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C O N T E N T S

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INVESTIGATING NATURAL TREATMENT FACTORS AND INEQUALITIES OF MEDICINAL WATER INSTITUTIONS IN THE ASPECT OF TOURISM IN HUNGARY

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Abstract: The aim of the research is to reveal the spatial inequalities of the natural treatment factors in Hungary and the medicinal water institutions built on them, with the help of spatial research methods on the basis of secondary data. Due to the favorable geographical conditions of Central Europe, the Carpathian Basin has a considerable amount of natural resources. With the appreciation of health, in our days they represent significant value because they are becoming increasingly important in tourist services aimed at maintaining and restoring health. In Hungary, there are outstanding opportunities for this in health tourism, which provides a wide range of medical services, including medical tourism based on natural treatment factors. In order to achieve the set research goal, we used the range of the data set (range-ratio), the dispersion range (range), the relative range (relative range) and the dual measure (Éltető–Frigyes-index) as spatial inequality test methods for the geographically based examination of Hungary's natural treatment factors and the system of medicinal water institutions. The research results show that the spatial polarisation of natural treatment factors and the medicinal water institutions based on them show significant inequalities in Hungary. It has been proved that the development of the counties is outstanding in terms of medicinal waters and medicinal bath, and the spatial difference is also the lowest in the case of these treatment factors.

Key words: medicinal water institutions, medicinal water, medicinal bath, natural treatment factors, spatial polarisation

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INTRODUCTION

In the Carpathian Basin, Hungary has an outstanding geographical and hydrogeological conditions, which appear primarily through the empirical and evidence-based use of natural treatment factors, providing an opportunity for the geographically based development of tourism. As health is becoming more and more valuable in today's fast-paced world, its role in tourism is becoming more and more apparent (Bauer, 2008). Health tourism trips, including those based on natural treatment factors, play a prominent role in the preservation of health abroad and in Hungary (Szabó, 2017). There are a significant number of natural treatment factors and the medical services based on them in the world and in Hungary as well, but the research focus primarily on the formation (Bookman, 2007), conceptual system (Carrera and Bridges, 2006) and development (Cook, 2008) of medical tourism, or examines the medical and health tourism aspects and products of a smaller spatial unit (Dávid et al., 2013).

In Hungary, health tourism is based on special medicinal water treatments and the institutional system providing them, which are mainly financed by the National Health Insurance Fund of Hungary. The study of spatial differences in this specific system has not yet been the subject of scientific research. Therefore, the authors of the present study make an attempt to comprehensively investigate the natural treatment factors and meicinal water institutions in Hungary. Among natural resources, Hungary is internationally recognized (Szabó, 2012) thanks to its natural treatment factors (Hojcska and Szabó, 2016). In Hungary, five types of natural treatment factors can be used in medicinal water treatments as a health tourism product (Bujdosó, 2011), which are available in many places in the country. These treatments provide a conservative treatment option for patients, especially in cases of musculoskeletal disorders in medicinal water institutions. The aim of our research is to promote the geographically based development of tourism by exploring the resources of Hungarian medical tourism. In order to achieve our research goal, the natural treatment factors and the system of medicinal water institutions of Hungary will be explored on a geographical basis, using modern inequality studies. Our research is relevant, because the efficient development of the resources of Hungarian medical tourism is a precondition in order to be internationally acknowledged. The aim of the research is to reveal the spatial inequalities of the natural treatment factors in Hungary and the medicinal water institutions built on them, with the help of spatial research methods on the basis of secondary data.

LITERATURE REWIEV

Due to its geographical position, Hungary has an outstanding quantity and quality of natural treatment factors in the world, primarily medicinal waters (Bender et al., 2013). As a result, natural treatment factors appear as health care products in the health care industry, and their spatial differences are also important from a tourism point of view (Bujdosó, 2018). Within

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tourism, medical tourism plays a key role with the increasing emphasis on health among the population. As health is becoming more and more appreciated, there is an increasing emphasis on preserving it. The pursuit of a healthier lifestyle provides a significant motivation for a new health-oriented lifestyle, which includes turning to nature and increasing the use of natural therapies (Botterill et al., 2013). The use of natural values and natural areas within and outside the country (Ilieş et al., 2010) for health-preserving sports and tourism activities (Ilies et al., 2018) can contribute to maintaining health. Medical tourism based on medical services also plays an increasing role (Géher et al., 2016; Csapó and Marton, 2017) besides the importance of preventive and recreational travel and services (Fritz, 2019). This is based on the natural treatment factors of natural resources, which include healing climates, medicinal caves, medicinal gases, medicinal mud, medicinal soils, and thermal waters (Dávid et al., 2007), as well as medicinal thermal waters certified by special procedures in Hungary (Csermely, 2009).

Hot water has been used for thousands of years by different peoples to bath, refresh and relieve musculoskeletal problems. There were already public baths in ancient Greece and Rome, then they were used for healing and recreational care by wounded soldiers, and later the use of thermal waters as a bath and drinking cure appeared as a treatment (Van Tubergen and Van der Linden, 2002; Ákoshegyi and Németh, 2006). After the Roman and Greek bathing cultures, there was a decline in bathing life in the Middle Ages, followed by slow development again. Then, physiotherapy procedures, medicinal water treatment and balneo therapy developed more vigorously with the European (France, Germany) recovery in the 18th and 19th century (Kovács, 2017). In balneotherapy, medicinal waters are used in curative procedures, but it is associated with the use of medicinal muds and natural medicinal gases in medical treatment, which can be part of prevention, curation and rehabilitation for many diseases. Nevertheless, there are significant differences between countries in the practical application, reimbursement, education, and research of balneotherapy (Cantista, 2012). In Europe, Hungary has played a prominent role in balneotherapy and spa tourism using natural treatment factors since the 19th century. In Hungary, an internationally outstanding number of natural treatment factors are under legal protection. The medicinal water institutions (medicinal baths, medicinal hotels, health resorts) built on these treatment factors provide the spa treatment services that form the basis of spa tourism (Hojcska and Kurth, 2016) in almost all areas of the country, under strict regulation. Nowadays, natural treatment factors are mainly used in health tourism (Molnár and Dávid, 2010), within which these factors are used in the sector of medical tourism. In this sector, there are significant differences in terminology, service supply and finance in different parts of the world (Hall, 2013). Zsarnóczky dealt with the systematization and summary of these (Zsarnóczky, 2019). His results suggest that while in Asian countries (India, Singapore, Taiwan, and Thailand) high-quality medical services fall into this category, in Brazil, Turkey, and Russia, in addition to medical services, traditional procedures are in the focus of medical tourism. Furthermore, in these countries, medical tourism destinations are represented by private institutions that provide services based on market demand, without the involvement of insurers.

The medical tourism system of the countries of North America is operated by service providers with a similar structure to Asia and providing the most complex wellness tourism packages with the assistance of private insurers. However, the system of health tourism in Europe, and its medical tourism, is completely different from the previous ones, especially with regard to the Carpathian Basin (Szabó, 2011). The reason is that there are a significant number of natural treatment factors here, the application of which in medicine is mostly based on the system of national health insurers (Zsarnóczky, 2017). Among the natural treatment factors, medicinal mud (Babov et al., 2020), medicinal caves (Lăzărescu, 2014; Nagy et al., 2008), medicinal gases (Modelska et al., 2015; Incze, 2016) and medicinal waters are the most commonly used in medical tourism (Gutenbrunner, 2010; Teoibas-Serban, 2020). Overall, it can be concluded from the research of Munteanu and his coauthors (2020) that among the natural treatment factors, the health use of thermal waters is found and widespread on almost every continent; in the Middle East and Southeast Europe, Asia, South America and North Africa, but Central Europe has the most significant and highest temperature thermal water reserves on which many baths have been built (Bachvarov and Liszewski, 2004; Jordan, 1999).

MATERIALS AND METHODS

In order to achieve the set research goal, we carried out secondary research, during which we used and analyzed the data of the natural treatment factors and medicinal water institutions in Hungary included in the register of the National Public Health and Medical Officer Service (NPHMOS). The analyses were performed according to the NUTS3 (nomenclature des unités spatiales statistiques = Nomenclature of Spatial Units for Statistics) unified spatial division system, which includes 19 counties of Hungary and Budapest, forming a total of 20 survey spatial units (Goll, 2010). In accordance with the research goal, we use spatial inequality test methods for the geographically based examination of Hungary's natural treatment factors and the system of medicinal water institutions in order to achieve complex test results. Four of these methods are used to study spatial polarisation.

The indicators measuring spatial polarisation are to compare the most developed and underdeveloped areas of the studied territorial units. Our first measure used to measure spatial polarisation is the range of the data set (range-ratio), which is the quotient of the maximum and minimum values occurring in the examined data set. The minimum value of the results is 1, there is no upper limit. Its advantage is that it is easy to calculate, but its disadvantage is that only the two extreme values are taken into account, but the distribution is not. Its symbol is „K", its formula is (Noether, 1955): $K = X_{max} / X_{min}$ where x_{max} = the maximum value of the data set, x_{min} = the minimum value of the data set (Molnár, 2015). In this research, this means how many times difference is there between the two extreme values of the data set containing the natural treatment factor and the medicinal water institution which were examined by county. The second polarity measure used is the dispersion range measure (range). It is easy to calculate, easy to interpret, but its disadvantage is that only the maximum and minimum value data are taken into account by this measure.

Its symbol is "R", its formula is (Tippett, 1925): $R = x_{max} - x_{min}$ where x_{max} = the maximum value of the data set, x_{min} = the minimum value of the data set (Németh, 2005). This polarisation measure shows the largest difference in the number of natural treatment factors and medicinal water institutions in the counties in our investigation. The third measure of spatial polarisation we

use is relative range (relative range). This measure is also suitable for comparing data series with different averages, as well as for comparing data series with different units and magnitudes. Its symbol is „Q", its formula is: $Q = (x_{max} - x_{min})/\bar{x}$ where x_{max} = the maximum value of the data set, x_{min} = the minimum value of the data set, $\bar{x}$ = the average of the data set examined (Molnár, 2015). In our research, we use this measure to determine how the average number of natural treatment factors and medicinal water institutions in the examined county relates to the difference between the maximum and minimum values of the same factors.

The fourth measure examining spatial polarisation is the dual measure (Éltető–Frigyes-index), published in 1968 by Hungarian statisticians Ödön Éltető and Ervin Frigyes. Its symbol is „D", its formula is: $D = \bar{x}_m / \bar{x}_a$ where x_{max} = the maximum value of the data set, x_{min} = the minimum value of the data set, $\bar{x}$ = the average of the data set examined, $\bar{x}_m$ = the average of the values above the average, $\bar{x}_a$ = the average of the values not exceeding the the average (Nemes Nagy, 2006; Major and Nemes Nagy, 1999). This measure gives the quotient of the average of the values above the average of the total distribution and the average of the values below the average of the total distribution in the counties on which our study is based in relation to the natural treatment factors and medicinal water institutions. With these four measures we can safely determine the spatial differences of natural treatment factors and medicinal water institutions, as well as the development of Hungarian counties in terms of natural treatment factors and the system of medicinal water institutions (Cowell, 1977; Williamson, 1965). Thus, our research goal can be achieved.

LIMITATION OF THE STUDY

To evaluate the results, it is important to identify the limitations of the present research, which, like most studies, have limited the design and conduct of the current study. The limitation of the research is the limited literature relevant to the topic. In Hungary, the use of the large numbers of natural treatment factors in medical tourism partly differs from the international one, and this gives the literature limitation of the research. Therefore, there are only a few possibilities to compare the different literatures in the topic (Price and Muran, 2004).

RESULTS AND DISCUSSION

In our research, we endeavoured to make the results of our planned study suitable for the development of geography-based tourism, which is a precondition for Hungarian medical tourism to be internationally acknowledged. In order to achieve this, natural treatment factors in Hungary and the spatial polarisation of the medicinal water institutions based on them by counties are explored.

1. Geographical division of Hungary's natural treatment factors and medicinal water institutions

The data suggest that five types of Hungary's natural treatment factors (medicinal water, medicinal mud, medicinal cave, medicinal gas) are used as natural resources in medical tourism, primarily in medicinal water institutions. These natural treatment factors and medicinal water institutions based on them can be found in different numbers in the counties of Hungary which are illustrated in Table 1. Overall, the natural treatment factors in Hungary include 270 medicinal waters, five medicinal mud, five medicinal caves, two medicinal gases, and the medicinal water institutions built on them include 98 medicinal baths, 40 medicinal hotels and 32 health resorts.

Table 1. Hungary's natural treatment factors and medicinal water institutions (NUTS3) (Source: Based on ÁNTSZ 2019, own editing)

County	Natural treatment factors				Medicinal water institutions		
	Medicinal water	Medicinal mud[1]	Medicinal cave	Medicinal gas	Medicinal bath	Medicinal holtel	Health resort
Budapest	20	0	1	0	11	3	0
Baranya	8	0	1	0	6	1	2
Bács-Kiskun	18	0	0	0	6	1	3
Békés	14	0	0	0	6	1	2
Borsod-Abaúj-Zemplén	9	0	2	0	4	2	1
Csongrád-Csanád	16	1	0	0	7	1	1
Fejér	5	0	0	0	1	0	0
Győr-Moson-Sopron	12	0	0	0	3	0	1
Hajdú-Bihar	29	1	0	0	9	8	2
Heves	15	0	0	2	6	3	6
Jász-Nagykun-Szolnok	28	1	0	0	6	3	1
Komárom-Esztergom	3	0	0	0	1	0	0
Nógrád	2	0	0	0	0	0	0
Pest	12	0	0	0	5	1	0
Somogy	13	0	0	0	5	0	1
Szabolcs-Szatmár-Bereg	19	0	0	0	7	0	2
Tolna	10	0	0	0	3	1	0
Vas	19	0	0	0	5	4	4
Veszprém	2	0	1	0	2	0	2
Zala	16	2	0	0	5	11	4
Total	270	5	5	2	98	40	32

2. Geographical inequalities of natural treatment factors

In the first part of our research, the geographical inequalities of Hungarian medicinal waters, medicinal mud, medicinal caves and medicinal gases as natural treatment factors are explored using four methods suitable for the examination of spatial polarisation.

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[1] The medicinal mud of Neydharting in Austria is also on the register of National Public Health and Medical Officer Service, which is not part of our calculations, as it is not located in Hungary

2.1. Spatial polarisation of medicinal waters

Mineral water can be declared medicinal water when undergoing a special procedure, and when its medical effect has been proven by medical examinations. Hungary has the highest number of certified medicinal waters in Hajdú-Bihar County (11%) and the smallest number (0.7%) in Nógrád County compared to the total number of medicinal waters (Table 2).

Table 2. Spatial polarisation of medicinal waters by counties (NUTS3) (Source: Own editing and calculation)

County	Undeveloped counties										Developed counties										Averege	Total
	Nógrád	Veszprém	Komárom-Esztergom	Fejér	Baranya	Borsod-Abaúj-Zemplén	Tolna	Győr-Moson-Sopron	Pest	Somogy	Békés	Heves	Csongrád-Csanád	Zala	Bács-Kiskun	Szabolcs-Szatmár-Bereg	Vas	Budapest	Jász-Nagykun-Szolnok	Hajdú-Bihar		
Piece	2	2	3	5	8	9	10	12	12	13	14	15	16	16	18	19	19	20	28	29	13.5	270

Table 3. Spatial polarisation of other natural treatment factors by counties (NUTS3) (Source: Own editing and calculation)

County	Undeveloped counties											Developed counties									Average	Total
	Bács-Kiskun	Békés	Fejér	Győr-Moson-Sopron	Komárom-Esztergom	Nógrád	Pest	Somogy	Szabolcs-Szatmár-Bereg	Tolna	Vas	Baranya	Budapest	Csongrád-Csanád	Hajdú-Bihar	Jász-Nagykun-Szolnok	Veszprém	Borsod-Abaúj-Zemplén	Heves	Zala		
Piece	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	2	2	0.6	12

When examining the spatial polarisation of the medicinal waters, we were also the first to determine the range ratio, the result of which has been K = 29/2 = 14.5. Based on this result, we found that in the case of Hungarian medicinal waters, there is a 14.5-fold difference between the counties with the least medicinal water and the counties with the most medicinal water. Second, we calculated the dispersion range measure of medicinal waters, the result of which has been R = 29 – 2 = 27. This result shows the difference between the number of medicinal water elements in the county with the most and the least medicinal water, which is 27. Third, we calculated the relative range the result of which has been Q = (29-2)/13.5 = 2. This result shows that the difference between the counties with the most and the least number of medicinal water elements related to the average is two. The fourth measure, the dual index shows the relation between the averages of the number of medicinal waters above the average distribution of the total number of medicinal waters and the average of the number of elements that had fallen below the average distribution of medicinal waters in the counties.

The result of this quotient is D = 19.4/7.9 = 2.5. Therefore, we concluded that there is a 2.6-fold difference between the most developed and the least developed counties in terms of medicinal waters. Ten counties in Hungary have a better-than-average supply of medicinal water, most of which are located in Hajdú-Bihar (29) and Jász-Nagykun-Szolnok (28) counties. Nine counties have below-average supply of medicinal water, the least of which can be found in Nógrád and Veszprém counties (two each) and Komárom-Esztergom County (three). These differences in the quantity of medicinal water are mainly explained by the differences in natural geographical conditions and the difference in the distribution of evidence based medicine (EBM) research required for declaration as medicinal water (Bender et al., 2014).

2.2. Spatial polarisation of other natural treatment factors

As the natural treatment factors such as medicinal mud, medicinal cave and medicinal gas can be found in small quantities in the counties of Hungary compared to the quantity of medicinal waters, the spatial polarisation can only be partially investigated in their case. In the case of medicinal mud, we found that Zala County (40%) has the most medicinal mud in Hungary and Csongrád-Csanád, Hajdú-Bihar and Jász-Nagykun-Szolnok Counties (20%-20%-20%) have the least, in addition to the fact that no medicinal mud is found in any other county of the country. Examining the caves, we determined that most of the caves are located in Borsod-Abaúj-Zemplén County (40%), the least in Budapest, Baranya and Veszprém Counties (20%-20%-20%), there are no other medicinal caves in the country. Regarding medicinal gases, we found that the most (two) and the only natural medicinal gas is in Heves County. In order to analyze the spatial polarisation more accurately, we summarized the number of these natural treatment factors by counties and analyzed them together (Table 3). When examining the spatial polarisation of other natural treatment factors, we first determined the range ratio, the result of which has been K = 2/1 = 2. On the the basis of this result it can be stated that in the case of Hungary, there is a twofold difference between the counties with the fewest and most medicinal mud, medicinal caves and medicinal gas. Second, we determined the dispersion range measure, the result of which has been R = 2 – 1 = 1.

This result shows the difference between the number of elements in the county with the most and the fewest other natural treatment factors, which is one other natural treatment factor. Third, we calculated relative range, the result of which has been Q = (2-1)/0.6 = 1/0.6 = 1.7. This result shows that the difference between the counties with the most and the least number of other natural treatment factor elements related to the average is 1.7. The fourth measure, the dual index shows the relation between the averages of the number of natural treatment factos above the average distribution of the total

number of natural treatment factors and the average of the number of elements that had fallen below the average distribution of natural treatment factors in the counties. The result of this quotient is $D = 1.3/0 = N/A^2$.

Table 4. Spatial polarisation of medicinal baths by counties (NUTS3) (Source: Own editing and calculation)

County	Undeveloped counties							Developed counties													Average	Total
	Nógrád	Fejér	Komárom-Esztergom	Veszprém	Győr-Moson-Sopron	Tolna	Borsod-Abaúj-Zemplén	Pest	Somogy	Vas	Zala	Baranya	Bács-Kiskun	Békés	Heves	Jász-Nagykun-Szolnok	Csongrád-Csanád	Szabolcs-Szatmár-Bereg	Hajdú-Bihar	Budapest		
Piece	0	1	1	2	3	3	4	5	5	5	5	6	6	6	6	6	7	7	9	11	4.9	98

Table 5. Spatial polarisation of medicinal hotels by counties (NUTS3) (Source: Own editing and calculation)

County	Undeveloped counties													Developed counties							Average	Total
	Fejér	Győr-Moson-Sopron	Komárom-Esztergom	Nógrád	Somogy	Szabolcs-Szatmár-Bereg	Veszprém	Baranya	Bács-Kiskun	Békés	Csongrád-Csanád	Pest	Tolna	Borsod-Abaúj-Zemplén	Budapest	Heves	Jász-Nagykun-Szolnok	Vas	Hajdú-Bihar	Zala		
Piece	0	0	0	0	0	0	0	1	1	1	1	1	1	2	3	3	3	4	8	11	2	40

Table 6. Spatial polarisation of health resorts by counties (NUTS3) (Source: Own editing and calculation)

County	Undeveloped counties											Developed counties									Average	Total
	Budapest	Fejér	Komárom-Esztergom	Nógrád	Pest	Tolna	Borsod-Abaúj-Zemplén	Csongrád-Csanád	Győr-Moson-Sopron	Jász-Nagykun-Szolnok	Somogy	Baranya	Békés	Hajdú-Bihar	Szabolcs-Szatmár-Bereg	Veszprém	Bács-Kiskun	Vas	Zala	Heves		
Piece	0	0	0	0	0	0	1	1	1	1	1	2	2	2	2	2	3	4	4	6	1.6	32

Table 7. Summary of polarisation measures (N/A^3)(Source: Own editing and calculation)

	Natural treatment factors		Medicinal water institutions		
	Medicinal waters	Other natural treatment factors	Medicinal baths	Medicinal holtels	Health resorts
Range	14.5	2	11	11	6
Dispersion range	27	1	10	10	5
Relative range	2.2	1.7	2.04	5	3.1
Dual measure (Éltető - Frigyes index)	2.5	N/A	3.3	9.8	6

3. Geographical inequalities of medicinal water institutions

There are a significant number of medicinal water institutions based on natural treatment factors (98 medicinal baths, 40 medicinal hotels, 32 health resorts). We also examined their spatial polarisation.

3.1. Spatial polarisation of medicinal baths

Compared to the total number of medicinal baths, Budapest has the highest (11%), Fejér and Komárom-Esztergom Counties have the lowest number (1%-1%) of medicinal baths, not counting Nógrád County as there is no such institution there (Table 4). When examining the spatial polarisation of medicinal baths, first we determined the range ratio, the result of which has been K = 11/1 = 11. On the basis of this result it can be stated that in the case of Hungary, there is an eleven-fold difference between the counties with the fewest and most medicinal baths. Second, we determined the dispersion range measure, the result of which has been R = 11 – 1 = 10. This result shows the difference between the number of medicinal bath elements in the county with the most and the least medicinal baths, which is ten. Third, we calculated relative range, the result of which has been Q = (11-1)/4.9 = 10/4.9 = 2.04. This result shows that the difference between the counties with the most and the least number of other medicinal bath elements related to the average is 2.04. The fourth measure, the dual index shows the relation between the averages of the number of medicinal baths above the average distribution of the total number of medicinal baths and the average of the number of elements that had fallen below the average distribution of medicinal baths in the counties. The result of this quotient is D = 6.5/2 = 3.3. From this it can be concluded that there is a 3.3-fold difference between the most developed and the least developed counties in terms of medicinal baths.

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[2] Data is not applicable because divsion by zero is undefined in Mathematics

[3] Data is not applicable because divsion by zero is undefined in Mathematics

There are 13 counties in Hungary with better-than-average medicinal bath supply, most of which are in Budapest (eleven), Hajdú-Bihar (nine) and Szabolcs-Szatmár-Bereg (seven) Counties. On the contrary, there are seven counties with below-average medicinal bath supply. The fewest medicinal baths are located in Fejér and Komárom-Esztergom Counties (one each) and in Veszprém county (two), taking into account that no medicinal baths are available in Nógrád County. These differences in the quantity of medicinal baths are mainly due to the natural geographical conditions in the counties.

3.2. Spatial polarisation of medicinal hotels

There are 40 medicinal hotels in Hungary. Most of them are located in Zala County (28%). Baranya, Bács-Kiskun, Békés, Csongrád-Csanád, Pest and Tolna Counties have the least of these medicinal hotels, whereas Fejér, Győr-Moson-Sopron, Komárom-Esztergom, Nógrád, Somogy, Szabolcs-Szatmár-Bereg and Veszprém County have none (Table 5).

When examining the spatial polarisation of medicinal hotels, first we determined the range ratio, the result of which has been K = 11/1 = 11. On the basis of this result it can be stated that in the case of Hungary, there is a 14.5-fold difference between the counties with the fewest and most medicinal hotels. Second, we determined the dispersion range measure of medicinal hotels, the result of which has been R = 11 − 1 = 10. This result shows the difference between the number of medicinal hotel elements in the county with the most and the least medicinal hotels, which is ten. Third, we calculated relative range, the result of which has been Q = (11-1)/2 = 10/2 = 5. This result shows that the difference between the counties with the most and the least number of other medicinal hotel elements related to the average is 5. The fourth measure, the dual index shows the relation between the averages of the number of medicinal hotels above the average distribution of the total number of medicinal hotels and the average of the number of elements that had fallen below the average distribution of medicinal hotels in the counties. The result of this quotient is D = 4.9/0.5 = 9.8.

