, it will be seen how crop diversification is more visible than in the rainy season (Parakansalak Sub-district office, 2019).

What farmers do in Parakansalak Village is seen that they are farmers as cultivators of land in rural areas, where rational considerations or choices become the behavior of residents in this village. The most important adaptation is the problem of adaptation to climate or season (Daraba, 2015). The above has explained that they live in two climates or seasons, namely the dry season and the rainy season. The morphology of these two seasons creates specific different social patterns but are still related to one another.

The rainy season is considered the most severe season because it does not generate much cash income. After all, rice farming results in the rainy season are not sold to the market but consumed by themselves. This response is a form of adaptation to the coming climate or dry season in the coming months, which seems to be significantly helped by the stock of rice or rice in their homes. This situation was strengthened by the Head of Parakansalak Village, Asep Sobari, in his interview:

".. Officials contact us and record groups of farmers who cannot afford to get help from the village ministry; we have to wait if they need to contact us, so we come. help all explain to them ..".

Although the amount of rice obtained from all residents varies, the generally accepted difference is that 30% of the rice yields are for agricultural laborers, and 70% of the rice harvest is for land or rice owners (Daraba, 2015; Vuillot et al., 2016). The average landowner or landowner will make an annual adaptation that is quite successful in facing the dry season and, at the same time, enter the rainy season next year. Unlike the residents who work as agricultural laborers who yield 30% of the average rice harvest still does not meet his needs - let alone reach the dry season or the rainy season in the coming years. For up to the next 2-3 months, the rice yield is not sufficient for the needs until the season changes next year. These farm laborers must be done because adaptation is more difficult to avoid changing seasons into the dry season, even if it's only for 2-3 months (Zhang et al., 2011; Daraba, 2015; Vuillot et al., 2016).

The adaptation of new technologies by subsistence farmers using sustainable intensification is a complex process. This process is not easy because it involves many competent parties (Benenson and Omer, 2003; Aminah et al., 2015; Daraba, 2015). In Parakansalak village, agricultural technology transfer is almost entirely dependent on government assistance, both central and local. The new technology development system in agriculture is a system introduced by the government to farmers (top-down model), usually through extensive processes. This system's weakness is that extension workers are not involved in the practical problems faced by farmers. The courses or training taught to extension agents are relatively simple, the training time does not follow a seasonal cycle, and the training time is somewhat limited. So that extension workers do not understand the problems of farmers in the field.

With an ineffective extension process, it results in low effectiveness of the transfer of knowledge to farmers. Farmers' understanding in villages is not good enough regarding agricultural practices, the variability of land and ecological areas, and understanding of markets and infrastructure (Zang et al., 2011; Vuillot et al., 2016). Meanwhile, for farmers applying new technology often requires more time, effort, and capital investment. On the other hand, this new technology does not guarantee higher profits for the farming business. The top-down method of knowledge transfer does not help farmers to avoid risks to their farming. Farmers also need time to understand new technologies and their relationship to agricultural production. Many of these problems result in poor perceptions of farmers about changes that have occurred in their agriculture. Therefore, it is essential to change the model in transferring knowledge into farmer actions.

Previously, the so-called agricultural space production, as described above, will ultimately influence the formation of their social space, which is more abstract but applies to their living arrangements. This circumstance is built due to its production with its agricultural characteristics as the environment they process (Snapp et al., 2002). For more details, it will be explained how the production of space with the treated environment makes their farming characteristics and forms the social area, which we commonly refer to as social structure.

First, the area that was once a wilderness on the mountains' slopes by the predecessor residents was opened to make them productive as agricultural land. Second, the difference between able-owned people who own land and less-able people who do not own land has a specific pattern of relations between the two in the context of land management or agriculture. It can then be seen the pattern or social structure of residents' daily lives in Parakansalak. This situation is the reality of social structure built in this village due to the attachment of one element to other elements in aspects of their daily lives (Zang et al., 2011; Vuillot et al., 2016).

Modern high input agriculture – based on decades of investment, research, and innovation – has been implemented. More food has been produced on less land with fewer resources at a lower cost to consumers while also creating greater prosperity. In parts of the world where smallholder farmers dominate, investment in agricultural innovation can be life-changing (Snapp et al., 2002; Benenson and Omer, 2003; Jingnan et al., 2007; Paroda, 2012; Daraba, 2015; Aminah et al., 2015). Speaking of the social structure in Parakansalak Village, it cannot be separated from the reading of the social morphology in this village, which means the determination of physical environmental factors, both natural and climate (as domains) combined with social-economic life (as a result) that takes place in the lives of Parakansalak villagers. There is a form of production of space, which consequently makes it a way of social structure. The social system in question is a fabric that presents its difficulties for most citizens to get out of a condition called poverty (Noble et al., 2000; Orford et al., 2002; Ballas, 2004). As a result of an interview with the agricultural extension agent of Parakansalak Village, Sutisna stated:

"... We started getting agricultural production facilities assistance from 2015 to 2018, then they were cut off because there were villages that needed more. Hopefully, this year there will be more ..".

The regional characteristics of rural settlements' spatial form reveal that the rural spatial evolution follows a series of similar rules, ensuring that the accommodations are relatively stable and different from those in other regions during the evolution process. In the practice of rural planning and construction, however, planners often focus on the importance of society, economy, and culture, neglecting the role of space form, which, to a certain extent, destroys the organic and various rural settlement spatial texture and hinders the inheritance of the traditional rustic spatial form (Griffith, 1942; Gospodini, 2006; Echenique et al., 2012; Neil et al., 2018).

With this social morphology, it will also present the effects of social life structured in such a way as a social order for citizens' lives in Parakansalak Village. Problems arise when this social structure is so strong that collectively influences the behaviors of citizens, an essential critical action is the economic behavior of citizens through the agricultural domain, which for the bulk of citizen /majority feels difficult and insufficient to meet their needs - which in words others as a form of impoverishment (Hillier, 1998; Hillier, 2002). Concerning this condition was the response by expressed of the leader of the farmer group, Ubed Ikin, in his interview as follows:

"... Indeed this program is aimed at the poor in this area, through groups formed by the community themselves to develop their farming businesses so that that income can increase. ...".

From there, we can read that the poverty that occurred in Parakansalak Village, which until now continues to plague the majority of villagers, starts from the land and the nature of land ownership, production of their living space through agriculture to become the social structure that supports it and ultimately impacts on "permanence" poverty conditions of the majority of residents in this village. Then the collapse of national food security is just a matter of time if farmers are still marginalized.

Under the evolutionary mechanism of comprehensive control of internal factors and external factors in the evolution of rural settlements, the processes of 'organism's deprivation, inheritance, and mutation in genetics can be analogized. The evolution law of rural settlement space has a pronounced similarity with biological evolution. In this paper, the concept of "morphogenesis" is introduced to classify rural spatial

forms' potential factors at a more comprehensive and in-deep level. Referring to the idea of genes in biogenetics, the morphological characteristics that can reflect and control the rural settlements' spatial form are called rural settlements' morphogenesis (Pu et al., 2013; Pu et al., 2018). Social morphology is based on environmental conditions or surrounding conditions. The nature of land ownership, climate/season conditions, determination of crops based on seasons, and market potential (commodities) to citizens' work process is a form of rural communities' social-economic life (Hillier, 1998; Hillier, 2002; Zang et al., 2011; Vuillot et al., 2016). All of this is a form of spatial production, which presents most residents' general characteristics in Parakansalak Village. Likewise, with all their difficulties, they will face the rainy and dry seasons again in turn. For that, they will always feel challenges that are almost unbroken from time to time.

CONCLUSION

What can be concluded from the explanation of the lives of the community members in Parakansalak Village is that in this village community it is a portrait of the face of poverty in an area that has a unique character, namely concerning the production of space in the physical, natural, and social environments which are forms of from social morphology that gives effect to the formation of the social structure of the life of villagers. From each of them, it can be seen that the impact of spatial production as a form of social morphology indeed illustrates the conditions of poverty in this village.

This is supported by the results found in this study which concisely indicate that the poverty conditions in this village are caused by several primary factors, namely: a) the majority of residents as farmers have a high degree of dependence on the land that is their source of livelihood in agriculture, b) in the case of agricultural space production which is very dependent on the climate / season, namely the rainy season and the dry season with different types of plants between the two seasons, c) the level of agricultural production results both from the two seasons is not enough to provide benefits for fulfillment the needs of the majority of the poor as farm workers because of the lack of ownership of agricultural land, limited land is only owned by a handful of wealthy citizens, and d) the dependence of the majority of the poor as agrarian laborers on the rich as landowners is closely related to spatial production (both space in physical environment, nature, and space of social environment), which can be read as a form of social morphology that ultimately creates a social structure called poverty.

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ENTREPRENEURSHIP AND TOURISM THROUGH THE LENS OF SUSTAINABILITY. CHARTING THE KNOWLEDGE BASE THROUGH BIBLIOMETRIC ANALYSIS

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Abstract: Tourism, entrepreneurship, and sustainability have been under the examination of this study, as we tried to map out the knowledge base yielded between the 1995 and 2020 timeframe. Bibliometric methods were employed in the analysis of articles. After analyzing the available articles, 322 articles concerning tourism and entrepreneurship, from which 14 articles on entrepreneurship and sustainable tourism were obtained. Further steps were made into refining the findings as we looked into which research streams related to sustainable tourism entrepreneurship have been in the spotlight.

Key words: tourism; entrepreneurship; sustainable tourism; sustainability; bibliometric analysis; research topics

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INTRODUCTION

The importance of entrepreneurship in fostering innovation and competitiveness, increasing productivity, and generating employment, wealth, and income for public budgets is widely accepted. Implicitly, it also determined researchers' interest in discovering its forms, causes, apparition, motivators, and ability to exploiting opportunities, connections to lifestyle, successes, and failures (Hart et al., 1995; Carter et al., 2003; Shane, 2000; Santarelli and Vivarelli, 2007), and the literature is expanding every year.

In this article, we are interested in investigating the main corpus of literature on tourism entrepreneurship, as described in selected articles published during the last decades (the search query's timespan is 1995 to 2020). The aim is to review entrepreneurship research in the tourism and hospitality industry at large and, more specifically, in sustainable tourism, and provide future research directions. Specific objectives addressed include to examine the research themes and identify directions of research; to assess the attention given to research on entrepreneurship and sustainable tourism; to capture the research streams related to tourism entrepreneurship that have been in the spotlight; to find out how are research themes pertaining to tourism entrepreneurship clustered and what is the place for sustainability; to highlight the research gaps and future streams of study that are likely to emerge in economic studies. Such endeavor is an important one; through the bibliometric method presented here and the gaps and future trends it helped identify, the systematic mapping of the knowledge base will enable future researchers to expand the state of the art of various fields of research and to develop their studies in a way that will truly bring out significant contributions to the knowledge base. Therefore, the research contributes to the expansion of the frontiers of science by promoting inquiry into relevant and leading-edge topics.

The paper is organized as follows. In the second section, we present current directions identified in the literature; in the third section, we present the methodology employed, in the fourth section, we describe and discuss the findings, including a visualization of the results; in the final section, we conclude and present the main implications and limitations of the study.

MATERIAL AND METHODS

Current directions in the literature on tourism entrepreneurship

According to Ratten (2019), tourism entrepreneurship is an attractive and stimulating research topic, including the analysis of general entrepreneurial traits (risk-taking, openness to both innovation and hard work, ambition, a proactive attitude), within a captivating framework (tourism as a human interest), and multidisciplinary concepts such as the impact of technology, economic geography, cultural contact, and international relations. Due to the relatively easy identification of tourism entrepreneurs' traits with lifestyle factors (e.g., seeking a balance between the private life and managing a business, appreciating comfort and cultural/environmental factors or interpersonal relations, the rather small size and low growth rate of businesses), most studies in the last 3-4 decades subscribed to this concept of the lifestyle entrepreneur (Ateljevic and Doorne, 2000), based on case studies and the analysis of small and medium businesses, i.e., small tourism entrepreneurs (Morrison et al., 2010; Thomas et al., 2011; Badulescu and Badulescu, 2012), which combine elements of survival and growth, promoting new products and destinations, sustainability, forms of tourism that would revitalize mountain and rural areas, neglected by sweeping industrialization (Cunha et al., 2018; Badulescu and Badulescu, 2017).

The importance of education (from the point of view of both supply and consumption), the problems of resilience and succession in family businesses (typical for small and medium tourism businesses), relations with corporate entrepreneurship (large hotel chains and tour operators) were also studied. The connections to economic geography, social and anthropological analyses, all generated interest in

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understanding the relationship between tourism, entrepreneurship, territorial planning and regional development (Williams et al., 1989), cross-border cooperation (Timothy, 1998; Badulescu et al., 2014), and socio-cultural, religious, ethnic influences on tourism and hospitality businesses. Some studies also integrated sustainability in a broader and more humanitarian view, stressing the importance of solving the major problems of humanity, such as the SDG objectives of tourism (UNWTO and UNDP, 2017), the preservation of local cultures and traditions, of the cultural heritage of humanity (Jeffrey, 2018), the protection of small communities, the equitable share of benefits stemming from tourism, environmental protection, etc. A somewhat newer theme refers to social tourism businesses in the sharing economy (Gössling and Hall, 2019), the merging of social concerns with unique experiences in the touristic offer (Kasim, 2006), or growing tourism partnerships leading to value co-creation (Kallmuenzer et al., 2019). Alegre and Berbegal-Mirabent (2016) or Aquino et al. (2018) are suggesting Tourism social entrepreneurship as a solution and a strategy to address social issues.

The attempt to understand what was published regarding tourism in the last half-decade contains a predictive endeavor (Fagadar et al., 2021). Researchers, practitioners, academia, policymakers, and other stakeholders wish to foresee entrepreneurial research evolution in this peculiar, dynamic, complex, and fragile sector. A few trends are apparent for the next 20-30 years, as follows:

(a) A first trend can be recognized now in more holistic approaches to tourism entrepreneurship through business model proposals (Reinhold et al., 2017; Ratten, 2019; Fissi et al., 2020).

(b) A second trend takes into account the revolutionary transformations determined by technological innovation and the expansion of ITC, which stimulated the emergence of a new and ripe-for-studying field of tourism entrepreneurship, the so-called sharing economy. For over two decades, digital technology is transforming an important part of the tourism industry, generating a more dynamic character (Buhalis et al., 2019), challenging and stimulating entrepreneurs and their efforts to reanalyze and reinterpret the complex relationship between the dynamism of technological innovation, the business world, and tourism consumption.

(c) A third research direction refers to new players in the tourism industry, referred to as “new innovative tourism providers” or disruptive innovators (Gutentag, 2015), such as Airbnb, standing at a crossroads between corporate entrepreneurship, technological innovation, and consumer involvement in the touristic product’s configuration;

(d) A fourth direction focuses on new approaches in the general theory of entrepreneurship, such as dynamic capabilities (D’Annunzio et al., 2015; Rodríguez et al., 2020) and entrepreneurs’ capability to employ local physical and non-material resources in a more sustainable manner (Yachin and Ioannides, 2020), known as entrepreneurial bricolage (Fisher, 2012) or self-efficacy (Kornilaki et al., 2019), or the role of artificial intelligence in small and medium enterprises in tourism.

(e) Future studies could fuse fundamental theoretical perspectives into a more creative and productive approach (Solvoll et al., 2015; Ratten, 2019). It is apparent that, while many researchers studying entrepreneurship have shown openness towards the tourism sector, the converse (tourism researchers approaching the study of entrepreneurship) is less enthusiastic.

(f) The current period put a spotlight on the extraordinary challenges of the global COVID-19 pandemic, especially its devastating effects on small and medium enterprises, as “the tourism industry has been hit hard by the necessary measures taken to contain the pandemic, and it seems unlikely that the sector will return to normalcy any time soon” (International Labour Organization, 2020), with over 60% of tourism businesses around the world being severely affected or closed. Zenker and Kock (2020) consider that current and future research on the topic must rely on the numerous articles that already analyzed the effects of other crises on tourism and travel, and, by extension, on small and medium enterprises operating in tourism: economic crises (Papatheodorou et al., 2010); social and political instability, terrorism (Sönmez, 1998); the SARS epidemic, avian flu, and other influenza pandemics (Mao et al., Lee, 2010; McKercher and Chon, 2004; Page et al., 2006), the refugee crisis (Zenker et al., 2019), boycotts and animosity (Yu et al., 2020), or other natural disasters, wars and political restrictions. Tourism entrepreneurship provides ample opportunities for practically-relevant research on the role of innovation in post-crisis recovery and the consolidation of industry (Martínez-Roman et al., 2015; Thomas and Wood, 2014), but also on the difficulties and limitations, objective or subjective, encountered by small businesses implementing innovation, collaborative action and experimentation (Pikkemaat and Zehrer, 2016; Stiubea, 2020; Sundbo et al., 2007), knowledge and technology, eco-innovations (Pikkemaat et al., 2019), acceptance, and managing change in tourism (Buhalis and Cooper, 1998).

Could sustainability give new impetus to tourism entrepreneurship research?

The field of sustainable entrepreneurship in tourism is changing rapidly both in research and in practical action. For more than two decades, we have seen an increase in the number and diversity of studies in the field. However, it is only recently that there is a call from the scientific community and practitioners for a more robust theoretical base and better development of methodological models (Malnar and Crnogaj, 2019). According to Parrish and Tilley (2016), current methodologies in sustainable entrepreneurship are still underdeveloped, both conceptually and empirically; there are confusing areas due to “the imprecise and conflicting definitions of the concept, and the need to distinguish between sustainable tourism and the development of tourism on the principles of sustainable development” (Butler, 1999: 7).

Crnogaj et al. (2014) consider tourism to be highly dependent on entrepreneurship; in other words, it cannot survive in the long term if it is not both sustainable and entrepreneurial at the same time. Hall et al. (2010) state that research related to sustainable development and entrepreneurship is developing and could be a focal point of the future of sustainable tourism. Entrepreneurship is recognized for its contribution to the provision of sustainable products and processes, and new businesses are often referred to as a panacea for many social and environmental concerns. However, there is sufficient uncertainty about the nature of entrepreneurial motivation and how it can be conducted, which is probably why some authors consider that the main driver for improving social and environmental impacts could be regulation rather than market measures (Buckley, 2012: 528). Finally, the decline of agriculture, the migration to urban centers, the lack of economic opportunities, as well as the increasing interest in sustainability and nature make tourism, especially sustainable tourism, a necessity and an opportunity in rural areas (Lordkipanidze et al., 2005).

RESEARCH METHODOLOGY

In order to chart the knowledge base of the last decades on tourism and hospitality entrepreneurship, with a lens on sustainable tourism, as well as to test the above-mentioned research trends dawning in the timeframe selected for research (1995-2020), a bibliometric analysis was employed. This quantitative, scientometric method has gained much popularity, coupled with the development of specialized research databases (e.g., Web of Science), that make research information readily available (Cancino et al., 2017).

Bibliometric analysis is recognized as a method for measuring, studying, and monitoring scientific publications and their impact on the scientific community (King, 1987; De Oliveira et al., 2019). Among the types of information revealed by such analysis, we mention (Waltman and Noyons, 2018): scientific output data (e.g., number of publications produced by a research unit), scientific impact (e.g., number of citations received by publications), scientific collaboration (data on co-authored publications, national and international and

university-industry collaborations), interdisciplinarity (degree of publications' interdisciplinarity based on the fields cited by the publication).

The research questions we address in the analysis are as follows:

RQ1. Which research streams related to tourism entrepreneurship have been in the spotlight?

RQ2. What is the place of sustainable tourism entrepreneurship theme among the research conducted so far?

RQ3. How are research themes pertaining to tourism entrepreneurship clustered, and what streams of study are likely to emerge in economic studies?

Bibliometrics makes use of a range of indicators and tools that combined allow for the mapping of the state of the art, identification, grouping, and analysis of research gaps and trends. De Oliveira et al. (2019) propose a process for mapping the knowledge base through bibliometric analysis, which has also been undertaken for the study herein.

Defining the field of study

As presented in the Introduction, we propose to study the tourism entrepreneurship state of the art through the lens of sustainability. We will crisscross the two major fields of entrepreneurship and tourism, studying them from the edges towards the core of our study, the common denominator of sustainability, to see the research interest captured by this complex, three-faceted field.

Defining search platforms

Weighting on the decision on search platforms, e.g., Scopus, Web of Science, we have chosen Web of Science as the right platform for this research. WoS is credited with having the most robust databases, the oldest and most comprehensive records of citation indexes, with reasonable availability of search filters, encompassing a useful analysis tool (De Oliveira et al., 2019; Ellegaard and Wallin, 2015). The bibliometric data offered by the WoS platform is the year of publication, research areas, types of documents, keywords, language, articles, authors, journals, institutions, countries, and journal JCR index.

Mining of bibliometric data and importing data

The bibliometric data mining follows a well-established process, from defining the search criteria and the search query formula to refining and exporting results. The main field of study assumed by this research involved the use of the two main terms - tourism and entrepreneurship - for the search of all scientific papers studying these two concepts. Thus, the following search profile was established in WoS:

("entrepreneurship" OR "entrepreneurial" OR "entrepreneur") AND "tourism"

This search profile, although not exhaustive, yielded a comprehensive number of scientific documents for further study. We must mention here that, although not specifically stated, this search profile, specifically the results that were yielded, include all research pertaining to sustainability. The search results have been treated with a series of refinement criteria.

The timeframe criterion was completely liberalized; our interest was manifested for the whole period of platform indexation. The results spanned from 1995 to 2020 (21st of June 2020, was the date of the search query). *The language criterion* - results expected were limited to the English language. *Document types* - articles (book chapters and proceedings have been excluded). The *WoS categories* considered for the search were hospitality, leisure, sport tourism, management, business, and economics. *Research areas* are Business economics.

Following the search and refinement stage, 322 list items were obtained. For each publication, the full record, including cited references, was obtained. The bibliometric analysis followed two important phases. The data obtained is analyzed with the help of two pieces of software - HistCite and VosViewer. While HistCite has a data analysis role, VosViewer uses visualization to underline distinctions and bring refinement to the analysis. To perform the bibliometric analyses, the first software we employed was HistCite software, a quantitative method for analyzing systematic literature reviews (Zupic and Čater, 2015). The tool is used to gain a clear view of the structure of a specific field (Garfield et al., 2006; Zupic and Čater, 2015). The software's main purpose is to make it accessible for researchers and authors to perform bibliometric analysis (Bankar and Lihitkar, 2019) by identifying the most significant authors, journals, cited references, institutions, and countries (Thelwall, 2008). Bibliometric visualizations represent a powerful way of drawing detailed information from the analysis and presenting overviews of data from multiple sources, showing developments over specific time frames, revealing clusters and connections (i.e., network analysis). The visualization software chosen for this research was VosViewer Software (Van Eck and Waltman, 2011). From the variety of analyses and visual representations that VosViewer is known for, we chose the bibliographic coupling and cartography analysis. Results are presented in visual form, revealing the research clusters.

From the data obtained following the search query, a subset of data was retrieved, namely the entrepreneurship and sustainable tourism research data, which was compared and contrasted through the same type of analysis in order to answer RQ2. For retrieving this subset of data, we built upon the already conducted stages of the analysis and selected the articles that made use of this keyword, reflected in the keyword co-occurrence analysis. The size of the subset allowed us to evaluate each article.

RESULTS AND DISCUSSION

The HistCite results reveal that between 1995 and 2006, there were published only nine research articles. From 2007 to 2020, 313 papers were published, with 235 of these in the last five years). This finding indicates that tourism entrepreneurship is quite a new field of research and upholds the fact that, before 2006, tourism entrepreneurship was in the evolutionary stages of the concept. The ascending number of annual publications points out that the subject began to represent an area of interest for authors.

Table 1. Title terms by the count of publications (Source: retrieved from HistCite)

No.	Word	Publications	Percent
1	Tourism	274	85.10
2	Entrepreneurship	198	61.50
3	Innovation	91	28.30
4	Business	90	28.00
5	Performance	86	26.70
6	Entrepreneurial	70	21.70
7	Social	65	20.20
8	Development	62	19.30
9	Management	60	18.60
10	Industry	55	17.10

The ranked Word List generated by HistCite displays the vocabulary taken from the document's title and excludes words with two characters or less and stop words. We choose to rank the words by the count of the publications in which they are title terms (Table 1). It is not a surprise that the terms *Tourism* and *Entrepreneurship* got the top scores of the title terms, as they were also part of the search profile. Ranked third, fourth, and fifth, we see *Innovation*, *Business*, and *Performance*.

With the use of the visualization software, further steps into mapping the tourism entrepreneurship knowledge base were made as we approached RQ1. In order to determine the research topics that have been addressed during the last decades on tourism entrepreneurship, we looked into the occurrence of keywords, a tool or analysis within VosViewer that quantifies terms and themes studied within the articles. Starting with a number of 1,532 keywords within the collection, and after applying a limiting factor of 3 minimum number of occurrences, 207 keywords met the threshold. The co-occurrence analysis revealed a list of classified terms on two criteria - the number of occurrences and total link strength. Figure 1 represents an overlay visualization of the analysis. While the size of circles and the labels show the higher number of keyword occurrences, the thickness of the lines shows the strength of the co-citation links. In this display, the data is reviewed against a timeline, as the color code details. Thus, we can see that themes such as innovation, performance, hospitality, strategy, growth have been researched and cited more extensively than others. Moreover, of more recent interest to scientific research (yellow color – the year 2018 as average publication date) have been themes such as sustainability, tourism clusters, entrepreneurial marketing, uncertainty, entrepreneurial impact, social entrepreneurship, networks.

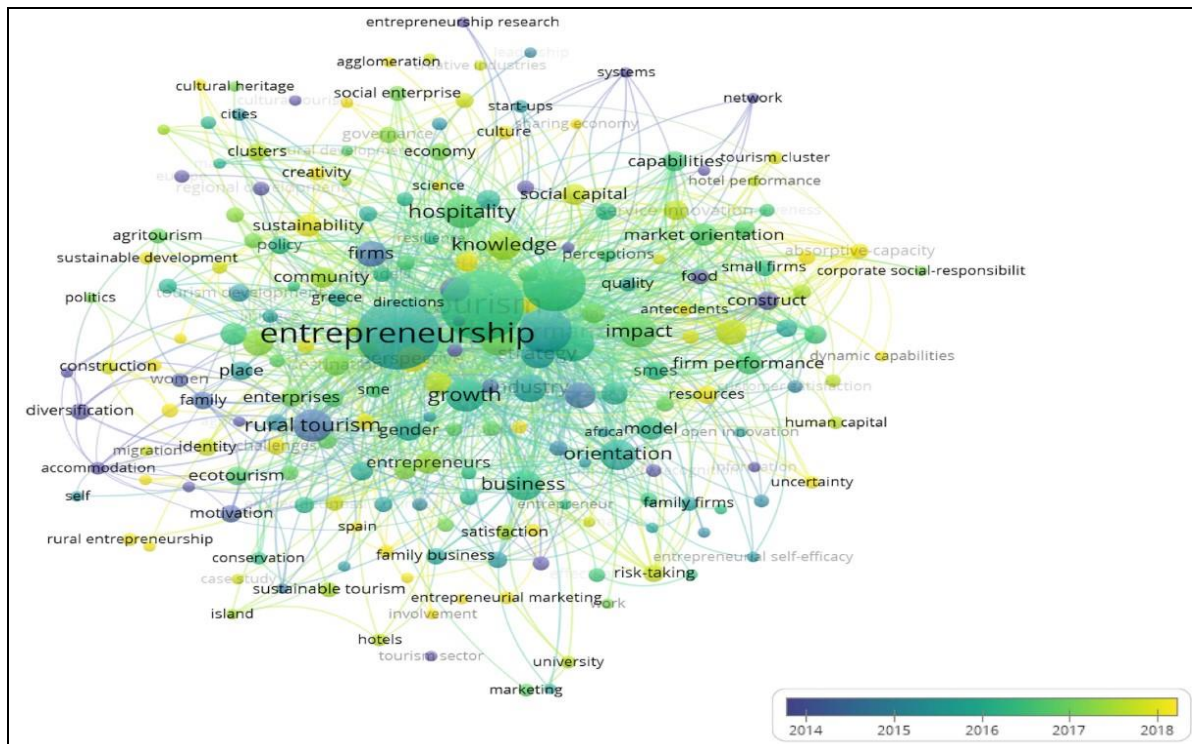


Figure 1. Keywords co-occurrence network in the “overlay visualization” display mode (Source: retrieved from VosViewer)

Research Question 3 looks within the entrepreneurship tourism research collection and attempts to see what is the place of sustainable tourism; how much has it been published, what authors, articles, and journals dealt with the theme, what papers are the most cited.

Within the 322-article collection, only a fragile sub-set of articles has been identified as looking at sustainable tourism. The sub-set contained 14 published articles written by 34 authors, with the first article having appeared in 2008. Although in small numbers, the trend is growing, with each year revealing an increasing number of published works on the relationship between entrepreneurship, tourism, and sustainability, hinting towards an increasing interest in this research topic. In our findings, there are 12 journals related to sustainability issues in tourism entrepreneurship. One journal has published three articles, and each of the others has published only one article. As we can see in the following list, not all the journals are specialized on this topic, but these results signal growing interest in it.

1. *International Journal of Contemporary Hospitality Management* – 3 articles
2. *Amfiteatru Economic* – 1 article
3. *Journal for International Business and Entrepreneurship Development* – 1 article
4. *Journal of Destination Marketing & Management* – 1 article
5. *Journal of Hospitality and Tourism Management* – 1 article
6. *Journal of Science and Technology Policy Management* – 1 article
7. *Regional Studies* – 1 article
8. *Retos – Revista de Ciencias de la Administracion Y Economia* – 1 article
9. *Systems Research and Behavioral Science* – 1 article
10. *Technological and Economic Development of Economy* – 1 article
11. *Tourism Management* – 1 article
12. *Transformations in Business & Economics* – 1 article

After listing the journals, we wanted to identify the most cited paper in our collection (Table 2). According to HistCite report, there are 833 cited references for our collection. Two of the first ten most cited papers have each four citations, another two papers have each three citations, and more than 50% of top-10 papers have each two citations, meaning either they are not relevant to be cited or, in some cases, the articles are relatively recent and had no time to be cited. Contrasting the results obtained on this narrowing lens with the results of the main query (entrepreneurship and tourism), which is the objective of RQ2, we noticed that there is little to no overlap in terms of main authors, publications, and journals. Nevertheless, it is obvious that there is a growing trend in research publication for sustainable tourism entrepreneurship.

CONCLUSIONS, IMPLICATIONS, AND LIMITATIONS

Since the beginning of research on sustainable entrepreneurship in tourism, many authors have made considerable contributions in developing this field, commonly characterized as one of apparent confusion and immaturity. Whichever perspective is taken, a mix of approaches have been used to interpret the results, through various lenses. The purpose of the present study is to assign clarity to the relationship between entrepreneurship, tourism, and sustainability, along with identifying future research trends. For this, a 25-year bibliometric analysis was conducted on the literature on entrepreneurship tourism issues published in Web of Science between 1995 and 2020. The analysis of the leading authors, journals, scientific papers, and keywords indicates that sustainability is becoming a strategic approach for tourism and highlights the importance of this subfield within the entrepreneurial tourism literature.

Through the visualization software, the main research themes addressed so far were presented within a network context. Themes such as innovation, performance, hospitality, strategy, growth have been researched and cited more extensively than others. The number of links and the total link strength among the network's items also revealed gaps in research and potential future trends. After looking at the subset of data on sustainable tourism entrepreneurship, results acknowledged that there is almost no overlap in terms of the main authors, publications, and journals that have been identified as influential on both sets of data. The literature found on sustainable tourism entrepreneurship presents a structure with a small number of papers. Six main clusters of themes pertaining to tourism entrepreneurship have been identified: the innovation cluster, entrepreneurship, industry, business, tourism, and perspective clusters. Sustainability appears as a stream of study likely to emerge in the entrepreneurship cluster and in the business cluster (as sustainable tourism).

The present study brings its contributions both for researchers and practitioners. From the academic perspective, the bibliometric analysis offers answers to important questions that authors should ask themselves when studying the field of sustainable entrepreneurship in tourism. For practitioners in the tourism field, this study helps them understand how to integrate sustainability in their responses to environmental challenges and tourism trends. With the gaps and trends identified through the bibliometric research, we can acknowledge the points underlined in the literature review as areas either in need of more comprehensive studies or as hot spots in future research - even both. The uniqueness of the times lived now, a worldwide pandemic, which has affected in a major way the tourism sector makes this research a welcome map of the tourism entrepreneurship knowledge base and a backdrop for future similar endeavors. Although the research has particularly focused on finding all published articles in WoS having tourism and entrepreneurship keywords in the title, the keywords, and abstract, there could be other relevant studies of tourism entrepreneurship, which did not meet the search criteria. The main limitations come from the selected platform (i.e., Web of Science), research type (i.e., articles), and language of publications (i.e., English). Having attempted a tri-fold research on tourism entrepreneurship through the lens of sustainability, we noticed a limitation arising from over scrutinizing the databases, which may have rendered fragile some of the results. Another limitation of the study comes from the way a network visualization may lend qualitative significance or insignificance to certain items because of a time-related bias. In order to refute such errors, corroboration with the overlaying visualization, which has the capacity to accommodate the time frame criterion, is recommended.

While the scope of this research has been clearly delineated, future research on the field of sustainable entrepreneurship in tourism can increase the amplitude of the study by adding other scientific works from Scopus and similar platforms because, as the bibliometric analysis indicates, sustainability is an interesting topic for researchers in the tourism entrepreneurship field and is increasingly getting attention.

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THE INTERDEPENDENCE BETWEEN TOURISM AND INNOVATION ACTIVITY IN THE WESTERN BORDERLANDS OF RUSSIA

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Abstract: An intensive movement of people, which is typical in areas with strong tourism industry, is perceived to provide numerous positive externalities with regards to the diversity of cultures, ideas, and knowledge. Border regions act as natural contact zones experiencing the influx of tourists across borders. The borderland is expected to benefit from their geolocation and intensive cross-border cooperation, acting as testing grounds for external innovations. The article is designed to test the interdependence between the tourism industry and innovation activity in the borderland. The study focuses on the western border regions of Russia, which is a highly divergent area in terms of socio-economic development and experiences challenging times in the context of geo-economic turbulence after 2014. By using the statistical research method, the study develops on evaluating the dynamics of indicators for tourism industry development and innovation activity. The eight-year period of 2012-2019 is applied for taking into account the lag in innovation performance resulting from the positive externalities of tourism. Results show that the growth in tourism industry and innovation activity of found in regions with intensive public expenditure on large-scale infrastructural projects.

Key words: innovation activity, tourism industry, innovation security, border regions, borderland, Russia

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INTRODUCTION

There are numerous regions and countries around the globe whose socio-economic development depends on tourism. According to the World Travel and Tourism Council (WTTC) annual report of 2020, the tourism industry contributes to 10.3% of global economy GDP and acts as one of the world's largest employment sectors supporting 330 million jobs as of 2019. The country level data suggests that individual countries' economic dependence on tourism reaches over 50% of GDP, e.g. Macau – 91.3%, Aruba – 73.6%, British Virgin Islands – 57.0%, Maldives – 56.6%, US Virgin Islands – 55.5% (WTTC, 2020). Surely, the COVID-19 pandemic has affected the tourism industry, causing many SMEs and even large businesses go bankrupt. The United Nations World Tourism Organization (UNWTO, 2021) reports of a significant drop in international arrivals by 74% in 2020, predicting a long-lasting impact of the pandemic – the pre-pandemic level of tourism activity is not expected before 2023. With that, the optimistic projections suggest a gradual recovery and an increasing growth of domestic tourism after the lockdown (Assaf and Scuderi, 2020). Moreover, the resilient strategies of tourism are highlighting its complex cross-industry nature and diversification spread on to (un)related variety of economy sectors (Romão, 2020).

Most of the popular tourist destinations have developed regional clusters of related activities that boost the development of catering, entertainment, wellness, crafts, cultural facilities, transportation, farming, education services and other complementary activities (Sigurardottir and Steinthorsson, 2018; Vorobiova et al., 2019; Mauri and Turci, 2018). This cross-sectoral “fertilization” inevitably increases economic resilience. The inflow of tourists facilitates entrepreneurship and favors the diversity of economic activities (Lejárraga and Walkenhorst, 2013). While the correlation between tourism intensity and economic performance is extensively monitored and widely documented, the interdependence between the tourism and innovation activity is far less studied (according to Gomezelj (2016), these are only 12.4% of all published research on tourism). On the one hand, the innovation performance studies focus on the tourism industry itself. These are predominantly incremental and adaptive innovations that improve certain attributes and functions but rarely create any disruptive effect (Panfiluk, 2021). For instance, Brandão et al. (2019) note that innovation towards the tourism products is particularly relevant considering the change in consumer behavior, thus, are responsive to modern customer expectations. Digitalization is one of the vivid examples (Happ and Ivancsóné Horváth, 2020), starting from online and mobile bookings of hotels, travel tickets, and restaurants on to customized offerings of travel packages. There is a global trend on consumer-driven and environmentally friendly innovations in tourism and hospitality that cover the diversity of interrelated services and products combined in a single quality perception of a tourist about the

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destination and the local community (Pikkemaat et al., 2019). For the customer tourist experience is being composed of market offerings (products and services) from multiple providers, the tourism industry is highly interested in developing the regional market along with other “interwoven” economy sectors and the public environment (Hoarau, 2014).

On the other hand, the tourism is, therefore, found to be the trigger of regional innovation activity. Ozseker (2019) argues that the configuration and the development trajectory of a local innovation system can be transformed by the tourism industry and the tourism innovation systems (TIS). The TIS is defined as “...the parts and aspects of the economic structure and institutional set-up affecting learning and innovation in tourism firms” (Sundbo et al., 2007: 93). The organizations in tourism destinations tend to be highly networked, forming a “loosely articulated groups of independent suppliers linked together to deliver the overall product” (Scott et al., 2008: 171). Moreover, Verreyne et al. (2019) clarified that tourism market does incorporate firms that are not limited to those generally classified as tourism firms and expand to the related sub-sectors. Therefore, the innovation activity is facilitated by firms within and outside the tourism industry.

Of particular interest to this study is the role of tourism in driving the innovation activity of border regions. The regional development strategies of the borderland inevitably focus on cross-border cooperation while balancing between the contact and barrier function of the border (Kolosov et al., 2016). By focusing on international markets with a wide network of inter-organizational and cross-industry ties the tourism industry companies can foster innovation and change (Brandão et al., 2018). The diversity of cultures, ideas, and knowledge “spilling” over the border support the absorption of new technologies and innovation. The border regions could act as testing grounds collecting the tacit knowledge and adopting the foreign-born innovations to the national institutional context (Mikhaylov et al., 2020). As noted by Zach and Hill (2017), networking and boundary spanning favors the in-flow of new ideas, while close collaboration facilitates the implementation and application of the shared knowledge. In recent years, the development of border regions via the implementation of cross-border cooperation in tourism has received an increased attention (Nilsson et al., 2010; Rajčáková and Švecová, 2013; Vaishar et al., 2013). Scholars indicate that border areas are better aligned with the needs of tourists and are prompt to response with market-specific innovations (Weidenfeld, 2018). Moreover, the international movement of people (and tourist mobility in particular) and temporary face-to-face interactions between knowledge receivers (residents) and providers (tourists) is much more intensive at the border regions, where tourism plays an essential role in disseminating knowledge and innovations (Weidenfeld, 2013). The study of Makkonen et al. (2018) presents the classification of the cross-border knowledge flows, distinguishing between the intentional (knowledge transfer) and unintentional (knowledge spillovers) knowledge sharing. The authors conclude that cross-border tourism can address the issues of peripherality by achieving synergies with neighboring territories. In this paper we aim to analyze the co-development of both tourism and innovation activity in the borderland based on empirical data from the western border regions of Russia. In the next section we describe the methodology for our study and Section 3 provides our empirical results. The paper closes with some discussion and conclusions.

MATERIALS AND METHODS

The study area covers 15 western border regions of Russia, listed from north to south: Murmansk region, Republic of Karelia, Leningrad region, St. Petersburg city, Pskov region, Kaliningrad region, Smolensk region, Bryansk region, Kursk region, Belgorod region, Voronezh region, Rostov region, Republic of Crimea, and Sevastopol (Figure 1). These regions are the contact zones with eight countries: the European Union member states (Finland, Estonia, Latvia, as well as Lithuania and Poland in the case of exclave territory of Kaliningrad region), Norway, Belarus, and Ukraine.



Figure 1. The location of the study area (Source: developed by the authors)

The Federal State Statistics Service of the Russian Federation (Rosstat, URL: www.gks.ru) is used as a primary source of data. The research design is structured into three stages: 1) *Measuring the dynamics of institutional density* – the number and diversity of tourism-

related (Accommodation facilities, Sanatoriums and resorts, Travel agencies) and research-intensive (Research organizations, Share of innovative organizations) organizations. The institutional density is determined as the primary indicator of the tourism industry development and its possible impact on the regional economy; 2) *Measuring the performance dynamics* – the output of the tourism sector (Tourist packages sold, People sent on tours, Persons placed in collective accommodation facilities, Persons placed in health resort organizations) and the indicators of the innovation activity (Internal research and development costs, Technology development costs, Number of technologies used, Volume of innovative products, Share of innovative products in GRP); 3) *Measuring the relationship between tourism and innovation activity* using the average annual growth rate performance. The data archive depth covers eight years – from 2012 to 2019. Due to inconsistency in the statistical data series the dates of individual indicator values were taken for the closest available dates. Therefore, some values start from 2010 or 2011. The eight-years period considered ensures detection of both the long-term trends and the changes after geo-economic turbulence started in 2014 after the geopolitical shocks at Ukrainian-Russian border.

The data on both tourism and innovation development is assessed in absolute values and analyzed via annual growth rates. The comparison between tourism and innovation activity is provided via relation of the accounted average geometrical growth rates. Due to the general lag period of implementing innovations, the formula used accounts for the indicators on innovation activity with a one-year lag as compared to the tourism development (i.e. the time lag between industry and innovation is considered to be equal to 1 year):

$$I = \frac{\sqrt[n]{V_{0t} \cdot \dots \cdot V_{nt}}}{\sqrt[m]{V_{0t-1} \cdot \dots \cdot V_{mt-1}}} \quad (1)$$

I – the index reflecting the relation of tourism development against innovation activity in the previous period; n – the number of indicators accounted for tourism industry development; m – the number of indicators accounted for innovation activity development; v_{nt} – the annual growth rate of the n_{th} indicator on tourism industry in the year t ; v_{mt-1} – the annual growth rate of the m_{th} indicator on innovation activity in the year $t-1$. The average indicator values are calculated for every region, for all the regions in the given year (to indicate the general dynamic changes for all the western borderlands), for the whole period of 2011-2019 (related to 2010-2018), and for the period 2015-2019 (related to 2014-2018) – in order to point out the specifics of this period after the beginning of geo-economic turbulence.

RESEARCH RESULTS

The institutional density of tourism industry and innovation activity

The statistical assessment of the institutional density of the western border regions of Russia in absolute values marks the general congruence between the tourism industry and the innovation sector development of the most advanced regions. Not only Krasnodar region as the center of coastal tourism at the South, but other regions with developed innovational environment are among the leaders of tourism industry development (Figure 2). The prevailing role of St. Petersburg as both the ‘culture capital’ of Russia and large science & technology center is discovered as expected, but the development dynamics of organizations is independent: while the number of sanatoriums and resorts is in decline, the number of travel agencies and accommodation facilities multiplies, that reflects the change of the touristic profile of the city. This trend takes place against the background of reducing number of research organizations and the declining share of innovative organizations in the recent years.

It is noticeable that both vectors of growing and reducing research and innovative organizations predominantly correspond the similar dynamics found for travel agencies and in a lesser extent of accommodation facilities, sanatoriums and resorts.

The calculation of the composite index demonstrates that in most of the regions the development dynamics in the number of research (knowledge-generating) and innovation (knowledge commercialization) organizations are generally in proportion with the tourism industry dynamics – most values equal or are very close to 1. The multiplicative superior growth of tourism institutional density is noted in 2014-2016, which is the period of the most geo-political tension at the western borderland of Russia, followed by the proportional co-development of innovation sector with the two-year wave length oscillation (Table 1).

Year / Region	2012	2013	2014	2015	2016	2017	2018	2019	2012-2019	2015-2019
Murmansk region	1.15	0.90	0.85	1.09	1.01	1.43	0.93	0.91	1.02	1.06
Republic of Karelia	0.87	0.93	1.21	1.15	1.10	0.97	1.48	0.78	1.04	1.07
St. Petersburg	0.92	1.05	0.91	1.15	1.34	1.43	0.94	0.91	1.06	1.13
Leningrad region	1.02	0.93	1.11	1.09	0.84	1.33	1.02	1.08	1.04	1.06
Kaliningrad region	1.21	0.83	0.91	1.87	0.62	0.98	1.33	0.85	1.02	1.05
Pskov region	1.08	1.07	1.18	0.96	1.00	0.94	1.12	1.12	1.06	1.03
Smolensk region	0.94	1.06	0.96	1.07	0.76	1.10	1.09	0.99	0.99	0.99
Bryansk region	0.85	1.10	1.11	0.96	1.17	1.09	1.11	1.05	1.05	1.07
Kursk region	0.66	1.07	1.20	1.16	1.13	1.04	1.19	0.96	1.03	1.09
Belgorod region	0.92	1.32	0.91	1.10	0.70	1.22	1.07	0.90	1.00	0.98
Voronezh region	0.92	1.04	0.99	1.39	0.77	1.12	0.97	0.93	1.00	1.01
Rostov region	1.00	0.92	1.12	0.95	0.82	1.15	1.12	0.98	1.00	1.00
Krasnodar region	1.03	0.90	1.12	1.04	0.89	0.95	0.99	1.11	1.00	0.99
Republic of Crimea	-	-	-	-	2.24	1.25	0.88	1.19	1.31	1.31
Sevastopol	-	-	-	-	4.35	0.21	0.92	1.04	0.97	0.97
Average	0.96	1.00	1.04	1.13	1.07	1.01	1.07	0.98	1.03	1.05

Table 1. The interdependence of tourism and innovation sectors growth rates by institutional density (Data source: developed by the authors)

Note: the index is based on the following data: in the numerator are the growth rates of indicators – the number of travel agencies, the number of collective accommodation facilities, the number of sanatorium-resort organizations; in the denominator are the growth rates of indicators – the number of research organizations, the share of innovative organizations in the total number of organizations.

The most extensive growth of tourism industry in relation to innovation activity for the whole period is typical for St. Petersburg, Pskov and Bryansk regions, and in the less extent for the Republic of Karelia and Leningrad region (the highest values for the Republic of Crimea is due to its inclusion into Russian economic and legal system that caused the need for transformation of the previous regional system of tourism business and its reorientation to Russian demand in the conditions of economic sanctions). The values of the indicator for the post-

turbulent period are generally higher, that marks the trend to an active development of tourism. The only exception is Smolensk region, and in Belgorod region the development of tourism is not as fast and intensive as the innovation growth of the region. It is noticeable that in the last two years the value of indicator is below 1 in both northern and southern regions (except Krasnodar region). This recent trend can mark the need for new impetus from innovation environment for the further qualitative growth of tourism industry.

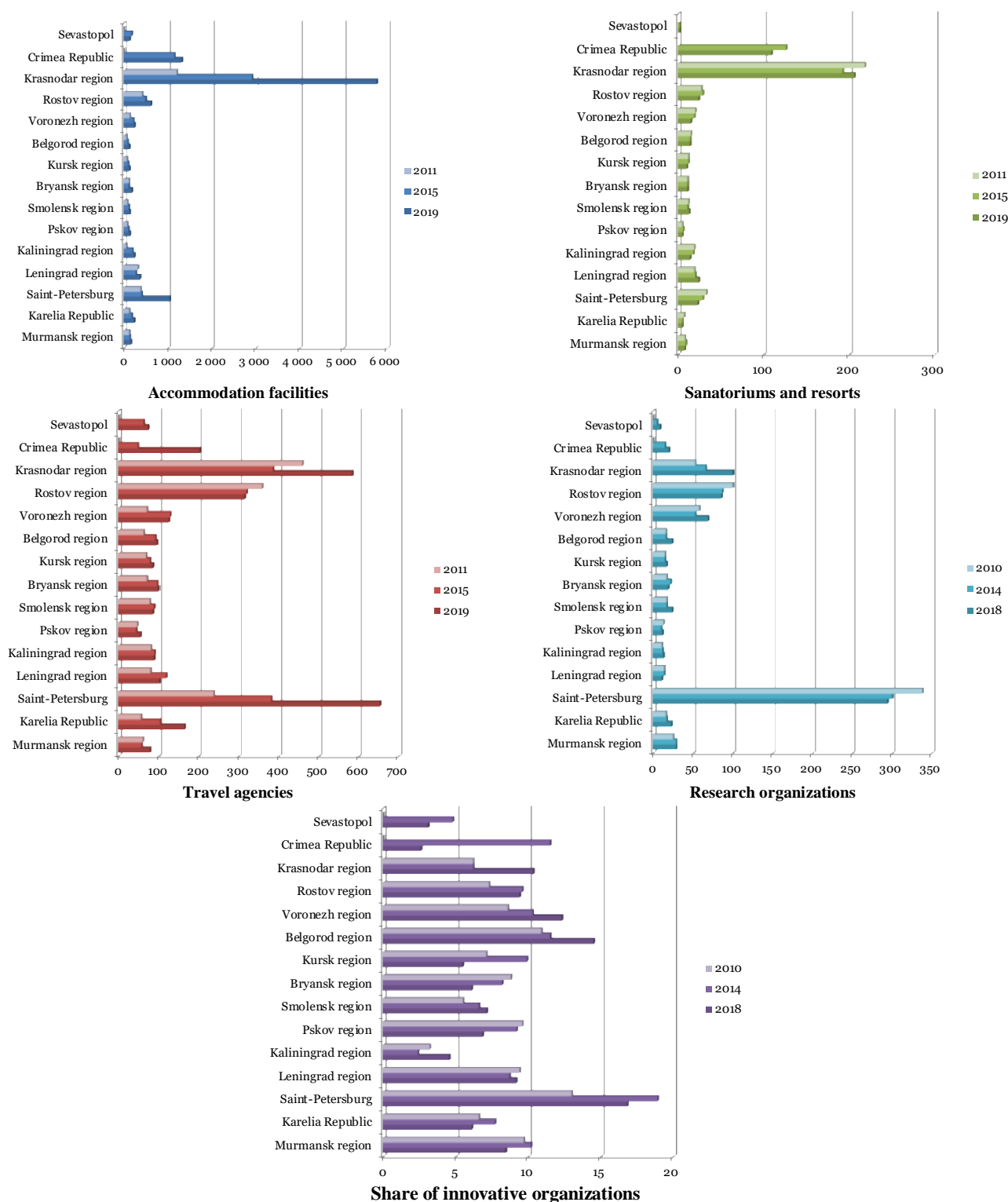


Figure 2. Institutional density dynamics of tourism and innovation activity (Source: developed by the authors)

The tourism sector performance and the innovation activity indicators

The performance indicators predominantly duplicate the picture of institutional density. There is a notable difference and a clearly reflected division of function between recreational and healthcare tourism in the southern coastal regions against the historical and cultural tourism in the north (including the 'northern capital' of Russia – the Saint-Petersburg). The data also reflects the growing role of Kaliningrad and Leningrad regions (Figure 3). The dynamics of expenditures on innovations, their use and production in comparison to tourism industry performance indicate the lack of innovations in the Republic of Crimea and the need for modernization of its infrastructure and development internal potential for creating and conducting the innovation adapted for the local use (Figure 4).

Generally, there is less divergence in use of innovations than in their production and expenditures. This could indicate the lack of internal financial and human resources in small regions needing the cross-regional technological projects with the territorial division of labor.

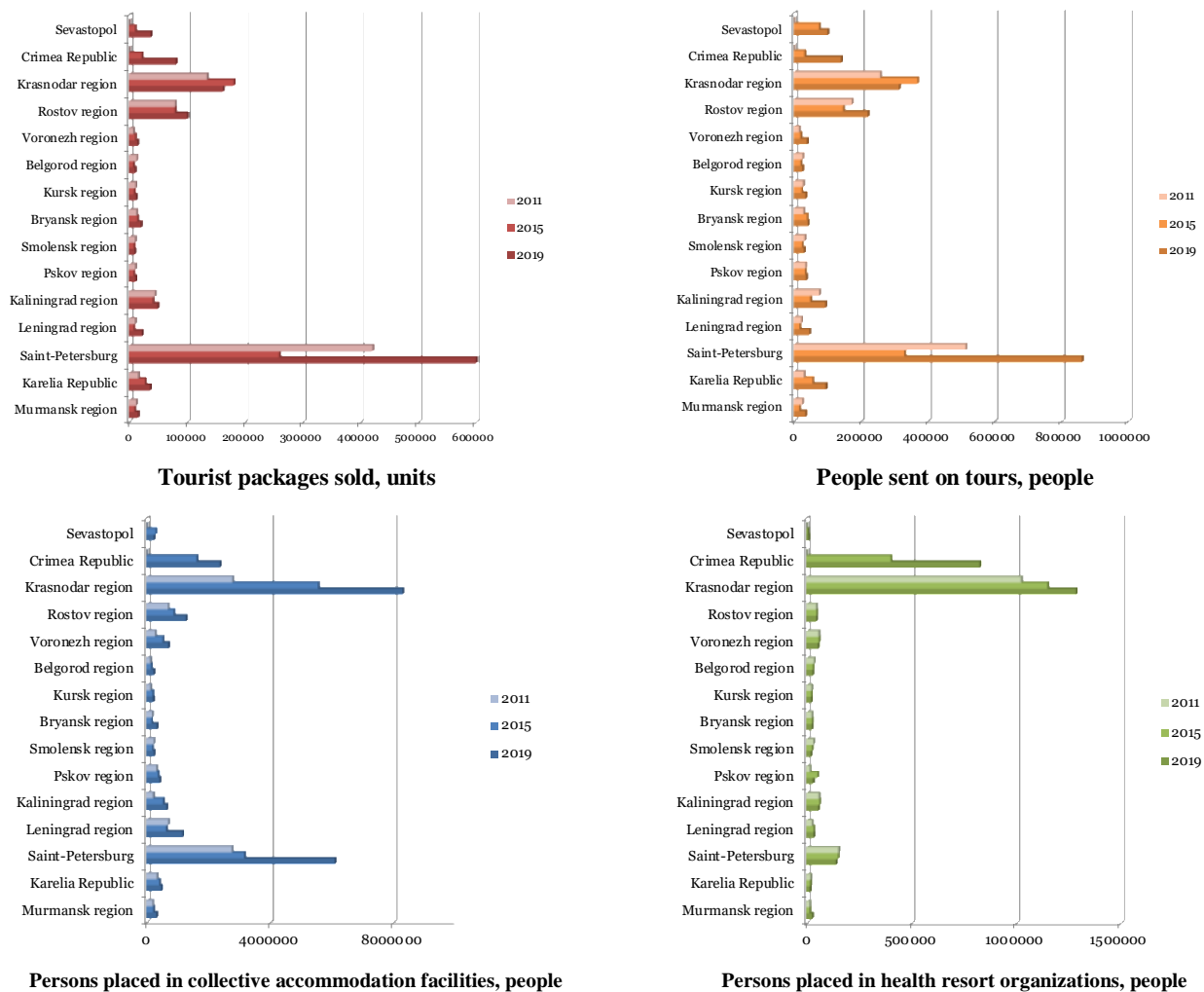


Figure 3. Dynamics of tourism industry performance (Source: developed by the authors)

The index of output performance between tourism industry and innovation activity demonstrates a different picture (Table 2).

Year / Region	2012	2013	2014	2015	2016	2017	2018	2019	2012-2019	2015-2019
Murmansk region	2.01	1.16	0.38	0.39	1.54	1.44	1.29	0.86	0.98	0.99
Republic of Karelia	2.12	1.50	1.50	1.15	1.11	0.49	1.04	0.38	1.02	0.75
St. Petersburg	0.97	0.83	0.52	0.93	1.59	0.91	0.98	1.03	0.93	1.06
Leningrad region	1.01	1.16	0.45	0.89	1.20	1.80	0.74	1.12	0.98	1.10
Kaliningrad region	0.79	0.67	1.59	1.19	0.35	1.16	1.38	1.03	0.93	0.93
Pskov region	0.88	0.80	1.51	1.60	0.50	0.77	0.86	0.98	0.93	0.88
Smolensk region	0.89	0.91	0.82	0.63	1.05	1.16	0.71	1.36	0.91	0.94
Bryansk region	0.84	0.65	1.35	0.94	0.55	0.86	1.65	1.34	0.96	0.99
Kursk region	0.50	0.74	0.66	0.91	1.27	0.69	0.99	1.06	0.82	0.97
Belgorod region	0.96	0.83	0.92	0.63	1.19	0.53	0.82	0.92	0.82	0.78
Voronezh region	1.07	1.05	1.09	0.85	0.76	1.59	0.84	1.02	1.01	0.97
Rostov region	0.95	0.67	0.77	0.83	0.64	1.03	1.43	1.54	0.94	1.04
Krasnodar region	0.88	0.97	1.34	0.67	1.01	0.39	0.57	1.40	0.84	0.73
Republic of Crimea	-	-	-	-	0.95	0.67	1.38	1.29	1.03	1.03
Sevastopol	-	-	-	-	-	-	-	0.74	0.74	0.74
Average	0.99	0.89	0.90	0.85	0.90	0.88	1.00	1.02	0.93	0.93

Table 2. The interdependence of tourism and innovation sectors growth rates by performance (Data source: developed by the authors)

Note: the index is based on the following data: in the numerator are the number of tourist packages sold to the population, the number of people sent on tours, the number of people accommodated in collective accommodation facilities, the number of people accommodated in sanatorium-resort organizations; in the denominator are the internal costs of research and development, technology development costs, the number of technologies used, the volume of innovative products, the share of innovative products in the GRP. Most of the regions demonstrate disproportion of the faster growth of innovation performance than tourism sector (except the Republic of Karelia and Voronezh region, the high values for the Republic of Crimea and the lowest for Sevastopol are caused by the extremely low values of the primary indicators and the short period of statistic monitoring). For the last 5 years, the proportion between the tourism and innovation activity was

reached in St. Petersburg, Leningrad and Rostov regions. But in St. Petersburg and Rostov region such trend is mostly due to reduction in innovation performance for the last years, rather than a coherent growth. It is also noticeable that the smallest ratio was in 2015, just after the geopolitical crisis and sanctions have started, unlike the growth of the number of organizations in the same period (Table 1).

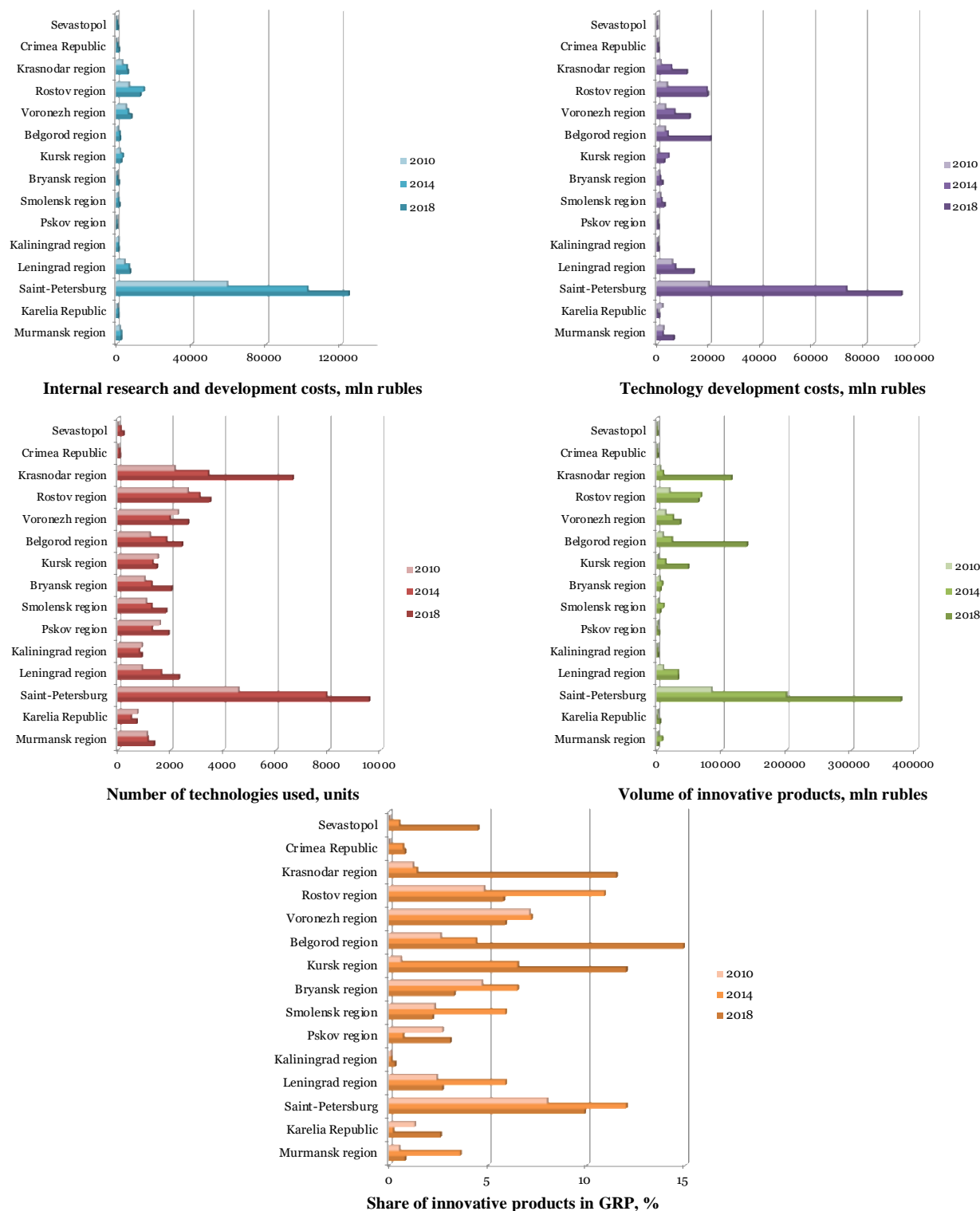


Figure 4. Dynamics of innovation activity (Source: developed by the authors)

The relation of tourism growth to the expenditures on research and technologies was calculated (as such investments can give indirect multiplicative effect for tourism development). This indicator duplicates the previous picture, as most of the regions invest in technologies without multiplication in tourism (Table 3).

Note: the index is based on the following data: in the numerator are growth rates of the number of tour packages sold to the population, the number of people sent on tours, the number of people accommodated in collective accommodation facilities, the number of people accommodated in sanatorium-resort organizations; in the denominator are the growth rates of the technology development costs. The main difference is the higher value of the indicator in 2015 (unlike in all other years) and its modest growth up to 2019. Generally, taking into account the whole period, the investments into technological innovations do not correlate with the tourism industry. The situation

changes in the recent years. The most extensive effect takes place in Leningrad and Kursk regions, and smaller one in St. Petersburg, Rostov and Bryansk regions, and the Republic of Crimea; the advanced innovation development is observed in the Belgorod region.

Year / Region	2012	2013	2014	2015	2016	2017	2018	2019	2012-2019	2015-2019
Murmansk region	3.61	0.98	0.46	0.57	1.88	1.34	1.31	0.19	0.93	0.81
Republic of Karelia	2.66	2.53	2.73	2.46	0.67	0.16	1.22	0.70	1.19	0.74
Saint-Petersburg	0.68	0.87	0.44	0.86	1.57	0.78	1.06	1.09	0.86	1.04
Leningrad region	0.80	0.66	0.15	9.40	0.52	3.05	0.19	3.09	0.96	1.55
Kaliningrad region	1.10	0.34	1.21	1.75	0.19	0.36	3.28	2.06	0.88	0.95
Pskov region	0.66	0.48	1.55	2.15	0.72	0.31	1.53	0.87	0.87	0.91
Smolensk region	0.62	1.30	1.03	0.72	0.60	0.92	0.81	1.44	0.89	0.86
Bryansk region	0.73	0.55	1.26	1.60	0.79	0.57	2.06	0.82	0.94	1.04
Kursk region	0.28	0.65	0.33	1.71	4.05	0.48	1.17	0.84	0.82	1.26
Belgorod region	1.48	1.30	1.27	0.25	2.02	0.12	0.90	1.18	0.79	0.58
Voronezh region	0.44	1.37	0.92	1.16	0.73	1.49	0.60	1.10	0.91	0.97
Rostov region	0.86	0.29	0.80	1.04	0.49	1.02	1.50	1.67	0.84	1.06
Krasnodar region	0.39	0.39	0.80	3.22	0.98	0.59	0.22	4.04	0.82	1.11
Republic of Crimea	-	-	-	-	0.91	0.76	1.47	1.12	1.03	1.03
Sevastopol	-	-	-	-	-	-	-	0.46	0.46	0.46
Average	0.84	0.74	0.80	1.40	0.88	0.62	0.99	1.09	0.89	0.96

Table 3. The interdependence of tourism industry growth to technology development costs (Data source: developed by the authors)

CONCLUSIONS

The study identified that the co-development of tourism and innovation activity in the western border regions of Russia is moderate. There is the resonance and disproportion in terms of the institutional density of both activities that, however, follow the general economic trends. The general growth in innovation production has not yet reflected in the extensive growth of touristic services, the externalities of investments into research and technologies only starting to be noticeable in several regions in the recent years (Figure 5).

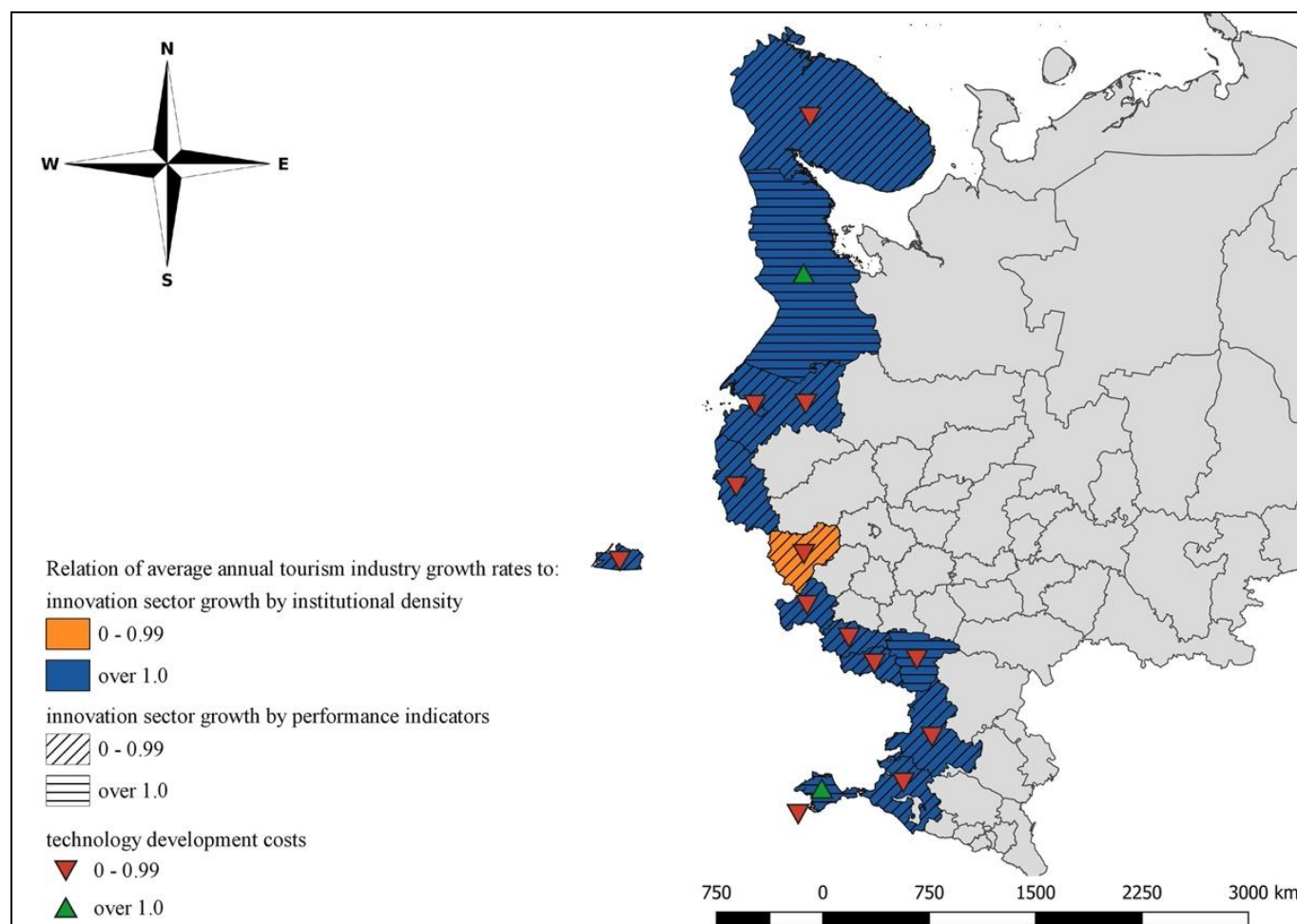


Figure 5. The co-development of tourism industry and innovation activity (Source: developed by the authors)

It means that in the nearest future the growth of demand for innovations can be forecasted in the sphere of tourism, as it needs the qualitative improvements for the further quantitative growth of production. The regions concentrated more on innovations rather than on tourism (e.g. Belgorod and Kursk regions) can find the new possibilities for attracting touristic flows by implementing innovations to develop infrastructure and create additional objects of interest. Moreover, this could increase the resilience of the regional economy due to diversification and mutual reinforcement (Gorochnaya et al., 2020).

The research has shown the deepening differentiation between regions. In this situation the newly involved into national organizational and technological space regions of Crimea peninsula need the special attention for achieving stability and proportions in their development, improving infrastructure with the high-scale use of new technologies. Not only the neighboring of central, but also the regional organizations are to participate in this process. The smaller regions in the central zone of the western borderland need cross-border integration to reach functional division of labor in hi-tech sector and activate knowledge spillovers and mutual investments, which can help in enforcing the modest internal potential. The best situation of touristic development at the background of smaller innovative growth is typical for Leningrad region, as it has the externalities of co-location with St. Petersburg and concentrates the parts of its city agglomeration, so that the diffusion of innovations is faster and more intensive. The fact that in the most of regions the performance of touristic sphere's growth is disproportionally slow in relation to innovation one (at the background of parity of organizational growth) marks the cumulative long-term lack of new technologies in touristic sector in the Russian peripheral regions.

They need the intensive and qualitative changes. This lack is partly compensated by the natural potential of the coastal territories and the places of historical and cultural interest that attract tourists, but the further development of the sector needs the radical improvements to gain and maintain national and global competitiveness.

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RIVER DEVELOPMENT AS A SUSTAINABLE GEO-TOURISM WITH A PARTICIPATORY STAKEHOLDER APPROACH

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Abstract: This study initially carried out mapping geodiversity along the Citarum River area and identified the potential for Citarum geotourism, mapping stakeholders in Citarum geotourism. Of the nine sectors (Upper Citarum Zone) of the Citarum River Area mapped, one village can represent the geotourism area, namely Cibeureum Village, Kertasari District, Bandung Regency. This research's research type is PAR (Participatory Action Research) with primary and secondary data collection. Meanwhile, data analysis uses qualitative and quantitative analysis methods (mixed method), content analysis, map analysis, geodiversity analysis, and is equipped with qualitative and quantitative descriptive analysis methods. The results of this study indicate that community participation has yielded benefits for local communities. However, many things need to be provided to the community from various skills to benefit all parties, including maintaining geodiversity sustainability in the geotourism area.

Key words: stakeholder participatory approach; Citarum River; Geodiversity; Geo-tourism; community benefits

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INTRODUCTION

Sustainable development does not only prioritize activities that protect nature but promote the welfare of its people. Tourism activities are near related to sustainable development, especially in the relationship between abiotic, biotic, and cultural aspects, so the term geotourism emerged (Pereira et al., 2018; Dowling, 2013). Ecotourism activities can be carried out through individual tourist visits to geological sites or guided tours (Newsome and Dowling, 2010) via geotourism routes (Newsome et al., 2012), which can be reached by driving, cycling, and walking (Bouzekraoui et al., 2018). The involvement of the local community is very much needed in providing geotours, geo products, geo restaurants, and geo souvenirs (Farsani et al., 2011), of course with the support of the local government in providing infrastructures such as transportation, facilities and infrastructure for tourist attractions, and supporting facilities for geotourism through its territorial planning. These efforts are carried out and improving the economy and public knowledge of geology and aiming to meet geotourism destinations' needs.