From this it can be concluded that there is a 9.8-fold difference between the most developed and the least developed counties in terms of medicinal hotels. There are seven counties in Hungary with better-than-average medicinal hotel supply, most of which are in Zala (eleven) and Hajdú-Bihar (eight) Counties. There are nine counties with below-average medicinal hotel supply. The fewest medicinal hotels are located in Baranya, Bács-Kiskun, Békés, Csongrád-Csanád, Pest and Tolna (one each) Counties, taking into account that no medicinal hotels are available in Fejér, Győr-Moson-Sopron, Komárom-Esztergom, Nógrád, Somogy, Szabolcs-Szatmár-Bereg and Veszprém Counties. The number of qualified medicinal waters in these counties mainly cause these differences in the quantity of medicinal hotels.

3.3. Spatial polarisation of health resorts

The largest number of health resorts in Hungary is in Heves County (19%), while five counties (Fejér, Komárom-Esztergom, Nógrád, Pest, Tolna) and Budapest do not have such medicinal institutions at all (Table 6).

When examining the spatial polarisation of health resorts, first we determined the range ratio, the result of which has been K = 6/1 = 6. On the basis of this result it can be stated that in the case of Hungary, there is a 6-fold difference between the counties with the fewest and most health resorts. Second, we determined the dispersion range measure of health resorts, the result of which has been R = 6 − 1 = 5. This result shows the difference between the number of health resort elements in the county with the most and the least health resorts, which is five. Third, we calculated relative range, the result of which has been Q = (6-1)/1.6 = 5/1.6 = 3.1. This result shows that the difference between the counties with the most and the least number of other health resort elements related to the average is 3.1. The fourth measure, the dual index shows the relation between the averages of the number of health resorts above the average distribution of the total number of health resorts and the average of the number of elements that had fallen below the average distribution of health resorts in the counties. The result of this quotient is D = 3/0.5 = 6. From this it can be concluded that there is a six-fold difference between the most developed and the least developed counties in terms of health resorts. There are nine counties in Hungary with better-than-average health resort supply, most of which are in Heves (six), Vas and Zala Counties (four in each). There are eleven counties with below-average health resort supply. The fewest health resorts are located in Borsod-Abaúj-Zemplén, Csongrád-Csanád, Győr-Moson-Sopron, Jász-Nagykun-Szolnok and Somogy Counties (one in each), the remaining six counties have no health resort at all. This difference in the quantity of health resorts is due to the difference between the natural geographical conditions and the requirements needed to be adequate for qualified health resort.

4. Summary of polarisation measures

Our results obtained by examining the spatial polarisation of natural treatment factors and medicinal water institutions are summarized in Table 7. Overall, it can be stated that the range ratio and the extent of dispersion, with the exception of other natural treatment factors, show high differences between counties in the case of medicinal waters and medicinal water institutions. However, based on the more reliable relative range and the results of the dual index it can be concluded that there is no significant spatial difference between the counties in terms of the examined factors, with the exception of the dual index of other natural treatment factors (N/A) and medicinal hotels (9.8).

5. Examining Hungary's medicinal facilities

We have grouped the natural treatment factors found in Hungary and the medicinal water institutions based on them as health facilities. Based on this, we have determined the developmnet of the counties by their health facilities with a dual index. The level of development in the counties of Hungary is illustrated in Figure 1. When examining the dual index of Hungary's aggregate health facilities, we obtained the result that the quotient of the average above the total average distribution and the average below the total average distribution of health facilities is D = 33/12.2 = 2.7. This means that there is a 2.7-fold difference between the most developed and the least developed counties in terms of health facilities.
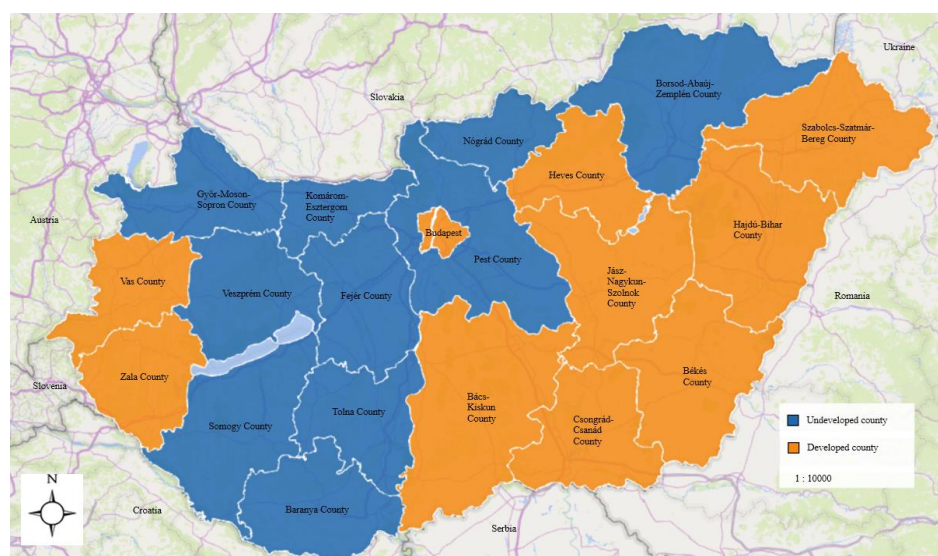
Figure 1. Development of counties (NUTS3) based on the number of health facilities
(Source: Own editing with Microsoft Excel 2016 3D Map and own calculation)

There are nine counties (Békés, Csongrád - Csanád, Bács - Kiskun, Szabolcs – Szatmár - Bereg, Heves, Vas, Zala, Jász – Nagykun - Szolnok, Hajdú - Bihar) in Hungary, besides Budapest, with better - than-average health facility supply, most of which are in Hajdú - Bihar County. There are ten counties with below-average health facility supply (Nógrád, Komárom - Esztergom, Fejér, Veszprém, Tolna, Győ r- Moson - Sopron, Baranya, Borsod – Abaúj - Zemplén, Pest, Somogy). The fewest (two) can be found in Nógrád County. The number of medicinal waters and medicinal water institutions cause these differences in the quantity of natural treatment factors and medicinal water institutions in the counties.

CONCLUSION

Hungary has an international reputation for its natural treatment factors, especially for its medicinal waters due to the country's geographical constraints. These natural resources connect the fields of geography, balneology and tourism in an interdisciplinary way, the role of which is becoming more and more prominent today with the appreciation of health. Internationally and in Hungary, health tourism, including medical tourism trips aimed at preserving health, play an outstanding role in the preservation of health. Natural treatment factors and medicinal water institutions built on them open up remarkable opportunities for these trips. To achieve our research goal, we examined the spatial inequalities of natural treatment factors and medicinal water institutions with the use of secondary data.

Based on our results, we concluded that among the natural treatment factors of Hungary, medicinal waters are found in the largest amount, the number of which significantly differs in the counties, but based on the polarisation measures there is no significant spatial inequality between the counties. Further examining other natural treatment factors, we concluded that their number is low in the counties. From the results of the polarisation of medicinal water institutions based on natural treatment factors, it can be concluded that the basis of Hungarian medical tourism is provided by medicinal baths, the polarisation of which does not show significant differences between the counties. Furthermore, there are greater inequalities between medicinal hotels and health resorts with moderate polarisation in the counties. Overall, it can be stated that the five counties east of the Tisza, as well as Heves, Bács-Kiskun, Vas and Zala Counties, and Budapest can be considered as developed counties in Hungary, the other ten counties can be described as underdeveloped in terms of health facilities.

These results suggest that spatial investigations play an important role in assessing the development of a country's tourism, so further research on the topic is recommended. Our results can form the basis of further researches in other countries of the Carpathian Basin, besides Hungary, which we propose to carry out for example in Romania, Slovakia, Slovenia, Ukraine, Serbia and Austria. The new results can be useful for the medical tourism decision makers.

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GREEN PERFORMANCE AND EMPLOYEES' CITIZENSHIP BEHAVIOR: EXAMINING THE ROLE OF EMPLOYEES' PRIDE AND COMMITMENT

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Abstract: Nowadays, employee behavior that has emerged as one of the most crucial factors that determine the success of organizations in general, and in tourism industry in particular. Previous researchers indicated that it is necessary to shed light on the mechanism influence of determinant factors on organizational citizenship behavior in the tourism industry. So that the main purpose of this study is to examine the mechanism of employees' perceptions of green performance of hotels influence their organizational citizenship behavior (OCB) with the serial mediating effects of psychology (perceived pride) and emotion (affective commitment) of employees working in the hotel. A conceptual research model is developed and then empirically examined using PLS - SEM. The study data was collected from 209 employees working in hotel at Moc Chau national tourism area (Vietnam) via a questionnaire survey. The results show a positive correlation between employees' perception of green performance of their hotel and their OCB. Interestingly, employees' perceived pride and affective commitment act as serial mediators in the relationship correlation between employees' perception of green performance of their hotel and their OCB. This study offers new insight for researchers and managers in the hospitality industry in term of "go green" tendency.

Key words: Green performance, tourist, citizenship behavior, perceive pride, affective commitment

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INTRODUCTION

Abraham Maslow stated about the subject of human motivation: human nature is good, when giving people safety and affection, they will also gain affection in their psychology, emotion and behavior. Assurance of employee commitments is a major concern in human resource development and organizational development. Increasingly, modern executives are focusing more on attracting, training, and increasing the loyalty of competent employees to maintain a competitive edge for firms. The modern environment is full of economic uncertainty, rapid change, continued globalization, increasing competition and the rise of the mobile millennium serving as the foundation and potential driving force for increasing attention and focus on employee commitment from both students and academics The current environment is changing rapidly with continuous globalization, increasing economic uncertainty, and increasing competition. The rise and growth of the mobile network serve as a driving force and an important foundation for focusing on employee engagement. Research by Risher (2014) demonstrates that a poor attitude, mentality or feeling about the business can reduce employee's commitment to the organization. In the same vein, Alvino (2014) indicated that employees' overtime behaviors and work performance are affected by factors such as emotional attachment and commitment of employees to the organization. Davies et al. (2015), while highlighting the re-focus of

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corporations on emotional commitment and happiness, stated that "this is the unified philosophy of the 21st century manager: Every worker can be better, physically, mentally and output" highlighting the importance of focusing on emotional commitments. Each worker can become better mentally, in their health and performance (Davies et al., 2015).

Currently, businesses are facing many difficulties due to low rubber prices leading to more fierce competition. In addition to traditional solutions such as increasing capital, investing in science and technology, the policy makers have suitable decisions. Stemming from the above issues, this study contributes to better understanding the importance of organizational citizenship to the organization's work efficiency, as well as contributing to improving the quality of employees. Organizational citizenship behavior research helps company managers to have a complete and comprehensive view of their employees to come up with the right policies and measures to encourage innovation and motivate employees. This is an important basis for improving productivity and working efficiency of employees, ensuring fairness, reliability, increasing employees' cohesion with the organization. Tourism which is one of the most developed economic sectors recent years, has contributed a lot of works for the economy of almost all countries in 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, psychical tourism, and cultural tourism. For this reason, many countries have built a tourism – based country development strategy for the future. 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 impression 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 Bank[1]. 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. Finally, this study is based on the theory of social identity theory and selection of the natural tourism scene in the Moc Chau national tourism area. That means that the main aim of this study is the link between green practices and OCB. Because this area is one of the most famous natural tourism destinations in Vietnam, it attracts a lot of hotel tourists every year. With the provincial government's sustainable tourism development strategy, the manner of hotel staff affects the better service and quality of service. Therefore, in order to evaluate the effectiveness and contribute to documentation and practice, this study attempts to answer the following research questions:

Firstly, to what extent does the employee's perception of green practices influence their OCB?

Secondly, to what extent does employees' perceived pride and affective commitment affect green practices and OCB?

Thirdly, how does employees' perceived pride and commitment affect the relationship between their perception of green practices and their OCB?

BACKGROUND THEORY AND HYPOTHESIS DEVELOPMENT
1. Green Practice and OCB

Green practice is the activity of environmental commitments including: environmental protection, waste treatment, corporate social responsibility (CSR). Nowadays, products and services related to the environment which are currently in serious need of society. To solving the problems, hotel managements have to understand and practice this issue well in practice. In addition without issues related to customers, the success of a green hotel depending on the personal beliefs and daily actions of the staff. Individual environmental standards explain variance in hotels, but green organizational climates explain variance between hotels and control with the effect of individual environmental standards on individual environmental behavior. Smith, Organ and Near (1983) showed OCB is personal, voluntary, non-direct or explicitly binding behavior is recognized by rewarding the organization's system but this drives the organization's performance. OCB depicts such spontaneous employee behavior promoting the efficient and effective functioning of the organization. These specialties include: author, owner and goodwill. In 1988, Organ again re-clarified the nature of the OCB as "a voluntary, personal behavior that is not directly or explicitly recognized in regular rewarding activities but has the effect of promoting effective activities of the organization. This behavior does not stem from the required orders, the characteristics of the job or agreement in the job. Sandra and Morrison's research's results showed that employers are disappointed because their employees do not meet their duties when their employees work after 18 months. The research also showed that employees are less able to express their civic behavior. The relationship between employee and employer is in part based on trust.

According to the social identity theory, staffs are aware of their organization's effort development defining clearly by emphasizing environmental orientation, they feel higher valued than working for an eco-friendly company. In other words, an employee's positive self-image by adjusting their identity to the organization. Furthermore, pointed out that work demonstrates value to individuals through psychology. According to social identity theory, employees perceive their organization's efforts to develop emotion and have the ability to be clearly defined by emphasizing environmental orientation, when they feel more valued than when working for an environmentally friendly company. In other words, green practice enhances an employee's positive self-image by adjusting their identity to the organization (Lee et al., 2012). According to research by Kamal Manaktola, Vinnie Jauhari (2007), all individuals tend to develop the values they receive sustainably, then formulate and ultimately act on green practices. According to Trang et al. (2018), the attributes of a green hotel in particular which are 5 aspects: customer benefits, energy efficiency, water saving, recycling policy and green identity has a positive effect on the value and profitability of environmental attitudes, thereby enhancing the intention to take eco-friendly actions and visiting a green hotel, at the same time, environmental households. From these evidence, this research hypothesis that:

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[1] https://www.worldbank.org/en/country/vietnam/overview

H1: Employees' perception of green practice has positive impact on their perceived pride

Recently, researching staff casinos found a positive relationship between green practice and organizational trust. Lee et al. (2012) used the views of food service employee in Korea to experimentally examine the effects of CSR on work attitudes and behaviors. Affective commitment (AC) describes the employee's affective attachment to the organization, stemming from accepting the organization's values. The hotel is a too familiar concept, it is where the service business stores accommodation, catering services and other complementary services. While green hotels provide services to diners on a guaranteed basis and environmental protection. For a society where environmental pollution is a problem in all countries around the world, the "greening up of hotels" model completely raises awareness and increases attitudes to feel positive about the place there. As noted that the hotels' employees in low awareness of green practices needs further improvement to perfect the system. Values (reward benefits of the program) and sentiment (feeling attached to the brand) from research by and restrictions from international treaties and individual institutional commitment to move green in the hospitality industry from provides fair value. Employees who believe that their organization pursues green program by supporting eco-friendly practices is proud of being part of the organization, thus leading to a more positive working attitude. An empirical study by revealed that employees have the ability to show positive working attitudes (e.g. job satisfaction) when they see moral activities. Similarly, pointed out that an organization's ethical environment affects employee's job satisfaction. Therefore, we believe that green practice fosters a strong ethical environment, makes employees feel good about themselves and thus increases the motivation to work hard by demonstrating a sense of commitment to organization. An empirical study by revealed that employees are capable of displaying a positive work attitude (e.g. job satisfaction) when they see a company behave morally. Therefore, we believe that green practice fosters a strong ethical environment, makes employees feel good about themselves and thus increases their motivation to work hard by demonstrating a commitment to cohesion, bundle with the firms. From these evidence, this research hypothesis that:

H2: Employees' perception of green practice has positive impact on their affective commitment.

Tyler (1999) suggested that people become more emotionally engaged with an organization in the extent that their membership in the organization contributes to an organization positive social identity. More specifically, it is argued that the valuable organizational characteristics can be considered a source of organizational pride for the individual employees, creating satisfaction and commitment to the organization, and can therefore be an important source of employee collaborative behavior. Accordingly, empirical research in organizations has determined that organizational pride predicts individual employees' psychological attachment and motivation. The organization's environmental policy helps employees gain confidence in the environment. Environmental training is an essential element of employees' environmental beliefs. Employees' environmental beliefs lead to citizen's behavior toward the environment. Supporting the environment enhances the impact of staff's environmental beliefs on OCB, which is the fact that hotel staff say they are increasingly engaged in eco-friendly citizenship behavior as their environmental confidence increases. In addition, green training positively affects the organization's environmental and behavioral commitment, and the cognitive behavioral control completely mediates the association of hotel staff. From these evidence, this research hypothesis that:

H3: Employees' perception of green practice positively related to OCB.

2. Perceived pride

Pride is a complex human emotion resulting from the positive influence of the perceived value of an object or person with which the object is closely related. Pride can be either an introverted or an extrovert emotion depending on the context. Pride can be expressed through many different means. The non-verbal representation of pride can serve as a means of sending a functional signal, automatically perceived to be worth, status or achievement.

Tyler (1999) suggested that people should become more emotionally engaged with an organization, to the extent that their membership in this organization contributes to a positive social identity. More specifically, it is suggested that the valuable organizational characteristics can be considered as a source of organizational pride for individual employees, creating satisfaction and commitment to the business and this can be an important reason for the employee's cooperative behavior with the organization. According to Tyler and Blader (1999 organizational pride will predict the psychological attachment as well as work motivation for individual employees. From these evidence, this study suggests that:

H4: Employees' perceived pride has a positive effect on their affective commitment.

A model describing employee attitudes that mediate the relationship between employee voluntariness and their behavior. The model suggests that workplace attitudes such as awareness, pride, and job satisfaction can mediate the relationships between employee volunteerism and realistic work behaviors, present tasks, citizenship behavior of the organization and counterproductive working behavior. Furthermore, Glavas and Kelly (2014) suggested that perceived organizational support (POS) can enhance the impact of employee volunteering on an organization's results such as satisfaction at work, organizational identity and organizational commitment that explain the relationship between CSR perceptions (including green practices) and the organizational citizenship behavior (OCB).

Organizational pride refers to a member's appreciation of the integrity of the organization they belong to. Perceived pride is defined as "the degree to which individuals experience a sense of excitement and self-esteem arising from their organizational membership". Organizational commitment and organizational pride expressing expected responses to these perceptions are consistent with the arguments of social exchange and social identity theory. Furthermore, according to the social identity and social exchange statement, on the success of the organization based on the employee's willingness to contribute, this willingness is influenced by perceived pride and a sense of organizational commitment. They will be motivated to do their best

for the good of the organization, and thus demonstrate broader performance. Previous documents suggest that perceived pride can be a psychological mechanism that can combine an organization's voluntary meaning and civic behavior. When employees feel meaningful at work, they tend to be for the benefit of the organization that collaborate with colleagues. In addition, they can engage in civic behaviors beyond the level required by their organization. Hence, this study hypothesizes that:

H5: Employees' perceived pride has positive effect on OCB.

3. Affective commitment

According to Meyer and Allen (1991), emotional commitment is the employee's emotional attachment to the organization, identification and participation in the organization. This can be demonstrated through the sharing of values, the desire to continue working for the benefit of the business. In the study of Meyer and Herscovitch (2001), there are still many confusion and disagreement about the definition of commitment and its influence on behavior. Emotional commitment can be understood as an individual's emotional attachment to an organization expressed through an individual's identity with participation in the organization. These research showed that individuals who show a lack of positive attitudes towards enterprises in the first week of work tend to leave the organization. In addition, they found organizational dissatisfaction as a precursor to the ultimate revenue change. Besides, the disorganization is the result of a degree of affective commitment. Rhoades et al. (2001) studied the relationship between work experience, organizational support awareness, affective commitment (AC), and employee turnover and found relationships between negative relationship between organizational support awareness (helping the organization be perceived) and subsequent voluntary employee turnover due to AC in retail and livestock workers. Favorable working conditions operate over POS to increase AC, thereby reducing employee withdrawals and emotional commitment and self-esteem are the main drivers of citizenship behavior. Commitment is considered an important factor in retaining talented employees, encouraging employees to participate in activities for the organization and thus enhancing employee commitment is a goal. Managers are concerned for the long-term and stable development of the organization. Other researchers showed that organizational trust and emotional commitment are the complete mediation of the relationship between commitment and the citizenship behavior of the organization. Emotional commitment is a topic that attracts many researchers because many aspects need to be tested and exploited. From these evidence, this study hypothesizes that:

H6: *Affective commitment has positive impact on OCB.*

H7: The relationship between employees' green performance and their OCB is serial mediated by perceived pride and affective commitment

In conclusion, we can depict the proposed research model as follow:
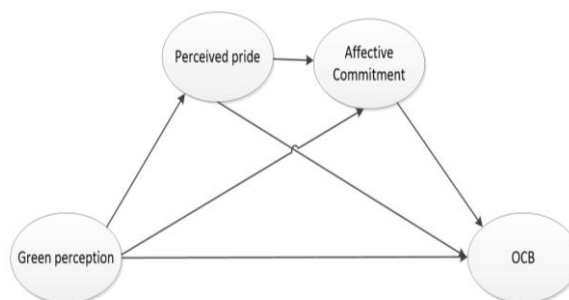
Figure 1. Research model

RESEARCH METHOD
1. Questionnaire design

To test the proposed hypothesis, this research utilizes the questionnaire survey method to collect the data. Participants are employees who work in the hotels in Moc Chau NTA. The authors selected this kind of respondents because they have well understood the activities of the hotels where in they work for. So that they can apprehend the green performance activities of their hotels which in turn stimulate their positive or negative emotion towards their hotels. This research applied scales from previous studies and adapted to fit the new context of green tourism in Vietnam. All scales are in the form of Likert-5 which range from 1 representing strongly disagree to 5 representing strongly agree. Wherein, employees' perception of green performance includes of 8 items adopted from, one of the items is "Using reusable utensils rather than disposable ones". Employees' perceived pride about the hotels composed of 3 items adapted from in which one of the items is "I am proud of being a member of my hotel". Employees' affective commitment includes of 6 items adapted from, one of the items is "I feel a strong sense of belonging to my hotel". Finally, employees' citizenship behavior is adapted from which composes of 6 items, one example is "Helps others even though there is no formal request". To have a more consistent questionnaire, we applied back – translation technique by specialists in English and business management. That means the original items in English version were translated into Vietnamese and then translated back to English, the specialists in English and business management compared the two versions and modified to have a draft version. To test the suitability of the questionnaire, this draft version is tested and checked with 15 employees who work in the hotels at Moc Chau NTA in a pilot test and then the final version of questionnaire was determined.

2. Data collection

The main aim of this research is to evaluate the organizational citizenship behavior of employees who work in a hotel where practicing well the green performance. So the population for this research is all the employees who are working in Moc Chau NTA. 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 for develop sustainable tourist industry. We applied a simple random sampling method through questionnaire survey with

employees of hotel at this area. The questionnaire consisted of 23 main questions, so according to the minimum sample size would be 115 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 in one month. Finally, the result has a total of 209 valid questionnaires collected after the survey, means the rate about 95%. The demographics of the respondents is depicted as follows:
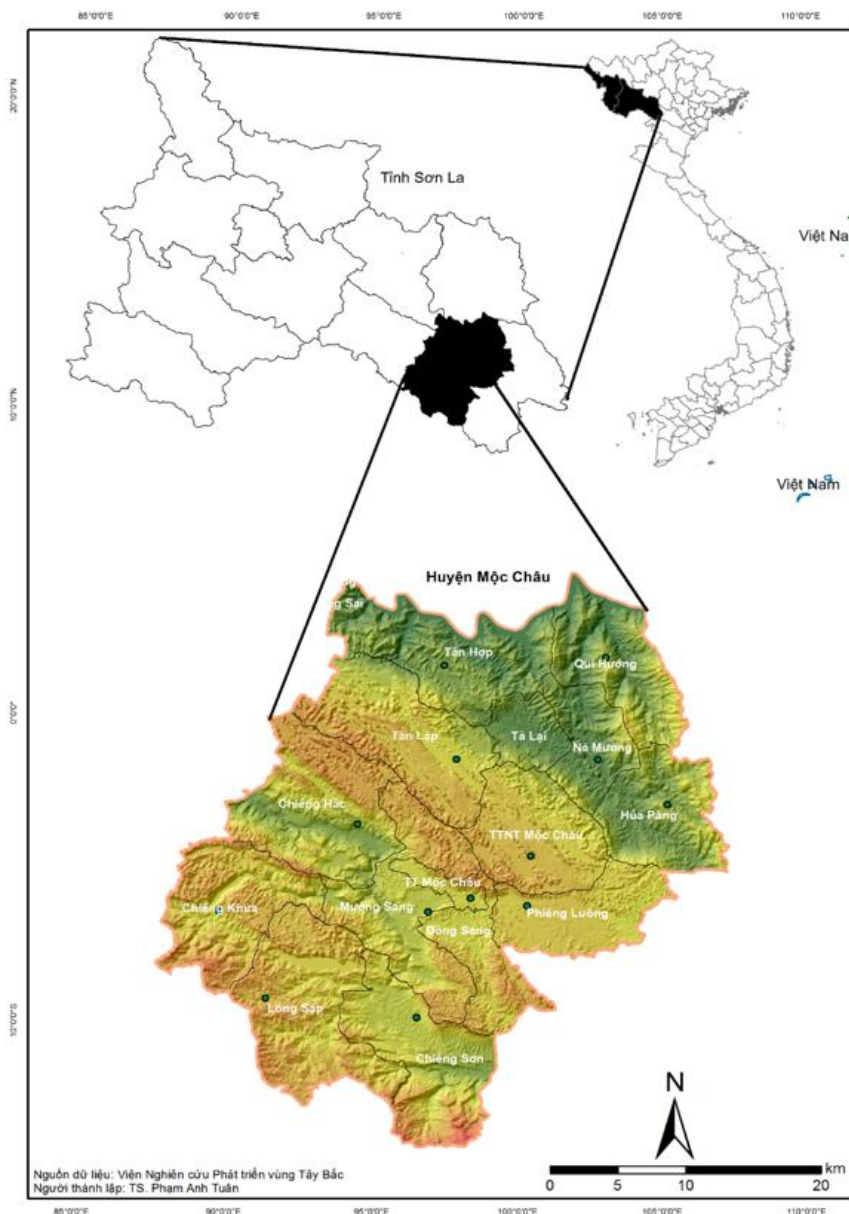
Figure 2. Map of Moc Chau district, Son La province (Vietnam)

Table 1. Demographic information

Factors	Component	Amount	%
Gender	Male	101	48.3
	Female	108	51.7
Age	Under 25	37	17.7
	25 – 35	73	34.9
	35 - 45	73	34.9
	Over 45	26	12.4
Income (VND/ month)	Under 5 million	17	8.1
	5 – 10 million	122	58.4
	10 – 15 million	53	25.4
	Over 15 million	17	8.1
Education	High school	110	52.6
	College	13	6.2
	University	78	37.3
	Other	8	3.8

Table 2. Measurement model evaluation

Variables	AVE	CR	Cα
Green practice perception	0.56	0.86	0.80
OCB	0.58	0.89	0.85
Perceived pride	0.69	0.87	0.78
Affective commitment	0.63	0.84	0.71

Table 3. Construct AVE correlation

	GP	PP	AC	OCB
GP	1	0	0	0
PP	0.56	1	0	0
AC	0.62	0.79	1	0
OCB	0.47	0.58	0.69	1

RESEARCH RESULTS

This study applied the PLS-SEM path model to test hypotheses through Smart PLS 2.0 software. 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 = 209). Furthermore, it can explain a relationship of reflective construct and formative construct. Moreover, this research attempts to clarify the serial mediating effects of employees' perceived pride and affective commitment in the relationship between green perception and employees' organizational citizenship behavior.

1. Scales measurement evaluation

To evaluate the scales, the current research used Cronbach's alpha (Cα), composite reliability (CR) and average extracted variance (AVE). In which, the minimum loading factor is 0.61 and the highest is 0.88, satisfying the cut-off value 0.5. Besides, values of Cα ranging from 0.71 to 0.85 and values of CR ranging from 0.84 to 0.89 are both greater than the level 0.7. These numbers proved the reliability of the scales satisfying the requirements. In addition, AVE values from 0.54 to 0.63 both satisfy cut – off value of 0.5, 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 (Fornell and Larcker, 1981). 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).

2. 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 employees' perception of green performance of hotels has positive effect on OCB (β = 0.504; p <0.001, t-value = 6.61). Besides, employees' perception of green performance of hotels positively impact on employees' perceived pride towards the hotel (β = 0.58; p <0.001, t-value =8.09), as well as on employees' affective commitment (β = 0.426; p <0.001, t-value =4.24). Employees perceived pride has positive effect on their affective commitment (β = 0.225; p <0.01, t-value = 2.49), on OCB (β = 0.306; p <0.001, t-value = 4.82). Finally, employees' affective commitment positively effect on OCB (β = 0.20; p <0.001, t-value =2.54). These evidence confirmed that hypothesis H1, H2, H3, H4, H5 and H6 are supported. To test the serial mediating effect of employees' perceived pride and affective commitment in the relationship between green performance and tourist loyalty, a mediation model was built with PROCESS v3.3 by Hayes, 2009. The testing results are showed as follow. In Table 4, employees' perception of green performance of hotel has a significant impact on OCB (β = 0.0903, p < 0.001) in the direct model. The influence of employees' perception of green performance of hotel decreased in the indirect model 1 with employees' perceived pride acting as a mediator (β = 0.0053; p <0.001, [-.0063, .0173]). In the same vein with indirect model 2 with the mediating role of employees' affective commitment (β = 0.0098; p <0.001, [-.0003, .0234]). Especially, the results showed both employees' perceived pride and affective commitment influence on the relationship between employees' perception of green performance of hotel and OCB as the serial mediators (β = 0.0009; p <0.001, [-.0009, .0032]). This evidence confirmed the hypothesis 8.
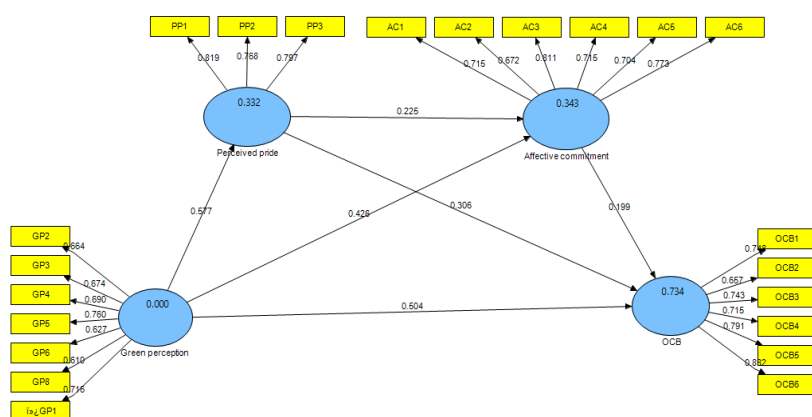
Figure 3. PLS testing results

Table 4. Mediating effect testing

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
.0903	.0103	8.7472	.0000	.0699	.1106

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.0160	.0093	-.0013	.0355
Ind1	.0053	.0059	-.0063	.0173
Ind2	.0098	.0060	-.0003	.0234
Ind3	.0009	.0010	-.0009	.0032

Indirect effect key:

Ind1	OCB	->	PP	->	GP		
Ind2	OCB	->	AC	->	GP		
Ind3	OCB	->	PP	->	AC	->	GP

CONCLUSION AND DISCUSSION

In the modern life, human needs are more and more increasing, not only at a basic level as before but also at a higher level. They need to go outside after stressful working hours and they want to travel to go back with natural mother. That stimulates the development of green tourism in all over the world. Besides, employees serving in the hotels contribute as a main factor that satisfy their tourists. So that in the manager perspective, it is necessary to understand how mechanism of employee behavior to have suitable solutions. This research is among the research that attempt to answer this question by focusing on the organizational citizenship behavior of employees who work in the hotels in Moc Chau NTA (Vietnam). Specifically, this study attempt to clarifiy the employees' perceptions of hotel green practice performances, thereby assessing and examining its role in the correlation with their OCB with the mediating roles of perceived pride and affective commitment. Research shows that employees have their own point of view in term of the hotels' green performance which include of 8 items related to four group such as energy efficiency, water conservation, recycling and clean air. In which, one example of recycling is "Using reusable utensils rather than disposable ones", of water conservation is "Landscaping with native plants to minimize water consumption", of energy efficiency is "Using Energy Star-rated equipment" and clean air is "Using environmentally preferable cleaning products". The evidence confirm that employees have well knowledge about the green performance of hotels in general.

In addition, the current research also clarifies the relationship between employees' perception of hotel green practices and their perceived pride towards the hotel (β = 0.58; p <0.001, t-value =8.09). That means the more their working hotel perform the green activities, the more they feel pride towards their hotel with relatives and with other people. The evidence also show that the green performance of hotel strongly influence on the pride of employees with β = 0.58. Moreover, previous scholars asserted that nowadays, the positive emotion is very importance determining the quality of all relationship in the society. Specifically, if employees have good emotion with their organization, they have certainly good attitude, behaviors and actions. It is a very importance thing that organization need to consider. This evidence also contributes to the literature in the field by filling the research gaps as proposed by previous researchers such as. Besides, this research also explores the influence of employees' perception of green performance of hotels on employees' affective commitment (β = 0.426; p <0.001, t-value = 4.24). This means when employees perceive the practice of green activities in their hotel, their commitment and retention to work in their hotels is in a higher level. Nowadays, retention employees in the organization is more and more important especially employees whose knowledge, ability and capability are good. This is a contribution to the tourist literature by filling the call of deeper examining the relationship between green performance and employees commitments such as.

In the same vein, this research confirms the crucial role of employees' perception of green performance of hotels has positive effect on OCB (β = 0.504; p <0.001, t-value = 6.61). As mentioned by previous scholars, employees' OCB is very important for the firms because it stimulates employees behaving as a part of the firm. But previous research also showed the OCB mechanism of employees is "under-estimated" that need to deeper research, especially in the correlation with corporate

social responsibility in the hospitality industry. This research indicated that employees' perception of green performance of hotels has directly positive effect on OCB. Moreover, this research also examines the mediating role of employees' perceived pride and affective commitment in this relationship. To test the serial mediation of employees' perceived pride and affective commitment in the relationship between employees' perception of green performance of hotels and OCB, this research created a mediation model and applied PROCESS v3.3 by Hayes, 2009. The results showed that these two factors contribute as the serial mediation in the relationship of GP and OCB (β = 0.0009; p <0.001, [-.0009, .0032]). This finding is a new in the field because as our knowledge to date, there is no research that examining these factors as the serial mediation between GP and OCB. This evidence fill the call of research by previous scholars such as. Beside theoretical contribution, this research also has some managerial contribution to managers and policy makers. Firstly, this research suggests that hotel managers need to understand the importance of the "green" factor by performing green practice activities in the hospitality and tourist industry. Because this factor has a direct effect on employees' behavior, especially their OCB. Scholars pointed out that employee citizenship bring a lot of competitive advantage to the firm, employees not only retain working in the firms but also better serve their customers and work more efficiently. Nowadays, employee retention is very important that determine the success of all the firm, if the employees turn to the competitors working, that is really a terrible thing of the firm. Secondly, this research indicates the important role of green performance in the psychology of employees who work in the firm. Specifically, the more employee perceive the green performance of hotel, the more positive psychological state (perceived pride towards the hotel) they have. So that employees will be very pride with other people when working in a firm that practice well the green activities. Managers of hotel in particular and all firms in general need to know this mechanism to have suitable solutions in the reality.

Thirdly, in the same vein, this research indicates the important role of green performance in the emotion of employees who work in the firm. Specifically, the more employee perceive the green performance of hotel, the more positive emotion (affective commitment) they have. Managers need to know this mechanism to have suitable solutions in the practice. Previous research also showed the importance of emotional state of employees in the relationship with their work creativity and productivity. Fourthly, this research found the relation between psychology and emotion of employees by proposing the relationship between employees pride and their commitment with the firm. Positive emotion is crucial for the employees in the firm that stimulate them to be more productive and efficient in their work which in turn satisfy customer. Managers who know this relationship can apply well in their firms that can lead to a lot of competitive advantages to the firms. Finally, the current research provides some contribution in terms of serial mediation of pride perception and commitment in the relationship between green practice and OCB. That means green practice can stimulate the OCB of employees by pride perception and affective commitment independently and both of these two factors. Managers know this mechanism can have solutions to improve the productivity of their employees, as well as their employees' OCB. Even the theoretical and practical contributions, this research still has some limitations. First, this research only collected the self – administered data from employees who work in homestay services in Moc Chau national tourism area, which may lead to incomplete and unrepresentative employees in other firms. 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 employees' behavior. This research did not examine the role of trust because trust and commitment is vastly research together. Moreover, future studies could also propose new factors to enrich knowledge on this topic in the current competitive context.

Acknowledgments

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LOCAL AND SUSTAINABLE POTENTIAL APPROACHES IN THE DESIGN OF A MASTER PLAN ARCHITECTURE: CASE STUDY OF PAKSEBALI TOURISM VILLAGE DEVELOPMENT, INDONESIA

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Abstract: This research aimed to plan the design of the master plan through a local potential and sustainable approach in creating a master plan architecture Paksebali tourism village. The research methods used are Research and Development (R&D) method in qualitative research. The first step was carried out with a study of the Paksebali Tourism Village to find the right approach's characteristics and then develop it in the form of an architectural design of a tourist village master plan. This study's results indicate that the master plan for Paksebali Tourism Village is based on developing supporting facilities for local potentials by maintaining these potentials' sustainability, which is implemented in master plan designs both macro and micro. This sustainability is fundamental as the consistency of this potential is conservative, maintains local characteristics, and becomes a welfare source for local communities. The Paksebali Tourism Village master plan's architectural design transformation requires these considerations (local potential and sustainability).

Key words: community-based, local potential, master plan architecture, Paksebali tourism village, sustainability

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Introduction

Tourism villages are a new perspective in the tourism sector (Komariah et al., 2018; Sesotyaningtyas and Manaf, 2015; Trisnawati et al., 2018). This model emerged as a response to the tourism development model, which prioritizes individual and group interests. Exploring tourism potential without paying attention to the sustainability and contextual aspects of local communities is a phenomenon that is developing worldwide. This generally occurs in mass tourism, where tourists come to tourist objects in droves in large numbers (Butler, 1999; Juan et al., 2016; Marson, 2011; Vainikka, 2013). This mass tourism positively impacts economic development and affects environmental and social degradation (Buckley, 2007; Fennell, 2008; Vainikka, 2013). Focus on financial aspects and not paying attention to the sustainability aspects of the explored environment and distant social relations between communities due to economic competition. In various countries globally, there is a change in tourism development towards quality tourism by offering exclusive travel and maintaining environmental and social sustainability (Fennell, 2008; Pan et al., 2018). There was an exploration of the natural environment without regard to supporting ecological resources for the future. There was also the construction of tourist accommodation facilities without considering the impact on the ground. Tourism area planning must pay attention to local aspects and pay attention to their ecological impacts (Gohar and Kondolf, 2016). The transition of vernacular and traditional settlement architecture to commercial architecture, for example, is a form of commercialization of the interests of the selling value of tourism, where vernacular and traditional architecture could become tourist destination artifacts, not converted into commercial architecture. Some changes have occurred in the spatial layout of community residential units, which have changed their function to become an art shop. However, visually, the facades of the buildings still retain local architectural characteristics. The presence of tourism accommodation architecture such as lodging and restaurants with an architectural style that was not contextual on the site being built, changed the identity of a place with a new identity. The above phenomenon is the basis for the emergence of a Tourism Village in the tourism industry, with the concept of existence, independence, and sustainability of village assets through independent management by the village themselves. Tourism village assets which are local potentials as objects of tourist destinations can be in the form of rural nature, natural attractions, traditions, and other unique elements that attract tourists (Joshi, 2012). The local community is expected to be able to maintain the sustainability of natural, cultural, and other potentials, as tourism actors in the management of tourism village governance (Wijaya, 2020; Yanes et al., 2019).

The tourist village has components that synergize with one another in realizing the main goal: local communities' welfare. According to Prasyanti et al. (2018), tourism village components consist of soul, body, and mind. Soul has a connection with local potentials as a tourist asset, such as natural, cultural, and traditional potential, and other villages that can be used as tourist assets. The body is a tourist village's infrastructure to support the village's potential, namely roads, tourism accommodation facilities, and other hospitality facilities. The mind correlates with hospitality and management. The potential as the main asset of a tourist village and village infrastructure will not work together if there is no tourism management (mind). Local communities are carried out, which are expected to be independent in managing their tourism assets. The community approach is an effort to maintain village assets as the main aspect of the Tourism Village through the local community's

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independence in managing their village (Adebayo et al., 2019; Okazaki, 2008; Wijaya, 2020; Wijaya and Nurwarsih, 2019). This strategy is a core component of ecotourism or tourism focused on the climate. Ecotourism is described as a tourist trip to a remote location to enjoy and learn about the potential of nature, culture, and customs while also benefiting the local economy. (Cater and Cater, 2015; Cobbinah, 2015; Fennell, 2008). Ecotourism is a form of tourism that focuses on natural and cultural resources through knowledge, awareness, and restoration (Masjhoer et al., 2017). On January 19, 2017, Klungkung Regent Regulation No.2 of 2017 named Paksebali Village as a tourism village. This determination is based on the potential of Paksebali Village as a tourism village. Paksebali Village has natural areas in Tukad Unda and Bukit Mandean, which can provide a panoramic view of natural beauty in river water flow that terraces up to the green hilltop visual beauty hilly area (Wijaya, 2020). The preservation of both sacred and secular art traditions in the village of Paksebali is still well preserved to this day. As a product of religious culture, Temple architecture provides an overview of local architecture development in Paksebali Village. Community independence in the economic sector through community activity units in the form of local crafts and local culinary is an essential part of the assets of the village of Paksebali as a Tourism Village (Pantiyasa and Rosalina, 2018).

The tourism potentials possessed by the Paksebali Tourism Village are scattered in the Paksebali Village area with a considerable distance from one prospect to another (Wijaya, 2020). This distribution is a concept in a tourist village that provides a tourist movement scenario through the "tour around village" approach. However, this was not supported by an information center's existence and the capacity of tourism support facilities to provide comfort and security for the Paksebali Tourism Village visitors. The concept of the soul – village assets as tourism potential, body – infrastructure and capacity of supporting facilities, and mind – tourism village management that prospects in Paksebali Village. The destination object was not supported by the presence of a "body of tourism village," thus, the comfort and safety of visitors were reduced in its hospitality value. Tourists could not know the tourist destination spots, the unavailability of tourist attractions to improve the local economic aspects, and tourists have not enjoyed local dance tourism attractions optimally because it has not been accommodated in performance architecture. Rest areas were still minimal in supporting tourist visits to the village. According to the above definition, the tourist village elements in the form of "soul," "bone," and "mind" are at odds with the reality in the area. This means that the Paksebali Tourism Village did not have the concept of developing a tourism area that is integrated between "soul," "body," and "mind" in a tourist area to support the local welfare of the Paksebali Village residents in the independent management of the tourism village. The potential of Paksebali Village can be seen in Figure 1. The study aimed to develop Paksebali Tourism Village in a master plan planning with a sustainability approach. The scenario offered is that the potential possessed by Paksebali Village is the main asset in developing a tourism village while still prioritizing the distinctive aspects of each potential, not carrying a design concept from outside Paksebali Village but adopting the local wisdom of Paksebali Village. Can be done through a sustainable master plan, namely (1) planning for the arrangement of the Tukad Unda and Bukit Mandean areas oriented to a contextual design; (2) accommodating the activities of cultural traditions such as local dances in a space (stage); (3) supporting the development of community activity units in the field of local crafts as tourist objects; and (4) planning an information center as a starting point

Figure 1. Spreading the Potentials of Paksebali Tourism Village (Source: Author, 2021)

for excursions in Paksebali Village, serving information about Paksebali Village, restaurant facilities that present local menus with a modern appearance, galleries to display the local handicrafts of Paksebali village and information about village traditions, also the management room for the tourism area of Paksebali Village. This scenario is following the concepts of "soul," "body," and "mind," as well as the idea of sustainability in protecting nature (environment), economic sustainability, and social relations between visitors and local communities in a setting that is still natural.

MATERIALS AND METHODS

The research method used in this research was research and development (R&D). This method emphasizes two main stages: a study in the form of research and development in design. This method aims to produce a particular product and test its effectiveness (Hamzah, 2019; Sugiono, 2016). The research stage focuses on grand concepts to see and limit analysis and searching or data collection (Muhadjir, 2002). The development stage is in the form of design, development, testing, and reporting. This stage focuses on implementing the research results, namely the sustainability concept, in the master plan design for Paksebali Tourism Village. The grand concept serves as a starting point for developing the master plan for the Paksebali Tourism Village district. The elegant concept used is the sustainability concept - economic, environmental, and social. The

master plan design towards has the approaches aimed at directing the existence of the local potentials of Paksebali Tourism Village. The involvement of local communities in the operational and conservative management of these tourism assets, maintaining the independent presence of local communities, and reducing the effects of development and architectural forms outside the context of the Paksebali Tourism Village can change the characteristics of Paksebali tourist village. The analysis out through data collected through structured interviews and observations. The data collection method was carried out to identify Paksebali Tourism Village's potentials in nature, culture, local crafts, and local culinary. The identification was carried out based on biological, cultural, and traditional variables, local arts, and local culinary delights. The units of information identified are relevant to the purpose of this research. The results of this data collection were translated into architectural planning, which was divided into four zones, namely (1) the Bukit Mandean zone; (2) the information center zone in the Tukad Unda (Unda river) area; (3) the zone where the performance is located; and (4) the glamping zone.

The development of a tourism village through consideration of sustainability - economic, environmental, and social aspects can be detailed as follows:

1. They are planning in the economic aspect through the method of interaction of local communities in tourism activities to get welfare from these tourism activities. The vernacular architectures as tourist accommodation through the tourist house approach, a large amount of capital, is not required in tourist accommodation.

2. Planning in the social aspect, namely, equitable distribution of community interactions in tourism activities so that the benefits are evenly distributed. There is no form of social jealousy among the village community, and social relations are well established through intense communication in cooperation in managing the sustainability of these local potentials.

3. Planning in the environmental aspect, namely through the interaction of the local community in running a tourist village, a strong sense of belonging is a tremendous asset in maintaining the sustainability of these local potentials. The involvement of village *awig-awig* (customary regulations) is the proper method in maintaining these potentials because local people are very obedient to the ordinary local rules.