The Citarum River flows from the upstream area of Mount Wayang, south of Bandung City, to the north and empties into the Java Sea. With a length of about 297 km. Citarum is the longest and largest river in West Java Province. The Citarum River has a vital role in the community's socio-economic life, especially in West Java and Jakarta. Citarum River water is used as a source of raw water, agricultural irrigation, fisheries, a source for hydroelectric power for the supply of Java and Bali, and water supply for industrial activities. To conserve water resources and other natural resources in the Citarum River area, the development of geotourism can be an alternative in supporting sustainable development. In terms of existing geological diversity (geodiversity), the Citarum watershed area has geosite and geoheritage potential scattered in its scope. Geological heritage, as part of the geotourism component, promotes education and development aspects. Citarum geotourism development cannot be separated from the research program to restore the Citarum River.

According to Government Regulation no. 35 of 1991 concerning rivers, a river area is a unitary irrigation system resulting from developing one or more watersheds. River management must cover the entire river area. Furthermore, (Regulation of the Minister of Public Works and Public Housing Number 04 / PRT / M / 2015 concerning Criteria and Designation of River Basins, the Citarum River Basin is a National Strategic River Basin with River Basin Code: 02.06.A3. The Citarum River Basin consists of 10 districts and 2 Cities with the Citarum river into the main river. Further, CRB consists of 10 sub-Citarum include Sub Citarum Hulu, Citarik, Cisangkuy, Cikapundung, Ciwidey, Ciminyak, Cimeta, Cisokan, Cikaso, and Cikundul.

In 2019 a Research Program was prepared by the Citarum Research Center, Padjadjaran University, a strategic framework for restoring the Citarum River. The research program's elements include urban and community revisioning, design and engagement, and sustainability assessment and projection with indicators that include: 1) a water quality monitoring system Citarum. 2) Handling of wastewater and sanitation. 3) Collaborative waste management. 4) River discharge control. 5) Revitalization of the upstream sub-basin area. 6) Urban monitoring environment with community involvement. 7) Participatory multilevel watershed governance. 8) Increasing awareness of environmental laws at various levels. 9) Research SDGs. The Citarum River research program's direction is necessary to develop Citarum geotourism as sustainable development through a stakeholder participatory approach. The story of Citarum geotourism is prepared based on the water resources management strategy selected from the alternative plan contained in the water resources management pattern by the

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coordinating forum for water resources management in the river basin concerned. Citarum geotourism development as a form of sustainable tourism based on geodiversity through a stakeholder participatory approach is a comprehensive and integrated development prepared through public consultation. It involves the role of the community, business world, academics, and all parties related to the management of natural resources, including water resources in the Citarum River Basin. The various natural resources available in the Citarum river area are the essential capital for implementing sustainable development. This potential can be utilized for development activities in different sectors according to the national development program policies that use natural resources optimally for the people's welfare. By paying attention to preserving the environment's function and balance, geodiversity can be utilized to the fullest as a resource for scientific development and to support natural tourism objects with a geological perspective (Hjort et al., 2015). Geological diversity is the variability of the earth's surface materials, landscapes, and physical processes, for example, materials such as rock, soil, and water (Gray, 2011). Geological diversity is widely recognized for its scientific value and the substantial knowledge benefits it provides to society (e.g., records of past climate change, the evolution of life, and understanding of how Earth systems operate) (Gray, 2011; Gray et al., 2013).

In the context of nature conservation, geological diversity provides many essential services for geological diversity, including providing a substrate and mosaic landforms for habitat development (static aspects), as well as soil formation (biogeochemical and water cycles, and geomorphological processes; for example, water flow regimes, sediment supply, erosion, and rainfall) for habitat maintenance (dynamic aspects). These values are now embedded in the service ecosystem concept (Millennium Ecosystem Assessment) (Board, 2005). Without the contribution of biodiversity, many ecosystem services essential for life on earth would become extinct or require much more expensive technological alternatives. Geological diversity underlies and provides most ecosystem services (Gordon and Barron, 2013; Gray, 2011; Gray et al., 2013). It also provides additional inseparable items (e.g., minerals, aggregates, and fossil fuels) that are typically considered non-renewable capital assets (Gray et al., 2013). The value of biodiversity is classified into five groups that can benefit human life (Gray, 2004; Melelli, 2014): (1) Intrinsic value, independent of social evaluation, is also called scientific value. (2) Cultural values are related to geo-mythological aspects, historical and archaeological aspects, and spiritual and religious aspects. (3) Aesthetic value refers to the visual and non-visual attractiveness of biodiversity, which involves psychological effects on humans. The amount of biodiversity is also significant for geotourism activities. (4) Economical and functional values are useful for using mineral resources such as fuel and construction materials, utilization of landscapes, and utilization of geodiversity, respectively geo-heritage, for geotourism activities. (5) The value of research and education is related to understanding the origin of life and landscapes, landscapes and climate evolution, and paleogeographic reconstruction.

Why geodiversity is so essential, in the last decades, there has been an appreciation of the values of a broader range of geodiversity and its relation to landscape and biodiversity conservation, economic development, climate change adaptation, sustainable land and water management, historical and cultural heritage, and health community and well-being (Gordon and Barron, 2013; IUCN, 2012). Geological diversity is an important starting point for ensuring biodiversity and natural diversity as a whole. Geological diversity is a geological component that functions as a historical trace of the earth's formation. Geotourism is tourism services and facilities for tourists in obtaining knowledge and understanding of the geology and geomorphology of a geological site (Hose, 1995). In Indonesia itself, the publication of geotourism has been around since 1999 by the Geological Survey Center (Brahmantyo, 2013), which defines geotourism as a tour activity that utilizes all aspects of geology, especially non-living features such as landscapes, rocks, fossils, minerals, and waters, as well as the process of forming these geological features. Furthermore, geotourism is an element of commercialization for tourism activities, mostly based on geological factors (Sungkar and Brahmantyo, 2013).

Geotourism is a sector that emerges from sustainable tourism with global growth, and its formation is based on five main principles, the first three principles, 1) geological-based, 2) sustainable, and 3) educational, which are characteristic of the form of geotourism while the other two directions, 4) are beneficial for the local community, and 5) creating geo-tourist satisfaction, being ideal for all forms of tourism (Dowling, 2011). If properly designed and managed, the linkage between sustainable development and geotourism can provide economic, social, and environmental benefits to geotourism destinations. Sustainable development is a vehicle for creating jobs, stimulating wealth of geological resources, and providing social welfare benefits for the community (Olson and Dowling, 2018).

The General Assembly of the United Nations (UN) has designated 2017 as the International Year of Sustainable Tourism for Development and revealed that designing and managing tourism well can make a significant contribution to three dimensions of sustainable development, depending on the sustainable management of natural resources (Henriques et al., 2019). Sustainable development is a conceptual framework in global growth that represents a multidimensional phenomenon and includes much different human activity (Mihic et al., 2012), one of which is related to a long-term perspective on natural resources (Amir et al., 2015). As the primary source for geotourism, geological heritage is part of the holistic concept of protection, education, and sustainable development (Lazzari and Aloia, 2014). Furthermore, a geopark as a geotourism destination is a pioneer in ecotourism, stimulating socio-economic activities and sustainable development by attracting more and more geo-tourists (Farsani et al., 2011). Geotourism development is based on five main principles, the first three principles, 1) geological-based, 2) sustainable, and 3) educational, which are characteristic of geotourism while the other two directions, 4) benefit the local community, and 5) create satisfaction for geo tourists, is ideal for all forms of tourism (Dowling, 2011).

Table 1. Linkage of geo-tourism and SDGS, results of analysis (2018)

Principles of Geo-tourism	Sustainable Development Targets	Linkage of Geo-tourism with SDGS
Geological-Based	Goals: 6, 13, 14, 15.	Process elements and forms of geo-tourism attraction are fundamental elements of activities geo tourism, this requires the management and protection of the earth's heritage, biodiversity, and culture, followed by educational efforts, awareness, mitigation capacity, and adaptation to the impacts of climate change.
Sustainable	Goals: 4, 6, 8, 12, 13, 14, 15, 17	Encouraging the creation of a local economy, building community capacity, and conservation efforts for geological and non-geological sites through education and cross-sector participation at local, national and global scales.
Educational	Goals: 4, 12, 13	Through active and passive interpretations, local people receive education related to geological diversity, biodiversity and cultural diversity, as well as an understanding of consumption patterns in geo tourists that are in harmony with nature.
Beneficial to Local Communities	Goal: 1, 4, 5, 8, 11, 12, 17	Job creation, education efforts, gender equality, promoting the culture of local communities, and protecting the cultural heritage of their ancestors are of various benefits for the local community. In addition, there are also efforts to increase awareness of integrated sustainable development between the community and various related stakeholders.
Geo-tourism's Satisfaction	Goal: 4, 11, 12, Good	Interpretation provides an experience for geo-tourists, considering that experience is the main product of geo-tourism activities. In addition, accessibility and supporting facilities for geo-tourism are other factors that can create satisfaction for geo-tourists.

Meanwhile, suppose it is related to the Sustainable Development Goals (SDGs) (United Nations, 2015). In that case, the contribution of geotourism is in 11 SDGs destinations, which can be seen in Figure 8 with the following brief explanation: (1) Goal 1, local communities

around the geotourism attraction have equal rights to various sources of income and management of natural resources and inheritance. (2) Goal 4, provide education for local communities and geo tourists to obtain sustainable development and appreciation and contribute to cultural diversity. (3) Goal 5, ensure women's participation and opportunities to take leadership in decision-making in social life and development. (4) Goal 6, protect and restore aquatic ecosystems, including mountains, forests, river swamps, watersheds, and lakes. (5) Goal 8, Encourage the local economy to develop geotourism that creates jobs, promotes culture and local products. (6) Goal 11, Strengthen efforts to protect and to safeguard natural and cultural heritage. Also, it provides accessibility facilities such as green open spaces and is friendly to people with disabilities. (7) Goal 12, Provide education and raise awareness of sustainable development through a lifestyle in harmony with nature. (8) Goal 13, increase knowledge, awareness, and capacity to mitigate and adapt to climate change impacts. (9) Goal 14, prevent and reduce all kinds of marine pollution and protect it sustainably. (10)

Goal 15, conserve, restore, and use freshwater and terrestrial ecosystems and prevent biodiversity extinction. (11) Goal 17, improve cooperation and local, regional, and international stakeholders' cooperation in sharing knowledge, ideas, and implementation.

MATERIALS AND METHODS

From its primary paradigm, action research methods are categorized into interpretive/naturalistic (qualitative) approaches. Qualitative methods can be used to reveal and understand something behind a phenomenon that is little, not yet known (Veal, 2017). This method can also be used to gain insight into something that is little known. By the explanation above and the research objectives to be achieved, the approach used in this study is a qualitative and quantitative research approach. The qualitative approach is directed at the setting and the individual holistically (intact). The qualitative approach in this research is used to obtain in-depth data. For this reason, researchers collect and analyze data on field findings and present them descriptively and the meanings they contain.

The type of research used in this research is PAR (Participatory Action Research), which means that research emphasizes the collaboration of actors and researchers to change situations or behavior, increase knowledge, and increase abilities. PAR is a study where the control is carried out together, both the researcher and the perpetrators. It can also be concluded that PAR is a study that actively involves all parties related to the research subject under investigation in assessing ongoing actions to make changes and improvements for the better.

Participatory Action Research (PAR) builds bridges to connect people (Lovell, 2009; McIntyre, 2007; Jenkins and Ito, 2015; Schuler and Namioka, 1993). This research seeks to develop practical knowledge in understanding social, political, environmental, or economic conditions. PAR is a participatory research and development method that recognizes social relationships and values the reality of our experiences, thoughts, and feelings. This research is looking for something to connect the research process to the process of social change. This research recognizes that the change process is a subject that can be researched. This research brings the research process into the circle of people's interests and finds practical solutions to common problems and issues that require joint action and reflection, and contributes to functional theory. In the study of participatory action, the fundamental principles of research are as follows: (1) The community must be involved in the entire research process, from problem formulation to a discussion about finding solutions to problems and interpreting findings; (2) The research team must be a combination of all elements that bring change; (3) The research process must be seen as part of the educational experience that seeks to build community needs and increase community awareness and commitment; (4) The process should be viewed as a dialectical process, dialogue over time, and not as a static image of a point in time; (5) The object must be the liberation of human creative potential and human resources mobilization for solving social problems.

This study's data collection method is divided into 2 (two) types: primary and secondary data collection. Primary data collection was carried out using observation, field surveys, and interview methods. This study's main source was to determine key sources and sources in this study by purposive snowball sampling, which was carried out from the central level to the local level. The secondary data collection method was carried out by surveying institutional data, such as various spatial planning and tourism at different regional groups. Also, other secondary data collected are statistical data that supports multiple analyzes conducted in this study.

This research uses qualitative and quantitative analysis methods, content analysis, geodiversity analysis (quantitative), and map analysis, and is equipped with a qualitative descriptive analysis method. The data and information obtained are then carried out by the data input process, data management, and data plotting and conversion. Furthermore, the data and information are assessed and tested on existing concepts and theories using qualitative and quantitative analysis procedures through Data analysis before being in the field, data reduction, data presentation, and conclusion drawing; qualitative conclusions will be completed through scoring as a representation of the findings quantitatively, both in drawing temporary conclusions and final conclusions. This is intended so that the qualitative data output does not cause multiple perceptions and can facilitate the communication of research results.

RESULTS DISCUSSIONS

UPPER CITARUM

Geological diversity is the main source of attraction for the sustainability of tourism activities, especially geotourism, in the Upper Citarum Zone. The distribution of geological diversity is supported by biodiversity and cultural diversity in the Upper Citarum Zone, making the area a Geotourism Destination. Geological diversity that has tourism facilities is used as a geotourism attraction, while those that are not supported by tourism facilities make it a geotourism resource. There are 40 geological diversity scattered in the Upper Citarum Zone. Geotourism potential in the Upper Citarum Zone is classified into Upstream Citarum Tourism Destinations, which includes five tourism areas based on the Upper Citarum Sub Watershed division. The tourism area includes 1) Upper Citarum Tourism Area, which includes 13 tourist attractions and 11 tourist resources; 2) Citarik Tourism Area, which includes ten tourist attractions and five tourist resources; 3) Cikapundung Tourism Area, which includes 23 tourist attractions and eight tourist resources; 4) Cisangkuy Tourism Area which includes five tourist attractions and seven tourist resources; 5) Ciwidey Tourism Area which includes seven tourist attractions and eight tourist resources. Meanwhile, in the Cikapundung and Ciwidey sub-watersheds, tourism activities have been running well. This is indicated by the high tourist visits every weekend and long holidays. It will not be separated from time because one condition can not be considered but must compare two conditions for a particular purpose when analyzing a social change in society. There could be noticeable differences in a physical or non-physical object and now the object's condition in the past.

The system is complex, made up of different kinds of relationships, and separated by certain limits from the surrounding environment. Similarly, its complexity is also seen as a system if it is used in human society. Also, qualitatively a system is considered in certain segments of the society, such as economic, political, and cultural aspects. The creation of balance or shock, consensus, contention, harmony or strife, cooperation or conflict, and so on, comes from the interplay of the whole complex systems. Rural society is characterized by a strong inner feeling among members of the village community. A person is an inseparable part of the community in which he lives, with the characteristics of an agrarian society that is closely related to kinship compared to urban society. The life system of an agrarian society is

generally grouped based on kinship, most of the agrarian communities live in agriculture, the society is homogeneous, such as in terms of livelihood, religion, and so on. Agricultural societies are often characterized by farming methods using traditional tools such as hoes, sickles, and others. The mode of production carried out by agrarian societies in the economic sector is usually in agriculture and livestock in traditional ways. Natural resources are in the form of land, water, humans, which in the end, they need raw materials or nature to support life.

Likewise, what happened in Cibeureum Village, where one of the characteristics of rural communities is the high spirit of mutual cooperation. People always help each other in terms of togetherness, as expressed by Mustaqim, one of the farmers, he said that "people often do working together or a kind of collective voluntary work done by the people of Cibeureum Village to clean clogged waterways. Meanwhile, currently, Babakan Village people are starting to find it difficult to be invited to this social service because residents are willing to work socially if they receive cash rewards." (Interview with Mustaqim, 2020). The above statement shows that agrarian society is not stagnant. It develop and change like modern society, but the level of change felt by the people of Cibeureum Village feels slow for years, or it can be said that the trend of change is slow. The tendency to be modest in people's lives always occurs and is deeply rooted in society.

Cibeureum Village is a very large agricultural and plantation area, with the community's average population making use of this vast land to seek or supplement their daily income. The interview results by the researcher with a resident of Cibeureum Village, named Mustofa, said that "the condition of the people of Cibeureum Village is generally a livelihood as a farmer, from father to child. They start working after leaving school. According to him, farming has become a hereditary income from his parents' grandmother (Interview with Mustofa, 2020). With the good natural resources owned by Cibeureum Village, of course, many of the surrounding communities use this land to be used as agricultural and livestock land, with large areas of land, and not much land has been converted into tourism objects or other things. People rely on their land to find their daily needs. The researcher interviewed one of the farmers named Mustaqim. He said: "Before the emergence and development of tourism in Cibeureum Village, the majority of the people were farming, raising livestock, but some people migrated to other cities to sell. Besides that, Mustaqim also said that the conditions of Cibeureum Village were not as similar." (Interview with Mustaqim, 2020). The interview results above show that Cibeureum Village people tend to work as farmers when they are still in an agrarian society. This was supported by the community's direct use of natural resources, as evidenced by the average number of farmers around 743 families. At this time, the people of Cibeureum Village had not experienced social change.

Because society in every development will always experience social changes, these changes occur slowly or quickly, planned, or unplanned. In general, the social changes that occur in society result from modifications to community life patterns that have been influenced so that social change occurs. In line with Herbert Spencer, humans and society, including cultures that experience development through certain stages, change from simple forms to more complex ones and finally become perfect with various industries.

This was reinforced by the results of an interview with one of the farmers named Yanto, he said that: "The condition of the people of Cibeureum Village before tourism did not change much in the community, the community only farmed, raised livestock, and not many people in Cibeureum Village were utilized by tourism (Interview with Yanto, 2020).

THE STATE OF THE COMMUNITY BEFORE THE TOURISM INDUSTRY

With the explanation above the results of interviews conducted by researchers during field observations, the researchers found several aspects that occurred in the community when the community was in an agricultural society, including social and economic aspects.

Rural communities are people who have a strong inner bond with other members of society. The village community will feel that they are an inseparable part of the community where they live, with this assumption that they will always make sacrifices for other communities because they feel that fellow community members should love, respect, and have the right to be responsible together towards peace and happiness in society. One of the characteristics of the Village community is a very intense communication pattern. This also occurs in the Cibeureum Village community, which occurs between community members that are well established before changes that occur in the community with the tourism industry. As for the form of communication that the researcher explored in a resident named Supriatin, he said that: "In terms of communication that occurs in Cibeureum Village, it is interpersonal in which communication is carried out verbally and face-to-face from one person to another. They still have a strong working-together spirit with the characteristics of the village community, cleaning the sewers or something else." (Interview with Supriatin, 2020). Indirectly, this study's findings show that the state of the Cibeureum Village community still retains its original character as a community where each resident still has a clear sense of belonging and responsibility.

In addition to the form of communication that researchers explore from the Cibeureum Village community, there are still many things done by the community in the social aspect. One of them is that the community is still not empowered by tourism, the existence of tourism evidences this, the community has begun to be properly empowered by tourism. When they were still in an agrarian society, Cibeureum Village people generally had high school education and immediately jumped in to help their parents farm. There were still many unemployed teenagers, starting from youth organizations who did not have a clear community direction.

The researcher interviewed one of the cadets of Cibeureum Village named Rizky, he said that: "The conditions before the development of tourism that emerged in Cibeureum Village, teenagers only relied on farmers after graduating from school, there were a lot of young people who did not have jobs, and Karang Taruna is only limited to associations without any clear direction. The community is also difficult to empower because they are confused about empowering other communities. After all, there is no input from others, such as income from tourism after tourism." (Interview with Mustofa, 2020).

The activities and conditions of the people of Cibeureum Village when the conditions of the community were agrarian were not much different from the examples of rural communities in general. As the author examined in the results of the field research conducted, it could be said that the economic level of the Cibeureum Village community at that time was middle to lower because the number of landowners and farm laborers was very different, the people in Cibeureum Village did not change much in terms of their livelihoods depending on They sell agricultural products, livestock, plantations, the results of land processing directly to the market or to other collectors because not many lands have been converted into tourism land and there are no other jobs besides farming and opening small businesses. To increase or increase the economic output of the people of Cibeureum Village, the community only depends on agriculture because, at that time, tourism was not yet developed, and there were not many people who worked in the tourism or handicraft sector at that time. Because the majority of the people of Cibeureum Village usually focus more on farming, such as growing chilies, cabbage, tomatoes, and cassava.

Researchers interviewed a farmer as well as a vegetable medicine trader in Cibeureum Village. Ade, he said: "The condition of the people of Cibeureum Village is not much different from now, it's just that some farmers and farmland have now been converted into tourist areas. Also, some people have migrated to Bandung City or Subang Regency, they have migrated to sell medicinal vegetables" (Interview with Ade, 2020). From the above statement presented by one of the traders, the results of the interview. We can know that the condition of the people of Cibeureum Village is the same as the community in general in terms of economic aspects, not much different from the people of Suntenjaya Village, Wangun Harja Village, which is close to Cibeureum Village, this can be proven by the number of farmers around 743

families and total farm laborers 1821 people. In this condition, the community does not experience many changes that occur in terms of livelihoods in Cibeureum Village, with tourism that has not developed as it is now, of course at that time it has not had much impact on Cibeureum Village, the community still relies on existing natural resources to support the economy of the community.

SOCIAL AND ECONOMIC CHANGE

Society is constantly changing at all levels of its internal complexity. At the macro level, there are economic, political, and cultural changes, at the meso-level there are changes in groups, communities, and organizations. At the micro-level, there are changes in individual interactions and behavior. Society is not a physical entity but interrelated in a double manner. As Edward Shils (2011) said, culture is a phenomenon between periods, culture is incarnated not by a moment's life. But it's just over time. It's time-incarnation. Society operates from past to past to future. Its involvement goes through a transition between what happened and what happens. In today's culture, there are past factors, traces, and seeds of future promise. Society's production existence means that the previous step is directly related to the current step as a causal requirement deciding the next phase. In human society, social change or gradual change is common among humans, as Herbert Spencer said that evolution's general law underwent special treatment. The mechanism of social evolution is based on three rules. First, it contains inequality of uniformity, inequality of homogeneous populations. Human individuals are basically different in terms of innate talents, individual experiences, and environmental conditions in which they live. Humans cannot survive in the form of a homogeneous mass without the emergence of differentiation of roles, functions, power, wealth. Second, there is a tendency for stronger role specialization inequality, power disparities, and wealth differences to deepen. As a result, the initial differentiation develops gradually and accumulatively. Third, because people in the same position (role, prestige, wealth) tend to gather together.

This mechanism produces a series of inseparable stages in human history, starting from the simple stage of society, the activities of all its members are the same without political organization, through the complex society stage, there is a division of labor between individuals and the division of functions between societies begins to emerge, then enters a more complex stage of society has a constitution and permanent laws to the most complex stage of the civilization of social unity. The term tourism in recent years has become a hot topic of conversation among the public. Tourism is considered a new industry in Cibeureum Village, which has been proven capable of spurring rapid economic growth. Tourism is present in Cibeureum Village by displaying the beauty and uniqueness of tourism. The presence of tourism in Cibeureum Village has succeeded in changing the economy of the people who are directly involved in the tourism industry, which started only by farming, people began to dare to enter the tourism industry, began to take a position as workers, build hotels or build their tourism.

The rapid development of tourism in Cibeureum Village has succeeded in increasing the local community's standard of living. According to Herbert Spencer, the development of society is a process of continuous growth and change. Social evolution is a series of long-lasting social changes in society, starting from a homogeneous and simple group or society, gradually becoming a more advanced community group, and finally becoming a more complex society. Likewise, what happened in Cibeureum Village, the community began to experience a gradual change from an agrarian society to an industrial society from a simple society to a complex society. Changes that occur due to the development of tourism objects in Cibeureum Village are starting to be felt by some people in Cibeureum Village, starting from the social aspect to the economic aspect, the surrounding community has felt the changes.

The emergence of tourism in Cibeureum Village has led the community towards a more modern and more complex change. Tourism that is developing in Cibeureum Village includes tourism Situ Cisanti, Mulberry Hills, Fairy Garden. The three tourists are part of the The Lodge Group in Cibeureum Village. The three tourists are part of the Situ Cisanti Group in Cibeureum Village, which was originally established only for tourism Situ Cisanti in 2007, but time was passing, and visitor enthusiasts were booming at that time. The results of an interview conducted on one Situ Cisanti worker named Edik, he said that: "Situ Cisanti is a sustainable tourism environment. Because at first, Situ Cisanti was established not for tourism but only for a place to rest, the owner of Situ Cisanti himself who comes from Garut. However, the development of the era and the mass media in Situ Cisanti seems to be growing rapidly, according to Edik, this is part of nature's reciprocity to us if we want to protect the environment. And now what the community feels with the development of tourism is welcomed by the people themselves. (Interview with Edik, 2020). From Edik's explanation above, we can know that the development of tourism in Cibeureum Village has a good impact on the Cibeureum Village community's social changes because, according to him, around 90% of workers in tourism are originally residents of Cibeureum Village. Tourism is growing rapidly, assisted by social media, besides that, each existing tourism object presents a different view. Like Situ Cisanti, tourism provides Sky swing, hang gliding, camping, hot air balloon, sky tree. The five places present beautiful views to just take pictures and refresh the eyes. Mulberry Hills tourism is more dominant to tourist inns, there are many villas and beautiful scenery too. Meanwhile, Fairy Garden tourism provides a location for children's education that is good for children's development, such as many small children's games.

Of course, from the growing development of tourism in Cibeureum Village, the transition from an agrarian society to a tourism industry community has had a good impact on society both in terms of social and economic aspects. The people of Cibeureum Village have felt changes that have an impact in both positive and negative directions. But all of that is a natural thing in the social change that occurs.

Tourism growth in Cibeureum Village started around 2007 until now. This growth of tourism has changed people's lives. From a simple society to a more dynamic society, close community ties and tourism growth began undergoing changing changes. Once high in society, the importance of cooperation has now changed its importance to something that can be traded for material value, one of which is because the group has begun to be busy with the tourism sector's work activities.

However, it is experiencing changes in a negative direction, there are also many impacts on the community. The researcher interviewed one of the Situ Cisanti tourism employees who was originally a local resident of Cibeureum Village named Mustofa. He said that: "The RW 15 community very welcomes the development of Situ Cisanti tourism because Situ Cisanti entrusts tourism management to the indigenous people of Cibeureum Village, equally." On average, Situ Cisanti employees, almost 80%, involve youth organizations and the surrounding community. In terms of the social aspects that are felt directly by the community, the direct empowerment of the tourism sector and the management of youth organizations so that youth organizations have clear directions and goals, youth organizations are starting to be able to pay teachers teacher and pay for cleaning the garbage in the Cibeureum Village area. Also, Mustofa said that school children now do not directly help their parents but try to join the tourism industry in Cibeureum (Interview with Mustofa, 2020).

With so many tourism developments in Cibeureum Village, there have been many changes in the community's condition, especially influencing tourism adults and empowering the Cibeureum Village waste bank to make Cibeureum Village comfortable the tourism developments that occur in the area. It is in line with what Herbert Spencer said that every human being will always change quickly or slowly. Social evolution is so closely related to society. It could change from a simple community to a complex one, from a primitive community to a modern one. It is felt directly by Cibeureum Village people from the change of an agrarian society to a tourism industry community. According to the interview results with a tourism worker named Edik, he said: "There are many social changes that occur in

Cibeureum Village because, according to him, every tourist who visits the tourism location not only brings money but also brings rubbish. Cibeureum Village has a lot of garbage scattered about. Still, on the other hand, this has been anticipated by the youth organization because the tourism management team is working with the youth organization, the youth organization fund empowers community members to build waste processing so that the tourism area looks clean. (Interview with Edik, 2020). From Edik's explanation above, of course, the emergence of the development of the tourism industry that has emerged in Cibeureum Village greatly affects the community directly, with the growing tourism, it certainly requires a lot of workers, this is felt directly by the people of Cibeureum Village, especially new teenagers. After graduating from school, they are not bothered by the difficulty of finding a job, because tourism also empowers people who have the skills and willingness to be channeled towards tourism. It is felt directly by Karang Taruna.

The authors' results during an interview with one of the Youth Organization named Hambali, he said that: "This youth organization is in the form of a partnership with the Karang Taruna tourism in the form of a social organization in the community. It is not like the mass organizations that exist in tourism. According to him, mass organizations in the community, especially in tourism, only ask for detrimental things to tourism without a clear contribution, such as youth organizations in partnerships with tourism. (Interview with Hambali, 2020)

With the presentation of one of the Karang Taruna presentations above, we can know that how the tourism side manages the community directly, this is what makes tourism in Cibeureum Village last until now, because of its openness and trust in the community to make the community a direct part of the community. In addition to helping the people of Cibeureum Village in matters relating to society, tourism also helps the Cibeureum Village Government emphasize poverty and unemployment in Cibeureum Village. Nearly most Cibeureum Village people make their livelihoods mostly in the agricultural sector before the tourism industry is growing. Over a long period, there has been a change in Cibeureum Village due to the tourism industry. The basic needs that continue to increase make people think in a more advanced direction to meet more needs. Society also changes in terms of livelihoods from agrarian to the tourism industry.

BUSINESS OPENING AROUND TOURISM LOCATIONS

Community efforts to improve the economy include opening Bandung specialty food stalls, handicrafts, hotels to home culinary delights. As expressed by Fitri as a trader in the tourism area, "Thanks be to God, with the existence of tourism which is quite famous in the area of Bandung, especially Cisanti, this makes tourists want to enjoy the beauty of nature by coming to bring their families and partners to just have recreation to tourist attractions. It was welcomed by traders because the more visitors who came, the greater the merchandise's chance to run out quickly. With merchandise that runs out quickly, it helps to increase the yield of income (Interview with Fitri, 2020).

Apart from traders, residents also positively impact the development of tourism in which residents' houses are used as parking lots when the increasing number of visitors coming to tourism places is very profitable to simply increase their daily livelihoods. People of Cibeureum Village have experienced a shift in employment, such as a shift in livelihoods from farmers to the tourism industry, patterns of interaction with outsiders, changes in income levels, and changes in facilities and infrastructure. According to Sztompka, society is constantly changing at all levels of its internal complexity. In sociological studies, change is seen as dynamic and linear. In other words, change does not occur linearly. In general, social change can be defined as shifting or changing the structure or order in society to get a better livelihood.

WORKING IN TOURISM INDUSTRY

At first, in the Cibeureum Village community, many of the people did not have a job, many of them after graduating from school, were unemployed because of the difficulty of finding employment, but after the tourism industry was growing in Cibeureum Village, it could reduce unemployment because tourism managed the people of Cibeureum Village to work together as workers in tourism.

As Ridwan expressed, one of the tourism employees in Cibeureum Village said: "with this tourism, he can work, because previously he only worked as an employee of a cafe far from his house. This is certainly very helpful with tourism, especially in terms of distance to work with a clear income (Interview with Ridwan, 2020). As explained by Ridwan, the development of tourism has an impact on increasing economic change. With the existence of tourism, many people work as part of tourism members. From those who do not work to become workers from initially an agrarian society, some have shifted to the tourism industry, the availability of jobs, and increased income. The tourism sector has made a lot of assistance to the direct community, such as the construction of shops around the tourism object Situ Cisanti, from the construction, was given directly by Situ Cisanti, the salaries of the Koran teachers and cleaning money were borne by the tourism sector, which made the community comfortable with the presence of tourism. As Taufik stated as a trader in the tourism area, he said: "Actually, he is a farmer, but when the tourist Saturdays are busy, he uses his spare time to sell around the tourist area. Also, he said that by selling, he could add more income (Interview with Taufik, 2020).

From the interview results, it can be seen that the Cibeureum Village community's efforts in improving the economy to meet their daily needs not only from agricultural products but the community can participate in developing the tourism industry in Cibeureum Village. This can be seen from the interview results above that many people in Cibeureum Village are taking advantage of the growing development of tourism, the nature of the community starts to shift from a homogeneous group to a heterogeneous group where many jobs can be done, not just farming. Such as opening shops, stalls, selling souvenirs, and working directly from the tourism industry. Public knowledge about how to cultivate opportunities with the growing development of tourism can be quite good because people are willing to work together with tourism. Of course, this situation is very beneficial for the people of Cibeureum Village in increasing their income. In addition to having an impact on increasing income, with the development of tourism, it helps the village government to reduce poverty by increasing employment opportunities. This can be proven by the large number of tourism workers who are native to the Cibeureum Village community, apart from people who work in tourism, the local community also takes advantage of other opportunities by making their home page a parking lot for tourist visitors. The author also interviewed a resident who worked as a parking manager and worked in the tourism section named Edik, who said: "Before developing tourism in Cibeureum Village, he worked as a farm laborer and sold agricultural medicines in Subang. However, when tourism grew rapidly, he returned to his village to work as part of a tourism worker (Interview with Edik, 2020).

From the results of the interview above that the author has done as a step towards taking data from the people of Cibeureum Village, we can find out that the growing tourism industry brings benefits to society in terms of economic improvement, this is felt by traders, workers, and youth organizations that are actively involved in managing tourism.

THE IMPACT OF THE TOURISM INDUSTRY

The tourism activities that are so complex include all aspects of life that directly impact the community's environment's sustainability. The impact is very felt for those who live around tourist objects and are directly involved in tourism activities. The impact of tourism development is in the form of positive and negative impacts. Before tourism developed, most of the people of Cibeureum Village worked as farmers, breeders, but after the development of tourism, the local people began to switch their livelihoods as tourism

managers. According to the community, working in tourism is quite promising in increasing income compared to just being a farm laborer. According to Edik, the development of tourism also provides employment opportunities for local youth who do not continue their schooling to work, so tourism impacts employment for Cibeureum Village people. Tourism economic activity is an activity that can have a multiplier effect, which can trigger the growth of other economic activities in some regions. Starting from here, it can be explained that the tourism industry seems to be the driving force for the growth of other supporting industries. The main sectors in tourism, such as marketing, transportation, accommodation, supporting sector views, are attractive for recreation.

The growth of tourism support sectors in Cibeureum Village. Researchers have observed it since the boom in the community around 2015, infrastructure and facilities are increasingly mushrooming in the Situ Cisanti area, such as the number of stalls, food vendors, and hotels that have started to appear. Tourism also provides women with socio-economic opportunities by empowering PKK mothers with programs collaborating with tourism in Cibeureum Village. Apart from being empowered in social organizations, women in Cibeureum Village are also empowered as workers in restaurants to not depend on the husband's income.

Also, tourism has an impact on the development of people's mindsets. Local communities, especially those directly involved with tourism, will carry out social interactions with tourists from diverse cultural backgrounds. So that automatically, people's insight into the outside world will increase. The development of a public mindset is reflected in the community's awareness, the more parents who send their children to college, the more they realize that the times have made education a primary need that must be fulfilled.

On the way, tourists to tourism in Cibeureum Village are their reasons for visiting the area, namely tourist attractions, both natural, providing beautiful scenery and others. Cibeureum Village, a very beautiful Perhutani attraction, has charm for tourists from domestic and foreign tourists. Seeing the increasing number of visitors from various regions reaching 10 thousand people per day, this was taken advantage of by the people of Cibeureum Village. This moment is used as money by the people of Cibeureum Village, such as making their house land used as a parking area or leasing it to be used as a selling location by small traders, because many of the people become impromptu sellers when the number of tourists increases. Because moments like this help the community in improving the community's economy. The nature of tourism, which is open and directly touches the community, is very vulnerable to impacting society's social changes from various aspects of life. The impact of tourism is usually more focused on local communities who live near tourism objects. In addition to the positive impacts mentioned above, tourism as a free activity often negatively impacts local communities.

The increasingly individualistic nature of the community as a result of tourism has now begun to appear in the Cibeureum Village community where they have begun to think that working and making money is much more important than having to interact and spend time doing mutual cooperation, which is decreasing, different from the past where the intensity of the community to work equal very high.

The ease of getting a job in the tourism sector that does not require a lot of expertise for workers, it is feared that the local people of Cibeureum Village think that higher education is not too important, because of the cooperation between tourism and the people of Cibeureum Village which makes 90% of them as tourism employees. One form of relationship between local people and tourists is in mass-tourism, which means that there is nothing spontaneous between tourists and local people. But most of them have been arranged in tour packages by travel agents. Tourism activity is an activity with an economic purpose, which means that employment in tourism is only for economic purposes, which means that tourism increases economic interests in making a living. Therefore, the interaction between local people and tourists with tourists is more of an economic transaction. As happened in Cibeureum Village, the development of tourism has changed the relationship between the community and tourists, the form of hospitality that was originally purely on a cultural basis has now turned into commercialized hospitality. The change in commercialized hospitality is evidenced by the researcher's experience in the field while in the tourism area of Cibeureum Village. That what researchers see tourism managers and tourists only communicate that is beneficial is no longer coming purely from ourselves. Another negative impact that developed after the emergence of tourism felt by the people of Cibeureum Village was congestion because initially, this tourism was not a setting to actually be used as a tourism object but only to be used as a resting place for landowners. Still, a large area of land and with the concept of a beautiful environment, it invites the curiosity of visitors to come to visit tourism, this is what makes managers and the community not ready to prepare a large parking area, because at that time the tourists who come can reach 15,000 people with an average number.

It is what creates new problems in Cibeureum Village with frequent traffic jams, due to the congestion that occurs certainly affects farmers and cattle breeders, farmers who sell their crops experience delays which make their vegetables less fresh, while breeders experience the same thing with farmers because they wanted to sell the squeezed milk but were blocked by the traffic jams they used to take.

However, this has been quickly resolved by the tourism manager, because basically with the arrival of tourists who come, it is their own desire without an invitation letter. Therefore, the tourism management collaborates with youth organizations to solve the root of the problem that occurs in Cibeureum Village. Karang Taruna is assigned partly to open roads for vegetable cars and milk cars that want to cross the road. They are escorted by Karang Taruna until the end of the congestion; besides that, tourism also provides transportation services from outside tourism to reduce the volume of vehicles arriving at tourist attractions. From the interview results with the tourism manager named Edik, the researcher said that the development of the tourism industry in Cibeureum Village, apart from having a positive impact, also negatively impacted. Because the life of the tourism industry demands cultural changes that always have a negative impact, this negative impact does not mean it cannot be resolved, but it takes time and openness from those who feel aggrieved by the involvement of tourism, such as farmers and ranchers who feel the negative impact of tourism. However, the tourism management can resolve this by collaborating with youth organizations to unravel congestion and pave the way for farmers who want to pass (Interview with Edik, 2020).

From the explanation above, we can see that the negative impacts of Cibeureum Village can be overcome directly by the tourism manager due to the management's openness with the community, which has gone well until now. The informants felt this after interviewing researchers during field observations. In an open and barrier-free world of tourism, all elements of culture easily join human life. Meetings between the local community and visitors seem to have a high level of tolerance, so as not to easily cause tensions between the surrounding community and visitors. However, it is feared that this openness attitude will harm Cibeureum Village residents' generation, even though residents have not felt it because of the many cultures that have entered Cibeureum Village. Tourism, as McKercher puts it, carries investment disproportionately because it focuses more on benefit centers, not cost centers (McKercher, 1993). Following what happened in Cibeureum Village, this theory says that tourism is based more on benefits alone. Still, attention to its bad impact on tourism has not received much attention from both the government and the local community. It can be seen from the problems surrounding tourism goods, such as the amount of waste, although currently a waste bank management facility has been built.

THEORY OF SOCIAL DEVELOPMENT

Social change always has positive and negative impacts. Therefore, in responding to change, wisdom and in-depth understanding of the values, directions, and strategies are needed following the change's nature. Social change is part of cultural change; social change includes

changes in age differences, birth rates, and a decrease in the sense of kinship among community members as a result of urbanization and modernization. Change is often faced with value systems, norms, and some supporting ideas. By communication media, changing the social, political, economic, educational, and cultural systems. The theoretical analysis that the researchers conducted in Cibeureum Village regarding the agrarian society's socio-economic changes with the tourism industry uses Herbert Spencer's classic theory of social evolution. Evolution also describes how society develops from a primitive society to an advanced society, the theory of evolution also combines a subjective view of values and the ultimate goal of social change. These changes occur gradually and slowly, which initially are simple and then turn into modern ones. At the stage of evolution, theorists regard society as the development of simple forms into complex forms, they believe that societies at a more advanced stage of development will be more progressive in other societies. The theory of evolution tends to be ethnocentric because they consider modern society to be superior to the previous society. Social evolution is a series of social changes in a society that lasts for a long time, starting from a simple and homogeneous ethnic group or society, gradually becoming a more advanced ethnic group or society, and eventually becoming a complex modern society.

Cibeureum Village is a village that has experienced changes in its society. This change is said to be a social evolution like what is Herbert Spencer's theory, the people of Cibeureum Village have experienced a change into a more advanced society, they feel a significant impact from the changes that occur, they switch from an agricultural society to an industrial society, the amount of land is converted into a tourist area. Herbert Spencer describes this as a primitive society or a simple society that has shifted towards more complex society and become the society it aspires to. The changes that occurred in Cibeureum Village were not only about the livelihood sector. With the increasing number of job vacancies available, of course, it helps the people of Cibeureum Village reduce poverty and ensure the community's standard of living. This is done by the community so that it becomes a complex society and eventually becomes perfect. With the flow of changes occurring in the community that has brought the people of Cibeureum Village towards a more complex society characterized as a modern society, society has begun to change from a homogeneous to heterogeneous society, this is due to the impact of the growing tourism industry that occurs in Cibeureum Village.

The results of the authors' findings when research in the field of evolution in society do occur through various sectors, Cibeureum Village realizes that the changes that occur in society due to tourism certainly have a social and economic impact on the community, many people have begun to switch to work in tourism and tourism brings a positive impact in society so that the community will always maintain the existing tourism in Cibeureum Village and still exist because tourism really helps the community, especially in terms of economic improvement. The people of Cibeureum Village did this in order to create a dreamed community like what Herbert Spencer mentioned.

The community of Cibeureum Village is a village where the average livelihood of the community is a farmer. It is due to the large number of natural resources that can be processed by Cibeureum Village people. When changes occur, both social and economic changes after tourism change part of the community's work from homogeneous to heterogeneous groups because the community switches from an agricultural society to the tourism industry, it can be seen from the results of the author's research at the time in the field where there have been many kinds of work done by the community. There is already a specialization of work, such as the characteristics of modern society, this has happened since the existence of the tourism industry in Cibeureum Village.

With the development of tourism in Cibeureum Village, it has been able to change most people's livelihoods into a more modern heterogeneous society. The existence of stratification in society and the beginning of labor division in society are certainly characteristic of modern society or more complex society. After the development of tourism, of course, there is a lot that can be done by the people of Cibeureum Village to improve the economy of the people in various sectors of work, not only in relying on the agricultural sector, but the community can involve other things to support the tourism sector such as building restaurants, stalls, hotels, with the aftermath of the development of tourism. Herbert Spencer said that Multilined theories of evolution as a theory of community development stages in research results. Herbert Spencer described that the community's condition would develop from a livelihood system originally hunted into farming. Likewise, what happened in Cibeureum Village, from the results of the author's research, the community developed gradually from a livelihood system that started as farming people who now become workers in the tourism sector. It is because the community accepts the changes that have come to Cibeureum Village. Because these changes have brought the flow towards a more modern one, people feel helped in terms of economic improvement by tourism in Cibeureum Village. The changes that occur in Cibeureum Village certainly do not impact the community's livelihood sector but impact social changes that occur in the community due to the economic improvement in Cibeureum Village. People such as teachers and women who manage cleanliness are starting to be empowered by the Karang Taruna, the Karang Taruna gives them wages because Karang Taruna has more income because of the tourism sector in Cibeureum Village.

CONCLUSION

The condition of the people of Cibeureum Village was originally an agrarian society; people who daily depend on their income in the agricultural sector, livestock, and small traders. Initially, the life of the people of Cibeureum Village was the same as other village communities, namely, they often worked together and had a life together. However, after the tourism industry's existence, people began to switch from an agricultural society to a tourism industry community. Here the community begins to collaborate with tourism managers to develop tourism. For example, people have started to turn their yard into a parking area for tourists to increase their income. In the social aspect, the people of Cibeureum Village, especially youth organizations, are empowered by tourism managers, they are included to work together so that youth organizations have sufficient income so that the youth organization can pay teachers and cleaning staff as a result of the benefits of working with tourism managers. Thus, the positive impact felt by the people of Cibeureum Village from the growing development of the tourism industry will certainly reduce poverty and unemployment rates in Cibeureum Village.

However, social change does not always run smoothly. There are negative impacts felt by the people of Cibeureum Village, such as heavy traffic, which affects farmers and other breeders to market their agricultural products because the road they are traveling on becomes congested and jammed accompanied by dirty air from vehicles coming to the location travel.

Concerning the ecologically-based tourism industry in Cibeureum Village, the researchers advise tourism management parties to conduct regular community empowerment programs, such as online business training and training on good harvest processing. The purpose of holding this program is expected to be able to increase the creativity and innovation of the people of Cibeureum Village, given that not all elements of society can be absorbed to work in the tourism concerned, of course, with the expertise possessed by the community in the future, so that people continue to have other creativity thanks to frequent the holding of these educational programs.

In addition, geo-trek development is needed in each of the Citarum sub-watershed in the future, while the proposed geotrek is adjusted to activities that can be carried out by tourists. Dry track geotrek and wet track geotrek can be made by geotourism destination managers in collaboration with communities, government, universities, and so on. Geotourism interpretation planning in geosites is carried out through the information board's narrative on the geosites and is also done online through the destination manager's sites.

Community-based geotourism development in the Upper Citarum Sub-watershed needs to be done by providing training related to tourist destinations' development. The planning for the mitigation system for the Upper Citarum Zone geotourism destinations involves all stakeholders based on a community-based approach. Marketing planning for geotourism destinations in the Upper Citarum Zone from the local level or destination managers to the national level is linked and integrated to reduce marketing costs.

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USING INQUIRY-BASED LEARNING TO EXPLORE RESPECT OF CULTURAL BASE DESIGN: A CASE STUDY IN AMPHAWA TOURISM COMMUNITY, THAILAND

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Abstract: Amphawa is a Thai valuable cultural heritage. This cultural tourism has been amplified thanks to the UNESCO award. Despite the recognition, there exists a conflict as seen obviously in the town development by cross-cultural designers. This research focuses on establishment of a proper learning model. Qualitative research was undertaken using a tool namely Ethnographic Delphi Futures Research. The results found that the method of Inquiry-Based Learning significantly made learners gain insights because of the direct interactions with the community stakeholders who truly take part in reaching the consensus which improved consistency of the design works to preserve the cultural identity.

Key words: Culture-Based Design, Cross-Cultural Designers, Culture Lag, Ethnographic Delphi Futures Research, Inquiry-Based Learning

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INTRODUCTION

Amphawa tourism community in Thailand is a community enriched with cultural heritage. Amphawa received international awards and grants to support its conservation of the cultural heritage (Peerapan et al., 2005). Amphawa is perceived as the top-rated tourist destination during weekends because of convenience of traveling (Peerapan, 2009) (not far from Bangkok). As a result, this community has created projects in developments of its physical environments and various service models to accommodate the increasing number of tourists (Seyanon, 2009). The positive impact is job creation and increased income of the community (Joseph et al., 2020). But in the attempt of tourism promotions, ways of thoughts and lifestyles of the local have changed rapidly causing cultural lag during such rapid developments (Tuntipornwanichkul et al., 2011). This is an adverse impact on the community. This research is motivated by a piece of news regarding the new establishment of the European-style-4-star hotel namely ChuchaiBuri Sri Amphawa Project. The hotel has been planned to locate in the middle of the Amphawa community. The architectural style of this project is in a complete contrast to the context of the Amphawa community. Consequently, it has been a debate that gained more attention from people in the community.

The Culture Lag (CL) is caused by an off-balance between prosperity of material culture and nonmaterial culture. There are several reasons leading to the occurrence of culture lag in cultural-tourism sites. One of the main reasons is the lack of stakeholders' engagement in reaching a consensus during the community development (Xavier, 2016). According to the paradoxical effect of visual perception theory (Zharikova et al., 2017) that describes a relation between human perception and the physical environment context (Gibson, 1979), the lack of engagement of stakeholders can cause misperception to tourists as a result of the undesirable changes in visual environments during the community development (Zarewa, 2019). Therefore, the consensus originated from the crucial information obtained from the community stakeholders is significant to designers allowing an appropriate design that harmoniously improve the physical environment with the way of life of the villagers in the community. Moreover, the design must meet the requirements of tourists. Since the development is engaged by people from different aspects, the problem of culture lag can be minimized. In design courses, fundamental subjects provide design knowledge, design technology, artistry, and design problems to guide and develop learners to become professional designers (Demirbaş and Demirkan, 2003). Based on the Active Learning (AL) approach, it can be practiced in two learning styles: Project-Based Learning (PjBL) and Problem-Based Learning (PBL). Both methods are considered as a Traditional Learning Approach (TLA). In this traditional approach, learners are supposed to follow a process after obtaining a design topic or a design problem. Necessary information is retrieved to analyze, summarize, synthesize, and create design works. Instructors themselves design both pedagogy styles. The instructors are likely to throw ideas or their preference styles into learners' design works. That is similar to a reflection or a transfer of their design preferences into learners (Zande et al., 2014). As a result, the learners' design works become inconsistent with the design context in terms of timing and spatial especially in the Culture-Based Design (CBD).

From the literature review, the Inquiry-Based Learning (IBL) is a participatory approach that allows learners to create their inquiries in the purpose of gaining insights of the subject content (Voet and De Wever, 2019). The objective of the Inquiry-Based Learning is, in fact, not to find an answer but to find a proper solution in each story content. It also changes an attitude from "what we know" to "how we come to know" (Salama, 2010). In this learning style, instructors perform as a facilitator (Bonwell, 1996). Learners can attain knowledge by making inquiries, investigating, and finding various methods until they reach meaningful comprehension (Keeton and Tate, 1978). As seen from these, it is a long-term knowledge gain method that can be utilized to solve problems effectively.

This research paper focuses on implementation of the Inquiry-Based Learning method into the teaching and learning in the Culture-Based Design course. This learning method aims to provide learners with depth insight that cannot be obtained via the Traditional Learning Approach method. Learners receive authentic information from the cultural community via the inquiries. This can eliminate the problem of forcing the instructor's thoughts into the learner's work as the learners can always double check with the villagers from whom they received the information. Therefore, the information is a consensus of stakeholders' engagement prior to the next step of design. This process also reduces the problem of the visually ugly design and the conflicts with Culture-Based Design works.

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Aim of the research. This research aims to compare the Inquiry-Based Learning and the Traditional Learning Approach in solving problems emerging from the research process and data collection of Cross-Cultural designers. Designers who have working experience typically will accumulate knowledge until they have their unique approach or form (Alaswad, 2019). They frequently use their uniqueness into the Culture-Based Design work which undermines the cultural identity that is supposed to be conveyed. For this reason, stakeholders have denied a consensus of the Culture-Based Design works. The research question was, "Can the Inquiry-Based Learning approach be applied to the teaching and learning in the Culture-Based Design course which focuses on the research process and data collection of cultural identity for achieving mutual acceptance among stakeholders of the cultural tourism community?"

METHODOLOGY

The research method was a qualitative research, which was the grounded theory. The research tool was the data collection and interview of the Amphawa community stakeholders. These reduce the chance of conflict between the community villagers and the community outsiders (as seen in the hotel design that does not blend in with the community environment). The researcher chose to use the Inquiry-Based Learning in conjunction with the design process focusing research process and data collection of learners (Duran and Dökme, 2016). In this situation, the learners interacted between the informant and the environment during the collection of information. They had been able to extract and show the essential and accurate information of the cultural identity. This method will have followed the participatory design paradigm.

Research Design

The instructor suggested additional methods for collecting data beyond the past processes when learners made questions and jointly defined the studied subject's scope and details. Questions were issues and problems arising in the Amphawa community, which the instructor had stimulated learners. The instructor recommended using the Ethnographic Delphi Futures Research (EDFR) with three informants to encourage greater interaction between learners, the community people and environment than regular data collection.

The Ethnographic Delphi Futures Research is a research technique that combines the Ethnographic Futures Research (EFR) and the Delphi Technique (Charoenphut and Chirinang, 2015). It has strengths and advantages. The Ethnographic Delphi Futures Research processes are similar to the Ethnographic Futures Research, but the Ethnographic Delphi Futures Research interviews are more flexible. Open-ended questions are prepared in advance in order to get the appropriate answers matching the research goals.

In the first interview, the Ethnographic Delphi Futures Research interview method was the instructor-recommended method for researching and collecting data. The learners used in-depth interviews with informants are experts who are involved in the Amphawa community in three groups. Three members were from each group - the instructor recommended the qualified professionals to learners. In this step, learners prepared the topic of open-ended questions in advance. During the interview, learners noted and recorded the audio by notified experts in advance. The first interview time was 90 minutes per person. Those topics divided into two issues, viz. the way of Amphawa people's life from the past until the present and the physical environment identity of a row of traditional wooden Amphawa houses lining a canal (RTW-AH). Color, material and surfaces, lighting, decorative items, decoration, and void were key points of the physical environment identity of a row of traditional wooden Amphawa houses lining a canal.

They would have analyzed content and transcript from the recorded audio files when they finished all interviews. They checked duplicate words of the two significant issues from all informants—those duplicates were used as a factor to create a query in the next interview.

In the second interview, learners went back and asked the nine informants to find each issue's duplicate words' rating scale. In this step, they used questionnaires. In its questionnaire form, the Likert scale is a 5-point scale used to allow the individual to express the extent they agree or disagree with a duplicate word. Learners also interviewed the reasons for their rating scale of informants. This step's finalized results were representative of the community's cultural identity, which used the results of the interviews explained. When the duplicate words' analysis results were consistent, they used it to create a query in the third interview. In the third interview, the famous duplicate words were in the questionnaires with the 5-point Likert scale. The results of this step were the ranking of each issue. Experts chose one duplicate word that they think was the ultimate uniqueness representation and confirmed the answer by explaining the reasons.

Consensus checking of the Amphawa cultural identity representative was keywords from 7 factors. These reviews again find a consensus on the representation with 2 groups: 10 villagers who have lived in the Amphawa community for more than 10 years and thirty tourists who have experienced traveling and stayed in the Amphawa community. The research tool was the questionnaires with the 5-points Likert scale. Informants also had to explain the reasons for their answers. The results were analyzed using descriptive statistics by finding the Mean and Standard Deviation (S.D.). These results described the accepted level to the collective cultural identity information and used the respondents' explaining results to describe the phenomenon that occurred.

Participants

1. Twelve participants of the third-year undergraduate learners in the interior and exhibition design department, Suan Sunandha Rajabhat University, as representatives of a Cross-Cultural designer, who volunteer or are interested in participating in this research. These participants had the design knowledge but no experience in the Culture-Based Design and never lived in the Amphawa community. Their age was between 19-22 years old; 6 women and 6 men. They had to collect information for using in their design, which are the terms and conditions for this group. Learners in this group have passed an introductory design course. They have also passed the design process by lectures from instructors and have already designed small projects. They had the skills to conduct research and collect data for their design process in the next step.

2. Informants involved in the Amphawa community are experts, divided into 3 groups: 1) the community villagers who were born and live there and have owned a row of traditional wooden Amphawa houses lining a canal, 2) instructors in the field of the Culture-Based Design, and 3) interior environment designers who have experienced in design related to the Culture-Based Design. Three members are chosen from each group. The sampling was purposive that the instructor recommends the qualifications of informants. After that, the learners contacted and met with the experts.

3. Respondents, a stakeholder providing consensus data concerning Amphawa identity, were divided into 2 groups: 1) the community villagers who have lived in the Amphawa community for more than 10 years (10 participants) and 2) tourists who have experienced traveling and stayed in the Amphawa community (thirty participants). In this research, the researcher's role was the creator of attention and the mentor to learners. The researcher facilitated the research and collection of information in the area for the learners.

Research Area

This research has divided into 2 parts according to the research process. The first research area was the classroom activity area where teaching activities by the Inquiry-Based Learning took place. The first step was to generate the engagement using focused group discussions concerning problems of the Culture-Based Design. As the motivator, the instructor encouraged learners to create questions about the

Amphawa community issues and problems as appeared in the newspaper. When learners asked the interesting questions, they defined the scope and enumerated details of the studied subject. In this case, they researched and gathered the outstanding cultural identity knowledge of the Amphawa community. The scope was the villagers' life of the community and the physical identity of a row of traditional wooden Amphawa houses lining a canal for using in the design process in the next step. Learners explored and searched the data that is the second step of the Inquiry-Based Learning when they already defined the collecting data area. Therefore, the second research area was the Amphawa community. Learners interviewed and recorded data with three groups of experts and asked for villagers' and tourists' opinions. All data collection steps were within the Amphawa community for encouraging the interaction between people and their environment within the community.

PROCESS

This section presents the teaching steps to compare the Inquiry-Based Learning and Traditional Learning Approach methods which were used and divided according to key points of learning management.

Assignment

In the Inquiry-Based Learning method, the instructor opened issues to motivate learners using events related to the course content. This process caused learners to ask questions that led to research for answers. In this research, the instructor cited the conflicting news between villagers and stakeholders in Amphawa cultural tourism community and outside capitalists. Outside capitalists were those who built hotels using the contradicted design guidelines to the community context. This situation has resulted in the Culture Lag due to the destruction of buildings that represented the community identity. Furthermore, villagers were evacuated from their communities.

The learners shared various opinions and exchanged details about the causes of the conflict and the arising problems.

"Amphawa already has a pretty clear identity. Why was it not used in the design that can confirm the evidential of Amphawa identity?"

"The travelers visited Amphawa because they wanted to experience the atmosphere of past Amphawa, weren't they? If they were to experience another different atmosphere, why would they need to go to Amphawa?"

These are examples of what the students debated. The instructor continued asking questions so that the students could give their frame of ideas and clarified questions. That led to the formulation of an appropriate assignment of the work topic to the course content and time.

"What is the Amphawa atmosphere?"

"What is the evidential identity of Amphawa that the villagers and stakeholders mutually accept?"

The instructors' questions had influence in motivating learners to actively find a representation of the Amphawa community identity that the villagers and stakeholders mutually accepted which was used as important information for design work. However, there still was a problem because the socio-cultural identity had a vast meaning. The instructor then added questions to formulate an appropriate scope to the time of the learning period making learning boundaries more concise and clearer.

"What aspects of identity should be searched for using in the most suitable interior design work?"

The learners had researched the information and debated to find the answers again until they reach conclusion. As follows:

"A row of traditional wooden Amphawa houses lining a canal is the Amphawa community's distinctive architectural identity since Amphawa was the floating market in the past. It received the UNESCO Asia-Pacific Awards for Cultural Heritage Conservation. Moreover, the villagers' lifestyle is also impressive for tourists."

Those were the two main areas that learners set and were eager to search for learning. In the Traditional Learning Approach method, the instructor determined the design topic for the learners.

"Learners work on the interior design of a local restaurant by using the concept from a row of traditional wooden Amphawa houses lining a canal."

The learners performed the work according to the design process that they had previously learned when they received the topic and all requisitions from the instructor. These include 1) the problem determination, 2) the research and collection of information, 3) the conceptual development, 4) task creation and 5) the work presentation. All these are a design process that all learners have been familiar with. Moreover, the instructor recommended researching and collecting a row of traditional wooden Amphawa houses lining a canal information for the definiteness of both learning groups' research processes and data. That is based on six key points, e.g. color, material and surfaces, lighting, decorative items, decoration, and void.

Data Collection

In survey and search process of the Inquiry-Based Learning method, the instructor recommended the learners to stay in the row of traditional wooden Amphawa houses lining a canal where has been converted to a homestay. Learners collected data by the Ethnographic Delphi Futures Research method with three groups of experts. All interviews conducted in the Amphawa community for emphasizing the interaction between learners and community stakeholders. They combined them with researching information from documents, textbooks, and internet contents. After that, learners made a plan to determine the guidelines and duration of the process themselves. In Traditional Learning Approach method, the instructor guided the information sources to learners. The learners mainly search for information from documents, textbooks, and internet content. They went to the Amphawa community area that they only photographed, measured, and collected the row of traditional wooden Amphawa houses lining a canal building sizes. In this method, learners and community stakeholders had little interaction. In both methods of teaching and learning, the instructor was only responsible for observing. The instructor was not participating in the interview process and data collection. The instructor gave advice only when learners had problems.

Explanation

The information obtained from the Inquiry-Based Learning method was important information that were received directly from villagers and stakeholders in the Amphawa community. That information was profundity, evident, and specific. It was reexamined three times by the Ethnographic Delphi Futures Research procedure with experts and repeatedly inquired with villagers and tourists. All these processes; thus, got a consistent consensus (Alalou et al., 2016). Therefore, the obtained information was credible. Learners' information contents that they concluded and presented to the instructor were profundity. The data of each factor explained all the referable reasons. The instructor was served only to inquire about the issues that needed more details. The instructor did not suggest or show any comments about the learners'

information. In Traditional Learning Approach method, the primary source of the obtained information was from the Internet. Learners researched and used the obtained information to brainstorm, analyze, debate for summarizing data. The instructor explained with examples from his/her own experience when learners presented information. However, the content lacked profundity, apparent content, and had the unclear reasons. The instructor may have intervened with ideas or preference style into learners' design work. As a result, learners were familiar with cursory researching and receiving information, which would affect their future works.

RESULTS

This part presents the researcher's findings and learners' collection of information, including the analysis and presentation to compare the profundity of information between using the Inquiry-Based Learning and Traditional Learning Approach method and dividing the findings according to learners' searching factors.

Lifestyle Factor

The Inquiry-Based Learning group described the villagers' lifestyles up to 3 generations. Because of the opportunity to talk with the villagers who were born and have lived in the community.

"Amphawa was a large trading community 70 years ago. There was the main water transportation. There were many boats for trading and exchanging goods in the canal. People can walk across the canal by walking on a hull floating on the water. Many RTW-AH were along the two sides of the canal. Villagers started trading in the early morning and dwindled in the late morning. "Anong Krit-Nan said, is 79 years old, is her tiny interview part.

"Around 1977, a row of traditional wooden Amphawa houses lining a canal became a cheap rental room. When I was young, I ran around here. There were very few boats because more widespread freight cars were used. The market moved up to the ground. The villagers infrequently paddled a boat carrying goods for sale in the past. Some row of traditional wooden Amphawa houses lining a canal has been demolished to create modern buildings. The floating market was just restored in 2004." Some interview part of Parinya Phruek-Hattha-Phong, who is 45 years old.

"I was born and saw already this jolly market condition. There were many tourists here. The villagers traded enjoyably, but the number of villagers began to decline recently. There are outsiders, who are not Amphawa people, rented area for trading. Food products are expensive because of the high price of the rent." Sophon Si-Rat, who is 25 years old, said.

The Traditional Learning Approach learning group, the primary source of the obtained information, was from the document and the Internet. That information lacked profundity and could not provide the changes from the past to the present.

The Amphawa community has stagnated in the 21st century as a result of changing the means of transportation.

On August 11, 2004, Amphawa Floating Market was restored by Amphawa Subdistrict Municipality, Samut Songkram, and the community.

Community and Amphawa Floating Market, Samut Songkram, is rural tourism/ village tourism. It was highly popular in 2010, according to the ranking from Tourism Authority of Thailand (TAT) Booklet.

These data were obtained from The Conservation and Revitalization of Amphawa Community monograph, December 2008. The research results found that the information obtained from the Inquiry-Based Learning method connected directly with experiences of the local who truly witness evolution of Amphawa in each era. Some in-depth information can even explain the causes of the happened incidents. This information was not revealed in online documents which could be obtained merely from community villagers.

Color, Material and Texture Factor

Teak, Siamese Sal, and Ironwood were the specific color and materials that learners could identify. This was attributed to undertaking the Ethnographic Delphi Futures Research with villagers and stakeholders in the Inquiry-Based Learning method. Besides, learners could identify the color and the material and the locations where the materials were often used.

"The wooden folding doors of the front of a row of traditional wooden Amphawa houses lining a canal must use teak because it is gorgeous. It looks good and deluxe. The wood surface is only coated with the wood treatment oil, that is enough." Thonphat Bunsanan said.

For his interview part, Prasitthichai Kanokthianthana said, *"For the walls and floors were mostly made from Redwood and Siamese Sal. Other types of wood have been seen, but rarely. The wood surface was glossy from rubbing and wiping for such a long time."*

The color and the texture of wood used in a row of traditional wooden Amphawa houses lining a canal have been reconditioned often, concluding from the Traditional Learning Approach learning group learners. They concluded from what they saw. This conclusion was most likely caused by inadequate access to the data source leading to a lack or false of the obtained details.

Lighting Factor

Natural lighting shined in by opening the wooden folding doors installed at the front of a row of traditional wooden Amphawa houses lining a canal. During daytime, the inside environment received sufficient natural light. In the past, inhabitants generated warm light from kerosene pressure lanterns, kerosene lanterns, and antique oil lamps during nighttime. Nowadays, artificial light was used. Daylight was used in the work area whereas warm light was used for creating the atmosphere. This data above was found and presented by the Inquiry-Based Learning group. The Traditional Learning Approach learning group concluded that artificial lighting was not turned on in daytime. On the other hand, inhabitants used artificial lighting at nighttime. The main source of light used in daytime is natural light.

Decoration and Decorative Items Factor

The Inquiry-Based Learning group obtained information regarding this factor by data collection as follows:

"The main utility of a row of traditional wooden Amphawa houses lining a canal building was for commercial purposes. Decorations and decorative items were the simple styles of furniture, for instance, product showcase. Over time, those things and furniture have become valuable antique." Sarath Simsiri said.

For some interview part, Khwanrat Chinda said, *"A kerosene pressure lantern, kerosene lantern, antique oil lamp, antique brassware, vintage gramophone, vintage sewing machine and traditional bamboo fish trap, which once used in daily life, have transformed into decorative items. That is a change of function and value when the time passed."*

Tools and furniture in the past have been used in interior decoration today; this is the conclusion of the Traditional Learning Approach learning group.

Void Factor

The Inquiry-Based Learning group presented that there was trading along the waterfront in the past. That void of the wooden folding doors was wide opened is an apparent identity of a row of traditional wooden Amphawa houses lining a canal. Therefore, it was necessary to be opened. The top of the wooden wall installed with a ventilator above the door also helped ventilate and removed moisture when the door was closed. Since the building is located along the canal, the atmosphere is humid. If the air could not circulate, people could feel uncomfortable due to a sticky-feel moisture. In the Traditional Learning Approach learning group, conclusion made for the wooden folding doors was that the wooden wall was installed with a ventilator above the door. However, they did not give the reason of the installation of the ventilator.

Table 1. The conclusion of results of the data collection and research: comparison of two learning groups
(Inquiry-Based Learning VS Traditional Learning Approach)

The study factors	Lifestyle	Inquiry-Based Learning	Traditional Learning Approach
		Explaining the community changes from the data collected from people with 3 different ages who were born and have lived in the community.	Summary of changes came from document and the internet, but the connections between the changes and what caused the changes were not mentioned.
	Color	The colors of real wood were specific with the types of wood e.g. Teak, Siamese Sal and Ironwood	They only know the color of real wood.
	Material and Texture	Wood e.g. Teak, Siamese Sal, and Ironwood have been identified as the material and the used position was recorded. For example, the Teak wooden folding doors and Redwood floor. The wood surface was glossy from rubbing and wiping for a long time, or the wood surface coated with the wood treatment oil.	Summary as Wood, Wood Surface and Color of wood
	Lighting	During daytime, the inside environment received sufficient natural light. In the past, a light source was a lantern during the nighttime. Now, artificial warm or dim light was used.	Natural light was used in daytime whereas artificial lighting was used at night.
	Decorative items	Functions of tools used in daily life and their values had been transformed when the time passed. The tools were transformed into decorative items, such as a kerosene pressure lantern, kerosene lantern, antique oil lamp, antique brassware, vintage gramophone, and vintage sewing machine, and a traditional bamboo fish trap.	Tools and furniture in the past were used as interior decoration now.
	Decoration	Everyday life furniture, Simple wooden furniture, Products showcase	Simple wooden furniture
	Void	The void of the wooden folding doors was wide opened because of trading along the waterfront in the past. The top of the wooden wall vent installed with a ventilator above the door helped ventilate and remove moisture.	The void of the wooden folding doors was wide opened and the top of the wooden wall was installed with a ventilator.

From the Table 1, it was found that the Inquiry-Based Learning group presented obvious and profound information. In-depth explanations were observed compared to the superficial information obtained from the Traditional Learning Approach learning group. This resulted from the interaction of learners with villagers and stakeholders in the Amphawa community. During the collection of information, learners were in the community area—causing them to absorb the context of physical environment which allowed connections between their newly earned knowledge with clear insights of the community context.

Consensus

After concluding the data analysis of the Ethnographic Delphi Futures Research procedure, the Inquiry-Based Learning group also took keywords of the eight factors to search for a consensus with two groups of informants. There were forty informants. The research tool was the questionnaires with the 5-point Likert scale.

Table 2. The data analysis of the Ethnographic Delphi Futures Research procedure

Factors	Identity		Mode	□	SD	Prominent Level
1. Lifestyle	1.1	An atmosphere of the evening floating market	5	4.22	0.83	Well
	1.2	The activity; Boat trip, Watching Firefly and Giving alms to a Buddhist monk	5	4.67	0.5	Maximum
2. Color	2.1	Brown color of real wood	5	5.00	0.00	Maximum
	2.2	Color of wood; Teak, Siamese Sal and Ironwood	5	4.78	0.44	Maximum
	2.3	Color of wood coat with the wood treatment oil	4	4.11	0.60	Well
3. Material and Texture	3.1	Real wood surface	5	4.67	0.50	Maximum
	3.2	Wood surface is glossy from rubbing and wiping	5	5.00	0.00	Maximum
	3.3	Wood surface coat with the wood treatment oil	5	4.56	0.53	Maximum
4. Lighting	4.1	Natural light	5	4.89	0.33	Maximum
	4.2	Lighting from a kerosene pressure lantern and kerosene lantern	5	4.89	0.33	Maximum
	4.3	An artificial light is warm lights	5	4.44	0.73	Well
	4.4	Dim light	4	4.00	0.71	Well
5. Decorative items	5.1	Old photos of Amphawa past	5	4.67	0.71	Maximum
	5.2	Tools in the past; lantern, antique brassware, vintage gramophone and vintage sewing machine	5	4.89	0.33	Maximum
	5.3	Tools and equipment used in the past; Wicker	5	4.67	0.71	Maximum
6. Decoration	6.1	Furniture for occupation	5	4.33	0.71	Well
	6.2	Furniture for everyday life	5	4.67	0.71	Maximum
	6.3	Simple furniture, seat, bed from cotton wool	5	4.67	0.5	Maximum
7. Void	7.1	Wooden folding doors open and see a canal	5	5	0	Maximum
	7.2	Ventilator above the door	5	4.67	0.5	Maximum
	7.3	Ventilator vent on the top of wall	4	4.22	0.67	Well

Table 2 demonstrates concluding results of a consensus representing the Amphawa community cultural identity. The lifestyle and physical identity of a row of traditional wooden Amphawa houses lining a canal were a confirmation of accepting the information prior to the design in the next step which can be implied that this process reduced conflicts in the design process.

CONCLUSION

This research aimed to apply the Inquiry-Based Learning method to the teaching of the Culture-Based Design course, focusing on the research process and data collection of cultural identity for achieving mutual acceptance among stakeholders of the cultural tourism

community. This research adopted the Inquiry-Based Learning method to develop teaching for the Culture-Based Design course. The results found that the Inquiry-Based Learning group presented the profound results of the data collection process when compared to the Traditional Learning Approach method. The instructor acted only as an instructor and facilitator. He/she had no opportunity of forcing the instructor's thoughts or ideas into the learners' discovery. The knowledge gained by learners was established based on their hands-on experience (Paul et al., 2006) which was accurate since the knowledge was originated from the true context of community.

Learners comprehended the real context in the community area where they surveyed and collected data. Learners had related the events with knowledge gained through searching, causing a good understanding of the meaning of what they were studied. These results were demonstrated by their explanations while presenting their works to their teacher.

The obtained information from the Ethnographic Delphi Futures Research which was designed to attain the most reliable consensus from experts was reinvestigated with the community stakeholders. The reinvestigation was to confirm the reliability of the consensus which eliminated conflicts of discovered information. Cross-Cultural designers should emphasize the process of researching and collecting information directly to reduce the conflicts of Culture-Based Design works (Buil et al., 2012). Obtaining information from documents, textbooks, or the internet may not be sufficient because of the designer's lack of interaction with the actual community context. Those designers, who have work experience, always forced their ideas or preference styles into their design works. This was a major cause of the wrong interpretation of Culture-Based Design work resulting in the observation of culture lag in the community of cultural tourism such as Amphawa.

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RELOADING OF GASTRONOMY TOURS IN THE CONDITIONS OF USING THE RIGHT-BANK POLISSIA GASTRONOMY POTENTIAL

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Abstract: The article is devoted to the development of methods for creating and updating gastronomic tours in terms of realizing the tourist potential of the Right-Bank Polissia and in connection with the demand of potential domestic and foreign tourists. The method of calculating the gastronomic potential of the Right Bank Polissia has been shown, the geovisualization of which is carried out by developing a series of author's thematic cartographic models. The map "Gastronomic tastes of the Right-Bank Polissia festivals" will help to show the route to the Right-Bank Polissia, which contains popular gastronomic events, food museums and other infrastructural objects related to gastronomic tourism with well-thought-out logistics and price policy.

Key words: gastronomic tour, economic analysis of gastronomic potential, Right-Bank Polissia, thematic cartographic models, nature-based tourism, tourist destinations

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INTRODUCTION

The pace of tourism development in the world has been steadily gaining momentum until the early spring of 2020, when the vast majority of countries introduced strict national quarantine restrictions related to the COVID-19 pandemic. Scientists have substantiated new types of tourism, formed new tourist destinations, and travel companies presented new tourist products. New forms of gastronomic tourist services appeared on the tourist market every year: live excursions, lectures, master classes. In general, gastronomic tours in the absence of any restrictions allow tourists to "taste" a familiar place, take part in the festival or learn to cook a favorite indigenous dish from its creators. Combining these examples with elements of other types of tourism, you can form a rich variety of gastronomic tourist offers for every taste.

FORMULATION OF THE PROBLEM

Gastronomic tourism is just beginning its development in our country, and especially in regions remote from the capital. Underestimation by tour operators of Polissia region, prospects for the development of various gastronomic tours to attract new customers, and the destination development slow down this process. Awareness of the need to create a competitive gastronomic tourism product that meets the interests of tourists and is in demand is a significant condition for the growing popularity of gastronomic tourism in the region and the country. Now there is a need to compile maps of the gastronomic potential, gastronomic festivals, a gastronomic tour of Right-Bank Polissia, and the development of the author's method of determining gastronomic potential.

ANALYSIS OF RECENT PUBLICATIONS

A great number of the scientists have studied the gastronomic tourism, potential and tour: Beidyk (2001); Vetkin (2013); Gordin (2014); Kolenda (2006); Linkova (2015); Liubitseva (2008) and others. Researches in the field of the gastronomic tourism are developed by such foreign scientists as Curtis (2010); Hamarneh (2017); Privitera (2018); López-Guzmán (2018).

The aim of the article is to develop a gastronomic tour of Right-Bank Polissia for domestic and foreign tourists on the basis of the marketing research of the Ukrainian and foreign tourists' gastronomic tastes. Tasks of the article: to develop a method of creating and updating gastronomic tours in terms of realizing the tourist potential of the Right-Bank Polissia in connection with the demand of

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potential domestic and foreign tourists and the possibility of consuming tourist services in a convenient, dynamic and modern information environment; to develop a series of author's thematic cartographic models; to create a new tourist product: a map "Gastronomic tastes of the Right-Bank Polissia festivals" in the Right-Bank Polissia of Ukraine.

RESEARCH METHODOLOGY AND METHODS

The methodological tool of the study is a set of general scientific and special methods. The scientific method in tourism is a system of approaches and methods that corresponds to the subject and objectives of this science. Descriptive, statistical, and graphic methods contribute to the study of the tourist specialization. The cartographic method is a systematization and generalization of the geographical research results in the form of cartographic models, maps, and schematic maps (Ostapchuk, 2014; Shevchenko, 2007; Bondarenko, 2007). In the explorations of the geography of tourism there is a return from quantitative methods to qualitative analysis using sociological, psychological and ethnological methodologies, as well as the application of economic theory and the theory of management, marketing. Qualitative indicators that are widely used in geographical practice include the so-called Baretti and Defert coefficient, which indicates the level of development of the tourist function. The SWOT method was used to determine opportunities for tourism development in a particular area. MS Excel 2007 is used in computer systematization of material in spreadsheets; ArcGIS 10.2 geoinformation system, Adobe Photoshop raster graphics editor, Adobe Illustrator vector graphics editor are used when creating experimental map samples and developing mapping techniques. In the conditions of the information society development, the mathematical methods play an important role while studying tourism, in particular economic-mathematical and social-spatial models with use of computer technologies (Kuzyk, 2011). Few Ukrainian works (Liubitseva, 2008; Beidyk, 2001; Malska, 2006) are devoted to the theoretical foundations of the tourism geography development. There are few theories and concepts of this field in the foreign literature, the main accents are covered in the works of Cohen (2004); MacCannel (1996); Przecławski (2004). Therefore works of foreign scientists are mainly used. They include the work of Polish scientist Kowalczyk "Geografia turystyki" (2000).

The material of the study is based on samples of the gastronomic Internet discourse: culinary sites, blogs, forums of the Internet communities, the Internet versions of the media, the Internet comments, and the Internet resources videos. According to the analysis, the empirical data on the tourist taste preferences representation are obtained. In addition, the material of the study is the results of an experiment conducted with the participants of the gastronomic Internet discourse, as well as quantitative data obtained from queries of the Internet search engines.

PRESENTATION OF THE BASIC MATERIAL OF THE RESEARCH

The gastronomic culture structure as a system includes three main elements, namely culinary culture, food culture and gastronomic reflection. Gastronomic culture performs the following functions: regulatory; communicative; broadcast; functions of identification, integration and labeling of social and cultural status of the individual. The main function should be considered to be the regulatory function and the function of marking social and cultural status. National cuisine is a cultural construct of the modern era, which emerged in the process of nation-building, which presents national culture and identity at the level of everyday life. The representational nature of the national cuisine has led to the predominant translation of the core of gastronomic culture, which sets the basic rules for combining products and determines the range of possible dishes. Ritualized confirmation and consolidation of the norms of gastronomic culture in the national cuisine becomes the basis for their "profanation" in everyday practice. The specificity of the existence of the considered forms of the gastronomic culture representation in Ukraine is associated with the significant irrelevance of these forms to the socio-cultural conditions of Ukrainian society. Gastronomic tourism has its own specific features (Gordin, 2014) and factors (Linkova, 2015). It has been revealed the growing dynamics of demand for gastronomic tours at the present stage of the tourism industry development in research. Due to the growing ethnocultural interest of society to learn about its own history and world cultural and historical space, authors propose to aggregate ethnic research and gastronomic tourism in a specific type of tourism, which will diversify the final products of the tourism industry through synergies.

Each territory has its own face. The preservation of architectural monuments and the historical appearance of cities and settlements has long been talked about, and the gastronomic face of the territory of the Right Bank Polissia has its own background. Gastronomic tourism has a huge cultural and cognitive function: it creates conditions for interaction and coexistence of different cultures, religions and traditions, provides an opportunity to see the national housing of peoples, their traditions and customs, taste national cuisine, get acquainted with hospitality and traditional life. This, ultimately, leads to the strengthening and establishment of interethnic relations of different ethnic groups. According to the author Nesterchuk (2020), gastronomic tourism is one of the promising areas of the ethnocultural revival of the world, which determines its essence and socially significant role in the global development of tourism and society as a whole.

However, in the modern world, gastronomic tourism is characterized by diversity and ambiguity, as it is closely connected with economics, culture, history, geography, architecture and many other sciences. Accordingly, gastronomic tourism is characterized by many different features, which are embodied in various indicators with different units of measurement. Thus, to give a holistic assessment of the level of development of gastronomic tourism in a region using traditional methods is a complex and time consuming process. This necessitates the expansion of the mechanism of using methods of economic analysis, in particular, the active use and creative processing of research techniques in related fields (mathematics, statistics, cybernetics, micro- and macroeconomics, etc.) is possible and scientifically grounded today. One of the solutions to this problem is the use of statistical methods of comparative multidimensional analysis in economic research, which are based on the distribution of multidimensional random variables, in particular, the method of taxonomy, which allows to solve the analyzed heterogeneity of the set of factors. Based on the method of taxonomy, a generalized assessment of a complex object or process is performed by calculating an integrated indicator, which is a synthetic value of all uniformly acting features that characterize the units of the study population and provides identification of the most influential factors. To assess the level of the gastronomic tourism development in Right-Bank Polissia, such a "combined" value should be an indicator of the gastronomic potential, which includes appropriate resources, reserves and opportunities for their use.

Currently, taxonomic analysis has become very popular in the study of complex multifactorial objects. The wide application for the analysis of various directions of scientific thought in various scientific fields (for example, in sports, philology, agriculture, pedagogy, archeology, ecology, economy, geography and other modern sciences, indicates the universality of this method better than any other evidence. The mentioned above convinces the expediency of using the taxonomic analysis to assess the level of the gastronomic tourism development. Comparative analysis of the scientific literature (Andrusiv et al., 2020; Bąk, 2013; Baranovsky et al., 2018; Dopp et al., 2019; Hydzik, 2012; Kinash et al., 2019; Kolenda, 2006; Kopiński, 2014; Petrovska, 2016; Pocięcha, 2008; Pocięcha et al., 1988; Ridyard et al., 2015; Rozmus, 2016; Stanisławski, 2010), is used to identify the "classical" stages of the taxonomic analysis: "input information system formation" → "observation matrix construction" → "observation matrix values standardization" → "differentiation of features into stimulators and destimulators" → "reference vector formation" → "distance matrix construction" → "taxonomic indicator calculation for each object research" → "taxonomic analysis structure assessment". Also the works of Polish scientist Pluta are quite important in

addressing the use of taxonomic method (Pluta, 1976). In order to form the initial data for the taxonomic analysis of Right-Bank Polissia gastronomic potential on the basis of expert assessments, a system of indicators has been selected for three objects (Zhytomyr Polissia, Volyn Polissia, Rivne Polissia): gastronomic events (number of gastronomic festivals and other gastronomic events), tourist infrastructure (number of hotels, restaurants, green estates, museums related to gastronomy, monuments dedicated to food and beverages), food industry (factories and plants) and agricultural production (agricultural firms, farms). On the basis of the initial information the matrix of observations of X dimensionality ($m \times n$) of values of characteristics (features) of multidimensional units is formed:

$$X_{mn} = \begin{pmatrix} x_1 \\ x_2 \\ \dots \\ x_i \\ \dots \\ x_m \end{pmatrix} = \begin{pmatrix} x_{11} & x_{12} & \dots & x_{1j} & \dots & x_{1n} \\ x_{21} & x_{22} & \dots & x_{2j} & \dots & x_{2n} \\ \dots & \dots & \dots & \dots & \dots & \dots \\ x_{i1} & x_{i2} & \dots & x_{ij} & \dots & x_{in} \\ \dots & \dots & \dots & \dots & \dots & \dots \\ x_{m1} & x_{m2} & \dots & x_{mj} & \dots & x_{mn} \end{pmatrix} \quad (1),$$

- m is the number of units of n -dimensional space corresponding to the number of rows of the matrix;
- n is the number of features of each unit, which corresponds to the number of columns of the matrix;
- x_{ij} is the value of the feature by number j for the unit by number i .
In general, object data forms rows, and metric values form columns of the observation matrix.

To calculate the integrated taxonomic indicator of gastronomic potential (ITI_{GP}) on the basis of the collected data on the selected indicators of assessment of gastronomic tourism of Zhytomyr, Volyn, and Rivne regions the corresponding matrix of observations is constructed:

$$X = \begin{vmatrix} 20 & 74 & 38 & 965 \\ 21 & 16 & 117 & 899 \\ 12 & 72 & 74 & 337 \end{vmatrix} \quad (2)$$

Since the selected indicators (criteria) for assessing the gastronomic potential describe different properties of the studied objects, they are inhomogeneous, with different units and, accordingly, incomparable. Then to ensure that they can be reduced to a single dimensionless value, the standardization of observation matrix is carried out by the following formula (Bak, 2013; Kolenda, 2006; Pociecha et al., 1988):

$$z_{ij} = \frac{x_{ij} - \bar{x}_j}{\sigma_j} \quad (3),$$

z_{ij} is the standardized feature j for the i -th object;
 \bar{x}_j is the arithmetic mean value of the j -th indicator;
 σ_j is the standard deviation of the j -th indicator;

Since the selected indicators (criteria) for assessing the gastronomic potential describe different properties of the studied objects, they are inhomogeneous, with different units and, accordingly, incomparable. Then to ensure that they can be reduced to a single dimensionless value, the standardization of observation matrix is carried out by the following formula (Bak, 2013; Kolenda, 2006; Pociecha et al., 1988).

$$\sigma_j = \left[\frac{1}{m} \sum (x_{ij} - \bar{x}_j)^2 \right]^{\frac{1}{2}} \quad (4),$$

As a result of transformation of each value of the x_{ij} -th feature the following standardized matrix is formed:

$$Z_{mn} = \begin{pmatrix} z_1 \\ z_2 \\ \dots \\ z_i \\ \dots \\ z_m \end{pmatrix} = \begin{pmatrix} z_{11} & z_{12} & \dots & z_{1j} & \dots & z_{1n} \\ z_{21} & z_{22} & \dots & z_{2j} & \dots & z_{2n} \\ \dots & \dots & \dots & \dots & \dots & \dots \\ z_{i1} & z_{i2} & \dots & z_{ij} & \dots & z_{in} \\ \dots & \dots & \dots & \dots & \dots & \dots \\ z_{m1} & z_{m2} & \dots & z_{mj} & \dots & z_{mn} \end{pmatrix} \quad (5),$$

All elements of the formed standardized matrix have zero value of mathematical expectation and unit value – variances.

Based on the data of the observation matrix, the mean values and standard deviations are calculated for each indicator of the gastronomic potential in the system of initial data of the three regions (Table 1).

Table 1. The results of intermediate calculations for the standardized matrix construction (Source: own research)

Indicators	Gastronomic events	Tourist infrastructure	Food industry	Agricultural production
\bar{x}_j	17.67	54.00	76.33	733.67
σ_j	4.93	32.92	39.55	345.10

Accordingly, to reduce the selected characteristics to a common integrated indicator, the standardized matrix has the following form:

$$Z = \begin{vmatrix} 0.47 & \mathbf{0.61} & -0.97 & \mathbf{0.67} \\ \mathbf{0.68} & -1.15 & \mathbf{1.03} & 0.48 \\ -1.15 & 0.55 & -0.06 & -1.15 \end{vmatrix} \quad (6)$$

The next step is to differentiate the selected features by dividing them into stimulators (indicators, the increase of which improves the overall assessment of the study object function) and destimulators (lead to deterioration of the study object function), taking into account the impact of each indicator (factor) on the level of the gastronomic potential development. This feature distribution is the basis for the construction of the reference vector, which is formed on the basis of the principle that features with maximum values are selected among the features-stimulators, and with minimal – among the features- destimulators. The selection of reference points according to each indicator of the study object functioning level is carried out taking into account the fact that in one-dimensional space there is a pairwise comparison of indicators. For each indicator, the reference point is the distance to which the integrated indicator of the gastronomic potential development level of the region is calculated. Therefore, we distinguish the "best" values in terms of the analyzed features and the purpose of the study (maximum or minimum) z_{0j} among all m_0 units for each j -th feature of the matrix of standardized features vertically

and form the coordinates of the reference vector: $z_{0j} = (z_{01}, z_{02}, \dots, z_{0m})$. In this case, the coordinates of the reference point are:

$$\begin{cases} z_{0j} = \max z_{ij}, \text{ if } j \in I, \\ z_{0j} = \min z_{ij}, \text{ if } j \notin I (j = 1, \dots, m) \end{cases}, I \text{ is the set of stimulants.}$$

In this case, all the selected indicators for assessing the level of the gastronomic potential development belong to the stimulants. In the above mentioned standardized matrix Z , reference points are highlighted in bold, which allows to form a corresponding vector-reference:

$$Z_{0j} = (0.68; 0.61; 1.03; 0.67).$$

The next step is to build a matrix of distances between individual observations and elements of the reference vector:

$$C_{mn} = \begin{pmatrix} c_1 \\ c_2 \\ \dots \\ c_i \\ \dots \\ c_m \end{pmatrix} = \begin{pmatrix} c_{11} & c_{12} & \dots & c_{1j} & \dots & c_{1n} \\ c_{21} & c_{22} & \dots & c_{2j} & \dots & c_{2n} \\ \dots & \dots & \dots & \dots & \dots & \dots \\ c_{i1} & c_{i2} & \dots & c_{ij} & \dots & c_{in} \\ \dots & \dots & \dots & \dots & \dots & \dots \\ c_{m1} & c_{m2} & \dots & c_{mj} & \dots & c_{mn} \end{pmatrix} \quad (7),$$

c_{ij} is the multidimensional Euclidean distance (quasi-distance) between the individual observations and the reference vector for each selected indicator of the level of the gastronomic potential development, which is determined by the formula (Bağ, 2013; Kolenda, 2006; Pocięcha et al., 1988):

$$c_{ij} = (z_{ij} - z_{0j})^2 \quad (8), \quad z_{0j} \text{ is the standardized value of the indicator } j \text{ at the reference point.}$$

According to the calculations, the distance matrix has the following form:

$$C = \begin{vmatrix} 0.043 & 0.000 & 3.997 & 0.000 \\ 0.000 & 3.113 & 0.000 & 0.036 \\ 3.349 & 0.004 & 1.186 & 3.310 \end{vmatrix} \quad (9).$$

Based on the formed distance matrix, the taxonomic distance between the individual observations and the reference vector (c_{i0}) is determined by the formula (Bağ, 2013; Kolenda, 2006; Pocięcha et al., 1988):

$$c_{i0} = \sqrt{\sum_{j=1}^n (z_{ij} - z_{0j})^2} \quad (10),$$

z_{ij} is the standardized feature j for the i -th object; z_{0j} is the standardized value of the indicator j at the reference point. It should be taken into account that the closer the unit of the studied population to the reference point is, the smaller the value of c_{i0} is, and, respectively, the higher the quality of the studied feature is. Determining the taxonomic distance for each object is the basis for the final comprehensive assessment of the gastronomic tourism development level of Right-Bank Polissia by calculating the integrated taxonomic indicator of gastronomic potential (ITI_{GP}) (Bağ, 2013; Kolenda, 2006; Pocięcha et al., 1988):

$ITI_{GP} = 1 - d_i$ (11), d_i is the coefficient of taxonomy, which is calculated by the formula (Bağ, 2013; Kolenda, 2006; Pocięcha et al., 1988):

$$d_i = \frac{c_{i0}}{c_0} \quad (12), \quad c_0 \text{ is the indicator of the quality of the studied object functioning:}$$

$$c_0 = \bar{c}_0 + 2\sigma_0 \quad (13), \quad \bar{c}_0 \text{ is the arithmetic mean of the previously calculated distances between the standardized indicators of the } i\text{-th object and the reference:}$$

$$\bar{c}_0 = \frac{\sum_{i=1}^n c_{i0}}{n} \quad (14),$$

σ_0 is a standard deviation from the reference point:

$$\sigma_0 = \sqrt{\frac{\sum_{i=1}^n (c_{i0} - \bar{c}_0)^2}{n}} \quad (15)$$

The closer the value of the taxonomic indicator to the unit is, the better the level of the studied object is, in particular, the higher the level of the gastronomic potential development is. Continuing the consideration of the issue, it should be noted that the taxonomic analysis is incomplete, and the conclusions are insufficiently substantiated without determining the importance of the selected indicators in a comprehensive assessment of the phenomenon, in particular, the level of the gastronomic tourism development. To do this, it is necessary to analyze the structure of a comprehensive assessment obtained by the taxonomic method, by calculating the proportion of the contribution of each selected feature of the studied object in the integrated taxonomic indicator (Bağ, 2013; Kolenda, 2006; Pocięcha et al., 1988):

$$w_{ij} = \frac{(z_{ij} - z_{0j})^2}{\sum_{j=1}^n (z_{ij} - z_{0j})^2} \times 100 \quad (16), \quad w_{ij} \text{ is the weight of the indicator in the assessment of the object under study.}$$

The total impact of the selected indicators on the comprehensive assessment of the gastronomic potential level of the region is defined as the arithmetic mean of the calculated fractions:

$$\bar{w}_j = \frac{\sum w_{ij}}{n} \quad (17)$$

This indicator allows to determine the importance of each selected factor in a comprehensive assessment of the gastronomic potential development level, which, in its turn, helps to outline priority areas for further in-depth analysis of the gastronomic tourism development.

Table 2 demonstrates the results of the final calculations of a comprehensive assessment of the gastronomic tourism development level of Right-Bank Polissia in 2019 by calculating the integrated taxonomic indicator of gastronomic potential.

Table 2. Estimated indicators for taxonomic analysis of the gastronomic tourism development level of Right-Bank Polissia in 2019 (Source: own research)

Objects	c_{i0}	\bar{c}_0	σ_0	d_i	ITI_{GP}	Rating
Zhytomyr Polissia	2.01	2.20	0.54	3.28	0.39	2
Volyn Polissia	1.77				0.46	1
Rivne Polissia	2.80				0.15	3

Table 3. The assessment structure of the gastronomic potential level of Right-Bank Polissia in 2019 (Source: own research)

Components of gastronomic potential	The structure of the taxonomic indicator of gastronomic potential by its components, %			Average weight	Rating
	Zhytomyr Polissia	Volyn Polissia	Rivne Polissia		
Gastronomic events	1.07	0.00	42.67	14.58	3
Tourist infrastructure	0.00	98.82	0.06	32.96	2
Food industry	98.93	0.00	15.10	38.02	1
Agricultural production	0.00	1.18	42.17	14.44	4
Total	100.00	100.00	100.00	100.00	X

The conducted research demonstrates that in 2019 Volyn Polissia is in the lead, = and Rivne is in the last place. That is, according to the set of selected features Volyn region demonstrates the greatest level of the gastronomic tourism development in Right-Bank Polissia and Rivne Polissia is the least developed. In addition, if we use the Harrington scale (from 0.00 to 0.36 is a low level of development; from 0.36 to 0.64 is an average level; from 0.64 to 1.00 is a high level of development), we notice that a high level of the gastronomic tourism development is achieved in none of the studied areas in 2019, in particular, in Volyn and Zhytomyr Polissia there is an average level of development, and in Rivne it is very low. The satisfactory level of the gastronomic tourism development of Right-Bank Polissia can be explained first of all by modern conditions of "chronic" economic and political instability in Ukraine.

To strengthen the conclusions, it is necessary to consider the significance of each indicator selected for a comprehensive assessment of the gastronomic tourism development level in more detail. Therefore, on the basis of the distance matrix, the structure of taxonomic analysis of gastronomic tourism development in three regions of Right-Bank Polissia has been assessed. It has revealed the components of gastronomic potential that have the greatest impact on the formation of the relevant integrated taxonomic indicator (Table 3).

Analysis of the rating structure of the Right-Bank Polissia regions according to the level of gastronomic potential demonstrates that on average the volume of food industry in terms of the number of factories, plants and plants engaged in food production (38.01%) has the largest impact on its construction in 2019 and availability of agricultural firms and farms (14.44%) has the smallest one. At the same time, in terms of individual regions, various components of gastronomic potential prevail, in particular, in Zhytomyr region - the food industry (98.93%), in Volyn region - tourist infrastructure (number of hotels, restaurants, green estates, museums associated with gastronomy, monuments dedicated to food and drink) (98.82%) and in Rivne region - gastronomic events (number of gastronomic festivals and other gastronomic events) (42.67%) and agricultural production (42.17%). In general, the selected components of the gastronomic potential of the three regions of Right-Bank Polissia, which are factors influencing the level of its formation, can be placed from the most important to the least: food industry → tourist infrastructure → gastronomic events → agricultural production.

This sequence of gastronomic potential components allows to distribute them by priority in managing the level of the gastronomic tourism development in three areas of Right-Bank Polissia, because, while increasing more priority features along with others, the level of gastronomic potential of the region is growing faster. Thus, the integrated taxonomic indicator is a complex characteristic of the gastronomic potential of Right-Bank Polissia. The proposed model of taxonomic analysis allows to identify areas for improvement of gastronomic tourism management policy, as well as to determine the impact of external and internal threats on the level of gastronomic tourism in each of the studied areas further, and to form prerequisites for management strategy.

However, the developed model cannot take into account force majeure. In particular, the beginning of 2020 was marked by an outbreak worldwide of the coronavirus pandemic COVID-19, which mercilessly affected the tourism business around the world, including Ukraine, due to the closure of borders and the introduction of emergency quarantine measures. Obviously, this negatively affected all components of the gastronomic potential and caused irreparable damage to the gastronomic tourism market. Thus, due to the coronavirus pandemic, out of 30,000 catering companies, 12,000 were liquidated as economic entities (Nastych, 2020). According to the World Travel & Tourism Council, the number of jobs threatened by the COVID-19 pandemic could reach 75 million. In Europe, up to 10 million jobs in the field of travel and tourism are at risk, a loss of almost 552 billion dollars. In Ukraine, losses are estimated at 0.5 million jobs. In addition, according to Cushman & Wakefield Ukraine, at the end of the first half of 2020, Rack rates decreased for all categories of hotels in both dollars and hryvnias (compared to the same period last year). How events will develop in the future is quite difficult to predict. The introduction of any stricter quarantine restrictions in Ukraine will only negatively affect all components of gastronomic potential (Grishina, 2020).

Thus, the **gastronomic potential** is a symbiosis of resources (tourist and recreational), reserves (use and practical implementation of inherent abilities: culinary, hotel and restaurant, institutional), opportunities (formation of new skills: culinary schools, workshops, blogs, tours, connection of a new model of mass media recreation), tourist infrastructure, producers of gastronomic tourist product, institutions, attractions for organization and implementation of tourist, recreational, gastronomic, hotel and restaurant, logistics, promotional activities in the region to meet human needs (Figure 1). Promisingly, Kyiv Polissia in the future will be an attractive area for tourists with a set of tourist attractions and a developed tourist infrastructure. The availability and quality of tourist infrastructure determine the number of tourists who will visit the destination. The destination space has both physical-geographical and administrative boundaries that determine the form of government, the image of the territory and the level of competitiveness in the tourism market. Currently, Ukrainian cuisine is a tool for promoting the Ukrainian language in foreign restaurants of Ukrainian cuisine - as an object of gastronomic tourism. The considerable influence of gastronomic tourism on the region's economy is obvious: the use of products of local producers as one of the directions of tourism development, the system of gastronomic tourism product formation, import substitution in the food and tourism industry, etc.

Right-bank Polissia has significant potential for the development of multidisciplinary and highly efficient tourist and recreational economy. It is characterized by favorable natural and cultural-historical recreational resources. It attracts tourists not only with its unique forest and swamp landscapes, but also with a bright and colorful ethnocultural environment. At the present stage of the tourism industry development it is important to offer a new product that can interest an experienced consumer. Development of the gastronomic tour maps will help to promote gastronomic tourism in the Right-Bank Polissia (Figure 2).

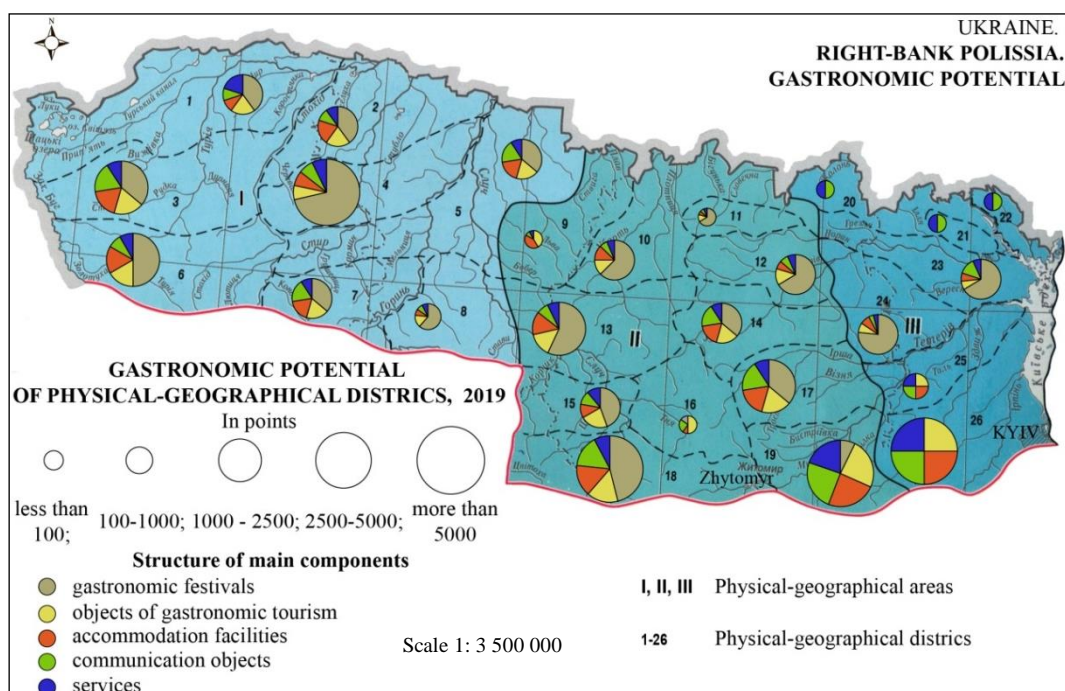


Figure 1. Map of gastronomic potential of Right-Bank Polissia. The scale value is given in the original (Source: own research)

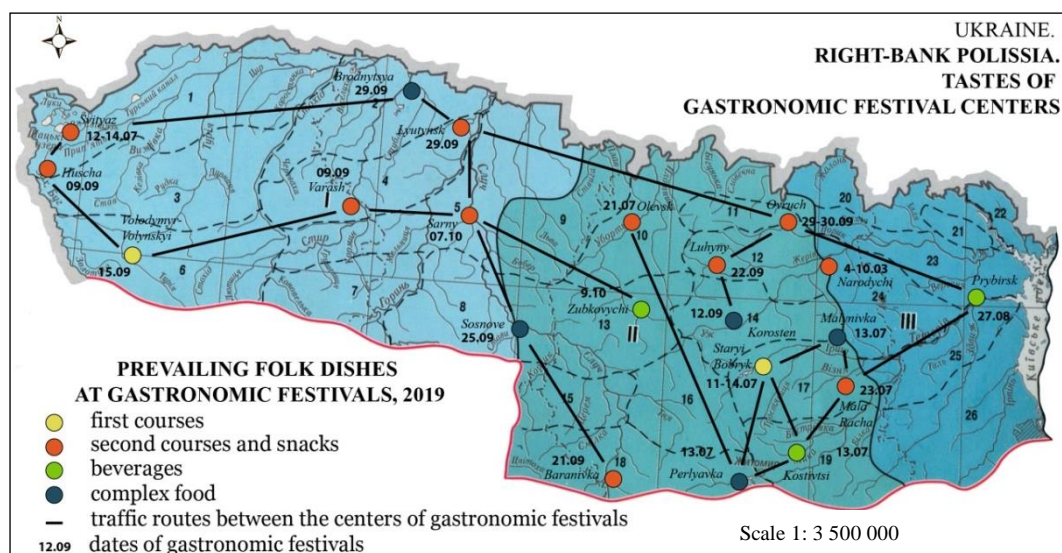


Figure 2. Map of the gastronomic tour "Gastronomic tastes of the Right-Bank Polissia festivals". The scale value is given in the original (Source: own research)

It is extremely important for a region that is developing and outlining its own branding curiosities in the field of tourism, recreation and entertainment to make this kind of scientific research in the field of gastronomic tourism. The objects of general analysis can be: a gastronomic tourist product, a gastronomic tour, a gastronomic tourist and a consumer basket of a gastronomic tourist, which will become resulting. The author's vision of the above mentioned definitions is offered:

- ✓ "a gastronomic tourist product" is a package of tangible and intangible elements (impressions, services, attractions, and tourist resources) that can be purchased within one trip to the destination;
- ✓ "a gastronomic tourist" is a tourist who travels with a clearly defined gastronomic purpose, regardless of financial status, visiting both high-end establishments and catering establishments, or street food or indigenous, traditional cuisine;
- ✓ "a gastronomic tour" is a specially selected program of gastronomic recreation, where taste impressions are put at the first place, while the visual impressions are additional;
- ✓ "a consumer basket of a gastronomic tourist" is a unique package of tourist services, that primarily includes a promotional gastronomic tour, which is spatially localized in the information and tourist hub of the visited gastronomic and indigenous attraction.

Public authorities are aware of the effectiveness of gastronomic tourism for the development of the country's economy and industry and create programs for their development in many countries, states, and cities (Alliance of Independent Gastronomic Specialists of Ontario Tourism, Chinese Academy of Social Sciences, The World Food Travel Association). Other institutions and organizations make a significant contribution to the development of the tourism industry. This contribution presents some results of research projects of the Department of Tourism: "Constructive-geographical and organizational-economic principles of development of innovative types of tourism in the territory of the Right-Bank Polissia" (State registration number 0117U007357); "Organizational and economic principles of ecological tourism development" (State registration number 0119U103399); "Gastronomic tourism: theoretical and methodological construct and prospects for the implementation of gastronomic research in the field of tourism, recreation" (State registration number 0119U103398). Scientific developments are used in the Program of inbound tourism of Zhytomyr region until 2030.

CONCLUSIONS AND PROSPECTS OF THE STUDY

In summary, we can say that developing gastronomic tourism contributes to the socio-economic development of the Right-Bank Polissia region, including the creation of additional jobs, preservation or opening of enterprises, helping to brand the region in general and its local parts, attracting tourist flows. Due to the mapping of gastronomic potential and the separation of gastronomic festivals as events of large-scale tourist significance in the Right-Bank Polissia, it is advisable to conduct gastronomic and tourist zoning.

The map of the gastronomic tour "Gastronomic tastes of the Right-Bank Polissia festivals" thanks to PR-technologies will allow to attract tourist flows to the destination of the Right-Bank Polissia.

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STAKEHOLDER AND VISITOR REFLECTIONS OF SPORT BRAND POSITIONING IN SOUTH AFRICA

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Abstract: The purpose of this paper was to identify stakeholder and visitor perceptions of brand images of the South African destination brand in order to examine how sport is utilised as a catalytic agent for achieving brand positioning. Following a mixed method approach, in-depth semi-structured interviews were conducted with 24 sport, tourism, and government stakeholders. Survey questionnaires were administered with 403 sport event visitors at major events across South Africa. The results show congruence between stakeholder and sport event visitor perceptions on the multi-layered brand images of South Africa. Uniquely defined city brand images raise challenges and opportunities for establishing a coherent national brand positioning. The utilisation of sport for brand positioning is greatly dependent on brand distinctiveness and dedicated stakeholder vision and policy. The study provides a framework of recommendations that practically guide key industry stakeholders on value propositions that underpin brand positioning strategies. This study also makes a contribution to existing brand positioning theories and practice by exploring the value proposition construct to a unique sport environment while employing real-life destination brand scenarios.

Key words: sport brand positioning, positioning strategy, sport events, stakeholder reflections, the South African brand

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INTRODUCTION

Among scholars and practitioners, the development of alternative marketing strategies designed to satisfy the needs of specific target markets provided the initial spark of interest in the concept of brand positioning for place brands (Ibrahim and Gill, 2005). Therefore, the significance of brand positioning has been increasingly emerging in the place branding discourse and policy mandates of places. More specific to destination brands, it has been consistently proven that sport can be a catalyst for the re-branding of cities and nations. In particular to establishing tourism destinations, city planners and decision-makers spend millions of dollars on major sport events, including investing in sport business opportunities (Maennig, 2019). This is not only to draw on (new) sport tourism markets but to augment a favourable climate for establishing positive brand positioning (Herstein and Berger, 2013). Fuchs and Diamantopoulos (2012) are of the view that brand positioning emanates from consumer perceptions and therefore, positioning strategies are based on the examination of visitor perceptions and preferences. For this reason, marketers have limited control over product/ brand positioning. Strategies designed from an organisations' perspective, instead of the consumer perspective, are thus likely to be unsuccessful (Brooksbank, 1994).

Certainly, brand positioning as it applies to destinations involves complexities in its conceptualisation and practical features which suggest that the design and implementation of brand positioning strategies are not trivial (Insch, 2014). Despite the many complexities involved, and similarly to traditional marketing, stakeholders of tourism destinations should examine the perceptual images of the destination brand in line with developing positioning strategies. It is however still unclear how sport events – one of the biggest tourism niche industries – contribute to the awareness and perceptions of tourists on host destinations and, subsequently, how such perceptions inform brand positioning strategies. This ostensibly necessitates the current study purpose: to determine the perceptions of both consumers of sport (sport tourists) as the key perceptual entities of the destination brand, as well as the perceptions of stakeholders of sport and destination branding as the custodians of brand positioning strategies. Having successfully hosted a series of mega-events, including the 2010 FIFA World Cup (the first for an African country), as well as serving as host to a series of annual sport events, the South African destination brand was investigated.

The paper begins with a critical review on brand positioning literature and contextualises it to destination branding, with a particular focus on sport. Thereafter, the methodological processes and approaches are discussed according to a mixed methods research design. The key findings and discussion, which highlight implications to branding theories and stakeholder policies and practices are presented next. Thereafter, the paper concludes with recommendations for future research.

LITERATURE REVIEW

Brand positioning in context to destinations

Several studies have addressed topics related to the brand positioning of tourist destinations. Some studies have investigated the context of brand image (Daye, 2010; Raid, 2016; Klein, Völckner et al., 2019), while others have investigated brand identity as a key construct to brand positioning (Cai, 2002; Kapferer, 2002; Konecnik and Go, 2008; Bregoli, 2011). In fact, it is proposed by Kotsi and Pike (2020) that, in the tourism literature, Cai (2002) was the first to highlight the importance of brand identity development for destinations in order for marketing communications to achieve differentiation from their rival counterparts. Thus, both brand image- the subjective and perceptual phenomenon that is formed through consumer interpretation which is influenced by reasoning and/or emotions (Fuchs and Diamantopoulos, 2012) - and brand identity- the detailed and useful information about the brand, such as trademarks, logos, and strategic missions (Janiszwska and Insch, 2012; Lee Kim and Won, 2018) are essential elements for brand differentiation. To this end, Crawford and Di Benedetto (2008) propose that brand positioning is the attempt to create, change or foster specific images about a brand in the minds of consumers. In doing so, successful positioning creates brand preferences which influence consumer decisions when choosing specific brands over their competitors (Tasci and Gartner, 2007; Lee et al., 2018). Fuchs and Diamantopoulos (2010) further argue that brand positioning leads to a high level of

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brand equity and customer loyalty. The literature highlights that, achieving greater brand equity equates to achieving competitive advantage (Pike and Page, 2014). This is particularly important for tourist destinations that offer similar tourism products and possess comparable destination characteristics. In consideration of the foregoing, emerging literature focusses on the empirical investigation of brand equity based on consumer satisfaction and travel (re-visit) intentions (Chi, et al., 2020; Indrie et al., 2020; Tran et al., 2020).

Furthermore, Kapferer (2012) argues the importance of destinations to possess a clear value proposition to establish and augment brand distinctiveness. Consequently, many destinations have viewed sport (events) as powerful tools for brand positioning (Govers and Go, 2009; Zhang and Zhao, 2009; Hemmonsby and Knott, 2016; Hemmonsby and Tichaawa, 2019a/b; Hemmonsby and Tichaawa, 2020). Accordingly, studies contextualising sport brand positioning in relation to consumer perceptions and tourist behaviour have emerged (Lee et al., 2018), thus giving grounds to the current study's scope and context. Destinations are the centrepiece of tourism; therefore, authorities are able to distinguish tourism destinations from similar destinations by positioning their unique and competitive attributes which make it a more attractive destination to visit (Chacko and Marcell, 2008). However, it can be challenging for destinations to select an appropriate frame of reference that defines its brand since destinations are comprised of a multiplicity of products that make up the destination brand (Saqib, 2019). This branding challenge may arguably have an extended impact on the obscurity of the destinations' brand identity which by definition should clearly define and communicate the destinations' brand. Keller (1998) and Insch (2014) notably recognise that a well-defined brand identity translates to a successful brand positioning in that it sets the boundaries of positioning by adjusting the expression and uniqueness of the place brand. Moreover, the brand identity creates its own image, distinctive properties, and positive associations and values in consumer minds with the goal of the positioning concept being an idea of differentiation (Fayvishenko, 2018; Marcu et al., 2020).

While this brand identity challenge perpetuates in brand development theories, Anholt (2010) posits a related challenge that centres on gaining the support of a heterogeneous group of destination stakeholders in designing the brand identity for large destinations. This is consistent with Inch (2014) and Saqib (2019), who proposes that the complex relationships of multiple stakeholder groups can further result in fragmented coordination and challenges in decision-making on positioning strategies. Accordingly, Pike and Mason (2011) advance that, in the event where impartial decision-making supersedes the design and implementation of the destination identity, it is critical for Destination Marketing Organisations (DMOs) to select a positioning slogan and supportive imagery which are aimed at capturing the essence of the place with a multitude of different features. While positioning must be truthful and reflect the authentic place brand, the authors stress that the challenge remains in the diversity of independent stakeholders with "different opinions, market interests and service offerings; multiple geographic markets that are heterogeneous and dynamic; a reliance on funding from public sources" (Pike and Mason, 2011: 170). This then has further implications for brand managers of destinations.

Arguably one of the most complex factors for destinations is that of perceptual influences of the destination brand image. Visitors often differ in their perceptions, expectations and desired satisfaction of the tourism product and the place. Likewise, the perceptions of stakeholders are considered important to destination brand positioning. This is as a result of the influence of marketing communications on stakeholders' perceived experience which convey authentic messages about the destination brand (Riad, 2016). Therefore, the complexity of destinations by reason of differences in perceptions is heightened (Saqib, 2019). Taking into account different socio-cultural backgrounds of visitors, Pike (2010) posits that visitors form different perceptions of the brand image and as a result, destination managers are expected to systematically conduct market research in order to determine any inconsistencies between the intended and perceived brand image. Chambers and McIntosh (2008) and Coz and Mowatt (2013) argue for destinations to be authentically linked to issues associated with the competitive environment and the goal of authenticity should be to achieve a competitive advantage. Consequently, the authentic reputation of the destination brand image should be promoted through a unique competitive advantage which, in essence, would contribute towards superior brand performance (Baker, 2012; Bosch and Taris, 2014; Riad, 2016). To this end, Herstein and Berger (2013) caution destinations against setting unrealistic expectations of the destinations' brand and instead suggest focussing on a brand image and identity that fits its tangible assets (such as buildings, climate, sea, reefs, roads, transportation system and facilities) as well as its intangible assets (such as history, people, and culture and spirit). Destinations are inherently different from products, thus logic dictates that the brand positioning concepts must be adapted to suit destinations so as to accommodate these differences. However, such options have not attracted much attention in the known destination marketing literature. In addition to known challenges in destination contexts, the significance in operationalising brand positioning strategies is widely acknowledged in the literature (Janiszwska and Insch, 2012; Herstein and Berger, 2013; Insch, 2014; Saqib, 2019). Studies such as those of Herstein and Berger (2013), Allameh et al. (2015), Lee et al. (2018); Wu and Cheng (2018) attempt to operationalise brand positioning in the context of a specific (sport) market. Pike's (2010) theory results in repeat visitation, brand awareness of visitor perceptions, interests, and traveling intentions. This particular study further sets out to use sport event tourism as the specific market that expresses the brand positioning to a selected destination.

The role of Destination Marketing Organisations (DMOs) in brand positioning

While the interest in applications of brand theory to practise in tourism is increasing, there is still a paucity of published research in the literature to guide DMOs on best practices that could potentially mitigate protracted complexities. However, recently Trunfio and Lucia (2018) examined best practices on how DMOs engaged stakeholders in destination brand management and marketing, thus beginning to build on and advance the current body of literature. Notwithstanding such theoretical and practical advancements, it remains unclear how the marketing and management constraints facing DMOs are alleviated as a result of the multiple complexities in destination branding. That is, the multi-attributed entities that comprise destinations, the multitude of markets and their diverse interests and perceptions, along with the heterogeneous stakeholder groups involved in decision-making, which makes the brand positioning process inherently complex.

Meanwhile, the roles of DMOs in the branding process needs more clarity. Pike (2004), Kavaratzis (2005), Pike and Mason (2011), and Rodríguez-Molina et al. (2019) generally link DMOs roles to marketing through establishing clear brand identities used to enhance the competitiveness of the destination- thus largely engaging in promotional activities. Earlier researchers, however, argue that DMOs engage in a more managerial role as they are becoming more prominent 'destination developers' by acting as catalysts and facilitators for the realisation of tourism developments (Presenza et al., 2003). As a result of this mandate and associated managerial functions, Presenza et al. (2003) dubbed the DMOs as Destination 'Management' Organisations. More recently, Morgan et al. (2012) are of the view that DMOs exist less to manage and more to coordinate, not simply to communicate with the consumer but to support the wider destination system and therefore, establishing, nurturing, and servicing partnerships between a range of stakeholders. While coordination can be viewed synonymous to management, it is not clear how these two concepts are distinct in the tourism literature and thus can be applied interchangeably. Nadalipour et al. (2018) however begin to contextualise the notion of DMOs in their study on destination sustainable competitiveness and posit that the responsibility of the DMO is to coordinate efforts to attract tourists (both business and recreational) to its geographical area (destination) without limiting their traditional role-playing in destination marketing. This then ties in with Freire (2006) who

suggest that tourism destinations should develop a system of brand management that focuses on their brand identity with DMO's identifying a unique set of brand associations that can strategically be created and maintained.

Specifically to brand positioning, Rodríguez-Molina et al. (2019) posit that, DMOs should successfully employ high levels of message consistency across different levels of communication channels to provide alternative brand positioning strategies. As DMOs need to communicate the brand positioning to specific target markets, it is furthermore important, in destination positioning research, to explicitly identify the travel situation in which the research participant is expected to make judgements on the brand image (Pike, 2004). However, it remains unclear how DMOs contribute to the brand messaging in a unique sport event situation where another group of (sport) stakeholders are involved. Who is responsible for branding? The travel situation of interest for this paper was for sport events and more specifically, the sport spectator. While there is a clear increase in the number of (active) participants in major events, studies have also found that there is an overall significant number of (passive) participants traveling for sport (Roche et al., 2013), which may be as a result of brand perceptions/awareness and destination attractiveness. In line of this finding, the focus of this paper is on investigating passive participants.

The influence of sport events on brand positioning

Mega-events such as the Olympics and World Cup Games can yield particularly high levels of tourism, media coverage, prestige, and economic impacts for the host destination (Getz, 2012). While the quality of the urban development and media attention on destination brand attributes contributes positively to the destination's image and leads to favourable perceptions, it is still of concern as to how long such perceptions remain from once-off mega-events. On the contrary, small-to medium scale sport events, that occur on annual bases, have been shown to position their brand images more consistently (Kelly and Fairley, 2018). Melbourne, Australia, for example, has proven to consistently succeed in this regard by positioning an event portfolio comprised of both hallmark and major annual events and, as such, has made the destination into a fierce competitor for global brand positioning (Getz et al., 2012). The frequency in hosting major events not only enables continuity in positioning strategies but it also verifies relationships among the variables of the participants' background, the attractiveness of local sport tourism, participation motives, satisfaction, and loyalty (Chen et al., 2011).

It is for such reasons that theoretical and practical advancements have been made to event leveraging so as to employ strategies and tactics to sport event hosting to achieve desired long-term benefits such as repeat visits, future business opportunities, and lasting brand positioning (Chalip, 2014). However, while the conceptualisation of leveraging has become more prominent to mega-event hosts, recent studies have demonstrated the need for sport event leveraging in small-scale events (Kelly and Fairley, 2018; Hemmonsbeey et al., 2018). Hemmonsbeey et al. (2018) postulate that destination branding outcomes are nothing short of strategic and the need for event leveraging to some degree is necessary to comprehend the destination in its entirety, i.e., the perceived images through effective brand messaging of event and destination by means of competitive brand positioning. This is particularly important to secure economic development and encourage lengthening of stays and or repeat visits to the destination. Based on the premise that branding constructs in relation to identity and image plays a significant role in influencing customer satisfaction and loyalty, and ultimately lead to brand equity (Allameh et al., 2015; Wu and Cheng, 2018), it is worth researching destination branding in the context of brand positioning. This paper investigates sport as a competitive advantage and a strong motivator for brand positioning in specific (tourism) markets for host destinations. This research is practically applied to a developing, South African destination brand and it investigates the reflections of both stakeholders of sport and destination branding as well as sport event visitors at major events in South Africa based on variables linked to perceived quality, value, experience, satisfaction and intention to revisit. From the literature reviewed, the study sought to ask the following research questions:

RQ1: What are the brand identity and image constructs of the South African destination brand that influence stakeholder and visitor perceptions?

RQ2: To what extent does DMOs contribute to enhancing the destination brand through sport event hosting?

RQ3: How are sport events used as a vehicle to achieve/ promote brand positioning?

METHODOLOGY

This study aimed to determine the perceptions of key groups of stakeholders and event visitors on brand image constructs that address the destinations' attractions and tourism products for the purpose of establishing a favourable destination brand positioning. Research questions that led the investigation of this study were guided by the literature review and thus have informed the study's methodological processes and practices. The nature of the constructs- which are largely influenced by human perceptions (Henning et al., 2004) which in this study context are key industry stakeholders- led to the adoption of a mixed methods research approach which followed a QUAL- quant sequence. This methodological approach is appropriate when the qualitative investigation is selected as the dominant method of inquiry and the quantitative investigation subsequently acts as a support and verification of the QUAL findings (Creswell and Clark, 2011). Qualitative, face-to-face interviews of a semi-structured nature were conducted with key industry stakeholders involved in sport events, destination branding organisations, and academia. These stakeholders have specific background, training, education and/or experience in sport event hosting, marketing, strategic planning, and implementation of brand positioning and image creation strategies. The inclusion of stakeholders in academia in related areas of expertise ensured an academic, non-biased influence. More specifically, chief executive officers, senior managers, executive directors, and marketing managers at all geographical and governmental levels were considered for this research. To elicit rich and meaningful data from a wide range of stakeholders while matching the aforementioned stakeholder characteristics, a purposive sampling technique, as suggested by Jones (2015) was followed.

Table 1. List of organisations and their geographical representation Source: (Authors)

Representative organisation	Geographical representation
Tourism organisations (DMOs) and Destination development	<ul style="list-style-type: none"> • City of Cape Town • Western Province • National Tourism (government and private)
Sport event organisers and marketing	<ul style="list-style-type: none"> • City of Cape Town • Western Cape Government • Gauteng Province
Tour operators	<ul style="list-style-type: none"> • Cape Town • Western Cape • South Africa
Academia	<ul style="list-style-type: none"> • Western Cape • Gauteng Province

A list of organisations with their local, provincial, or national representations are illustrated in table 1 below. To protect the individuals' identities, the study does not divulge the positions held at specific organisations, nor reveal the names of individuals interviewed.

Hagaman and Wutich (2017) reveal that larger samples sizes of between 20 and 40 interviews are necessary to reach saturation especially for identifying emerging themes. As a result, a total of 24 stakeholder interviews deemed sufficient for this study as no new themes emerged at this stage of data collection. The large quantity of data required throughout the

quantitative phase of the current study, warrants survey questionnaires as the befitting method for data collection from event attendees (see Gratton and Jones, 2010). Respondents were targeted at major events hosted in South Africa and a random sampling of these individuals was employed by experienced fieldworkers. Randomisation ensured an autonomous selection of each respondent (Plowright, 2011). Fieldworkers were assigned particular areas at the event precinct (i.e., main entrances, water points, visitor areas, seating/ waiting areas etc.) to ensure randomness was achieved. Two major events were visited: a marathon event (the Comrades marathon – the largest one hosted in the Kwa-Zulu Natal province and South Africa) and a multidisciplinary triathlon event (the IRONMAN – hosted in Port Elizabeth, another major city in South Africa). These popular events promised a large number of participation and event attendees in particular to the international audience. The Comrades Marathon is the world's largest and oldest marathon race and places a prominent focus on South Africa as a sport destination (Turco et al., 2003). Whereas, the IRONMAN event is positioned to promote the ultimate African experience, being a scenic bike course along the Nelson Mandela Bay coastline, which has been voted Africa's best spectator course, the best run course in the world, and the second-best race venue in the world (ironmansouthafrica.com, 2018).

Guided by the proposal of Isaac and Michael (1981:193), in that "the needed samples size of a randomly selected sample from a given finite population of N cases", the current study has used a sample calculator to determine the N cases of both major events visited. This was calculated to achieve a 95% confidence level and at a 5% margin of error in the results. While the researcher set out to split the sample across both events (200, respectively), by the end of the data collection, a total of 403 (200 at the Comrades Marathon and 203 at the IRONMAN) valid responses had been collected. The collection of data, therefore, achieved over 100% success rate.

All stakeholder interviews were conducted at a convenient location (usually the respondent's workplace). The interview times ranged between 45-60 minutes. Prior consent of all respondents was sought via email. Cognisant to Denzin (2010), the semi-structured interview protocol constituted a set of pre-determined questions which were developed through the literature review- however, still flexible enough to permit probing and clarifying as well as exploring specific phenomena. Questions mainly centred on destination branding strategies in relation to perceived brand image, brand identity, and brand positioning. Specific questions on the influence of sport (events) and stakeholder involvement, partnerships, and decision-making in the context of sport event hosting and destination branding were further explored. Examples of questions included; in your opinion, what are the brand characteristics/ constructs that make up the South African destination brand identity? How does brand identity and perceive image translate to brand positioning? From your experience in either sport event hosting/ tourism marketing, how do you believe your organisation contribute to the South African destination brand?

For the quantitative phase, a series of closed and open-ended questions, including 5 point Likert scale questions were developed to determined sport event attendees' profiles, their awareness and perceptions, and their satisfaction levels of the brand positioning of South Africa through established brand messages. Attendees could indicate the degree to which they agree or disagree with brand messages conveyed through the sport event, as well as whether their attendance at the event had encouraged them to, for example, return to South Africa, visit/ support other South African tourism products/ amenities, encourage others to visit, and/or change or reinforce their perception of South Africa. Primary reasons for visiting were also elicited as well as intentions to lengthen visitor stays to determine opportunities for brand positioning beyond the event phase. Questions on visitor awareness of entities who are mostly responsible for destination branding through sport event hosting in South Africa were also prompted. Paper-based questionnaires were administered by trained fieldworkers and supervised by the researcher. Informed consent was asked when the event attendees were approached, and their full anonymity was guaranteed.

The qualitative data analysis started with each interview being digitally recorded and manually transcribed verbatim using MS Word. An inductive bottom-up approach to the coding procedure was employed in determining which individual and family codes are manually assigned, categorised, and themed to a specific sentence or passage of response. There were no pre-set themes, thus the inductive (open) coding approach according to the systematic strategies of Strauss and Corbin (1990) as well as the guidelines of Miles et al. (2014) were more appropriate than a deductive top-down approach which automatically codes and themes content. The analysis thus began with open coding of interview transcripts which followed with reducing and clustering codes by grouping it into categories. From the resultant list of codes and categories, information was extracted and grouped by themes. These themes were then used in conjunction with the quantitative results which form the basis of the results section of the paper. Atlas.ti software was used to code and analyse the qualitative data, which is useful for managing and analysing copious amounts of raw data (Smit, 2002). The greatest possible effort was put forward to ensure the validity of the data that were analysed and reported through constant checking, and through comparing the voice recordings with the interview transcripts for ensuring correct meanings, interpretation, context, bias, and legitimacy. The Statistical Package for Social Sciences (SPSS) enabled researchers to perform statistical operations on the quantitative data. In preparing for data capturing, an SPSS template with the coded variables was set. Thereafter, descriptive statistics were run to indicate/ show the frequencies of the selected variables (expressed in percentages and graphs). The questionnaire was piloted, and the results were analysed to assess all factors prior to the actual data collection. The results gleaned were continuously assessed throughout the research process to maintain the validity of the study.

Results from the profiling of sport event attendees show that the respondents who participated in the study are presented as follows. The demographic profile in terms of racial and age backgrounds shows that, most of the respondents were predominantly white/ Caucasians who ranged between the ages of 26 and 45 years old, (i.e. young adults). The gender composition of the sample was almost equally divided between males (51.4%) and females (48.6%). An average monthly disposable income, ranging between R25 001–R30 001 per month, was calculated across respondents at both events. When converted to US Dollars, this equates to roughly \$1,649- \$2,039. A geographic profile of the origin of respondents show that 40.9% of the event attendees were from South Africa, whilst 59.1% of respondents represented other countries. An analysis of the international attendees shows that the majority of them were from the USA (7.8%), Germany (5.4%), the UK (5.1%), Australia (4.7%), Spain (4.4%), Canada (3.7%), and Argentina (3.0%) with the rest of the international attendees representing a number of other countries.

RESULTS

While participant quotes are used to illustrate their responses, in order to protect their identities, a number is assigned to each respondent (e.g., R1, R2, R3, etc.), which bear no significance to their title or positions. Where necessary- to express a response given by specific respondents-, the representative organisation is used as a frame of reference. The respondents discussed the global brand identity of South Africa, brand messages influencing perceptions, and the challenges facing brand managers when positioning an authentic South African brand.

Global brand identity of South Africa

Resulting from the brand logo and the subsequent messaging emanating from the logo design and promotional campaigns, respondents mentioned that the South African destination's brand identity is globally positioned. For instance,

South Africa is a prime destination for international tourism through its brand identity trademark [R2].

The South African brand identity upholds a strong global appeal that attracts international tourism markets... I mean, the flag is globally recognisable and it is in our logo [R9].

Our brand is identified in our logo design and it extends to a large [international] audience [R8].

One of the most intelligent logos ever used in South Africa was the 'Proudly South African' logo which was an endorsement sticker and campaign on the South African destination products [R1].

Distinguishing the brand identity, unique features of the South African brand were mentioned to contribute to this brand positioning. Notably, intangible, experiential elements linked to nature and wildlife were mentioned. For example,

South Africa is a global brand which is still associated with nature and wildlife. The destination is still an animal attraction and it attracts people here. [R10].

Emphasising this point, a respondent in sport event organising articulated the unique brand compared to elsewhere in the world - "[South African cities] offer world-class conferencing and sport, and yet, in a few hours, you can be in a [i.e. the] bush experiencing the big five [i.e. Africa's largest and most dangerous mammals], which you simply can't do anywhere [else] in the world" [R4].

In relation to sport, respondents mentioned that the event is a pull factor to position the primary identity in the minds of consumers. Illustrating practical examples of sport, respondents in sport event marketing expressed the following points,

The Cape Town Cycle Tour as an example, [for] domestic and international visitors, it isn't just coming to a bicycle race in Cape Town. The sport event is only the hook. It is more like, "We are going to Cape Town, why don't we stop in Johannesburg on our way back [home] and spend a week at the Kruger National Park". It is about leveraging those opportunities [R4].

Our event is [there] to attract fans, it is to get people to our country, to experience this destination. But the event makes it so much accessible to come and enjoy the unique countries landscape [R17].

Stellenbosch [a region in the Western Cape] is a global destination for especially mountain bikers. We host our [mountain bike] event and the World Championships in the Western Cape. Athletes are not going to Cyprus or Spain to train or compete, they are choosing Stellenbosch, and it's amazing for the brand's distinctiveness [R8].

Furthermore, stakeholders in provincial government and sport and recreation mentioned the value of the brand identity and more importantly that the value results in the "lengthening of visitor stays" [R4] as well as the sustenance of tourism operations, such as "experiencing South Africa's accommodation, catering, hotels, attractions, and sport at large" [R6].

Sport event attendees were asked what their main reasons/ motivation were for their visit to the host destination so as to establish whether the event is in fact a pull factor for brand positioning (see Table 2 below). A significant amount (81.5%) of respondents indicated 'the sport event' as their main reason. Second to this, (8.1%) indicated that 'business' was the main reason. Whereas 'general tourism/ sightseeing' and 'visiting friends and family' received equal indications (5.2%).

Table 2. Main reason for respondents' visit (n=403, in %)

Reason	%
To participate in the event	81.5
General tourism/sightseeing	5.2
Business	8.1
To visit friends and family	5.2

Further questions regarding pre- and post- event stays were probed to elucidate their entire stay in the destination. When asked whether the attendees have extended their stay after the event, 51.6% indicated 'yes' and 48.4% indicated 'no'. From the indicated 'yes' responses, 41.9% of the respondents specified their intentions to extend their stays between 1 to 2 days after the event phase. 30.1% have specified

their intentions to about 3 to 5 days, and a notable number of respondents (27.9%) have specified to extend their stays for more than 5 days post event. Regarding pre-event stays, most of the sport event attendees' arrivals were 3 to 5 days before the event (45.7%), followed by the percentage of 39.7% 1 to 2 days before, with only 14.6% indicating more than 5 days before the event.

Brand messages influencing perceptions

The following appeared to be clear brand messages from multiple stakeholder responses.

1. Value for money:

This 'good value for money' is why we [i.e. South Africa] have been voted number one tourism destination in the world for five consecutive years through different media groups and publications [R3].

Our currency is shockingly weak, which is not actually good but in saying that, it is cheap for international visitors [R4].

South Africa is well perceived as one of the 'cheapest' global destinations to visit. The [South African] Rand compared to other European countries...even the dollar... it is much cheaper [affordable] [R11].

2. Welcoming/ friendly host:

South Africans are welcoming and friendly as a people so visitors will feel at home [R9].

In terms of the friendliness, people remember that, they will go back [and] the tourism experience is heightened [R3].

Brand messages sent is [that] we are a friendly nation and we are hospitable. We want to welcome you. We need to be welcoming and that is what tourism is all about [R24].

So the friendliness and willingness to help because first impressions last [R15].

3. Good climate/ natural features:

South Africa offers good qualities in terms of its climate. We are a prime destination to market this country and enjoy the benefits of that [R7].

One can argue that the South African climate is a big benefit as it attract year round sport and events [R10].

South Africa boast a good climate with attractions such as the mountains, the landscape, and the beaches. Durban has beach attractions, coastlines, so does PE [Port Elizabeth] and Cape Town, our other cities offer great offerings as well, we have the wine farms in Stellenbosch... [R1].

Notably, respondents in local and national event organising referred to more tangible make-ups of South African in its history and heritage and they believed that sport can be used in conjunction with such brand messages to position an all-encompassing destination brand image.

So when people think about South Africa, from a sport perspective they think about the name, 'Nelson Mandela', 'Robin Island'. We [have] unique characteristics [and] we are now able to show that. The Robin Island swim race, now that iconic history and heritage, that contributes conceptually. This race is in its 9th year and they run 27 kilometres (for every year that Madiba was in prison) [R9].

Tshwane for example, it has got the historical Voortrekker Monument [raised to commemorate the Voortrekkers who left the Cape Colony] - which is a prime attraction for tourists. The Tshwane Golf Open has used and promote this and in fact, the positioning statement-saying 'it is not all about golf' [R6].

Adversely, social imperatives such as safety and security, and health and education were mentioned to negatively impact the destination brand. While it was argued respondents that these issues are largely perpetuated in the international media, it is believed that these issues are real challenges that need more prioritisation over large event budgets. For example,

You would be surprised the international media coverage you get about the safety and security- those are key barriers that we work with. [R5].

Social issues are often not prioritised as it should similar to other imperatives such as hosting large scale sporting tournaments [R12].

We have a safety and security problem, so to put the billions of Rands [in]to pitching for major events, it is taking out of housing, education and health, so this needs to be prioritised [R4].

From a tourism perspective, a respondent in local tourism management enunciated that, *the negative ones are the safety and security because people experience those [R1].*

Results of sport event attendees on perceived brand messages largely correspond with stakeholder sentiments. Respondents were asked whether they strongly disagree to strongly agree that the South African brand conveyed certain brand messages through sport event hosting. Table 3 below illustrates that respondents strongly agreed on South Africa 'being a capable host of sport and events' (62.8%) as the main brand messages. Thereafter, 'being a welcoming host to its visitors' (61.8%) were almost similarly perceived. A close indication for 'being both friendly and scenic' (59.5%) and an almost equally close indication of 'being diverse' (56.6%), 'being a competitive destination for major sport event hosting' (56.4%) and 'having a good climate' (54.1%) were indicated. Albeit under the 50 percent mark, 'rich heritage' (43.7%) were also viewed favourably. On the contrary and not surprising are variables linked to 'political stability' (35.3%) and 'safety' (30.4%) which scored the least favourable and or neutral. Consistent with the neutral responses are 'business opportunities' although the agreed column obtained more responses (34.2%) to the business variable.

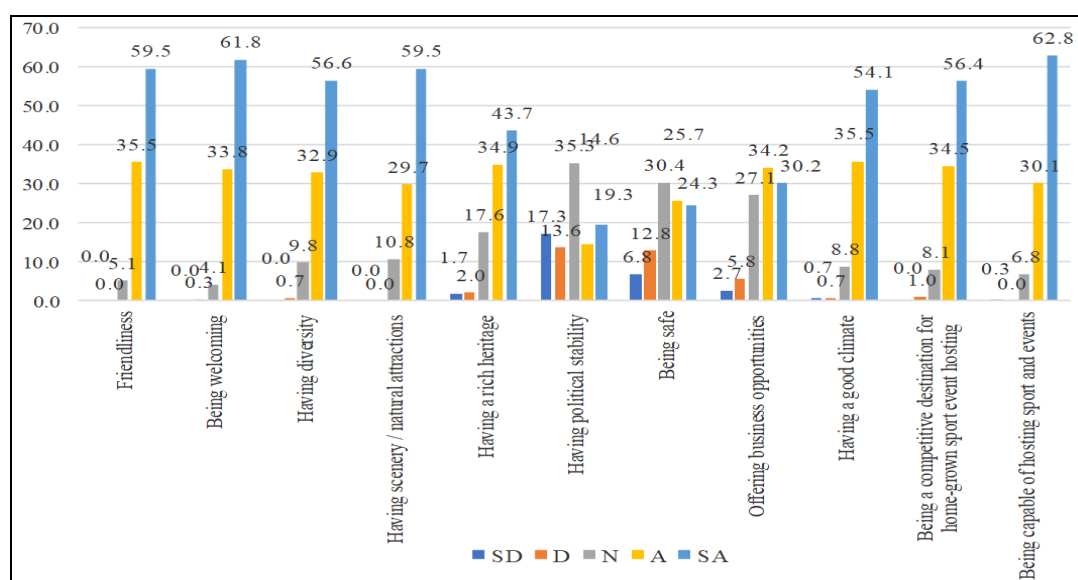


Figure 1. The brand messages of South Africa conveyed through sport event hosting (n = 403, in %)

Respondents were further asked whether their attendance at the sport event had encouraged them to perceive, to promote, or to support the South African destination brand positioning, by referring to key variables. The results in Table 4 show that the subjects were strongly agreeing with; 'visiting/encouraging others to revisit the host city' (57.8%); 'returning to the host city to spectate/participate in the event again' (54.1%); 'visiting other South African cities/provinces' (52.4%); 'supporting local South African business' (53.6%); and 'promoting the host city to family and friends' (54.6%). Albeit not above 50%, 'spectating/participating in similar events in other South African cities' (47.3%) was also strongly agreed upon across the entire subject group. Almost split between agreeing (37.2%) and strongly agreeing (44.3%), respondents believed that 'the event changed/reinforced their perceptions of the host city'.

Challenges facing brand managers in South Africa when positioning an authentic South African brand

Stakeholders mentioned clear challenges to the South African brand management and promotion that are believed to impede the brand positioning. These challenges are linked to financial contributions as well as marketing related. For example,

Investment related: *Events need to be driving international participation, but it can only drive it gets the support of the national role players. They say events are successful provincially, I would say 'yes', but [the event] can't give you a return if [national government] are not helping [R4].*

We are marketing South Africa as a destination. The challenge events have, is that it gets little to no support from national tourism, trade and industry, and economic development, hence event organisers are limited to promote their own event [R8].

From a national tourism perspective, a respondent addressed this investment challenge by admitting to a desire to commit to sport event branding, however, the infancy of a sport strategy at a national tourism level has not made this possible to the full extent. For example,

So there has never been someone driving sport at SA tourism before, again it's a huge organisation. We have not been able to firm because of not having a full-on strategy just yet, it's hard to commit [R20].

This respondent further mentioned the expectations of sport event organisers that does not meet the broader sport tourism sector. For instance,

Most event organisers think it's like they give us millions and we slap on a logo and that is fine. We say no, we want our ecosystem to benefit, our graded establishments, our tour guides, our tour operators, and cites [R20].

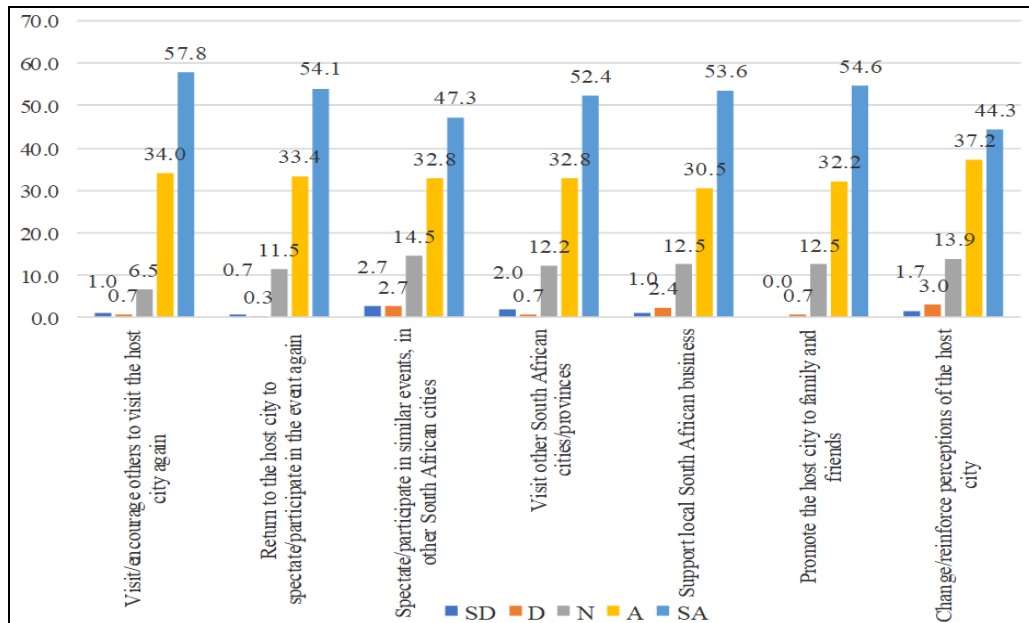


Figure 2. Respondents' attendance at event encouraged them to... (n=403, in %)

Marketing/promotional related: *Destination branding for South Africa has become a little bit disjointed. All the components that makeup South Africa are all competing with each other and there is no overarching grace of selling the South African brand [R12].*

It is the collective responsibility of all entities to promote South Africa to visitors. It is imperative to form those partnerships between sport and tourism- across the board- but that is unfortunately not happening, not in the best functioning way at least [R3].

If government see that if they are able to assist funding and promoting events to niche markets, which they couldn't buy their way into, then there is benefit for them in marketing the country [R4].

When asking event attendees who they believe were responsible for branding/ promoting South Africa during sport event hosting, the results in Table 5 show that 33.5% of the sport event organisers were believed to be the most responsible for the destination branding practices concerned. Closely followed was the government, with 32.7%. Private investment companies/sport brand sponsors were deemed responsible for destination branding by 18.0% of the respondents, with the community and tour operating companies, with 8.1% and 7.7%, respectively, being perceived to be the least responsible for destination branding practices.

Table 3. Which entities are most responsible for destination branding practices concerning the hosting of sport events (n=403, in %)

Entity	%
Government	32.7
Sport event organisers	33.5
Tour operating companies	7.7
Private investment companies / sport brand sponsors	18.0
Community	8.1

DISCUSSION AND IMPLICATIONS

From the current study's findings, it is apparent that the South African brand distinctiveness lies in logo and trademark design of the destination's brand identity. This can be distinguished by the imagery of the country's flag and through promotional campaigns that express the uniqueness of the brand.

Such findings are consistent with past studies that recognise the translation of a well-defined brand identity is to express the uniqueness of the brand, as well as to create its own image, distinctive properties, positive associations, and values in consumer minds, with brand positioning being the idea of differentiation (Keller, 1998; Insch, 2014; Fayvishenko, 2018). While diverse tourism experiences which include elements of wildlife and diversity positively promotes the authentic destination brand, it is, however, unclear how such features are definitively incorporated in the brand identity and subsequent positioning. Conversely, from a sport event perspective, such elements are not only considered but are inadvertently used to attract visitors. Thus, studies arguing the importance of a clear value proposition (in this case the sport event), so as to augment brand distinctiveness are supported (Kapferer, 2012). However, supporting the opposite, the results from sport event visitors show that the majority of event visitors (81.5%) indicated the actual event as their main reasons for visiting the host destination. A shockingly low number of attendees (5.2%) indicated general tourism/ sightseeing. This then begs the question as to how effectively the event is used to stimulate ancillary intentions and, to which extent destination attractions such as wildlife influences travellers' decisions? A fair indication (27.9%) to post-visitor stays were indicated for longer than 5 days after the event which show potential interest from event visitors in tourism products and destination offerings. What is more, variables relating to repeat visits/ revisiting intentions and promoting the destination to others scored favourably (above 50%) across sport event visitors which further translate to brand equity/ value (Tran et al., 2020; Chi et al., 2020). For the destination to fully realise (long-term) benefits from sport tourism, secondary motivations thus need to be stimulated. It might thus be feasible for South African sport and destination brand stakeholders to employ strategic branding practices through leveraging major sport as posited by Chalip (2014).