This research's steps are divided into two main stages: research and development (Hamzah, 2019; Sugiono, 2016). The research stage was carried out through a qualitative study to find concepts and approaches in designing the master plan for the Paksebali Tourism Village. The development stage consists of (1) reviewing the images and elements of a tourist village; (2) identifying the existing conditions of Paksebali Tourism Village and the development of tourism in the context of a tourist village; (3) finding the gaps and weaknesses of Paksebali Tourism Village based on the concept of "soul," "body" and "mind"; (4) formulating a development program based on elements of a tourist village ("soul," "body" and "mind"); (5) composing a tourism village development model with the local character through a sustainability approach; (6) planning a master plan for the development of the tourism village of Paksebali which is divided into two programs, namely macro and micro; and (7) synthesizing the planning model analysis. These research steps are implied in the research flowchart below (Figure 2):
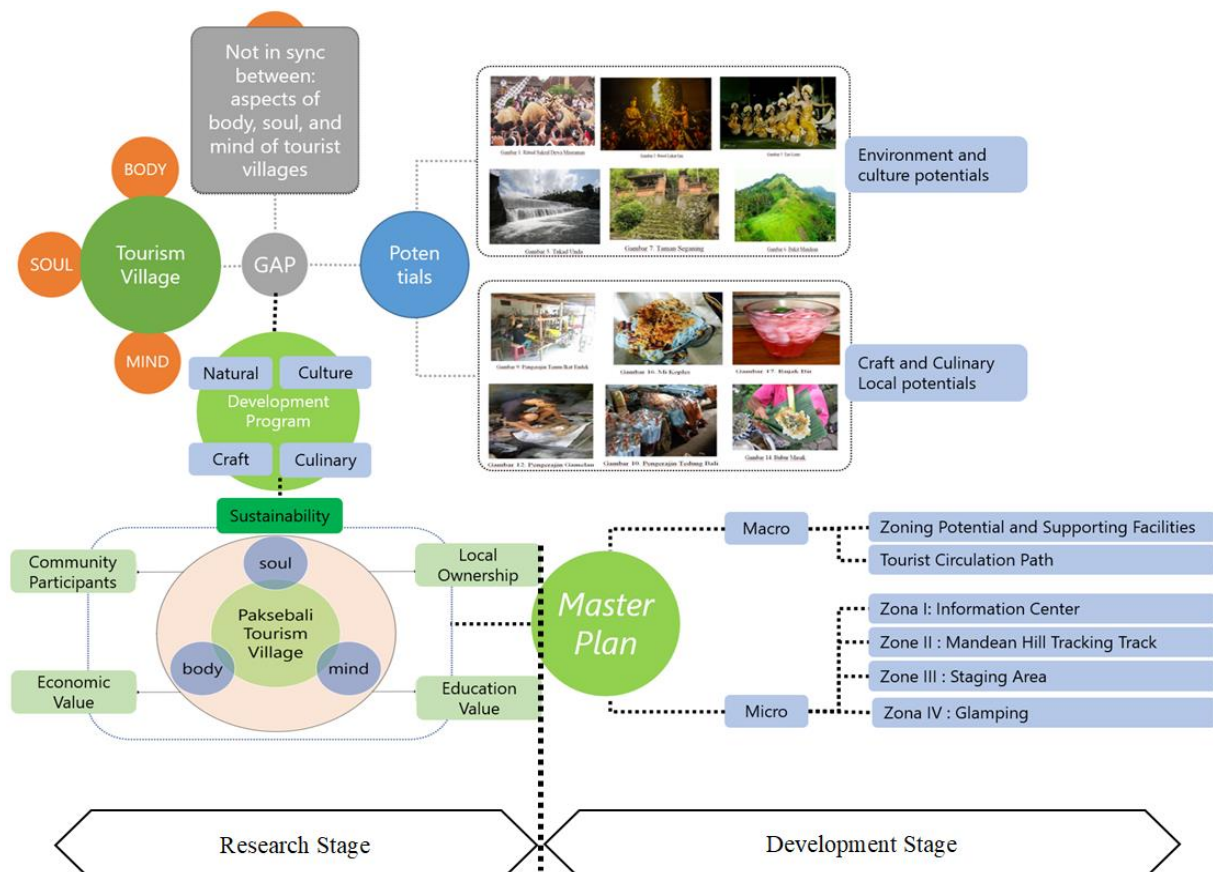
Figure 2. Stages of Research and Development (R&D) (Source: Author, 2021)

The picture above shows a gap between a tourism village's concept and the existing conditions of the Paksebali Tourism Village. The central idea of a tourist village is the empowerment of local communities towards village independence. Community empowerment creates a concept of the sustainability of local potentials that are owned because a tourist village aims to create a sustainable local potential for the future. The local potential is the main asset of a tourist village; its existence needs attention in governance and conservatism. Proper authority and conservatism involve the local community so that the welfare created is from the people and for the people.

RESULTS AND DISCUSSION
1. Potential and Problems in Paksebali Tourism Village
Paksebali Tourism Village is one of the tourist villages in the Klungkung Regency (Wijaya, 2020). As a tourism village, Paksebali Village has the potential to attract tourists. The attraction of these potentials is a soul of a tourism village in Paksebali Village that must be maintained for its sustainability. These potentials consist of (1) natural potential, (2) cultural potential, (3) local craft potential, and (4) local culinary potential. This potential makes Paksebali Village a tourism village based on *Surat Keputusan Pemerintah Kabupaten Klungkung*, established in 2017. These potentials will not run according to the Tourism Village's objectives if they are not supported by management and infrastructure. Management aspects in accommodating hospitality facilities because the concept of a tourist village depends more on local communities' elements in governance for local communities' welfare and preserving the natural environment. Usually, exploration of tourism potentials or assets is aimed at the benefit (money) aspect rather than maintaining the sustainability or preservation of this potential for the common welfare. It has become a growing phenomenon in the tourism industry (Juan et al., 2016; Marson, 2011; Vainikka, 2013).

Paksebali Village has natural potential in the Mandean Hill area upstream of the village and the Tukad Unda area in Paksebali Village. Between these areas, there is a residential zone. Mandean Hill is an area that is still natural and calm, overgrown with various types of vegetation. You can see a view of the mountains and settlements in a 360-degree rotation on this hill. On the downstream side, there is Tukad Unda, which is the largest river in Klungkung and is the path of the floodwaters from the eruption of Mount Agung. This area's specialty is that it has terraced land that forms a river flow like a water curtain (Pantiyasa and Rosalina, 2018; Wijaya, 2020). This natural potential is an attraction for adventurous tours and tours that prioritize visuals or views. Other prospects still exist today as part of religious traditions and rituals. In Paksebali Village are the sacred rites of the Lukat Gni tradition, Dewa Masraman, the Lente Dance tradition, the Subali Mascot Dance, and the Ngelawang DanceThese dances can only be enjoyed or watched during religious ritual activities at each temple in Paksebali Village. The material form of culture is in the temple architecture, which has a historical background with a natural context and a traditional village context. In celebrating the community's independence, Paksebali Village has micro, small, and medium enterprises (UMKM) active in local handicrafts such as velvet literature, Ikad Endek weaving, Balinese building, glass painting, and Balinese gamelan. The marketing of these products is local, domestic, and even overseas. Another potential that this village has is local culinary delights, which can only be found in traditional markets. However, this potential is undoubtedly a unique attraction in supporting the existence of the Paksebali Tourism Village.

The existence of a tourism village is supported by its potential and infrastructure aspects and management. It promotes ecological tourism through coherent facility planning in infrastructure provision, service development, and planning thematic tourist routes to reach all potential tourism villages (Bica and Florescu, 2017). As a Tourism Village, it is a challenge for Paksebali Village to move the concept of a tourist village with a local character in its people's welfare. Related to the above, the phenomenon that has developed in Paksebali Village based on the results of the grand tour and interviews with tourism awareness groups is (1) the circulation to and from tourism potentials was still unclear and unregulated, considering that the distribution of tourism potential was far apart while clear directions for circulation were not yet available; (2) the map of the distribution of village potentials did not clearly define or describe the advantages of each potential as a tourist attraction; (3) the Mandean Hill area did not yet have a tourist character according to its potential, the current development was only as a place for selfies by visitors; (4) there were temple architectures that have a history of the existence of villages and natural environments, which have not been clearly identified; (5) tourists could not enjoy traditional dance performances because the performances take place at night and are incidental; (6) information about local handicrafts has not been clearly exposed to visitors; and (7) tourism support facilities were not available in every tourist spot. The above problems require planning solutions that are synergistic between tourism support facilities, the sustainability of local potentials, and local communities' welfare. The grand concepts used in the embodiment and layout of the master plan are sustainability - economic, social, and environment (Asmin, 2014; Mihalic, 2016; Wijaya and Nurwarsih, 2019).

2. Architectural Design in The Macro Context
At the macro scale, the architectural design plans a master plan by grouping tourism support facilities in Paksebali Village. This grouping is based on a sustainability approach. Economic sustainability is carried out by providing a display room for local handicrafts in the information center building. Tourists who come are directed to the information center as a starting point for their tours; visitors can see and enjoy local handicraft products equipped with each product's history. If tourists want to see local handicraft production activities, tourists will be escorted by the local guide of Paksebali to the intended place. The presence of a craft display building in the information center complex is an effort to guide visitors in exploring handicrafts interested in buying them. The same applies to local culinary delights, namely, providing restaurants with modern packaged local food menus. Meanwhile, social sustainability can be applied by providing shared facilities that form good communication between visitors and local communities, namely local craft spots and a tourist house intended for tourists who want to stay overnight in Paksebali Village. Visiting tourists can spend their time walking and interacting with residents. On the other hand,

environmental sustainability is carried out by formulating a planning concept with tourist activities concentrated in the information center in the Tukad Unda area and not sporadically enjoying the natural beauty of Mandean Hill. Tourists who come to Mandean Hill must be escorted by a local guide to avoid illegal tourists (Figure 3).
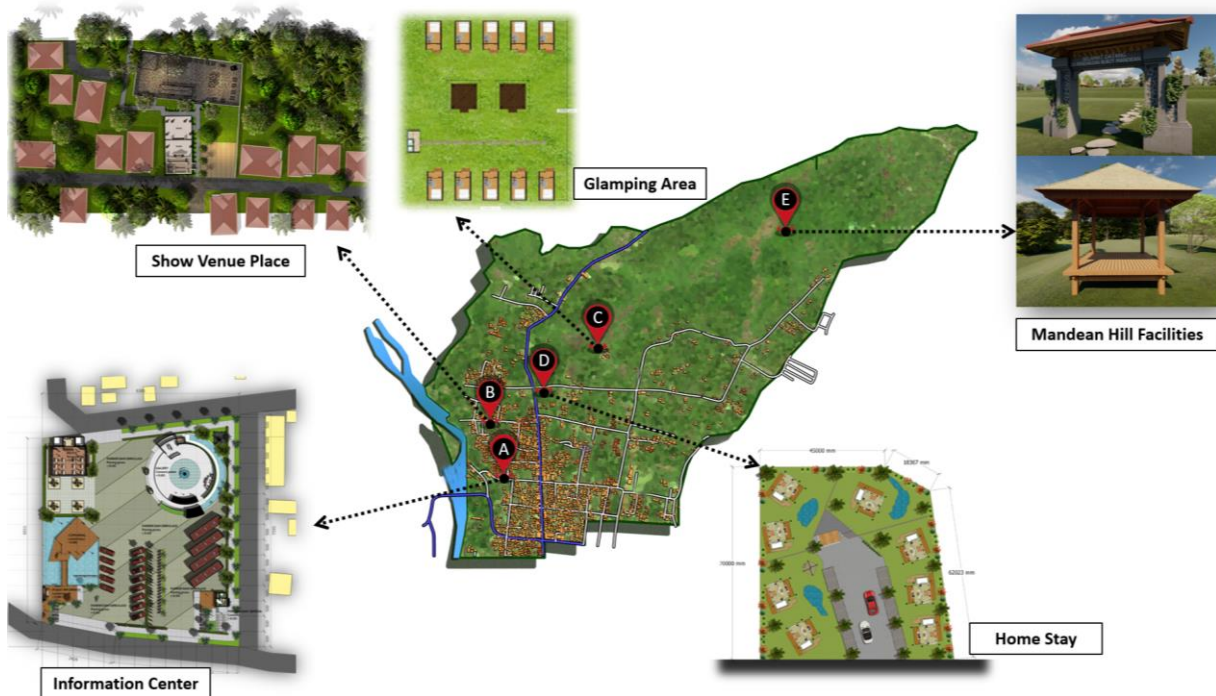
Figure 3. Paksebali Tourism Village Development Master Plan Planning (Source: Author, 2021)

3. Architectural Design in The Micro Context

a. Information Center Design

Information center planning aims to focus and direct visitors who come to a tourist facility—respond to a problem regarding the unclear circulation of visitors that has been happening in Paksebali Tourism Village. The circulation concept is to spread, which first meets or centers in one place (information center). The radial or diffuse circulation has one common point, applies in all directions, has a large area, and has a close relationship between spaces (Ching, 2009). The Information Center is planned with the primary function as a forum to provide information about Paksebali Tourism Village for tourists who come to visit. Carrying Bamboo Architecture's theme, this information center building was made to preserve the village's original characteristics and be environmentally friendly (Khatib, 2009; Manandhar et al., 2019). Tourists start their journey by entering the information center facility to obtain precise information, either in the form of a map of tourism potential in Paksebali Village that is interesting to visit or other information. Also, visitors can take a short break or sit back and enjoy the Telaga Waja River's view in the Communal Room before starting their tour of Paksebali Village.

Figure 4. Information Center Planning (Source: Author, 2021)

The information center consists of several building periods, namely (1) the information center building; (2) communal space, (3) restaurant, (4) gallery, (5) rental; and (6) parking lots for vehicles. This information center complex is located in the downstream part of the Paksebali Tourism Village, adjacent to the Tukad Unda (Unda River) area. All periods of the building are directed to Tukad Unda (Unda River) view so that the value of wellness as part of the hospitality concept for visitors is well achieved. The existence of restaurant buildings and local craft galleries is a manifestation of the "body of tourism villa" and the sustainability of the local community's economic aspects. The products displayed are the local handicrafts and culinary delights of the Paksebali Tourism Village community, so this tourism activity is for the local community's welfare. Environment sustainability is translated into the concept of using natural energy for ventilation and lighting through semi-open buildings to include sunlight and ventilation cross-circulation. According to the idea of tropical architecture, the building adapts to a low environment and is environmentally friendly (Hardiman, 2012; Manurung, 2014; Nugroho, 2018) (Figure 4).

b. Design of Cultural Performance Venues

This cultural venue is a tourist facility to accommodate the traditional performances of the Dewa Mesraman and Lente Dance. This facility is located on the side or offensive zone of the complex of Pura Panti Timbrah. So far, this traditional performance has taken place in Pura Panti Timbrah. However, this activity's proper facilities still do not provide a hospitality atmosphere if it is a tourist attraction for cultural performances. Therefore, a performance facility is planned in a Wantilan building and a parking lot as a service function. This plan aims to revive and exist Dewa Mesraman and Lente Dance's traditions as a form of cultural sustainability and establish social relationships between visitors and the community (tourism actors) through this activity. Culture sustainability is concerned with maintaining cultural beliefs, cultural practices, conservation of heritage, culture as its entity, and efforts to answer whether a given culture will exist or not in a future context (Packalén, 2010; Soini and Birkeland, 2014; Throsby, 1995) (Figure 5).
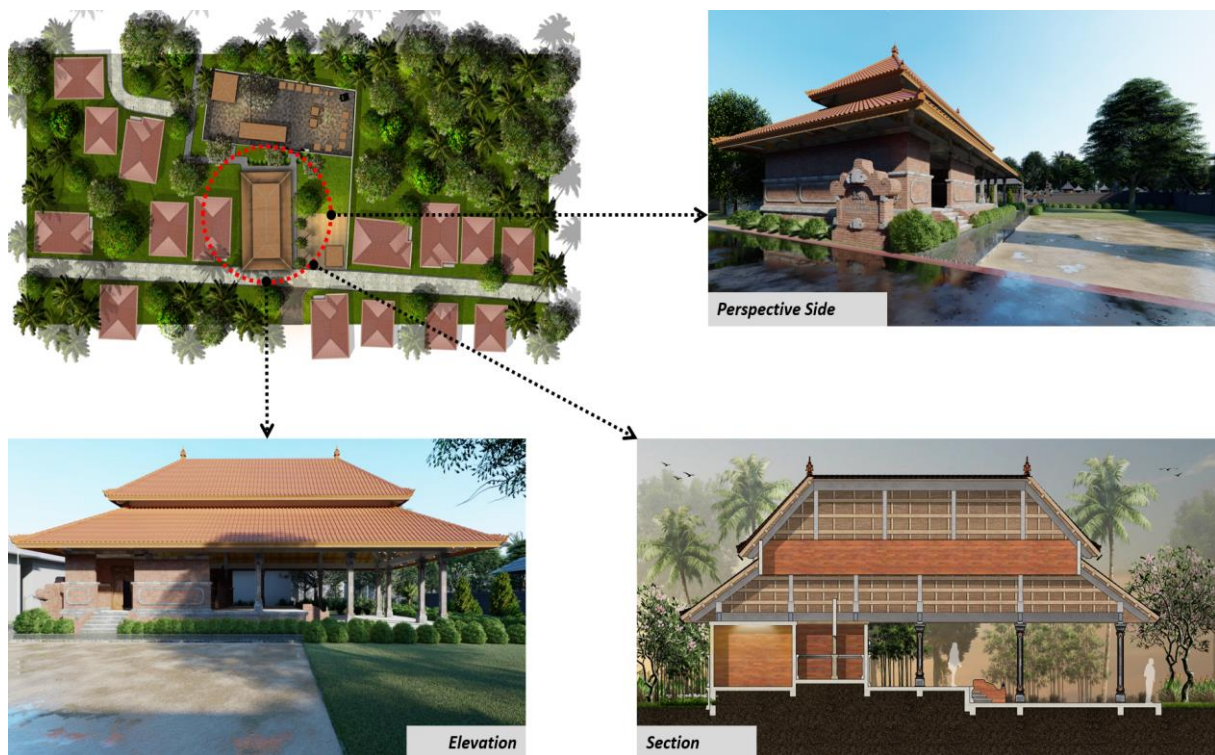
Figure 5. Show Venue Design (Source: Author, 2021)

c. Glamping Area Design

Planning a Glamping Area is an additional facility in Paksebali Tourism Village. The village's natural environment's carrying capacity is still raw and an attraction for tourists to stay at Paksebali Tourism Village. Glamping describes a camping style with resort-style amenities and services not typically associated with "traditional" camping (Budiasa et al., 2019; Craig, 2020; Josipa et al., 2017). The architectural formation used by this glamping architecture is to take the primary form of the Jineng or rice barn. Tourists only come and rent a semi-permanent campsite, and there are service facilities in the form of toilets and showers. Usually, at camp, visitors bring a tent to stay in and enjoy the village's natural atmosphere. However, the concept of glamping is to reduce the damaging impact on the environment through supervisory management by the local community.   This camp or glamping provides ten glamping points with a total area of 142.8 m^2 with a capacity of 2-4 people in one room. The glamping design is made using a semi-permanent wooden structure. The building's shape, which adopts the granary/Jineng form, is dominated by wood as the finishing material (Figure 6). In this camping area, there are also public toilets and a standard room in a gazebo form. With a location on Mandean Hill, visitors can enjoy a view of the beautiful and green Paksebali Village's beautiful natural scenery.

d. Tourist Accommodation Design

Tourist accommodation is part of a tourist village (Prasyanti et al., 2018). The concept of a tourist accommodation by

adopting local architecture in its architectural manifestation, with its realization through revitalizing traditional and vernacular architecture that is no longer functional or creating new architecture with local architectural themes (traditional and vernacular). Planning a tourist accommodation makes the interaction between tourists and the local community through a temporary stay in Paksebali Tourism Village. Tourists can enjoy the natural beauty, culture, and traditions of Paksebali Village. In the idea of a tourist village, visitors or tourists enjoy tourist attractions in tourist villages and interact with residents to find out local wisdom (Nuryanti, 1993; Tomic, 2008). This tourist accommodation in Paksebali Tourism Village functions as a stopover for tourists visiting the village. This tourist accommodation is built in an empty area where the shooting range was located. This field is no longer used by the surrounding community to be used as a potential homestay. This homestay has a land area of 3,150 m^2 consisting of 8 housing units. Each tourist house unit has an area of 47.5 m^2 with two terraces, namely at the front and rear, to accommodate up to 4 people per unit, which can be occupied by adult and child visitors (Figure 7).
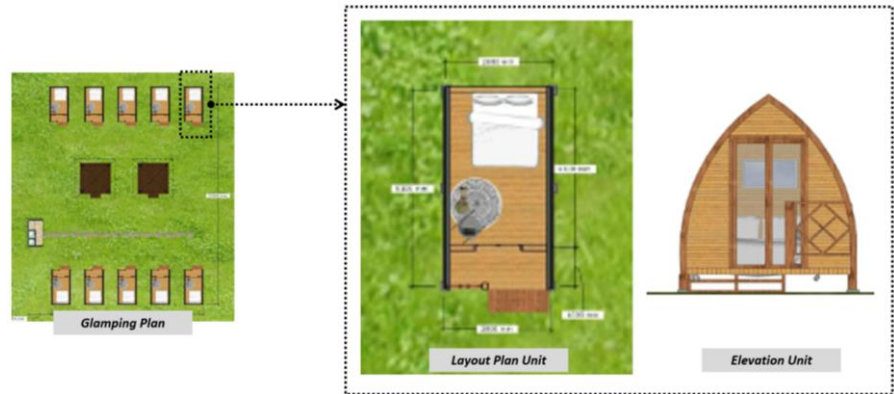
Figure 5. Glamping Design (Source: Author, 2021)

Figure 6. Home Stay Design (Source: Author, 2021)

e. Design of Supporting Facilities for Bukit Mandean Tourism Objects

Accessibility to the Mandean Hill area was initially via two routes, namely Pura Dalem and Pura Kawitan Merajan Agung Dewa Satria Dalem Pegedangan. However, this is unethical, considering that temples are sacred buildings and tourism activities are secular. Therefore, it is proposed to make an impressive entrance to disturb the temple's holy area. We are planning the entry and exit design appropriate to recognize and attract visitors easily. Paths are made using natural rocks to simplify and clarify hiking, cycling paths. Besides, a rest area was also created as a place to rest and a safety post in case of an emergency (Figure 8).

CONCLUSION

Local potential and sustainability are approaches to the development of Tourism Villages. Independence in potential local governance for this potential's sustainability is a commitment to a Tourism Village concept. Paksebali Tourism Village has a great wealth of potential as a tourist destination developed with attention to sustainability. This sustainability is fundamental as the consistency of this potential is conservative, maintains local characteristics, and becomes a welfare source for local communities. The Paksebali Tourism Village master plan's architectural design transformation requires these considerations (local potential and sustainability). Therefore:

1. The local potential is a precious asset in the development of a tourist village. These potentials provide the uniqueness of a tourist village, which is an exciting thing for tourists visiting the place. The sustainability of local prospects as the identity of a tourism village must be maintained because the identity has local genius values through wise considerations in village governance. The local potential is natural, cultural, and community capacity in government with local wisdom. Natural potential usually provides benefits from the landscapes contained in an area.

2. Moreover, the natural potential is in the form of landscapes in the form of cultural vegetables. Artistic potential in the form of handicrafts and local dances is also a precious asset because the potential of local culture provides moral messages for the community.

3. Tourism villages to develop based on the local potential to utilize local natural, cultural and human resources. The sense of belonging of the community becomes more muscular, which provides benefits in the economic aspect and provides a sustainable value from these potential resources.

4. Local potentials provide positive sustainability impacts on economic, social, environmental, and cultural aspects. The financial element provides welfare values to the local community evenly because these potentials are part of the village, not individuals or groups. The social piece

Figure 7. Design of Facilities Supporting Attractions Mandean Hill (Source: Author, 2021)

impacts social relations between communities that will be more well-established; there is no social jealousy because of unequal benefits and welfare maintained local potentials in maintaining environmental sustainability. And the cultural potential becomes sustainable by reviving the richness of local culture.

5. Architecture as a physical form in the development of a tourist village must accommodate these local potentials while still paying attention to its sustainability aspects. In this case, sustainable planning and design are needed, considering potential local factors in planning that pay attention to time rather than profit alone. The method of tourism facilities is integrated with local potential, does not bring in building materials from outside the village, does not adopt external architectural styles, and optimizes the appearance of local architecture.

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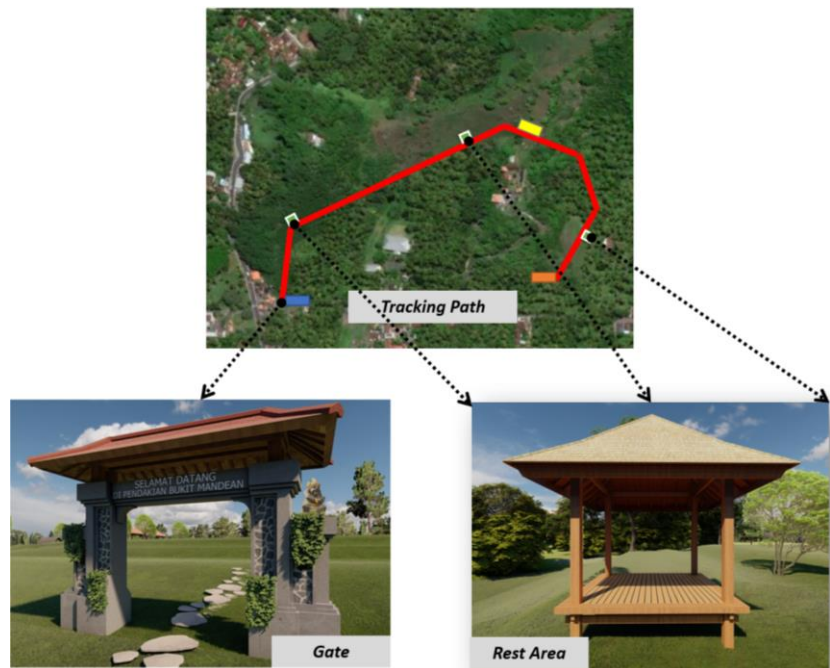
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TOURISM IS TOO DANGEROUS! PERCEIVED RISK AND THE
SUBJECTIVE SAFETY OF TOURISM ACTIVITY IN THE ERA OF COVID-19

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Abstract: The COVID-19 pandemic has heightened the risk associated with tourism and induced a paradigm shift in tourist behaviour. The study explores the nexus between COVID-19 induced perceived risk the subjective safety associated with tourism activity. A cross-sectional deductive study was conducted. Data were generated from a respondent-driven snowball sample of 323 potential tourists from all over the world. The key findings indicate perceived physical, psychological and social COVID-19 pandemic induced risk negatively influenced the overall subjective safety associated with tourism activity. Moreover, further analysis indicated heterogeneity in the influence of the perceived risk on specific tourism activity. Tourism practitioners are provided with timely empirical evidence-based insights that contribute to a better understanding of tourists' evolving behaviour.