Chambers and McIntosh (2008) and Coz and Mowatt (2013) suggest that the goal of brand authenticity is to achieve competitive advantage. Herstein and Berger (2013) thus suggest destinations focus on a brand that fits its tangible and intangible assets so as to achieve competitive positioning. Correspondingly, the study's results on perceived brand messages show congruence between stakeholder and visitor

perceptions on a destination brand image that convey both tangible and intangible features. Beyond these features, the current study adds perceptions of efficiency and competency to host major sport which help achieve a competitive positioning as event attendees positively perceived 'being a capable host of sport and events' (62.8%) and 'being a competitive destination for major sport event hosting' (56.4%). Therefore, advancing the branding theory on branding perceptions by including competitive brand features in a unique sporting environment. While social challenges are believed to persist towards the South African brand image, it is in the management of such challenges to mitigate the effects thereof on the sport tourism experience. Congruent to a remaining challenge in the destination branding literature is the complexity in the multiple stakeholder groups, their contributory roles, and their exceeding expectations.

The current study elucidates the roles of branding organisations consistent with Nadalipour et al. (2018) - according to marketing and management functions to the promotions of brand messages and the coordination of branding partners. This is despite other researchers distinguishing these functions (i.e. Pike, 2004; Kavaratzis, 2005; Pike and Mason, 2011; Rodríguez-Molina et al., 2019). Largely from a national tourism standpoint, investment and marketing-related challenges seem to impede on the consistency and efficacy of brand management and marketing where the destination and the event are left to promote themselves. Relatedly, the absence and infancy of a sport strategy by national tourism organisations further impede the destination brand positioning to specific (niche) markets. Although a definitive view into stakeholder responsibilities and expectations for destination branding through sport is unclear, both public (government) organisations and private (sport organisers) are deemed in charge of sport brand positioning. The implication for stakeholders is thus to collectively coordinate their mandates and set realistic expectations between sport event organisers and tourism organisations to cover the scope of each stakeholder's mandate while benefiting the broader tourism sector. From a theoretical perspective, destination brand positioning literature is commonly linked to brand identity, image and equity constructs (Keller, 1998; Fuchs and Diamantopoulos, 2012; Insch, 2014). However, for the most part, such constructs remain notional. Yet, some researchers acknowledge that the adoption of value propositions that help define brand identities and help distinguish brand images which are consequently considered for brand positioning (Funch and Diamantopoulos, 2010). It is previously posited that the innate hosting and participating nature of sport events distinguishes sport as value propositions for destination brand (re)positioning (Rein and Shields, 2007). The current study thus explores value proposition in the context of sport and challenges such notional constructs as well as advances extant brand positioning theories. Furthermore, the pragmatic investigation of this study provides new empirical evidence on the unique destination brand positioning in the context of sport.

CONCLUSIONS AND FUTURE RESEARCH

Destination brand positioning is evident in clear and established brand identities. Beyond promotional activities, destination marketers and managers need to ensure consistent brand image perceptions linked to intangible, tangible and competitive destination features. Sport can be a positive value proposition to establish the destination brand in the minds of a unique niche market, however, it is not without the proper investment and commitment from all sport and branding stakeholders to effectively achieve desired results.

While this study used sport events as the central point for examining destination brand positioning, it acknowledges that sport tourism extends beyond events to include a number of other industries such as sport business and conferences. To extend the current study's scope, it is therefore recommended that further research incorporates a multidimensional perspective of sport tourists. Moreover, the tourism industry extends beyond sport, and especially with secondary brand images mentioned, it is viable to extend the current study's context to include events with a different focus (such as cultural, social, or historical).

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NURTURING CONSUMERS' GREEN PURCHASE INTENTION ON NATURAL DYES BATIK DURING CRAFT SHOPPING TOUR IN THE BATIK CITY OF PEKALONGAN INDONESIA

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Abstract: Demand on eco-friendly products is burgeoning, as a form adaptation to climate change mitigation strategy. Hence, environmental issues are still considered as an emerging topic that concerns the tourism sector. Planned Behavior Theory (TPB) describes the formation of environmentally friendly behavior intentions in green purchase intentions of natural batik dyes. Data were obtained from 200 visitors who ever purchased natural dyed batik during their craft shopping tours to the city of Batik, Pekalongan Indonesia. The data were further analyzed using the structural equation modeling (SEM) approach. The initial model's calculation results reveal that green subjective norm has no significant relationship on green purchase intention. Furthermore, green product knowledge and attitude positively impact green purchase intention of batik products made from natural ingredients. The results showed that INELOC does not moderate the relationship between attitude (ATT) on green purchase intention. Craft shopping tour is becoming popular choice of sightseeing bundling offered by travel agents. Besides its positive value, increasing demand on the handicraft shopping also has a negative consequence on the environment. The destruction occurs as a result of rapid growth in consumption, hence, purchasing environmentally friendly products can be a way to minimize the climate change and balancing the ecosystems. Demand on eco-friendly products is burgeoning, as a form adaptation to climate change mitigation strategy. Realizing that the river pollution can endanger people's health, MSMEs have started producing batik with natural dyes. Although the number of MSMEs that produce natural dyed batik products is not high, the Pekalongan City Government is continually socialize the importance of reducing chemical waste and river pollution. These findings have important implications for marketers and policymakers of natural dye batik.

Key words: handicraft shopping tour, Internal Environment Locus of Control, Green Purchase Intention

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INTRODUCTION

Recently, consumer preference for environmentally friendly products is flourishing. The phenomenon of climate change and increasing global warming (Afrinaldy et al., 2017) is the driving factor for increasing public awareness of ecological problems. High level of consumption on non-environmentally friendly products globally have proliferate environmental problems which resulted as pollution in various elements of life (Afrinaldy et al., 2017) such as; water, air (Lou et al., 2017) land, and waste (De Aquim et al., 2019). Thus, the novel green consumption trend among community encourages every member to understand and alter their conventional consumption patterns in their purchase intentions in pursuing environmental sustainability (Ahmad et al., 2020; Brutting et al., 2020; De Aquim et al., 2019; Prakash et al., 2019; Jaiswal and Kant, 2018; Nie et al., 2018). Research on green products' consumer purchase intentions has been widely conducted (Chairy, 2012; Joshi and Zillur, 2015; Mobrezi and Khoshtinat, 2016; Bashir et al., 2019; Agmeka et al., 2019). Kim and Hwang (2020), in their study, explain that the intention of environmentally friendly behavior related to the theoretical framework and product knowledge about the pro-environment in terms of goods (food) delivery services using drones to reduce air pollution from goods delivery vehicles (food). Furthermore, Hsu et al. (2017), in their study on environmental knowledge, attitude, and green purchase intention, found that attitude and subjective norms significantly impact purchase intention of herbal skin care products. From the above explanation, it can be concluded that increasing public awareness of various environmental problems encourages environmentally friendly products' purchase intention. The Planned Behavior Theory (TPB) factor positively affects consumer purchase intentions (Ahmad et al., 2020). According to Hung et al. (2016), in TPB construct, subjective attitudes and norms may have the most significant and most positive effect (Wang et al., 2017). The model that will be developed in this study is consecutive with the research conducted by Guerin and Toland (2020), which is driven by TPB's concept (Ajzen, 1991) that is indirectly related to subjective norms, attitude, and knowledge. Several studies have also been modified to validate purchase intention on environmentally friendly products in accordance to the TPB concept, such as in India, where consumer attitudes and perceived behavioral control are found to be significant in predicting purchase intentions. In contrast, subjective norms did not affect (Paul et al., 2016). Another study conducted in Morocco revealed that women's traditional knowledge is ready to be integrated into natural product development (Montanari and Bergh, 2019). Eco-friendly packaging products, as a study found that purchase intention towards environmentally friendly packaging was significantly influenced by personal norms and attitudes (Prakash and Pathak, 2017). Furthermore, Hsu et al. (2017) found that attitudes, subjective norms, and perceived behavioral control significantly impact green skincare products' purchase intention in Taiwan. Based on those studies, it can be concluded that there is an insufficient number of studies on purchase intention in natural dyes batik products among customers during craft shopping tour, especially in Indonesia. Previous studies on batik in Indonesia (Meutia and Ismail, 2012; Rukayah et al., 2015; Borshalina, 2015) did not focus on green buying intentions but placing higher priority on price instead. However, batik was initially made using natural dyes made from plants, which are the only available dyes in the past (Haake, 1989). Accordingly, the idea (Clean Batik Initiative (CBI), 2013) was implemented by the Indonesian - German Economic Association (EKONID). CBI aims to reduce the negative impact on the environment caused by batik production.

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Pekalongan is a densely-populated coastal zone, the inhabitants are hardworking as they have to cope with the risk of rob and maintain the coastal ecosystems from irresponsible acts. Many careless people trash the beach over time that would harm the seashore. Majority of the people are open minded in maintaining harmonious ecosystem. The communities have coastal zone management systems based on their traditional knowledge and practices. One of the strategy imposed by the local government in saving the environment is through consuming green products.

A study conducted by Bashir et al. (2019) found that behavioral intention towards the environment mediates the relationship between consumers' norms and green consumer behavior. Furthermore, Ng and Law (2015) argued that people with an internal locus of control (LOC) show a positive attitude towards environmentally friendly products. It is due to the belief that their actions are the main determinants of the environment's well-being (Basak and Ghosh, 2011). On the other hand, the result of the study on people who have an external LOC has no impact on the environment because they believe that their purchase will not make a significant environmental change. They tend to believe that this is the government's responsibility or company (Basak and Ghosh, 2011). Individuals with an internal locus of control show a better adaptation to various situations in a more practical way than people who have an external locus of control (Trivedi et al., 2015). If research that explores the impact of internal and external control beliefs on individual pro-environmental behavior, a study conducted by Yang and Weber (2019) developed and tested an integrated environment locus of control (ELOC) model. The results showed that internal ELOC produces positive effects on green behavior. Accordingly, based on the explanation above, INELOC is expected to have a moderating role in this study. Patel et al. (2020) constructed a model in their study which connects internal consumer trends (identity and internal environmental control locus) with the development of TPB to determine green purchase intention. Although the results were consistent with the theoretical basis and supported by empirical evidence, the study limitations suggest further research on more specified green products—this study identified as MSME batik products that use natural dyes in Pekalongan City, Indonesia.



Figure 1. Natural Dyed Batik (Indigo)
(Sources: Zahir Widadi Batik Pekalongan, 2020)

The current orientation of the international market is that batik is agreeable to nature (Clean Batik Initiative/CBI, 2013). This is focused on the fact of the detrimental effects of the improper use of synthetic dye based chemicals in the batik industry. According to the Water Resources Management Agency (BPSDA), the four rivers in Pekalongan have been polluted and can no longer be used on a municipal or community basis. Rain water can no longer be used for watering rice fields or fishing ponds in delta rivers. Given the degree to which this issue is significant and the lack of viable solutions to solve it, CBI finds the use of natural dyes to be a very important idea to enable the industry to recover its roots and to be able to contribute to sustainable growth. A great deal of re-learning is needed to achieve this goal (Clean Batik Initiative/CBI, 2013). On 2 October 2009, Batik was copyrighted by the United Nations Educational, Science and Cultural Organization (UNESCO) as a human heritage for non-material oral culture (Masterpieces of the Oral and Intangible Heritage of Humanity) originating in and belonging to Indonesia. Thus the town of Pekalongan, which is one of the most popular areas for the batik industry in Indonesia, is closely linked to the culture of the Batik manufacturing process. According to the Pekalongan City Department of Industry, Trade, Cooperatives and Micro, Small and Medium Enterprises (MSMEs), Pekalongan has been declared a national batik hub, with 70% of the batik supply in Indonesia coming from the city. The Department of Industry, Trade, Cooperatives and Micro, Small and Medium Enterprises

(UMKM) of Pekalongan City also reported that over time the City of

Pekalongan is trying to meet the global market needs of environmentally friendly goods. The idea of manufacturing naturally dyed batik has been warmly accepted by the international market for its inspiration to manufacture environmentally sustainable batik products. The goal of this study is to explore the relationship between green subjective standards, awareness of green products and attitudes towards green purchasing intentions through the Internal Environmental Control Locus (INELOC) between craft shopping tourists in the Batik town of Pekalongan.

LITERATURE REVIEW

Theory of Reasoned Action (TRA) and Theory Planned Behavior (TPB)

Customarily, in consumer behavior research, it is started by (Ajzen and Fishbein, 1977), Theory of Reasoned Action (TRA), which explains that consumer behavior is determined by intention, combined with subjective attitudes and norms. Furthermore, the theory of planned behavior (TPB), according to Ajzen and Fishbein (1980), is used as an extended TRA model consisting of perceived behavioral control with norm attitudes and actions. TPB is a theory developed based on the theory of reasoned action (TRA) and can be interpreted as an indication of a person's readiness to behave in a particular pathway (Ajzen, 1991). Thus TPB incorporates perceived behavioral control (PBC) into TRA. Perceived behavioral control implies an individual's perception of readiness and ability to engage in certain activities (Ajzen, 2000; Wu, J. M., 2016). It is subsequent with Guerin and Toland's (2020) study results where the overall findings correspond to the TPB. The findings supported the incorporation of the behavior theory (especially the TPB modification theory). Our environmental theory is developed based on TPB by combining green subjective norms, knowledge of green products, and attitudes with an internal locus of control (INELOC) in predicting green behavior intentions.

Green Subjective Norm on Green Purchase Intention

Subjective norms can be understood as the perceived social power to perform certain behaviors (Ajzen, 1991). According to Ajzen's theory, the factors that can influence the cognitive-affective process are the subjective norms determined by a person's normative beliefs on whether essential people (such as friends, parents, teachers, and coworkers) agree or disagree with the behavior and the person's willingness to comply with others. Thus indicates the importance of people's judgments one's behavior decision (Ajzen, 1991). The emergence of green subjective norms (GSN) stems from the theory of planned behavior (TPB) by combining independent self-construal and interdependent self-construal into a planned behavior theory (TPB) adjustment. The merger was carried out to predict green behavioral intention (Ajzen, 1991; Ajzen and Fishbein, 1977; Mancha and Yoder, 2015). Furthermore, in their research, Mancha and Yoder (2015) found that carrying out a campaign to promote green behavior prioritizes independence, precisely aims to support attitudes of preservation, and campaigns that focus on interdependence must specifically improve subjective green norms and perceived behavioral control. Once this

self-evaluation is fulfilled, the requirements of attention to the dissonance between increased attitudes and beliefs should result in adopting greener intentions and behaviors. Thus it can be concluded that green subjective norm has a significant and positive relationship with green behavioral intention. Therefore, it is suggested that the antecedents of green behavioral intentions will have a positive relation to intended green behavior. The proposed hypothesis can be stated as follows:

Hypothesis 1: Green subjective norm can influence green purchase intention.

Knowledge of Green Product on Green Purchase Intention

The result of the study conducted by Guerin and Toland (2020) supported TRA. The structural equation models fit the data well, most of the path coefficients are significant, and knowledge has an indirect effect on behavioral intention. Hair et al. (2006) stated that a relationship between knowledge about products and green purchase intentions, while knowledge on usage and purchase has no relationship. Contrary, the findings of Choi and Johnson (2019) stated that environmental knowledge has a considerable effect in explaining purchase intention. Previous research on consumer experiences in using products has proven that there are differences between expectations and perceptions in determining consumer attitudes (Souri et al., 2018). Similarly, the results of other previous studies on the quality of knowledge cost knowledge, and knowledge of green products affect green purchase intention (Wang and Hazen, 2016). Furthermore, environmental knowledge is proven to have a positive relationship with green purchase intention (Zhao and Zhong, 2015). However, Ritter et al. (2015) stated that a lack of consumer information often resulted in behavior and attitudes gaps between the environment, concerns, and actual purchase intentions. Meanwhile, another study shows no significant relationship between green consumers' knowledge and behavior (Zhao et al., 2014). Thus, it can be concluded that green behavioral intention will positively related to green behavior. The proposed hypothesis can be stated as follows;

Hypothesis 2: The knowledge of green products can influence the green purchase intention.

Attitude on Green Purchase Intention

Understanding attitudes (ATT), according to Ajzen (1991) and Ajzen and Fishbein (1977), is the level of a person's positive or negative attitude as a tendency to consistently respond to things that are favorable or unpleasant to the behavior target. Research conducted by Verma (2018) created a socio-psychological model that was developed by including original variables rooted in TPB, and the findings showed that attitude ranked the highest in the results achieved to predict consumers' purchase intention of green products. Furthermore, Hung et al. (2016) stated that the right attitude and purchase intention are positively related to consumers' attitudes. Similarly, Leonidou et al. (2010) examined how individuals evaluate various pro-environmental actions by proposing two constructs; inward environmental attitude and outward environmental attitude, where the individual's role in preserving the environment is entirely dependent on the individual's efforts in it. Furthermore, the research model developed by Trivedi et al. (2018) measured the main antecedents (attitude) of environmental attitudes, which were divided into inward and outward orientation. The study found that green packaging's environmental attitudes and attitudes play an essential role in shaping green purchase intention. Therefore, the proposed hypothesis can be stated as follows;

Hypothesis 3: attitudes has a positive influence green purchase intention.

Internal Environment Locus of Control (INELOC) on Green Purchase Intention

Locus of control (LOC) refers to "a person's belief in his ability to control events that occur in his life," which was first proposed by Rotter (1960). It is generally believed that people with an internal LOC show a positive attitude towards the use of environmentally friendly products. They believe that their actions are a significant determinant of environmental well-being. On the other hand, those with an external LOC will show learned helplessness because they believe that their purchase will not make a significant environmental change and argued that it is the government or companies (Trivedi et al., 2015). Psychological surveys of the environment found that internal locus of control is one of the strongest predictors of individuals (Sebastian and Guido, 2007). Yang and Weber (2019) stated that respondents perceived higher responsibility given to government and companies relative to their environmental impacts driven by Confucian values (i.e., group orientation, belief in the hierarchy) with relatively consistent internal ELOC compared to external ELOC. Ahn et al. (2014) discussed the implications of using embodied experiences for behavior change with an internal environment locus of control (INELOC) serving as a moderator. It served as the rationale for the argument that people with INELOC have greater involvement in consuming environmentally friendly products than people with external LOCs (Schwepker Jr and Cornwell, 1991). Overall, because it has been found that the relationship between attitudes towards the environment and LOC is clearly established in both individualism and collectivism societies, this study considers this to be an INELOC variable (Patel et al., 2020). According to Bashir et al. (2019), behavioral intention towards the green environment moderates the positive and significant relationship between consumer norms and green consumer behavior. Furthermore, internal locus of control (LOC) shows a positive attitude towards the use of environmentally friendly products, which is the main modal for influencing the purchase intention of environmentally friendly products, driven by the belief that their actions are the main determinants of environmental welfare.

However, those with an external LOC tend to believe that the purchase they made will not significantly change the environment. The responsibility is the government or company (Trivedi et al., 2015). Companies are more likely to support such campaigns as part of their corporate social responsibility (Parsa, 2011). The concept of locus of control was initiated by Rotter (1960), defined as an individual's control over their work and their belief in self-success, which divided into two; first, the internal locus of control that explains a personal belief on the self-responsibility for their work behavior in the organization. Second, external locus of control describes individuals who believe that their work behavior and their success are more due to external factors, such as the organization. Locus of control can also be demonstrated by two essential characteristics; high achievement motivation and low external direction. It is believed to be the basis of the locus of control scale. Furthermore, it has been revealed that a person's feelings can control his life goals, which is an integral and essential correlation of health (Rotter, 1960). The presence of INELOC is argued to have strengthened the effect of green subjective norm, knowledge of green products, and attitudes towards the intention to purchase green products as a moderating factor (Patel et al., 2020). According to Suliyanto (2011), the moderating variable is a variable that determines or affects the strength or weakness of the relationship between the independent variable and the dependent variable.

The moderator or contingency variable is a variable that has a contingent effect. A study conducted by Patel (2020) used INELOC as a moderating variable on the relationship between ATT and purchase behavior control (PBC) on GPI. It has never been used as a moderating variable on the relationship between GSN, KGP, and ATT on GPI. Therefore, the proposed hypothesis can be stated as follows;

Hypothesis 4: Ineloc moderates the influence of green behavior norms and green purchase intention.

Purchasing green products is personal behavior that can be manipulated through information and emotional processes. Ghahtarani et al. (2020) argued that sharing knowledge can impact purchase intentions because by having the information about products and services, one can make wise decisions about which product will be purchased. Furthermore, internal locus of control (ILOC) is highlighted as an essential determinant of behavior among consumers, where consumers with high INELOC have a more favorable attitude towards products

(Patel et al., 2020). The study was supported by TPB's basic concept, which was developed in predicting consumer knowledge of green products (Knowledge of Green Products) on green purchase intentions. Similar to the research conducted by Deijen and Kornaat (1997), the results show that emphasizing additional information on product users is very important because it can increase user knowledge, increase short-term compliance, and increase long-term knowledge of the product used. Therefore, the proposed hypothesis can be stated as follows;

Hypothesis 5: Ineloc moderates the influence on knowledge of green products and green purchase intention.

Attitude is a psychological tendency expressed by evaluating specific goals through several levels ranged from the most liked to disliked (Eagly and Chaiken, 1993). Previous studies' support that attitudes toward the environment as the most relevant and vital determinant of pro-environmental behavior intentions (Kai and Haokai, 2016). Consistently, a research by Deijen and Kornaat (1997) indicated that the internal locus of control views behavior as internal motivation that helps someone to achieve self-determined goals related to the individual's (positive or negative) attitude. Therefore, this study proposes that the internal environment of locus of control (INELOC) to have a moderating effect on green products' knowledge. According to the study conducted by Patel et al. (2020), using samples of respondents at a productive age resulted in the significant influence of attitude on the intention to purchase green products. Therefore, the proposed hypothesis can be stated as follows;

Hypothesis 6: Ineloc moderates the effect of attitudes on green purchase intention.

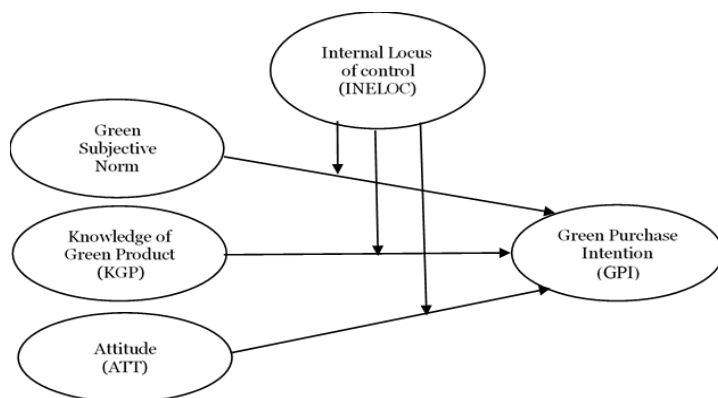


Figure 2. Research Framework (Source: Authors' model developed for the study)

Table 1. Characteristic Respondents
(Source: primary data obtained through questionnaires)

Demographics	Categories	Frequency	Percent
Gender	Males	82	41
	Females	118	59
Total		200	100.0
Education Background	Doctoral	7	3.5
	Master	63	31.5
	Degree	91	45.5
	High School	39	19.5
Total		200	100.0
Profession	Governance	20	10
	Lecturer	54	27
	Entrepreneurs	42	21
	Employee	36	18
	Student	15	7.5
	Others	33	16.5
Total		200	100.0

MATERIALS AND METHODS

Participant and Sampling Design

According to circumstances, the sampling method involved a stratification process, followed by Stratum subjects' random selection. The sample population mentioned above was taken from the residence of Central Java, who is familiar with Pekalongan batik products, especially natural dyed batik products. The sampling technique used a purposive sampling method with certain criteria; the respondents were people who had bought natural dyed batik. According to Patton (1990), the tendency of purposive sampling is usually used in homogeneous research cases, such as in this study. 200 respondents were gathered, 13 question items were asked and measured using a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree).

Descriptive Statistics

A total of 200 respondents were gathered (Table 1); 59 percent were women, while 41 percent were men. Majority of the people come from Java island, Indonesia. The educational backgrounds differ as 3.5 percent of doctoral graduates, the majority is 31.5 percent of master graduates, holds bachelor degree 45.5 percent, 19.5 percent high school. Based on the age category, respondents with age ranged 17-34 years are 42.5 percent, 35-50 years are 52 percent, and respondents older than 50 years are 5.5 percent. From this data, the highest number of respondents is at the age of 35-43 years. In terms of work positions, most of the respondents from this study as lecturers are 27, working in government institutions with a total of 10 percent, percent, entrepreneurs are 21 percent, employees are 18 percent, students 7.5 percent, and others are 16.5 percent.

Table 2. Measurement, Reliability, and Validity (Source: Authors' calculation)

Constructs and Indicators	Factor Loading	Composite Reliability	AVE	Mean	SD
Green Subjective Norms (GSN) (Kim and Hwang, 2020)		0,756	0,509		0,56
I believe that buying environmentally friendly products (natural color batik) is a good example for others	0,733			4,2	
Using environmentally friendly products (natural color batik) is the right thing to do	0,762			3,9	
Family, friends, and my surroundings believe its a good thing to consume environmentally friendly products (natural color batik)	0,640			3,9	
Knowledge of Green Product (KGP) (Liobikienė et al., 2015)		0,707	0,550		0,66
Knowledge about the benefits of environmentally friendly products will affect my interest in buying environmentally friendly products (batik of natural dye)	0,824			4,3	
I know the price of environmentally friendly products (batik of natural dye) is more expensive than chemical batik products	0,649			4,1	
Attitude (ATT) (Mancha and Yoder, 2015)		0,763	0,616		0,68
I started to leave products that are not environmentally friendly	0,779			4,1	
I would encourage everyone to use environmentally friendly products	0,791			4,2	
Internal Environment Locus of Control (INELOC) (Patel et al., 2020)		0,848	0,653		0,67
I use environmentally natural color batik as a form of self-respect to the green peace	0,833			4,4	
The environment that made me become a loyal consumer of natural color batik	0,712			4,1	
I support the go green movement which is being encouraged by my government	0,87			4	
Green Purchase Intention (GPI) (Kanchanapibul et al., 2014)		0,913	0,777		0,91
I am interested in buying natural color batik because the trend is updated	0,893			3,8	
I bought natural color batik products to safe the environment regardless the price	0,86			3,4	
I bought natural color products because of the pressure to preserve the environment	0,891			3,4	

RESULTS AND DISCUSSION

Confirmation factor analysis (CFA) was conducted to test the validity of the measurement model with data. In total, the results indicate that the measurement model has met the appropriate statistical criteria. CMIN / DF is 1.251, probability 0.100, AGFI 0.918, GFI 0.950, TLI 0.980 and RMSEA 0.036. Furthermore, the CR value of green purchase intention has a value of 0.913, internal environmental locus of control (INELOC) 0.848, attitude 0.763, green subjective norm 0.756, knowledge of green product (KGP) 0.707. The average variance extracted (AVE) value for each variable is above 0.5 and the loading factor value is also above 0.5 with a significance at the 5% level, the results are in accordance with an adequate increase in indicators (Bagozzi and Yi, 1988), (Table 2).

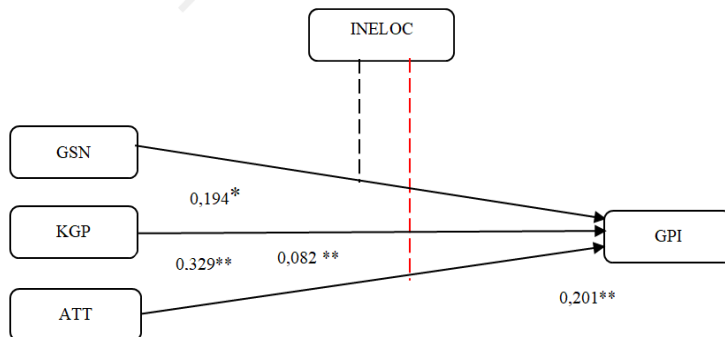


Figure 3. Moderating effects (Source: Authors' calculation) Note: Significant < 0,01**

study conducted by Hair et al. (2006). In the test, the moderating effect of internal environment locus of control (INELOC) in the relationship of attitude (ATT) on green purchase intention (GPI) was not supported with a p -value > 0.05 ($\beta = 0.082$). Furthermore, the moderating effect of the internal environment locus of control (INELOC) of KGP interaction on GPI was found to be positive and significant with a p -value < 0.01 ($\beta = 0.194$), indicating that the relationship between green product knowledge is significantly stronger when the internal locus of control is higher (Figure 2).

DISCUSSION

One of the main problems experienced by Pekalongan City lately is environmental destruction, especially river pollution which is thought to be caused by the textile industry and the batik industry. Seeing the problem of waste that pollutes the river will endanger public health, one of which is when consuming clean water for residents around the polluted area, then with these complex problems the MSMEs start producing batik with natural dyes even though the number of MSMEs producing natural dyed batik products is not too much. However, the Pekalongan City Government continues to disseminate it to this day with the hope of reducing chemical waste and river pollution which causes the river to become colorful. In addition to environmental problems, in order to meet market orders regarding the booming natural dyes, the international demand for natural dye batik products is also a factor for MSME batik to produce natural dye batik. With the hope that all stakeholders can work together in promoting and disseminating environmentally friendly batik products. With the description above, then this study aims to examine the influence of green subjective norm (GSN), knowledge of green product (KGP), and attitude (ATT) on the surrounding community who buy natural dyed batik products with internal environment locus of control (INELOC) as moderator. Ajzen and Fishbein (1977) stated that attitudes, based on TPB, are stable predictors of green behavior (Prakash and Pathak, 2017). The hypothesis testing results indicate that the first hypothesis is not supported, where the purchase intention of consumers in this study is not influenced by GSN (Mobrezi and Khoshtinat, 2016). This result is different from most of the previous research results, which found a significant effect of subjective norms on purchase intention on environmentally friendly products (Talal Al-Maghrabi, 2011; Choi and Johnson, 2019). It indicates that consumers have low subjective norms so that it does not affect the purchase intention of natural dyes batik products. It can be seen from the results that the relationship between GSN is not significant (0.03). Therefore, GSN, an external factor, does not affect consumer intentions to buy natural dyes products.

However, the second and third hypotheses are supported. It is found that KGP largely determines the influence of pro-environmental behavior. This result is consistent with previous studies (Zhao and Zhong, 2015; Hung et al., 2016). When consumers have sufficient knowledge about green products, they will tend to buy natural dyes products without encouragement from the surrounding environment. Furthermore, the results showed that high ATT led to their intention to consume green products (Hung et al., 2016). These results are explained by the significant effect of ATT on GPI (0.201). The findings prove that green knowledge is necessary for creating a sustainable impact, then a high caring attitude towards environmental conservation is needed. Thus it has a substantial impact on the purchase intention of natural dyes batik products. The moderating role of INELOC on the purchase intention of natural dyes batik products indicated from the fourth and fifth hypotheses, which are equally supported, the GSN and KGP on the GPI shows significant results (<0.05). It means that high GSN and KGP affect green purchase intention with the support of substantial internal factors. Awareness of GSN and the high level of KGP can be used to form further pro-environmental intentions with a strong push from the influence of their internal environment, which results in the purchase intention of natural dyes batik products. The findings indicate different results from the research conducted by Patel et al. (2020) on the relationship between ATT and GPI. The hypothesis is unsupported, where ATT had no significant effect (0.082) on the purchase intention of natural dyes batik products moderated by INELOC (Figure 3). It is caused by the different attitudes that each consumer has depending on the green environment's morality and awareness. The argument consistent with Verma's (2017) study that consumers have a significant effect on positive attitudes towards the purchase intention of green products and their concern for the environment depends on morality and consciousness. Thus, it can be concluded that the findings show that attitude is not the main reason motivates consumers to buy natural dyes batik products. The awareness of each consumer in relation to self-morality motivates the decision to purchase natural dyes products that are related to environmental awareness.

CONCLUSION

This work has extended the theory of planned behavior to the field of handicraft shopping tour by proposing a framework for understanding how green subjective norm (GSN), knowledge of green product (KGP), and attitude (ATT) affect tourist intention to buy green products.

The green product in this case is a natural dye batik produced by MSMEs in the batik city of Pekalongan. Out of the six hypotheses, only two were supported (the second and third hypotheses). Knowledge on green products influence consumers' pro-environmental behavior. When they have good knowledge of green products, they tend to buy natural dyes, even without the pressure from their environmental.

Furthermore, Attitude has a significant effect green purchase intention. Caring towards environmental preservation substantially impact the purchase intention of natural dyes batik products. The moderating role of INELOC only strengthens the relationship between knowledge on green products and green purchase intentions of customers during craft shopping tour. High subjectivity norms drive people to buy environmentally friendly batik products (natural dye batik).

It means that they wanted to be good examples for the community, especially when environmentally friendly products are consistent. One of the main problems currently faced by Pekalongan City is environmental problems, especially river pollution, which is caused by the textile industry and the batik industry waste. Realizing that the river pollution can endanger people's health, MSMEs have started producing batik with natural dyes. Although the number of MSMEs that produce natural dyed batik products is not high, the Pekalongan City Government is continually socialize the importance of reducing chemical waste and river pollution.

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THE INFLUENCE OF BRAND ATTITUDE ON BEHAVIORAL INTENTION IN THE CONTEXT OF NATIONAL CARRIER'S SERVICE FAILURE

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Abstract: Studies on the service failures involving a national carrier are still very limited. This present study strives to investigate the relationship between brand attitudes and behavioral intentions in the context of national carrier's service failures as well as the moderating effect of causal attribution on the above main relationship. Data were collected from 419 airline passengers using the purposive sampling technique. Path analysis was used to analyze the data. The effect of brand attitude on behavioral intention is found to be positive significantly. The results also showed that out of the two dimensions of causal attribution, only stability moderates the relationship between brand attitudes on behavioral intention.

Key words: brand attitude, behavioral intention, causal attributions, stability, controllability

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INTRODUCTION

Service failure essentially occurs when service performance fails to meet customer expectation. It normally resulted in many negative consequences, such as negative word of mouth, customer complaints, as well as unfavourable attitude and behavioural intention toward the services as a whole (Ithnan and Ariffin, 2020; Ariffin and Mansour, 2018). Previous studies have also clearly indicated that service failures are the main reason for the customer switching behavior, and unfavorable brand recommendation (Latif and Lanxia, 2019; Akinci and Aksoy, 2019). Extant of literature showed that service failure has the potential to change a customer's attitude towards a brand from a positive one to a negative one and this will then affect the behavioral intention unfavorably (Habibi and Ariffin, 2019). Unquestionably, brand attitude is a widely researched construct in marketing studies but very little is currently known about its impacts on repurchase intention as well as word-of-mouth recommendation in the context of airline service failure involving national carriers. Al-Fandi (2020) contended that the two main indicators of behavioral intention are repurchase intention as well as intention to recommend.

The Causal Attribution theory suggested that customers will interpret the causes of a service failure based on the two most dominant dimensions known as stability and controllability (Weiner, 1986). The judgements of the perceived reasons for the failure will influence the decision as to whether or not to continue purchasing the same brand in the future, as well as the intention to recommend the brand to others. Therefore, it is posited in this present study that the impact of brand attitude on behavioral intention (operationalized as repurchase intention and word-of-mouth marketing) in the context of national carriers' service failure should also largely dependent on the attributions of the failure made by the affected passengers. If the cause of the failure is perceived to be within the control of the national carrier or preventable by the airlines, passengers will put the blame on the airlines and this will negatively affect their behavioral intention towards the national carrier as a whole (Nikbin et al., 2011). To what extent is the above claim true when the customers have relatively strong attachment with the brand such as in the context of national carriers involving the passengers from the country-of-origin of the airline?

National carrier is an airline registered in a given sovereign state and enjoys privileges and preferential rights by the local authority particularly for its international routes. According to Raguraman (1997), national carrier has played a very important role in nation building and acts as a significant national identity for many countries. Considering the fact that national carrier has been regarded as an important national symbol and prides for a given sovereign country, it is not wrong to assume that the citizens of the country would extend undivided and continuous supports for the survival of the airlines. It is therefore very interesting to uncover the post-failure reactions towards national carriers amongst its respected citizens. Does the attitude towards their national airlines (brand attitude) affect their behavioral intention, and to what extent the causal attributions moderate the above main relationship? Specifically, the research objectives of this study are:

1. To determine the relationship between brand attitude and behavioral intentions in the context of national carrier's service failure.
2. To examine the moderation effects of causal attribution dimensions (stability and controllability) on the relationship between brand attitude and behavioral intentions in the context of national carrier's service failure.

CONCEPTUAL MODEL

By using the Causal Attributions Theory, the conceptual framework of this study is developed and presented in Figure 1. The framework strives to determine the post-service failure's behavioral intention towards national carriers amongst the passengers of the airline's country-of-origin. In this present study, the behavioral intention is anticipated to be significantly affected by the brand attitude towards the brand (national carrier) and the strength of the predicted relationship between brand attitude and behavioral intention is expected to be moderated by the two core dimensions of causal attribution's known as controllability and stability. The intention is believed to be able to direct individuals to carry out a behaviour. A very recent study by Komariah et al. (2020) also clearly indicated that customer intention is very much dependent on the attitude towards the focal offering.

LITERATURE REVIEW AND HYPOTHESES

Essentially, brand attitude is defined as the continuous preference of consumers towards a specific brand (Fishbein and Ajzen, 1980)

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and the overall assessment made by the consumer vis-à-vis the brand (Ariffin and Yahaya, 2013). A favorable attitude towards a brand would increase the probability of consumers to continue using that brand in the future (Kotler and Keller, 2008). Peter and Olson (2002) contended that attitude towards an object (including brand) consists of salient beliefs acquired via experience, which can fluctuate between positive/negative as a function of past experiences with the object. Behavioral intention is the motivational factors affecting a behavior.

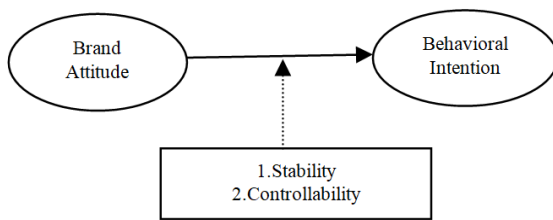


Figure 1. Conceptual Framework (Source: Author)

The stronger the intention to execute a behavior, the more likely it is to take place (Ajzen, 1991). Zeithaml et al., (1996) pointed out that behavioral intentions can be outlined by measures such as word-of-mouth, loyalty, complaining behavior, repurchase intentions and price sensitivity. Yasvari et al. (2012) utilized word-of-mouth as an indicator for referral intention, while Chou (2015) defined behavioral intention using attitude loyalty (recommendation of services) and behavior loyalty (repurchase intention). Similarly, Beneke and Wickham (2015) employed negative word-of-mouth as the outcome of service failure in the airline industry in South Africa.

The study on airlines' service failure by Nikbin et al. (2011) also used

both repurchase intention and word-of-mouth as the outcomes of behavioral intention in the marketing perspective. Alfandi (2020) operationalized the construct by using both revisit intention as well the willingness to recommend the destination. The research stream on service failure has reached its maturity (Khamitov et al., 2020). Attitude has been linked to many behavioral outcomes such as brand loyalty (Gomez et al., 2006; Schiffman and Kanuk, 2007). It was found to play a significant role towards forming brand loyalty (Gomez et al., 2006). Yasvari et al. (2012) examined the direct effect of attitude on referral intention and found a significant relationship between the variables. Punyatoya (2015) examined the effect of brand attitude on brand purchase intention of the environmental product, and confirmed that positive attitude towards the product leads to higher behavioral intention to purchase environmental products. Beneke and Wickham (2015) also reported that failure cause negative attitudes, which in turn leads to negative word-of-mouth. In a related study, Saha and Theingi (2009) pointed out that behavioral intention is subjective, and could thus be positive/negative. A negative attitude leads to negative word-of-mouth, or negative behavioral intention and anti-consumption, while a positive attitude leads to a positive behavioral intention. It was confirmed from literature that studies pertaining to the effect of attitude in the airline context are limited. Thus, it is anticipated in this study that:

H1: There is a relationship between brand attitude and behavioral intention in the context of national carrier's service failure.

The stability dimension of attributions essentially refers to the perception of the situations that led to the service failure as either persistent or infrequent (Srivastava and Gosain, 2020). The Causal Attribution theory developed by Weiner (1986) basically conceptualized the reaction of consumers to occurrences such as service failure (Maxham and Netemeyer 2002). The theory argued that when individuals make causal attribution, they are expected to be inclined towards a particular behavior based on their own explanations of the attributions. This phenomenon can be explained via two main dimensions namely controllability, and stability. Stability is referring to the extent a cause of failure is considered as temporary or permanent (Folkes, 1984). Failures based on stable causes will take place more frequently compared to the unstable one. Nikbin et al. (2011) studied the moderating effect of stability on the relationship between company reputation and behavioral intention, and confirmed that the permanent cause of service failure degraded the relationship between reputation and repurchase intention, as well as positive word-of-mouth. What about in the context of national carrier's service failure? This present study anticipates that:

H2: Stability moderates the relationship between brand attitude and behavioral intention in the context of national carrier's service failure.

Controllability refers to the ability of a company or entity to control service failure or the accident (Folkes, 1984). Customers will relate service failure to the ability of the company to prevent/cause failures (Weiner, 2000). If customers think that the cause of failure is uncontrollable, they will not blame the service providers, but if they believe failure is controllable and internal, they will tend to be dissatisfied and blame the service providers (Nikbin et al., 2011). Therefore, when a problem is controllable, the positive relationship between brand attitude and behavioral intention is weaker. In contrast, when customers feel that the cause of the failure is uncontrollable, they put less blame on the service providers. Papen et al. (2020) also indicated that controllability has a significant moderating effect on the relationship between disappointment with the organization and intention to repurchase. Accordingly, the following hypothesis is proposed for testing in this present study:

H3: Controllability moderates the relationship between brand attitude and behavioral intention in the context of national carrier's service failure.

RESEARCH METHOD

By using the judgmental sampling, a total of 480 self-administered questionnaires were distributed at the Kuala Lumpur International Airport (KLIA), Malaysia in April 2020. Respondents were confined only to individual airline passengers who have experienced flying using the national carriers of their own countries within the last six months from the time of data collection. Out of the 460, only 419 were found to be usable for further analysis. 41 questionnaires were discarded mainly due to missing responses. The measurement for brand attitude consists of five items adapted from Grace and O'Cass (2005). The eight items used to measure the causal attribution of stability and controllability were adapted from Hess et al. (2003) and Russell (1982) while behavioral intention was measured using four items borrowed from Zeithaml et al. (1996). All items for all variables were measured on a 6-point scale. A panel of three experts has been appointed to refine and validate the measurements for all variables in this study. Pre-testing and pilot-test have also been carried out prior to data collection for the actual study. Path analysis was employed to analyze the data of this present study. A preliminary analysis has also been conducted to ensure that there is no issue on the data violation as well as all assumptions have been satisfactorily fulfilled. Below are the main stages involved in the methodology of this present study:

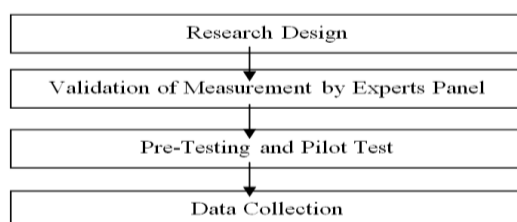


Figure 2. Stages in Research Methodology (Data Source: Author)

Table 1. Reliability test

Variable	Number of items	Cronbach's alphas
Brand attitude	5	0.90
Stability	4	0.79
Controllability	4	0.82
Behavior intention	4	0.89

RESEARCH FINDINGS

Throughout the six days field work, a total of 463 questionnaires have been returned. However, due to extensive missing values and outlier issues, only 419 were found to be appropriate for further analysis.

Reliability and Validity

As presented in Table 1, the results showed that the values of Cronbach's alphas for all variables ranged from 0.79 to 0.90. These values exceeded the cut-off point of 0.70 as suggested by Nunnally and Bernstein (1994) to assess the internal consistency of the measurements.

For a model to have a convergent validity, three criteria must be achieved. First the factor loading should be greater than 0.70, composite reliability (CR) as well as Cronbach's Alpha (CA) should be greater than 0.70, and Average Variance Extracted (AVE) should be greater than 0.50 (Hair et al., 2011). Table 2 shows the factor loadings, CA, CR, and AVE. It shows that all the values of the criteria were achieved. This leads to the conclusion that the convergent validity and construct reliability are achieved. The results presented in Table 3 also showed that the discriminant validity was also achieved as the root square of AVE (in bold) are greater than its row and column.

Table 2. Convergent Validity of the Variables

Variables	Items	Factor loading <0.70	CA<0.70	CR<0.70	AVE<0.50
Brand Attitude	AT1	0.76	0.90	0.93	0.71
	AT2	0.88			
	AT3	0.86			
	AT4	0.85			
	AT5	0.86			
Behavioral Intention	BI1	0.85	0.89	0.93	0.76
	BI2	0.90			
	BI3	0.88			
	BI4	0.85			
Controllability	CO1	0.70	0.82	0.88	0.71
	CO2	0.88			
	CO3	0.93			
Stability	ST1	0.85	0.79	0.86	0.68
	ST3	0.75			
	ST4	0.87			

Table 3. Discriminant Validity of the Variables

	Attitude	Controllability	Intention	Stability
Brand Attitude	0.84			
Controllability	0.12	0.84		
Behavioral Intention	0.52	0.26	0.87	
Stability	0.19	0.29	0.20	0.83

Table 4. Path Coefficients of the direct effect hypotheses testing

	Path coefficient	Standard Deviation (STDEV)	T-value	P Values	Comment
Brand Attitude -> B. Intention	0.41	0.04	9.63	0.00	Significant

Path Analysis

The result of the path analysis as presented in Table 4 showed that brand attitude has a significant and positive effect on behavioral intention ($\beta=0.41$, T-value=9.63, P-value=0.00). With R Square of 0.47, H1 was supported.

The results presented in Table 5 indicated that the effect of the interaction of stability and brand attitude (Stability*Attitude -> Intention) and behavioral intention was positive and significant ($\beta=-0.13$, T=2.39, P=0.02). This finding provided empirical support for H2 - Stability moderates the relationship between brand attitude and behavioral intention. The results presented in Table 6 indicated that the effect of the interaction of controllability attribution and brand attitude (Controllability*Attitude -> Intention) and behavioral intention was not significant ($\beta=0.057$, T=1.54, P=0.12). This finding provided no empirical support for H3 in this present study. It can be concluded that controllability attribution does not moderates the relationship between brand attitude and behavioral intention.

Table 5. Moderating Effect of Stability

	Orig. Sample	Sample Mean	S.D	T	P Values	Decision
B.Attitude -> B. Intention	0.44	0.44	0.04	10.22	0.00	
Stability -> B.Intention	0.11	0.11	0.05	2.05	0.04	
Stability*B.Attitude -> Intention	-0.13	0.13	0.05	2.39	0.02	Supported

Table 6. Moderating Effect of Controllability

	Orig. Sample	Sample Mean	S.D	T	P Values	Decision
B.Attitude -> B. Intention	0.38	0.04	0.04	9.27	0.00	
Controllability-> B.Intention	0.21	0.04	0.05	5.92	0.00	
Controllability*B. Attitude -> Intention	-0.06	0.04	0.05	1.54	0.12	Not Supported

DISCUSSIONS AND IMPLICATIONS

This present study provides empirical evidence on the positive impact of brand attitude on behavioral intention in the context of national carrier's service failure. It is clearly showed that brand attitude is a powerful explanatory variable or determinant of behavioral intention in both contexts of pre- and post-service failures. The more favorable the attitude towards the airlines, the more likely they will fly again with the airline in the future, recommend the airline to others or talk positively about the airline. Even though the affected airline is the national carrier of the passengers, the airlines management however should not simply take this sentiment of ethnocentrism for granted. It is crucial for the management to consistently build their brand image and reputation because the negative brand image will affect behavioral intention unfavorably. An effective service recovery strategy needs to be in place to ensure that the brand attitude towards the airline would not be largely affected. National carriers should also go extra miles to enlighten their domestic passengers with superb customer services in order to encourage them to promote and support the airline in all market situations. Unlike other commercial services, the psychological attachment to a national carrier among the people of its country-of-origin is essentially developed within the cultural context rather than the consumption setting. Perhaps, the change or shift in cultural phenomenon is required to make a change to the psychological bonding. The strength of the brand attitude towards a cultural artifact such as national carriers could not be easily changed. The state of brand attitude will lead to positive emotions or attachment with the brands. These strong attachment and favorable emotions will, in turn prevent the affected passengers from switching to any other airlines. The findings of this study also revealed that stability attributions weakened the positive relationships between brand attitude and behavioral intention in the context of national carrier's post-service failure. Passengers are said to be somewhat forgiving of a service failure caused by their own airlines compared to other airlines. However, if similar kind of service failure keep happening over times, these passengers would start reconsidering their loyalty towards the national carriers involved. In other words, the interaction between brand attitude and stability attribution would lead to a less favourable behavioral intention towards the national carriers involved. Even though their brand attitude is remains unchanged due to other reasons, perhaps they would not want to recommend the airline to others. This is to avoid other people experiencing the inconveniences as the probability of the same failure to recur is relatively high.

This study however did not find the moderating effect of perceived controllability on the relationship between brand attitude and behavioral intention. In other words, regardless whether the cause of the failure is perceived to be within or beyond the control of the

national carriers, the strength of the brand attitude's impact on behavioral intention will remain unchanged. Due to the technicality of the airline service provision, it is quite difficult for the affected passengers to determine what are the factors considered to be within and what factors are considered to be beyond the control of the airlines. The behavioral intention and loyalty of passengers toward national carriers will not be largely affected by only a single unpleasant service experience regardless of the source of the failure. Passengers are likely to be more considerate as the airline service is very unpredictable. This study may be considered as a guide for national carrier management to facilitate in-depth understanding of customer experiences and develop effective marketing strategies that will improve the operational environment and the experience of customers of national carrier. This is because, although the present study is primarily theoretical, it is believed that the conceptual relationship proposed may provide a useful and robust framework that can offer national carrier management valuable information on the factors that influence the behaviour of their potential passengers.

Specifically, in respect to brand attitude, this study offers national carriers a view of how consumers rate their relationship with service providers from the standpoint of brand attitude towards a national carrier after service failure. The results of this present study can assist national carrier management to improve their understanding of how brand attitude affects passenger behavioral intentions. The prescriptions proposed based on the findings can also help national carrier management to design and promote more effective and efficient strategies for ensuring positive brand attitude, which can lead to a significant increase in passenger retention and, ultimately, profits.

CONCLUSION

This present study which was focusing on the service failure of national carriers managed to achieve all its objectives successfully. The results clearly indicated that brand attitude has a strong relationship with behavioral intention to fly again with those national carriers that have involved in service failures. The extent of the influence of brand attitude on behavioral intention was also found to be dependent on the stability attribution made by the affected passengers. Specifically, the stability attribution is expected to weakened the main relationship as passengers believe that the airlines are not doing their very best to avoid the failures from reoccurring over times. Interestingly, this present study did not find empirical support for the moderating effect of controllability attribution. This is mainly due to the fact that passengers are usually unable to examine what factors are considered to be controllable (uncontrollable) by the airlines.

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NEW TENDENCIES IN WINE TOURISM IN TOKAJ WINE REGION (HUNGARY): THE DECREASING ROLE OF TOKAJI ASZÚ AS A DOMINANT BRAND

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Abstract: The aim of paper is to explore the economic, social and political changes in Tokaj Wine Region (Hungary) in last 30 years and present their consequences on wine tourism. We analysed the data regarding European Union grant application of economic enterprises and we conducted personal interviews with the leaders of some of the major wineries of the region. Among significant changes which have taken place in Tokaj Wine Region since 1990s the following have to be mentioned: change in ownership of wineries, the evolution in the technology of winemaking, the new activity of state government and local authorities, the increase in the number of wine varieties produced and European Union financial support. Wine tourism in the region has undergone significant changes (increase role of smaller wineries and wine varieties). Settlements on the western side of the region are becoming increasingly important.

Key words: wine tourism, Hungary, Tokaj Wine Region, European Union, geographical shift

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INTRODUCTION

The Tokaj Wine Region (according to surveys, the 2nd most popular wine region in Hungary - Hlédik and Harsány, 2019), which is situated in the north-eastern part of the country, on the eastern and southern sides of the Zemplén Mountains (Figure 1), plays a prominent role among Hungarian wine regions. The uniqueness and key role of the area is well illustrated by the fact that in 2002, on the basis of the decision of the UNESCO World Heritage Committee, it was added to the list of World Heritage sites under the name “Tokaj Wine Region Historic Cultural Landscape”. In contrast with most other wine regions in Hungary, the main products of the Tokaj wine region are white wines, including the world-famous Tokaji Aszú, which is considered as one of the most important attractions of the region’s wine economy.

In recent decades, however, there have been significant changes in the region in several respects, which have had momentous consequences. Our aim is to explore these changes and the factors behind them. The present paper fundamentally consists of three larger units. After reviewing the literature on wine tourism, we outline the most important elements of the pre-1990 development of the area. The third major unit deals with changes after 1990, paying particular attention to their impact on wine tourism.

LITERATURE REVIEW

In recent decades, wine tourism has come to be regarded as one of the dynamically developing sectors of tourism, which has also become by now an important tool for local economic development (Scorrano et al., 2018).

As a result, researchers have also paid increasing attention to this area, one of the first steps of which was the creation of a definition taking all factors into account. According to Johnson et al. (2000), wine tourism can be defined as visits to vineyards, wineries, wine festivals and wine shows for the purposes of wine tasting and/or exploring a wine region, while in the opinion of Getz, who approaches this topic rather from the perspective of marketing, it is “travel related

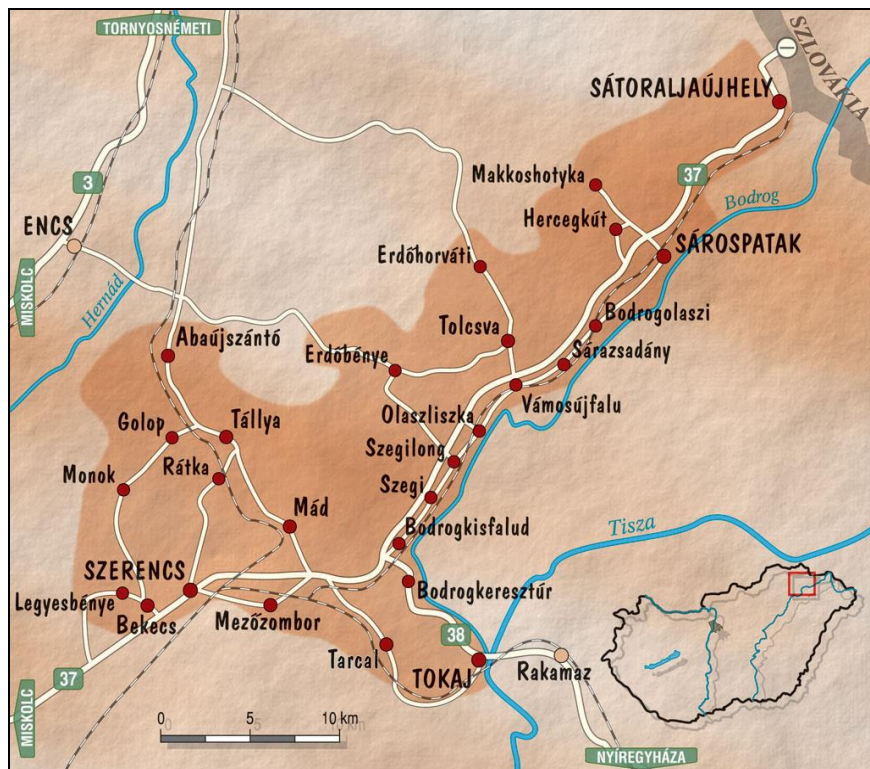


Figure 1. Location of Tokaj Wine Region in Hungary and its settlements (Source: own cartographical work)

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to the appeal of wineries and wine country, a form of niche marketing and destination development, and an opportunity for direct sales and marketing on the part of the wine industry” (Getz, 2000: 4).

Its uniqueness within tourism is due to the close relationship between natural and social factors. On the one hand, its development requires suitable natural conditions (good quality soil, favourable terrain and climate) (Gergaud and Ginsburgh, 2018), and thus to some extent it resembles beach and mountain tourism. On the other hand, in case these conditions are satisfied, the steps generally required for highly developed beach and mountain tourism (e.g. the construction of hotels and restaurants) are not sufficient, but some conscious/special steps by the stakeholders (the production of grapes and wines) are also necessary in order to create a product that is truly attractive to tourists.

In recent years, studies on wine tourism have focused on a variety of topics (Gómez et al., 2019), which are naturally also related to each other up to a certain extent. Papers in the first group emphasised the role of wine tourism in regional development, which included direct and indirect job creation (Gál-Czékus and Nagy-Kovács, 2017; Jurinčić and Bojnec, 2009), the benefits of creating wine routes (Del Chiappa et al., 2019; Trišić et al., 2020), as well as the issue of incomes generated locally (Byrd et al., 2016; Lipták, 2019). Research projects belonging to the second group focused on wine tourists. In this context, they explored their most important economic and social traits (Alonso et al., 2007), the factors that play a crucial role in participating in wine tourism, the expectations toward wine tourism (Grybovych et al., 2013; Kóródi et al., 2020) and the experiences it has generated, which also largely determines satisfaction (Gu et al., 2020; Pelegrin-Borondo et al., 2020).

Thirdly, in line with research on the topic of cultural tourism, a large number of researchers have also dealt with the issue of wine-related events (e.g. wine festivals). In the framework of the above, they have pointed out that in order to meet the needs of tourists, a complex package is required (Fusté-Forné, 2019; López-Guzmán, 2019), which includes, in addition to the presentation of region’s wine offering, also the organisation of gastronomic type events (Carvache-Franco et al., 2020; Komariah et al., 2020). The fourth major topic concerns wine tourism and sustainability (Andrade-Suárez and Caamaño-Franco, 2020; Baird et al., 2018; Karagiannis and Metaxas, 2020), in which researchers draw attention to two things: they emphasise the need to use environmentally friendly technologies in the production of grapes, and to minimise the damage to nature through the environmental loads caused by tourists. In order to achieve the desired effects, research papers have underlined the importance of preliminary studies and the measurement of the impact of each risk factor.

MATERIALS AND METHODS

In the preparation of this paper, we have relied on a variety of sources of information. Firstly, we have reviewed the specialist literature on the region (Luda – Váradi, 2016; Nyizsalovszky, 2006; Törökné Kiss, 2014), as well as the strategies and concepts summarising the development ideas in order to explore the role of wine in the history of region and the current relationship of local governments to this feature. Secondly, we have analysed the data available on the website containing the results of the European Union grant applications submitted by various economic enterprises in the wine region (palyazat.gov.hu) to. Thirdly, we have also conducted personal interviews with the leaders of some of the major wineries in the region, in the course of which we have obtained information about the history and current situation of the wine region as well as their efforts to increase the satisfaction level of tourists.

RESULTS AND DISCUSSION

The history of the Tokaj Wine Region

Relying on the favourable natural conditions of the region (the loess layer of several metres thickness on the volcanic andesite base rock, the erubase soil formed on the glacial till soil, the balanced temperatures, the dry and sunny weather in the autumn months, and the relatively constant humidity generated by the evaporation from the main watercourses of the area, the Bodrog and Tisza rivers - Nyizsalovszky, 2006), viticulture started in this area as early as the 9-10th centuries. The Mongol invasion in the 13th century destroyed almost 100% of the existing plantations, and in the interest of replanting them, King Béla IV invited Italian settlers to the region (their presence is witnessed by several settlement names such as Olaszliszka and Bodrogolaszi). They brought with them the most important grape varieties of their homeland (e.g. one of its most prominent grape varieties, Furmint, is of Italian origin), and they created the foundations of world famous wine region.

At the same time, in the first half of the Middle Ages, Hungary’s most important wine region was Sarmia, located between the Drava and the Danube Rivers in present-day Croatia and Serbia, but the occupation of this area by the Ottoman Empire in the 16th century opened the way for the rise of the Tokaj Wine Region (Törökné Kiss, 2014). From the 17th century onwards, the most important product of the wine region has become Tokaji Aszú, which is made from grapes harvested late (mainly November), and the exquisite quality of which is due to the presence of the *Botrytis cinerea* fungus, causing the shrinking and rotting of the grapes. The outstanding importance of Aszú is reflected by the fact that the King Louis XIV of France called it “The Wine of Kings and the King of Wines” (*Vinum regum, rex vinorum* – Figure 2), while the Tsar Peter I and Tzarina Catherine I of Russia considered ensuring its trade so important that a detachment was stationed in Tokaj, which also supervised the acquisition and safety of the shipment (Wachtler – Nagy-Kovács, 2006). In order to ensure the quality of grape production, a royal decree was issued in 1737, the first of its kind in the world, to declare Tokaj as a closed wine region, pursuant to which the production has continued for the past almost 300 years in a strictly regulated way (Szepesi et al., 2016). In the second half of the 19th century, the phylloxera epidemic appearing in Hungary also caused considerable destruction in the vineyards of the Tokaj wine region (Incze and Novák, 2016). When replanting began in the early 20th century, the steeper, less accessible parcels were allowed to go fallow, and more of the foothill areas that were less steep and therefore easier to cultivate, but had overall



Figure 2. Famous sentence of King Louis XIV of France on a wine label of Tokaji Aszú (Source: own photo)

less favourable properties from the perspective of grape quality, were brought under cultivation instead. Between the two world wars, the government paid less attention to the development of the region, and thus the export of wine decreased significantly. After World War II, due to the priority placed on industrial development, agriculture (including viticulture and viniculture) was pushed into the background. In line with the spirit of the age, a quantitative approach became dominant, and the main target of sales was the Comecon countries.

Winemaking in Tokaj became almost exclusively the task of the Tokaj-Hegyalja State Winery, established in 1971. Thus, almost all of the wine supply of the region was concentrated in a single hand, resulting in the loss of diversity in the variety of vineyards. Generally,

medium to low-quality wines were produced, but certain high-quality wine specialities were also delivered to Western European markets. From the point of view of grape production, the fact that the planting of vines took place on the foothills with an inclination of 1-2% only, bringing these parcels into cultivation allowed the use of agricultural machinery, but resulted in a deterioration in quality. Wine tourism, which started in the 1970s and 80s, was primarily the privilege of large wineries under the control of the State Winery, while small producers were first allowed to organize wine tastings from the 1980s only. Both in case of state wineries and small producers, according to the wine law in effect at the time, wine tourists could taste the standard wine offering, which included dry Furmint, semi-dry Hárslevelű, dry Szamorodni, sweet Szamorodni, as well as Aszú (the principal attraction, however, was clearly the tasting of the Aszú and Szamorodni varieties).

Changes in Tokaj Wine Region over the past 30 years

Since the 1990s, significant changes have taken place in the Tokaj Wine Region, which have also affected the region's wine tourism. On the one hand, a major change in ownership has taken place: as a result of the privatisation, the State Winery, which had previously played an almost monopolistic role, was broken up, giving way to thousands of small wineries. As the legal successor of the State Winery, the private company Tokaj Kereskedőház Rt. was founded in 1993, which is engaged in viticulture, viniculture and wine trade, and is considered one of the largest purchasers of grapes. In addition, for various reasons (e.g. the special reputation of the area), foreign investors also show increasing interest in the region in the 1990s. Among those foreign investors, the English appeared first, who founded Royal Tokaji Wine Co. in Mád. French investors bought property in Bodrogkeresztúr and Sárospatak (Chateau Dereszla Bodrogkeresztúr and Chateau Pajzos-Megyer Sárospatak-Tolcsva). In Mezőzombor, the Disznókő Vineyard belongs to the French AXA Millésimes, the Degenfeld Winery is owned by a German-Hungarian (Mária Degenfeld - Thomas Lindner) family, while the Tokaj Oremus winery in Tolcsva is in the hands of the Spanish Alvarez family. In Tarcál, Királyudvar winery is owned by Anthony Hwang, a Far Eastern investor.

The second most important factor was the evolution in the technology of winemaking (Tóth, 2016). Before the 1990s, it was typically the oxidative process that was used in the region, as a result of which, during the long ageing period, a symbiosis emerged between the noble rot in the cellar and the wine aged in the barrels (the materials produced by the noble rot in the microclimate of the cellar find their way into the wine during the extraction periods). This method has served as the basis of the high quality of Tokaji Aszú, and because of its high content of penicillin, it is not a coincidence that the real Aszú was also once sold in pharmacies. At the same time, the disadvantage of the method was the high evaporation loss associated with long ageing and the significant labour demand (more extractions per year). As a result – in line with the foreign investor's demand for profits – the so-called “reductive” process has become more widespread after 1990, in which wines are aged in steel containers with the exclusion of oxidation, thus reducing the ageing times and preserving the primary fragrance and flavour materials in the wine. Based on the in-depth interviews conducted in the framework of the research project and first-hand experiences gained on site, it has been shown that the reductive process is used in 75 to 80% of the wineries examined, and they contribute to an increase of the number of wines available for tasting (in addition, so-called “combined” wines, in which the two methods are combined, have also appeared).

Table 1. The most important data of the subsidies received in the Tokaj wine region in the framework of the “VP-4.2.2-16 Supporting the product development and resource efficiency of wineries” and the “VP-4.1.3-16 Modernisation of horticulture – Procurement of horticultural machinery” aid schemes between 2014 and 2020, in a breakdown according to settlements (Data source: own calculation based on palyazat.gov.hu)

	VP-4.2.2-16 aid scheme		VP-4.1.3-16 aid scheme	
	number of application supported (pieces)	amount of grant awarded (million HUF)	number of application supported (pieces)	amount of grant awarded (million HUF)
Abaujszántó	2	35.1	3	17.4
Bekecs	-	-	2	14.0
Bodrogkeresztúr	5	189.2	3	27.8
Bodrogkisfalud	4	222.6	4	25.4
Bodrogolaszi	-	-	-	-
Erdőbénye	6	92.4	3	12.3
Erdőhorváti	-	-	-	-
Golop	-	-	-	-
Hercegkút	3	148.1	8	50.0
Legyesbénye	-	-	-	-
Mád	8	676.8	11	84.2
Makkoshotyka	-	-	-	-
Mezőzombor	1	26.3	1	6.5
Monok	-	-	-	-
Olaszliszka	2	39.1	6	38.5
Rátka	1	37.2	3	18.8
Sárazsadány	-	-	-	-
Sárospatak	7	360.0	5	32.0
Sátorajáújhely	4	285.5	5	26.7
Szegi	-	-	-	-
Szegilong	-	-	1	3.3
Szerencs	2	63.2	11	74.6
Tarcál	7	374.9	6	45.8
Tállya	10	610.3	6	35.8
Tokaj	5	433.0	3	22.3
Tolcsva	6	314.9	10	51.9
Vámosújfalú	-	-	-	-
Alltogether	73	3908.7	91	587.7

grapes and, at the same time, the specific locations of vine production (vineyard parcel names) have become increasingly important for the differentiation of wines. The fifth important change is the increase in the number of vine varieties produced. The grape varieties Furmint (having a share of 60-65%) and Hárslevelű (approximately 25-30%), which had played a prominent role for a long time, remained important, but besides them, newer varieties of grapes (e.g. Zeta, Kabar, and Grasa de Cotnari) have also gained importance both in large wineries and in smaller ones,

Thirdly, the development of the region has also been significantly influenced by the actions taken by the various state and local authorities. In the former group, the passing of new legislation, particularly Act CXXI of 1997 on viticulture and viniculture, as well as Government Decree 485/2016 (XII. 28.) on the world heritage management plan of the Tokaj Wine Region Historic Cultural Landscape, should be mentioned. The above act reinforced the closed nature of the Tokaj wine region, listed the most important wines typical in the region, and also recorded their method of production, while the government decree defined the areas with the World Heritage site title, detailed the most important values of the region, as well as the methods of managing them. The most important of the local actions is the activity of the Tokaj Council of Wine Communities, established by the communities of the wine region, which includes, among other things, the coordination and professional review of the organisation of the rules of procedure of the individual wine communities, the organisation of cooperation between members, to facilitate their access to the market, and the protection of origin and quality. Fourthly, in contrast with the processes in the previous period, after 1990, vine cultivation was reduced on the peripheral foothills, and the steeper areas, previously allowed to go fallow or grown over by forests were brought under cultivation again (this aim was also served by the fact that no government aid was granted for planting vines in parcels at lower elevations).

This enabled the production of better quality

resulting in an expansion of the offering (Luda – Váradi, 2016). The last important factor is EU funding, which came to the region in the period 2014-2020 under the Rural Development Operational Programme. The most significant aid schemes for viticulture and viniculture were “VP-4.2.2-16 Supporting the product development and resource efficiency of wineries” and “VP-4.1.3-16 Modernisation of horticulture – Procurement of horticultural machinery,” both financed by the European Agricultural and Rural Development Fund. The examination of the territorial distribution of the aids allows us to draw two important conclusions (Table 1). On the one hand, the majority of the settlements in the region (18 out of 27 settlements) benefited from some support of aim, which reflects the importance of viticulture and viniculture.

The settlements left out were either those with low populations (e.g. Sárszadány – 299 inhabitants, Szegi – 268 inhabitants) or located on the edge of the wine region (e.g. Legyesbénye, Vámosújfalú), further away from the mountains, where natural conditions were not so favourable. On the other hand, it can be concluded that the majority of the subsidies has been granted to the western and south-western part of the wine region (e.g. Mád, Tarcál, Tállya, Tokaj), which is due to the greater popularity of these settlements, also linked to their more favourable geographical location. As a result of the factors discussed above, the number of wineries in the Tokaj Wine Region that also offer wine tastings has increased significantly in recent years, and there are currently 21 settlements in the region offering such a service (Figure 3). In terms of territorial distribution, the prominent role of settlements in the western - south-western part of the region can also be observed.

In the section dealing with the history of the Tokaj Wine Region, I mentioned that the range of wines offered for tasting by various wineries in the pre-1990 period was rather narrow, and consisted only of Aszú, Szamorodni, Hárslevelű and Furmint.

The changes in the boundary conditions, as outlined above, have also brought about a significant transformation in this respect. The results of the survey among wineries (Table 2) show that, in addition to standard products, an increasing number of wineries are striving to expand their range with new wines and to increase their attractiveness by producing local specialities for tourists visiting the region. Wine routes, established in the 2000s, are designed to take advantage of the opportunities offered by tourism related to wines, as they combine wineries producing wines, restaurants offering local specialties, high-quality accommodations, tourist service providers, and attractions in the wine region. Today, there are four wine routes (Figure 4) named after different grape varieties, which include all but two villages in the wine region.

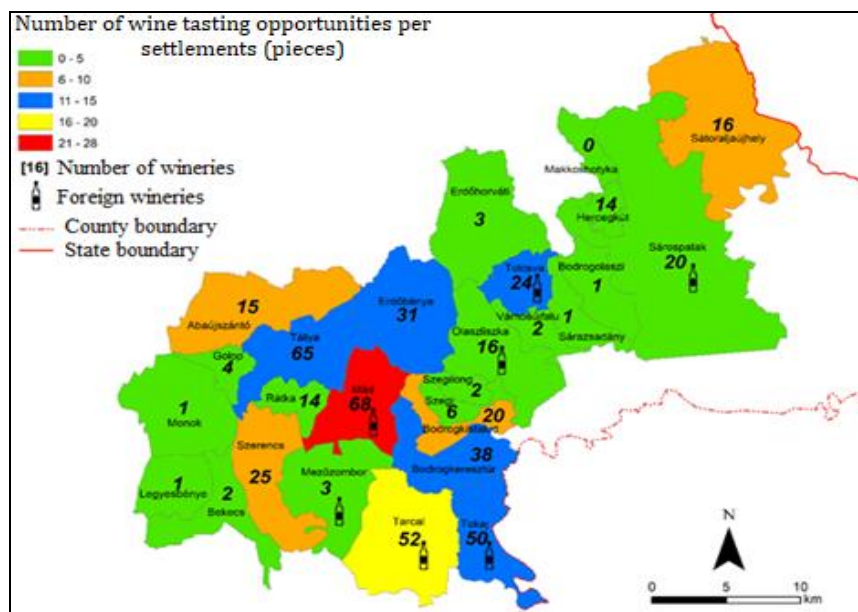


Figure 3. The number of wineries offering wine tasting on the individual municipalities of the Tokaj wine region (Source: own data collection)

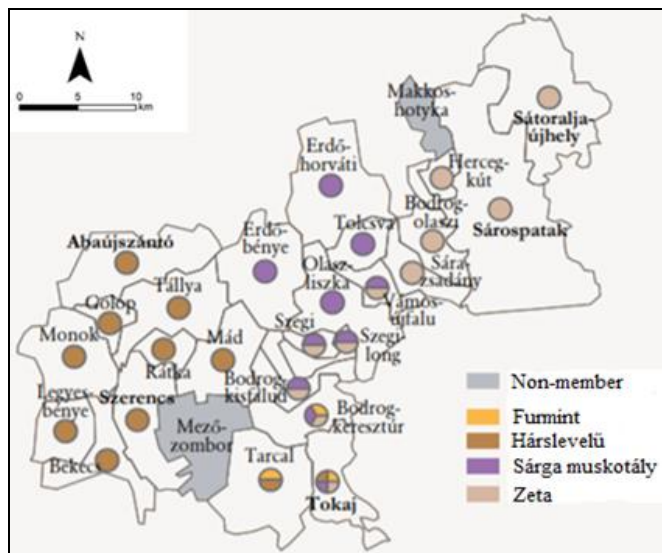


Figure 4. Wine routes in Tokaj Wine Region (Source: Central Statistical Office, 2016:11)

Table 2. Wines offered in the wine tastings of the most important wineries
1 – Aszú, 2 – Furmint, 3 – Szamorodni, 4 – Hárslevelű, 5 – Sargamuskotály, 6 – Cuvée, 7 – Zeta, 8 – Kabar, 9 – Grasa de Cotnari (Source: own data collection)

	1	2	3	4	5	6	7	8	9
Hímes winery (Tokaj)	x	x	x		x	x	x		
Füleky winery (Bodrogkeresztúr)	x	x		x				x	
Homoky winery (Tállya)	x	x	x	x	x				
Tokaj Classis (Mád)	x	x			x	x			
Péter winery (Tokaj)	x	x	x	x	x		x	x	x
Erdős winery (Tokaj)	x	x	x	x	x				
Majoros winery (Tarcál)	x	x	x	x	x	x			
Dereszla winery (Bodrogkeresztúr)	x	x	x		x			x	
Paulay winery (Tokaj)	x	x	x	x	x	x			x
Simkó winery (Sárospatak)	x	x		x	x	x			
Tokaj Portius Sárospatak)		x	x		x		x		
Barta winery (Mád)	x	x	x	x	x				
Götz winery (Herceghút)	x	x	x		x	x			
Csubák winery (Tolcsva)	x	x	x	x	x	x			
Zsirai winery (Mád)	x	x	x	x	x	x			
Tokaj winery (Tokaj)	x	x	x	x	x	x			x
Basilicius winery (Tarcál)	x	x	x	x	x	x	x	x	x
Puklus winery (Bodrogkeresztúr)	x	x	x	x	x	x	x	x	x
Angyal winery (Rátka)	x	x	x	x	x	x			
Illés winery (Erdőbénye)	x	x	x	x	x	x			x
Üri Borok winery (Mád)	x	x	x	x	x				

Wine tourism and gastronomic events that strengthen the direct marketing part and enrich the experience of wine tourists with traditional and other cultural tourism experiences aim to increase the sense of satisfaction. Harvest parties are currently held in 80% of the settlements of the Tokaj wine region, but in themselves they are not attractive to tourists. Bor Mámor Bénye, Mádi Furmint Ünnepe, Kerekdomb Fesztivál Tállya, Tarcáli Charmed Weekend and the Tokaj Harvest Days are the most important wine festivals in the region. At the same time, the main weakness of wine-related events is that they are not aimed at the target audience but at everyone, and as a result they cannot ensure the quality of wine.

CONCLUSION

The most important findings of the study could be summarised as follows. In the area of viticulture and viniculture, significant changes

have taken place in the Tokaj Wine Region in the past 30 years. New economic operators have emerged as foreign investors appeared, and new opportunities have also opened up in wine-making technology. Grape cultivation started to return to the steeper areas used more extensively in the period before the 19th century, and partly in a parallel way, the range of grape varieties produced has also broadened. Central and local regulations increasingly focused on quality grape production, and this was also supported by grant opportunities.

As a result of these processes, wine tourism in the region has also undergone significant changes. On the one hand, besides larger wineries, smaller producers have also opened towards this type of tourism, as indicated by the increase in the number of wine tasting opportunities. On the other hand, the range of wines offered at wine tastings has been continuously expanded: in addition to the previous standard offering (Aszú, Hárslevelű, Furmint, Szamorodni), the new wine varieties have started to play an increasingly important role.

At the same time, the geographical impact of these changes can be observed as well: in contrast to the eastern regions, settlements on the western side of the wine region are becoming increasingly important (e.g. Mád, Tállya). However, the impact of a number of factors should be taken into account in the future of the wine region. Overall, we can conclude that tourists have welcomed the changes taking place, the improvement of quality and the widening of the product range. At the same time, I also consider it important that the new flavours, the more economical technologies should not displace the Aszú production technology with its centuries-old traditions, which remains one of the main image elements of the region (Béres-Virág and Ritter, 2018; Kozma and Czimre, 2014). International experience proves that a unique product that defines the image of the region cannot be forgotten because the tourist attraction of the area is impaired. In the future, it is also important that the wine that has made Tokaj-Hegyalja world famous should be a stable and main element of the wine supply.

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HOW GREEN PERFORMANCE STIMULATES TOURIST LOYALTY? EXAMINING THE ROLE OF RELATIONSHIP QUALITY IN VIETNAM

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Abstract: The main purpose of this research is to propose and test a conceptual model that clarifies the relationship between green performance of hotels and customer loyalty with the mediating role of relationship quality. The data collected from 200 homestay tourists in Moc Chau national tourism area, Son La province, Vietnam through questionnaire survey was tested by applying partial least squares with SmartPLS software. Analytical results showed that the higher tourists perceive the homestay green performance, the tighter the relationship quality they have towards the homestays, which in turns stimulates their loyalty behavior. The evidence also indicated that relationship quality contributes as the partial mediator in the relationship between green practice and tourist loyalty. The theoretical and managerial contribution, as well as the limitation and future research direction were also discussed in the paper.

Key words: Green performance, relationship quality, tourist loyalty, Vietnam

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INTRODUCTION

Tourism which is one of the most developed economic sectors in recent years, has contributed a lot of works for the economy of almost all countries all over the world. Economists indicated that the development of society and economy stimulates the high and diversifying demand of customers for the tourist services such as natural tourism, psychological tourism, cultural tourism etc. For this reason, many countries have built a tourism – based country development strategy for the future. But this sector is also very sensitive and slight that is influenced by a lot of factors: nature, customer, socio culture and politics. For instance, Covid-19 pandemic has affected this sector in a global sphere. This in turn causes a big impact on the economy of all the countries in the world. Moreover, environmental issues have been global issues which influence seriously our world, including Vietnam – an industrialized country. Nowadays humans are facing with the global warming, deforestation and pollution (water, air and sound) so they have tendency to return to the nature and protect the nature for our future generation.

Vietnam which is a developing country in the Southeast of Asia, has marked to the world with high economic growth rates in the recent years. With the openness and development policy of Vietnamese government from 1986, Vietnam economy has been developed in an impressive manner. For instance, the GDP per capita has increased annually with USD 2,715 (2019) in comparison with 96,343 (1989) as the number of World Bank¹. In term of tourism, Vietnam is a country with very rich and diverse tourism resources, many natural landscapes, long and beautiful beaches as well as many unspoiled natural areas. Specifically, many places have been recognized as world natural heritage such as Son Doong cave, Ha Long Bay. Therefore, green tourism (sustainable tourism) is not only a phenomenon but also an urgent requirement for the country's sustainable development to meet the needs of the times. To concretize that requirement, the Vietnamese tourism industry proposed a set of criteria for sustainable tourism development, namely, the Green Lotus label which includes 81 criteria with a total of 154 points and 25 bonus points, divided into 3 levels: junior level (30 criteria), incentive level (29 criteria) and advanced level (22 criteria).

Because of the emerging topic, recently, there are a lot of research on this issue such as research of (Han et al., 2018; Martínez, 2015; Merli et al., 2019; Yusof et al., 2017). Yusof et al. (2017) indicated that environmental management practice do not have significant effect on

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¹ World Bank Group - International Development, Poverty, & Sustainability

customer loyalty directly but indirectly via customer satisfaction. Besides, Martínez (2015) showed that green image has both direct effect on customer loyalty and indirect impact through green trust and green satisfaction. Han et al. (2018) in the same vein found that hotel practice of water conservation management and hotel practice of waste reduction management influence on guest participation intention for green hotel practices and guest loyalty intention for green hotel via hedonic value and utilitarian value. This research context is in Vietnam. Moreover, in the research of Merli et al. (2019), the authors explained why hotels should go green by confirming that green practices performances directly influence on loyalty towards the hotel, loyalty towards the green hotel and satisfaction. Even the significant contribution to the literature and practice, the authors indicated that it is necessary to deeper examine relationship between hotel green practices and customer loyalty by adding other variables in term of giving a comprehensive mechanism of customer behavior in tourist industry.

Moreover, as noted above Vietnam tourism is now very developing with many types such as natural tourism, cultural tourism, social tourism, entertainment tourism, sportive tourism, spiritual tourism (Han et al., 2018). But to date, in Vietnam, almost all of the research applied macro approach in term of giving the suggestion for government and tourist industry, very little research focuses on the customer behavior (such as loyalty) in the correlation with green performance. As suggested by Trang et al. (2019), there is a need to deeper examine the crucial role of relationship quality in the relationship between green hotel and customer behavior (Trang et al., 2019). So that this research aims to fill this gap by proposing and empirical testing the relationship between green performance of homestay and tourist loyalty in the context of Vietnam. In addition, this research also clarifies the role of tourist – hotel relationship quality (trust, satisfaction and commitment) in this relationship to shed light on the importance of green performance in the customer perception.

To reach the end, this research is based on the trust – commitment theory and select the context of natural tourism in Moc Chau national tourist area. Because this area is among the most famous natural tourist places in Vietnam where attracts a lot of tourists both domestic and international each year. According to the authorities, most tourists visiting Moc Chau are young and have high level of education which lead them to a high level of environmental perception. Moreover, recent years, with the sustainable development tourist strategy of provincial authority, there are a lot of environment friendly services such as green homestay. To evaluate the efficiency and contribute to the literature and practice, this research attempts to answer research questions as followe

First, to what extent does green performance of homestay influence tourist loyalty?

Second, to what extent does tourist – homestay relationship quality influence tourist loyalty?

Third, how does tourist – homestay relationship quality influence the relationship between green performance and tourist loyalty?

The remaining of this paper is arranged as follows. After introduction section is the background theories and hypothesis development. The third section is the data collection which is continued with data analysis section. This paper finishes with the conclusion and discussion section.

BACKGROUND THEORY AND HYPOTHESIS DEVELOPMENT

Trust – commitment theory

The commitment - trust theory questioned this central hypothesis in view of relationship in strategic alliances (Morgan and Hunt, 1994). Focusing on what makes relationship marketing successful, the commitment - trust theory considered trust and relationship commitment as the key factors in building and maintaining successful relationship. This theory is first applied in psychological area but nowadays this theory has been utilized in a lot of fields such as management (Casimir et al., 2012; Kwon and Suh, 2005), marketing (Brown et al., 2019; Solberg and Nes, 2002). According to the theory, trust and relationship commitment are central to successful firms, because they encourage positive customers behavior (Park et al., 2017; Zhang et al., 2015).

In the tourist industry, previous research applied this theory to explain the relationship between relationship perception and destination loyalty (Su et al., 2017), corporate image and tourist loyalty through mediating effect of tourist satisfaction and commitment (Richard and Zhang, 2012), customer engagement and brand loyalty (So et al., 2016). Previous research also showed the relationship between organizational identification and its outcomes via employee trust and commitment (Edwards and Peccei, 2010; Thomas, 2015). They also indicated the correlation between CSR and employee trust and commitment (Collier and Esteban, 2007; Farooq et al., 2014; Turker, 2009). In summary, this theory has been utilized vastly in the tourist industry because of its usefulness. Therefore this research also applies this theory to clarify the relationship between green performance and customer loyalty with the mediation of relationship quality.

Green performance of homestay

In this research green performance of homestay (GP) can be understood as the process and procedures performed by the homestay by which all activities are friendly with the environment (Yusof et al., 2017). By this definition, GP means all the activities of homestay minimizing the negative impact for the environment around. So that, green homestay is an environment – friendly lodging properties performing a lot of strategy and activities to minimize harmful to the environment (Verma and Chandra, 2018). These actions can be energy efficiency utilization, solid waste policy, water conservation, efficient lighting. Other green activities are eco-cuisine and using electronics as an email, using more Internet and paperless activities. One of the most use in hotel is electronic consumption, especially in the condition of heating and refrigerator utilization. Therefore, most hotels are now using a system whereby, when guests leave the room, all the energy appliances will shut down except for refrigerators, alarm clocks and other essential appliance. This is because customers often simply leave the room without switching off the appliances (Alexander, 2002) As noted above, environment – related for product and services are now the serious demand of the society (Namkung and Jang, 2017). To satisfy this demand, the management of hotel have to understand and perform well this issue in the practice (Han et al., 2011). Previous research indicated that green performance is considered as a competitive advantage for the hotel which leads to customer accepting a premium price and revisit intention in the future (Kim et al., 2017).

In the same vein, they indicated that GP stimulates customer loyalty for the hotel (Yusof et al., 2017) or customer willingness to pay (Kang et al., 2012), or pay more for the restaurant if customer perceived the green practice (Namkung and Jang, 2017). The more hotel performs well the green activities, the more customer perceive hotel brand reputation in the practice (Han et al., 2011).

Green performance and customer loyalty

Customer loyalty is considered among the most important concepts utilized popularly in business and in the marketing field. So that this concept has received a lot of research by scholars because of its crucial role for the firms. This concept is utilized in many industry to examine the customer loyalty to the firms or employee loyalty. This research focused only on the customer loyalty in the tourist and hospitality industry. To date there are many definitions of this concept. Specifically, customer loyalty refers to customer commitment towards products, services (Priporas et al., 2017), towards a destination (Chi and Qu, 2008) or towards a tourist brand (So et al., 2016) or towards a firm. In this research, tourist loyalty is defined as the strength of the relationship between the attitude of tourists towards the green hotel/ homestay which stimulate them to revisit and stay in that hotel/ homestay in their next trips in the future.

This definition is the same with (Yusof et al., 2017): “customer loyalty is the willingness to keep repurchase of the product and service offered, keep using the same accommodation service which are concerned with the environmental issues and to suggest the service to close friends and families”. The literature indicated two facets of customer loyalty, namely behavioral and attitudinal (Yusof et al., 2017). Martínez (2015) confirmed in tourist industry scholars focus more on the attitudinal component (Martínez, 2015). Previous scholars also indicated that the more loyal a tourist is to a hotel, the more profitable to the hotel. Previous research proposed and tested many determinants of customer loyalty in the hospitality and tourist industry such as service quality (Osman and Sentosa, 2013), perceived value (El-Adly, 2019), hotel image and reputation (Lai, 2019). Previous scholars also indicated the importance of social responsibility on customer loyalty (De Grosbois, 2012; Martínez, 2015). As mentioned above, green practice can be considered as the environmental responsibility of the firms, especially tourist firms have to perform well their responsibility towards the environment. Previously it was confirmed the direct effect of green practice to the customer loyalty (Martínez, 2015; Merli et al., 2019; Robinot and Giannelloni, 2010). Theory of social identity showed that tourists go to natural tourism because they have a close identification with the nature and tend to revisit when they have occasion (Lai, 2019). In the same vein, scholars applied the theory of planned behavior and found the importance of moral reflectiveness and conscientiousness on tourist loyalty towards green hotel. So this research proposes that:

H1: Green performance of homestay has positive impact on tourist loyalty.

Tourist – hotel relationship quality

Relationship quality has recently emerged as an important concept which has attired a lot of research from both academicians and practitioners in the marketing field because of the intensive competition nowadays (Brown et al., 2019; Collier and Esteban, 2007; Curry and Gao, 2012). This concept has its origin from relationship marketing domain. It aims to build a long-term, trusting, beneficial relationship with the customers (Kwon and Suh, 2005). In other words, the most ultimate purpose of relationship marketing is to build, maintain and strengthen strong relationships with customers. In this research relationship quality is considered as the evaluation of customers about the strengthening and attachment to a firm which can lead them to positive feelings, emotion and behaviors such as respect, courtesy, empathy, and helpfulness (Brown et al., 2019). The key factor in testing the potential for relationship quality is the degree of interaction between customers and firms. Relationship quality has been tested in many research contexts between business to business, business to consumer, industry marketing or service marketing. There are many background theories applied to explain this concept such as social exchange theory, theory of reasoned action and theory of trust – commitment (Morgan and Hunt, 1994). Previous research proposed and indicated a lot of relationship quality dimensions such as trust (Young and Alba, 2003), trust and commitment (Brown et al., 2019), satisfaction (Martínez, 2015), commitment (Lai, 2019). They also agree that relationship quality is a higher – order construct including many components. By examining the literature in the tourist and hospitality industry, as the suggestion of previous researchers that it is necessary to have a more comprehensive construct of relationship quality, hence this research proposes that this construct is a second – order construct which encompasses of three dimensions, namely, tourist trust, tourist satisfaction and tourist commitment. In which, tourist trust refers to a tourist’s confidence in the goodwill and competence of the hotel (Brown et al., 2019). Tourist trust is important in a long temps and profitable relationship. Tourist trust can be divided into cognitive trust and affective trust. Tourist satisfaction refers the tourists’ response to the “evaluation of the perceived discrepancy between expected performance and the actual performance in term of services provided by a hotel after its consumption” (Richard and Zhang, 2012). This definition is originated from expectation – confirmation theory which has been applied vastly in research customer satisfaction and loyalty. Moreover, tourist commitment refers to the “belief to the importance of an ongoing relationship that all partners tend to maintain that relationship and in some case they are willing to sacrifice short-term benefits to have long-term ones” (Richard and Zhang, 2012).

Previous research also attempted to examine a lot of relationship quality antecedents such as corporate image (Richard and Zhang, 2012), service provider attributes and orientation (Kim and Cha, 2002), social responsibility (Collier and Esteban, 2007). In the research of Trang et al. (2018), the authors indicated that green attributes stimulates customer trust and satisfaction (Trang et al., 2019). Moreover, previous research also confirmed customer trust, satisfaction and commitment have positive effect on customer loyalty (Brown et al., 2019; El-Adly, 2019; Martínez, 2015). In the same vein, theory of trust – commitment showed that trust and commitment positively influence on customer loyalty, customer word-of-mouth or citizenship behavior (Han et al., 2018). From these evidence, this research propose that:

H2: Green performance of homestay has positive impact on tourist – homestay relationship quality.

H3: Tourist – homestay relationship quality positively influence on tourist loyalty.

The mediation of tourist – homestay relationship quality

Previous researchers showed that corporate social responsibility can both influence on customer loyalty both directly and indirectly through customer trust, satisfaction and identification (Martínez and Del Bosque, 2013), involvement and commitment (Inoue et al., 2017), commitment (Collier and Esteban, 2007), trust and commitment (Brown et al., 2019), satisfaction (Kim and Cha, 2002), relationship quality (Richard and Zhang, 2012). They also considered green practice as a part of corporate social responsibility, namely environment responsibility. Recent research also examine the mediation of relationship quality in the hospitality and tourism industry (El-Adly, 2019; Lai, 2019; Merli et al., 2019). From these evidence, the hypothesis of this research is that:

H4: The relationship between green performances of homestay on tourist loyalty is mediated by tourist – homestay relationship quality.

From these hypotheses, the research model is depicted in Figure 1 as follow:

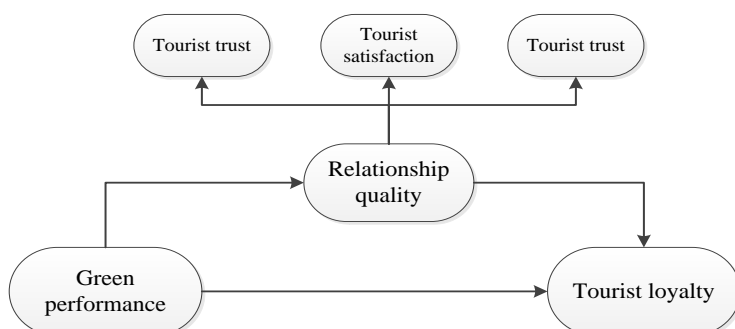


Figure 1. Research model

RESEARCH METHOD

Questionnaire design

To test the proposed hypothesis, this research utilizes the questionnaire survey method to collect the data. Participants are tourists who visit Moc Chau NTA and stay in the community hospitality, called homestay. The authors selected this kind of respondents because they experienced already the homestay services and they can perceive to which extent that homestay applied and performed the green activities in the reality which can lead them revisit or not that hotel. The current research applied scales from previous studies and modified to fit the new context of green tourism in Vietnam.

All scales are in the form of Likert-5 which range from 1 representing totally disagree to 5 representing totally agree. In which, tourists' perception of green performance includes of 8 items adopted from (Lee et al., 2018; Yusof et al., 2017); tourist – hotel relationship quality is measured by tourist trust with 4 items applied from (Ponnappureddy et al., 2017; Su et al., 2017), tourist satisfaction with 3 items adopted from (Merli et al., 2019; Robinot and Giannelloni, 2010); tourist commitment with 4 items from (De Grosbois, 2012; Rahman and Reynolds, 2016) and tourist loyalty behavior with 3 items modified from (Merli et al., 2019; Yusof et al., 2017).

To have a more consistent questionnaire, we applied back – translation technique by specialists in English and marketing. That means the original English items were translated into Vietnamese and then translated back to English, the specialists in English and marketing compared the two versions and modified to have a draft version. This draft version is tested and checked with 10 tourists in a pilot test and then the final version of questionnaire was fixed.

Data collection

The main aim of this research is to evaluate the loyalty behavior of tourists who stayed in a green homestay that means the ability of revisit and re-stay in that homestay. So the population for this research is all the tourists who have visited Moc Chau national tourist area. Moc Chau NTA, belonging to Moc Chau district, Son La province, 180 km from Hanoi, 120 km from Son La city, is approved by the Prime Minister on the Planning as a national tourist area in May. 11/2014. These are 2 mountainous districts located on the limestone plateau of the Northwest region with an average altitude of more than 1,000 m above sea level. There are 12 minority ethnics live together in Moc Chau district with abundant cultures such as clothes, specialties, foods as well as house on stilts.

That means Moc Chau NTA has both natural tourism resources and humanity resources which is the basement to develop sustainable tourist industry. The authors applied a simple random sampling method through questionnaires at this area. The questionnaire consisted of 22 main questions, so according to (Hair et al., 1998) the minimum sample size would be 110 questionnaires. To collect the most appropriate responses, the research team selected 11 homestays at Moc Chau NTA and 20 respondents for each homestay. This study was deployed during one month. Finally, the result has a total of 200 valid questionnaires collected after the survey, means the rate about 90.9%. The demographics of the respondents is depicted as follows:

Table 1. Demographic information of respondents

Factors	Component	Amount	%
Gender	Male	95	47.5
	Female	105	52.5
Age	Under 25	31	15.5
	25 – 35	70	35.0
	36 – 45	73	36.5
	Over 45	26	13.0
	Under 2000	15	7.5
Yearly income* (USD)	2000 – 3000	117	58.5
	3000 – 5000	52	26.0
	Over 5000	16	8.0
	High school	76	38.0
Education	College	12	6.0
	University	107	53.5
	Other	5	2.5

* Notes: The per capita income in Vietnam (2020) is 2750 USD (General Statistics Office of Vietnam)

Table 2. Measurement model evaluation

Variables	AVE	CR	C α
Green practice performance	0.50	0.88	0.85
Loyalty	0.61	0.83	0.70
Satisfaction	0.69	0.87	0.78
Trust	0.66	0.89	0.83
Commitment	0.63	0.87	0.80

Table 3. Construct AVE correlation

	GP	COM	LOY	SAT	Trust
GP	1	0	0	0	0
COM	0.25	1	0	0	0
LOY	0.34	0.39	1	0	0
SAT	0.17	0.25	0.29	1	0
Trust	0.38	0.37	0.31	0.26	1

RESEARCH RESULTS

This study applied the PLS-SEM path model to test hypotheses through Smart PLS 2.0 software (Hair Jr et al., 2016). Compared with other empirical analytical methods, the proposed research model is the most suitable for this method because it focuses on predicting and explaining the complex relationship between the variables in the model and consistent with the small research sample ($n = 200$). Furthermore, it can explain a relationship of reflective construct and formative construct. In the model, relationship quality is a formative construct and is indirectly formed from 3 reflective constructs that are tourist trust, tourist satisfaction and tourist commitment.

Scales measurement evaluation

To evaluate the scales, the current research used Cronbach's alpha ($C\alpha$), composite reliability (CR) and average extracted variance (AVE). In which, the minimum loading factor is 0.63 and the highest is 0.88, satisfying the cut-off value 0.5. Besides, values of $C\alpha$ ranging from 0.70 to 0.85 and values of CR ranging from 0.83 to 0.89 are both greater than the level 0.7 (Bagozzi and Yi, 1988). These evidence confirm the reliability of the scales satisfying the requirements. In addition, AVE values from 0.50 to 0.69 both satisfy cut – off value of 0.5 (Fornell and Larcker, 1981), indicating that the convergence value is satisfactory (Table 2). To test discriminant validity, this research first used the AVE value of each variable in the correlation to other variables (the Fornell - Larcker criteria). Then, the analytical results showed that the square root of AVE is greater than the correlation coefficient with other variables, demonstrating that the scales ensure discriminant validity (Table 3).

Evaluation of structural model

After evaluating the scales by testing reliability, convergence and discriminant validity, the authors applied the PLS-SEM model to test the relationship of variables using SmartPLS software. The results of the relationships are shown in Figure 2. The results of data analysis show that the relationship quality between tourists – homestay is a second – order construct including of tourist trust, tourist satisfaction and tourist commitment. In which, tourist trust representing 71.9% of variance ($\beta = 0.84$), tourist commitment representing 53.3% of variance ($\beta = 0.73$) and tourist satisfaction representing 51.2% of variance ($\beta = 0.72$). The results also showed that green performance of homestay has a significant effect on tourist loyalty ($\beta = 0.52$; $p < 0.001$, t -value = 11.98). Moreover, the green performance of homestay has positive impact on the tourist – homestay relationship quality ($\beta = 0.73$; $p < 0.001$, t -value = 14.64), which in turns influences tourist loyalty ($\beta = 0.25$; $p < 0.01$, t -value = 2.37). These evidence showed that hypotheses H1, H2 and H3 are supported. To test the mediating effect of tourist – homestay relationship quality in the relationship between green performance and tourist loyalty, a mediation model was built (Bagozzi and Yi, 1988) with bootstrapping test in SmartPLS (Hair Jr et al., 2016) and with Sobel test (Hayes, 2009). The testing results are showed in Figure 3.

In Figure 3, green performance of homestay had a significant impact on tourist loyalty ($\beta = 0.688$, $p < 0.001$, T -values = 13.12) in the direct model. The influence of green performance of homestay on tourist loyalty decreased in the indirect model ($\beta = 0.52$; $p < 0.001$, t -value

= 11.98). In addition, Sobel mediation test results with one-tailed probability and two – tailed propability is smaller than 0.05 threshold (Hayes, 2009). This outcomes expressed that green performance of homestay on loyalty is partially mediated by the influence of tourist – homestay relationship quality. This evidence confirmed the hypothesis H4.

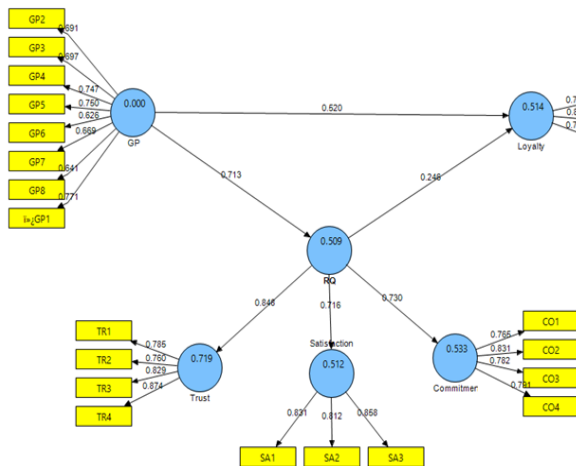


Figure 2. PLS testing results

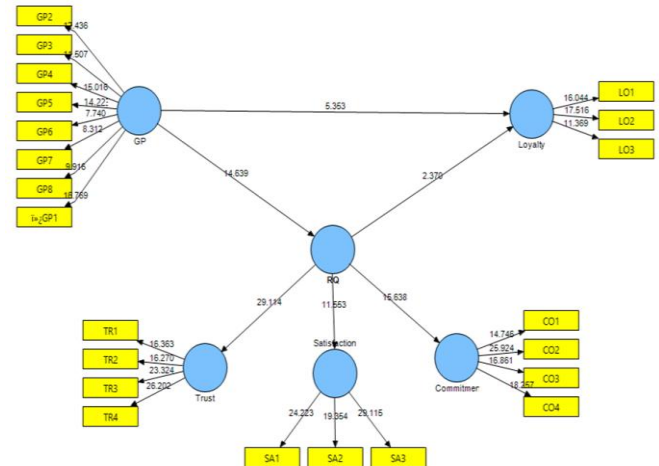


Figure 3. Mediating effect testing

CONCLUSION AND DISCUSSION

In the context of rapid economic and social development, human needs are increasing, not only at a basic level as before but also at a higher level. After stressful working hours, everyone would like to have trips to rest and explore the world. Many of them choose natural tourism in order to return to the “mother nature”, to be immersed in beautiful nature. Therefore, as life quality is increasing, people have to face with the pollution and four concrete walls in urban areas, they desire to be in truly natural places. This poses for hotel managers to understand the needs of their customers, provide a truly natural accommodation, with environmentally friendly products. This is the premise for the development of the business in accordance with the needs of customers as well as the sustainable strategy orientation in tourism of the local government. This study attempts to clarify the tourists’ perceptions of homestay green practice performances, thereby assessing and examining its role in the correlation with their loyalty behavior. Research shows that tourists have a very strict requirement on green performance for homestays including 8 items related to all services in the homestay. This fact becomes a criterion that plays a crucial role in stimulating customers’ loyal behavior to that homestay. As analytical results, the higher level of perception of green practice performance, the higher the tourists have tendency to loyalty ($\beta = 0.52$; $p < 0.001$, $t\text{-value} = 11.98$). The current research contributes the new knowledge to the literature in the hospitality and tourist industry. This research also confirms the relationship between green practices at homestays in promoting positive behavior of tourists (such as loyalty) (Merli et al., 2019; Yusof et al., 2017).

In addition, the current research also clarifies the relationship between customer perceptions of homestay green practices and the tourist – homestay relationship quality. In this study, tourist – homestay relationship quality includes three components: tourist trust, tourist satisfaction and tourist commitment. In which, customer trust plays the most important role in this construct. This evidence confirms that trust is the first factor which is very important in the social relationship (Han et al., 2011; Ponnappureddy et al., 2017). Tourist commitment and satisfaction are in second and third place in this construct. Therefore, in order to create positive tourist behavior, homestay needs to build tourist trust, tourist commitment as well as tourist satisfaction. This research also indicates that green practices performances contribute as a basement to help hotel building and maintaining relationship quality with customer. In particular, data analysis results show that the green performance has a strong effect on the relationship quality p ($\beta = 0.73$; $p < 0.001$, $t\text{-value} = 14.64$). This finding contributes greatly to the literature in the hospitality and tourist industry. This is among the first research focusing on the tourists - homestays relationship quality in the relation with the green practice. Furthermore, the current research shows that through the quality of the relationship between tourists and homestays, tourists tend to be more loyal to the homestay ($\beta = 0.25$; $p < 0.01$, $t\text{-value} = 2.37$). This evidence contributes to the literature in the hospitality industry and give a more comprehensive understanding in comparison with previous studies focusing on the correlation between relationship quality in promoting customer loyalty behavior (Han et al., 2018; Merli et al., 2019; Robinot and Giannelloni, 2010).

Finally, this research attempts to propose and test the role of the tourist-homestay relationship quality on the effect of tourists’ perception of green performance on tourist loyalty behavior. As mentioned above, in this study the tourist-homestay relationship quality includes three components of tourist trust, tourist satisfaction and tourist commitment. In contrast to most previous research which only analyzed the role of each of these individual components in the relationship between green active practices and loyalty (Martínez, 2015; Merli et al., 2019). This research shows that the effect of tourists’ perception of green performance on tourist loyalty behavior is partially mediated by the tourist-homestay relationship quality. This is an important finding in providing tourism with a more holistic view of this relationship.

Beside theoretical contribution, this research also has some managerial contribution to managers and policy makers.

Firstly, this research suggests that hotel managers in general, homestay in particular need to understand the importance of the “green” factor by performing green practice actions in the hospitality and tourist industry. Because this factor has a direct effect on customer behavior, especially customer loyalty. Scholars pointed out that the cost of acquiring new customers is much higher than maintaining loyal ones (Curry and Gao, 2012). Moreover, loyal customers not only will continue to revisit and utilize services next times, but also becoming a marketer, a citizen for the hotel free but highly effective way, helping the hotel to build brand reputation.

Secondly, this research indicates the important role of relationship quality to customer loyalty. This research suggests to managers of hotels the necessary to build good relationship quality with customers. Specifically, building and maintaining customers’ trust in the firm’s products and services, thereby improving customer satisfaction and building customer commitment. Performing well green activities is one of the factors that help businesses have a good relationship with customers. Through this relationship, firm can create and maintain customer positive behavior such as citizenship behavior, revisit, repurchase or recommendation and loyalty.

Thirdly, this research asserted that customer – firm relationship quality contributes as the partial mediators between customers’ perception about green performance of hotels and customer loyalty. This finding helps managers understand about the mechanism of customer

loyalty in correlation with green practice performance. That means, green activities not only directly stimulate customer loyalty and also indirect effect via the relationship quality. So that, managers can have appropriate strategies and marketing policies to promote customer loyalty.

Finally, the current research provides some suggestions for tourism policy makers and local tourism authorities in developing natural tourism, ecological tourism or green tourism. This research indicated that when tourism firms perform well green activities, they can help attract more tourists, thereby promoting the development of local tourism, bringing income to local people, and improving the quality of life. Therefore, policy makers need to have specific policies on green tourism development as well as supporting and encouraging tourist firms and other related services to apply and realize well green activities in their daily activities.

Even the theoretical and practical contributions, this research still has some limitations. First, this research only collected the data from tourists who visited and stayed in homestay services in Moc Chau national tourism area, which may lead to incomplete and unrepresentative Vietnamese tourists. Further research could expand the investigated area to have a more complete and comprehensive research sample. Second, the current research did not mention some of the variables that could moderate these relationships, such as gender, income, age, and education level. This suggests further research could clarify and give a more comprehensive understanding of the relationship between green performance and customer behavior. This research only analyzes relationship quality which is considered as a second - order construct that includes three components: tourist trust, tourist satisfaction and tourist commitment, but has not been analyzed as a first - order construct to have a more comprehensive understanding. Moreover, future studies could also propose new factors to enrich the knowledge on this topic in the current competitive context.

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A METHODOLOGY FOR EXAMINING GEOTOURISM POTENTIAL AT THE KRUGER NATIONAL PARK, SOUTH AFRICA

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Abstract: In contrast to Europe, Asia and South America where geotourism is actively pursued, geotourism activities in South Africa have not to-date been a focus of tourism products. The purpose of this paper is to propose a field methodology that can be used to assess the potential for geotourism development. Existing procedures to establish geotourism site potential are reviewed and a new methodology that accounts for more characteristics than currently found in documented methods is proposed. This consists of three phases: creating a standardised manner of inventorying the sites; standardising field rank scoring for each site by geotourism value, cultural value, ecological sensitivity, accessibility, development requirements, currently available academic literature, and, developing a final multi-site database assisting the South African National Parks to preserve geoheritage sites. Based on previous studies, the Kruger National Park has geoheritage sites that could form the basis for geotourism development: therefore, the methodology was piloted in its northern regions at well-known geoheritage sites. The findings of this study intend to assist the South African National Parks, local community leaders, the private sector (including existing tour operators) and government departments in achieving a national database of geoheritage sites to ultimately be associated with sustainable tourism activity led by local communities.

Key words: geotourism, sustainability, geoheritage, Kruger National Park, South Africa

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INTRODUCTION

Geotourism, is a form of tourism which sustains and enhances the identity of a territory, by taking into consideration the territory's geology, environment, culture, aesthetics, heritage, and, the wellbeing of its residents (International Congress of Geotourism, 2011). Worldwide, geotourism is gaining popularity (Ren et al., 2013) being used as a vehicle to foster sustainable tourism development through establishing local guardian communities who benefit from associated geotourism activity. The objective of this paper is to propose a methodology for documenting and ranking South African geoheritage sites, in the Kruger National Park (KNP). The methodology finally used to select the KNP localities that could be geoheritage sites contributes to creating a KNP database of geoheritage sites.

An increased interest in geological and heritage awareness has stimulated interest in geotourism as a tourism product particularly as it often shares management responsibility with local communities and national guardians. This has precipitated a phenomenal rise in dedicated geoparks and geotourism activities with this interest further used as a tool for geoheritage conservation (Newsome and Dowling, 2010). South Africa has yet to establish a field ranking methodology that collects data by standardised geotourism characteristics to assess what sites to develop. The KNP is the largest South African public park within the South African National Parks (SANParks) with an established tourism clientele focused on wildlife viewing (Schutte, 2003; Scholtz et al., 2013; Grünewald et al., 2016). Previous studies (Strickland-Munro et al., 2010; Strickland-Munro and Moore, 2014) highlight that the KNP needs to create more job opportunities to reduce poverty within nearby local communities. Neglecting geotourism potentially misses an opportunity for sustainable geotourism activity development by local communities. This study focused on the northern part of the KNP located in Limpopo Province and was selected because of its uniqueness due to its diverse assemblage of rock formations (South African National Parks, 2017), significant cultural and archaeological ruins like Thulamela and Makahane heritage sites. In addition, communities bordering the northern part of the KNP are poorer and benefit less from tourism activities than those communities abutting the southern part of the park as fewer tourists visit the north (Matiza and Oni, 2014). This study develops a methodology that will provide the opportunity to develop a database of geoheritage sites assessable by their collected characteristics as to their potential for geotourism development to create local jobs. This research contributes to opening up new rural community economic opportunities in accordance with recommendations by Farsani et al. (2011) and Ehsan et al. (2016).

These studies all concur that geotourism is a branch of sustainable tourism that can be used for poverty alleviation, geo-conservation, and the development of rural economies. Furthermore, this study can also help to identify the KNP in tourism literature not only famed for its wildlife but also as a geopark. The United Nations Educational Scientific and Cultural Organization (UNESCO) Global Geoparks (UGGp) (Zouros, 2016) engages in defining a globally recognised significant geopark territory (Justice, 2018: 2) as a “single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education, and sustainable development” (United Nations Educational, Scientific and Cultural Organization, 2018a). The next sections provide literature that underpins the rationale for the development of a South African geotourism assessment instrument and discusses the concept of geotourism, global overview of geotourism, geotourism in South Africa, tourist motivation towards geotourism and benefits of geotourism.

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LITERATURE REVIEW

Definitions of geotourism have evolved as tourist needs began to focus on geological heritage and geoconservation, incorporating notions such as understanding others' cultures, personal education and, sustainability in terms of the importance of recognising the need to preserve these sites and indigenous communities who cohabit with or near them (Newsome et al., 2012; Hose, 2016). The scientific literature reveals a multitude of concepts and definitions concerning geotourism (Wimbledon, 2013; Ruban, 2015; Boley et al., 2011; Gordon, 2018) often using terminologies such as geodiversity, geoconservation, geoheritage, and geosites in different ways (Brilha, 2016; Brilha, 2018). A succinct and clear description of geoheritage and its relationship to geotourism by Newsome and Dowling (2018: 305) state, "geoheritage refers to the elements of the earth that we value, whereas geotourism is a type of tourism that is based on some aspects of the earth's geological and/or geomorphological heritage" but what the concepts of geotourism and geoheritage encompass is widely argued in literature. Dowling and Newsome (2010) suggest that geotourism is two parts thus, geo and tourism: 'geo' means geology and geomorphology while 'tourism' refers to visiting learning, appreciating and engaging with geosites. However, this suggestion and the former lack the emphasis on the wellbeing of residents or historic guardians as inferred in the UGGp UNESCO definition. Ehsan et al. (2013: 1713) capture this omission defining geotourism as a "tool for sustainable development of geoheritage resources". This definition is considered by many authors as too broad and susceptible to misinterpretation as there are so many differing opinions about the concept of what sustainable development is (Munasinghe, 1993; Goodland, 1995; Mitcham, 1995; Harris, 2000; Nooten, 2007; Emas, 2015). Establishing a definition that guides the development of a South African site assessment instrument that encompasses characteristics that help determine where sites can realistically be developed for local community guardianship and benefit, becomes critical. Hose (2012: 4) further claims that no studies have adequately covered the "current breadth of modern geotourism in terms of the nature of provision and geographical coverage, together with its theoretical underpinnings" which this study tries to address. For this paper, geotourism is considered in terms of 'cultural heritage' as defined in Article one of the 1972 UNESCO Convention (United Nations Educational, Scientific and Cultural Organization, 1972a: 80):

"Monuments: architectural works, works of monumental sculpture and painting, elements of structures of an archeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from history, art or science;

Groups of buildings: groups of separate or connected buildings, which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from history, art or science;

Sites: works of man or the combined works of nature and man, and areas including archeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological points of view".

It is necessary if using the 1972 UNESCO convention definition to develop a methodology for determining the potential for developing a geotourism product that can incorporate all the UNESCO criteria. Worldwide research reveals that tourists seek authentic travel experiences (Reimold, 2001; Stokes et al., 2003; Phau et al., 2013; Chingombe and Taru, 2018) such as geotourism.

As regards what is considered geoheritage Lima et al. (2010: 1) note, "the UNESCO's Convention concerning the protection of the world cultural and natural heritage, signed in Paris in 1972, was the first international effort to select sites of paramount world importance due to their natural characteristics". The protection of geosites as such a high priority that they it has been proposed that geological heritage and geodiversity must be taken into consideration when designing International Union of Conservation of Nature (IUCN) programmes (Carcavilla et al., 2009). Carcavilla et al. (2009) note that globally, a minority of countries do see geoconservation as an essential activity and currently, three international programs working with IUCN programmes are creating opportunities to protect geological (geo) heritage as follows: the UNESCO World Heritage Convention; the Biosphere Reserves; and, Wetlands of International Importance (Ramsar Agreement). In connection with protecting geological heritage, three more categories are distinguished by Dingwall (2005):

- Human heritage locations with geological aspects as their main feature;
- Places of value for other non-geological reasons;
- Areas with minor or indirect geological value.

Newsome et al. (2012: 20) note that, "in recent years there has [however] been a rapid expansion of tourism interest in geological features and landscapes, both within existing protected areas due to the recognition and identification of geosites via geo-conservation activities, governmental recognition of geo-heritage and the emergence of a complex tourism demographic that is more demanding of new, unique and educative experiences". In addition, in Europe there is a rapidly expanding geopark movement, as well as the establishment of a number of organisations that actively promote geotourism and the conservation of geodiversity.

Ruban (2015) summarised the number of journal articles published globally on geotourism between 2012-2014 and found that there was limited research conducted on the subject. From the article summary it was found that there are 179 published articles on geotourism in Europe, 104 on Asia and 29 on Africa. Only approximately 10 of the publications on Africa dealt with South African geoheritage. It is clear that there is paucity of information in South Africa in terms of realising the potential from geotourism by undertaking empirical research to guide its development. Geotourism can assist to create local enterprises, new jobs (Dowling and Newsome, 2010) and educate tourists and local people on the need to protect geopark attributes (Zouros, 2016). For example, geotourism has been effectively utilised to link geology and culture, establish local enterprises, educate tourists and local people in order to promote conservation of geoheritage sites in Europe, Asia, Australia and Canada (Newsome et al., 2012; Badang and Unjah, 2013; Ifode and Niculae, 2016; Arora et al., 2020; Paungya et al., 2020; Rozenkiewicz et al., 2020; Santangelo and Valente, 2020; Widawski et al., 2020). Geotourism offers opportunities to conserve natural heritage sites whilst enhancing the socio-economic status of the local communities. In addition, Ehsan et al. (2013: 1711) show that geotourism offers a "realistic key solution to the apparent conflict between environmental and cultural protection and economic growth". Half of all travellers are reported as supporting controlled access to historic sites so that they may be preserved and protected (Stokes et al., 2003).

Geotourism provides greater potential for the development of aligned educational facilities used to educate tourists and local people. Geotourism assisted in the creation of innovative local enterprises, new jobs, and high quality guide training courses as new sources of revenue, while the geological resources of the area are protected (Dowling and Newsome, 2010; United Nations Educational, Scientific and Cultural Organization, 2016). Other researchers (Härtling and Meier, 2010; Jeon et al., 2016) indicate good economic results for local communities from implementing geotourism as a secondary tourism offering to supplement existing wildlife tourism in parks. However, in the world as a whole, many countries make no official recognition that geosites are cultural and scientific places of national importance (Wimbledon, 2013). UNESCO's UGGp programme has identified over 100 geoparks in 29 countries (United Nations Educational, Scientific and Cultural Organization, 2016). However, as at 2019 only one UNESCO geopark is currently recognised in Africa (Ngorongoro Lengai UNESCO Global Geopark in Tanzania) and none in South Africa (United Nations Educational, Scientific and Cultural Organization, 2018b).

Geotourism undertakings in South Africa are governed by regulations in the National Heritage Resources Act, Act No. 25 of 1999. Geotourism in South Africa has yet to be developed by the National Tourism Department. Reasons for this include lack of institutional

and public participation in geology (Reimold, 1999), lack of data on important geological or geomorphological sites, conflation of geological with other ecological and cultural heritage issues (Reimold, 1999) and, problems with creating relevant legislation for effective management (Cairncross, 2011). Limited studies by various authors have been conducted on geoheritage sites specific to South African geological and mining heritage (Viljoen and Reimold, 1999; Reimold, 2001; Smit, 2003; Gibson and Blom, 2008; Schutte, 2009; Knight et al., 2015; Anhaeusser et al., 2016; Taru and Chingombe, 2016; Mukwada and Sekhele, 2017). Schutte (2003) notes that South Africa has many natural resources often of a geoheritage nature, not utilised for educational, recreational, or tourism purposes. Saayman (2017) considers the potential of tourists to explore South Africa from aspects other than wildlife as having great potential while Ginting and Febriand (2018: 2) see “geotourism bringing benefits to the tourist and local people” where tourists get a unique travel experience and local people get economic benefits from tourist visits (Boley et al., 2011).

According to Gibson and Blom (2008) development and effective management of geological and other heritage resources as tourism and educational resources has the potential to uplift an economically depressed region and act as a flag-bearer for the development of other geological heritage resources in South Africa. However, previous research indicates that few communities abutting the park are benefiting from the current form of tourism (wildlife) at the KNP. For example, in 2012 SANParks reported only three abutting communities (Makuleke, Nkambeni and Mjejane) benefited from contractual financial generating agreements with the KNP (South African National Parks, 2012). Previous studies (Strickland-Munro et al., 2010; Strickland-Munro and Moore, 2014) highlight that the KNP has not done enough to create jobs and reduce poverty within the nearby local communities. According to El Wartiti et al. (2009: 143) “geological heritage sites, properly managed, can generate employment and new economic activities, especially in rural regions in need of new or additional sources of income”. However, at the time of this research there were no published plans for geotourism development at the KNP, yet geotourism can offer a new secondary product to supplement the existing tourism thereby positively utilising natural resources for the benefits of the local people. It is therefore important for the KNP to consider seriously market diversification and venture into geotourism as a secondary market that will contribute towards sustainable tourism. This will not only create jobs and help alleviate poverty, but will strategically position the KNP for future tourism market demand. This research was also aligned with the United Nations (UN), African Union (AU) and South African goals towards sustainable development. According to the UN, poverty alleviation and job creation remains the centre of the Millennium Development Goals: Lack of job opportunities is one of the major contributing factors to poverty in South Africa. As a result, the report by the United Nations Economic Commission for Africa (UNECA) indicated that South Africa has listed fighting poverty alleviation and job creation as one of its su-regional sustainable development priorities (United Nations Economic Commission for Africa, 2015). The findings by Mukwada and Sekhele (2017) suggest the need to address a conundrum of intertwined endogenous and exogenous conditions as a strategy for enhancing the viability of community-based geotourism projects. Knight et al. (2015) documented the examples of geoheritage sites in South Africa such as the West Coast Fossil Park and Makapan Valley Heritage Site.

South Africa holds 10 of the UNESCO’s world heritage sites: Fossil Hominid Sites of South Africa also known as the Cradle of Humankind (cultural and anthropological interest), Mapungubwe (cultural landscape site), Richtersveld Cultural and Botanical Landscape (cultural and botanical heritage interest), Khomani Cultural Landscape (cultural heritage interest), Robben Island (cultural heritage interest), Cape Floral Region Protected Areas (plant biodiversity interest), Barberton Makhonjwa Mountains, (geological interest), Maloti-Drakensberg Park (geological and biological diversity interest), iSimanalis Wetland Park (geological and biodiversity interest) and Vredefort Dome (geological interest). Nevertheless, Reimold (2001) and Schutte (2003) note that these natural resources are not utilised enough, either for educational, recreational, or tourism purposes. Reimold (2001: 22) also noted that “several hundred important natural sites are not properly accounted or inventoried, nor are they protected”. Moreover, while structures exist in South Africa to pursue and implement protection of geological sites, lack of manpower and funding do present persistent problems to geotourism development (Reimold, 1999; Smit, 2003). The potential contribution to local sustainable development from use of these national geoheritage sites is not being realised. Development of an instrument to value geotourism opportunities within the KNP hopes to provide opportunity to develop new geotourism products that are run by and employ rural communities near the KNP.

METHODOLOGY

This research involved developing a field instrument to aid national parks in South Africa and particularly the KNP in the creation of an inventory of geoheritage sites. This research focused specifically on establishing and field-testing a geoheritage field survey instrument developed and extending past researchers work on geoheritage forms (see phase 1). The field-testing of the form focused on the northern region of the KNP where community involvement in tourism activities is to-date very limited. The lack of jobs created in the north is largely because the northern regions of the park are a considerable distance to travel to by road and the north has no commuter airfield. In contrast, the southern end of the park utilises community members to a far greater extent as the tourism visitors are very large every year, which encourages job creation employing people from abutting rural communities. The southern end of the park is only 5 hours’ drive from South Africa’s international airport and port of entry, Oliver Tambo International Airport. The KNP also has its own internal park airfield that runs several daily commuter flights from Oliver Tambo International Airport into Skukuza situated in the south and the airfield is ten minutes’ drive from the largest KNP accommodation camp.

The southern end of the park has similar wildlife offerings to the north so tourists do not generally drive from the southern to the northern end as it takes 5 days by road. Consequently, the north is not as developed as regards creating jobs through accommodation and other services. The South African National Parks have not to-date focused on developing tours related to geoheritage sites as a way to create jobs nationally and this research sought to help establish a field survey instrument that would fit the peculiar circumstances of South African parks. These circumstances include the fact that tours to geoheritage sites will need a road infrastructure to reach sites and generally, tourists will need to be accompanied by a trained field guide/tour guide to be able to walk in safety to a site due to a prevalence of wild, dangerous animals. This study adopted a three phase methodological approach as shown in Figure 1.

This study was conducted with the permission of SANParks who considered the results vital in the identification of geoheritage sites in a manner specific to the recognition of the wildlife and vegetation, national park biomes and, South African legislation in considering

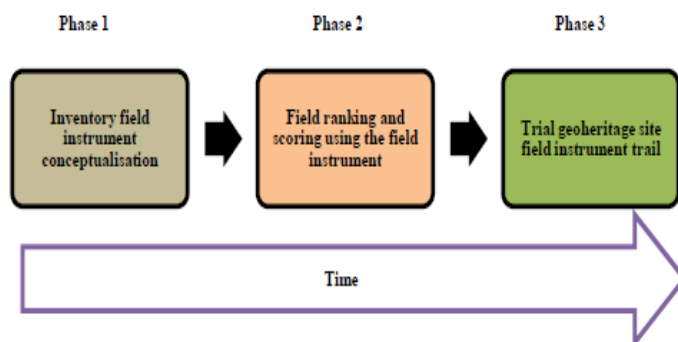


Figure 1. Phased methodological approach (Authors, 2020)

strategy for the development of geotourism at the northern part of the KNP. Consequently, the results of this study are vital in developing geotourism at the northern part of the KNP.

PHASE ONE: INVENTORY FIELD INSTRUMENT CONCEPTUALISATION

“The development of a geosites’ inventory should be the first step in any geoconservation strategy” (Lima et al., 2010: 1). This methodology to create an inventory began first by identifying a methodology to standardise categories for noting geosite characteristics with special emphasis on using the instrument in the context of a national park. This was done by reviewing previous related methodological studies for assessing geoheritage site potential. This included critiquing the field methodologies recommended to-date summarised in Table 1 with critiques of why each would not have been suitable for a national park.

Table 1. Critique of existing geoheritage survey forms (Authors, 2020)

Author/s	Limitations of the instrument	New approach adopted by this study
Brilha (2016)	<ul style="list-style-type: none"> The methodology proposed by Brilha (2016, 2018) does not include cultural value as one of the criterion to measure the characteristics of a geoheritage sites. Furthermore, the inventory process for geosites proposed by Brilha (2016,2018) uses two different scales for assessing geoheritage sites with scientific value and educational and tourism potential. This study argues that scientific value and educational and tourism potential should be assessed using the same scale to understand the diversity of the geoheritage site. 	<ul style="list-style-type: none"> This study included cultural value as part of the inventory process. This allowed the recognitions of cultural history of the area and how local communities relate to the geoheritage sites. In addition, all the categories were measured on the same scale. This allowed for the assessment of the diversity of the geological site and to improve its marketability as the site will offer different attributes, which might attract tourists from different backgrounds.
Fuertes-Gutiérrez and Fernández-Martínez (2010) and Fuertes-Gutiérrez and Fernández-Martínez (2012)	<ul style="list-style-type: none"> Does not include cultural value as one of the criterion to measure the characteristics of a geoheritage sites. Lack of acknowledgement of previous literature about the geoheritage site. 	<ul style="list-style-type: none"> This study included cultural value as part of the inventory process. This allowed the recognitions of cultural history of the area and how local communities relate to the geoheritage sites. This study included a category on available literature in order to understand and identify published literature, oral history recordings and/or any information disseminated about the geoheritage site.
Ginting and Febriand (2018)	<ul style="list-style-type: none"> Does not include cultural value as one of the criteria to assess the characteristics of a geoheritage sites. Lack of acknowledgement of previous literature about the geoheritage site. Does not include ecological sensitivity of the geoheritage site. 	<ul style="list-style-type: none"> This study included cultural value as part of the inventory process. This allowed the recognitions of cultural history of the area and how local communities relate to the geoheritage sites. This study included a category on available literature in order to understand and identify published literature, oral history recordings and/or any information disseminated about the geoheritage site. This study introduces the measurement of ecological sensitivity to measure the capacity of the geoheritage site to withstand visitation without damaging the ecological sensitivity or value of the site.
Gordon (2018)	<ul style="list-style-type: none"> The criteria used to assess the potential for geoheritage sites that can be used for geotourism development is absent. 	<ul style="list-style-type: none"> This study explains in detail the criteria used for inventory and assessment of geoheritage sites that can be utilised for geotourism development.
Lima et al. (2010)	<ul style="list-style-type: none"> The use of weights to determine the final assessment score is subjective as the criteria lacks explanation of how the corresponding weights were determined. In addition, some criteria's did not have corresponding weights. 	<ul style="list-style-type: none"> This study explains in detail the criteria used for inventory and assessment of geoheritage sites that can be utilised for geotourism development. Furthermore, no corresponding weights were used in order to avoid subjectivity.
Page (2004)	<ul style="list-style-type: none"> Does not include cultural value as one of the criterion to measure the characteristics of a geoheritage sites. Absence of category to assess developments required to make the site suitable for geotourism. Lack of acknowledgement of previous literature about the geoheritage site. 	<ul style="list-style-type: none"> This study included cultural value as part of the inventory process. This allowed the recognitions of cultural history of the area and how local communities relate to the geoheritage sites. This study introduces a category to measure developments required in order to assess what infrastructures exist and in what condition. This study included a category on available literature in order to understand and identify published literature, oral history recordings and/or any information disseminated about the geoheritage site.
Randrianaly et al. (2016)	<ul style="list-style-type: none"> Suggest that geosites of scientific importance can be valued as educational sites and those with tourism value can be used to promote geotourism. Absence of category to assess the developments required to make the site suitable for geotourism. Lack of acknowledgement of previous literature about the geoheritage site. The inventory method does not explain how to identify quantitatively the priority sites. 	<ul style="list-style-type: none"> This study argues that both scientific importance and tourism value should be categorised as one because tourists may be interested in both the scientific and tourism values of the sites. Therefore in this study a site with geotourism value can be used for both educational and tourism purposes. This study introduces a category to measure developments required in order to assess what infrastructures exist and in what condition. This study included a category on available literature in order to understand and identify published literature, oral history recordings and/or any information disseminated about the geoheritage site. This study details how to quantitatively assess the geoheritage sites and identify the priority sites that can be used for geotourism development.
Reynald et al. (2007)	<ul style="list-style-type: none"> Absence of category to assess developments required to make the site suitable for geotourism. 	<ul style="list-style-type: none"> This study introduces a category to measure developments required in order to assess what infrastructures exist and in what condition.
South African National Parks (2018)	<ul style="list-style-type: none"> Lack of criteria to assess and prioritise geoheritage sites. South African National Parks (2018) was only used to locate the geoheritage sites within the ecological sensitivity map of the Kruger National Park. 	<ul style="list-style-type: none"> This study introduces new criteria to assess and prioritise geoheritage sites.
United Nations Economic Commission for Africa (2015)	<ul style="list-style-type: none"> Lack of criteria to assess and prioritise geoheritage sites. United Nations Economic Commission for Africa (2015) was only used in this study to understand the importance of management and protection of natural resources such as geoheritage sites. 	<ul style="list-style-type: none"> This study introduces new criteria to assess and prioritise geoheritage sites.
Wimbledon et al. (2000)	<ul style="list-style-type: none"> Absence of category to assess developments required to make the site suitable for geotourism. The inventory method does not explain how to identify quantitatively the priority sites. 	<ul style="list-style-type: none"> This study introduces a category to measure developments required in order to assess what infrastructures exist and in what condition. This study details how to quantitatively assess the geoheritage sites and identify the priority sites that can be used for geotourism development.

Figure 2 represents the final survey form with six categories of assessment to take to the field. However, before this field trial, the instrument was discussed with the statistical services consultancy at the University of Johannesburg and SANParks head office experienced staff to find a manner to determine scoring the categories for measuring geotourism potential at the KNP. This resulted in a decision not to use weightings per category to avoid assessor subjectivity but rather use a Likert scale. All categories were finally assessed on a one to five Likert scale (Figure 2) of very low, low, moderate, high, and, very high.

Project Name:				Project No.:			
Field Data Sheet: Geoheritage sites information							
Camp/ Site Name:				Unique Ref:			
Camp Manager & Cell No:				Photos:		Date & time:	
				Name of Researcher & Cell No:			
				Ranger's Name:			
Loc: Lon: Lat: Elev:				Site Size: height= width= length=			
				Geoheritage Type:			

Step (S)	Assessment	Very Low (1)	Low (2)	Moderate (3)	High (4)	Very High (5)	Comments/ justification/recommendations
1	Geoheritage site has a geotourism value	1	2	3	4	5	
2	The site has cultural value	1	2	3	4	5	
3	The site has ecological sensitivity	1	2	3	4	5	
4	Accessibility to the site	1	2	3	4	5	
5	The site requires development	1	2	3	4	5	
6	Available literature	1	2	3	4	5	
Total Score		Scores in S1+S2+S3+S4+S5+S6					

Notes:

Figure 2. Geoheritage sites field ranking sheet (Authors, 2020)

The use of Likert scale (Likert, 1932) helps in determining the geoheritage sites with a high priority for geotourism development by adding their final score. Likert scale was also selected because it is easy to understand for effective collection of geoheritage sites data in field by novice researchers such as park's staff. SANParks also requested the addition of an ecological sensitivity as a criterion to be collected. Lima et al. (2010) notes that to create a useful geoheritage site inventory in terms of developing geotourism opportunities, a geoconservation strategy should be adopted to evaluate each site. Lima et al. (2010) recommended three considerations as follows: geoheritage site characterisation quantified by their possible relevance to a tourist; the requirement for protection from vandalism and desecration or simply general tourist wear and tear from visits, which is applied according to South African national legal frameworks for geoheritage site conservation; and finally estimating a site value. These recommendations were applied to quantitatively rank each of three sites explored to evaluate the instrument. Table 2 links the sites explored to the UNESCO recommendations.

RESULTS AND IMPLICATIONS

PHASE TWO: Field ranking and scoring using the field instrument

The six categories of the survey (Figure 1) are now explained as to their contribution to identifying geoheritage sites with potential for geotourism development:

1. Geotourism value: According to Tongkul (2006), scientific value refers to the important geological records or history of the earth (e.g. fossils, rock types and unconformity). This category includes palaeontological features such as dinosaurs and/or fossils. Age (first or oldest) of features is a factor, however cannot automatically be equated with the best and this does not rule out new unexploited features (Wimbledon et al., 2000). This study groups earth sciences/geology and palaeontology together because of the following reasons:

- Palaeontology is a branch of geology/geosciences (Tongkul, 2006; Sallam et al., 2018). To support this, at the University of Witwatersrand (the only institution offering Bachelor of Science with honors in palaeontology in South Africa) students need to have studied geology. Furthermore, palaeontology is within the geology/geosciences/earth sciences schools or departments at universities such as University of Witwatersrand.
- Dinosaurs and fossils are fundamental to the geological time scale in that in order to determine the age of most layered rocks scientists study the fossils these rocks contain (Edwards and Projeta, 2003).
- Most fossils are seen engraved in rocks as palaeontologist have major challenges extracting fossils from their host rocks (Cunningham et al., 2014).

• A stratigraphic site, a single exposure, can be at the same time palaeontological, sedimentary, geochronological, palaeoenvironmental, petrographic, and historic-geo-economic, and be the place to identify a time-stratigraphic unit (Wimbledon et al., 2000).

Ranking and scoring was done as follows: geoheritage site that has one or more geological features common throughout South Africa was scored very low as regards interest for a tourist; a geoheritage site that has one or more types of geological features that is less common in across South Africa was scored low; a geoheritage site that has one or more types of geological features unique to the

Limpopo Province incorporating the KNP not common in other provinces was scored moderate, a geoheritage site that has one or more types of geological features with unique features for the KNP and South Africa was scored high; while a geoheritage site that has one or more types of geological features which are unique and uncommon in South Africa and, neighbouring countries was score very high (Figure 1). This categorisation is based on previous published studies.

2. Cultural value: For the purpose of this research, cultural value is considered as the presence of monuments and groups of buildings, which are outstanding from a historical, art or science point of view in accordance with the United Nations Educational, Scientific and Cultural Organization (1972b) resolutions. The cultural value category also considers local indigenous knowledge of the site associated with traditional use, local beliefs, and historic and archaeological records (Tongkul, 2006). This study category assisted in determining if the site is worth conserving as a representative example of the community's heritage. This category helps to determine the marketability of the area. For both the dedicated geotourist and the general visitor who has less specialised interest in geology, the nature-culture symbiosis provides a means to enhance the visitor experience of engaging with geoheritage through different aspects of landscape appreciation (Gordon, 2018). Ranking and scoring was done as follows: geoheritage site that has one or more monuments and/or groups of buildings, cemeteries/graves, paintings, iron smelters which is located >10 km away from a road was scored very low; geoheritage site that has one or more monuments and/or groups of buildings, cemeteries/graves, paintings, iron smelters located 5-10 km away was scored low; geoheritage site that has one or more monuments and/or groups of buildings, cemeteries/graves, paintings, iron smelters which is located 1-5 km away was scored moderate; geoheritage site that has one or more monuments and/or groups of buildings, cemeteries/graves, paintings, iron smelters which is located 500 m -1 km away was scored high; geoheritage site that has one or more monuments and/or groups of buildings, cemeteries/graves, paintings, iron smelters which is located <500 m away was scored very high.

3. Ecological sensitivity: This category is used to determine the potential impacts on the ecological sensitivity of the park using the SANParks sensitivity map (South African National Parks, 2008, 2018). Ranking and scoring was done as follows: geoheritage site located within wilderness zone (WZ) was scored very low; geoheritage site located within remote zone (RZ) was score low; geoheritage site located within the primitive zone (PZ) will be scored moderate; geoheritage site located within low intensity leisure zone (LILZ) was scored high; while geoheritage site located within high intensity leisure zone (HILZ) was scored very high.

4. Accessibility: This category is designed to collect information about accessibility of the site in terms of proximity to road infrastructure. Ranking and scoring was done as follows: a geoheritage site that is located in a remote area (>5 km from the main road) with no sign of human access was scored very low; geoheritage site that is located in a remote area (>5 km from major road) with evidence of human access was scored low; geoheritage site located in a less remote area (1-5 km from major road) with evidence of human access was scored moderate; geoheritage site located <1 km from major road with evidence of human access was scored high; geoheritage site located <1 km from major road with clear evidence of human access (people seen on site, footprints, vehicle tracks etc.) was scored very high (Figure 1). In order to understand the accessibility of a geoheritage site, the following questions pose as examples of what was also be considered by the researcher during the course of the study: does the site represent potential hazards for visitors? Is the effort required by tourists to get to it too difficult to make a visit worthwhile (time, cost, effort)? Is the site accessible for disabled people?

5. Development required: This involves an investigation of how much development would be needed to get the site tourist friendly and determine the types of developments that are needed. These categories really require a judgement as to what infrastructures exist and in what condition. Ranking and scoring was done as follows: geoheritage site that is unsuitable for geotourism of any form unless major developments are done and has no infrastructure (e.g. power lines, ablutions, buildings, fences and/or water etc.) was scored very low; geoheritage site with non-functioning infrastructure (e.g. power lines, ablutions, buildings, fences and/or water etc.) was scored low; geoheritage site with infrastructure (e.g. power lines, ablutions, buildings, fences and/or water etc.) but requires additional developments was scored moderate; geoheritage site with functioning infrastructure (e.g. power lines, ablutions, buildings, fences and/or water etc.) that requires minor maintenance was scored high; geoheritage site with functioning infrastructure (e.g. power lines, ablutions, buildings, fences and/or water etc.) that requires no repairs will be scored very high.

6. Literature available: This category was used to identify previous studies related to that particular type of geoheritage site. This refers to published literature, oral history recordings and/or any information about the geoheritage site. This step was conducted before and after the fieldwork to complete the survey form. Ranking and scoring was done as follows: a site with no publication was scored very low; a site with one publication was scored low; a site with two publications was scored moderate; a site with three publications was scored high; a site with four, or more publications was scored very high. A higher aggregate score indicates high potential or tourism importance for geotourism development, while a lower score indicates low potential or importance. Geoheritage sites with the higher scores will be recommended to be prioritised for geotourism development by SANParks.

PHASE THREE: TRIAL GEOHERITAGE SITE DATABASE PREPARATION

The information collected during the inventory and field ranking, and scoring phases was used to prepare a database on geoheritage sites for the northern KNP. All visited geoheritage sites were included in the trial database inventory with specific information including their location global positioning coordinates and proximity to a park main road. Tools for geoheritage site data collection include a Garmin GPSmap 62s to map location of geotourism sites and a Nikon CoolPix AW130 camera for site pictures. This is to guarantee the acquired knowledge is preserved to maximise its usage for geotourism development. This was also done to ensure that identified geoheritage sites are properly maintained and protected. This database promote systematic inventory of geoheritage sites within and around the KNP. Two sites were reviewed in the KNP Limpopo region as a pilot (Table 2).

Table 2. Trailed KNP geoheritage sites (Authors, 2020)

Site Name	Site Type	Field Observation Notes
Thulamela	Mixed	Geology, cultural landscape and history (geological formations, portholes, baobab trees and artefacts). The site has very high geotourism value and cultural value as explained in Figure 1 and phase 2 of the methodological approach.
Crooks Corner	Cultural	Historical movement of people. The site has very low geotourism value and cultural value as explained in Figure 1 and phase 2 of the methodological approach.

Table 3. Ranking results for the three trailed KNP geoheritage sites (Authors, 2019)

Name	Geotourism Value	Cultural Value	Ecological Sensitivity	Accessibility	Development Requirements	Available Literature	Total Ranking Score
Thulamela Heritage Site	5	5	4	5	1	5	25
Crooks Corner	1	5	4	5	1	5	21

Table 2 was created based on the results of field ranking of the two sites (Table 3). All two sites had never been classified by geoheritage criteria before. The geoheritage sites were evaluated and prioritised based on six categories: their geotourism value, cultural value, ecological sensitivity, accessibility, development requirements and available literature about the site. The ranking results of the two piloted sites (Table 3) shows that Thulamela heritage site has potential for geotourism development than Crooks Corner.

CONCLUSIONS

The results of this study are vital in developing geotourism at the northern part of the KNP. A literature review about the inventory process used in several countries allowed the development of a new methodology proposed in this paper. Because of this study, the geotourism potential at the KNP is now better recognised. This study has identified a systematic site exploration methodology that can be used towards geotourism development at the KNP. The developed method of determining potential geotourism serves as a guideline for future studies in South African national park and national parks beyond the African continent and globally.

This study is important since it highlights that to identify geotourism potential and implications for management involves not only tailoring a methodology that is designed for case context, that may best work to provide the relevant data, but also involves the engagement of key stakeholders (e.g. those working in parks) for research design and for methodology effectiveness. Since many countries make no formal acknowledgment that geosites are cultural and scientific places of national importance, a contextual methodology design can ensure that unique characteristics for geosites are recognised and marketed accordingly. The case methodology designed and employed at the KNP shows that geotourism can offer a new secondary product to supplement the existing tourism market and to utilise natural capitals with unique characteristics for the benefits of local people.

In South Africa and many other countries, geoheritage sites at national parks are at risk of degradation or being damaged. This is because the national entities are not even aware of this threat because there is no systematic inventory of geoheritage sites. Best practice to co-ordinate geotourism advancement to all park stakeholders in any country would be to offer positive communication highlighting the outcomes tailored for each stakeholder type and for a nation as a whole. A legitimate authority in each country, in this case the South African national parks, needs to champion the less understood value of being a geotourist as opposed to the traditional wildlife or wild biome tourist. This latter type of tourist has been widely reported in the past decades in academic literature as to the manner of exploring their perceptions and expectations from tourism offerings but the same cannot be said of geotourist interests and specifically the role of park-abutting, local communities who want to benefit from geotourist activities. A wide range of recommendations on the value of creating and maintaining national parks/ protected areas exists but globally a more consolidated effort needs to be led by each country and their researchers to support international conventions and standards appraised at national, state and local levels for geotourism activities.

This would lead to the geotourist gaining a valid perception of the geotourism offering before embarking on their trip much as international hospitality indices rate countries today for global traveller and destination manager use. A primary goal for park management is to ensure tourists are provided with a level of service that ensures a high level of satisfaction from experiences with park's products and inventory of the geosite in the manner described, helps ensure this is attained. Academic research has already acknowledged a strong causal effect between behavioural intentions of satisfied tourists to market positively a tourism offering by word-of-mouth. The methodology applied in this research advances the existing methods for geotourism inventory using a South African park that deals with specific complexities such as lack of tarred or even dirt road park road infrastructure to an interesting site, providing tourist amenity infrastructure in a park that is many kilometres wide and long, considerations of how to manage interactions between potential dangerous animals and geotourists and most importantly, using unique local indigenous knowledge to create a way to transfer indigenous knowledge to future generations. This latter consideration of the potential contribution towards preservation of cultural knowledge and local community development in communities abutting a park has not been well explored. As the pressure from the human species increases with the globally burgeoning population, so parks will need to argue more and more strongly for their existence in terms of satisfying tourist type demands balanced with local community needs for sustainable livelihoods arising from the park. In response to challenges such as climate change and global warming, the need to encourage sustainable business practice making inclusive use of indigenous knowledge cannot be ignored and communities abutting national parks with unique insights into geoheritage as an indigenous knowledge source cannot be ignored lest it be forgotten. Geotourism inventory using the described methodology is proposed here to have an extremely important role to play influencing indigenous knowledge preservation.