Key words: COVID-19, perceived risk, subjective safety, tourism activity, tourism value chain

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INTRODUCTION

The exponential global spread of the novel coronavirus disease 2019 (COVID-19) is attributable to increased global mobility buoyed by tourism activity (Qiu et al., 2020). The COVID-19 pandemic is the first high-impact crisis event that is distinctly 'glocal' (Salazar, 2005), as a global pandemic with palpable idiosyncratic implications for each tourism destination in the world on a localised level (Perić et al., 2021). Therefore, to date, national governments have instituted many moratoriums on tourism activities, including international travel bans and the closure of tourism facilities (Chua et al., 2020; Matiza, 2020). The COVID-19 pandemic has exposed the global tourism industry's frailties and susceptibility to crises events such as health pandemics (Liu et al., 2013; Seabra et al., 2013). As the impact of consumerism and the importance of information symmetry becomes more evident in tourist's decision-making (Shaheer et al., 2019), tourists have also become more circumspect in their tourism consumption decisions. A study by Global Rescue and WTTC (2019) submits that tourism demand generally recovers 19.4 months *after* crises events associated with epidemics and outbreaks, signifying the need to better understand and predict tourist behaviour in the wake of crises events.

One key aspect to consider in post-crisis tourist decision-making in the era of COVID-19 is the impact of the pandemic on the psyche of tourists (Kock et al., 2020), more pertinently, perceived risk and how it influences the subjective safety of tourists in their consumptive decision-making. The present paper is premised on the notion that perceived risk triggers safety concerns (Liu et al., 2013). Consequently, safety concerns transcend travel intentions to influence the whole tourist decision-making process, including decisions associated with the mode, organisation and timing of travel, and destination choice (Karl and Schmude, 2017). While there has been a flurry of contemporary studies relating to the impact of the COVID-19 pandemic on tourism in general (Qiu et al., 2020; Wang et al., 2020) and more pertinently the cognitive and conative travel behaviour of tourists (Abraham et al., 2020; Bae and Chang, 2020; Chua et al., 2020; Li et al., 2020; Matiza, 2020; Perić et al., 2021), academic inquiry into the effect of the pandemic on the subjective safety associated with tourism activity is still minimal.

Moreover, incisive models of the influence of the perceived risk-subjective safety of tourism nexus in light of COVID-19 are currently absent from the literature; hence insights into the potentially multidimensional risk factors associated with the pandemic are yet to be fully explored. Despite the linkages within the tourism value chain, there is also scant comprehensive research into the impact of crises events on specific tourism-oriented services and products' subjective safety. The study aimed to explore the influence of COVID-19 induced risk perceptions on the subjective safety associated with tourism activity. The findings offer tourism practitioners critical and timely insights into the multidimensional nature of perceived risk associated with the COVID-19 pandemic, and whether risk perception influences tourists' views on how safe they perceive tourism to be in light of the pandemic. Our findings advance academic inquiry into the impact of the ongoing pandemic on tourist behaviour

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and enrich the extent of the literature on the role of risk perception in tourism by modelling the COVID-19 pandemic's multidimensional risk profile in relation to various tourism activities in the short-to-medium term.

LITERATURE AND HYPOTHESES
Perceived risk and health crisis events in tourism

Perceived risk within the tourism discourse is a subjective multidimensional construct that may be decomposed into 11 typologies, namely; equipment, financial, physical (health-related), psychological, satisfaction, social, time, crime, terror and political-oriented risk (Fuchs and Reichel, 2006; Matiza, 2020; Olya and Al-ansi, 2018; Perić et al., 2021; Reisinger and Mavondo, 2005; Qi et al., 2009). The established diversity in risk typology points to the potentially idiosyncratic nature and heterogeneous influence of risk perception in tourist behaviour (Seabra et al., 2013). For instance, Boksberger et al. (2007) found that financial, personal, functional and social risk influenced tourist decision-making concerning air travel, whereas An et al. (2010) associated air travel with physical, natural disaster, political and performance risk. Hence, perceived risk is a subjective construct that may be heterogeneous in influencing tourist decision-making and conative behaviour.

Perceived risk allied with health crises heightens tourist anxieties based on their perceived susceptibility to infection, as well as the perceived severity of the disease - often resulting in risk mitigation behaviour including the avoidance of specific destinations or particular tourism activities due to safety concerns (Liu et al., 2013; Neuburger and Egger, 2020; Perić et al., 2021; Sánchez-Cañizares et al., 2020). Previous flu-like virus outbreaks have had a discernible adverse effect on tourism's perceived safety and resulted in significant tourism demand decreases. For instance, there is empirical evidence of the declines in tourism demand in China (Dombey, 2003), Singapore (Henderson, 2003), and Taiwan (Wang, 2009) during the Severe Acute Respiratory Syndrome (SARS) outbreak. The subsequent H1N1 (swine flu) outbreak constrained both inbound and outbound tourism in the cases of tourism destinations such as Brunei (Haque and Haque, 2018), the United Kingdom (Page et al., 2012), and Japan (Kuo et al., 2008). Prior studies (Garg, 2013; Griffiths and Lau, 2009) have also established a correlation between health crises, heightened risk perceptions and the perceived safety of engaging in tourism activity during and post-crises. However, Perić et al., (2021) note that the COVID-19 pandemic 'transcends' the sheer scale and impact of all previous health crises that have impacted tourism. To this end, the growing body of knowledge (Bae and Chang, 2020; Neuburger and Egger, 2020; Wachyuni and Kusumaningrum, 2020) allied with the ongoing pandemic and tourism suggests that risk perceptions adversely affect and modify tourist behaviour, linking COVID-19 induced risk perceptions with avoidance behaviour and tourists' intentions to avoid travel and tourism activity (Bae and Chang, 2020; Neuburger and Egger, 2020; Wachyuni and Kusumaningrum, 2020). The COVID-19 pandemic presents a clear and present danger to tourists' health and well-being, possibly instigating risk-induced avoidance behaviour in the near future.

The present study explores risk perception associated with the COVID-19 pandemic in relation to the subjective safety of tourism activities in the near future (within the next year) based on a triad of dimensions, physical- [likelihood of the occurrence of danger, illness or injury]; psychological- [likelihood tourism activity will not reflect the tourist's self-image, not meet expectations, or create anxiety for their safety]; and social- [likelihood that tourism activity will negatively affect the opinion held of the tourist by the tourist's various social reference groups] risk dimensions (Deng and Ritchie, 2018; Fuchs and Reichel, 2006; Karl and Schmude, 2017; Khasawneh and Alfandi, 2019). The subjective safety of tourism activity in the near future integrates the broad spectrum of travel and tourism-related activity within the tourism value-chain to include; the scope of tourism [domestic and international travel]; activity choice [domestic and international tourist attractions]; mode of transport [air travel and private self-drive]; as well as interaction [group travel and tourist interaction], respectively. Beyond the palpable physical (health-related) risk associated with the COVID-19 pandemic, the psychological and social risk is the potential impact of additional perceived risk dimensions on tourism activity's subjective safety. Therefore, the following null hypotheses were tested,

$H0_1$: The perceived physical- [$H0_{1a}$], psychological- [$H0_{1b}$], social- [$H0_{1c}$] risk associated with the COVID-19 pandemic does not significantly influence the subjective safety of tourism activity in the near future.

Perceived risk is a critical antecedent to tourist decisions (Reisinger and Mavondo, 2005). Prior studies have attributed that pervasiveness safety concerns associated with international travel to Thailand (Rittichainuwat and Chakraborty, 2009), the United Kingdom (Page et al., 2012) and African countries (Carter, 1998) to heightened perceived risk related to the SARS, H1N1 and HIV outbreaks, respectively. Domestic tourism demand in the United States of America (USA) was negatively affected by tourists' safety apprehensions and avoidance behaviour following the 2014 Ebola outbreak (Cahyanto et al., 2016). With this in mind, the following null hypotheses related to the COVID-19 pandemic and the subjective safety of international and domestic travel were tested.

$H0_2$: The subjective safety of international travel is not influenced by perceived physical- [$H0_{2a}$], psychological- [$H0_{2b}$], social- [$H0_{2c}$] risk associated with the COVID-19 pandemic.

$H0_3$: The subjective safety of domestic travel is not influenced by perceived physical- [$H0_{3a}$], psychological- [$H0_{3b}$], social- [$H0_{3c}$] risk associated with the pandemic.

There is an established link between air travel and disease diffusion (Bowen and Laroe, 2006). Fenichel et al. (2013) determined that health crises such as influenza outbreaks heightened perceived risk, prompting negative behavioural changes in air travellers such as flight cancellations and the subjective preference for alternative modes of travel due to safety fears. A study by Young et al. (2014) linked depressed demand for air travel with the potential for both the in-flight transmission and the vector spread of the H1N1 virus internationally. Due to the Ebola outbreak, Cahyanto et al. (2016) found that over 50% of the American tourists surveyed indicated that they would avoid air travel due to their risk perceptions and fear of infection during flights. As a

result of the SARS outbreak, American tourists opted to travel domestically, but more pertinently chose to avoid air travel and opted to utilise private self-drive transport to travel to their tourist destinations (Wen et al., 2005). The following null hypotheses related to COVID-19 and the subjective safety associated with air travel and private (self-drive) transport were tested,

$H0_4$: The subjective safety of air travel is not influenced by perceived physical- [$H0_{4a}$], psychological- [$H0_{4b}$], social- [$H0_{4c}$] risk associated with the COVID-19 pandemic.

$H0_5$: The subjective safety of self-drive or private transport is not influenced by perceived physical- [$H0_{5a}$], psychological- [$H0_{5b}$], social- [$H0_{5c}$] risk associated with the COVID-19 pandemic.

Tourists are susceptible to cognitive biases, such as risk aversion in their tourism destination and product choices (Wattanacharoensila and La-ornual, 2019). To this end, Gstaettner et al. (2019) ascertain that risk perception and the safety of tourism products and activities are critical antecedents to tourist decision-making and behaviour. The perceived safety of both international and domestic tourism attractions is inversely correlated to the perceived risk of exposure to disease at the location (Li et al., 2017) or potentially infectious individuals most likely to be encountered at the tourism attractions (Cahyanto et al., 2016; Kock et al., 2019). In the wake of the SARS outbreak, Wen et al. (2005) observe that American tourists indicated that they were more likely to visit domestic tourism attractions as these were most likely perceived to be safer than international tourism attractions. While in the case of Chinese tourists visiting domestic attractions it emerged that hygiene and safety concerns were heightened by the SARS outbreak and influenced tourist decisions about which attractions to visit, which forms of entertainment to consume, and the choice of accommodation (Wen et al., 2005). Hence, it would be prudent to examine the potential effect of COVID-19 related risk perceptions on the subjective safety associated with visiting domestic and international tourism attractions based on the following null hypotheses,

$H0_6$: The subjective safety of visiting popular international tourism attractions is not influenced by perceived physical- [$H0_{6a}$], psychological- [$H0_{6b}$], social- [$H0_{6c}$] risk associated with the COVID-19 pandemic.

$H0_7$: The subjective safety of visiting popular domestic tourism attractions is not influenced by perceived physical- [$H0_{7a}$], psychological- [$H0_{7b}$], social- [$H0_{7c}$] risk associated with the COVID-19 pandemic.

Disease outbreaks have been linked with negative crowding behaviour due to perceived infection risk, suggesting that tourists are less likely to engage in group-oriented tourism activity as the perceived risk of disease infection increases (Wang and Ackerman, 2019). Li et al. (2017) found that the perceived crowding associated with tourism to Mount Sanqingshan National Park, a Chinese world heritage site, negatively impacted the location's subjective attractiveness and safety, thus pointing to the negative connotations of group travel.

Moreover, social crowding whereby tourists would interact with many strangers at the destination was found to impact tourist decision-making pointing to the impact of interactions with tourists of other nationalities as an antecedent to tourist travel intentions and anticipated satisfaction (Li et al., 2017). Prior tourism studies (Kock et al., 2020) have also recognized that risk perceptions induced by health crises stimulated xenophobic behaviour by tourists. Tourists associate the risk of disease infection with specific nationalities and are unwilling to travel to locations or engage in tourism that will result in their interaction with specific groups of people. For instance, Americans and Italians that presented heightened perceived risk of exposure or vulnerability to the Ebola virus exhibited xenophobic prejudices towards Africans since the virus is of African origin (Kock et al., 2020). More pertinently, xenophobic tendencies have been linked with disease avoidance behaviour and xenophobia in tourists (Cahyanto et al., 2016; Kock et al., 2019). The following null hypotheses related to COVID-19 and the subjective safety of group travel and international tourist interaction were formulated,

$H0_8$: The subjective safety of travelling in groups is not influenced by perceived physical- [$H0_{8a}$], psychological- [$H0_{8b}$], social- [$H0_{8c}$] risk associated with the COVID-19 pandemic.

$H0_9$: The subjective safety of interacting with tourists of other nationalities is not influenced by perceived physical- [$H0_{9a}$], psychological- [$H0_{9b}$], social- [$H0_{9c}$] risk associated with the COVID-19 pandemic.

MATERIALS AND METHODS

A self-administered questionnaire was distributed as part of an online survey launched on the Tourism Research in Economics, Environs and Society (TREES) Facebook page. The questionnaire was designed and published on Google Forms platform - with the link to the online questionnaire being posted on the travel and tourism-oriented social media page between 7 May and 19 June 2020. This approach was similar to that of COVID-19 related studies (Li et al., 2020; Perić et al., 2021; Sánchez-Cañizares et al., 2020) that utilised social media platforms such as Facebook and Twitter to conduct surveys during the ongoing pandemic. Respondent-driven snowball sampling was implemented to grow the sample population for the study, entailing that the initial respondents were asked to invite other individuals within their social and professional network to participate in the survey (Fricker, 2008; Wejnert and Heckathorn, 2008). Logical validity of the sample was indicated by the vast majority of respondents (90.4%) having engaged in travel and tourism activity at least once before the pandemic, as well as intending to engage in international (82.4%) and domestic (97.5%) tourism-oriented travel within the next two years. More significantly, a final sample of $n=323$ was achieved and deemed suitable for analysis (Goretzko et al., 2019).

In order to measure perceived risk, 12 statements were drawn from scales utilised in previous studies exploring perceived risk in tourism (see Deng and Ritchie, 2018; Fennell, 2017; Fuchs and Reichel, 2006; Khasawneh and Alfandi, 2019; Olya and Al-ansi, 2018; Sohn et al., 2016). Tourism activity was measured by eight statements which were drawn from the literature (see Adam, 2015; Olya and Al-ansi, 2018; Reisinger and Mavondo, 2005; Rittichainuwat and

Chakraborty, 2009). Socio-demographic data were also solicited and limited to the respondents' age, gender, educational level, marital status, travel companionship, and region of residence. To ensure content validity, the survey instrument was reviewed by the North-West University's Tourism Research Scientific Committee and received ethical clearance (NWU-00625-20-A4) from the faculty research ethics committee before being administered. Data were analysed utilising the Statistical Package for Social Sciences (IBM SPSS v.26) and AMOS (IBM v.26).

RESULTS
Respondent profile
The sample of n=323 mainly consisted of females (61.3%), with most respondents being aged between 24 and 44 years old (65.9%) at the time of the survey. Respondents were also highly educated [post-graduate (67.8%) and Bachelor's (19.2%) degree], with an even split between married (44%) and single individuals (44%) respondents. Most respondents travelled with either their family (26.6%) or their partner (22.6%) when engaging in tourism. The majority of the respondents resided on the African continent (45.5%) with the rest indicating their respective regions of residence as Europe (23.5%); Asia (17.3%); North America (9%) or Asia-Pacific (4.7%). Notably, the internet (39.9%); social media (26.3%); and word-of-mouth (20.7%) were the most influential information sources for tourist's decision-making.

Validation of the conceptual model: Factor analyses
The data for perceived risk reported a KMO of .813 and Bartlett's test of Sphericity of χ^2 (66) = 2199.928, p < .001, while the data for tourism activity reported a KMO of .868 Bartlett's Test of Sphericity of χ^2 (28) = 1442.466, p < .001, suggesting factor analysis was possible with the data. Table 1 summarises the results of the EFA on the perceived risk dimensions and tourism activity. The EFA for perceived risk extracted the three *priori* dimensions which cumulatively accounted for 69.18% of the variance in the data, Physical risk (*PHR*: EV = 4.683, α = .838); Psychological risk (*PSR*: EV = 1.945, α = .928); and Social risk (*SCR*: EV = 1.673, α = .842), respectively. Tourism activity loaded as one factor, TOA (EV = 4.557, α = .909), explaining 56.96% of the variance in the data. Tables 2 and 3 summarise the outcome of the CFA.

Table 1. Exploratory factor analysis - Perceived risk and tourism activity

Variable		*Items	Mean ($\bar{x}$)		Std. Dev (σ)		Communalities		**Factor loading coefficients	
			Min	Max	Min	Max	Min	Max	Min	Max
Perceived risk	Physical risk (PHR)	PHR1, PHR2, PHR3, PHR4	3.38	4.20	1.081	1.321	.625	.754	.674	.896
	Psychological risk (PSR)	PSR1. PSR2, PSR3	2.20	2.25	1.277	1.307	.817	.892	.848	.912
	Social Risk (SCR)	SCR1, SCR2. SCR3, SCR4	2.11	3.15	1.183	1.322	.639	.811	.708	.834
Tourism activity	Tourism activity (TOA)	TOA1, TOA2, TOA3, TOA4, TOA5, TOA7, TOA8	2.20	3.27	1.051	2.259	.461	.756	.679	.870

*See Appendix 1 for items statements
**Oblimin with Kaiser Normalisation, Coefficient (≥.50)

Table 2. Confirmatory factor analysis - Model fit indices

	χ^2	p-value	χ^2/DF	CFI	TLI	SRMR	RMSEA
Perceived Risk (PHR/PSR/SCR)	85.144	.000	2.365	.977	.965	.056	.065
Tourism activity (TOA)	26,150	.004	2.615	.988	.975	.024	.071

Notes: χ^2 = Chi-square statistic, χ^2/df = Relative chi-square, CFI = Comparative Fit Index (>0.95), TLI = Tucker-Lewis Index (≥ 0.95), SRMR = Standardised Root Mean Residual (<0.08), RMSEA = Root Mean Square Error of Approximation (<0.08)

The respective models for perceived risk and tourism activity indicated a good fit (Table 2). Both models were within the recommended indices parameters suggested by Gaskin and Lim (2016), and Hair et al., (2014). Table 3 summarises the model validity of the perceived risk and tourism activity constructs. The CFA confirmed all the perceived risk dimensions and the tourism activity factor. No items from the EFA were dropped from the respective CFA constructs. The standardised CFA coefficients for all variables constructs were >.50 (Wang *et al.*, 2020). All the measurement constructs reported composite reliabilities above CR ≥ 0.70, while the average extracted variances were above the AVE ≥ 0.50 threshold, confirming the constructs' discriminant and convergence validity (Hu and Bentler, 1999; Wang et al., 2020).

Modelling the influence of perceived risk on tourism activity
The Pearson product correlations (Cohen, 1988) reported statistically significant moderate positive correlations ranging between r =.326 and r =.426 amongst all the perceived risk dimensions, suggesting that they were cognate as measures of perceived risk. Intriguingly, weak (r = -.272) to moderate (r = -.319) inverse correlations were also reported between the perceived risk dimensions and the subjective safety of tourism activity. As Table 4 summarises, the model was statistically significant, with the perceived risk dimensions explaining 14% of the variance for the subjective safety of tourism activities in the near future. The significance of the R^2 statistic is supported by the literature which recommends a minimum R^2 of 0.02 (2%) (Cohen, 1988), while more specifically within the social sciences, Ferguson (2009) recommends a minimum R^2 of 0.04 (4%) for practical effect significance. There were no multicollinearity concerns noted based on the Tolerance (>.10) and VIF (<10) statistics, respectively (Hair et al., 2014). As it emerged, physical (*PHR*: β = -.141, t = -2.393, p < .05), psychological (*PSR*: β = -.115, t = -2.026, p < .05), and social (*SCR*: β = -.219, t = -3.690, p < .001) risk associated with the

COVID-19 pandemic had a negative statistically significant influence on the subjective safety of tourism activities in the near future (Table 4). This suggests that as perceived risk related to the COVID-19 pandemic increases within the near future, the subjective safety associated with tourism activities reduces.

Table 3. Confirmatory factor analysis - Model validity

Latent construct		Observed variables	Standardised Coefficients		Composite Reliability (CR)	Average Variance Extracted (AVE)	TOA	PHR	PSR	SCR
			Min	Max						
Tourism Activity		7	.581	.848	.906	.581	**.763**			
Perceived Risk	Physical Risk *(PHR)*	4	.733	.786	.806	.513	.	**.717**		
	Psychological Risk *(PSR)*	3	.836	.953	.930	.816	.	.355***	**.903**	
	Social Risk *(SCR)*	4	.563	.952	.872	.636	.	.351***	.572***	**.797**

* p < 0.05, ** p < 0.01, *** p < 0.001

Table 4. Multiple regression analysis - The influence of perceived risk on the subjective safety of post-pandemic tourism activity

	Unstandardised coefficients		Standardised coefficients	t-value	Sig.	Tol.	VIF	Hyp.
	B	SE	β					
DV: Subjective Safety of Tourism Activity								
R^2 = .135, F(3,319)16.641, p=.000								
IV: Physical risk (*PHR*)	-.137	.057	-.141	-2.393	.017*	.782	1.279	$H0_{1a}$
IV: Psychological risk (*PSR*)	-.092	.045	-.115	-2.026	.044*	.841	1.189	$H0_{1b}$
IV: Social risk (*SCR*)	-.205	.056	-.219	-3.690	.000***	.770	1.299	$H0_{1c}$

Statistically significant at *p < .05, **p < .01, ***p < .001

Table 5. Multiple regression analysis - The influence of perceived risk on the subjective safety of specific tourism activities

	Unstandardised coefficients		Standardised coefficients	t-value	Sig.	Hyp.
	B	SE	β			
DV: International travel						
R^2 = .132 , F(3,319)16.150 , p=.000						
IV: Physical risk (*PHR*)	-.249	.069	-.212	-3.600	.000***	$H0_{2a}$
IV: Psychological risk (*PSR*)	-.111	.055	-.115	-2.022	.044*	$H0_{2b}$
IV: Social risk (*SCR*)	-.162	.067	-.143	-2.401	.017*	$H0_{2c}$
DV: Domestic travel						
R^2 = .073, F(3,319)8.395, p=.000						
IV: Physical risk (*PHR*)	-.067	.065	-.063	-1.035	.301	$H0_{3a}$
IV: Psychological risk (*PSR*)	-.098	.051	-.113	-1.919	.056	$H0_{3b}$
IV: Social risk (*SCR*)	-.175	.063	-.171	-2.785	.006**	$H0_{3c}$
DV: Travelling by air						
R^2 = .118 , F(3,319)14.182 , p=.000						
IV: Physical risk (*PHR*)	-.159	.076	-.125	-2.096	.037*	$H0_{4a}$
IV: Psychological risk (*PSR*)	-.095	.060	-.091	-1.579	.115	$H0_{4b}$
IV: Social risk (*SCR*)	-.272	.074	-.222	-3.698	.000***	$H0_{4c}$
DV: Visiting popular international tourist attractions						
R^2 = .069, F(3,319)7.880 , p=.000						
IV: Physical risk (*PHR*)	-.041	.074	-.034	-.552	.582	$H0_{6a}$
IV: Psychological risk (*PSR*)	-.108	.059	-.108	-1.825	.069	$H0_{6b}$
IV: Social risk (*SCR*)	-.219	.072	-.186	-3.026	.003**	$H0_{6c}$
DV: Visiting popular local tourist attractions						
R^2 = .075, F(3,319)8.663, p=.000						
IV: Physical risk (*PHR*)	.038	.073	.032	.519	.604	$H0_{7a}$
IV: Psychological risk (*PSR*)	-.121	.058	-.124	-2.107	.036*	$H0_{7b}$
IV: Social risk (*SCR*)	-.254	.071	-.220	-3.594	.000***	$H0_{7c}$
DV: Travelling in groups						
R^2 = .061, F(3,319)6.965, p=.000						
IV: Physical risk (*PHR*)	-.176	.078	-.139	-2.274	.024*	$H0_{8a}$
IV: Psychological risk (*PSR*)	-.045	.062	-.044	-.739	.460	$H0_{8b}$
IV: Social risk (*SCR*)	-.158	.075	-.130	-2.097	.037*	$H0_{8c}$
DV: Interacting with tourists of other nationalities						
R^2 = .137, F(3,319)16.900, p=.000						
IV: Physical risk (*PHR*)	-.302	.074	-.241	-4.091	.000***	$H0_{9a}$
IV: Psychological risk (*PSR*)	-.064	.059	-.062	-1.087	.278	$H0_{9b}$
IV: Social risk (*SCR*)	-.195	.072	-.161	-2.715	.007**	$H0_{9c}$

Statistically significant at *p < .05, **p < .01, ***p < .00

Thus, null hypotheses $H0_{1a}$, $H0_{1b}$ and $H0_{1c}$ were rejected, perceived physical, psychological, social risk associated with the COVID-19 pandemic significantly influences the subjective safety of tourism activity in the near future. To gain more insight into this nexus, the data were subjected to further linear regression analyses in line with the approach adopted by van Dyk et al., (2019). Regressions were conducted between the respective statistically significant perceived risk dimensions and each post-pandemic tourism activity. All the regression models were statistically significant (Table 5), with R^2 statics for the respective models being above the recommended minimum R^2 of .04 (4%) for practical effect significance (Ferguson, 2009). There was an absence of multicollinearity in all the respective models, *PHR*: Tolerance of .782 and VIF of 1.279; *PSR*: Tolerance of .841 and VIF of 1.189; and *SCR*: Tolerance of .770 and VIF of 1.299.