This study presented was the first of its kind to present a uniquely South African manner of taking inventory of geoheritage sites in South Africa that can assist with opening new tourism opportunities for creation of local employment, park management, and improve academic knowledge on geotourism. The outcomes of this study will assist the South African National Parks and the National Department of Tourism to develop geotourism as a secondary tourism market product in order to supplement the primary (wildlife) tourism market, to preserve local indigenous knowledge of an area and, to develop a more encompassing and balanced interrelationship of people, planet and profit in a national conservation strategy. The lessons learned through this study were that, development of an inventory process for development of geotourism requires willingness and cooperation among different role players including the researchers, lead national departments, management entities, academics, statisticians and local communities. This study was conducted with the strategic intent towards influencing decisions to develop geotourism in South Africa and beyond as a new market segment to alleviate poverty especially in rural areas. The next phase of this study will include the prioritisation of geoheritage sites using the proposed method as explained in this paper and the creation of hot spots maps to identify the geoheritage sites with high geotourism potential.

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REVEALING TOURIST HOTSPOTS IN YOGYAKARTA CITY BASED ON SOCIAL MEDIA DATA CLUSTERING

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Abstract: Cities have a common characteristic in the form of land utilisation, which is dominated by built-up areas. Tourism is an essential aspect of city development because it can involve the identity of the city. Historical buildings, landmarks, shopping centres and museums are generally interesting places for tourists to visit. Yogyakarta, the research area, is synonymous as a city of culture and of students. Knowledge of the spatial clustering patterns of tourists can be one of the references for urban development. Social media data were used in the study as an alternative to direct data collection, which requires considerable resources. Flickr and Twitter were used as proxies to determine the distribution of tourists, and the DBSCAN and HDBSCAN clustering algorithms were used to determine the centres of tourist activity. Furthermore, Flickr data were analysed temporally to determine the impact of the COVID-19 pandemic on tourism in Yogyakarta City. The clustering of social media data results shows that there are several city hotspots, besides the already well-known tourist attractions. Apart from city landmarks, several other tourist hotspots were revealed through the clustering process, such as accommodation, shopping centres, entertainment venues and souvenir shops, which also support tourism activities. The impact of COVID-19 on tourism in Yogyakarta City can be reflected through the number of uploaded photos by tourists on Flickr, which has decreased since March 2020.

Key words: Social Media, Flickr, Twitter, HDBSCAN, COVID-19

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INTRODUCTION

Tourism in urban areas has certain characteristics because most of the land use is generally built-up areas. Various human-made landmarks, such as buildings, shopping centres, recreation zones, or iconic city locations can be beautiful places for tourists to visit (Hu et al., 2015). This condition is different from tourist attractions clearly defined as having a particular space and function. Because each city is unique, tourists can visit exciting places there. The problem is that in public areas, it is likely that tourism officers will not record the number of visitors. Several previous studies have called this tourist perception the ‘vague place’ concept (Montello et al., 2014; Montello et al., 2003). Urban tourism can generate much diversification of tourist choices, so it is not easy to decide where to visit when on short visits (Jansen-Verbeke, 1986; Salas-Olmedo et al., 2018). Apart from visits to exciting places, tourists also need adequate supporting infrastructure. Some of this may also become tourist destinations in its own right, because it offers absolute uniqueness. For example, in terms of hotel selection, tourists tend to choose hotels close to their destination, generally within walking distance (Shoval et al., 2011). This makes a tourist destination attractive because determination of a tourist centre is not only based on officers' counts at officially managed tourist sites. Knowledge of tourists' favourite locations is required for more effective city management, especially if there are new locations that offer opportunities for further exploration (Devkota et al., 2015).

The number of incoming tourists is a good indicator to assess the competitiveness of regional tourism. There are three sources of incoming tourist number data, namely: statistical records, travel records, and social media (Mou et al., 2019). Statistical records can provide accurate incoming tourist data but are unable to show the spatial distribution of tourists. Meanwhile, the use of travel notes has two main challenges, namely the existence of incomplete data and an inaccurate report by the author. Social media provide opportunities for passive tourist data acquisition due to its increasing popularity (Girardin et al., 2008; Mou et al., 2019; Önder et al., 2014). The digital footprint left by tourists through social media content opens up opportunities for spatial tourist studies. In general, studies related to tourist concentration can be conducted using census techniques or surveys based on samples (Salas-Olmedo et al., 2018). However, both methods require considerable resources and do not necessarily cover a broad enough spatial or temporal scope. Big data offers new tourism research opportunities by providing high levels of spatial and temporal data to analyse large volumes of tourist spatio-temporal patterns (Goodchild, 2007). Big data for tourism studies can be obtained from three sources: users, devices and operations (Li et al., 2018). These three big data sources for tourism are influenced by developments in social media platforms, the Internet of Things (IoT), and services for tourism-related operations (e.g., web searches, web page visits and online ticket purchases). Based on big data from these three primary sources, tourist and tourism market behaviour can be better explored and understood by academia and industry. For example, big data on a large scale make it possible to overcome the limitations of survey data user sample size problems and provide new ways to understand tourist behaviour (Yang et al., 2015). Big data analysis is also known to provide sufficient data without sample bias to understand such behaviour (Li et al., 2017). The use of geotagged photos from photo-sharing services or other social media can enrich tourism data sources and can be used in tourism

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planning and management. The density of geotagged photos shows the distribution of the tourist presence across a city, and is easier to perform than direct measurements (García-Palomares et al., 2015). The direct benefit of density mapping is that it can be used to determine spatiotemporal clusters (Hu et al., 2015; Kisilevich et al., 2013) and identify urban morphology (Kádár, 2014).

MATERIAL AND METHODS

Study area

Yogyakarta is known as a city of culture and education, with a rich historical heritage in every corner of the city. It receives privileges from the Government of Indonesia through Law Number 13 of 2012 concerning the Privileges of the Special Region of Yogyakarta. This law further strengthens the cultural elements found in Yogyakarta. The city is located in the middle of Yogyakarta Special Region, with an area of 32.5 km².

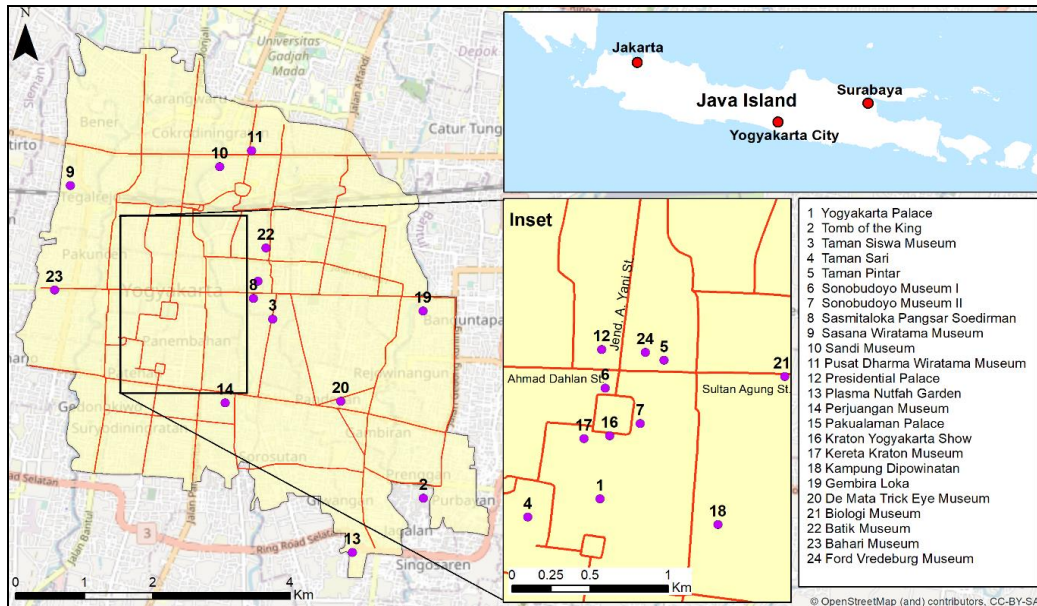


Figure 1. Tourist attraction in Yogyakarta City

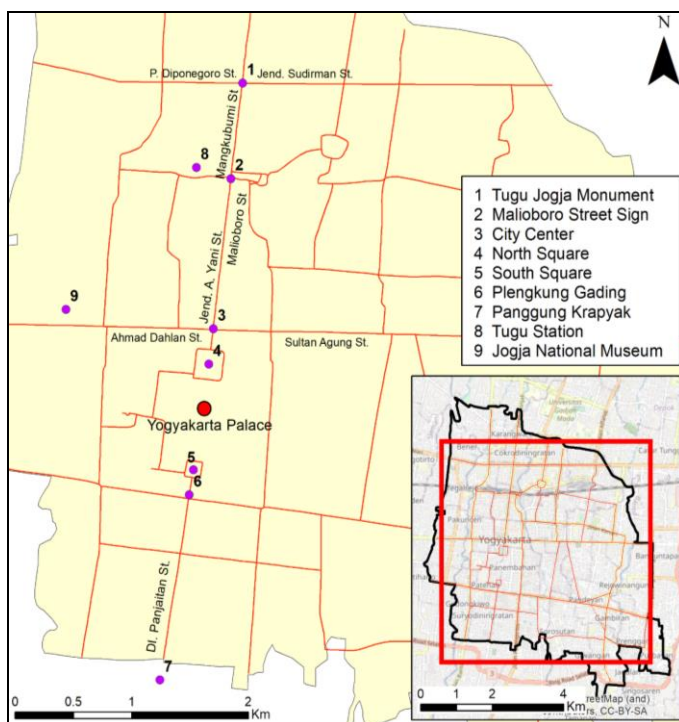


Figure 2. Philosophical axis of Yogyakarta
(Tugu Jogja Monument – Yogyakarta Palace – Panggung Krapyak)

24 tourist attractions were recorded in the Government Tourism Office report (Statistik's, 2018), of which the majority were located in the centre of the city (Figure 1), which is filled with locations that are attractive to tourists, such as the Yogyakarta Palace (Keraton Ngayogyakarta Hadiningrat), Presidential Palace and several museums.

Apart from the tourist attractions listed in Figure 1, Yogyakarta City has other landmarks that are no less attractive to tourists, such as the Yogyakarta Monument, Malioboro Street, North Square (alun-alun lor), South Square (alun-alun kidul), and Tugu Station (Figure 2).

Malioboro Street and the buildings in it are even part of the identity of the city, given its long history (Septirina et al., 2016). Yogyakarta City is also famous for the philosophical axis formed between the Tugu Jogja monument, Yogyakarta Palace and Panggung Krapyak, which is a manifestation of the journey of human life from birth to death (Syahbudin et al., 2018). Because these locations are in the form of public spaces, it is somewhat challenging to record tourist visits with certainty, compared to attractions that have doors/gates for entry and exit. Information about tourist hotspot clusters is therefore needed, especially in the current era, as many tourist sites prioritize their photographic quality. Photogenic attractions have the potential to gain popularity through information dissemination on social media (Wibowo et al., 2019).

Data acquisition and processing

The primary data used in the study were obtained from Flickr, in the form of photo-sharing services. Flickr allows users to post photos accompanied by a title and a description, and also supports the geotagging function, by which photos uploaded by users can be referenced to their location on the earth's surface. SmugMug, the owner of Flickr, is committed to providing data for free and open-access, for both commercial and non-commercial users (Flickr, 2018). Data collection is written using the Python programming language, which is used to communicate with the Flickr server via the Application Programming Interface (API). In general, the script used consists of four parts, namely function calls, providing access and authentication, commands for streaming data, and search limits

(coordinates). The Flickr data used in this study were limited to those from January 2000 to August 2020, with 34,704 data items obtained.

Twitter is a micro-blogging social media platform, which provides flexibility for users to upload multimedia information, mostly text, photos and videos. Because of its highly flexible functionality, data on Twitter have high variability. Twitter provides an option for users to include the location where a tweet was created, so geotagged tweets can be created. There are various ways to obtain Twitter data via the Twitter API (Twitter, 2020). In this study, the GET statuses/sample method was used, which provides 1% real-time random tweet data. Even though this is only a sample, it cannot be denied that the existence of Twitter data has added a new data source to mapping, as

an output from location-based social media (Thatcher, 2014). Twitter data were collected from January 2019 to August 2020, with a total of 62,980 tweets. In terms of popularity, Twitter is more popular than Flickr; data published by Hootsuite in 2019 showed that Twitter occupied sixth position on a list of the most active social media in Indonesia (Hootsuite, 2019). However, Flickr is also widely used in various Volunteered Geographic Information (VGI)-based research in tourism (Stock, 2018). This is because photos are a product of tourism activities, and a photo-sharing services platform is able to optimise them. The distribution of Flickr data appears to be more widespread than Twitter data, especially in the areas around the Presidential Palace and Yogyakarta Palace (Figure 3).

The difference in the time duration between the two data sets affects the difference in data density. A striking similarity between the two sets of raw data is the density along a straight line parallel to Jalan Malioboro. The large number of posting activities made adjacent to roads makes the patterns seen in the data similar to that of the road network. Raw data processing was performed by means of filtering based on text and location. Keywords were used for the text-based filtering; in this case, posts that had words related to tourism activities were retained. Some of these keywords were holiday, tourism, long weekend and scene. Location-based filtering was performed by eliminating data that had identical coordinate points. This can occur in the case of a user making repeated uploads from the same location; for example, by an advertiser (Frias-Martinez et al., 2012).

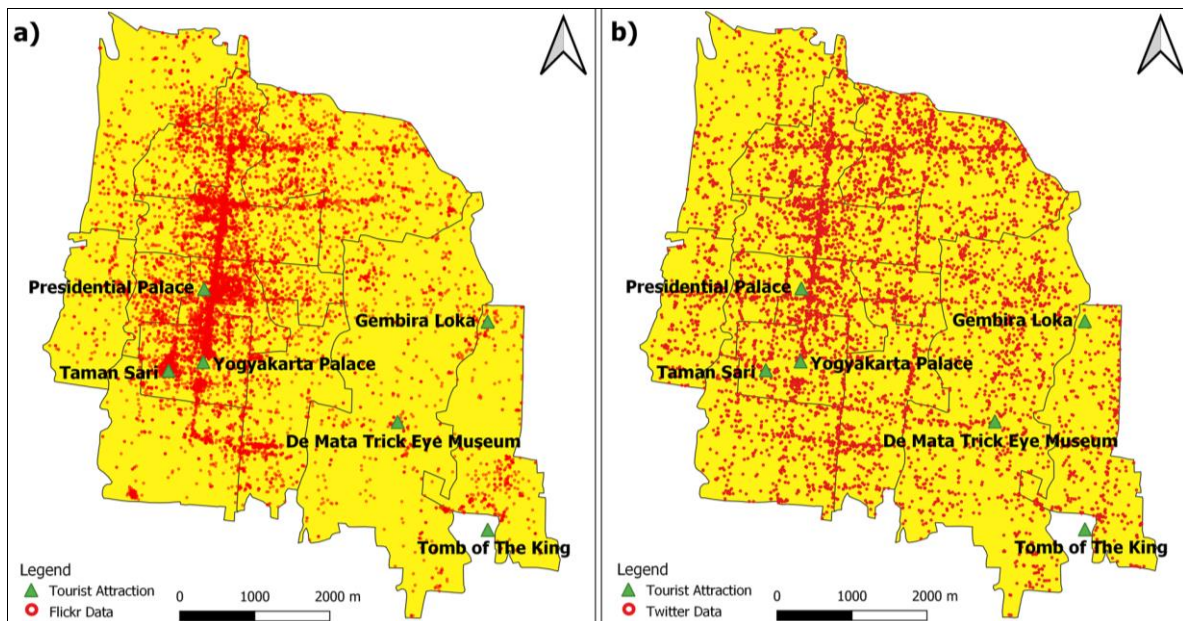


Figure 3. Raw data from a) Flickr and b) Twitter of Yogyakarta City

After filtering the Twitter data, 7,224 tweets or about 11% of the raw data were left. Of these, there were 4,340 unique users, so the average user makes just below two tweets. This further strengthens the Twitter data, which has high variability. On the other hand, Flickr data comprised 12,371 data items, or 35% of raw data. There were 2,323 unique users, with an average of five posts per user. Based on these records, it can be seen that Flickr users are more loyal to the platform, because it produces a higher average post.

Clusterization method

Tourists in Yogyakarta City stay on average for two days, so they need to determine the places to visit. This behaviour can produce specific patterns that can be recognised through social media (Devkota et al., 2019). For this study, geotagged Flickr and Twitter data were analysed using a clustering algorithm to determine the centre of activity. Grouping is a data mining technique to identify patterns in data, which is generally used for exploratory data analysis. Grouping techniques are widely used to uncover hotspots of dense data points.

There are various kinds of clustering algorithm, which are generally divided into two types, partitioning and hierarchical (Ester et al., 1996). Partitioning works by dividing the data into predetermined clusters, which in this case requires domain knowledge. An example of a popular partitioning algorithm is the k-means clustering algorithm (Shaji et al., 2020). The popularity of this algorithm is supported by various types of GIS software that provide it. Density-based spatial clustering of applications with noise (DBSCAN) is another example of density-based partitioning algorithms with better efficiency (Ester et al., 1996). Hierarchies work by composing a hierarchical decomposition of data, which can generally be represented using a dendrogram. Hierarchical DBSCAN (HDBSCAN) is an improved version of DBSCAN by creating a simplified hierarchy composed only of the most significant clusters, which can be easily extracted (Campello et al., 2013).

The DBSCAN algorithm has two user-defined parameters, namely the search distance radius/epsilon (ϵ) and the minimum data count within the search radius ($minPts$). These two parameters need to be determined carefully in order to produce useful clustering. The search distance radius (ϵ) is strongly influenced by the area of the study area and the scale of the mapping; the greater the value of ϵ , the more general the cluster, and vice versa. Meanwhile, $minPts$ affects the minimum number of points that can be considered as clusters. A low $minPts$ value can result in a large number of clusters, but with the risk of considerable noise entering the cluster. Conversely, a higher value of $minPts$ could cause cluster merging, meaning the level of detail could be reduced. On the other hand, the HDBSCAN algorithm, which is a development of the DBSCAN algorithm, applies DBSCAN to various epsilon values and integrates the results to find the grouping that provides the best stability (Campello et al., 2013). HDBSCAN also has the ability to find cultivars at varying densities, and it is also more robust in terms of parameter selection (McInnes et al., 2017). Assessment of clusterization results can be seen objectively from the value of the ratio of between to total sum of squares, with a value close to 1 indicating a good cluster. In this study, assessment of the clustering results was also made by conducting a visual assessment of the clusters formed, both from the DBSCAN and HDBSCAN algorithms.

Temporal Visualization

The COVID-19 pandemic has harmed the tourism industry in many countries. For example, Poland has experienced a decrease in the

number of visits and accommodation occupancy due to restrictions on international movements (Korinth and Ranasinghe, 2020). The magnitude of the pandemic is also expected to affect the pattern of tourism, accommodation services and commercial flights in South Africa (Rogerson and Rogerson, 2020). Indonesia, including the Yogyakarta City, cannot avoid these impacts because at the beginning of the pandemic it imposed large-scale social restrictions (PSBB). To determine the impact of social restrictions on tourism activities in the study area, a comparison of tourist patterns was conducted over the past five years. In this case, only Flickr data were used because Twitter's data coverage collected in this study was only until 2018.

RESULTS AND DISCUSSION

Data Clustering

Determination of the parameters for the DBSCAN algorithm is an important step in obtaining the appropriate clusters. An experiment was conducted by adjusting *minPts* values between 5-25 in multiples of 5, and *eps* values between 50 - 150 in multiples of 25. The 25 experimental results were then assessed visually and statistically. The most optimal clustering was achieved at the *minPts* setting of 20 and *eps* of 100 meters (Figure 4). A total of 34 clusters were generated from the Flickr data, while the Twitter data resulted in 39 clusters. Following the clustering theory, a low *minPts* value will result in a larger number of clusters, with a tendency to be overcluttered (Campello et al., 2015; McInnes et al., 2017). Tuning the value of *eps* to the same *minPts* value can reduce the number of clusters. This effect can be clearly seen in experiments 1-5; at the same *minPts* value of 50, the number of clusters decreased from 181 to 27 with the Flickr data and from 268 to 14 with the Twitter data. Too few clusters are more influenced by the choice of a too high *eps* value; this can be seen on the right-hand side of the graph in Figure 3. Changing the *minPts* value does not change the number of clusters produced if the *eps* value is too high. In this condition, the cluster distribution tends to be under clustered because there will be clusters that are too dominant. In this study, it was found that the *eps* value of 100 meters was an excellent value to represent the movement of tourists in tourist areas. This value may differ if applied to other types of travel or other applications.

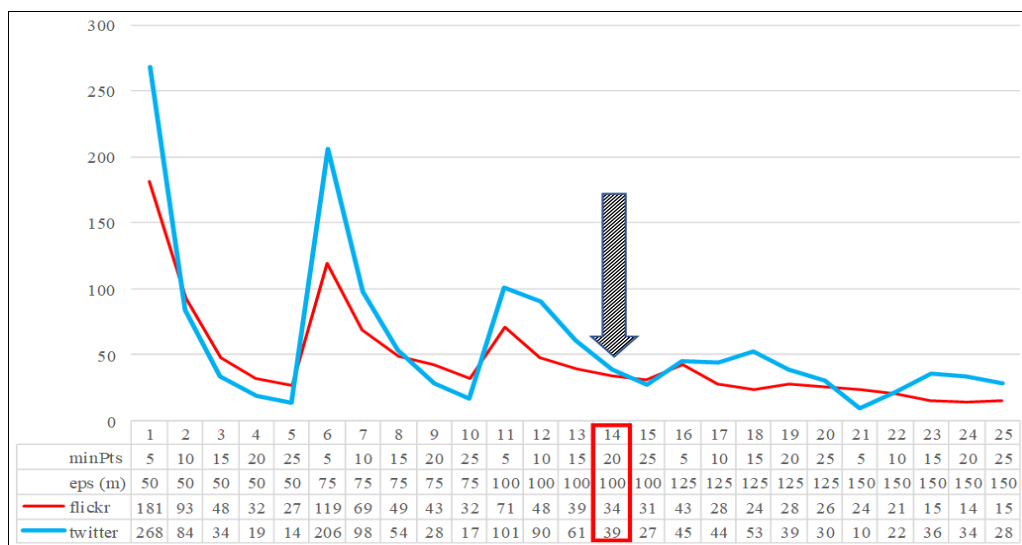


Figure 4. Experiment result of *eps* and *minPts* applied on the data (Parameters used in HDBSCAN algorithm)

The clustered data show a massive cluster in the middle of the city, which stretches vertically from north to south. This cluster can be found from the results of the Flickr and Twitter data clustering. The location of the cluster starts from Pangeran Mangkubumi Street, Malioboro Street, Ahmad Yani Street and reaches the area around the Yogyakarta Palace. The largest cluster generated from the Flickr data has a wide enough coverage area to intersect with 16 tourist attractions (Figure 5a). Meanwhile, the largest cluster from the Twitter data has an elongated shape and includes only ten attractions (Figure 5b). In a more detailed finding, there are many compelling attractions contained in the large cluster, which will be discussed in the following section. On the outskirts of the city, clusters are sporadically encountered. The eastern part of the city of Yogyakarta is where there are the least clusters, because there are not many tourist attractions. In comparison, the Flickr data show seven clusters, while those from Twitter show five. The HDBSCAN algorithm was executed using the same *minPts* value setting. In order to obtain good clustering results, the minimum sample value was tuned for each set of data. The minimum sample values used were 80 and 40 for the Flickr and Twitter data respectively. A difference in the minimum sample value was made because the essential characteristics of the two types of data are different, with Flickr data tending to be clustered. In contrast, Twitter data tends to spread out more (Figure 3). The high minimum sample value was intended as a conservative effort to remove noise from the cluster. In general, the clustering generated by the HDBSCAN algorithm has the characteristics of narrow and not very large clusters, especially those generated from the Flickr data (Figure 6). The clusters from the Twitter data are mostly narrow, except for a few in the eastern city of Yogyakarta, which appear to be more spread out and quite large.

A longitudinal vertical pattern across Jalan Malioboro can be seen, which is broken down by several clusters. On the one hand, this narrower cluster intersects with fewer, only 14, tourist attractions. On the other hand, many new points of interest emerge, beside the tourist attractions that are defined in Figures 1 and 2. Visually, the clusters generated using Flickr data are more compact than those from Twitter data. This is reinforced by the value of the ratio between the total sum of the squares obtained, with the results from the clustering of the Flickr and Twitter data resulting in values of 0.997 and 0.988 respectively. One of the reasons for the low ratio value for the Twitter data is the presence of clusters that are relatively spread out in the eastern part of the city, with very high within-cluster sum of squares values (127.12). In perfect clustering, members in one cluster will tend to be uniform, but between clusters have significant differences. An indication of this is the low within-cluster sum of squares and the high between-cluster sum of squares. In the following section, clusterization data from Flickr will be used, because visually and statistically it is superior to Twitter data clustering.

Exploring Tourist Hotspot

Although several clusters do not represent tourists' position at tourist attraction sites, they are still closely related to tourism activities,

since their locations offer views of the city, hotels, stations or other attractions. In comprehensive tourism management, aspects of tourist comfort should also be considered. Based on the clustering results from the Flickr data, 29 hotspot clusters can be categorized into six groups: tourist attractions, accommodation, city scenery, shopping centres, souvenir shops, and entertainment (Figure 7).

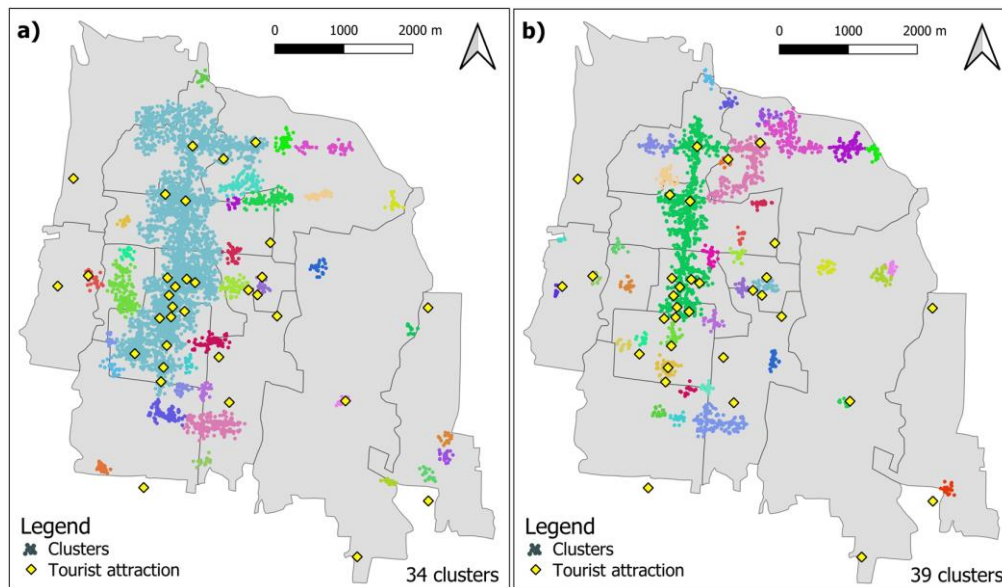


Figure 5. Clustering result of DBSCAN algorithm using a) Flickr and b) Twitter data

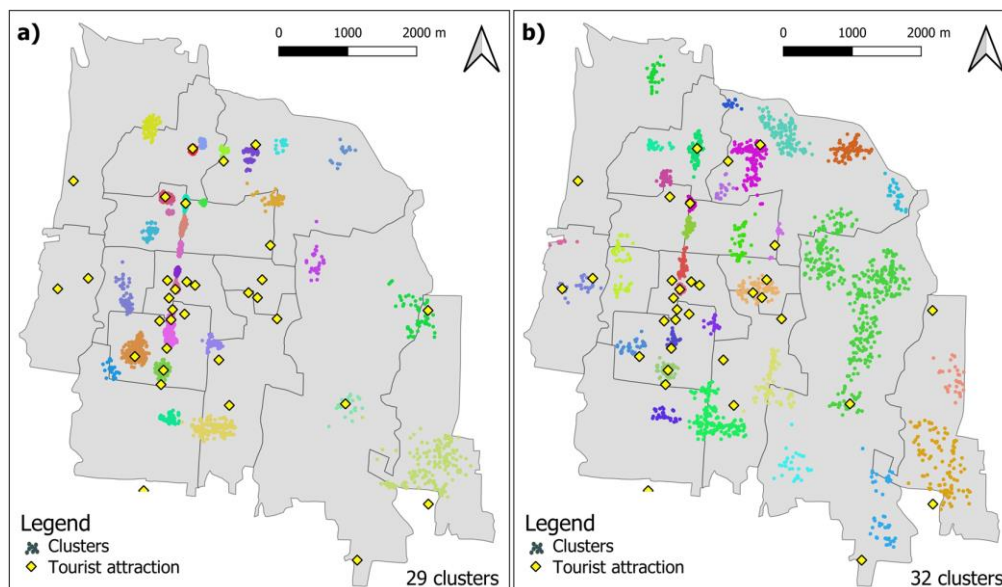


Figure 6. Clustering result of DBSCAN algorithm using a) Flickr and b) Twitter data

would be an ideal location for exploring the city, either on foot or by car. The Prawirotaman area, south of Yogyakarta Palace, is the most popular accommodation destination. Even in this area, there are two clusters which are not too far away. Not only known by local tourists, the Prawirotaman area is also well known among foreign tourists as a low budget accommodation area (Borgersen and Rye, 2004). However, the relative proximity to the city centre does not guarantee that the accommodation industry will survive. Ideally, development of the facilities provided by the inns should be made to improve the user experience and help the tourism industry survive. Yogyakarta City also provides city view tours that are attractive for tourists to take pictures at the various locations.

The data from the clustering results can present information on which areas are of interest to tourists, and include at least six locations, namely Code River, Kotabaru, the railway, Kepatihan Office, Kleringan Kewek Bridge, and South Square. Because these locations are open facilities, it is difficult to record the number of visitors. However, through social media data, it can then be revealed that these locations are attractive to tourists if simply to take photos. In recent years, some of these locations have undergone improvements to make them more attractive to tourists; for example, the construction of a boulevard in Kotabaru. Kotagede, which is located in the southern part of Yogyakarta City, offers souvenirs for tourists, including various well-known silver crafts. Apart from souvenirs, Kotagede also has tourist attractions such as The Kings Tomb, the Great Mosque of Kotagede, Kedhaton, and the Javanese Traditional House. However, due to the spread of the data point positions, the cluster formed is large. There are three shopping centre clusters, all three of which are well known, namely Malioboro Mall and Galeria Mall, which are modern markets, and Beringharjo Market, a traditional market. Preservation of the Beringharjo market is critical because it is not only attractive to tourists but also to maintain the culture of traditional Javanese markets (Herliana, 2015). Meanwhile, cinemas and football fields are a means for locals and tourists to find entertainment.

In addition to coordinate data, Flickr photo metadata also stores data on the date of photo uploads. This data can be used to determine the frequency of monthly photo uploads in Yogyakarta City. Figure 8 shows a graph of the number of Flickr photo uploads in the city,

There are nine clusters of tourist attractions, most of which are around Jalan Malioboro, except for Gembira Loka Zoo and XT Square. As one of the special symbols of the Yogyakarta Special Region, Yogyakarta Palace has the highest number of photo spots of all the clusters, making it a popular destination for tourists. The Taman Sari complex, which is part of cultural tourism, also has many photo points. These two popular cultural tourism sites can strengthen the image of Yogyakarta as a city of culture. The three intersection points starting from Tugu Jogja Monument, Malioboro Street Sign and the city centre are also attractive tourist destinations. Taking pictures at these landmarks can be proof that tourists have visited the city. The renovation and renewal of the three landmarks in recent years confirms that the authorities are paying attention to tourist area development.

The Malioboro Street area is now even more friendly to pedestrians, making it easier for tourists to explore from the north to the south at Yogyakarta Palace. This development further supports the preservation of Yogyakarta's philosophical axis and efforts to support Yogyakarta City as a World Heritage City (Syahbudin et al., 2018). The accommodation cluster is not too far from the city centre, with a radius of approximately two kilometers.

For a two-day stay, two kilometers from the city centre

juxtaposed with data on the number of tourists recorded by the Yogyakarta Special Region Tourism Office in 2018. The photo upload to Flickr graphic (in blue) fluctuates quite strikingly, with April being the lowest point and August the highest. In contrast, the tourist data graph (in orange) does not show significant differences, except for December, when it rose sharply. In general, the gap is quite large between August and October, when the number of photo uploads jumps from the previous month. In Yogyakarta City, these three months are in summer, with a transition to the rainy season, so they are very suitable for relatively distraction-free photo taking.

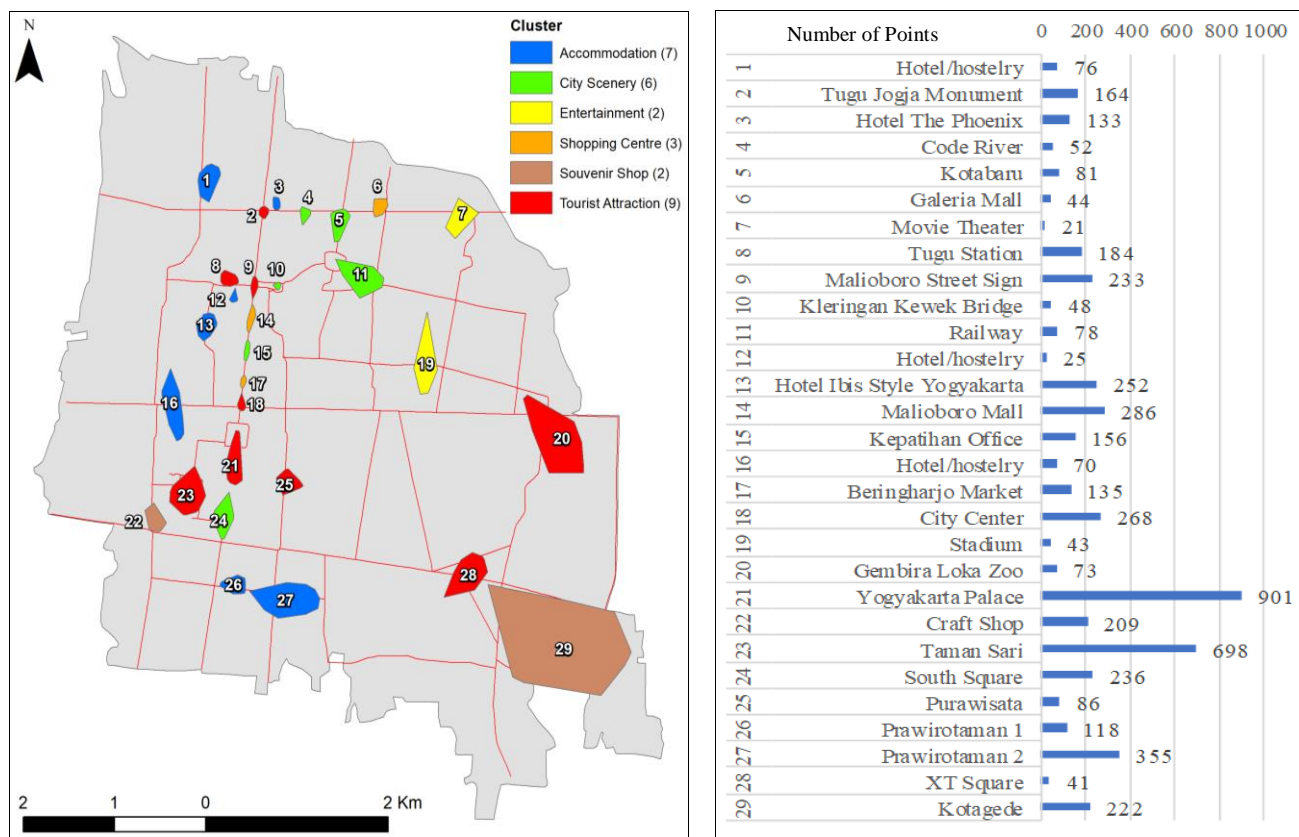


Figure 7. Tourist hotspot cluster in Yogyakarta City based on HDBSCAN clustering on Flickr data

COVID-19 Pandemic Impact

It is undeniable that the COVID-19 pandemic, that has taken place since the end of 2019, has greatly affected the tourism industry, including that of Indonesia. A few weeks after the announcement of the first case of COVID-19 in Jakarta in March 2020, many tourism industry players stopped their activities. Because of the highly contagious nature of the disease, crowds of tourists have the potential to become transmission clusters. Data on the distribution of clusters in the first half of the last four years in Yogyakarta City show a decreased number of tourist clusters, from 14 in 2017 to only 2 in 2020 (Figure 9). Naturally, the number of photos taken also fell. When viewed as a whole, the decline from year to year was consistent, at approximately the same rate. The clusters in 2017 were seen to be scattered from the Tugu Jogja Monument to Kotagede, while in 2018 they tended to be closer to the city centre.

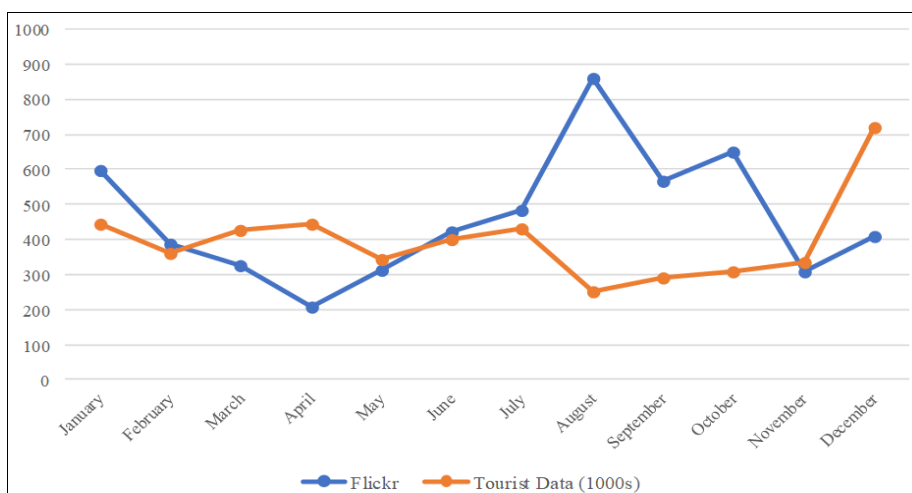


Figure 8. Number of photos taken and tourist data monthly (1000s)

There have been only two clusters in 2020, with the majority of uploads made from January to March. The two clusters are the area around Tugu Station, which is also adjacent to the Malioboro Street Sign, and the Yogyakarta Palace area. Both these areas and the city centre consist of clusters of the four sets of data used for clustering. The number of photos uploaded onto Flickr has decreased, which be an indicator that tourism in Yogyakarta has also been experiencing a decline. In 2017, the recorded number of tourists was 5,347,626. If in the simulation the cluster points represent the number of tourists, it is estimated that in early 2020 the number entering Yogyakarta was 800,000 to 1,000,000 visitors. With the closure of tourist sites, reduced hotel occupancy,

flight restrictions and government social restriction policies, the resulting impact could be even more severe as mentioned in other scholars findings (Korinith and Ranasinghe, 2020; Rogerson and Rogerson, 2020).

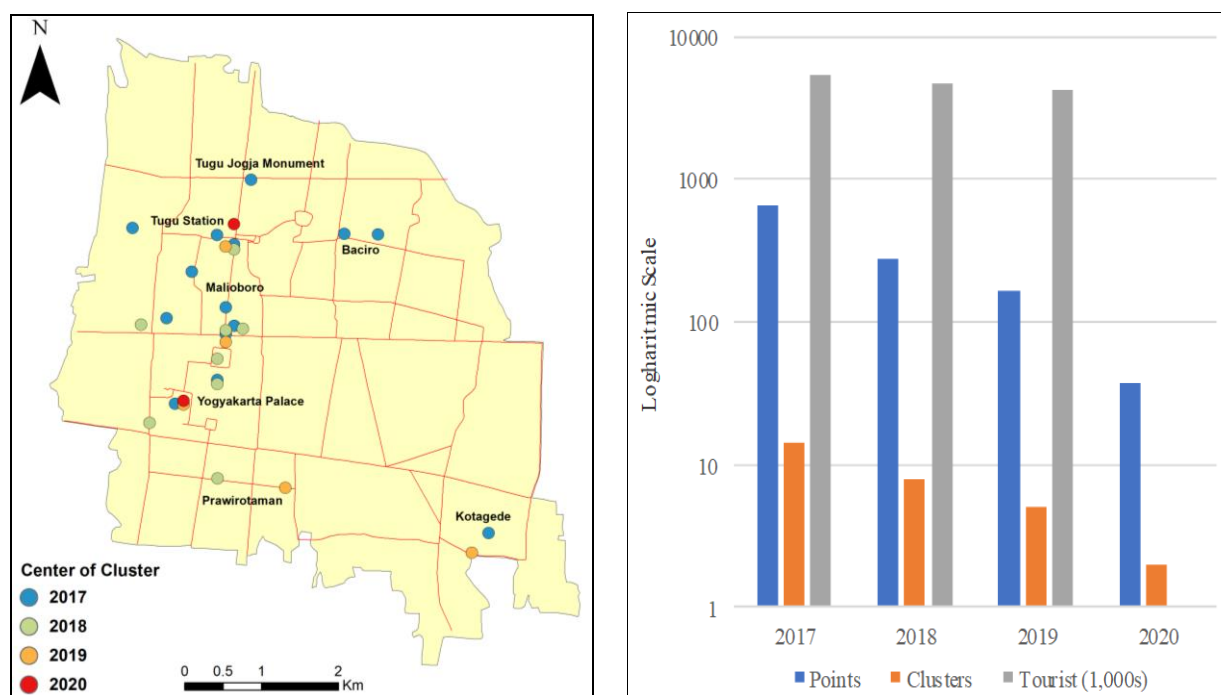


Figure 9. Clusters center for the first-half year in the last four years

CONCLUSION

Flickr and Twitter provide free access to large volumes of data, albeit with their respective limitations, which can be used for human-related research. The advantage of these data is that besides the coordinate option, a stamp team can be used for temporal analysis. In this study, both sources of data were used as proxies to determine tourist clusters. Flickr data has an advantage over Twitter data because its users only focus on uploading photos, making traveller recognition easier. On the other hand, Twitter data is rich, requiring delicate data pre-processing. However, the clustering results using the DBSCAN and HDBSCAN algorithms for both data sources resulted in the same number of clusters, with a similar spatial distribution. Determining clusters using the HDBSCAN algorithm is very flexible and can be applied in research based on two-dimensional point data to produce good clusters.

Determining parameters for execution can be done by adjusting the data used, mostly related to the study area and object. In this study, the HDBSCAN clustering results from the Flickr data show that cultural tourist attractions were still the main selling point of Yogyakarta City, with Yogyakarta Palace and Taman Sari having the largest number of photos. Other locations that are no less popular are Yogyakarta city landmarks, such as the Tugu Jogja Monument, Malioboro Street Sign, and the city centre. Tourist accommodation options indicate that areas within a two-kilometer radius of the city centre are the preferred ones. The Prawirotaman area has even spawned two adjoining clusters. This clustering method can be duplicated in other cities to gain insight into tourism activities that are not officially recorded. It is undeniable that the COVID-19 pandemic has had a very negative impact on the tourism industry. Based on the results Flickr data clustering in the last first half of the last four years, it has been established that the number of tourist clusters has continued to decline. The prediction of the number of tourists visiting Yogyakarta City will also fall.

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CULINARY TOURISM IN LOWER SILESIA (POLAND) IN 2014-2017

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Abstract: The aim of the article is to present the culinary heritage of Lower Silesia. The quantitative and qualitative analysis of the culinary tourism offer of 2014-2017 was performed on the basis of available source materials. It also presents the offer of regional products and award-winning manufacturers and producers. Additionally, it indicates institutions responsible for promotion. The research shows that culinary tourism in Lower Silesia is characterized by high potential, which is evidenced by the growing number of culinary events. However, over 100 regularly organized events, numerous regional products and producers require support as well as efficient and effective promotion. The measures taken by local and regional institutions are still insufficient. Despite the rich offer, only a few events capture wider public awareness. There are also few events of international significance. The same applies to the producers of traditional regional products and the products themselves. The number of Lower Silesian entities belonging to the European Culinary Heritage Network is small (56). By analysing the system of national and European labels and protection of regional products, it can be noticed that the Lower Silesian producers have problems overcoming the complex EU procedural obstacles. Although 48 Lower Silesian products are included on the "List of Traditional Products" of the Ministry of Agriculture and Rural Development, only one of them can boast of an EU certificate.

Key words: Lower Silesia, culinary tourism, culinary product

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INTRODUCTION

Culinary tourism is an important component of cultural tourism. It plays an important role in promoting the region and shaping its image, as well as in stimulating local entrepreneurship and community integration. Culinary tourism is often associated with a specific historical or ethnographic region. It has become one of the leading segments of cultural tourism in recent years. Lower Silesia region, which is the subject of this paper, is located in the south-western part of Poland. The present Lower Silesian cuisine was shaped mainly after 1945, when a substantial part of the population was resettled on an unprecedented scale. After the Second World War, the inhabitants of the former borderland areas of Lviv, Tarnopol, Stanisławów, Polesie, Nowogródek and Vilnius settled the so-called recovered territories, including the current Lower Silesian province. As part of the same operation, the ethnic groups of Lemkos and Boykos were also displaced from their traditional lands in south-eastern Poland. A large group of those who then came to Lower Silesia were settlers from central, northern and eastern Poland. The discussed area was also inhabited by post-war Polish re-emigrants from Yugoslavia, Romanian Bukovina, France and Belgium. In 1947-1948, Lower Silesian towns became home for Greek emigrants (Szczepankiewicz-Battek, 2014). Each group brought their customs, rituals, clothes, language, as well as culinary culture to Lower Silesia. In this cultural melting pot, a cuisine that is unique, heterogeneous, highly diverse and rich in flavours has been created. The richness and diversity of Lower Silesian flavours is a unique culinary attraction of the region and an incentive for tourists to explore Lower Silesia. The diversity of the cultural heritage, especially culinary, of the discussed region is worth further presentation and analysis, hence the aim of the article is to describe the culinary heritage of Lower Silesia and to indicate culinary tourism as one of the elements of the region's promotion. The research which the article is based on was conducted in the years 2014-2017.

MATERIAL AND METHODS

One of the first definitions of culinary tourism was proposed by Long (2004). In her opinion, culinary tourism includes "intentional, cognitive participation in learning about eating patterns, participation in consumption, preparation and presentation of food, exploration of culinary and nutritional styles, and eating in a way differing from one's native ways" (Kordowska et al., 2013). In Long's perspective, culinary tourism pursues new culinary experiences, assigned to different regions. Currently, culinary tourism covers a wide range of aspects from culinary trails, to cookery classes, tasting of dishes in restaurants, to specialist literature in the form of cookbooks, cuisine guidebooks or new recipes. Culinary tourism focuses on tasting new dishes, as well as education in the cuisine of a given region or country (Long, 2004).

Wolf (2001) was also one of the first authors of the definition of culinary tourism, which he described as: "(...) travelling to find and taste ready meals and drinks" (Durydiwka, 2013). Plebańczyk (2013) distinguishes different variants of culinary tourism:

- gastronomic tourism, aimed mainly at reaching places where unique food of interest is served, e.g. restaurants;
- food tourism understood as travelling in order to visit food fairs, producers and festivals in search of flavours, tasting and buying products;
- culinary tourism, as the broadest category, including the two above concepts, and also closely related to cultural tourism and culinary heritage. This type of travelling also aims to explore local cuisine with its recipes, participate in the preparation of dishes, but also to learn about local traditions and culinary habits.

Matlovičová and Pompua (2013), on the other hand, list three distinct forms of culinary tourism where food is the primary focus of tourists' attention: gourmet, gastronomic and cuisine tourism. On a scale of degree of interest and sophistication of tourists and their tastes,

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first comes gourmet tourism, mainly aimed at those seeking high-quality luxury food and food specialties and willing to travel because of them. The next is gastronomic tourism practised by a larger proportion of tourists looking for quality, status and prestige but willing to accept a wider range of gastronomic products. The third type of culinary tourism, cuisine tourism, is defined by tourists' wish to explore and taste local culinary specialties by visiting farmer markets, fairs, or gastronomic festivals and other events focused on specific food products or gastronomy offered by a given area (Matlovičová and Pompura, 2013). Therefore, culinary tourism is often combined in professional literature with broadly understood cultural tourism. In the opinions of many authors, culinary tourism is part of the cultural tourism in a broad sense. Cultural determinants significantly shape culinary traditions and nutrition cultures (Kowalczyk, 2008). Many tourists choose regions that are rich in culinary heritage. By eating new dishes, or experiencing a broadly understood culture of eating, tourists discover different flavours. Visiting places of this type provides tourists with knowledge about the attractiveness of the region, its traditions and social changes that have occurred over the centuries. Participation in such trips shapes culinary knowledge (Žuromskaitė and Leišienė, 2014).

Kowalczyk (2016) defines culinary tourism as tourist trips, during which the tourist has the opportunity to taste dishes and drinks, visit renowned food establishments, participate in gastronomic events, learn recipes and ways of preparing dishes, as well as the opportunity to purchase products and ingredients necessary to prepare particular dishes. The definition also encompasses tourist visits to the regions and towns that are noteworthy in the context of culinary traditions (Kowalczyk, 2016). Jędrzyak (2008) also argues that culinary tourism is part of cultural tourism. According to him, people undertaking this form of travelling seek not only culinary attractions, but also want to broaden their knowledge. In the author's opinion, the attractiveness of a given region can be largely determined by the diversity of its cuisine and its abiding by tradition in a broad sense. Culinary tourism is now a very dynamically developing form of tourism. It is estimated that culinary tourists account for about 15% of the world's tourist traffic (Durydiwka, 2013). It is worth investigating the motives of culinary travel. According to E. Wolf, these are: searching for "ordinary" food establishments, meetings with famous people from the world of cuisine (restaurateurs, chefs), participation in cookery workshops or courses, or traveling along the so-called culinary routes (Durydiwka, 2013).

Similar elements are taken into account by Orłowski and Woźniczko (2016). In their opinion, culinary motives cover a very wide range of activities and places, but the most important of them include: participation in presentations and tastings of food products, visiting culinary museums, travelling along tourist culinary trails, participation in festivals, feasts, fetes, events, culinary competitions, culinary trainings and courses, as well as visits to restaurants, classified in gastronomic rankings, thematic taverns, inns, hostels, auberges, wineries, places of raw materials and culinary products processing, etc. (Orłowski and Woźniczko, 2016).

Also Tomczak (2013) indicates a number of tourist attractions awaiting a culinary tourist. The most important ones include:

- places where you can taste local products and regional dishes, including shops with regional produce or organic food, inns, taverns, etc.;
- culinary events such as: culinary festivals, regional food markets, country fairs, tastings, culinary shows;
- regional products and dishes;
- people engaging in traditional manufacture of regional products, processing food according to traditional technologies.

Culinary tourism has been widely covered in literature on the subject. These issues were undertaken in the works of Grębowiec (2010), Krupa (2010); Widawski and Oleśniewicz (2014); Duda-Seifert et al. (2016); Buczkowska-Gołąbek (2017); Charzyński et al., (2017). Regional cuisine of various regions of the world was of interest to Žuromskaitė (2009); Matlovičová and Pompura (2013); Matlovičová et al. (2014); Dorocki and Struś (2015); Salanță et al. (2015); Benkhard and Halmi (2017); Jasińska et al. (2017); Privitera et al. (2018); Kapsdorferová and Švikruhá (2019). The issues related to the promotion of culinary tourism have been dealt with by Boyne et al. (2003); Meler and Cerovic (2003); Boyne and Hall (2004); Huang (2009); Batinić (2017); Yousaf and Xiucheng (2018). Culinary tourism is now a very dynamically developing form of tourism. It is estimated that culinary tourists account for about 15% of the world's tourist traffic (Durydiwka, 2013). The fascination with broadly understood culinary heritage, observed in recent years in the world and in Poland, can even be seen as a fashion trend, which is related to the social demand for this topic (Tomczyk-Miczka, 2011). According to Woźniczko et al. (2015) culinary tourism is one of the most important segments of tourism. Based on the review and selection of mass data and source materials, a quantitative and qualitative analysis of the offer of regional culinary tourism was performed. Among the applied methods of quantitative analyses (Denzin and Lincoln, 2009) an important part was the inventory of culinary events organised regularly in the Lower Silesia Province (*Voivodeship*) in 2014-2017 (Lower Silesia Culinary Events Calendar 2014-2017). The inventory was taken on the basis of source materials obtained from local government units of Lower Silesia (Marshal's Office, country offices (*powiat starosty*) and commune offices), local and regional tourist organisations and associations such as: country housewives club, educational farms network. The research was supplemented with conclusions from observations carried out during field research - 26 events, held regularly, were visited. During the field research, one of the methods of qualitative analysis was used, i.e. free-form interviews with the organisers of culinary tourism events. The methodology of the free-form interview is defined in-depth by Mayntz et al. (1985); Frankford-Nachmias and Nachmias (2001); Oppenheim (2004).

On the basis of data from the List of traditional products published by the Ministry of Agriculture and Rural Development (<https://www.gov.pl/web/rolnictwo/lista-produktow-tradycyjnych>), traditional Lower Silesian products entered on the nationwide list of traditional products were compiled. Producers of regional products who were awarded prizes in prestigious culinary competitions organised in 2014-2020 were also listed. The study also indicates institutions responsible for promoting this form of tourism. The activities of such institutions and organizations as: the European Network of Regional Culinary Heritage, the Marshal's Office of the Lower Silesian Province, the Lower Silesian Agricultural Advisory Centre, the Agricultural Market Agency, the Lower Silesian Tourist Organization, the Polish Chamber of Regional and Local Products as well as regional associations and foundations and local action groups were analysed.

The material presented in the article is a result of qualitative and quantitative research performed in the years 2014-2017 in Lower Silesia. As observed by Denzin and Lincoln (2009), "qualitative researches conduct studies in the natural environment, trying to capture sense or interpret phenomena applying terms used by the surveyed people". The research methodology of this study was selected for the purpose of accomplishing the aim of this article. The authors made use of methods of scientific literature analysis, secondary data obtained from different institutions, participant observation methods, as well as interviews conducted with participants of selected events of culinary character.

RESULTS AND DISCUSSION

One of the key motivational factors of culinary tourism for tourists is perceiving it as part of cultural heritage of a tourist destination; as the connection between the past and the present through preserved tangible and intangible relics of culture – food and its variations (Matlovičová and Husárová, 2017). Having discussed the motives of tourism, it is worth presenting and evaluating the tourist offer of the Lower Silesian province. Over 100 regularly held events provide an opportunity to get acquainted with the culinary heritage of Lower Silesia. These are: country fetes, food fairs and markets, culinary festivals and feasts, picnics, competitions, gastronomic exhibitions, demonstrations of traditional food production and master chef championships (Figure 1). They feature the traditions of the region, but also foster the integration of the local community and the accumulation of experience.

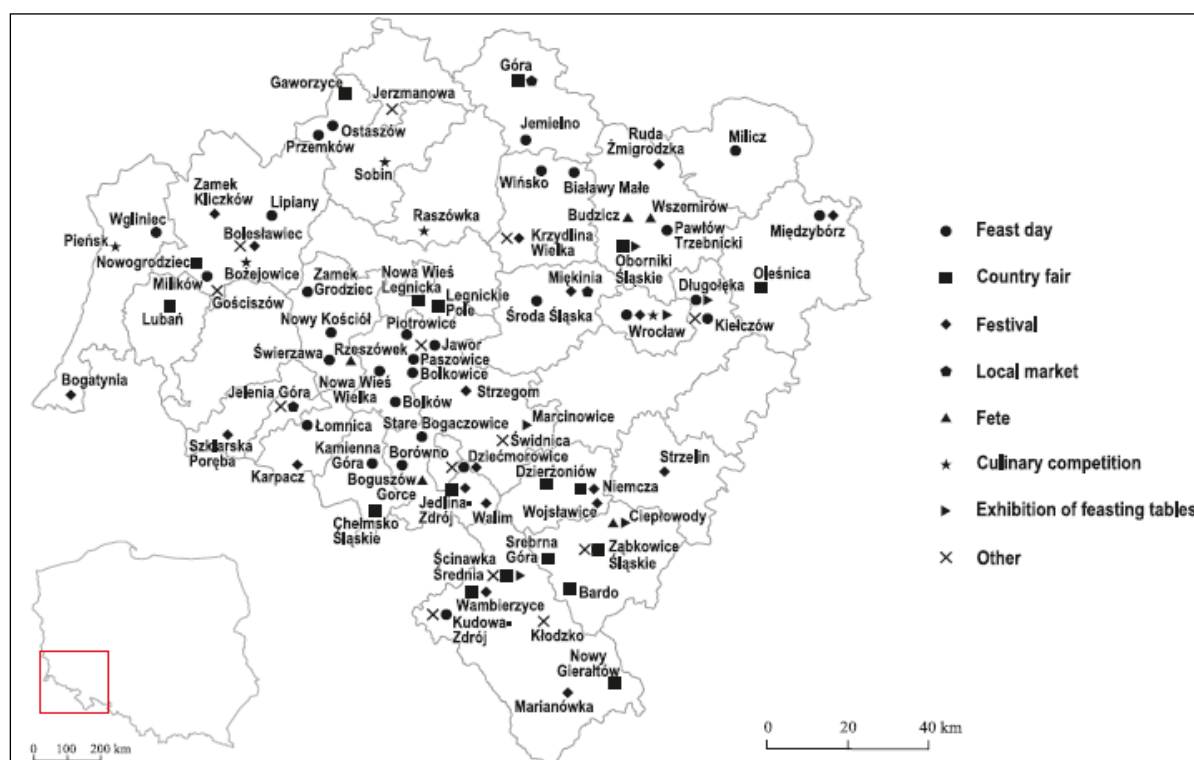


Figure 1. Inventory of regular culinary events in Lower Silesia in 2014-2017 (based on own research)

The unflagging interest of tourists led to an increase in the number of culinary events organized in the province of Lower Silesia in 2014-2017 from 104 in 2014 to 157 in 2017 (Table 1).

Table 1. Number of Lower Silesian culinary events in the years 2014-2017 (based on data from The Lower Silesia Culinary Events Calendar of 2014-2017)

Year	Feast day	Country fair	Festival	Local market	Fete	Culinary competition	Exhibition of feasting tables	Other*	Total
2014	32	20	19	3	5	7	6	12	104
2015	33	25	22	5	4	8	6	45	148
2016	34	24	26	2	5	3	2	51	146
2017	33	25	29	3	4	7	5	51	157

*including picnics, fetes, fairs, workshops

Country fairs, feasts and festivals dominated in the structure of culinary events. Many events have become permanent landmarks in the Lower Silesian cultural landscape, including the Festivals of: Milicz Carp, Flour in Wrocław, Cucumber in Legnica, Honey and Wine in Przemków, Łęgi Odrzańskie in Ścinawa, Kłodzko Trout, and Eco-fair in Wrocław, as well as Our Culinary Heritage - Tastes of Regions competition, Carp Festival in Wrocław, International Bread Fair in Jawor, Easter Traditions Meetings in the Kłodzko Valley, Easter and Christmas Feasting Tables and many more. Noteworthy international events include the 'Europe on the Fork' festival in Wrocław or the International Apiary and Beekeeping Workshops in the Western Sudetes.

A guide to the culinary events of Lower Silesia is the "Calendar of Culinary Events of Lower Silesia" published regularly by the Marshal Office of the Lower Silesian province. An analysis of the culinary tourism offer of Lower Silesia reveals that the organizers of culinary events often choose themes and motifs for their events that stem from the traditions of national and ethnic minorities. The cuisine of the inhabitants of the former Eastern Borderlands, Czadca Highlanders, Lemkos, Greeks, Armenians and many other minorities can be experienced during e.g. the Our Culinary Heritage - Tastes of Regions competition held in Wrocław, the Kaleidoscope of Cultures in Wrocław, Festival of the Balkan Culture in Bolesławiec, or Pieczenica (pork roasting) in Gościszów. In Lower Silesia, numerous people and companies are engaged in the production of regional produce. Among them are the winners of the "Our Culinary Heritage" national competition held as part of the International Polagra Food Fair in Poznań. Since 2003, the "Pearl" award has been given to 39 entities from the Lower Silesian province for the presented culinary products. The winning products and producers in 2014-2017 are presented in Table 2.

Regional products are often the leitmotif of thematic villages - villages with an idea - of which worth visiting are Morzęcin Mały - a spinach village, Bagno - a herbs village, Gołędzinów - a rowanberry village, Pęgów - a strawberry village, Rościszewice - a sunflower village. The dynamically operating Lower Silesian Culinary Trail called "Smaki Dolnośląskie (*Lower Silesian Tastes*)", associating 49 service points, is of great importance in the development and promotion of the discussed form of tourism. The trail is not linear, so tourists and event organizers can, depending on their preferences, include selected points of the trail in their sightseeing itineraries. The Trail associates entities operating in the broadly understood culinary tourism industry in Lower Silesia, which hold a quality certificate awarded by national or international certification organisations. Entities that do not have such a certificate are certified by a verification commission appointed by the Lower Silesian Tourist Organization (<http://smakidolnegoslaska.pl/en/home/>). The Trail associates restaurants and other catering establishments, hotel service facilities, retailers and associations selling traditional and regional products, regional food processors, farmers, gardeners, and fishing companies. Culinary tourism is part of a wide offer of agriculture farms. It develops particularly well in 32 farms associated in the National Network of Educational Farms (Bogusz and Wojcieszak, 2018). Half of the farms declare maintaining the tradition of regional cuisine, and 13 have prepared educational programmes related to traditional products and local cuisine. Most farms organise: shows, workshops, feasts and tastings (www.zagrodaedukacyjna.pl).

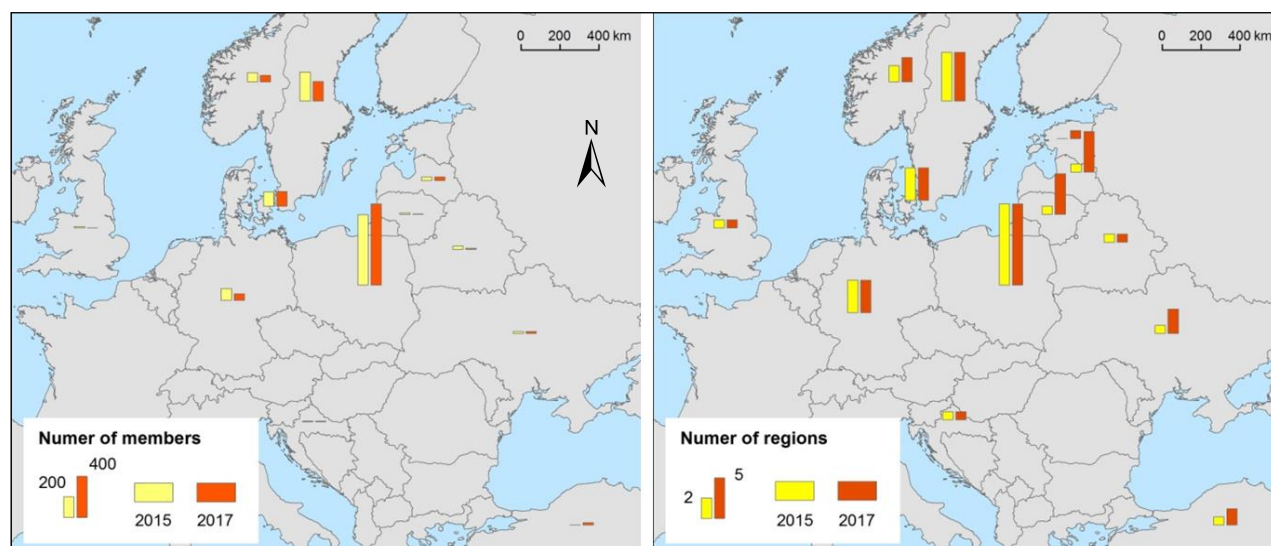
Table 2. "Pearl" award winners from Lower Silesian province in 2014-2017 (based on data from <http://www.produktyregionalne.pl>)

Year	Product	Producer
2014	Half-fat curd cheese	"DEMI Dairy Cooperative" in Góra
2014	Jagodnik sausage	Dariusz Konarski
2014	Mushroom soup with wild game meatballs	Ilona and Jarosław Dąbrowski
2014	Leg of mouflon	
2014	Cream of spinach soup	"Koniczyna" cooperative
2014	Rabbit saddle with spinach in its own juice	
2015	Goliszków goat cheese	Adam Kudłaty
2015	Ryczyn lime tree honey	Ewa Migocka Honey pantry
2015	Sobótka Górka 16 Beer	Bartłomiej Bogdański Sobótka Górka Brewery
2015	Trzebnica Cider	NOEL Henryk Nowakowski
2015	Lamb stewed with vegetables (dish)	"Cynamonowa" Kaffee Bistro Dariusz Ślabicki, Dorota Ślabicka
2016	Sudeten mountain cheese	Lucyna and Sylwester Wańczyk "Wańczykówka"
2016	Pickled cucumbers	Ścinawa Fruit and Vegetable Processing Plant, Marta Postoń, Teofil Szelwika, Tomasz Szelwika
2016	Karkonosze liqueur	Tomasz Luszpiński, ABDITUS Ltd.
2016	Wild boar and deer stew	Dworek Galosa in Strachocin
2017	Jagodnik cooked ham	Dar-Vit Butchery, Dariusz Konarski
2017	Traditional butter	Międzybórz Dairy Cooperative
2017	Niemcza forest honey	"Honey by Turek" Apiary, Maciej Turek
2017	Marrons	Elżbieta Malinowska, Beekeeping Farm

Lower Silesia as a region promotes its products and regional dishes. The most recognizable are: blueberries in Chocianów, dumplings (*pierogi*) in Paszowice, bread in Jawor, honey in Przemków and Oleśnica, wine in Środa Śląska, trout in the Kłodzko Valley, carp in Milicz, curd cheese in Międzybórz, cheese in Dziecmorowice, chocolate in Świebodzice, soup in Jedlina Zdrój, lamb in "Kowalowe Skały" or goose meat in Kudowa Zdrój. Traditional Lower Silesian products entered on the "List of Traditional Products" of the Ministry of Agriculture and Rural Development were divided into 9 categories (Table 3). Country Housewives' Clubs also play a significant role in promoting culinary tourism. On their initiative or with their participation, events are organized during which the culinary traditions of the region are presented, such as harvest festivals, fairs, Christmas events.

Table 3. Traditional Lower Silesian products on the "List of Traditional Products" (based on data from <http://www.minrol.gov.pl>)

Category	Products
Dairy products	Blue cheese, the Sudetes curd cheese, cheeses of Kamienna Góra, Zgorzelec, Łomnica goat cheese
Meat products	Zacisze roasted pig, Niemcza pickled fatback, Niemcza home-made meat pieces, Niemcza pork ham, Volhynia-style relish of Niemcza, Przedgórze Sudeckie sausage in jar, Niemcza sausage, Niemcza galicjanka sausage
Fish products	Milicz carp, Kłodzko trout, smoked Kłodzko trout
Fruit and vegetables	The Barycza Valley raspberry syrup, Ślęza sauerkraut, Ślęza sour cucumbers, Ścinawa pickled cucumbers
Bakery and confectionery products	Pomocne home rye bread, Pomocne wheat-rye sourdough bread, Przemków honey gingerbread biscuits, Oleśnica wheat-rye gingerbread cakes, kolach of Kuty Armenians, Rogowo Sobóckie rustic bread, crumble topping cake of Kłodzko region, Gogołowice bread, <i>begle</i> (jumbals)
Oils and fats	Traditional butter
Honey	The Sudetes buckwheat and multiflower honey, the Barycza Valley multiflower honey, the Ząbkowice region lime tree set honey, Ryczyn lime tree honey, Bory Dolnośląskie heather honey
Ready dishes and meals	Chrzastawa potato and curd cheese dumplings (<i>pierogi</i>), rabbit pate with spinach, Spytków goose stuffed with pancakes, Krużewniki black cabbage rolls, Silesian relish (pork dish), <i>keselica</i> (sourdough soup)
Drinks	Książęce beer of Lwówek, Lutynia pressed apple juice, Trzebnica cider, Karkonosze mountains liqueur, Silesian wine, <i>Juha</i> – dried fruit compote

Figure 2. Numbers of members and approved regions of the European Network of Regional Culinary Heritage in 2015 and 2017 (Prepared by the authors based on data from <http://www.culinary-heritage.com/regions.asp>)

The promotion of the culinary heritage of Lower Silesia is handled by many organizations and institutions. One of the most important ones is the European Network of Regional Culinary Heritage, which brings together 33 European regions (Figure 2), aimed at joint development through regional food and culinary traditions (Jęczmyk et al., 2014). The first Polish region to join the Network in 2005 was the Warmian-Masurian province. In subsequent years, other provinces joined the Network (Table 4). In 2016, 10 provinces (673 entities) were members of the organization. The network logo - a white cook hat on a blue background has become synonymous with high quality products produced in a traditional way while preserving the tradition of the region (Świtała-Trybek, 2014). On June 10, 2011, the Lower Silesia province became a certified member of the Network. The Network logo and the wording Lower Silesia Culinary Heritage can be found at the entrance to many restaurants, processing plants or shops, which are inspired by a common idea: respect for tradition and high quality of offered products. By the efforts of the Polish Chamber of Regional and Local Produce, the national "Quality and Tradition" system was established for promotional purposes. Its aim is to recognise high-quality food products with a traditional character or with characteristics

that distinguish them from other products of the same category, and which have the producer's assurance of their unique features or maintenance of higher production standards (Jęczmyk and Sammel, 2012). All the described activities aim at protecting traditional and regional

Table 4. Provinces members of the European Network of Regional Culinary Heritage (based on data from <http://www.culinary-heritage.com/regions>)

No	Province	Joined in	Number of members
1	Lower Silesian	2011	56
2	Kuyavian-Pomeranian	2012	39
3	Lesser Poland	2014	12
4	Masovian	2008	67
5	Opole	2008	56
6	Pomeranian	2008	63
7	Świętokrzyskie	2010	68
8	Warmian-Masurian	2005	156
9	Greater Poland	2008	116
10	West Pomeranian	2008	40

In order for a product to receive the PGI label, at least one of the production stages has to take place in the area to which its name refers. In Poland, until 2017, this label was awarded to 16 products, including one from Lower Silesia - heather honey from Bory Dolnośląskie. This product is characterized by an exceptionally high content of heather pollen and other unique components (<http://www.produkty-tradycyjne.pl/offer/cert/chog/page/2>). The Traditional Specialty Guaranteed label is awarded to products bearing a name that refers to the tradition of this product or its unique character. The product marked with this sign should have been produced from generation to generation (Grębowiec, 2010). The TSG mark can be given to agricultural products intended for consumption or finished products such as drinks from plant extracts, bread, beer, confectionery products, chocolate products, pasta and ready dishes. In Poland, this mark was awarded to 8 traditional products by 2017. Among them there are none from Lower Silesia. The Polish Chamber of Regional and Local Product is another organization which promotes the culinary heritage of Lower Silesia, and awards the "Pearl" prize. This organization's involvement in promoting regional produce resulted in establishing the national "Quality and Tradition" system. This institution acknowledges high quality food products, including these from Lower Silesia, distinguished by traditional character or features that differentiate them from other products of the same category, and holding the manufacturer's assurance of exceptional features of this product or maintaining higher production standards (Jęczmyk and Sammel, 2012). It is worth noting that the Regional Branch of the Polish Chamber of Regional and Local Product operates in Lower Silesia.

Table 5. Selected promotional activities of local and regional institutions supporting the culinary heritage of the Lower Silesia region in 2014 (based on Wabnic, 2015)

Institution	Form of promotion	Example material	
		Title	Volume
Marshall Office Division of Rural Areas	Calendars	Culinary Events of Lower Silesia	2000
	Catalogues	Regional and Traditional Products of Lower Silesia	1500
Lower Silesian Branch Office of Agricultural Advisory Centre	Leaflets	European Culinary Heritage Network	1000
	Brochures	Lower Silesian Vineyards	100
Lower Silesian Tourist Organisation			Traditional Regional Products of Lower Silesia
The Barycza Valley Local Action Groups	Calendars	Regional Products	500
	Calendars	Recipes	500
	Catalogues	Carp Festival	20000
Kłodzka Wstęga Sudetów Local Action Groups	Information folders	Lower Silesian Flavours	1000
	Leaflets	Lower Silesian Flavours	500
	Publishing house	Lower Silesian Flavours – Recipes	600
Bory Dolnośląskie Local Action Groups	Posters	Award winning dish of the „Ale Pasztet” Culinary Competition	250
		Promotion of the „Ale Pasztet” Festival	100

The culinary heritage of the region is supported at the national level by entering the product into the "List of Traditional Products" of the Ministry of Agriculture and Rural Development (Act of December 17, 2004, Journal of Laws of 2005 No. 10, item 68). The evaluation criteria are quality and traditional production methods that have been used for at least 25 years. The benefits of placing the product on the Ministry List include greater interest in the product itself and also in the region it comes from and an increase in its market value (Krupa, 2010).