As summarised in Table 5, perceived physical risk (*PHR*) reported a statistically significant inverse predictive effect on tourist's subjective safety associated with international (β = -.212, p < .001); air (β = -.125, p < .05); and group (β = -.139, p < .05) travel; as well as the subjective safety of interaction with tourists of other nationalities (β = -.241, p < .001). The finding suggests that as physical risk perceptions associated with the COVID-19 pandemic increased, the aforementioned tourism activities' perceived safety diminished. Hence, null hypotheses $H0_{2a}$, $H0_{4a}$, $H0_{8a}$ and $H0_{9a}$ were rejected. Whereas, null hypotheses $H0_{3a}$, $H0_{6a}$ and $H0_{7a}$ were confirmed since perceived physical risk (*PHR*) associated with the COVID-19 pandemic did not influence domestic travel's subjective safety as the subjective safety of visiting both popular international and domestic tourist attractions. Perceived psychological risk (*PSR*) reported a statistically significant inverse predictive effect on the subjective safety tourists associated with international travel (β = -.115, p < .05) and visiting popular local tourist attractions (β = -.124, p < .05). The findings suggest that as psychological risk factors associated with the pandemic increase, the safety of international travel and visiting popular local tourist attractions in the near future reduces.

Therefore, null hypotheses $H0_{2b}$ and $H0_{7b}$ were rejected. While, null hypotheses $H0_{3b}$, $H0_{4b}$, $H0_{6b}$, $H0_{8b}$ and $H0_{9b}$ were confirmed, perceived psychological risk (*PSR*) did not influence tourist's subjective safety of domestic travel; travelling by air; visiting popular international tourist attractions; travelling in groups, and interacting with tourists of other nationalities in the near future. Notably, perceived social risk (*SCR*) had a statistically significant inverse predictive effect on the subjective safety associated with all the tourism activities, namely: international (β = -.143, p < .05) and domestic (β = -.171, p < .01) travel; visiting popular international (β = -.186, p < .01) and local (β = -.220, p < .001) tourist attractions; air travel (β = -.222, p < .001); group travel (β = -.130, p < .05); as well as tourist's interaction with tourists of other nationalities (β = -.161, p < .01). The finding suggests that as the social risks associated with the COVID-19 pandemic increase, the perceived safety of all the tourism activities explored in this study decreases. Thus, null hypotheses $H0_{2c}$, $H0_{3c}$, $H0_{4c}$, $H0_{6c}$, $H0_{7c}$, $H0_{8c}$ and $H0_{9c}$ were rejected.

DISCUSSION AND CONCLUSION

The purpose of the study was to explore the nexus between the risk perceptions associated with the COVID-19 pandemic and the subjective safety of tourism activity in the near future. Notwithstanding, the literature supporting the correlation between the pandemic-related perceived risk and tourism activity (Li et al., 2020; Liu et al., 2013; Olya and Al-ansi, 2018; Seabra et al., 2013), there is extensive empirical evidence of the influence of pandemic-induced physical, psychological and social risk perception on subjective safety of specific tourism activity in the near future. Physical risk related to healthcare standards, the sanitation and hygiene of the tourist destination, the risk of infection, and the pervasiveness of the outbreak in neighbouring countries, diminished how safe tourists perceived international, air and group travel, respectively, as well as interacting with tourists of other nationalities to be.

This finding is corroborated by the literature (Abraham et al., 2020; Qiu et al., 2020), which associates international travel with vector disease transmission in the SARS, H1N1 and Ebola virus instances outbreaks. Moreover, national governments are propagating the notion of international travel as the primary mode of the global spread of the COVID-19 virus (Chua et al., 2020; Beck and Hensher, 2020). Relatedly, demand for air travel has been severely impacted by the ongoing COVID-19 virus pandemic due to, in part, risk perceptions heightened by government interventions that have restricted air travel, as well as the health warnings associated with 'public' transport due to the COVID-19 virus's hyper-transmissibility and air travel being viewed as being very unsafe in light of the pandemic (Beck and Hensher, 2020; Chua et al., 2020). Prior studies (Li et al., 2017; Wang and Ackerman, 2019) have established that negative crowding behaviour associated with group-oriented tourism activity stemmed from heightened safety concerns induced by perceived infection risk. Furthermore, previous studies (Cahyanto et al., 2016; Kock et al., 2020) have also established a link between perceived physical health risk and the development of xenophobic behaviour in tourists; thus the physical risk associated with the COVID-19 pandemic may also result in tourists viewing interaction with tourists from certain countries as being unsafe or risky.

This study also confirms that psychological risk related to the tension, worry and discomfort associated with travel and tourism in the era of COVID-19 also diminished how safe travelling internationally and visiting popular local tourist attractions was perceived by potential tourists. Sánchez-Cañizares et al. (2020) support this finding, suggesting that psychological barriers associated with health and hygiene reduce the likelihood of tourists engaging in international travel due to heightened anxiety, uncertainty and general safety concerns. Moreover, Zhang et al. (2020) suggest that psychological responses to the subjective safety of international travel associated with the COVID-19 pandemic also vary depending on the risk of infection related to the country being considered an international tourism destination.

The propensity of the COVID-19 virus's spread through direct and indirect human contact has resulted in stringent lockdown measures aimed at limiting human contact (de Vos, 2020; Lapointe, 2020). Hence, the moratoriums on non-essential travel, including tourist attractions' patronage (Zhang et al., 2020). Previous experience from the Ebola virus in the USA (Cahyanto et al., 2016), and SARS in China (Dombey, 2003; Li et al., 2017) shows that domestic tourists also worry about the safety of visiting popular local attractions during disease outbreaks.

Lastly, the study confirms that social risk related to how tourist's social reference groups (acquaintances, friends and family) may disapprove of their engaging in tourism activity, as well as the negative effect that tourism activity may have on their image in society, also diminished the subjective safety of tourism activity. Wattanacharoensila and La-ornual (2019) acknowledge the influence of social bias in tourist decision-making, particularly the social 'conflict' and dissonance that may arise from stereotypes associated with tourists' choices. To this end, prior studies have established that social predispositions either positively or negatively impact decisions related to the scope of tourism (Chen et al., 2013) and tourism product choices (Gstaettner et al., 2019). Thus, supporting the potential influence of social risk associated with the COVID-19 pandemic on tourism safety. The COVID-19 pandemic is a 'social' disease (Chua et al., 2020; Beck and Hensher, 2020), and the literature shows that the conditioning of individuals to avoid human contact in-order to stem the spread of the virus through social distancing interventions has instigated drastic reductions in tourism demand (Bae and Chang, 2020; Cifuentes-Faura, 2020). The promotion of social distancing behaviour has also significantly influenced the travel mode choices both available to and preferred by individuals (de Vos, 2020).

For instance, prior research has observed that perceived risk influences tourist decision-making related to group travel (package tours) or private travel activities (Adam, 2015). More pertinently, Lachance (2020) notes that the ongoing COVID-19 pandemic and the subsequent social distancing measures instituted by multiple national governments have significantly constrained travel and tourism activity including, at one point or another, all domestic and international recreational endeavours. Intriguingly, recent studies (Aguilera, 2020; Jamal and Budke, 2020) have also established that the fear and uncertainty surrounding the origins and transmissibility of the COVID-19 virus have heightened socially-oriented risk and manifested as discrimination against and xenophobia towards primarily Chinese nationals globally, as well as international travellers visiting foreign countries in general (Qiu et al., 2020).

In sum, the perceived risk associated with the COVID-19 pandemic is a multidimensional construct that negatively influences tourists' subjective safety of tourism activity. While there is some evidence of the influence of perceived risk related to the ongoing COVID-19 pandemic on tourist behaviour - primarily in terms of travel intentions - the present study presents novel findings that conclude that risk perceptions associated with the ongoing COVID-19 pandemic are a significant antecedent to the subjective safety of tourism activities in the near future.

Managerial Implications and Recommendations

In the era of COVID-19, the level of safety associated with tourism activity is imperative for both tourism sector recovery and the stimulation of tourism demand throughout the tourism value chain. Two significant managerial implications are discussed. First, public diplomacy as a specialised form of marketing communications will form the critical basis for evidence-based marketing meant to disseminate information crucial to the crisis and post-crisis communication-centric activities of tourism destinations. Government-led non-pharmaceutical interventions [domestic and international lockdowns] may be partially responsible for how unsafe tourism activity may be perceived to be in light of the pandemic.

It is recommended that national governments, tourism and health-oriented quasi-governmental organisations play a critical role in the concerted effort to manage the perceived safety of tourism activity and recover tourist confidence and trust in the safety of tourism at their respective destinations as part of public diplomacy. Public diplomacy as a multi-stakeholder marketing approach should involve the transparent and effective communication of the virus and infection protective measures in place to protect tourists such as the responsible opening up of national borders; the implementation of strict, but convenient and non-invasive immigration procedures; the transparent monitoring of compliance with health and safety measures throughout the tourism value chain; as well as the strengthening of public resource infrastructure such as hospitals. This process should complement an integrated crisis communications marketing strategy by DMO's to effectively communicate to tourists both the covert and overt health and safety measures to ensure tourists' safety throughout the tourism experience.

Second, given the pervasiveness of the psychological and social risk associated with contemporary tourism activity, tourism-oriented social marketing is recommended as it will be crucial to the social re-engineering of tourist behaviour during and post the crises. Inducing and incentivising health and safety-conscious behaviour as part of the tourism experience will improve tourism's subjective safety. Social marketing-oriented tourism promotion will motivate tourists to adjust to the 'new normal' impelled by the COVID-19 pandemic, and serve to inform tourists of the evolution of the tourism value chain in response to tourists' new requirements and expectations. For instance, product innovation in the airline sector such as a complete shift towards completely digital ticketing and check-in, the installation of surgical theatre-grade air filtration systems and more socially distant seating on aircraft, as well as the introduction of complimentary travel health insurance will go a long way in restoring tourist trust and confidence in air travel.

Whereas, tourism destinations may also focus on product innovations such as the promotion of more nature and outdoor activity-based tourism, as well as creating packages for smaller tourist groups for group tourism activities like bus tours, cruises or visits to indoor facilities to manage social crowding will also mitigate infection fears due to crowding concerns. Incentives such as complimentary destination branded face masks and hand sanitisers for visitors, or discounts for tourists who voluntarily undergo COVID-19 screening at tourism facilities (hotels, attractions, bars, restaurants) and attractions sites (theme parks, museums) will also promote safer, more socially responsible tourism.

A follow-up longitudinal study may be conducted to confirm the present study's findings in light of various vaccines' development and the emergence of the second wave of infections in most countries. Owing to the dynamic nature of the COVID-19 pandemic and its impact on the global tourism value chain, further research is recommended into the pandemic's potential influence on tourist decision-making and behaviour as the crisis evolves. It is recommended that future predictive tourism research associated with the COVID-19 pandemic pay particular attention to the psycho-social impacts of the virus

on decision-making beyond the archetypal health risk associated with the pandemic. Moreover, academic inquiry into the influence of pandemics on the subjective safety of specific tourism activities across the tourism value-chain will benefit and aid tourism practitioners and service providers in their post-pandemic recovery strategies.

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COASTAL GEOMORPHOSITES ASSESSMENT FOR ECOTOURISM DEVELOPMENT IN EAST LOMBOK, INDONESIA

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Abstract: The research set out to analyze coastal typology characteristics and ecotourism development through geomorphosite assessments and suggest fitting management strategies in East Lombok, Indonesia. In this research, the connection between ecotourism potentials and coastal typologies was investigated. The methods of this research were conducted using a combination of GIS-based analysis and field surveys. Geomorphosites were assessed from several facets or attributes: scientific and intrinsic, educational, economic, conservation, and added values. The analysis results showed that two coastal geomorphosites could be developed into ecotourism spots, as supported by East Lombok's regional planning to promote ecotourism in its tourism branding. In addition, the sites are suggested to develop local products as a part of their attractiveness. Another finding is that the coastal typology has a strong connection to the scoring result, especially the scientific-intrinsic and conservation values.

Key words: coastal typology, geomorphosite, ecotourism, East Lombok, Indonesia

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INTRODUCTION

Tourism is one of the leading sectors in Indonesia's development. It is known and, thus, expected to increase foreign exchange earnings, regional income and growth, investment, and labour markets. In addition, tourism also contributes to Indonesia's account balance (Narayan et al., 2021). Indonesia has enormous natural resource potentials and rich biodiversity to trigger and accommodate tourism development, yet this process remains less than optimum due to the lack of supporting facilities and infrastructures (Nandi, 2008; Badarab et al., 2017; Marfai et al., 2020). Among the diverse tourism potentials targeted for development is coastal-marine tourism. Bali Island is a famous global destination for cultural and coastal-marine tourism (Marfai et al., 2020; Mutaqin et al., 2020). Its popularity has begun to spread to neighboring islands, one of which is Lombok. Lombok also offers coastal tourism in, among others, Senggigi and Gili Trawangan (West Lombok) and integrated coastal tourism in Kuta-Mandalika (Central Lombok) that has just been recently developed. On the contrary, East Lombok, which is no less attractive than the areas mentioned above, remains untouched by development plans and, as such, improperly managed. In West Nusa Tenggara Regional Tourism Development Master Plan (RIPARDA: *Rencana Induk Pembangunan Kepariwisataan Daerah*) for 2013-2028, Lombok Island has four Regional Tourism Strategic Areas prioritized in tourism development. However, plans for more than half of the eastern coastal stretch are still lacking (Figure 1) as they only include Mount Rinjani and Sembalun for mountaineering tourism. Meanwhile, the coastal areas that are mostly developed are located on the west side (Statistics, 2019). This study focuses on East Lombok's coastal area because its tourism sector generates relatively low regional income and does not entirely adopt the ecotourism concept. Recently, the ecotourism concept has developed in several sites in Lombok by the collaborations between governments, private sectors, and communities.

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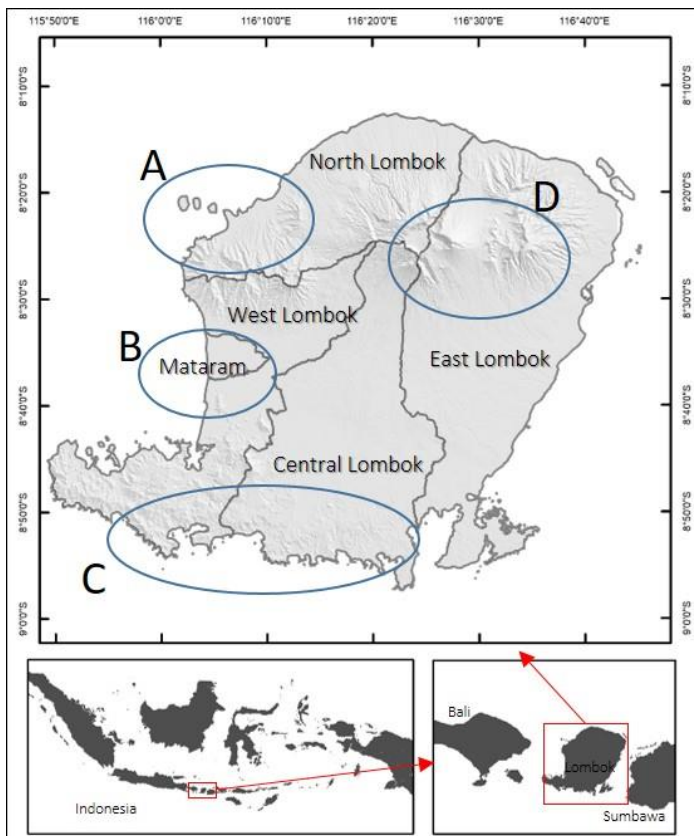
Figure 1. Four regional tourism strategic areas on Lombok Island based on RIPARDA: (A) Senggigi-Gili and (C) Kuta-Mandalika area for coastal tourism, (B) Mataram area for urban tourism, and (D) Rinjani Sembalun area for mountain tourism

The ecotourism concept has five aspects: nature-based, ecologically sustainable, environmentally educative, locally beneficial, and providing tourists with a satisfying experience (Hill and Gale, 2009). Ecotourism can positively impact local community development and environment conservation (Buckley, 2003; Tanaya and Rudiarto, 2014; Pattiwael, 2018). It is also enhancing children's education and improving local people's capabilities in management and other related areas (Masud et al., 2017; Zacarias and Loyola, 2017). Several tourism sites in central and western Lombok have adopted it. However, the tourism potentials of only particular coastal areas are known, while that of many others has yet to be explored due to the missing knowledge of their attractiveness and proper strategies for their development as coastal-marine tourist attractions (Khoiriyah et al., 2018). Geological settings are a known factor of coastal area formation. Lombok is composed of old and young volcanic materials, uplifted limestones, intrusive rocks, and coral reef formations (Mangga et al., 1994; Mutaqin, 2020), and as a result, it has various coastal typologies. For ecotourism development purposes in coastal areas, it is necessary to consider geological and geomorphological aspects (Newsome and Dowling, 2006) in addition to hydrodynamics, geodynamics, morphodynamics, eco-dynamics, and anthropo-dynamics typical of these areas (Sunarto et al., 2014). The dynamics of coastal geomorphological processes, notably in East Lombok and their relation to ecotourism are under-researched. Studies concerning this issue are limited: e.g. the identification of coastal materials, sea current, and wave typology of Tangsi Beach (Rayadi, 2016; Marfai et al., 2019) and coral reef profile (Mutaqin, 2020). This study relies on geomorphosite assessment as an approach to determine ecotourism development potentials in East Lombok. Geomorphosites are geomorphological landforms to which socio-economic, cultural, and/or scientific values are attributed (Panizza, 2001), and in many relevant studies, ecological and aesthetic values are added as known attributes for geomorphosites (Reynard and Panizza, 2005). These attributes create a powerful approach to assess the positive relationship between physical environments and social characteristics, components of ecotourism development (Kubalíková, 2013). In some specific cases, the assessments also beneficial for supporting the development of geopark (Kubalíková, 2019), coastal protection (Pereira et al., 2019), and geoconservation (Santos et al., 2020). For the first time in East Lombok's coastal area, the ecotourism development potential is linked to coastal typologies, which significantly shape the local physical characteristics. This is a further development from previous studies that have correlated geomorphosites with geomorphic genesis, e.g., dissolution (De Waele et al., 2005), marine processes (Orrù et al., 2005), and volcanic landform (Costa, 2011; Quesada-Román et al., 2020). This study was intended to analyze coastal typology and ecotourism development through geomorphosite assessments and provide recommendations on management strategies.

MATERIALS AND METHODS

The research started with geological and geomorphological feature identification and determination of sampling sites using GIS (Geographic Information System) in the laboratory. The data analyzed were the geological map of Lombok Island (1:100,000) (Mangga et al., 1994), Indonesia Topographic Map (RBI 1:25,000), and DEMNAS (0.27 arcsecond). DEMNAS, available at http://tides.big.go.id/DEMNAS/, is the national digital elevation model in Indonesia and is suitable for landform identification, especially in a volcanic landscape and its surroundings (Malawani et al., 2020a). Using the three data above, this research identified and characterized coastal typology according to Shepard's coastal classification system (1973). It also sought for any coastal tourism sites using the search engine in Google Map (Figure 2). The second step was field surveys to confirm the current and potential coastal tourism sites identified through the GIS-based analysis. One sampling site was removed from the research because of accessibility reasons, thus leaving seven samples (Figure 3). Also, during the field surveys, each sample's geomorphological characteristics were measured and determined using several variables: material constituent, slope, wave breaker type, sedimentation-erosion process, and beach type, and the coastal typologies—determined using Shepard's coastal classification system (1973)—were validated. The next step was the geomorphosite assessment using the data collected through direct observation and interviews. Several actors related to tourism management in each sampling site (e.g., tourist operators, villagers, and tourists) were interviewed. There are plenty of methods for geomorphosite assessment. Mucivuna et al. (2019) have been listed 71 methods of assessment, one of them is from Kubalíková (2013) which contain several geomorphosite attributes: scientific and intrinsic value, educational value, economic value, conservation value, and added value. The method from

Kubalíková (2013) was chosen because it suits ecotourism development purposes. This method also combined qualitative and quantitative evaluation (Mucivuna et al., 2019). The final step was scoring, which classified the geomorphosite's readiness for ecotourism development. It was also conducted a comparative analysis between geomorphosite attributes, coastal typology, and the latest issues to suggest the proper management for ecotourism in the sampling sites.

Figure 2. Map of Lombok Island: Geological map of eastern Lombok (A) and Suggested tourism facilities according to the Google Map application: hotels (B), beaches (C), and existing ecotourism sites (D)

Figure 3. The views of (1) Tanjung Luar, (2) Kwang Wai, (3) Labuhan Haji, (4) Surya Wangi, (5) Maiq Anyir, (6) Bangsal Korleko, and (7) Gege Korleko Beach (Photo source: field survey, 2020)
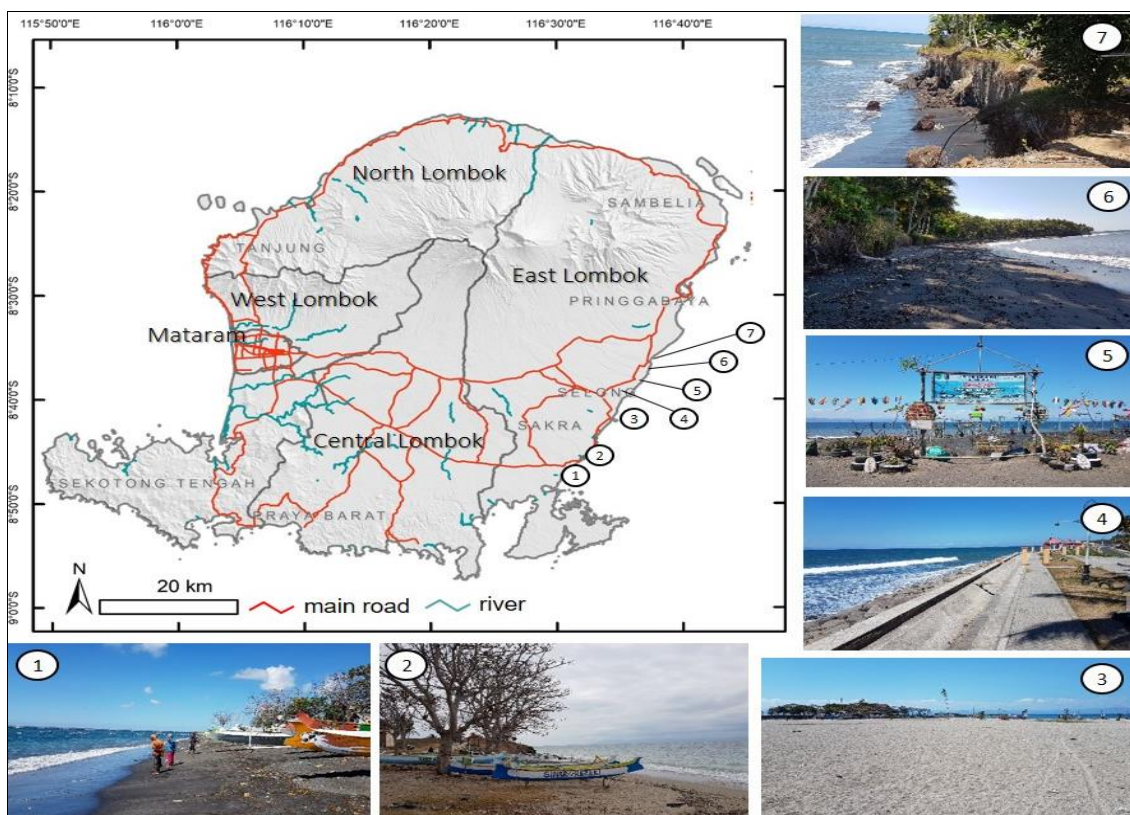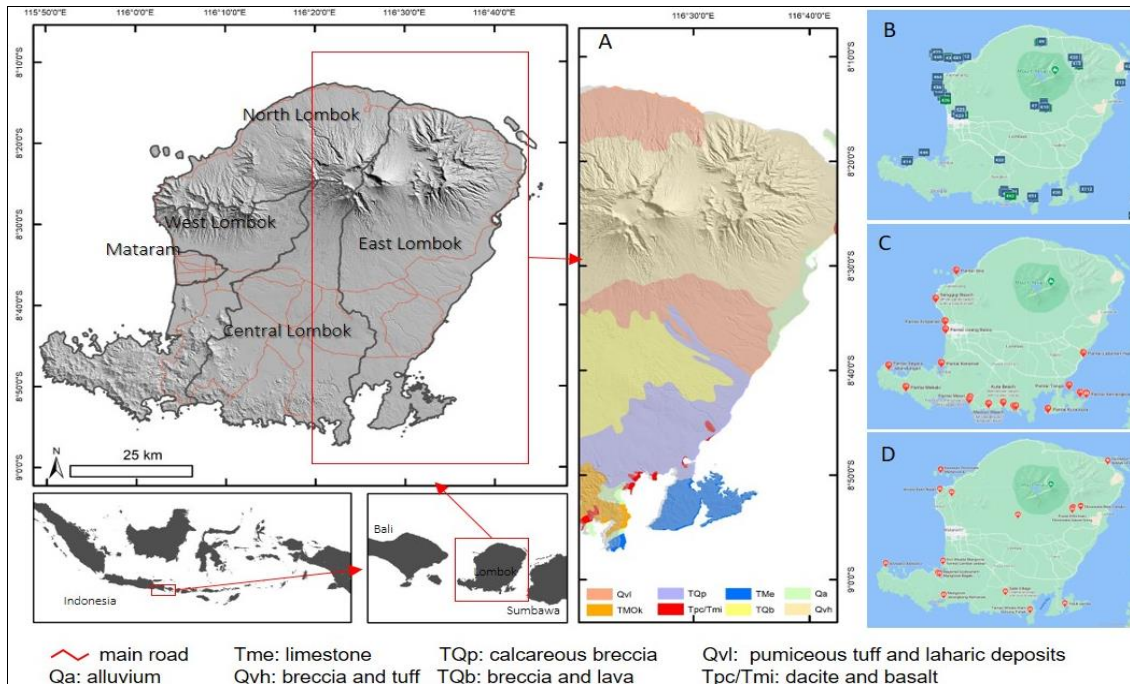
RESULTS AND DISCUSSION
Coastal Typology
The coastal typology characterization was conducted in seven sampling sites (i.e., Kwang Wai, Tanjung Luar, Labuhan

Haji, Surya Wangi, Maiq Anyir, Gege Korleko, dan Bangsal Korleko Beach) by identifying five variables: beach type, beach material, morphodynamic, slope, and wave breaker type (Figure 3). The samples had various beach types: rocky beach, sandy beach, cliff beach, sandy-rocky-cliff beach, sandy-anthropogenic beach, and anthropogenic beach. The rocky beach in Kwang Wai is formed of andesitic rocks originating in volcanic deposits. Tanjung Luar and Maiq Anyir are mainly composed of sand-sized grains; hence, categorized as sandy beaches. Gege Korleko and Bangsal Korleko are cliff beaches, but the latter also have rocky materials. Anthropogenic interferences like concrete structures and sedimentary infills also occur in Labuhan Haji and Surya Wangi. Based on the material analysis, sands were dominant in all sampling sites. Materials deposited in Kwang Wai are breccia, conglomerate, and sand, indicating a strong influence of volcanic activities, as a result of debris-avalanche deposit (Malawani et al., 2020b). Similarly, volcanic processes contribute to the mix of pyroclastic materials deposited in cliff beaches in Gege Korleko and Bangsal Korleko, with another material, i.e., ignimbrite. The combination of fluvial and marine processes in Tanjung Luar and Maiq Anyir allows the deposition of a slightly similar type of sediment, namely sands.

In addition to the widely distributed sands, Tanjung Luar has a marsh area emerging in the west. Meanwhile, the anthropogenic beaches (Labuhan Haji and Surya Wangi) are dominated by sandy materials and paving blocks, particularly along the center of tourism development. The morphodynamic processes were identified to determine which of the sedimentation and erosion was dominant. Kwang Wai, Maiq Anyir, Gege Korleko, and Bangsal Korleko are mainly formed of erosion processes apparent from serious shoreline retreats that reached up to several meters in the last decade, especially in Gege Korleko and Bangsal Korleko. Tanjung Luar and Surya Wangi are mostly influenced by sedimentation processes, as indicated by elongated accumulations of sediment inputs called spits. Spit is a coastal landform that extends to open water, formed by deposition or embankment of sediment in the estuary, which can result in a morphological shifting of the river mouth (Hegde et al., 2012; Zhang, 2016). Spit at Tanjung Luar is longer than the one found at Surya Wangi. Signs of anthropogenic interference are predominant in Surya Wangi, but natural processes still influence its form, although on a small scale.

The research found all three main types of breakers: plunging, spilling, and surging, which are known to vary according to coastal slopes. The breakers in Kwang Wai, Surya Wangi, and Maiq Anyir are plunging. Tanjung Luar dan Labuhan Haji have spilling breakers, while Gege Korleko and Bangsal Korleko had surging breakers. It is indicated that they have a different slope in the surf zone. Based on the characteristics above, East Lombok has five coastal typologies (Table 1). *First*, the volcanic coast-avalanche beach in the Kwang Wai area is affected by volcanic debris avalanche (DAD) processes. This DAD is connected to the Kalibabak DAD formation, formed prior to the Samalas caldera-forming eruption in 1257 CE (Malawani et al., 2020b). *Second*, the volcanic coast-pyroclastic surge in Gege Korloko and Bangsal Korleko is composed of deposits of pyroclastic surges, i.e., ash, pumice, and rock fragments ejected during the Samalas eruption in 1257 CE (Lavigne et al., 2013; Mutaqin et al., 2019a). *Third*, the marine deposition-barrier spit which covers almost the entire area of Tanjung Luar and creates a lagoon behind the sand bar. *Fourth*, the subaerial deposition-anthropogenic beach in Labuhan Haji and Surya Wangi is influenced by the natural deposition of fluvial sediments and anthropogenic interferences (Mutaqin, 2020). *Fifth*, Maiq Anyir is classified as a wave erosion beach because its unconsolidated materials are highly susceptible to wave erosion processes (Mutaqin, 2020). This type of beach also creates a micro-dynamic shoreline that forms rip currents.

Table 1. Classification of coastal typology in the sampling sites, East Lombok
Source: Field survey (2020); Mangga et al., 1994; Mutaqin et al., 2019a; Malawani et al., 2020b; Mutaqin, 2020

Beaches	Beach type	Materials	Sedimentation-erosion	Slope	Wave breaker	Typology (genesis)
Kwang Wai	Rocky beach	Breccia, conglomerate, sand	No sedimentation, wave erosion	Undulating due to hummock	Plunging	Volcanic coast-avalanche
Tanjung Luar	Sandy beach	Sand, marsh	Marine sedimentation-spit, no erosion	Flat	Spilling	Marine deposition-barrier spit
Labuhan Haji	Sandy-anthropogenic beach	Sandy, coral fragments	Anthropogenic infill, no erosion	Flat	Spilling	Subaerial deposition-anthropogenic
Surya Wangi	Sandy-anthropogenic-beach	Sandy-paving block	River sedimentation-spit-no erosion (sea wall)	Slightly gentle slope	Plunging	Subaerial deposition-anthropogenic
Maiq Anyir	Sandy beach	Sand-gravel	No sedimentation-wave erosion	Gentle slope	Plunging	Wave erosion
Gege Korleko	Cliff beach	Pyroclastic-mix, ignimbrite	No sedimentation-wave erosion	Cliff	Surging	Volcanic coast-pyroclastic surge
Bangsal Korleko	Sandy-rocky-cliff beach	Pyroclastic-mix	No sedimentation-wave erosion	Gentle-Cliff	Surging	Volcanic coast-pyroclastic surge

Geomorphosite Attributes
A. Scientific and intrinsic value

The scientific and intrinsic value was assessed from several variables: integrity, rarity, diversity, and scientific knowledge (Table 2). *Integrity* describes how natural or anthropogenic interferences damage the site and is expressed in 0.5 (disrupted) and 1 (small to no disruptions). *Rarity* allows one geomorphosite to be assessed for attractiveness similarity with other geomorphosites. The results showed that the samplings sites shared similar attractiveness, except for Kwang Wai and Tanjung Luar (rarity score = 1). It has hummocky hills; barrier spit and a mangrove area respectively. These attractive objects are only found at those sites. *Diversity* refers to the variation of features. All sampling sites had 2-4 features and, thus share similar scores (0.5). The last variable in scientific and intrinsic value is *scientific knowledge*. Neither scientific studies nor scientific explorations were found in the sampling sites, except in Gege Korleko. This beach geologically lies in deposits of pyroclastic surges and ignimbrites; therefore, the local government considers it as a unique geological site (Figure 4).
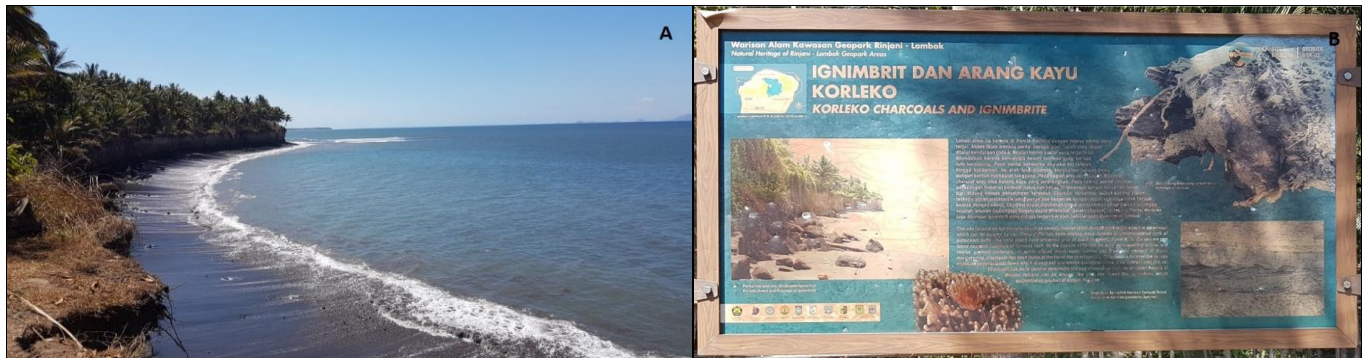
Figure 4. (A) View of Gege Korleko beach and (B) an information board containing the geological uniqueness of the site. The board explains the processes and age of the ignimbrite formation, as dated from the charcoal presence in this rock back to 1257 CE during the Samalas eruption (Photo source: field survey, 2020)

Table 2. Scientific and intrinsic value assessment of the sampling sites
(A: Kwang Wai; B: Tanjung Luar; C: Labuhan Haji; D: Surya Wangi; E: Maiq Anyir; F: Gege Korleko; G: Bangsal Korleko)

Variables	A	B	C	D	E	F	G
Integrity	Disturbed (0.5)	Small-to-no disruption (1)	Small-to-no disruption (1)	Small-to-no disruption (1)	Disturbed (0.5)	Disturbed (0.5)	Disturbed (0.5)
Rarity	No shared similarity (1)	No shared similarity (1)	Shared similarity (0.5)	Shared similarity (0.5)	Shared similarity (0.5)	Shared similarity (0.5)	Shared similarity (0.5)
Diversity	2-4 features (0.5)	2-4 features (0.5)	2-4 features (0.5)	2-4 features (0.5)	2-4 features (0.5)	2-4 features (0.5)	2-4 features (0.5)
Scientific knowledge	Unknown (0)	Unknown (0)	Unknown (0)	Unknown (0)	Unknown (0)	Scientific paper (0.5)	Unknown (0)

Table 3. Education value assessment of the sampling sites
(A: Kwang Wai; B: Tanjung Luar; C: Labuhan Haji; D: Surya Wangi; E: Maiq Anyir; F: Gege Korleko; G: Bangsal Korleko)

Variables	A	B	C	D	E	F	G
Representativeness	Medium (0.5)	Medium (0.5)	Low (0)	Low (0)	Low (0)	High (1)	Medium (0.5)
Pedagogical use	Low (0)	Medium (0.5)	Medium (0.5)	Low (0)	Low (0)	Medium (0.5)	Low (0)
Educational product	No (0)	Info panel (1)	Info panel (1)	No (0)	Info panel (1)	Info panel (1)	No (0)
Tour guides	No (0)	No (0)	Specialized excursion (0.5)	No (0)	Specialized excursion (0.5)	Specialized excursion (0.5)	No (0)

Table 4. Economic value assessment of the sampling sites
(A: Kwang Wai; B: Tanjung Luar; C: Labuhan Haji; D: Surya Wangi; E: Maiq Anyir; F: Gege Korleko; G: Bangsal Korleko)

Variables	A	B	C	D	E	F	G
Accessibility	Small road (0.5)	Main road (1)	Main road (1)	Main road (1)	Small road (0.5)	Earth road (0)	Earth road (0)
Tourism infrastructure	Medium (0.5)	High (1)	High (1)	Medium (0.5)	Medium (0.5)	Low (0)	Low (0)
Local products	No (0)	No (0)	No (0)	No (0)	No (0)	No (0)	No (0)

Table 5. Conservation value assessment of the sampling sites
(A: Kwang Wai; B: Tanjung Luar; C: Labuhan Haji; D: Surya Wangi; E: Maiq Anyir; F: Gege Korleko; G: Bangsal Korleko)

Variables	A	B	C	D	E	F	G
Threat and risk	Existing (0,5)	Low risk (1)	Low risk (1)	Low risk (1)	Existing (0,5)	Existing (0,5)	Existing (0,5)
Potential threat	Low (1)	Low (1)	Low (1)	Low (1)	Low (1)	Low (1)	Low (1)
Current status	No protection (0,5)	No destruction (1)	No destruction (1)	No destruction (1)	Continuing destruction (0)	Continuing destruction (0)	Continuing destruction (0)
Legislative protection	No (0)	No (0)	No (0)	No (0)	No (0)	No (0)	No (0)

Table 6. Added value assessment of the sampling sites
(A: Kwang Wai; B: Tanjung Luar; C: Labuhan Haji; D: Surya Wangi; E: Maiq Anyir; F: Gege Korleko; G: Bangsal Korleko)

Variables	A	B	C	D	E	F	G
Cultural significance	No (0)	No (0)	No (0)	No (0)	No (0)	No (0)	No (0)
Ecological significance	Yes (1)	Yes (1)	No (0)	No (0)	No (0)	Yes (1)	Potential (0.5)

B. Educational value

In general, the educational value represents the availability of educational products or purposes in a geomorphosite, and in this research, it was determined using four variables: representativeness, pedagogical use, educational product, and tour guides (Table 3). *Representativeness* refers to the common perspective of the locals or tourists on the physical features of the site. A large proportion of the sampling sites had low (0) and medium scores (0.5), meaning that the physical features' distinct characteristics remain unknown to the locals or tourists. An exception was found in Gege Korleko where the information board helped the locals and tourists to recognize the physical feature in the site. As for *pedagogical uses*, the interviews revealed that only three sampling sites, i.e., Tanjung Luar, Labuhan Haji, and Gege Korleko, offered excursions for students (0.5). However, even these three

beaches are rarely used for pedagogical excursions and tours that employ local guides' help. Maiq Anyir had local guides, but it was not designed for pedagogical tours yet. However, these guides were willing to help tourists who needed assistance during a tour. The four sampling sites (Tanjung Luar, Labuhan Haji, Maiq Anyir, and Gege Korleko) had *educational products* in the form of an information panel displaying general information (1), site plan, warning signs, evacuation routes, and assembly points. As for Gege Korleko, its information boards showed scientific-historical and geological information.

C. Economic value

The economic value describes the practical economic use of a geomorphosite, and in this research, it was a combination of accessibility, tourism infrastructure, and a local product (Table 4). Tanjung Luar, Labuhan Haji, and Surya Wangi could be accessed from the main road—hence, categorized as having high *accessibility*, while only small roads reached Kwang Wai and Maiq Anyir. Gege Korleko and Bangsal Korleko were accessible by cars, preferably motorcycle, via wide tracking roads (~4m) (lowest accessibility) and had no basis and supporting *tourism infrastructures*, e.g. information center, parking lot, and toilet. On the contrary, Labuhan Haji and Tanjung Luar had completely built supporting infrastructures for tourists, and the remaining three beaches only had basic infrastructures. All sampling sites offered no local products or commemorative souvenirs associated with them, although there were markets in the Tanjung Luar and Labuhan Haji areas.

D. Conservation value

Conservation value shows the protection strategies implemented in a geomorphosite (Table 5), including mitigation strategies against hazards. Here, it was determined from four variables: threats and risks, potential threats, current status, and legislative protection. All sampling sites had the same *threats*, namely earthquakes, and tsunami. In the context of earthquakes and tsunamis, the national disaster risk index (IRBI) (BNPB, 2014), places East Lombok in the red zone. Also, analysis of the *current status* revealed that severe marine erosion continues to morphologically damage some parts of the island, as apparent in Maiq Anyir, Gege Korleko, and Bangsal Korleko. Except in Surya Wangi, sea walls in other sites are reportedly efficient in protecting such erosion, thus creating low-risk areas. The research found that regulations and other forms of *legislative protections* relating to marine-coastal protection in all sampling sites were still lacking. Governments need to incorporate risk-mitigation planning, land use planning, and tourism development planning into their marine protection actions.

E. Added value

In this research, the added value comprised cultural and ecological significances of a geomorphosite. Because there were no specific *cultural* events or forms of attractiveness—a crucial element for tourism development, all sampling sites had zero cultural value. In Lombok, Kuta Beach (Central Lombok) is an example of coastal tourism development that positively turns its uniqueness into a cultural event called the Bau Nyale festival (a traditional fishery festival to commemorate the Princess of Mandalika). Also, several sites have important value for their *ecological* existence. We have identified that recent volcanic environment such as in Gege Korleko is beneficial for their ecological value, especially for scientific purposes. In addition, a mangrove ecosystem growing in Tanjung Luar also increases its ecological significance, and the lagoon creates an economic opportunity as the locals use it for salt ponds.

Table 7. The relation between coastal typology and geomorphosite value assessment

Geomorphosite attributes	Kwang Wai	Tanjung Luar	Labuhan Haji	Surya Wangi	Maiq Anyir	Gege Korleko	Bangsal Korleko
Typology	Volcanic coast-avalanche	Marine deposition-barrier spit	Subaerial deposition-anthropogenic	Subaerial deposition-anthropogenic	Wave erosion	Volcanic coast-pyroclastic surge	Volcanic coast-pyroclastic surge
Scientific and intrinsic value	2	2.5	2	2	1.5	2	1.5
Educational value	0.5	2	2	0	1.5	3	0.5
Economic value	1	2	2	1.5	1	0	0
Conservation value	2	3	3	3	1.5	1.5	1.5
Added value	1	1	0	0	0	1	0.5
Total	6.5	10.5	9	6.5	5.5	7.5	4

Geomorphosite for Ecotourism Development

Information on coastal typology in the research area is beneficial for characterizing geomorphosite values. Based on the analysis results, several coastal typology characteristics are indeed related to geomorphosite attributes. However, intangible attributes like educational and economic values cannot be directly correlated to coastal typology, e.g., sedimentation-erosion processes attract scholars' attention and, thus, creates scientific and intrinsic values (integrity). Beaches affected by small to no erosion processes tend to have high scores because they have no natural disruption. Knowledge of the sedimentation-erosion rate is also useful for planning coastal management and sustainability, which may include sea walls and/or green-belt vegetation (Yuniastuti, 2016; Wabang et al., 2017). Also, anthropogenic beach protected by coastal infrastructures has a relatively high conservation value score, such as in Labuhan Haji and Surya Wangi. In this assessment, it is apparent that anthropogenic interferences in a coastal area do not always cause negative effects. In Lombok, geomorphosites formed of sub-aerial deposition processes (Labuhan Haji) and marine deposition processes (Tanjung Luar) generally have the highest score (Table 7).

Most importantly, it is highly likely that they have high potentials to be developed as tourist attractions (Marfai et al., 2013). Based on these findings, the research suggests that Tanjung Luar and Labuhan Haji can be immediately developed as coastal-marine ecotourism sites and be the new icon of East Lombok. The mangrove ecosystem in Tanjung Luar also supports this strategy. A best practice example is Bumbang Beach in Central Lombok in which mangrove-based ecotourism was successfully established, and it has created an independent tourist village (Hakim et al., 2018). The current research has identified the vision and mission of Lombok's government for tourism development. With the Lombok motto, "East Lombok tourism: clean, beautiful, respectful, and secure", the government has already planned sustainable tourism. Here, the word *secure* concerns not only visiting

tourists but also the natural condition of the geomorphosite. For these reasons, the ecotourism concept is believed to be suitable for East Lombok's tourism development, especially because this region still relies on successful mountain tourism and ecotourism in Rinjani Park and Sembalun. Sadikin et al. (2017) concluded that the ecotourism management of Rinjani Park remain requires immediate improvement, i.e., the addition of appropriate eco-friendly infrastructure. East Lombok's coastal area can adopt this management strategy because most geomorphosites observed in this research have average-to-poor tourist infrastructure and accessibility (economic value). Sembalun ecotourism is also successful in introducing and monetizing the local products (Ariani et al., 2019), and it creates an excellent example for all sampling sites as they currently have no local products to offer (economic value). Another factor that coastal ecotourism development needs to take into account is natural hazards. Hazard and disaster events indeed have substantial impacts on tourism activities (Wahyuningtyas et al., 2019). Based on the national disaster risk index (IRBI) (BNPB, 2014), East Lombok is at high risk of being severely affected by tsunamis. On a detailed scale, cliff beach, such as in Gege Korleko and Bangsal Korleko, tends to be safer than other beach types. Although the most recent tsunami in East Lombok was caused by an underwater earthquake in 1977 (Pradjoko et al., 2015), the hazard still exists (Mutaqin et al., 2019b; Mutaqin et al., 2021). Also, Lombok lies in an earthquake-prone zone, and the 2018 earthquake disturbed tourism development in all regions of Lombok, as well as in East Lombok. After recovery to its normal condition in late 2019, this sector was severely hit by the COVID-19 pandemic and is thereby growing very slow (Fathurrahim, 2020). Lombok has just recently started to revitalize its tourism by implementing public health protocols. However, this strategy does not entirely work for ecotourism because social interaction between tourists and operators (guides) is key to successfully adopting the ecotourism concept. In this case, the pandemic creates a new challenge for ecotourism development in East Lombok, and probably for entire the world.

CONCLUSION

Geomorphosite assessment is a robust method of analyzing the readiness of a site for ecotourism development, especially when combined with coastal typology identification. Coastal typology has a relation with the physical attribution of geomorphosite, but for intangible attributes, it has no direct relation. In the case of East Lombok, only two coastal geomorphosites have a high score in assessed attributes and have a high potential to lead the ecotourism development. The regional planning in the research area also beneficial for ecotourism development, since it has been concerned with the ecotourism concept. However, it is highly suggested that the potential ecotourism sites start to develop local products as part of their attractiveness. At the same time, the local government needs to take into account the natural hazards because in the research area remains a lack of detailed maps or information to support and realize tourism protection. The pandemic has also influenced the implementation of the ecotourism concept, which has therefore created a new challenge for all those interested in this field.

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ASSESSMENT OF PROMOTIONAL MIXES PRACTICE
OF TIGRAY TOURISM INDUSTRY, ETHIOPIA

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Abstract: Tigray Regional State has significant tourism potentials. However, it is unable to exploit the existing tourism products using a promotional strategy. Therefore, the purpose of this study is to assess the promotional practice of the Tourism industry. This study applied a quantitative study design. The data was collected from 180 foreign and domestic tourists. The findings of the study indicated that Tigray tourism office frequently used television and radio promotional Media which are the most traditional, but infrequently used modern promotional tools (Websites, Short Mobile Messages (SMS), word of mouth, public relation). Sales Promotion and Public Relations mixes are mostly applied promotional elements in Tigray tourism sites.

Key words: Tourism, Promotional mix, Marketing mixes, Tigray, Ethiopia

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INTRODUCTION

Tourism is an ever expanding service industry with latent vast growth potential and has become one of the largest and dynamically developing sectors of nations (Nurhssen, 2016). Therefore, observably in most developed countries, the smokeless industry has the lion's share in the overall economic growth and development of a country. Tourism has become a favored and crucial catalyst development tool and it is becoming a common phenomenon in many developing countries for poverty alleviation or accelerating the rate of socio-economic development (Nurhssen, 2016; Ali, 2016). For instance, in eastern Africa, it has scored tremendous improvement with the presence of stability in Kenya, Ethiopia and Uganda (Ali, 2016). Tourism is becoming clearly an important source of economic growth in Ethiopia and Tigray too (Alemshet and Legese, 2019).