The list currently encompasses 1650 products, 47 of which are from Lower Silesia. Products representing the Lower Silesia province account for only 2.8% of Polish traditional produce (Wabnic, 2015). However, in the European system of traditional products protection there is only one Lower Silesian product – the heather honey from Bory Dolnośląskie (Protected Geographical Indication certificate). Culinary events are often used to create the image of the region. Properly used in promotion, they can be an important element of the message about the attractiveness and uniqueness of the tourist region (Bienia et al., 2014). The offer of Lower Silesian culinary tourism can also be found in widely distributed nationwide guidebooks and brochures issued by the Agricultural Market Agency entitled *Following the Trail of Good Taste (Szlakiem dobrego smaku)* (volume: 32 330 guides and 50,000 brochures). The promotion of culinary tourism of Lower Silesia is, however, primarily supported by provincial and local level authorities, i.e. the Marshal's Office, the Lower Silesian Agricultural Advisory Centre, the Lower Silesian Tourist Organization, as well as associations and foundations, and local action groups. The main platform of communication with tourists and others interested in culinary tourism are the websites of the above-mentioned organizations. For the promotion of the region's offer, these entities also use printed materials (Table 5). Although local and self-government authorities see culinary tourism as an excellent opportunity to promote the region and actively strive to support it, this activity should be intensified. Only a few events or regional products are more widely identified with the region. It is only the capital of the province, the city of Wrocław, that stands out positively against the background of the region, i.e. various culinary events thrive there, being promoted by tourist and local government institutions and developed under the patronage of famous people (e.g. Robert Makłowicz). This phenomenon is confirmed by the research of Duda-Seifert et al. (2016) and Woźniczko and Orłowski (2017). However, in other parts of Lower Silesia, such events remain merely local in character. In the opinion of the organisers of culinary events, the promotion provided is insufficient. Information about planned events is directed mainly to local communities via websites and social media, whereas the costly, though effective, promotional campaign on banners, posters, in the media, such as radio and television is limited. The authors' observations show that there is a lack of appropriate activities aimed at tourists. The organisers of culinary events do not promote their offer among the owners of accommodation facilities.

CONCLUSIONS

As a result of population exchange after 1945, Lower Silesia is a multicultural and diverse region. According to Duda-Seifert et al. (2016), typical Lower Silesian dishes are still poorly recognizable. This stems from historical events (population exchange), during which the cultural continuity of Lower Silesia was interrupted. Hence, Lower Silesian cuisine, which in a way has been reconstructed from scratch, draws from the flavours and cuisines of other regions and countries, including Silesian, German, Ukrainian, Lemko, Czech and other traditions. Research shows that culinary tourism in Lower Silesia has a vast potential - as evidenced by the growing number of culinary events such as country fetes, food fairs and markets, culinary festivals and feasts, picnics, competitions, gastronomic exhibitions, demonstrations of traditional food production and master chef championships. The wide offer of the region includes, among others 100 regularly organized events and 49 certified points associated in the dynamically developing Lower Silesian Culinary Trail "Smaki Dolnośląskie". Many events have become a permanent part of the Lower Silesian cultural landscape, including the Festivals of: Milicz Carp, Flour in Wrocław, Cucumber in Legnica, Honey and Wine in Przemków, Carp Festival in Wrocław, Kłodzko Trout Festival, Eco-fair in Wrocław as well as Our Culinary Heritage - Tastes of Regions competition. Numerous regional products, including forest honey from Niemcza, Milicz carp or Karkonosze mountains liqueur win prizes in national competitions and shows.

It is noteworthy that culinary tourism is part of the wide offer of Lower Silesian agriculture farms. It develops particularly in 32 farms associated in the National Network of Educational Farms, offering educational programmes related to regional cuisine, tastings, culinary workshops and folk feasts. Educational farms, agritourism farms and country housewives' clubs are important entities cultivating the culinary traditions of the region. An analysis of the system of national and European labelling and protection of regional products reveals that although 48 traditional products from Lower Silesia are entered on the "List of Traditional Products" of the Ministry of Agriculture and Rural Development, only one of them (Heather Honey from Bory Dolnośląskie) has an EU certificate. Producers in Lower Silesia have a problem with overcoming the obstacles of complex EU procedures. Similar is the case of the manufacturers of traditional regional products and with the products themselves. The number of Lower Silesian entities belonging to the European Network of Culinary Heritage is small (56). The benefits of this membership are worth promoting. Another problem is the low recognisability of the organisation's logotype.

Despite the rich offer of culinary tourism in Lower Silesia, only a few events reach wider public awareness. Most of them are poorly recognisable even in the region. There are also few events of international significance - the exceptions are the International Bread Fair in Jawor, the 'Europe on the Fork' festival in Wrocław or the International Apiary and Beekeeping Workshops in the Western Sudetes. The potential resulting from the region's near-border location also remains untapped. The neighborhood of the Czech Republic offers additional opportunities for establishing cooperation in the organisation and promotion of culinary events.

The offer of culinary tourism in Lower Silesia requires support and efficient, effective promotion carried out on many levels. The most involved entities in this area are the Marshal's Office, the Lower Silesian Agricultural Advisory Center, the Lower Silesian Tourist Organization, as well as associations and foundations and local action groups. The main platform for communication with tourists and all interested in culinary tourism are the websites of the above organizations and promotional materials, such as leaflets, guidebooks and thematic brochures. The promotion of culinary tourism takes place mainly on a local and regional scale, there are few coherent national and international campaigns. The only exception is the city of Wrocław, where the promotion of festivals is very strong. The International Bread Fair in Jawor, Easter Traditions Meetings in the Kłodzko Valley, Easter and Christmas Feasting Tables and many other are worth promoting. Due to the vast potential of the culinary heritage of Lower Silesia, it can be concluded that measures for the development of culinary tourism require a consistent strategy and cooperation on many levels. Cooperation between organisers of culinary events, producers of regional products, owners of tourist facilities (mills, apiaries, farms), and local government administration and institutions established for the development of tourism in the region is vital. Joint activities should be aimed at creating a brand that attracts tourists and investors.

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COMMUNITY BASED ECOTOURISM IN HUNGARY: CITIZENS' PERCEPTIONS TOWARDS THE ROMA COMMUNITY

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Abstract: This study sort to establish the perceptions of the Hungarian citizens on the involvement of the Roma community in ecotourism. The study targeted domestic tourists through an online survey. A descriptive survey research design was adopted and sampled 247 domestic tourists who had visited tourist destinations in Somogy County and Baranya County in Hungary. Analysis of the quantitative data collected revealed that Hungarian citizens perceive the Roma people's culture and their natural environment as have the potential to facilitate ecotourism development in rural destinations in Hungary. Approaches to full integration of the Roma community in ecotourism development in rural parts of Hungary are recommended.

Key words: Community Based Tourism, Ecotourism, Economic Development, Hungary, Involvement of Roma

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INTRODUCTION

Tourism has existed for many decades but it is only recently that community-based tourism (CBT) as a form of tourism was identified as a niche market (LoveSeed, 2007). CBT development is characterized as a form of locally situated development, using tourism to generate economic, social, and cultural benefits within a community (Johnson, 2002). Nepal (2004) refers to it as indigenous tourism, with any tourism product or service that is owned or operated by native peoples. A community in this case is understood to be 'a human group sharing a territory and involved in different but related aspects of livelihoods – such as managing natural resources, producing knowledge and culture, and developing technologies and practices,' Borriani (1992, cited in Borriani-Feyerabend et al., 2004).

CBT approach to tourism development has been touted as an important instrument for the realization of potential among marginal and deprived communities (Parwez, 2017). This is especially true for people isolated from the mainstream economy who gain social upliftment from such a development. Tolkach and King (2015) regard CBT "as a counterweight to neo-colonialism, neo-liberalism and conventional mass tourism", and many other authors hold almost the same view. Arguably, CBT emerged to counter the negative effects of mass tourism (Gadi Djou et al., 2017; López Guzmán et al., 2011). Johnson (2002) consider CBT as one component of a broad-based plan to improve rural economies in a way more compatible with the rural context.

Common among the existing literature on CBT emphasize on the need to involve members of local communities in all aspects of tourism development (Nagarjuna, 2015). As pointed out by Giampiccoli and Saayman (2016), alternative tourism, which includes CBT, could produce better results particularly for disadvantaged communities. For this reason, CBT has been pushed as one of the strategies for poverty alleviation enhanced sustainability in marginalized regions and communities (Juma and Khademi-Vidra, 2019). However, it is not a 'panacea' for development (Giampiccoli and Saayman, 2016). The adoption of ecotourism entrepreneurship in the CBT model has given rise to what is commonly referred to as community-based ecotourism (CBE). It is a special form of CBT where the principles of ecotourism are put in practice in implementing tourism development owned and operated by local community members.

In Europe rural tourism has been around, in one form or another, for at least a century (Kulcsár, 2009) and it is one of the main priorities of tourism development in many European countries (Swarbrooke; 1996). A number of studies of Slovak Roma communities have established that the Roma community of Central Europe is marginalized (Klimovský et al., 2016; Brunn et al., 2018). Various international organisations and institutions have recently noted widespread discrimination against the Roma people in the area of employment, education, health services, housing and loan practices. Evidently, many of their settlements lack formal infrastructure, poverty among the Roma is very high, and the state has been failing in the implementation of its official anti-poverty policies, to the extent that other stakeholders, especially local governments and NGOs, have become much more important in promoting their welfare (Klimovský et al., 2016).

In recognizing the potential of tourism in promoting livelihoods, CBT, particularly through ecotourism ventures, could be a promising approach to development of this marginalized communities. However, the inclusion of the Roma community in tourism matters appears to be limited. In Hungary, rural tourism could be particularly important, because the country lacks spectacular natural attractions, sea sides, high mountains or rainforest (Kantar and Svržnjak, 2018). The term "village tourism" is commonly used in Hungary referring to community-based tourism where food, lodging and services, present life in the countryside with active participation of visitors" (HNTA, 2005). In Somogy County

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of Hungary, within the Gypsies, the Boyash have a long tradition which demonstrates the life of Gypsies: their clothing and equipment, old and modern habits, traditions and attitudes. Potentially, ecotourism could bring the Roma people closer to the mainstream society and make them better understood. At the same time, the rural tourism destinations within which they reside will be marketed (Matlovicova et al., 2016). To achieve this, the perception of community members on the tourism enterprise established in their locality is critical to the success of the ventures. Negative perceptions among local residents may hinder their support for tourism development, while positive perceptions will secure their support for CBEs (Lee et al., 2013; Nicholas et al., 2009). Thus, this study examines Hungarians' perceptions regarding the inclusion of Roma Community in ecotourism development based on the resource endowment and the benefits gained from CBE development.

LITERATURE REVIEW

Rationale for CBT Development

The involvement of members of local communities in all aspects of tourism development is widely acknowledged (Nagarjuna, 2015; Gutierrez, 2019; Zielinski et al., 2020). Since CBT mostly targets marginalized and disadvantaged groups in the society (Tasci et al., 2013; Juma and Khademi-Vidra, 2019), this model of development, when applied in tourism addresses issues such as empowerment, self-reliance, social justice and sustainability (Giampiccoli, 2020). It is based on local community control, empowerment and benefits (Kaur et al., 2016). Ullan de La Rosa et al. (2017) recommend that CBT should be built upon the idea of collective ownership and management, redistribution of profits as well as ecological, social, and cultural preservation. From its promotion of all-inclusive participation and equity in planning, decision-making, management, ownership, and distribution of benefits and costs, it is a promising step towards achieving sustainable socio-economic and ecological development (Tasci et al., 2013).

Residents' Positive Perceptions on CBE

Ecotourism itself may bring immediate or gradual and important direct as well as indirect economic, social-cultural and environmental benefits to communities, especially to ecotourism staff. Snyman (2014) established that community members perceived ecotourism as reducing poverty by increasing real household incomes and opportunities in the long term and that ecotourism employment was perceived to reduce absolute poverty in rural areas, through steady, secure cash income provision in areas where there were few alternative income-earning opportunities. Similar perceived benefits enabled Vincent and Thompson (2002) to establish a strong support for the World Birding Centre ecotourism project in the US, with 79% of the local residents being on the affirmation.

Most studies reveal that local communities within tourism destinations are of the opinion that tourism helps them to diversify the livelihood sources of their families and enhance their wellbeing. Tourism is therefore regarded as a complementary activity, contributing to economic diversification (Iorio and Corsale, 2014; Coria and Calfucura, 2012). Local communities attest to being in a position to better pay their bills, more easily buy what they need, afford health care expenses and educate their children. In the Okavango region of Botswana, according to Mbaiwa and Stronza (2010) ecotourism has become the main livelihood activity of the members of these communities, replacing many traditional livelihood activities that damaged the environment. In some instances, however, only a very low effect on the generation of direct employment income has been confirmed (Vincent and Thompson, 2002; Kummitha, 2020).

Indirectly, communities benefit from ecotourism through the improvement of collective infrastructures and provision of local public goods (Juma and Khademi-Vidra, 2019). For example, income from ecotourism has been used to enhance water supply and provide housing to community households, as well as support for local sports activities and assistance for orphans and disabled people (Mbaiwa and Stronza, 2010). In terms of publicity, improvement in the infrastructure and opening to the outside world for ecotourism destinations such as Viscri, have made them relatively well-known villages, being cited in most tourist guidebooks (Iorio and Corsale, 2014; Kummitha, 2020). Researches have confirmed positive impacts of ecotourism on the revalorisation of local traditions and farming among the locals as well as a growing hope for a better future through provision of new inputs, options and aspirations, as well as optimism towards the future (Zapata et al., 2011).

Ecotourism forges networks which directly tackle problems such as lack of education and business experience, insufficient financial assistance and low level of democratic participation (Iorio and Andrea Corsal, 2014). Such conditions generally prevent communities, especially marginal ones, from taking tourism initiatives. Furthermore, the networks provide the community with bridging and bonding relations within the community that facilitated the development process. Networking is further evident when local guesthouse owners informally exchange guests among the different accommodation according to availability. Tourism also forges positive linkages with agriculture whereby villages even sell their products to the guesthouses. Through ecotourism, education for children and training for adults are facilitated to enable achieving and enhancing essential skills (Juma and Khademi-Vidra, 2019). Training courses in tourism and in other fields are organised for community members, to the point of obtaining certification to start independent enterprises. One of the key factors in eliminating poverty is through education and training of tourism professionals (Pénzes et al., 2014). The professional training programmes' structure promote professional profile and has specific value for potential employers (Matlovič and Matlovičová, 2016). For CBTs the focus usually is more and more on the poorest members of the community (Szente et al., 2018). Further, CBT projects have impacted on the integration of women to new roles in the labour market with up to 45% of employees in CBT projects within Nicaragua being women. As a result, many women feel more empowered with more decision-making capacity. Communities view ecotourism as having a positive effect on land value; the value of ecotourism-controlled land is higher than that of land used for other activities like logging, ranching, or agriculture (Mbaiwa and Stronza, 2010). Financial and physical capital obtained from ecotourism also serves as a safety net in case of unfortunate events and unforeseen expenses (Lepper and Schroenn, 2010). Apart from serving as a financial revenue generation tool leading to gross revenue increase, for some communities, the CBT projects have succeeded to reduce some economic uncertainty by diversifying local livelihoods, through tourism as a complementary activity, and the diminution of the risks of economic dependence. CBTs allow for re-investment back to the community an example being 10% for UCA San Ramo'n and UCA Tierra y Agua in Nicaragua (Zapata et al., 2011).

Regarding the environment, ecotourism involves environmental education in protected areas and facilitates the process of raising awareness on nature conservation (Zapata et al., 2011; Ilieş et al., 2017). Other benefits relate to improvements in water and waste management and the production of alternative energies (Osiaiko and Kummitha, 2020). Awareness of the economic importance of the preservation of cultural and natural heritage are reported to have arisen in some ecotourism destinations as well (Iorio and Corsale, 2014).

Residents' Negative perceptions on CBE

Local communities in ecotourism destinations have commonly associated the projects with seasonal employment (Iorio and Corsale, 2014). Economic leakages have also been reported in the community based tourism chain, with a perception that a proportion of tourism products that are consumed are purchased outside the community (Zapata et al., 2011). Concerning the opinion amongst respondents whether the larger community benefits from tourism or not, there is an indigenous perception that their relationship with tourism operators is

exploitive (Borman, 2008; Fay, 2007). For instance, it has been argued by Lapeyre (2010) that tour operators, both inbound and outbound, control most tourist flows within Namibia. Consequently, the revenue accrued by the communities largely depends on the extent to which they build commercial links with tour operators and travel agents. According to Coria and Calfucura (2012), ecotourism has added to the problem of resource conflicts as tourism operators and indigenous populations compete for resource access in the destinations. Another shortcoming of ecotourism for communities is that in early formative stages of projects, local leader and the external stakeholders heavily control local people (Iorio and Corsale, 2014). Local people opine that they are denied the chance to identify the priorities in the development process. Another perception is that ecotourism benefits are usually confined to elites in the community who earn the rights to run shops or develop tourism activities in the most profitable locations (Lapeyre, 2010). Hence, a very small proportion of population ends up benefiting. This uneven distribution of economic benefits can partly be attributed to significant inequality between indigenous communities and stakeholders outside the ecotourism areas (Coria and Calfucura, 2012). There is also an emergence of incipient conflicts between the tourism project and the larger community as a result of acculturation processes and noises from undesired visitors (Zapata et al., 2011). This comes with the perception that the tourism projects alter the family order which generate conflicts (Zapata et al., 2011). This include women doing double the amount of work due to the lack of male participation in home work, and gender violence, and parents generally spending less time with family and children.

Roma Community Tourism Initiatives in Europe

In almost all social and public activities, and life conditions, the Roma people are to a large extent described as marginalized and that the population has worse than average life conditions of the majority of European population (Kantar and Svržnjak, 2018). This situation has been attributed to poor education, exclusion from formal forms of work, specific life style and other community-specific characteristics. Some efforts have been made to develop economic activities that could create new ways of including the Roma population into community by affirmation of their culture and identity through rural tourism and ecotourism. Across Europe, a few tourism programmes have been initiated in the Roma regions, for example the region of Orfű near Pécs, which has an excellent European destination title because of its gastronomy offers to tourists (Kantar and Svržnjak, 2018). Another notable place is the Ladybird Farm established in 2002 and has since been welcoming guests, but with no significant inclusion of Roma community. More successful models of inclusion of this community to economic life through gastronomy are found in Hungary, Slovenia and Croatia. An example of Roma-based programme is Project ECOTOP 2 “*Life-long learning programmes for increased growth capacity in ecotourism*”. The implementation of this initiative is within INTERREG V-A cross-border cooperation programme Hungary - Croatia 2014-2020 with Križevci College of Agriculture working alongside other project partners. Previous evaluation results of this programme indicated that ecotourism is a special form of tourism in this cross-border area. However, there was evidence that it is not sufficiently developed and could not to a full extent satisfy the needs of ecotourists. Accommodation and other basic services which would correlate with worldwide accepted criteria imposed by ecotourism were to a large extent missing (Szente et al., 2018).

In Croatia there are currently two notable examples of inclusion of Roma people in the rural tourism. First is the Roma ethno house in the village Maglenča in Bjelovar-Bilogora County, and the second is the manifestations of Gypsy Ball and Market of bar musicians in the village Karanac in Osijek-Baranja County. The Roma ethno house of the autochthonous Croatian Roma group Lovar is located in the village of Maglenča. It is a tourism-culture object which simultaneously offers attractive and authentic service of presenting the unknown Roma history, tradition, language and customs as an integral part of the rich Croatian heritage, along with numerous products that Roma group Lovar used to be famous for. Being the first Roma house in Croatia, and also in Europe, visitors have the opportunity to see the permanent exhibition about the history of the autochthonous Croatian Roma groups Lovar and lavender products produced by the members of Roma association. Then we have the Gypsy Ball which takes place in Darda in Baranja. The event has a slightly over 15 years long tradition, attracting mainly the Roma people from other regions and countries, as well as numerous other guests that want to experience special Gypsy nights. The Market of Bar Musicians, a huge music-gastronomy event where one can listen to the best Roma and *tamburitza* bands from Croatia, Hungary and Serbia also exists (Kantar and Svržnjak, 2018). The possibility of including the Roma population in ecotourism or some other economic activity is generally very limited (Szente et al., 2018) because of some underlying operationalisation problems of their inclusion. One of these has been cited as the government's weak support towards their inclusion. In Slovakia for example, one of the most sensitive issues linked to the Roma problem is poverty in the Roma settlements, and searching for sufficient solutions that could lead to the improvement of the current state (Klimovský et al., 2016). In Hungary, this was evident when the Touristic Destination Management in Somogy County seemed not to have “any information at all about what this social group could offer or could be capable of contributing to tourism” (Kantar and Svržnjak, 2018). In view of aforementioned perceived benefits associated with ecotourism, it is thus prudent to have a study carried about to establish the perceptions of Hungarians on inclusion of Roma people in ecotourism initiatives in Hungary.

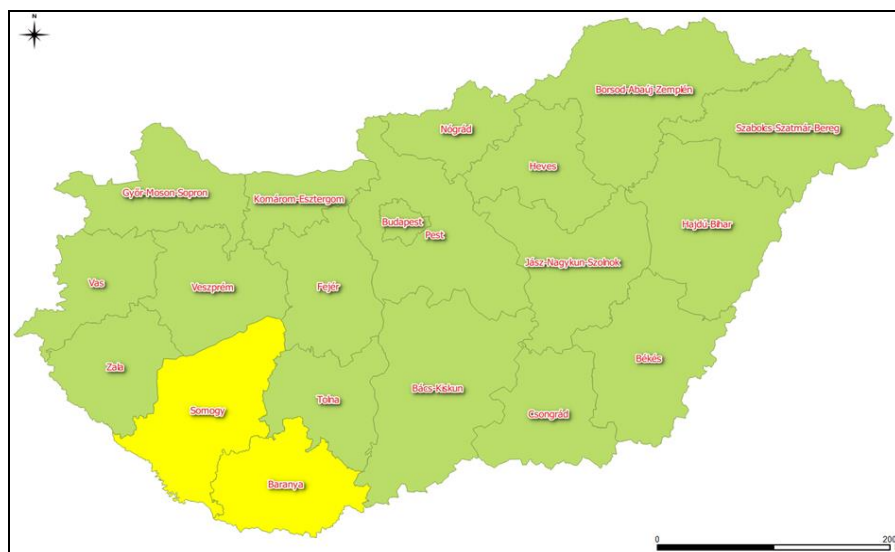


Figure 1. The map of Hungary showing the study areas, highlighted with yellow (Source: Barna, 2020)

METHODOLOGY

Study Area

Data for this research was collected through a questionnaire distributed online among tourists visiting Somogy and Baranya Counties in Hungary (Figure 1). These destinations were chosen for particular reason. Firstly, Somogy County and Baranya County host the highest density of Roma population (Somogy hosting 28,900 Romas which represent 5.1% of the country's Roma population, and Baranya County with 29,600 Romas which is 5.2 % of the country's Roma population (Csapó, 2019). Secondly these two counties have rich zoological natural points, national parks, national protected areas, native flora and fauna and highest natural landscapes in the country (Molnár and Horváth, 2008; Kerekes and Kiss, 2000). Lastly these two targeted counties have got eco-oriented

destinations, and tourists who visit these destinations are expected to be aware of ecotourism service and products. Additionally, Gyűrűfű Eco-village in Baranya County is known as the First Eco-village in Hungary and was found more than 20 years ago while Krishna Valley in Somogy County, is widely known as a cultural centre and eco-farm in Hungary. It is also a member of the Global Eco-village Network in Europe. For these reasons we selected these two cross-border counties, which provided appropriate study areas for data collection in understanding the Hungarian citizenry's perception about the involvement of the Roma population in ecotourism.

Study design, sampling and data collection

This research sought to answer the following research question: What are the Hungarian citizenry's perceptions and awareness about ecotourism products or services offered by the Roma community for the wider population in the country? To answer this question, this study used a quantitative research design by survey method to collect primary data from the two purposefully chosen eco-oriented destinations (counties) in Hungary. The survey questionnaire was designed into 3 sections: the first section dealt with demographic characteristics of the respondents. The second section dealt with Hungarian citizenry's perceptions on Roma culture and traditions. The scale was developed based on the finding of (Gosling et al., 2017; Snyman, 2017). The final section dealt with Hungarian citizenry's perception on activities or services that the Roma community have the potential to offer to eco-tourists. This scale was developed based on the finding of Syraji et al. (2017) and Fan et al. (2015). Data were collected online between the months of May and June 2018. A total of 306 domestic tourists filled the semi-structured questionnaire, consisting of open and closed ended questions. Out of these 247 questionnaires were complete and mistake free. The reply was voluntary and anonymous. Closed ended questions had 5 point Likert scale, ranging from 1 = "not at all agree", to 5 = strongly agree.

RESULTS

To fulfil the objectives and answer the research questions for this study, data was collected, edited and coded, and then analyzed by using Statistical Package for Social Science (SPSS) version 25 for descriptive statistics and inferential statistics. Mean, standard deviation and ranking revealed the relationship between Roma community's involvement in ecotourism and the Hungarian citizenry's perceptions.

Demographic Characteristics

Responses indicated that there were more males (54.3%) than females (45.7%). It follows that since time of the survey was summer period, more male visitors visited these two destinations along with their family members. The youngest respondent who filled the questionnaire was 18 years old and the oldest was 75 years old. Overall 82% of the respondents were age of group between 18-50 years and the remaining 18% of the respondents were above 50 years. As pertains to literacy levels, 16.5% had primary and secondary school education, 12.3% were certificate courses graduates from secondary school, 52.6% had university Bachelor's degree, and the rest, 18.6%, had attained Masters and higher education. Furthermore 44.9% of the respondents were Somogy County residents, 40.1% were from Baranya County, and the rest, and 15.0% came from other part of Hungary. When asked about their occupation, 65.1 % of the respondents said they were entrepreneurs/employed, 32.38% were students/pensioner/young mothers, and the remaining 2.42% respondents were unemployed/job seekers.

Table 1. Demographic characteristics of the Respondents (N=247) (Data source: Researchers' data analysis)

Items		Frequency	Percentage
Gender of the respondents	Male	134	54.3
	Female	113	45.7
Age of the respondents	18-25	71	28.7
	26-35	71	28.7
	36-50	61	24.6
	50 and above	44	18.0
Highest Educational Level	Basic School or Normal High school education	41	16.5
	Certificate courses from secondary schools	30	12.3
	College or university Degree	130	52.6
	Master and above	46	18.6
Respondents' county of origin	Somogy county	111	44.9
	Baranya county	99	40.1
	Other county	37	15.0
Occupation of the respondents	Entrepreneur/ Employee	161	65.1
	Students, Pensioner	80	32.38
	Jobseeker, Unemployed	6	2.42

Visitor's Preferred ecotourism products offered by Roma destinations

Findings in Table 2 show that village and forest walks offered by Roma community were ranked highest with 81.0% of respondents interested to experience this service from Roma community. Buying locally manufactured products ranked second with 71.4% of respondents interested to buy local products from these community. Experiencing the Roma tradition and cultural events ranked third with 46.4% of respondents interested in attending Roma traditional and cultural events. Experiencing of home stays at the destination ranked fourth with 45.2% of respondents interested in experiencing home stay programs, and lastly hand-made souvenirs had the least interest with 42.9%. All these are tourism products and service with economic potential that could benefit the region (Hornoiu et al., 2019; Stone and Wall, 2004; Stronza and Gordillo, 2008; Stem et al., 2003).

Table 2. Visitors' preferred ecotourism products or service experiences in Roma community (N=84) (Data source: Researchers' data analysis)

Statements	Frequency	%
Experienced home stay programs at the destination	38	45.2
Experienced Roma tradition and cultural events	39	46.4
Bought locally manufactured farm products -honey, jam, cheese, cooking oil	60	71.4
Participated in village and forest walks offered by Roma the community	68	81.0
Hand-made souvenirs	36	42.9

Gyöngyök Association in Pécs, the Romano Restaurant and Pizzeria in Zalaegerszeg and the Kíra organization in Gyula, were mentioned. They also mentioned some music bands, such as Dobogó, Khetanipe Ladybird Farm, and various NGOs organizations as common attractions/destinations. On the questionnaire items was the question on whether the respondents had knowledge of, and had participated in events or tours organized by Roma communities. Few of the respondents were aware of Roma wedding (34.6%) and the Roma Cultural Day (38.6%). It was also interesting that most of the respondents were aware of the World Roma Day (89.8%), although only 37.8% of them were familiar with the Roma Ball Days (Figure 2).

Ecotourism Opportunities for Roma Community Economic Development

This study went further to establish the Hungarian citizenry's perception on Roma cultural and traditional aspects as an ecotourism

Visitors' Knowledge about Tour Operators and Roma Community Events

Concerning citizens' familiarity with tour operators who offer tour packages to the Roma destinations or organize tours to Roma events, only 21 (8.0%) of the respondents were aware of such tour operators in Hungary. To clearly understand their awareness, the respondents were asked to name some of the organizations. In response, Színes

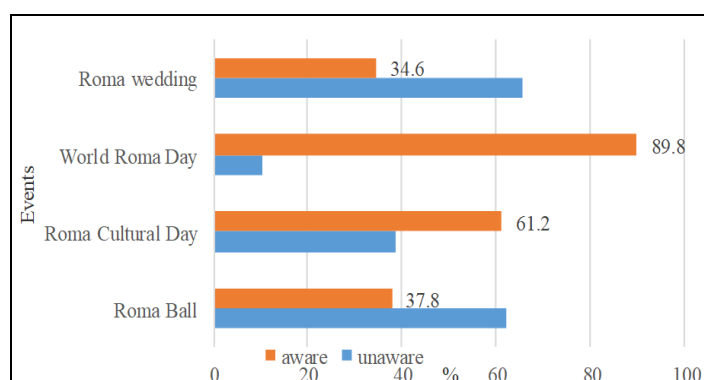


Figure 2. Knowledge of and participation on events or tours organized by Roma communities (N=247) (Source: Researchers' data analysis)

investment. A five point Likert scale (1= Strongly disagree 2= disagree 3= Neutral 4= Agree 5= strongly agree) was used to evaluate this among a total of 247 respondents by descriptive statistics (Mean, standard deviation and Rank). The responses were as follows: Interest in Roma community traditional dancing and music events \bar{x} =4.32; SD=.972, interest in traditional products and cuisines \bar{x} =3.75; SD=1.236, recommendation of Roma community as a potential resources for ecotourism development \bar{x} =3.52; SD=1.330, Roma community cultural value being rich enough to attract tourists to their locations \bar{x} =3.52; SD=1.163, and the need to encourage the Roma community to invest their talent and cultural products in tourism \bar{x} =2.92; SD=1.258. Concerning the interest in buying Roma community traditional products \bar{x} =2.77; SD=1.280, interest in Roma Community lifestyle and costumes \bar{x} =2.66; SD=1.302, being happy to attend events organized

by the Roma or to buy services provided by Roma \bar{x} =2.64; SD=1.269, having knowledge of Roma cultures and traditions being unique and close to natural environment \bar{x} =2.62; SD=1.168, and lastly, opinion that the EU, Local Government and NGOs support for Roma community's inclusion into ecotourism projects is viable \bar{x} = 2.46; SD=1.159. These results indicate that respondents had varied opinions on these aspects.

Table 3. Hungarian Citizens' perception on Roma culture and traditions (Data source: Researchers' data analysis)

Statements	Mean	SD	Rank
I know Roma cultures and traditions are unique and close to environment	2.62	1.168	9
Roma have traditional products and cuisines which attract tourists	3.75	1.236	2
I encourage Roma community to invest their talent and products in tourism	2.92	1.258	5
I am interested in Roma community dancing and music events	4.32	.972	1
I am interested in Roma community lifestyle and costumes	2.66	1.302	7
I am interested to buy Roma community traditional products	2.77	1.280	6
Roma community has potential resources for ecotourism development	3.52	1.330	3
I see viability in EU, Local Governments and NGOs support for Roma ecotourism projects	2.46	1.159	10
Roma community cultural value is rich enough to attract tourists to their locations	3.52	1.163	4
I would be happy to attend events organized by the Roma or to pay for services provided by Roma people	2.64	1.269	8

Respondents' Recommendations on Roma Community Ecotourism Product Development

Apart from cultural and traditional aspects presented above, the research further established Hungarian citizenry's recommendation on Roma community product development from ecotourism resources. Using a five point Likert scale, the respondents indicated their views about activities or services that the Roma community could develop to offer to ecotourists. The study results in Table 4 shows respondents' opinions ranked in the order of priority as follows: The highest ranking was the statement, recommending priority for Roma Community ecotourism products or services which are helpful for better economic conditions \bar{x} =3.67; SD=1.165. This was followed by a recommendation for Roma traditional Foods and beverages \bar{x} =3.63; SD=1.290, the recommendation for Roma traditional and Music performance events \bar{x} =3.60; SD=1.320, and recommendation to display Roma traditional costumes \bar{x} = 3.51; SD= 1.254. Below this was a recommendation to organize forest, national parks trips to see wildlife flora and fauna \bar{x} = 3.38; SD=1.215, to organize forest walks and pick wild products \bar{x} =3.16; SD=1.318, for Roma community to build eco-oriented guest houses for tourists \bar{x} =3.11; SD=1.186, and a recommendation for products that give proper environmental awareness programs to the Roma community \bar{x} =2.98; SD=1.239. Lastly, a recommendation to develop Roma community traditional souvenirs \bar{x} =2.77; SD=1.273. Once again respondents had different opinions on recommending Roma community resource exploitation for ecotourism.

Table 4. Recommendations on activities or services to be offered by the Roma community to eco-tourists (N=247) (Data source: Researchers' data analysis)

Statements	Mean	SD	Rank
I would recommend traditional Events, Music performers events (e.g. Gypsy Ball, Lugosi Orchestra, <i>Romano Drom</i> , and Caramel)	3.60	1.320	3
I would recommend Roma Traditional Roma Foods and beverages	3.63	1.290	2
I would recommend to display of Roma traditional costumes	3.51	1.254	4
I recommend Roma Community ecotourism resources which are helpful for better economic conditions	3.67	1.165	1
Organizing forest walks and pick products such as (walnuts, wild garlic elderberries)	3.16	1.318	6
I would recommend to organize forest, National parks trips to see wildlife flora and fauna	3.38	1.215	5
I would recommend to Roma community build ecofriendly Guest houses for tourists	3.11	1.186	7
I would recommend given proper environmental awareness programs to Roma community	2.98	1.239	8
Roma community traditional souvenirs (wicker basket, other carvings)	2.77	1.273	9

DISCUSSION

More male tourists visiting the destinations than female tourists (Table 1) could indicate that male respondents are more inclined to visit ecotourism destinations in Hungarian Roma destinations than females. This is consistent with the findings of much of previous research which suggest that male are likely to be more eco-oriented than females (Funnell, 2008). As pertains age, an overwhelming majority of the visitors, (total 57%) were of the age bracket 18-25 years. This points to the probability of majority of potential ecotourists to this destinations being youth, and not middle-aged or senior citizens. The findings also support the existing theory that ecotourists are likely to be "well educated" people in the society (Funnell, 2008). This is from the fact that we had a total of 52.6% having attained college and university education. A further 18% held a master degree or higher qualifications. Comparatively, 29% had secondary education as the highest academic qualifications. With respect to the visitors' County of origin, majority (45%) hailed from Somogy County and 40% from the neighbouring Baranya County, with a paltry 15% having travelled from the rest of the 17 Counties in Hungary. This shows that ecotourism activities in these destinations are highly popular only locally. It points to a need to aggressively market these destinations beyond the

neighbourhood. Concerted effort and promotional strategies should be aimed at publicizing these destinations to Counties with higher and more affluent populations including Pest County where the Capital city Budapest is, among other Counties in Hungary. Apparently, these destinations attracted more people (65%) with stable sources of income (entrepreneur/employee). This is consistent with typical ecotourists who are typified as having a stable, higher than average income (Dolnicar et al., 2013). Pensioners/students (32%) and job seekers/unemployed (2.5%) accounted for the remaining proportion of visitors. The popularity of ecotourism products in these destinations appeared to vary greatly (Table 2). However, there was no product whose popularity was too low to be regarded. "Hand-made souvenir" was the least popular product with 36% while the most popular product was "village and forest walks" with 81% popularity followed by "locally manufactured farm products" with 60%. Therefore to sustain the diversity, marketability and competitiveness of these destinations, the managers could do well to maintain all these products on their menus while enhancing the popularity of the less popular ones. Concerning the most preferred cultural and traditional experiences, dancing, music, and cuisine appeared to have the highest potential, according to the survey results (Table 3). It therefore suggests that if these destinations are to consider increasing the range of their ecotourism products, it would be worth prioritizing the exploitation of music and cuisine. This is further consistent with the respondents' recommendations (Table 4) where they recommended "ecotourism resources which are helpful for better economic conditions". Once more in this analysis, Roma traditional foods and beverages, and traditional music performance events are recommended by majority of respondents for inclusion into the designed products. Another interesting observation was the fact that only 37.8% of respondents were familiar with the Roma Ball Days, a few still, were aware of Roma wedding (34.6%) and the Roma Cultural Day (38.6%), while most of them were aware of the World Roma Day at 89.8% (Figure 2). These further emphasizes the need for making the other Roma Days as popular as the World Roma Day through aggressive promotion and awareness creation across Hungary. These destinations could perform exceedingly better if all these historic Days are widely recognized, acknowledged and celebrated to the point of attracting tourists to Roma community destinations.

CONCLUSION AND RECOMMENDATIONS

This study aimed at assessing the perception of the Hungarian citizenry towards the involvement of the Roma community living in Hungary, in ecotourism as an economic development strategy. Based on the results of this survey, the primary target groups of consumers and tourists could be the following: predominantly people of male gender, those with higher education, those with stable occupation with average incomes, and more likely adventurous travelers. The Roma people's culture, traditional foods and lifestyle could offer a good opportunity to improve their life through ecotourism. Overly, there was favorable perception towards the Roma culture and traditional values, attracting more tourists to Roma destinations. This study revealed that local government authorities and tour operators take little or no responsibility for organizing events or offering tour packages to the Roma destinations. They need to give awareness programs to citizenry, adequate knowledge about the Roma people's life style, their traditional and cultural products that could be integrated into ecotourism.

Cognizant of the fact that one of the key factors in eliminating poverty is through education (Pásztor et al., 2012; Péntes et al., 2014), education and training of Roma people to serve as tourism professionals could go a long way in enhancing the sustainability of CBT enterprises established (Ilies et al., 2017). Some of the respondents identified the importance of involving the target group, essentially the Roma youth in ecotourism. To this end, initiatives such as the 'Színes Gyöngyök' Association or the work of the folk artist József Kakas can be good examples for the youth, which are worth supporting. To this end, there is need for both the Hungarian Government, tourism stakeholders and the Roma community members to prioritize these issues, as has earlier been proposed by Kulcsár (Szente et al., 2018).

From the analysis, it emerges that there should be more ecotourism development among the Roma communities in Hungarian rural regions for enhanced economic benefits. Since ecotourism has the potential of delivering development (Kummitha and Osiako, 2020), it should be developed within rural Roma community regions by and for local community members who could invest in the development of diverse and unique facilities, activities, and events. This is achievable through inclusivity in engagements and support using appropriate strategies and approaches. These developments are envisaged create jobs for improving livelihoods, to improve local transportation infrastructure and ecotourism attractions, having a management system that is orderly and in harmony with standard ecotourism and hospitality experiences. By involving the Roma community in village and homestay tourism, cultural tourism events, natural site visits, and agri-tourism can widely deliver sustainable development in rural and marginalized regions of Hungary. Probably it is for these reasons that the Hungarian citizenry strongly perceived ecotourism as a potential tool for economic development of the Roma community living in Hungary.

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CITY BRANDING AND ITS VARIABLES: THE EVIDENCE FROM INDONESIA

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Abstract: This study aims to analyze city branding in tourist areas, with the variables being studied city brand attractiveness, tourism experience, city brand attitude, and city brand equity in tourism areas in Indonesia. This research method uses a quantitative approach with online surveys design, namely by taking a sample from a population and using a questionnaire to collect data. The main thing is that there is a hypothesis that will be tested for truth in this study. The survey questionnaire used is the Ministry of Education and Culture survey form. The research sample was conducted on 181 visitors to Bandung Barat, Indonesia. Structural equation modelling in this study uses a partial least square (PLS) structure. The research findings show city brand attractiveness and tourism experience on city brand equity through city brand attitude. This study produces a new model, namely, city brand attitude as a moderating variable that plays an essential role in building city brand attractiveness and tourism experience, which have the tourists primary preference. The tourist of Bandung Barat to be used as an affirmation of the identity of a vital city branding compared to other cities.

Key words: city branding, city brand attractiveness, tourism experience, city brand attitude, city brand equity

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INTRODUCTION

The concept of city branding is growing in Indonesia. Every government in Indonesia tried to introduce a tourist destination, the city power, and things that attract investors and tourists. The government is conducting promotions by creating city branding following the characteristics of each city. For strengthening city branding to the application of appropriate marketing city expressed by (Ahn et al., 2019; Ardyan and Susanti, 2018; Kavartzis, 2020). Naming is known as Malaysia with Truly Asia, Seoul to Soul of Asia, Amsterdam with Open for you, Brisbane Australia with New World City, and easy to remember, even for those who first heard it.

Development of city branding is devoted to putting the proper marketing strategies of various marketing strategies in an existing city so that the current competition is a challenge that must be faced. City branding must pay attention to culture, history, economy, architecture, landscape, growth and social development of society, and infrastructure is combined into one unified whole as an identity that is sold and can be accepted by everyone (Bonakdar and Audirac, 2020; Ginesta et al., 2020; Tresna et al., 2019). The attractiveness of cities in Indonesia is the geographic location between two oceans and two continents which connects the two, with an area of land and sea of 5.180.053 square kilometres, 17.504 islands and 1.340 ethnic groups. Making Indonesia has a lot of tourism potential, ranging from nature tourism, cultural tourism, culinary tours and shopping tours. This is an attraction for foreign tourists and local tourists.

The tourist preference becomes the city known as the city brand equity (Chin et al., 2020; Chin et al., 2020; Trusova et al., 2020). The variables associated with it such as brand awareness, brand loyalty, unique image, positive perceived quality, and revisit, the variable is judged from data on the number of tourists who do not reach the target that has been set in advance and some tourist areas closed because there is no ongoing management to maintain the facilities and development so that visitors are not interested in returning, become bored and do not want to visit these sights. The value of a city that becomes the preference of tourists to visit a city is known as city brand equity which is owned by West Bandung Regency, according to the assumption of researchers that it has not been maximally assessed from the variables inherent in it such as brand awareness, brand loyalty, unique image, positive perceived quality, and revisit, variables are evaluated from a data City brand equity which is less than the maximum visitor behaviour caused by factors known brand attitude in the concept of city branding (Bonakdar and Audirac, 2020; Dudek-Mańkowska and Grochowski, 2019; Górska-Warsewicz, 2020).

Variable-forming brand attitude is brand nature, business creativity, shopping, transport, cultural activities, and social bonding, and each indicator can be adapted according to the conditions of the field. An increase in brand attitude can be maximized by accommodating tourists' desire to get satisfaction when visiting tourist attractions, in this case, known as the tourism experience variable (Iliev, 2020; Marques, 2020), with indicators, value/ cost, local culture, accessibility, physiography and climate, place attachments, entertainment, the quality of service, safety/security, and hospitality. Other variables that can increase brand attitude by increasing city attractiveness are indicators of shopping, accessibility, amusement, activities, and atmosphere (Jung, 2020; Schumpp, 2020). The concept of city brand equity through city brand attitude, tourism experience and city brand attractiveness, is also supported by (Górska-Warsewicz, 2020; Oleinik, 2019; Rakhmanov, 2019). Chan (2019) provided evidence that city brand equity and its variables, such as tourism attraction, accessibility, amenities, ancillary service, hedonism,

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novelty, local culture, refreshment, meaningfulness, involvement, city safety and comfort, city diversity, brand awareness, brand loyalty, proud to live, overall lifestyle is good, rather live here than anywhere else, and good reputation among residents. Besides, previous studies have investigated different aspects of city brand equity, such as that among visitor (Hussein, 2020; Lemarié and Domann, 2019; Munawir, 2019); among Citizens (Ginesta et al., 2020; Schumpp, 2020); and entrepreneurs (Chivandi et al., 2020; Oleinik, 2019) but studies on tourism management in the city brand equity are limited (Bonakdar and Audirac, 2020; Górka-Warzewicz, 2020; Jawahar, 2020). Tourism management recognizes the importance of increasing city brand equity in their area to their role as management. City branding has significantly affected tourist visits (Haarhoff, 2019; Hussein, 2020). Why should we manage city brand equity? The reason is, each city is competing to increase its preference for visits to a town, providing the best facilities for tourists. The city management scheme aims to increase tourist visits. It is essential to know the products and services needed before tourists decide to visit a city. Management of city brand equity will impact the community's welfare and help invest in a town by managing city brand equity by focusing on tourist services. City brand equity is based on the objectives of this study, namely: (1) creating a city branding model concept consisting of city brand equity, city brand attitude, tourism experience, and city brand attractiveness; (2) measuring the level of city branding; (3) verifying the city branding model through its objectives among tourists in Indonesia; and (4) build interdependence between city branding variables (Ardyan and Susanti, 2018; Gómez et al., 2018; Kavaratzis, 2020).

MATERIALS AND METHODS

City Brand Attitude

A person carries out brand Attitudes as an evaluation of the overall concept towards a city, and it can be said that attitudes as individuals are faced with a stimulus that requires an individual reaction to a city. Jhamb (2020) stated that "attitude toward the brand is a relatively enduring, one-dimensional summary evaluation of the brand that presumably energizes behaviour. Brand Attitudes are relatively long and imprint tourists' attention after visiting a city, so they need to be appropriately managed to maintain their quality. Jiang et al., (2020) explain that brand attitudes can be formed through three factors, namely: (1) social bonds, (2) sun and surf brand personality, (3) business creativity. Brand attitudes will shape and influence the appreciation of social stimuli. Responses will guarantee one of the bases from which brand attitudes are formed. The requirement to have an answer and gratitude is to have experience related to psychological objects.

City Brand Attractiveness

City attractiveness is an essential part of urban branding. Investors and tourists are always looking for something interesting in the city. Noni et al. (2015) stated that "the attracting talented and creative people positively, affecting a city's general attractiveness to other stakeholders, such as investors and businesses". In the view of investors, investors will analyze the attractiveness of investing in the city. The city must be environmentally friendly and support business to create jobs, increase the working population and income levels, and encourage investors to invest in their well-being, thereby boosting growth. Investors will see whether a city can provide benefits if they invest their money in the town or not. Investors will also analyze how many tourists enter the city (Chivandi et al., 2020; Miftahuddin et al., 2020).

Tourism Experience

Experience is an important part that must be appropriately managed. The concept of experiential marketing emerged due to changes in the business world and is named the experiential economy. Also, the notion of Tourism Experience was expressed by Ardyan and Susanti (2018) which was taken from the concept of Brakus et al. (2009) saying that "brand experience as subjective, internal consumer responses (sensations, feelings, and cognitions) and behavioural responses evoked by brand-related stimuli that are part of a brand's design and identity, packaging, communications, and environments. Experience is significant to touch the emotional side consumers, not just the practical side. Various studies explain that the experience of handling the emotional side will be able to increase satisfaction (Al-Makhadmah, 2020; Carvache-Franco et al., 2020; Demirovic Bajrami et al., 2020). There are only a few studies that specifically examine the experience of city brands. Dealing with something found in a city, a tourist destination, some researchers write tourist experiences (Fedorchenko et al., 2020; Setyawati et al., 2020). The experience given to tourists must be unforgettable (Dashper, 2020; Sterchele, 2020; Stienmetz, 2020).

City Brand Equity

Brand equity can be applied in various fields. Some researchers have tried to use brand equity (Chan, 2019; Coelho, 2020; Kazemi, 2018; Pamungkas et al., 2020). In this study, brand equity will focus more on tourist ratings for city branding. In this study, tourist-based brand equity is defined as tourists' value based on their opinion about destination tourists, city facilities, and services. Tourism based brand equity indicators were adopted from Gómez et al. (2018) including brand awareness, brand loyalty, unique image, positive perceived quality, and revisit.

METHOD

Data

The study was based on measuring the level of city brand equity among the tourist population and was conducted in Indonesia's developing country. The sample size was determined using random sampling, and 200 tourists were chosen from the population. The research used online survey methods (Evans and Mathur, 2018). Approximately 200 questionnaires have been distributed, but only 192 respondents have completed the questionnaire. After validating the results, the number of valid questionnaires that could be used was 181: this met the minimum sample requirement according to (Hair, 2020). Table 1 explains the profiles of visitors. Table 1 indicates that respondents' gender profile is split between 51.4% female and 48.6% male. The majority of respondents are Diploma (58.6%) and High School (22.1%), while the rest of the sample consists of undergraduate (17.7%) and graduate students (1.7%). Most of the respondents (46.4%) registered more than 3 million Indonesian rupiahs. Approximately 35.9 per cent of respondents are age between 15 and 25 years.

Questionnaire design

Each questionnaire contained 51 questions of city branding indicators and seven demographic questions. The measurement variables used in the model estimation, identifying the associated latent variables as brand attractiveness, tourism experience, city brand attitude, and city brand equity, with these constructed as the arithmetic total of responses to statements on 5-point likert scales ranging from 1=strongly disagree to 5=strongly agree.

Data-analysis techniques

The present research uses partial least squares (PLS) to estimate the measurement and structural models. This technique provides advantages over covariance-based models (structural equation modelling (SEM) models (Sarstedt, 2019; Shmueli, 2019): (1) greater convergence due to its simplicity; (2) predictive applications; (3) better suited for small sample studies (less than 250 cases); (4) better suited for formative construct analysis; (5) more versatile by allowing for the integration of small samples; and (6) Advisable when the number of

indicators per latent variable is high. A variety of studies have used this technique to estimate first-and second-order models that are formative and reflective in nature (Cepeda-Carrion, 2019; Sarstedt, 2020). The program used to model the PLS was SmartPLS. The technique used for the significance test was bootstrapping, which involves the generation of a given number of samples of the same size as the original sample using a replacement value, thus obtaining a standard error value distribution.

Table 1. Visitor profiles

Variable	Frequency	Per cent
Gender		
Male	93	51.4
Female	88	48.6
Age		
15-25	65	35.9
26-35	63	34.8
36-45	41	22.7
46-55	9	5.0
>=56	3	1.7
Education		
High school	40	22.1
Diploma	106	58.6
Undergraduate	32	17.7
Graduate	3	1.7
Household income per month		
Rp.500.000-Rp 1.000.000	30	16.6
Rp.1.000.000-Rp 2.000.000	19	10.5
Rp.2.000.000-Rp 3.000.000	48	26.5
>Rp.3.000.000	84	46.4

Table 2. Loading factor for each measurement variable

Latent Variables	Measurement variable	Loading Factors	t-Value	P Values	Result
City Brand Attractiveness	Tourism Attraction	0.869	27.834	0.000	Valid
	Accessibility	0.880	34.994	0.000	Valid
	Amenities	0.945	72.207	0.000	Valid
	Ancillary Service	0.933	58.075	0.000	Valid
Tourism Experience	Hedonism	0.892	38.985	0.000	Valid
	Novelty	0.857	11.767	0.000	Valid
	Local culture	0.850	24.304	0.000	Valid
	Refreshment	0.880	16.895	0.000	Valid
	Meaningfulness	0.866	35.049	0.000	Valid
	Involvement	0.898	36.595	0.000	Valid
	Proud to live	0.855	31.331	0.000	Valid
Brand Attitudes	Overall lifestyle is good	0.875	30.348	0.000	Valid
	Rather live here than anywhere else	0.856	24.648	0.000	Valid
	Good reputation among residents	0.876	30.279	0.000	Valid
	City diversity	0.905	44.037	0.000	Valid
City Brand Equity	City safety and comfort	0.897	43.159	0.000	Valid
	Brand Awareness	0.897	38.522	0.000	Valid
	Brand Loyalty	0.908	45.693	0.000	Valid

RESULTS DISCUSSIONS

To achieve the objectives, we choose the study, and it is possible to use a sampling unit, namely tourists visiting the tourist destinations of West Bandung Regency to be evaluated, with criteria and scales that have been prepared in advance. Concerning periods, to obtain greater homogeneity in answers and suitability for questions that refer to specific moments, fieldwork was adjusted for a limited time frame, focusing on the December 2018 holiday season. Table 2 provides the estimations of the loading factor for each indicator on each latent variable. All the indicator variables have a loading factor estimate of more than 0.5. Each indicator also has a significant effect on each variable based on the t-test (t-value > 1.96, significance level = 5%). These loading factors are statistically significant, thus indicating good-quality items, based on Hair (2019). After a comprehensive analysis of the scales and constructs defined, city brand attractiveness, tourism experience toward city brand equity and brand attitudes were considered one-dimensional constructs reflectively linked to their indicators. Brand equity was described as a multidimensional construct with dimensions related reflectively to their indicators and formatively to the construct. This study conceptualizes brand equity as a second-order structure with three first-order dimensions as formative indicators and the influence of city brand attractiveness toward attitudes and tourism experience toward the brand attitudes as contributors to brand equity. Similarly, the impact of brand equity on a one-dimensional construct reflecting brand attitudes is presented. Studies have included second-order models to measure brand equity (Chan, 2019; Coelho, 2020; Kazemi, 2018).

Table 3. Result of Hypotheses Testing

Relationship	Original Sample (O)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values	T Table	Decision
City Brand Attractiveness -> Brand Attitudes	0.130	0.073	1.798	0.036	1.65	accepted
City Brand Attractiveness -> Tourism Experience	0.828	0.040	20.504	0.000	1.65	accepted
Tourism Experience -> Brand Attitudes	0.756	0.070	10.750	0.000	1.65	accepted
Tourism Experience -> City Brand Equity	0.553	0.075	7.402	0.000	1.65	accepted
Brand Attitudes -> City Brand Equity	0.411	0.076	5.428	0.000	1.65	accepted

Table 3 shows that the structural equation model's estimations are accurate based on the parameters for the calculation of the test hypotheses. These findings indicate that the model is suitable for the data set as a measurement model. The results are also set out below in Equation 1 to Equation 5. The hypotheses have been addressed from the model and have been shown to have a substantial positive effect.

Structure equations:

$$TE = 0.828 \cdot CBA \quad (1)$$

$$BA = 0.130 \cdot CBA + 0.756 \cdot TE \quad (2)$$

$$CBE = 0.553 \cdot TE + 0.411 \cdot BA \quad (3)$$

Equations 1 show that city brand attractiveness (CBA) has a positive effect on subjective tourism experience (TE), equation two show that city brand attractiveness (CBA) and tourism experience (TE) have a positive impact on emotional brand attitude (BA), and equation three tourism experience (TE) and brand attitude (BA) have a positive effect on subjective city brand equity (CBE).

The results of statistical tests show that the P-value of each variable is less than 0.05, so H0 is rejected, and H1 is accepted. There is an effect of city brand attractiveness (CBA) on tourism experiences (TE), it can be concluded that an increase in city brand attractiveness (CBA) affects tourism experience (TE) by 82.8%. (2) This means that each variable city brand attractiveness (CBA) and tourism experience (TE) has a significant effect on brand attitude (BA), so it can be concluded that an increase in city brand attractiveness (CBA) affects brand attitude (BA) by 13% and tourism experience (TE) has a direct effect of 75.6% on brand attitude (BA). (3) In the substructure III section, it shows the tourism experience (TE), and brand attitude (BA) variables have a significant effect on city brand equity (CBE), so it can be concluded that the increase in tourism experience (TE) has an impact on city brand equity (CBE) by 55.3% and brand attitude (BA) has an effect of 41.1% on city brand equity (CBE). It is known that each standardized coefficient (path) value between variables shows a positive result.

Through the recapitulation results in table 4, it can be seen that in the first sub-structure, the City Brand Attractiveness variable has an effect of 68.6% on the Tourism Experience. At the same time, the remaining 31.4% is influenced by other variables outside of this study.

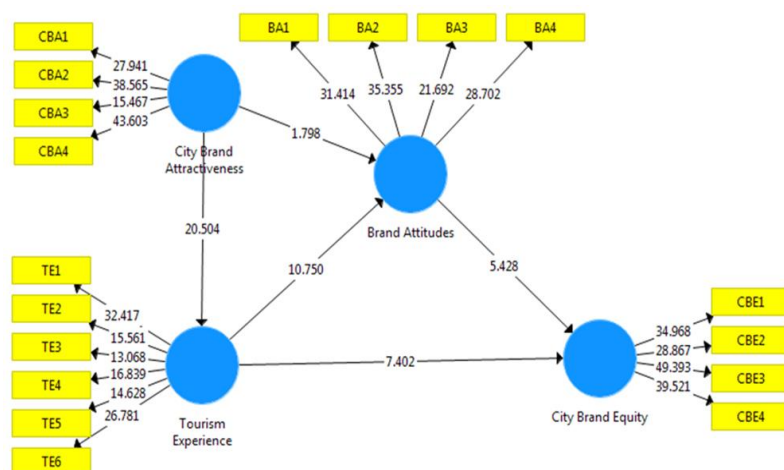


Figure 1. Research Framework

Table 4. Result of Hypotheses Testing

Correlation	Path	R square Partial	R square Simultan
City Brand Attractiveness -> Tourism Experience	0.828	-	0.686
City Brand Attractiveness -> Brand Attitudes	0.130	0.099	0.752
Tourism Experience -> Brand Attitudes	0.756	0.653	
Tourism Experience -> City Brand Equity	0.553	0.502	0.867
Brand Attitudes -> City Brand Equity	0.411	0.365	

Whereas in the second sub-structure, the City Brand Attractiveness and Tourism Experience variables affect 75.2% on Brand Attitudes. Simultaneously, the remaining 24.8% is influenced by variables other than the two independent variables. Judging from the path coefficient value, the most dominant variable sequentially influencing Brand Attitudes is Tourism Experience with a path coefficient of 0.756 (65.3%) then City Brand Attractiveness with a path coefficient of 0.130 (9.9%). The third substructure, the Tourism Experience and Brand Attitudes variables influence 86.7% on City Brand Equity. Judging from the path coefficient value, the most dominant variable sequentially affecting City Brand Equity is Tourism Experience with a path coefficient of 0.553 (50.2%), then Good University Governance (GUG) with a path coefficient of 0.290 (20.3%), then Brand Attitudes with a path coefficient of 0.411 (36.5%).

CONCLUSION

The conclusion of this study. The city attractiveness affects brand attitudes and shows that the city's attractiveness in the tourist area of West Bandung Regency is a factor that plays an essential role in maintaining the brand attitudes of the tourist area. The higher the attractiveness of cities in research is a determinant in increasing brand attitudes 2). The city attractiveness affects the tourism experience, and this shows that the attractiveness of cities in the West Bandung Regency area is a driving force that will increase tourism experience. The tourism experience resource as an intangible resource in West Bandung Regency's tourist area is very high, and this cannot move alone without structuring attractive city attractions. So that the tourism experience felt by visitors increases with a suitable arrangement of city attractions. 3). The tourism experience affects brand attitudes, and this shows that tourism experience in the tourist area of West Bandung has an essential role in optimizing brand attitudes. So that the tourism experience in the context of this research is only able to increase brand attitudes because of its uniqueness, offering new tours, new experiences and the friendliness of the community around tourist objects owned by West Bandung Regency so that tourists feel happy and spoiled when travelling to West Bandung Regency. 5) Tourism experience has no direct effect on city brand equity. This study's context can only increase city brand equity by records are not homogeneous, which are quickly owned by other city competitors. Therefore the resources owned need to be high heterogeneity, have uniqueness, diversity of tourist objects, new tours, new experiences in tourism that are not owned by tourist areas in other cities, and become the central preference tourist destination city. 6). Brand attitudes have a direct effect on city brand equity, and This shows that the higher brand attitudes in the tourist area in West Bandung Regency are an intangible resource that has been formed very strong and has a good reputation and is the primary preference for achieving city brand equity as a differentiator from other cities.

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SURVEY OF THE CONSUMER ATTITUDE OF TOURISTS VISITING SOUTH TRANSDANUBIA, HUNGARY

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Abstract: The primary goal of the survey conducted was to work out adequate methods for the exploration of the consumer attitudes of tourists visiting South Transdanubia (Hungary) and to typify these attitudes, especially to analyse tourists' behaviour concerning local products. The source of the primary findings of the paper is a guest questionnaire survey conducted in 2018. These data were analysed – relying on professional literature – by cluster analysis and factor analysis. During the research comprehensive information was gained about the typical consumer habits of tourists arriving at South Transdanubia, which habits show several similarities and matches to consumer trends revealed by the literature research. Getting to know these consumer attitudes allowed the authors to create consumer types with the help of which the structure and size of the potential consumer base can be known.

Key words: rural tourism, consumer attitude, consumer type, local product, South Transdanubia, Hungary

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INTRODUCTION

Tourism in Hungary is diverse, with several tourism products in the supply that attract both domestic and international guests. As regards the – regional distribution of the – number of guest nights spent in commercial accommodations in Hungary, two junctions are visible, Budapest and the Balaton region (19%) by the figures of 2019 databases of guest numbers. On the other hand, the region in the focus of the paper has significantly lower indices, based on the guest nights spent in commercial accommodations it is only 4% of the volume of tourism in Hungary (1.261 million guest nights) that was realised in South Transdanubia (Hungarian Central Statistical Office, 2019). These statistical indices reflect the distribution of tourists before the pandemic. In the recent years, tourism in the region has gone through considerable changes, making researches on the tourism development of South Transdanubia important, also, the willingness to utilise these research findings in practice may be high. Rural areas as complex regions have gone through a fundamental transition in the last decades. As a result of this transition, they are not only spaces of agriculture but also areas of recreation and entertainment, and in some cases, we can even talk about geographical space of tourism (Lane and Kastenholtz, 2015). For tourists participating in rural tourism, it is the quality of recreation, the opportunity to get away from the everyday stress of urban life that matters, as does the chance to get to know traditional lifestyles, authenticity, personal guest-host relationships and the proximity of nature (Frochot, 2005; Lane, 2009; Sidali et al., 2018; Sims, 2009). Approaching the issue from the demand side, a visible trend is the growing demand of urban dwellers to visit and get to know rural spaces (Bel et al., 2015; Molera and Abaladejo, 2007; Park et al., 2012; Pesonen, 2015; Sidali and Schulz, 2010). Rural areas thus have several advantages, as areas abundant in natural and cultural values and resources, offering a huge diversity of experiences where tourists can find the services that best match their needs (Campón-Cerro et al., 2017).

LITERATURE REVIEW

Results of empirical researches show that tourists visiting rural destinations do not only have different motivations but also different profiles, their behaviour and consumption habits are diverse and different (Eusébio et al., 2017; Fernández-Hernández et al., 2016; Molera and Abaladejo, 2007; Park et al., 2012; Pesonen, 2015). Knowing these attitudes may help manage the demand for destinations and the selection of the ideal segments (Kastenholtz, 2004). Besides, effective marketing activity, which can be implemented in several ways, plays an important role. It can be product-centred (Frochot, 2005), can be based on activities pursued during travels (Eusébio et al., 2017; Pesonen, 2015), or connected to factors related to sustainability (Kastenholtz et al., 2018). Tourism may play an important role in the sustainable development of rural areas especially in well organised and managed rural areas and regions where tourism appears as a part of the development strategy (Çakır et al., 2018; Clarke, 2005; Kastenholtz, 2004; Kastenholtz et al., 2012; Saxena et al., 2007).

The relationship between gastronomy and tourism has been appreciated over recent years (Cohen and Avieli, 2004; Long, 2004; Torres, 2002). The food offered to tourists may have a dominant impact on the economy, culture and environmental sustainability of the touristic destinations. Experts emphasise that locally produced goods have advantages both for the local inhabitants and the tourists (Boniface and Ioannides, 2017; Ilbery et al., 2003; Kim et al., 2009; Woodland and Acott, 2007). Local food products and the industries built on them (foods and beverages alike) are suitable for the improvement of sustainability both on the side of tourism and local community by the propaganda of sustainable farming solutions, the support of local businesses and creating a brand for the destination which is suitable for the attraction of even more tourists and investments. These advantages can also be seen concerning locals and tourists (Clark and Chabrel, 2007; Ilbery et al., 2003). Another achievement of initiatives based on local products can be linking visitors to local products and their producers. Telling the “story” of the food may satisfy tourists’ need for authenticity, which may lead to the stabilisation of the market of these products (Sims, 2009). Tourists often search for the experience of authenticity and the typical and iconic products of the respective areas, in which local products may play an important role (Sims, 2009). Advantages attributed to “local” products – for example, better environment,

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healthier foods, greater social justice – can often be contradictory. The primary reason for this is the alternative meanings of “local” as a concept (Maye et al., 2007). When purchasing local products, it must be mentioned that tourists can experience a sort of moral satisfaction, as they choose a more ethical form of eating. The personal experience of eating and shopping can strengthen tourists’ attachment to the destinations (Soper, 2007). Several studies have already proved that customers are willing to pay more for premium quality goods produced locally (Balogh et al., 2016; Carpio and Isengildina-Massa, 2008; Darby et al., 2006). According to Sims (2010), several consumers have been alienated from today’s modern food industry. Their needs for natural and healthy foods may be prime motivating factors by which tourists can be attracted to rural areas. Tourists are also consumers in the destination who partly bring their consumption habits with them and partly show an interest in the local specialities that are novel for them, which means that local food products can appear as attractions to them. A visible trend has unfurled in food consumption since the traditional community attitude of the 1960s through the individualist, “calculating” attitude of the 1980s and the followers of the trend of “uniqueness”, modernity and hedonism in the 1990s to the “responsible” consumer attitude, representing ethics and fairness and respecting the community again, after the turn of the millennium (Dagevos and Gaasbeek, 2001; Lehota, 2004). By the early 21st century, new concepts and behaviours are strongly attached to the consumption of foods like experience, already well-known in tourism, and lifestyle determining one’s self-expression (Törőcsik, 2014). Besides this, the issues of environment and responsibility are becoming more and more important in influencing consumption attitude. The growth of the membership of the LOHAS (Lifestyles of Health and Sustainability) group, i.e. health- and environment-minded consumers indicates the growing role of responsibility taken for the narrower and broader environment (Wenzel et al., 2007). Consumption of foods produced in the direct vicinity of the place of residence, i.e. local food trend seems to be evaluated (Törőcsik, 2011), which appreciates authentic products of the region and also their producers, marking a return to the seasonal trend of food consumptions based on traditions (Smith and Mackinnon, 2008).

The primary objective of the examinations made was the elaboration of adequate methods for the exploration of the consumption attitude of tourists visiting South Transdanubia and the typifying of these attitudes, to allow the analysis of their behaviour concerning local products.

MATERIALS AND METHODS

The main source for the research findings of this paper is a questionnaire guest survey conducted in 2018. Sampling lasted from early summer in 2018 (May-June) right to the beginning of autumn (September-October), matching the seasonality of the region, i.e. sampling was done in pre-main- and after-season as well. Areas concerned by the questionnaire survey are within the territory of the touristic region of South Transdanubia. The selection of the settlements involved in the survey was done by a tourism index defined by the Hungarian Central Statistical Office, the number of guest nights spent in commercial accommodations. Results of the questionnaire survey were recorded in a database with the assistance of the Microsoft Excel software. Of the total sample (n=430), only a certain proportion (n=166) could be included in further examinations, the main reason for which is the lack of data at certain variables.

This database was the foundation of the statistical methods applied in the subsequent phases of the research. The statistical methods were applied with the assistance of the software IBM SPSS Statistics 25.0. During the research, a total of 41 variables along 5 relevant dimensions were included in the factor analysis, as a result of which the total of the sample could be characterised with the use of 13 factors. Before the factor analysis, it was checked whether the variables chosen were suitable for further analyses. Table 1 shows the values achieved by the preliminary examinations proving the applicability of factor analysis, in the case of Bartlett-test, and also for the Kaiser-Meyer-Olkin indices. These tests proved that the sample is suitable for further analyses in terms of every dimension.

Table 1. Preliminary examinations proving the applicability of the analysis (Data source: own research)

KMO and Bartlett's Test		Dimension I	Dimension II	Dimension III	Dimension IV	Dimension V
KMO		0.682	0.769	0.709	0.724	0.673
Bartlett's Test	χ^2	438.123	693.039	324.180	456.427	1064.124
	df	36	36	15	28	28
	Sig.	0.000	0.000	0.000	0.000	0.000

Following this, tourists included in the factor analysis were surveyed with cluster analysis, distinguishing the different types using the Ward process and the application of the squared Euclidian distance. Each variable was measured along a metric scale, no outstanding individual values were found, and no significant correlations among the factors were detected, either. When defining and checking the number of clusters, the examination of the adequate number of elements of coefficients and types was done.

The description of the clusters and the examination of the correlations among the background variables (comparison of cluster centroids and averages) were done by variance analysis. During the survey of consumer types and local products, respondents could define on a scale from 1 to 5 to what extent they preferred local products. Aggregations were made for easier comprehensibility and easier analysability. Preference levels 1 and 2 were aggregated and given the specification typically not preferred. Preference level 3 was considered as neutral, while preference levels 4 and 5 were taken as category typically preferred. The main

demographic features of tourists (n=166) involved in the survey (Table 2) are a good indication of the fact that they made a heterogeneous sample. The main characteristics of the sample are male (61%), age between 18-25 (30%), single (39%), secondary degree, income between HUF 100,001-250,000 (48%).

Table 2. General demographic features of tourists involved in the survey (Data source: own research)

Gender: male: 61%; female: 39%
Age: under 18: 1%; 18-25: 30%; 26-35: 27%; 36-45: 14%; 46-55: 18%; 56-65: 4%; above 65: 5%
Marital status: single: 39%; (married) couples with child(ren): 34%; (married) couples with no child yet: 28%
Schooling: elementary: 6%; secondary: 50%; higher level: 44%
Income: less than HUF 100,000: 31%; HUF 100,001-250,000: 48%; above HUF 250,000: 21%

RESULTS AND DISCUSSION

Consumer attitude in the tourism of South Transdanubia

Exploration of consumer attitudes was done along five dimensions (Figure 1). At the decision on the use of each dimension, it was an important principle of selection that they should be relevant in tourism research and match the research objective defined earlier.

Based on the nature of the respective dimensions, the variables were chosen from among the questions of the questionnaire, the main aspect in their selection was the connection between the – contents of the – dimension and the variable. The questions selected, i.e. the variables describing the different characteristic features of consumer behaviour have high touristic relevance, also supported by the literature. The result of the factor analysis aiming at the filtering of the variables is shown in Figure 1, demonstrating that it is 13 factors that describe the consumer preferences connected to the realised demand. For the sake of easier interpretation, we have highlighted the factor weights in the tables summarizing the relationship between the variables and dimensions (Table 3, 4, 5, 6, 7), so that the characteristic of the variable of each consumer attitude is outlined. Dimension I (Table 3) is the frequency of the use of traditional sources of information, in connection with which a total of nine variables were included for three consumer attitudes. The first attitude (expert information) is typical mainly of those tourists who prefer information mediated by the tourism trade. The information acquisition habits of tourists showing the signs of the

second attitude (simplified information) reveal a preference for simple solutions primarily. A different attitude is shown by those tourists who prefer first-hand information; this factor contains variables representing the highest level of trust.

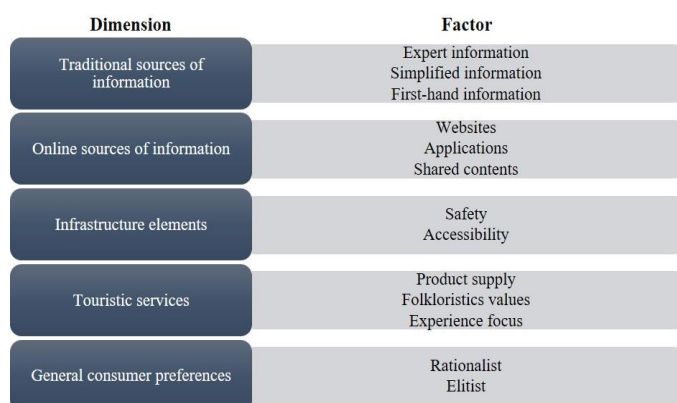


Figure 1. Survey dimensions applied and factors detected in the research

Factor	Traditional sources of information	F1	F2	F3
F1 (Expert information)	TourInform office (Frías et al., 2008)	0.816	-0.011	0.01
	Travel agency (Frías et al., 2008)	0.76	-0.037	0.005
	Travel book (Lyons and Wearing, 2008)	0.728	0.114	-0.026
	Travel fair (Sarmiento et al. 2015)	0.612	0.303	0.001
F2 (Simplified information)	Information signs, signs assisting Orientation (Marschall et al., 2017)	-0.163	0.679	-0.085
	TV advertisement (Pan et al., 2011)	0.314	0.663	0.184
	Flier, brochure (Berger, 2004)	0.152	0.656	0.065
F3 (First-hand information)	Recommendation by relatives and friends (Bieger and Lasser, 2004)	-0.01	0.117	0.832
	Previous experience (Murphy et al., 2007)	-0.012	-0.023	0.831

Table 3. Frequency of the use of traditional sources of information (Data source: own research)

Factor	Online sources of information	F1	F2	F3
F1 (Websites)	Website of tourism service providers (No and Kim, 2015)	0.79	0.085	0.179
	Website of attraction (No and Kim, 2015)	0.739	0.201	-0.061
	Travel websites (Akay, 2020)	0.731	0.123	0.23
	Website of the accommodation (No and Kim, 2015)	0.657	0.137	0.012
F2 (Applications)	Google Maps (Hsu et al., 2012)	0.108	0.868	-0.068
	Mobile applications (Tan et al., 2017)	0.14	0.745	0.284
	Facebook (Mariani et al., 2018)	0.239	0.616	0.185
F3 (Shared contents)	Twitter (Sotiriadis and Zyl, 2013)	0.089	0.109	0.861
	Pinterest (Maurer and Hinterdorfer, 2014)	0.111	0.157	0.85

Table 4. Frequency of the use of online sources of information (Data source: own research)

Factor	Infrastructure elements	F1	F2
F1 (Security)	Cleanliness of public areas (Mordue, 2017)	0.847	0.162
	Cleanliness of natural environment (Puhakka and Siikamäki, 2012)	0.809	0.12
	Public security (Tarlow, 2014)	0.678	0.192
F2 (Accessibility)	Car parking facilities (Anderson et al., 2006)	0.03	0.811
	Accessibility of the respective destinations (Hooper, 2014)	0.198	0.792
	Access for disabled persons (Buhalis and Michopoulou, 2011)	0.216	0.48

Table 5. Significance of the infrastructure elements of the touristic destination (Data source: own research)

supply available in the destination is featured in the attitude called product supply. The second attitude (folkloristic values) is typical, in the first place, of tourists open to folk values, for whom the use of environment-friendly solutions is a decisive factor. The attitude of experience focus is characteristic for those tourists who attribute special importance to experiences coming from the services used. Dimension V (Table 7) is general consumer preferences, along which two consumer attitudes, with 4 variables each, assist the interpretation of the sample. Rationalist attitude is typical of those tourists in the first place who make their decisions by rational consumer preferences primarily. The elitist factor characterises those tourists whose decisions are influenced by special aspects.

Factor	Touristic services	F1	F2	F3
F1 (Product supply)	Supply of other local products in the region (Kastenholz et al., 2016)	0,812	0,284	-0,007
	Shopping facilities, commercial establishments (Meng and Xu, 2012)	0,754	-0,116	0,311
	Supply of local food products in the region (Komariah et al., 2020)	0,739	0,321	0,102
	Demonstration of folk values, related programmes (Rodzi et al., 2013)	0,173	0,812	0,012
F2 (Folkloristic values)	Use of environment friendly solutions (Andereck, 2009)	-0,024	0,721	0,299
	Gastro- and other festivals, feasts (Timothy, 2015)	0,263	0,716	0,11
	Quality of service, attitude of the staff (Tsaur and Lin, 2004; Sharpley and Forster, 2003)	-0,087	0,154	0,755
F3 (Experience focus)	Hospitality of the locals (Mansour and Ariffin, 2016)	0,18	0,108	0,714
	Having a community experience (Zou et al., 2012)	0,26	0,074	0,566

Table 6. Significance of the elements related to the touristic services

Factor	General consumer preferences	F1	F2
F1 (Rationalist)	Price and value ratio (Mangion et al., 2005)	0.757	-0.016
	Quality (Sánchez et al., 2006)	0.749	0.036
	Price (Masiero and Nicolau, 2011)	0.749	0.033
	Accessibility/availability (Hashimoto and Telfer, 2006)	0.726	0.037
	Supply (Park and Jang, 2013)	0.602	0.293
F2 (Elitist)	Fashionableness (Turner and Witt, 2001)	0.047	0.924
	“Luxury” character (Thurlow and Jaworski, 2012)	0.069	0.882
	Uniqueness (Thurlow and Jaworski, 2012)	0.06	0.671

Table 7. General consumer preferences (Data source: own research)

Consumer types in the tourism of South Transdanubia

Using the consumer attitudes defined, respondents involved in the survey were classified into five types by cluster analysis (Table 8). For the easier analysis of the table, we highlighted the consumer attitudes in terms of every consumer types in each dimension. The earlier presentation of consumer attitudes allows that variables have also become definable for each consumer type.

The first type, making the largest part of the sample, is goal-oriented tourists, with 34% of tourists surveyed falling into this category. Of all 13 consumer attitudes, 7 are typical of them. During their travels they pay special attention to accessibility and product supply, also, they typically show rationalist consumer preferences in the first place.

Dimension	Consumer attitude	Consumer type				
		Goal-oriented 34%	Meticulous 20%	Classical 20%	Exclusive 14%	Hedonist 11%
Traditional sources of information	Expert information	Atypical (-0.596)	Typical (0.296)	Typical (0.144)	Typical (1.400)	Atypical (-0.359)
	Simplified information	Typical (0.233)	Typical (0.521)	Atypical (-0.415)	Typical (0.093)	Atypical (-0.475)
	First-hand information	Atypical (-0.077)	Typical (0.394)	Typical (-0.032)	Atypical (-0.630)	Typical (-0.025)
Online sources of information	Websites	Atypical (-0.635)	Typical (0.935)	Typical (0.326)	Typical (0.340)	Atypical (-0.086)
	Applications	Atypical (-0.316)	Typical (0.812)	Typical (0.198)	Typical (0.105)	Atypical (-0.709)
	Shared contents	Atypical (-0.202)	Atypical (0.020)	Atypical (-0.520)	Typical (1.739)	Atypical (-0.298)
Infrastructure elements	Security	Typical (0.091)	Typical (0.458)	Typical (0.062)	Atypical (-0.502)	Atypical (-1.434)
	Accessibility	Typical (0.487)	Typical (0.150)	Atypical (-0.774)	Atypical (-0.320)	Atypical (-0.076)
Touristic services	Product supply	Typical (0.286)	Typical (0.572)	Atypical (-0.814)	Typical (0.256)	Atypical (-0.092)
	Folk values	Typical (0.170)	Typical (0.063)	Typical (0.038)	Typical (-0.073)	Atypical (-1.314)
	Experience-focus	Typical (0.224)	Typical (0.582)	Atypical (-0.182)	Atypical (-1.197)	Typical (0.084)
General consumer preferences	Rationalist	Typical (0.396)	Typical (0.163)	Atypical (-0.169)	Atypical (-0.659)	Atypical (-0.866)
	Elitist	Atypical (0.018)	Typical (0.384)	Atypical (-0.791)	Typical (0.862)	Atypical (-0.001)

Table 8. Consumer types defined by the cluster analysis (Data source: own research)

The positioning of the consumer types detected in the classifications in the literature

The typifying of the consumers that we gained by our survey can be compared to further classifications in the professional literature. When analysing consumer trends, Lehota (2004) defined six consumer attitudes. The result of the cluster analysis done by Malota et al. (2018) also yielded six consumer types, in our terminology: consumer segments. The respective types, based on their characteristic features, can be connected in different ways to the consumer attitudes that our research detected. These connections of different quality are demonstrated in Table 9. The table shows whether there is a correlation between our consumer types and the consumer types defined in the literature, which were classified into four categories: correlation by their characteristic features, indirect correlation by their characteristic features, opposite types and no correlation. As regards the consumer types identified by this survey, it is the types “meticulous” and “goal-oriented” that can be best matched to the types demonstrated in the professional literature. The group of the “exclusive” is quite similar to those of the “unique” by Lehota (2004) and the “active perfectionists” and those “seeking local specialities” identified by Malota et al. (2018). Analogies to “hedonists” can be found in Lehota (2004) “individualists” and “unique”. The characteristic features of “classical tourists” are the least similar to the types in the other two classification systems; in fact, the type “responsible” by Lehota (2004) even shows opposite features.

Our types	Consumer types by Lehota (2004)						Consumer segments by Malota et al. (2018)					
	Individualist	Social	Traditionalist	Calculating	Unique	Responsible	Active perfectionists	Seeking value for money	Seeking local specialities	Everyday active	Price sensitive	Casual perfectionists
Goal-oriented	+	0	=	=	0	x	=	+	0	0	+	+
Meticulous	+	=	0	=	+	=	+	=	+	0	=	=
Classical	=	0	=	=	0	x	=	=	=	=	0	=
Exclusive	=	0	=	x	+	0	+	=	+	0	x	=
Hedonist	+	0	0	=	+	0	=	0	=	0	x	=

Table 9. Relationship dimensions among the consumer types (Source: Lehota, 2004; Malota et al., 2018; own research)

Legend: Direct correlation by their characteristic features: +; Indirect correlation by their characteristic features: =; Opposite types: x; No correlation: 0

It can be said about all consumer types identified in our research (Table 10) that the overwhelming majority of tourists fall into the category typically preferred when it comes to local products. It is seen that most tourists had average or above-average preference levels. One of the reasons for this may be the fact that the trends identified in the introductory part of the paper are also true for tourists travelling to South Transdanubia, their openness to and interest in local products is traceable also during their travels.

	Typically not preferred	Neutral	Typically preferred
Goal-oriented	6%	33%	61%
Meticulous	4%	18%	79%
Classical	13%	19%	69%
Exclusive	11%	17%	72%
Hedonist	0%	27%	73%

Table 10. Distribution of the preference for local products among the consumer types (Data source: own research)

CONCLUSION

In our research, we gained a lot of diverse information about the consumption habits typical of tourists visiting South Transdanubia, which can be correlated and matched in several aspects to the consumer trends identified in the professional literature. Getting to know these consumer attitudes allowed us to create consumer types by which the structure and size of the potential consumer base can be learnt.

As regards the preference level of the respective consumer types for local product, the proportions within the types and the formerly identified consumer attitudes, the following statements can be made. Those types that were typified by more than one attitude concerning the

sources of information had a neutral preference level in a smaller proportion. The types relying on expert information or websites or applications showed a smaller proportion of neutral preference level. As a summary, it can be stated that the regular use of different sources of information promotes the birth of preference for local products in both a positive and negative way.

Despite the lack of preference for folkloristic values, 73% of hedonist tourists are in the category of “typically preferred”. The categories of which a hedonist attitude is less typical showed this low preference level in higher proportion. The categories characterised by the elitist attitude showed a neutral attitude in a lower proportion than other categories did. The categories not characterised by attitudes related to online sources of information showed a significantly higher level of neutral preference.

High level of preference is most characteristic for the meticulous type, a reason for which may be the fact that 12 out of the 13 attitudes are typical of them, i.e. their decisions made about local products is based on the consideration of several aspects. A high level of preference is less typical for the goal-oriented type, which may be explained by the fact that members of this group rely on simplified information, only.

A neutral preference level is most typical of the goal-oriented type, a reason for which may be their reliance of the members of this category on simplified sources of information, only. A neutral preference level is most typical of the exclusive type, which may be explained by the fact that this is the only category that relies on shared contents as a source of information.

A low preference level is most typical of the classical type; a reason for this may be the fact that hedonist attitude is not typical of them. A low preference level is least typical of the hedonist type, a reason for which might be the fact that only two attitudes are typical of them.

The future way of this research could be the search for the relationships between the touristic demand and the consumer types determined by our survey concerning the local products of the Southern Transdanubia. These results would be beneficial for the region itself and based on them tourism professionals would be able to create development strategies based on the current behaviour of the tourists.

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THE GREEN SPACE AND SOCIAL IMPACT IN ALMATY CITY: A CROSS-SECTIONAL DATA ANALYSIS

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Abstract: The theory of urban ecology tries to enhance the positive aspects of green space for humans, while at the same time decreasing the negative aspects of cities for the environment. These benefits are reflected in economic terms as they have a positive effect on real estate values, investment, tourism and the quality of life. In this study urban green space is defined as all urban land covered by vegetation of any kind. This covers vegetation on private and public grounds, irrespective of size and function, and can also include small water bodies such as ponds, lakes or streams. This study aims to find the relationship between green space abundance and social impact in particular on academic progress in Almaty city, South Kazakhstan. Data on green space, academic average point score, and nine possible confounding variables were collated. Multiple linear regression analysis was performed. Multivariate data analysis was performed to produce scatter plots that include regression lines. There was a positive relationship between the proportion of green space and better academic average scores per student after accounting for the possible confounding variables. This study provides some support for the idea that access to green space has a positive impact on academic progress, but by no means is it conclusive.

Key words: urban planning and development, academic progress, regression analysis, Kazakhstan

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INTRODUCTION

It is now widely accepted that urban green space, such as parks, support and promote good mental and physical health (Diaz et al., 2006). Urban green space has been linked to stress reduction (Roe et al., 2013), improved social cohesion (Maas et al., 2009), reduced morbidity in various groups of diseases (Maas et al., 2009), recovery from mental fatigue (Taylor and Kuo, 2009; Berman et al., 2012) and the promotion of exercise (Bell et al., 2008; Alcock, 2014) amongst other things. There is also a growing body of evidence for a positive relationship between physical and mental health and academic attainment. For example, the vast majority of published articles on the matter have reported positive associations between physical activity and cognition (Hillsdon et al., 2006; Howie and Pate, 2012). A large number of researchers in the field now believe that there is sufficient evidence to introduce school physical activity policies that have the potential to improve academic results (Howie and Pate, 2012; Mynbayeva and Yelbayeva, 2020). Studies on the effects of mental health on academic success have found that mental health issues, such as anxiety and depression, are significant predictors of lower grades and increased chances of dropping out (Eisenberg et al., 2009; McLeod et al., 2012). One study also concluded that students whose mental health improved over their time at school made better academic progress than students whose mental health did not improve or worsened (Murphy et al., 2015).

Other research suggests that children living in areas with more green space around them may have better spatial working memory (Flouri et al., 2019; Taysum et al., 2020). Spatial working memory is a measure of how effective people are at orientation and recording information about their environment. It enables us to navigate through a city or remember the position of objects. The same research found that a lower quantity of neighbourhood green space was related to poorer spatial working memory, and this relationship was the case in both deprived and non-deprived neighbourhoods (Wolch et al., 2014; Flouri et al., 2019). Dadvand et al. (2015) assess the association between indicators of exposure to green space and measures of cognitive development, including working memory (the system that holds multiple pieces of transitory information in the mind where they can be manipulated), superior working memory (working memory that involves continuous updating of the working memory buffer), and inattentiveness in primary schoolchildren (Mynbayeva and Pogolian, 2014; Dadvand et al., 2015).

Within cities there is substantial potential to increase the ecosystem performance of green spaces (Tratalos et al., 2007), and within urban ecology there is a growing understanding of the functioning of natural systems within the urban environment (Kaye et al., 2006; Andersson, 2007). A focus on ecosystem services could lead to a better understanding of the connections between humans and the environment. Therefore, ecosystem services must be explicitly integrated in decisionmaking (Daily et al., 2009; Movkebayeva et al., 2020). Ecosystem services could be used as criteria in green space planning, both to evaluate and to provide goals for management and planning. This is often done for one or two ecosystem services already. For example, some cities in developed countries are using the water regulation services of urban green as an extra asset in their green management. Approaches using multiple ES criteria are scarce. These ecosystem services criteria should be combined with other criteria in green space planning. Recently Nuisl et al. (2009) proposed such a combined framework to evaluate land use change. They

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suggested an assessment that takes several criteria into account, including many ecosystem services. This could lead to an analysis that not only provides a more integrative way of looking at urban areas, but also gives new insights within a discussion that has a strong focus on spatial criteria (Nuissl et al., 2009; Koshim et al., 2020). The presence of green spaces within cities varies, but is diminishing with the current trend of urban compaction (Fuller and Gaston, 2009; Aliyeva et al., 2020). The dominance of impervious surfaces also changes the local climate, and creates an urban heat island effect. Together with direct human actions these differences have a profound impact on urban biodiversity and the provisioning of ecosystem services (Shandas et al., 2008; Aktymbayeva et al., 2020). Despite this chain of evidence, there has been very little work done on establishing the relationship between access to green space and academic achievement. In this study urban green space is defined as all urban land covered by vegetation of any kind. This covers vegetation on private and public grounds, irrespective of size and function, and can also include small water bodies such as ponds, lakes or streams (Artykbaev et al., 2020). This study aims to identify whether the positive effects of urban green space listed above extend to improved academic attainment. Such work is important as a better understanding of how academic achievement is affected by environmental factors may help to improve learning outcomes. This is particularly relevant given that in recent years, opportunities for spontaneous and regular contact with the natural world have decreased significantly for many children.

METHODOLOGY

Part of the effect of green space on academic progress may be the result of direct or indirect selection. Direct selection takes place when people's academic success influences their chances of living in a favourable environment. Indirect selection takes place when people with certain characteristics related to wellbeing (such as income) can afford to live in a favourable environment. Almaty city was selected for the case study of the effect of green space on academic progress. Almaty is the largest megalopolis of Kazakhstan with a population of almost 2 bln and there are 40 universities offering 901 study programs. The city is located in the southern part of Kazakhstan and surrounded by mountains. The significant area of all urban land covered by vegetation of any kind (Figure 1).

It is important when analyzing the strength of the relation, to take the possibility of selection into account and to control for this. Publicly available data for the following variables were obtained from the Kazakh National Datastore for Almaty city and other resources (Karatajev et al., 2016; Karatajev et al., 2017a): % area that is green space (2015), average point score per student (2018/19), population density (2019), % of residents that students at Al-Farabi Kazakh National University (2019), employment rate of 16-64 year olds (2019), median house price (2019), median household income estimate (2018/19), % of children in reception year that are obese (2016/17 to 2018/19), % of children in year 6 who are obese (2016/17 to 2018/19), and % unauthorized absence in all schools (2019).

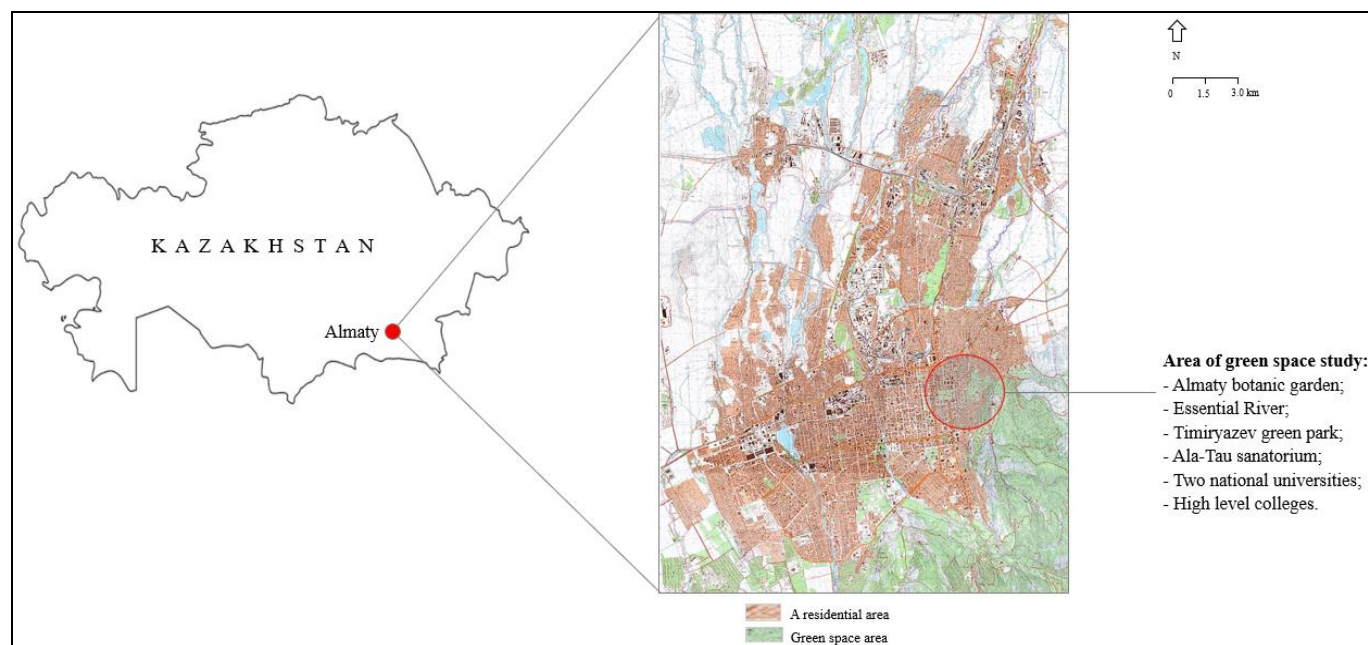


Figure 1. Green space and residential area of Almaty city

Multiple linear regression analysis was then carried out on the data. All procedures were carried out using the RegressIt add-in on Microsoft Excel. If the data are created by numerous variables, the analytical methods become very complicated. If a function is a linear function containing two or more variables, the multiple linear regression method is an excellent approach to fit data. Multivariate data analysis was carried out, producing descriptive statistics and scatter plots that include regression lines. The methods of analysis include changing the number of sample points to derive the least sample number required for solving the accurate estimated parameter values. Besides, different high-order lens distortion parameters were ignored, and only the various modes of low-order parameters were regressed to compare their effects on the overlay analysis results. In our case, let y be the linear fitting function of the m number of virables (see Breiman and Friedman, 1997; Toriello and Vielma, 2012),

$$x_1, x_2, \dots, x_m \text{ to } y(x_1, x_2, \dots, x_m) = a_0 + a_1x_1 + a_2x_2 + \dots + a_mx_m, \quad (1)$$

where a_0, a_1, \dots, a_m are constant parameters numbered at $m+1$, see (Toriello & Vielma, 2012). If the number of engineering data is n , then the sum of the square of error is:

$$S_r = \sum_{i=1}^n (y_i - a_0 - a_1x_{1,i} - a_2x_{2,i} - \dots - a_mx_{m,i})^2 \quad (2)$$

Derive the derivatives of the above equation with respect to each parameter (see Toriello & Vielma, 2012), and let:

$$\frac{\delta S_r}{\delta a_0} = \frac{\delta S_r}{\delta a_1} = \dots = \frac{\delta S_r}{\delta a_m} = 0 \quad (3)$$

Then matrix equation can be derived as follows (see Breiman and Friedman, 1997; Toriello and Vielma, 2012):

$$\begin{bmatrix} n & \sum 1_i & \sum 2_i & \dots & \sum m_i \\ \sum x_{1,i} & \sum x_{1,i}^2 & \sum x_{2,i}x_{1,i} & \dots & \sum x_{1,i}x_{m,i} \\ \sum x_{2,i} & \sum x_{2,i}^2 & \sum x_{2,i}x_{2,i} & \dots & \sum x_{2,i}x_{m,i} \\ \dots & \dots & \dots & \dots & \dots \\ \sum x_{m,i} & \sum x_{m,i}^2 & \sum x_{m,i}x_{1,i} & \dots & \sum x_{m,i}x_{m,i} \end{bmatrix} \times \begin{bmatrix} a_0 \\ a_1 \\ a_2 \\ \dots \\ a_m \end{bmatrix} = \begin{bmatrix} \sum y_i \\ \sum x_{1,i}y_i \\ \sum x_{2,i}y_i \\ \dots \\ \sum x_{m,i}y_i \end{bmatrix} \quad (4)$$

The elements $a_0, a_1, a_2 \dots a_m$ are the equation parameters estimated by fitting engineering data. The SD of multiple linear regression (see Toriello and Vielma, 2012) is:

$$\sigma_R = \sqrt{\frac{S_r}{n-m-1}} \quad (5)$$

Therefore, the sample number n must be, at least, larger than $m + 1$. Otherwise, SD will be invalid if the denominator of the square root in SD is equal to or smaller than zero. The multiple linear regression method includes planning the number of sample points, exploring differences in the numerical order of the error parameters in the overlay accuracy model, and the effect of ignoring different high-order lens distortion parameters on overlay. To obtain accurate estimated values of error parameters, the number of sample points increases exponentially along with the increase in the number of orders of parameters in the overlay accuracy model. When estimated values of the error parameter of low order distortion parameters of overlay have a numerical order far higher than that of high-order distortion parameters, the high-order distortion parameters can be ignored. In this case, excellent overlay improvements can still be achieved.

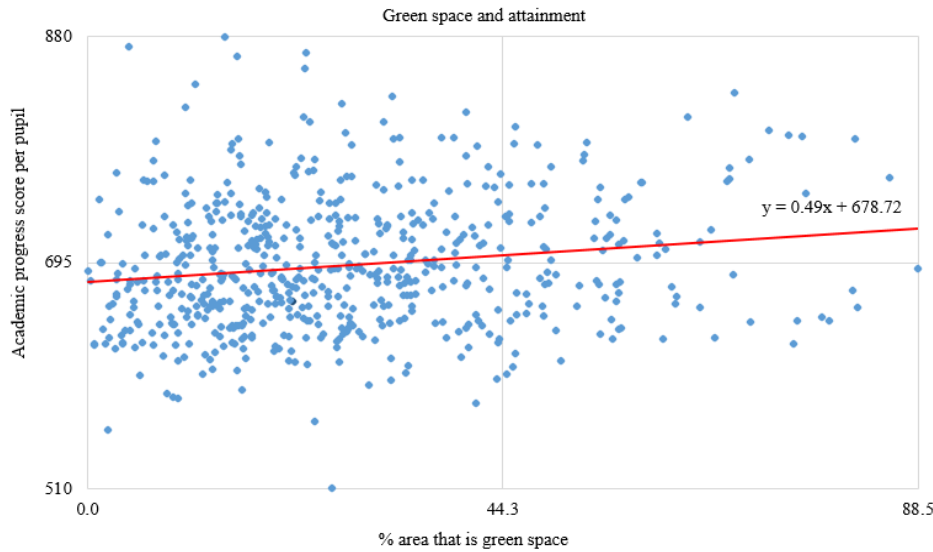


Figure 2. The relationship between green space area and academic progress

Only two coefficients (percentage of reception children that are obese and population density) were statistically significant according to the conventional 0.05 limit (Nuzzo, 2014). While these results do not oppose the theory that access to green space has positive effects on academic attainment, the support this study provides is weak and the results are by no means conclusive. The size of the regression coefficient for each independent variable gives the size of the effect that variable is having on better academic point scores per pupil.

Table 1. The proportion of green space and better academic point scores

Regression Statistics: (10 variables, n = 605)				
	R-Squared	Ad.R-Sqr.	Std.Err.	Std.Dev.
	0.330	0.319	44.020	53.330
Coefficient Estimates: (10 variables, n = 605)				
Variable	Coeff.	Std.Err.	t-Stat.	P-value
% of unauthorised absence in schools	-77.000	5.575	-13.813	0.000
% of reception children that are obese	-2.319	0.993	-2.335	0.020
% of year six children that are obese	-0.660	0.616	-1.073	0.284
Population density	-0.001290	0.000828	-2.055	0.040
Median household income estimates	-0.001153	0.000786	-1.467	0.143
Median house price	0.000019	0.000020	0.945	0.345
% area that is green space	0.090	0.146	0.617	0.537
Employment rate	0.212	0.530	0.400	0.689
Constant	838.989	43.141	19.448	0.000
Variable	Lower 95%	Upper 95%	Std.Dev.	Std.Coeff.
% of unauthorised absence in schools	-87.949	-66.052	0.338	-0.489
% of reception children that are obese	-4.269	-0.369	3.109	-0.135
% of year six children that are obese	-1.869	0.549	5.146	-0.064
Population density	-0.002522	-0.000057	4.849	-0.117
Median household income estimates	-0.002697	0.000390	6.504	-0.141
Median house price	-0.000021	0.000059	182.662	0.066
% area that is green space	-0.196	0.376	17.525	0.030
Employment rate	-0.829	1.253	6.478	0.026
Constant	754.261	923.717		

RESULTS

As can be seen in Table 1, the regression analysis showed a slight positive relationship between the proportion of green space in a ward and better academic point scores per student after accounting for the possible confounding variables; the coefficient was 0.090 with a P-value of 0.5. This has been represented graphically in Figure 2. Unsurprisingly, the variable with the largest coefficient magnitude was percentage of unauthorised absences in schools; this coefficient was three orders of magnitude larger than the coefficient for percentage area that is green space. There was huge variation in the orders of magnitude of the coefficients. Percentage area that is green space had the coefficient with the sixth largest magnitude out of the 10 variables included in the model, and the third largest positive coefficient.

The positive relationship found was very small; the regression coefficient was three orders of magnitude smaller than that of percentage of unauthorised absences in schools. The P value was not statistically significant according to convention, so, whilst this might take away from the certainty of the conclusion that there is a small but positive relationship between access to green space and academic attainment, it should not discourage further studies on the subjects that use different methods. This is partly because many in the fields that traditionally use statistical testing have claimed that they do not accurately reflect the quality of evidence and may lead to false positives (Trafimow and Marks, 2015). P values have also been criticized for deflecting attention from the actual size of the effect (Nuzzo, 2014). For these reasons, the P values in this study are of secondary importance to the size and plausibility of the effect of green space on academic attainment. Although the R2 value was relatively low,

it is of minor importance here as no predictions are being made. Another reason to interpret the results of this analysis with caution is that they contradict the results of numerous large studies that have shown that variables such as family income have significant and substantial impacts on attainment (Moore et al., 2013). Although, arguably, a more rigorous approach to answering this question may have been to group wards that are similar in all respects apart from their proportion of green space and then to perform a t-test, this technique was rejected due to the difficulty in grouping wards, which would have required subjective decisions to be made. Despite the lack of previous literature directly related to the link between access to green space and academic attainment, this study does have some strengths.

Firstly, the publicly accessible data allowed for many variables that are known to impact on attainment, such as wealth and ethnic background (Moore et al., 2013), to be accounted for. This is really important, as it allowed the effects of access to green space to be isolated as much as possible and thus gives a much more realistic picture of the impact of access to green space. The large sample size and the variation in demographics and geography between wards is also a credit to the study. It is also important to note the possible limitations of this study. Firstly, uncertainty is introduced by conducting analysis at ward level. As a result of this, length of residence as a measure of the degree of exposure or access to green space or possible lags in outcomes were not accounted for. It also means that no individual-level conclusions can be made, and that some differences in how some subpopulations are affected, such as how different genders are affected differently, could not be accounted for. As noted above, the data were collected between 2010 and 2015. Ideally, if annual data on the independent variables included were available for 2000-2015, changes in the demographics and green space of wards could have been considered. The dataset was derived from a large-scale public data source, which does not account for small privately-owned green spaces. Therefore, this study only looks at the effects of large, public green spaces. It is plausible that these spaces, such as gardens, do have an effect on mental and physical health (Nutsford et al., 2013) and attainment, and so this should be taken into consideration when interpreting results.

DISCUSSION AND CONCLUSION

This study shows that urban planning and university campus planning programs should include aspect for green space development and policy makers should take the amount of green space in the living environment into account when endeavoring to improve the social situation of the population, especially in urban environments. Like most countries, Kazakhstan is concerned with the future development and prosperity of constituent cities and regions; how is the modernisation and urbanisation of the country to be governed; how can people prosper, and social cohesion and environmental protection be ensured; how is green campus university programs should be integrated into urban policy development. In all countries, these questions must be superimposed on existing institutions, societal norms, state budgets and cultural practice. The major cities of Kazakhstan are also modernising very rapidly. City institutions are transitioning from those of a young, post-Soviet country, to those of an established independent nation. This includes building the capacity of local government and, crucially, the cultivation of a latent civil society dialogue. There is a consistent concern about the ability of Kazakh civil society to participate in decision making on issues such as urban water management, air quality, waste management and urban planning.

Access to green environments on universities, schools grounds or in universities, schools attendance areas could thus enhance both student and school-level academic success while lack of such access could hinder success. This in turn could influence the future well-being of urban populations via impacts on employment and socioeconomic status associated with poor educational outcomes. This notion is particularly interesting in the context of intensively-developed urban environments with little vegetation or green space; environments where student academic performance, particularly that of disadvantaged groups, is often poor. The limited evidence that exists in this area indicates that nature on and around university campuses can indeed impact the academic performance of entire student bodies. For example, high schools with views of trees and shrubs have been found to have higher average standardized test scores and graduation rates, more students going to college, and lower delinquency rates than other schools (Matsuoka, 2010). Additionally, levels of vegetation around universities have been found to exhibit a positive association with third-grade reading and mathematics scores on standardized tests (Wu et al., 2014). The connection between urban nature and university-level academic performance, however, is currently under-explored, and defining relationships between urban vegetation and university performance will require considerably more research. Key questions that remain center on identifying the locations in which natural landscape elements impact student performance, how different natural landscape elements influence academic performance, and the levels and types of exposure to nature that relate to student academic performance.

In conclusion, this study provides some support for the idea that access to green space has a positive impact on academic progress, but by no means is it conclusive. We hypothesized that the relation between green space and academic success would be stronger for people who are assumed to spend more time in green areas. Furthermore, the analyses show that the amount of green space is more strongly related to perceived general academic progress than urbanity. This research has shown that green space is more than just a luxury, and the development of green space should therefore be allocated a more central position in spatial planning policy. It highlights the need for further work, in particular, longitudinal studies. A longitudinal study that considers possible confounding variables as well as proximity and access to green space and academic attainment over the course of pupils' school career using remotely sensed images would allow for individual level conclusions and further isolation of the effects of green space as data on other possible confounding variables could be collected. Using remotely sensed images could, depending on the spatial resolution and classification technique, include small scale privately owned green spaces such as gardens. More information on how green space affects mental and physical health across the life course could help to determine the relative effects of green spaces on school pupils compared to other age groups. This should help to determine whether improved academic attainment is a valid argument for maintaining and supporting green spaces.

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GOVERNANCE AND TOURISM RESILIENCE DURING THE COVID19 CRISIS. CASE STUDY BUKOVINA, ROMANIA

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Abstract: The COVID-19 outbreak which pushed the public actors to seek out customized solutions adjusted for local development. The present paper investigates the role played by the public administration in rebuilding and supporting the tourist sector in Bukovina which has been severely affected by the restrictions imposed by pandemic. The study used a mixed research method: quantitative analysis (applied questionnaires) and qualitative research (interviews). Although the local administration has a limited jurisdiction of the territorial-administrative units, the current sanitary crisis along with the economic one have started to affect territories and populations more and more extended, which pushed the public actors to seek out customized solutions adjusted for local development. The results show that the types of governance applied by the county and local administration will have a decisive impact upon the recovery of the tourism sector.

Key words: resilience, governance, local administration, COVID-19, Bukovina, România.

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INTRODUCTION

The sanitary crisis which was triggered by COVID-19 started on the 12th of March 2020 as World Health Organization declared it a pandemic, resulting in a domino effect on the health, economic, and sociocultural systems worldwide. The necessary sanitary measures meant to limit the spread of the virus, such as social distancing, travel restrictions and bans on mobility, isolation and quarantine – either mandatory or self-imposed, have put a stop on tourism and turned the time spent inside, at home, into a real challenge. Even if tourism is largely regarded as a vulnerable activity exposed to a series of risk factors, such as environment, politics, military or sanitary issues (Gössling et al., 2020; Novelli et al., 2018), the current situation is quite different due to the global impact as all the countries in the world, in response to the pandemic, have imposed travel restrictions since April 20. In what concerns the travel destinations, 97 of them (45%) closed their borders entirely or partially for tourists, 65 destinations (30%) suspended totally or partially the international flights, while 39 places (18%) introduced new prohibiting measures for travellers coming from certain countries (UNWTO, 2020). The attempts of giving an accurate forecast of the pandemic's effects on the tourism industry, namely HoReCa, have been swiftly surpassed by the fast pace of the virus spread at global level. Tourism is one of the most affected sectors in both terms of offer and demand. Since it is an interdependent industry, the current circumstances of the global economy threatened by recession, geopolitical tensions, social and commercial pressures and anxieties, as well as the yet uncertain development of the pandemic along with the security measures taken by most countries (restricting travel, closing borders, suspending cultural events, activities of the commercial centers, accommodation units, and restaurants) are further concerns to the tourism business (Muscalu, 2020).

In Romania, the pandemic has impacted heavily on the tourism. For 3 months (March-May 2020), nearly 97% of the accommodation units were closed, while a small percentage were still in business as they hosted quarantined persons or medical personnel from the front line of COVID-19. From an economic activity that covered almost 3% of the national GDP to practically zero, that was a harsh shift which completely lacked any transition period. Both the hosting units and tourism agencies registered massive cancellations and decreases in reservations. Since early March 2020, the hotel vacancy rates in Bucharest were by 40% down and by 50% down in the case of resorts (INS a, 2020). This was followed by closing over 90% of the accommodation units, while in April, the National Institute of Statistics estimated a negative conjectural balance of -99% for the hosting facilities units, and of -97% for the tourism agencies (INS b, 2020).

The present paper is based on the premises that the regional and local impact of COVID-19 crisis has a highly heterogeneous nature with a strong territorial reach and deep implications for the population involved. Under the circumstances, local authorities are the prime responsible players to address such complex and challenging issues, namely isolation measures, health care, social services, supporting small entrepreneurs as well as providing ongoing support for public investments as a key element of resilience and fast recovery. Therefore, an extra responsibility is being placed on the broad shoulders of local administration which needs to apply a multi-level management and address urgent measures, such as free circulation, tourism, and leisure needs along with sanitary status, suspension of numerous jobs or maintaining the major economic branches that support or define the region. The analysis performed has taken the tourist region of Bukovina as area of reference. This region, in terms of accommodation, is the third tourist destination in Romania. The paper aims to identify the point of view shared by the local administration regarding the development trends of the tourism in Bukovina within the current pandemic context, and, also its resilience models. Under the circumstances of a pandemic globally and swiftly spread, the present paper holds two inter-relational objectives: the former addresses the tourist profile of a region with many generous offers such as Bukovina, but deeply affected by the general perception of Suceava County largely regarded these days as an uncertain tourist destination due to the pandemic situation in the region; the latter objective tackles the manner in which was perceived the governance applied by the local authority through concrete actions at a particularly difficult time for the tourism entrepreneurs and operators. Although the subject of research — the relation between the new coronavirus pandemic and tourism — makes

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reference to a fact still ongoing whose consequences cannot be accurately estimated at the time, there are already many studies tackling various approaches of the relation between tourism and pandemic. These studies have either a general nature on analysing possible lines of research in the field (Sigala, 2020), how this pandemic impacted upon the world economy and therefore, upon tourism (Gössling et al., 2020, McKibbin and Fernando, 2020), or they consider the particular features related to the direct relation between pandemic and the collapse of the tourist business at regional and global level. The conclusions of these scientific papers, regardless of the scale, are focused on two main ideas: tourism is one of the most affected sectors by the current crisis; however, and, at the same time, the changes triggered by the pandemic on the matter of tourism demand can become the turning point in the case of this sector, an opportunity for the development of the tourist activities in a different paradigm — *travel better not less, experience the other side of common destination* etc (Sigala, 2020; Gossling et al., 2020).

Another distinctive group of researches on tourism and COVID-19 are concerned with an unexpected and rather surprising opportunity given to the unsustainable tourism which has reached a global scale in the past years. The present crisis will encourage such practices to shift to a more sustainable model. These studies dispute the mechanisms and systems supporting the type of mobility which generated the mass tourism and regards them as an effective tool for transmitting the pandemic (Higgins-Desbiolles, 2020). If we take a closer look, there are studies analysing the manner in which the pandemic has influenced the tourist behaviour towards travel itself and features of the destination (Chebli and Said, 2020; Higgins-Desbiolles, 2020; Wachyuni and Kusumaningrum, 2020, Özdemir and Yildiz, 2020). Here, too, another common idea is outlined: the changes occurred in the tourist behaviour, whether they are connected to the destination, the quality of services or/ and the preferred way of travelling, should be acknowledged by the major players of tourism as they could provide the key elements for developing novel well-adjusted development strategies. Beyond these regards which expose the hard times and unique problem faced by tourism nowadays, the present paper takes into consideration an issue of no less: the local reaction to a global problem. The literature that goes into details on the actions taken by the public managers during pandemic, highlights the reaction phases to the crisis assembled into a general available model, namely the RISE model (resilience, intention, support) which is presented by Maher et al. (2020). The results of this model show that local administrations take innovative and strategic measures to fight the virus, even though COVID-19 exposes certain professional categories to social inequalities which are worsening as the virus is spreading.

MATERIALS AND METHODS

The decision to be in the business of tourism during and post-pandemic times is found, as we believe, in an interpretation paradigm. The reason behind this statement is the fact that tourism is a segment of activity where the perception on the space running the tourist activities is essential (Huete-Alcocer and Ruiz, 2019; Leung et al., 2013). Between April, 01, 2020 and May, 13, 2020, Suceava city and its neighbouring area (8 communes) were declared red zones (total quarantine) as measures taken for limiting the spreading of Sars-COV-2 virus. The city was the most affected one by the pandemic in Romania during the period mentioned earlier. Two months later, after the quarantine was lifted in the region, the public administration and tourism entrepreneurs were facing an attitude of uncertainty about the entire tourist region of Bukovina.

The starting point of the epistemological approach embraced by the present research relies on the fact that this pandemic has deeply affected the system of human, informal, and institutional relations on which tourism generally relies. The changes caused by the sanitary context, boosted by the role played by mass media on informing the public, and by the uncertainty of the time-horizon for making pertinent forecasts, have generated shock waves for each and every player engaged in tourism. This makes the new tourism reality far too complex to be merely described by a set of quantitative generalizations (Saunders et al., 2015; Piore, 2006). Whether we are talking about tourist, an administrator of a hosting facility, or local administration, each of these actors has their own view and understanding of the current situation. Under the circumstances, the data were collected by employing a mixed methodology, using both the qualitative and quantitative research (Creswell, 2007). Even though a mixed approach of methods has been used in this paper, the qualitative role had the leading part. We believe that its application is recommended for the phenomenon under analysis (Lee et al., 2013). The quantitative method has been used for classifying and measuring the impact of mass media on the tourist options of visiting a prestigious tourist destination which was identified with a region heavily affected by the pandemic. On the other hand, the qualitative method has been employed for getting information on the involvement degree of the local public administration in managing the crisis triggered by the pandemic, in supporting the tourism entrepreneurs, and in finding solutions for rebooting the local tourist activity (Matei, 2013). The first type of analysis is focused on tourists and has required a quantitative approach. Further, as a research tool, a questionnaire addressing potential tourists (Luo and Zhong, 2015) was applied online, which provided specific data and correlations on the tourist behaviour induced by the sanitary and mobility conditions imposed by the pandemic and, also helped outline the profile of the tourist who has chosen Bukovina as tourist destination this year. The questionnaire was distributed online between June 8 and June 30, 2020 and made use of the social media channels of promotion. Finally, 189 answers were validated, and, among these, 156 replies were given by persons who included Bukovina within their possible holiday destinations at the date of entry. The results obtained have been processed by using SPSS software to highlight the influence of different variables (age, residence, previous tourist experience etc.), and to outline the tourist profile during pandemic going to a destination whose image was profoundly affected at that time.

The qualitative approach of the present study is based on 11 interviews focused on the view of the persons questioned about tourist activities and evolution of tourism in Bukovina during and post-pandemic. The following have been interviewed: persons of the local public administration (a total of 4 persons), administrators/ owners of tourist facilities (5), and tourism agencies (2). The analysis started from the assumption that the tourism phenomenon is at a reboot point where it is vital to understand both the institutional and private mechanisms which need to be primed within a rational governance in order to achieve the resilience of a key economic sector of Bukovina region.

Although some researchers regard interviews as insufficient to reach objective conclusions (Dass and McDermott, 2020; Krippendorff, 2004), the published literature records different opinions as well, opinions which see interviews as useful instruments since they can catch the views of the subjects on a particular phenomenon and thus, provide depth to the quantitative researches (De Las Heras et al., 2020, Bryman, 2012; Qu and Dumay, 2011). In view of the present study, we have considered that, in an open discussion, the interviews have shaped the image of a different governance from the before-pandemic period, engaged into the necessity imposed by the current context.

RESULTS AND DISCUSSION

The sanitary crisis which started in early March at the same time in most European countries has created an unprecedented situation for the public institutions from each country affected by the pandemic. In the case of Romania, a survey run by the National Institute of Statistics (INS a, 2020), estimated that 95.4% of the economic agents included in the statistical research and which could assess the evolution of their activity volume, stipulated in April 2020 a shrinking of activity by more than 25% or even shutdown. By May 2020, the arrivals registered by the hosting units dropped by 96.9% as compared to the data from the previous year recorded in May 2019. According to the National Institute of Statistics, these data capture the impact of the COVID-19 crisis and of the measures taken by the authorities as result of enforcing the state of emergency on the 16th of March 2020 and of the state of alert on 17th of May 2020. Suceava County has registered for

several months (March-July 2020) the most numerous cases of infections with the new coronavirus in Romania. The crisis from Suceava has started after mid-March when a major outbreak developed at Sf. Ioan cel Nou County Hospital, and, represented the beginning of the COVID-19 crisis in Romania. At the time when reporting the number of cases started at county level (April 2, 2020), in Suceava County there have been already registered over 700 cases, and 3 days later there were over 1000 cases, a number which most Romanian counties have not reached three months since the pandemic started. This negative aspect has determined the association of Suceava County with phrases such as “Lombardia of Romania” or “The Wild North” which had devastating effects on the image of the county and, also on the tourism sector. The quarantine of Suceava municipality and its neighbouring communes for one month and a half (April 1 – May 13, 2020) has only put an emphasis on the negative image and resulted in building a negative climate about the chances of coming back to the normality, namely to travel under normal circumstances to Bukovina this summer. The image of the tourist destination is a concept including the sum of all beliefs, ideas, and perceptions a tourist shares about a tourist destination (Baloglu and McCleary, 1999), and plays an essential part in the configuration of tourist preferences and opinions when choosing a holiday (Lin et al., 2007). In this context, the analysis of the perception felt by potential tourists about Bukovina, the identification of changes in tourist behaviour induced by the current circumstances and those elements which give nuance to these changes, is a necessary approach for adjusting the tourist offer to the new requirements.

1. The Perception of Tourists about Bukovina as Tourist Destination

It is important to highlight the fact that most respondents (86%) have holiday plans for this year, but most of them will choose a destination in Romania. Accordingly, a third of the respondents stated that they changed their holiday plan under the current circumstances, while a quarter said that they cancelled their initial plans. However, more than half of the respondents (67%) said that they had not booked anything at the time, which shows the presence of uncertainty or a certain degree of wariness in taking decisions about this year holiday. These aspects have a definite negative impact on the tourism entrepreneurs who cannot anticipate how their tourist season will look like and need to take into consideration last-minute changes caused by the pandemic context and measures adopted. This aspect is also confirmed by the entrepreneurs from Vatra Dornei who did not have a clear picture of how their tourist season could look like in June 2020: “*So, we are waiting at the time being, along with our clients, to see what the future has in store for us*” (Valentina, tourism entrepreneur, Silva hotel, Vatra Dornei resort); “*Until the government establishes what you can and cannot do, people are waiting and phones are not ringing. We are waiting the new regulations from the government. At the time, everything is unclear*” (Mihaela, Neagra Șarului). It is still encouraging the fact that over 80% of the respondents who initially stated that Bukovina was a possible holiday destination, have not excluded it (yet) — this percentage also includes those people who stated that they did not take a firm decision. (“*What has been booked from now on it has not been cancelled*”, Valentina C., tourism entrepreneur, Vatra Dornei resort). Most of the respondents, who declared that they excluded Bukovina from the holiday plans, belong to the category of those who wanted, most likely, to spend their holiday in the region during July-August 2020, which shows, at least, a mid-term effect of the crisis on the tourism in Bukovina and just a momentary impact, how, for instance, it happened in the case of the Easter reservations. The impact of the image created around Suceava County as a result of the sanitary crisis from March-April 2020, can be also observed in the analysis of the fears voiced by respondents to justify excluding Bukovina from the possible tourist destinations of this year. As was to be expected, the most frequently invoked fear by the potential tourists is not related to the tourist services from Bukovina (fear of getting infected in the hosting facilities and/ or public alimentation), but fear of the sanitary services provided by the county hospital in the event they may need them. Almost half of the respondents (42%) who stated they excluded Bukovina from their holiday plans have given as main reason the fear of appealing to the medical services from the county of Suceava and this fear increases with age (Figure 1).

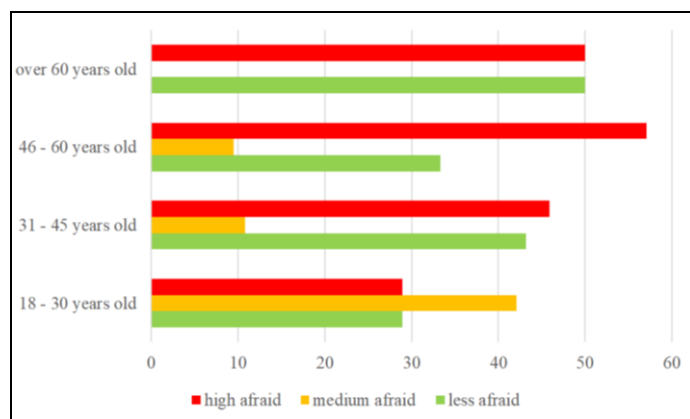


Figure 1. Did you exclude Bukovina as tourist destination because you were afraid of appealing to the medical services from the county of Suceava?

Once again, it is proven the interdependence between the image components of a territory as well as the sensibility of the tourism domain to all regional elements supporting its functions. If, in the case of other worries (getting infected in the hosting facility, in the public alimentation unit or anywhere in the area) which are related to what Bukovina has to offer as tourist destination, the more detailed knowledge of this space (acquired through a larger number of previous visits in the area) was reflected by a smaller percentage of the persons who invoked these reasons (fear to appeal to medical services and of a possible quarantining of the region), and this factor had no importance whatsoever. In the behaviour economy it is explained the impact of uncertainty (for instance, fear) on the tourist behaviour through the fact that, under such circumstances, the individuals choose to answer cautiously to the unknown (Mian and Sufi, 2010; Parker et al., 2013). For that matter, the most fearful of the respondents proved to be those from the neighbouring counties of Suceava, probably due to the direct access to more detailed information on the situation from Suceava County.

2. Changes of the Tourist Behaviour during Pandemic

In what concerns the specific features of the demand imposed by the current circumstances, they are also differentiated according to more variables and generally reflect the uncertainty generated by the pandemic context.

2.1. Type of Accessed Tourism

Most respondents (43%) have stated that they are interested in the active and adventure tourism, which involves outdoor activities and relies on nature as natural resource. The cultural tourism, which is often associated with the idea of Bukovina as tourist destination, appears as a third option for those who did not take out this destination from their traveling plans, while the balneotherapeutic tourism (Vatra Dornei resort, Cacica saline) is found on the fourth position, at a great distance from the rest of the options. Obviously, the options concerning the types of tourism are differentiated in accordance with age (those between 18 and 30 years old, namely 62.7% prefer the active and adventure tourism unlike those ranging between 46 and 60, merely 25%), and origin of tourists (among the tourists who chose Bukovina this year, 55.6% showed their preference for an active tourism) (Figure 2).

2.2. Length of Stay and Group Size

Over 85% of the respondents have declared that they will travel by their personal car, while the other means of transportation have secondary positions. Quite interesting is the fact that in the case of foreign travellers the percentage of those who have chosen their own car goes higher than 75%. Further, it is obvious the preference for going on trips in small groups of maximum 4 people (over 75%). A proof of

the fact that this relative small group can be interpreted as an adjustment to the current conditions imposed by the pandemic is given by the much higher percentage (89.9%) of those who fit into this category out of the total of persons who stated that their main concern about traveling to Bukovina is related to the quality of medical services provided by the county hospital of Suceava.

The length of the stay appears to respond to the current restrictions, in the context when nearly half of the respondents declared that they are interested in a maximum 2-night stay in Bukovina (Figure 3). This feature is also shared with the respondents whose place of residence is located in far more distant county and have chosen, a percentage of 77.8%, for a stay of maximum 5 nights.

2.3. Changes in Choosing the Hosting Units

Another aspect analysed through the questionnaire applied is directly linked to the structure of the hosting unit preferred by the tourists who did not exclude Bukovina from their holiday plans (Table 1). Most of them stated that they had chosen or intend to choose a rural locality in Bukovina, and the analysis of these destinations mentioned by tourists indicates well-known places, such as: Putna, Moldovița, Sucevița, and Cacica, along with occasional mountain destinations (Călimani, Rarău), as well as long-established balneotherapeutic resorts, namely Vatra Dornei and Gura Humorului. Regardless of the type of location chosen by the respondents (balneotherapeutic resort, rural locality, urban locality), the preferred structure of hosting unit was quite the same, more precisely a small guesthouse which, once again, shows an adjustment to the current circumstances. Additionally, in this case, the age factor makes certain differences as the youth (18 – 30 years old) are more willing to try other types of accommodation (although they prefer the small hosting structures), while the elderly (over 60 years old) have indicated the small guesthouses without exceptions (100%). Another interesting matter is that the small guesthouse structures have been chosen by most respondents who preferred an urban locality in Bukovina. The preferred structure of accommodation is correlated with the length of stay, namely those willing to spend more time in Bukovina (5-7 days) are more inclined to choose a small accommodation structure (over 80%).

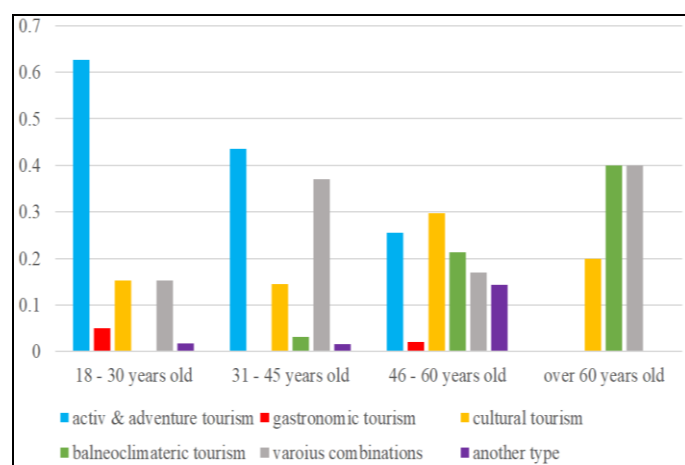


Figure 2. What kind of tourism most appeals to you in Bukovina?

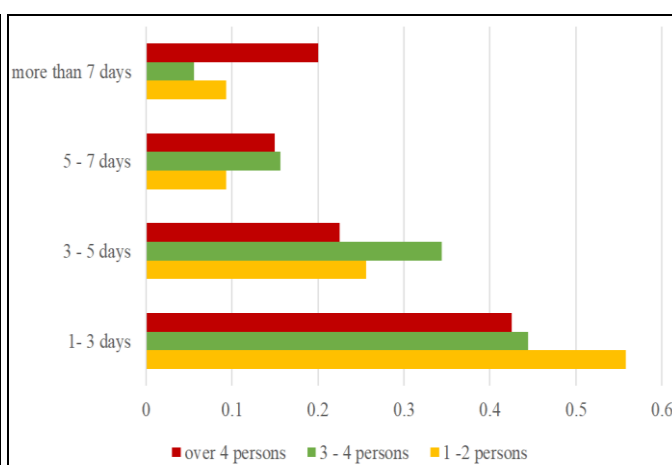


Figure 3. What is the planned stay in Bukovina?

Table 1. Changes in Choosing the Hosting Units

If you choose to go to a rural settlement, what kind of accommodation do you prefer?		The duration of the trip				Total
		1-3 days	3-5 days	5-7 days	More than 7 days	
Small hotel	% within If you choose to go to a rural settlement, what kind of accommodation do you prefer?	55.9%	26.5%	8.8%	8.8%	100%
	% within The duration of the trip	27.1%	20%	16.7%	25%	23.4%
Big hotel	% within If you choose to go to a rural settlement, what kind of accommodation do you prefer?	60%	20%	0%	20%	100%
	% within The duration of the trip	4.3%	2.2%	0%	8.3%	3.4%
Small Pension	% within If you choose to go to a rural settlement, what kind of accommodation do you prefer?	46.6%	34.2%	16.4%	2.7%	100%
	% within The duration of the trip	48.6%	55.6%	66.7%	16.7%	50.3%
Large Pension	% within If you choose to go to a rural settlement, what kind of accommodation do you prefer?	25%	50%	0%	25%	100%
	% within The duration of the trip	4.3%	13.3%	0%	25%	8.3%
Other Option	% within If you choose to go to a rural settlement, what kind of accommodation do you prefer?	52.4%	19%	14.3%	14.3%	100%
	% within The duration of the trip	15.7%	8.9%	16.7%	25%	14.5%
Total	% within If you choose to go to a rural settlement, what kind of accommodation do you prefer?	48.3%	31%	12.4%	8.3%	100%
	% within The duration of the trip	100%	100%	100%	100%	100%

3. Partial Conclusions supported by the Qualitative Analysis

The analysis on the specific features of the tourist demand under the current circumstances imposed by the sanitary crisis outlines a few aspects that are worth considering by the tourism players in Bukovina, at least in the case of the present tourist season. Firstly, a better communication about the medical crisis Suceava County went through, where it should be dissociated the image of tourist Bukovina from that of the outbreak generated by in the county hospital of Suceava - the city of Suceava and the periurban area (and which can be done through a constant detailed informing on the COVID-19 crisis, data supplied by the county hospital and constant reporting of the sanitary situation at a micro-territorial level) would have a positive effect on those who have not yet decided on spending their holiday in Bukovina and, also on those who did not make any holiday plans. Besides, there have been already taken some actions to remedy this aspect. Both public players who communicated data at the level of territorial-administrative unit, but did not provide sufficient continuity in doing that, and tourism entrepreneurs have involved in this endeavour to restore the image of Bukovina, as it can be observed in the interviews taken.

"But, to be sure, from now on we shall call the tourists who made reservations and see what they think about it. We have been keeping in touch with the clients, mostly by phone. They called us, and we called them too. They called to ask how things are here, if we have opened and under what conditions, while we called to check the reservations for the coming period." Valentina, C., Silva Hotel, Vatra Dornei

"We have also got in touch with our clients on the social media, but mostly by phone." Mihaela, I., agritourism guesthouse, Neagra Șarului.

Secondly, Bukovina should place its bets, at least in this early stage, on its natural resources, and the entrepreneurs could suggest tourist products for outdoor activities in less known or accessible locations. Last, but not least, the actors involved in the tourism development of Bukovina should make the best use of its particular features which define the accommodation units and are insufficiently promoted.

"After the restriction period comes to an end, I believe that the tourism will relaunch because Bukovina has numerous small guesthouses, partially isolated and people are looking for that. There are many guesthouses of ten seats, as it was built at a certain time, where two families which are closed, related, and trust one another could stay together." Valentina, C., Silva Hotel, Vatra Dornei

"I believe that the small-scale tourism will do well, in other words we hope that the mountain tourism will do ok here, at least in this area. It would help us a lot if there were a differentiated promotion campaign between Suceava and Bazinul Dornelor, which is a very safe zone with many reliable agritourism guesthouses." Mihaela, I., agritourism guesthouse, Neagra Șarului

Interviewing the experts is one of the most engaged methods of the qualitative technique. In the second part of the study, we have chosen to use the interviews to allow the detailed collection of the views shared by several members of the local public administration regarding the institutional mechanisms supporting the tourism industry in Bukovina. All the interviews were conducted by phone during May 20 and June 20, 2020. At the level of the county council of Suceava, there are department structures meant to provide development strategies and solutions for the issues related to the tourism within the county (The Tourism Office and the National Centre for Tourist Information and Promotion). Most projects of tourist promotion addressing Bukovina as tourist destination fall within the scope of county initiative, financing, and promotion, as it is probably one of the most active county structures dealing with big cultural events. Smart travel Bukovina, Green Pilgrimage, The Hora of Bukovina, The Easter in Bukovina, Medieval Art Festival, Pilgrim in Bukovina, Bukovina Rock Castle, Christmas in Bukovina, The Mountain Festival, Made in Bukovina Autumn Fair, etc. are tourist activities and registered trademarks of Suceava County Council which have brought dynamism to the tourism across the entire territory of Bukovina. At the level of territorial-administrative units, most of them have strategies for tourist development where the emphasis is put on unlocking the ethno-folkloric potential or/ and on initiatives related to the outdoor and winter tourism. For instance, in Gura Humorului town, a project financed by the World Bank is the financial plan on short and medium period of the town (2005). For 15 years now, tourism has been identified as the main recovery resource of the town on the threshold of disaster after shutting down the mines and light-industry factories. In the paragraph below it is rendered the vision of the then mayor of Gura Humorului town:

"There are resources. There is potential. There is room. Tourism must be seen as economic development, not just as facilities for the town's people. They can come to the public swimming pool too, but we need more facilities. We need to come with money from other part and develop the town"

In this context, the following research questions have been asked:

1. By declaring Suceava city a red zone did it affect the perception of the tourists about Bukovina as tourist destination?
2. Which resources and strategies did the local administrations from Bukovina mobilize during the crisis for the resilience of the tourism sector?
3. How do you see the future of tourism in the post-pandemic Bukovina?
4. Is there a positive impact of this period?

The questions above have provided the basis of the interviews for the categories of persons interviewed. The answers, more or less nuanced, make the basis of the qualitative research.

1. By declaring Suceava city a red zone did it affect the perception of the tourists about Bukovina as tourist destination?

In the tourism area of Bukovina, the municipality of Suceava was the most affected zone by the SARS-CoV-2 pandemic. Even if the municipality does not fall into the category of the main tourist attractions of Bukovina, the effects upon the perception of sanitary safety have reflected on the entire tourist region through two main features:

-The reality of the sanitary crisis which lead to radical measures of quarantining the metropolitan area and occupied all the efforts of the administration during quarantine with a direct focus on the county hospital and the pandemic state of emergency:

"The county administration was absent on the public market for a while, to say so... All the efforts were focused, for several months, on the hospital and sanitary crisis. No one was engaged in other activities, regardless of their type." (Emil, U. — manager of Bukovina Museum).

-The role played by the mass media in exacerbating this deficit of image, difficult to surpass for a good period, in spite of the fact it made reference to a particular situation. *"Even if this (the quarantine, in the context) was a reality, the news exacerbated the situation to the point that they created a Chernobyl like perception for the entire country. I have colleagues from other parts of the country who are now waiting to see me because they imagine I have become some sort of mutant since the quarantine."* (Emil, U. — manager of Bukovina Museum).

"Definitely! The outbreak from Suceava (the municipality of Suceava) has complicated things and made tourists become more susceptible about Bukovina!" (Mihaela, I. — owner of an agritourism guesthouse in Neagra Șarului).

"We clearly have an image problem. I hope that things will come back to normal. But, [...] what do I know? The county council has not taken sufficient measures to counter fight the PR coup suffered." (Laurențiu, B. — manager of a tourism agency).

The solutions for rebuilding the media image are seen at the level of county administration only. Even if, during all this period of sanitary crisis the prefect's office was mainly focused on applying the emergency ordinances on limiting the spread of COVID-19 virus, the fact that the effects of the pandemic upon the tourism and economic activities within the county were entirely neglected, proves a poor response capacity in times of crisis of the central authorities.

2. Which resources and strategies did the local administrations from Bukovina mobilize during the crisis for the resilience of the tourism sector?

Among the answers received at this question, we have come across two types of governance: the first category includes those administrations waiting for governmental solutions to the crisis, which are then applied to the actors from the local tourism.

"Something was granted (from the government, in this context) for the SMEs, at least in intention, but from what I have seen, money hardly come for companies." (Petre, A. — adviser at the Town hall of Vatra Dornei).

"Practically, I was helped by the government." (Valentina, C. — manager of Hotel Silva, Vatra Dornei resort).

We are mainly speaking about reducing taxes and duties and postponing their payment, or counselling for temporary unemployment or postponing the payment of bank loans. The second category includes a relatively small number of town halls which implement a governance where the public management is approached from the perspective of an entrepreneurship where the town hall is the main shareholder. In this case, the measures are considered and taken in view of counter fighting the projected deficit of the current-year budget and of supporting and continuing the ongoing projects.

"I have to find solutions within the current legislative framework, so I can rely as little as possible on the central administration... Anything that comes from the government is a bonus." (Marius, U. — mayor of Gura Humorului town)

"It takes a manager in the public local administration, who has the vision to make a general puzzle. Who knows where is the place of each piece." (Marius, U. — mayor of Gura Humorului town).

The promotion of artistic, craft activities is mainly suspended in its traditional form as these types of events can generally happen in the virtual space, online by the decision of the local counties (The Trout Festival, the Festival of the Painted Eggs, the Rafting Week — Ciocănești, etc.) by those from the Suceava municipality (Castle Rock and the Medieval Art Festival). The sums projected for promoting Bukovina as tourist destination through festival tourism have been reoriented towards the hospital and supporting the sanitary crisis within the county. To support the economic activities within Gura Humorului town, the town hall supplemented the support given to the

entrepreneurs by a series of measures, such as: reducing taxes and duties by 50%, cancelling the penalties for those who had accumulated debts from previous years, reducing rents for the spaces leased, cancelling the concession of some parking lots on public domain, reducing taxes by 25% in the farmers' market. A suggested solution for restoring the tourist flows in the area is a support granted indirectly to the tourism operators, namely per tourist. It is important to give these financial incentives to the tourists and not operators, since if the latter get the money, the impact on restoring the image of Bukovina will be minimum or quite non-existing. The tourism operators are not interested in orienting tourists to Bukovina, therefore, the tourists need to be tempted to overcome the blockage of opting for Bukovina.

"If you go on holiday to Bukovina, you have some benefits... (reductions, extra services, etc). Personally, I see things this way: I, a tourist who comes to an X guesthouse in Bukovina, regardless of the fact that I use vouchers or my own money, I have a less expensive accommodation, let's say by 20%. Those 20% are discounted to the guesthouse by the government. But they are discounted per tourist. If I give 5000 Euros to a guesthouse because it was affected by the pandemic, I do not solve anything on medium and long-term. The operators spend those 5000 Euros, and the tourists do not come to Bukovina". (Emil, U. — manager of Bukovina Museum)

In the same spirit, the mayor of Gura Humorului town sees a direct involvement of the local administrations, partners in the project Bukovina Resort granted as an accommodation package including various services (attractive prices for railway transportation, ski cable cars, etc.) for the tourists who choose the offers of Bukovina Resort.

"This is the interest: to move tourists in the area. A restaurant in every car of the train. How do we do it? Not we. It is necessary to lease this service. For this area only. The tickets are cheaper. All operators would be interested. That's why it is necessary to have private entrepreneurs in this project. The private area needs to be captured. The guesthouses should have tourist information and mobility facilities for the tourists checked in. One unitary matter: not all the ski slopes are managed by authorities. Here is the key element of development. The partnership between the public and private domain." (Marius, U. — mayor of Gura Humorului town)

The local administration is regarded, inside, as a management invested with a specific governance tied to the tourism development, having, thus two perspectives: one is identified with the current one, of association at a macro level within the region as Bukovina Resort, while the other one is local, taking the shape of associative structures which can become spoke and interest delegates of the tourism operators in the area.

"A syndicate from where I can get information. ... The Association for the Tourism Development of Gura Humorului... who knows better than the tourism operator what exactly wants the tourist?" (Marius, U. — mayor of Gura Humorului town)

The pandemic and the period of freezing the tourism activities has seriously affected the budget of the town halls in Bukovina. The level of collecting taxes and duties has been significantly reduced by comparison to the previous years, by nearly 40%. Under the circumstances, to continue the current investments, among which European projects, the administrations have been forced to resort to bank loans.

3. How do you see the future of tourism in the post-pandemic Bukovina?

The question is tricky since the tourism sector is dominated by total uncertainty when it comes to estimate the future evolution of pandemic and coming back to normal conditions of running the tourism activities. The relaunching of the tourism activity presents two sets of actions: the former is related to rebuilding the damaged image of Bukovina associated with a severely affected zone by the pandemic. The latter implies continuing the investment projects in tourist facilities (for instance, the Cultural Mall from Gura Humorului, theme park, aqua land, the castle of the hobbits, etc.), supported by a series of concrete, customized actions through the initiative of some media personalities who could come to Bukovina and be part in various artistic and cultural events of high visibility at national level.

"I have initiated an event ... a series of meetings with the music lovers, where very well-known stars of the Romanian music will be present: Andra, Smiley, Scărlătescu, Țândărică, from various music genres. The key point of these actions is the fact that these celebrities will come accompanied by their dedicated press, mainly the central press. I see things this way: the celebrity comes, meets with the public (obviously, the number of people will be limited) in a live broadcast of a local television, after the celebrity goes and checks in a guesthouse in the county and says that the area is safe." (Emil, U. — manager of Bukovina Museum)

The opinion of the persons interviewed is that the tourism in Bukovina relies on the unified actions of all actors involved. It engages local authorities, operators, and central authorities. Each has its well-defined part, even if not all the entities can have a similar reaction.

"The main power of recovery relies on the operators, I believe. Whether we are talking about guesthouses, restaurants, hotels, along with museums and monasteries which I consider operators too. Secondly, a particularly important role belongs to the local community." (Emil, U. — manager of Bukovina Museum). The local administrations are heavily engaged, under the office of county council, in major initiatives for attracting funding necessary for the development of the tourism infrastructure. One of these initiatives is to create a pole of tourism development for Bukovina, which should take the form of an association agreement between the county council and Gura Humorului, Câmpulung, Vatra Dornei resorts, and Cacica saline within the context of building the tourist resort of Bukovina. The advantage of such an association for all the entities involved, would reside in the extended governance over the access infrastructure, with a special accent on the existing railway and its partial transformation into a tourist transport network with related services and thus, benefits for every locality on this axis. If, until now, this initiative has been somehow divergent, the current context has created the necessity of mobilization for a common goal (using the existing accommodation capacity by reinforcing the pre-existing tourist infrastructure and raising the accessibility of the railway to the mountain, woods, mineral waters, UNESCO monasteries, ski-slopes, gastronomic locations).

"Everybody wants highways, nobody uses the train. ... However, until you make a highway, the problem must be solved. The train becomes cost-effective if the railway is subsidized, after a clear, practical circuit is created. There are European funds which we do not wait from the office of ministry." (Marius, U. — mayor of Gura Humorului town)

4. Is there a positive impact of this period?

The final methodological batch of this paper has taken into consideration the extent to which the local public administration regarded the numerous malfunctions generated by the measures meant to limit the spread of the pandemic, through the perspective of opportunities. Below there are mentioned some of these:

- The social impact through raising the awareness on the necessity of maintaining the tour operators in tourism;
- If the situation is correctly handled in terms of economics and pandemic, the county of Suceava can become an example of good practice in times of crisis;
- The emergence of new forms of tourism in areas where they have not been present before, such active, outdoor tourism;
- The revival of the home tourism and small structures of accommodation, which are isolated and more adjusted to the new demands of sanitary safety;
- The rural space is at gain here. The ecotourist destination will most likely develop.

CONCLUSION

The same as every domain of human activity, the impact of pandemic upon tourism in Bukovina will be fairly assessed once all restrictions are lifted and everything returns to the normal activities. Now, the model of action is the day by day approach due to the degree

of uncertainty and low predictability. As it is about a sector where the human interaction is essential, we can estimate that, in the case of Bukovina, the utilization degree of the tourist capacity will be initially reduced by 50%, which will impact on the income of the tourism entrepreneurs, at least in the same percentage. If we consider the fact that tourism is an important element of the local budgets managed by local administrations, the recovery of small enterprises operating in tourism could be also primed by public-private partnerships.

On short and medium-term, regardless of the major changes undergone by tourist activities in this area, there are visible two types of scenarios: the former is an optimistic one, which promotes the coming back to the normal parameters within one year once the state of emergency was lifted, and the latter, which is more pessimistic and says that the tourism will be restored to the previous parameters no sooner than 18 months since the pandemic ended. In both situations, the tourism will be generally maintained through an active type of tourism (agritourism, trips, ecotourism, cyclo-tourism, hippo tourism) which uses the natural potential of Bukovina. In the near future, one attraction will become the tourism oriented towards the natural reservations (The Woods of Slătioara have become UNESCO site, Călimani National Park, Todirescu-Rarău Reservation, etc.). The most affected will be the balneo-therapeutic tourism and festival tourism as well, which are quite difficult to estimate when they can safely come back in the circuit. Although the business tourism is another affected sector, we believe that it will soon recover due to the potential of the exceptional entrepreneurship found in Bukovina.

The first forms of tourism which are starting to be seen are the family or individual tourism. The people will look for destinations less crowded and, from this point of view, Bukovina is quite renowned. These types of tourism will be also supported by the holiday vouchers whose validity has been extended, and by the necessity of reviving the internal tourism.

What will change in the tourism of Bukovina, in our opinion, is the extent of involvement of the local and county administration in the social and economic life of the communities managed. Against a general identical background, each local administration had a different type of resilient behaviour. A possible gain of this trying period for the whole region is raising awareness on the necessity of association between the actors of the tourist market, both at local and county level.

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