Ethiopia has a strong religious appeal and cultural appeals (Girma, 2016). Tourism will continue to be a vitally important pillar of Ethiopia's economy (Geremew et al., 2017). In fastest growing countries like Ethiopia, where the tourism sector is at its early stage, weak promotion or lack of coordination and promotional efforts as well as skilled manpower and lack of integration are the major negatively contributing forces (Engda, 2020; Alemshet and Legese, 2019; Kidane and Berhe, 2017). Tigray, one of the regional states of Ethiopia, is considered as the "cradle of human civilization" just to indicate the numerous natural and cultural tourism heritages (Alemshet and Legese, 2019). Kidane-Mariam (2015) also confirmed that marketing and promoting have been the weakest areas of tourism development. It is recommended that tourist information and overall infrastructure and services shall be more convenient to tourist and shall be communicated to the rest of the world (Girma and Singh, 2019).

Geremew, et al., (2017) and Ali (2016) noted that as one of the great service sectors of the 21st-century economy, and after long decades of growth, nationally, tourism is still in its infancy Creating a family-hood relationship or friendly treatment of customers can be one of the techniques of retaining customers and the development of the sector (Bayih and Singh, 2020). The literature strongly argues that satisfied tourists are more likely to promote positive experiences with other potential tourists (Durie and Kebede, 2017). The focus of this study, thus, is on the fact that it will add a significant value in the crafting of best marketing strategy by the government and the citizens know that they didn't exploit the sector as well.

Statement of the Problem

Tourism is a circulation of people who travel to or stay in places outside their home country which is a major ingredient in the economic development strategy (Engada, 2020). Although Ethiopia has many positive opportunities i.e. abundance of tourism products, lack of marketing strategy is among the factors which hold back the country to compete as a tourism destination with other east African countries (Geremew et al., 2017). Today, successful organizations adapt their marketing strategies to marketplace changes (Dennis and Michael, 2014). Delivery of tourism services has its own contribution in building and sustaining the good image of a nation (Engda, 2020). However it should be supported by coordinated and as

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much as possible different mixes of promotion camaigns. What the authors witnessed from different works of literature is that for tourism development, identification of products, infrastructures, and role of tourism in economic development such as employment, revenue generation, etc. are more investigated. However, the role of promotion is under investigation. The investment that is done on the promotion marketing mix is not satisfactory. In addition, the authors observed that social media such as Facebook, LinkedIn, etc are serving for political purposes, no more articles are published scientifically, no more photos of tourism products are displayed online, no more youtube advertising was uploaded, no more conferences were held etc. It is important to know how destination image is formed and the factors that influence image formation (Haarhoff and De Klerk, 2019). Thus, that is why the authors investigated the promotional mixes practice in the case of Tigray region destination sites, is to assess the promotion practice, gaps, and then forward the best solutions.

Research Objectives
- To assess the promotional practices of Tigray region destination sites.
- To identify the routinely used promotional tools by the Tigray region tourism office.
- To forward possible recommendations that maximize tourism contribution for the national development.

LITERATURE REVIEW

Tourism marketing is a key policy focus in the tourism sector development strategy of most countries because of its potential as the most optimal alternative for achieving economic and social development (Benghadbane and Khreis, 2019). Tourism sector in Ethiopia is underperforming compared to neighboring destinations (Ali, 2016). Literature shows that Ethiopia ranks 14th among African countries in terms of tourism development. South Africa, Kenya, Tanzania, Botswana and Namibia rank first, second, third, fourth and fifth respectively (Asmelash, 2015). The above rank of Ethiopia is subject to different questions. For instance, what is wrong with the existing system? (Ali, 2016). In addition, Durie and Kebede (2017) asked what made the problem. The answer is relying on the concept of marketing. Girma and Singh (2019) concluded that if there is a marketing effort they can consider Ethiopia's destination area for their vacation but if this is not they did not have a plan to visit Ethiopia which is probably because of lack of information. In addition Girma (2016) recommended that government should have to open the door for the private sector to work together for marketing of Ethiopia for the rest of the world.

Tourism promotion is characterized with a unique human touch. That is because tourism services require the intervention of humans who deal with tourists as people seeking pleasure, authenticity, and innovation (Aldebi and Aljboory, 2018). International tourists' perceptions were based on their perceptions of what they already knew about the destination. The implication is that more active marketing is needed by the government to marketing themselves abroad (Chuchu, 2020). Marketing tools in tourism are constantly changing. The competition in the global tourism market is exponentially growing. Common practice in the tourism sector is the promotion of destination offer to send target audience specific image in correlation with extra destination value (Šerić and Marušić, 2019). The authors of this paper also surely agree with those authors because among the marketing mixes, specifically promotion is receiving little attention. The following are among the usual promotion campaigns in the tourism industry. Advertising is a means through which products, services and ideas of organizations are brought to the public knowledge. It persuades and reminds the audience of their continuous support of the advertised item (Chinenye et al., 2012). Public relation has been identified as the effective way of delivering message to the targeted group to that will influence people. Media publicity of events will improve the image of tourist destination, so as to enhance the attraction of tourism product destination more effectively. In sales promotion, discounts are the tool by which consumers are most motivated to pursue impulsive purchases. Also, free samples and demonstrations and product rehearsals are very effective, while loyalty cards are the most ineffective (Alimpic et al., 2020). Without properly incentivizing people on what is available, it will be impossible to show them what they are missing (Engda, 2020). A video promoting a service brings measurable effects in sales and raising the recognizability of the brand on the Internet. Moreover, it also constitutes a continuation of the path to being positively distinguished from the competition (Jarosławska-Sobór and Dulewski, 2018).

SMS marketing was accepted as one of the ways and any kind of advertisement with low budget. It has known as one of the cheap and easy methods for communicating the consumer to promote the products (Duzgun and Yamamoto, 2017). Word-of-mouth communication shows developing perception from the information get from friends, families, relatives and informal information channels (Girma and Singh, 2019). Mobile marketing is a way to reach the consumer with their personalized devices. It is getting more important due to its cheap, easy, and fast features (Duzgun and Yamamoto, 2017). Customizing destination promotional mix to fit global touristic standards ensures efficient destination positioning but includes higher investment (Šerić and Marušić, 2019). Promotion through electronic media, webs and printed media like magazine, newspaper, and brochure are also very important but in practice is very poor. The promotion element of marketing itself includes its own mixes which needs more focus and emphasis in this 21st century. Tigray Culture and Tourism Bureau should define and develop different promotional strategies for the tourists. Both off line and on line ways of communication have their role in the tourism industry. To keep tourism development any concerned body and all organizations should have to promote for, strengthen and re-build ongoing brand of unique culture, life style, history and adventure (Girma, 2016). Most of the tourism-related organizations adjust its promotional mix according to values and image they want to present to the target audience (Šerić and Marušić, 2019).

RESEARCH METHODOLOGY

The Study Area

This study was conducted in Tigray regional state in Ethiopia. Tigray region wns abundant natural, cultural, historical and archaeological treasures (Alemshet and Legese, 2019).There are stelae, Yeha temple, oblisks of Axum (Bayih and

Singh, 2020), St. Mary of Zion Orthodox Church, queen Sheba's bath, King Ezana's park, the tomb of Romhay, the tomb of Kaleb, and his son Gebremeskel and Bazen, rock-hewn churches in Kilte- Awlaelo District, Gerealta mountains, Debre damo monastery, the rock-hewn churches in Hawzen woreda (Alemshet and Legese, 2019), Adwa mountains, Ashenge hayik, monuments in Mekelle city, archeological works and unexplored sites around Humera city are also the tourism products of Tigray region, Ethiopia. The Orthodox Tewahedo Church ceremonies are very unique especially Timket /epiphany, Meskel (Finding of the True Cross) which is celebrated in September 27 G.C., Ethiopian New Year- September 11 is New Year's Day (Geremew et al., 2017), Ashenda and Hidar Zion which can be celebrated on August 24 and November 29 G.C. respectively are also other intangible tourism products.
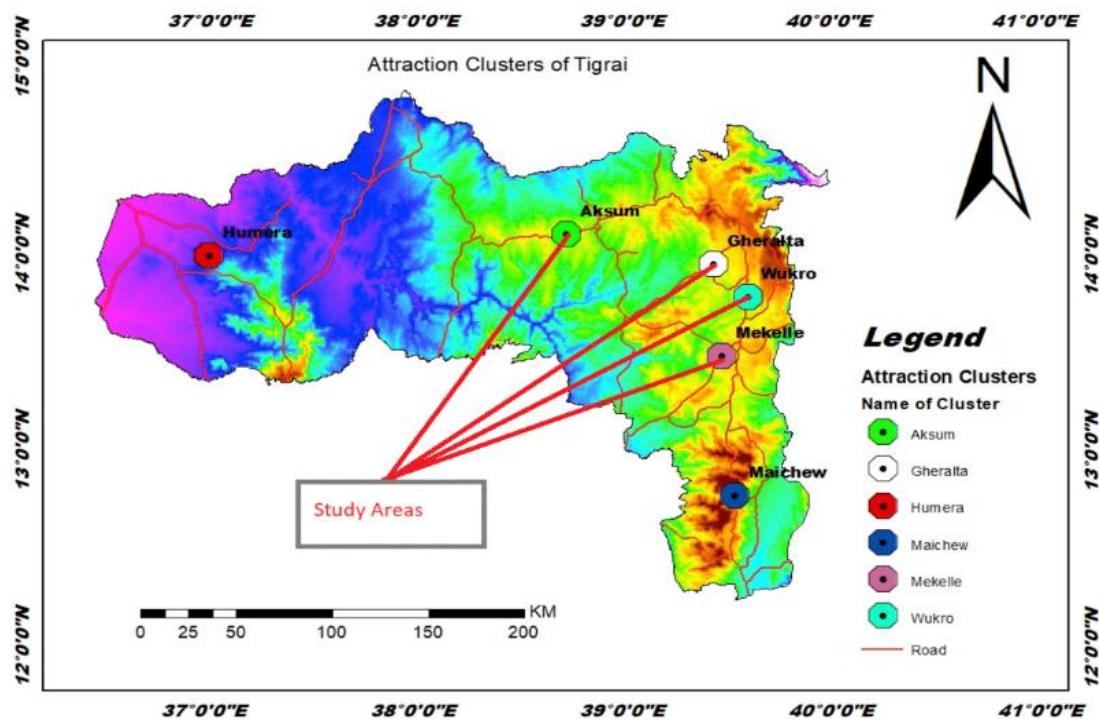
Figure 1. The map of study area (adopted from Tigray Culture and Tourism Bureau, 2015)

Types and sources of Data

In this study, a quantitative study was employed. Facts and concepts were put numerically to understand the different promotional tools practice. Both primary and secondary data were used to achieve research objectives. The structured questionnaire, websites, reports, and journal articles are sources of data respectively. Close-ended questionnaires on the five-point Likert scale were prepared after searching and reviewing several tourism literatures and receiving and incorporating written and oral feedback of two lecturers. A descriptive research design was utilized to assess and describe the promotional campaigns messaged towards Tigray cultural and historical heritages particular site.

Target population and sample size

Both international and domestic tourists who visited Tigray tourist destination sites, culture, and heritages from December 1 of 2019 to January 2020 period of time were the target population of this study. Thus, convenience sampling was appropriate to get enough and manageable data. A total of 180 questionnaires were distributed.

Data Processing and Analysis

After home editing and formal coding process of the collected data, the questionnaires were analyzed using SPSS 23.0. It determined the frequencies of promotional campaign employability by Tigray tourism and culture office and ranking of (from the highest to the lowest) of those promotional campaigns in the tourism industry.

Results

This part is attempted to discuss and identify the promotional practice of the Tigray tourism industry. the respondents were asked to whether they exposed to tourism-oriented promotion either oral or written ways of communication and then those who are only exposed were targeted as a respondent of this study. Accordingly, from 180 total sample questionnaires, only 178 questionnaires are properly filled and returned which is 98.89% of the response.

Demographic Characteristics of the Respondents

Figure 2 indicated that, among the participants, 65.6 % were male participants, and the rest 35.4% female. This data shows that majority of tourists who visited the Tigray region tourism site are still male.

Figure 3 also indicated that, the majority (86%) of respondents were found in the age category of 20-30, the rest 2.2%, 2.8%, 6.2%, and 2.8 were found in the age category of 31-40, 41-50, 51-60 and 61 & above respectively. Based on that, the majority of tourists who visited the Tigray region tourism site are mostly found between the ages of 20-30.
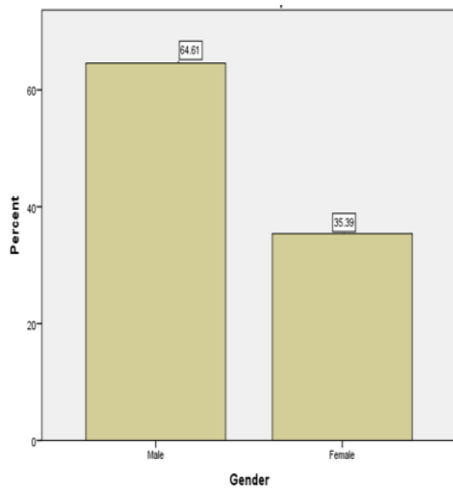
Figure 2. Gender distribution of the respondents
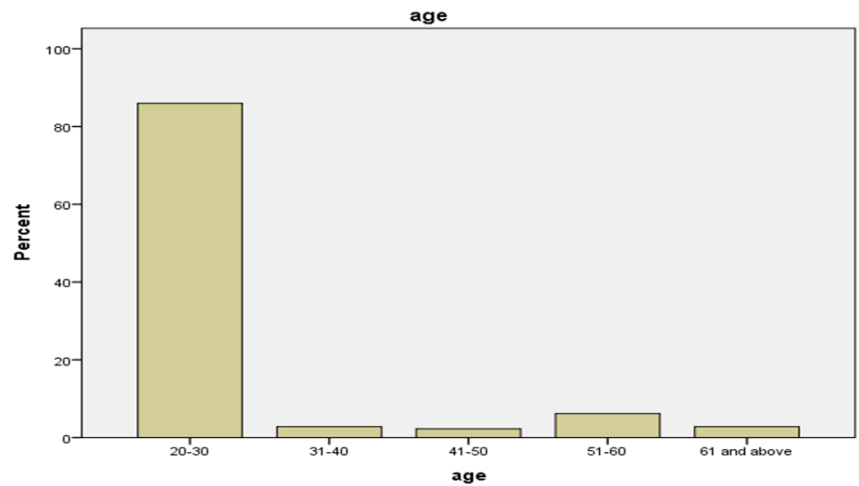
Figure 3. Age of respondents
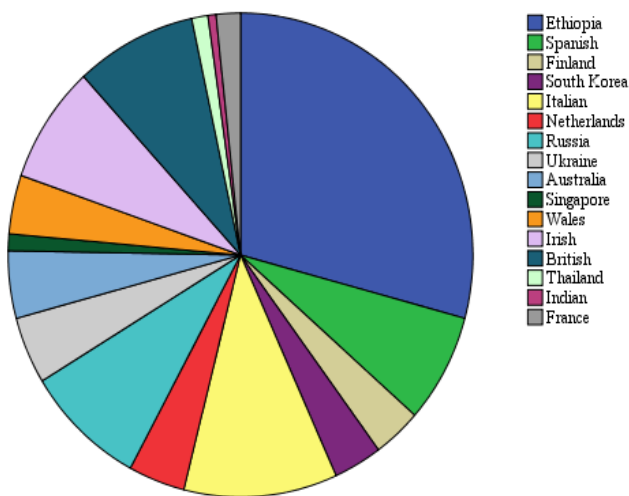
Figure 4. Nationality of Respondents (Source: Survey Data, 2020)

Table 1. Educational Status of the respondents (Source: Survey Data, 2020)

Categories	Frequency	Percent
Illiterates	4	2.2
Certificate	15	8.4
Diploma	8	4.5
Degree	142	79.8
Masters & above	5	2.8
Total	178	100.0

Table 2. Purpose of visit to tourist destination sites of Tigray (Source: Survey Data, 2020)

Purpose	Frequency	Percent	Valid Percent
Leisure program	70	39.3	39.3
Business purpose	15	8.4	8.4
Conference meetings	3	1.7	1.7
Sport purpose	2	1.1	1.1
Academic purpose	87	48.9	48.9
Total	178	100.0	100.0

Figure 4 is inteded to investigate the nationality of the respondents. Accordingly, at the country level, most of the respondents were from Ethiopia which accounts for 28.7 percent followed by Italy, Russia, Britain, and Iran represent 10.7%, 9.0%, 8.4 %, 7.9 % respectively. In sum, it is possible to say that Tigray tourism destinations sites are merely visiting by international tourists than the domestic tourists.

Table 1 revealed that, the majority were degree holders' which accounts for 79.8%, the rest 2.2%, 8.4%, 4.5 % & 2.8% accounts for uneducated, certificate, Diploma and Masters respectively. Hence, most of the visitors are educated. Table 2 also shows that 39.3% respondents purpose was for leisure, 8.3% of the respondent's purpose was for business (government, company or personal), 1.7% was to attend conference meeting, 1.1% of the respondents were for sports purpose, and 48.9% happened to travel were for academic (in-school – academic field trip). This indicates that the majority of respondents' purpose of visiting the tourist destination is for academic purpose followed by vacation and relaxing purposes. Therefore, destination marketers should find ways of making the customer experience memorable and comfortable.

Promotional Tools in Tigray Tourism Sites

In this section, it is intended to examine tourists' awareness level about promotional campaigns and to identify the most frequently used promotional tools by Tigray tourism site administration. Consequently, respondents were asked to respond to their level of awareness about promotional campaigns of Tigray destination sites in general. Table 3 shows that 78.7 % respondents have heard about any tourism promotion campaigns employed about Tigray destination sites where as the rest 18% of the respondents do not have any information so far. Therefore, even though the majority of tourists heard about any tourism promotional campaign about Tigray tourists' destination sites, the rest 18% which do not have any information about Tigray tourism should not be neglected rather it is a sign to work hard in promoting tourism site of Tigray regional wise.

According to Table 4, respondents were asked to specify the most frequently used promotional tool used by Tigray tourism site in order to promote its tourism products to tourists of the world. Accordingly, the result is categorized into three as (high mean, medium and low mean value). Then, television, radio and facebook tools have a mean value of greater than 3. Newspaper, books/handbooks, friend/ family referrals, and festival/concert have a mean value greater than 2 and less than 3. Magazine, public relations, word of mouth, websites and short mobile messages have a mean value greater than 1 and less than

2. Finally, video advert/e-mail, articles and reports, sponsorships, brochure/flier, coupons/samples, outdoor/ poster, exhibitions, and linkedin are the least used promotional tools by Tigray tourism site because the mean is less than 1. However, this result implies Tigray tourism site frequently used television, radio which are the traditional promotional tools, but infrequently used the most modern promotional tools (websites, short mobile messages, word of mouth, and public relation).

Table 3. Tourists' awareness level about the promotional campaignn (Source: Survey Data, 2020)

Tourists awareness level about promotional complain of Tigray sites	Response	Frequency	Percent	Valid Percent
	Yes	140	78.7	78.7
	No	32	18.0	18.0
	Total	178	100.0	100.0

Table 4. Promotional tools used in Tigray Tourism sites (Source: Survey Data, 2020)

S.N	Promotional Tools	N	Mean	Std. Deviation
1.	Television	178	.4888	.50128
2.	Radio	178	.3652	.93659
3.	Facebook	178	.3596	.48122
4.	Newspaper	178	.2584	.43900
5.	Books/Handbooks	177	.2429	.89998
6.	Friend/Family Referrals	177	.2373	.42663
7.	Festival/Concert	178	.2247	.41857
8.	Magazine	178	.1742	.38031
9.	Public Relation	178	.1742	.38031
10.	Word of Mouth	178	.1629	.37034
11.	Websites	178	.1461	.35417
12.	Short Mobile Messages	177	.1017	.30310
13.	Video Advert/E-Mail	178	.0955	.29474
14.	Articles and Reports	178	.0562	.23092
15.	Sponsorships	178	.0562	.23092
16.	Brochure/Flier	178	.0562	.23092
17.	Coupons/Samples	178	.0506	.21972
18.	Outdoor/Poster	178	.0393	.19492
19.	Exhibitions	177	.0339	.18148
20.	Linked in	178	.0225	.14863

Table 5. Descriptive Statistics (Source: Survey Data, 2020)

Promotional mixes	N	Minimum	Maximum	Mean	Std. Deviation
Average Advertising Score	178	1.40	5.00	3.4191	.81392
Average Mean publicity Score	178	1.00	5.00	3.4625	.88662
Average sales promotion Score	178	1.67	5.00	3.5599	.83277
Average online promotion Score	178	1.29	4.86	3.2103	.81398
Valid N (listwise)	178				

Tourists Perception towards Promotional Mix Campaigns

In this study, four elements were took into consideration i.e. advertising, sales promotion, public relation and online promotions and measured by a five-point Likert scale. As rule of tomb the minimum and maximum level of agreement on the given 5 –point Likert scale, the range in between the agreement level is calculated by (5-1= 4) then divided by five the greatest value of the scale (4/5 = 0.80). Accordingly, the length of cells is determined below: The mean value range from 1 to 1.80 represents (strongly disagree), from 1.81 until 2.60 represents (do not agree), from 2.61 until 3.40 represents (true to some extent), from 3.41 until 4.20 represents (agree) and 4.21 until 5:00 represents (strongly agree). The result of table 5 confirms that the mean of advertising is 3.42 with the standard deviation value of 0.81, which indicates, tourists agreed that Tigray tourism site uses advertising (broadcast and print media ads) as a promotional campaign. The mean of publicity is 3.46, and standard deviation of 0.88 which indicates, tourists were agreed that Tigray tourism site uses publicity as a promotional campaign. Sales promotion confirms the mean of 3.55 with standard deviation of 0.83 which indicates, consumers' tourists agreed that tigray tourism site uses sales promotion as a promotional campaign. Similarly, the online promotion confirms the mean value of 3.21 with standard deviation value of 0.81 which indicates, tourists agreed that Tigray tourism site uses online promotion as a promotional campaign. Comparatively, according to the figure (average mean score=3.5599) is the highest result of sales promotion (exhibitions, cultural and historical festivals and networking systems) followed by publicity approach =3.4625 (word of mouth, family/ friends referrals) of promotion. Advertising is ranked the third promotional element in Tigray tourism industry. However, online promotion mechanisms results the lowest (3.2103). Investments on online promotional campaigns will be needed. Effort, time, accessibility, speed, updated and new information should be uploaded in the website of the Tigray tourism and culture office, youtube using the internet.

DISCUSSIONS

The proper information is one of the features that customers are looking for. The benefits of the service should be stressed in all advertisements, the bonuses and free gifts available. Accordingly it was concluded that advertisement and sales promotions has influence on initial purchase and additions (Amin and Bashir, 2014) which is consistent with this study. However, Aldebi and Aljboory (2018) concluded that advertisement is the most influential promotion-mix element on the foreign tourists' mental images of the Jordanian tourist destinations. The tourism promotion-mix element that is ranked second is personal selling and the third is public relations. However, sales promotion is the least influential promotion-mix element on the foreign tourists' mental images of the Jordanian tourist destinations which contradicts the findings of this current study. In the other hand, 57% of respondents were developing their perception from the information get from Word-of-mouth communication i.e. friends, families and relatives, whereas, 26% respondents develop their perception from personal experiences and the rest (17%) of the respondents develop their current perception from media on their respective country in addition to the internet and informal information channels (Girma and Singh, 2019). The finding of these Ethiopian authors highly supports our finding and future recommendation that a huge investment on different tools of marketing in general and interactive/ online promotion is especially needed.

CONCLUSIONS

Promotion is the tool to inform or persuade customers for a given offering. In the tourism industry, advertising, publicity/ public relation, sales promotion, online promotions are specific instruments of promotion. Ministry of culture and tourism of Ethiopia as cited in Ali (2016) suggested that, the country should also focus on programs such as developing, promoting and expanding local tourism. So assessment of the practice of the above promotional mixes in Tigray tourism sector is necessary in order to win the social, economic and competitive advantage of the residents. Accordingly the authors found that all advertising, publicity/ public relation, sales promotion, online promotions were practiced by Tigray tourism and culture office from the domestic and foreign tourists view. It will be advisable to promote the natural, cultural, historical tourist attraction sites using as much possible diverse promotional Medias (broadcast Medias, print advertising, posters, signboards, social Medias, website and online media). Finally establishing destination marketing organizations and delivery of training to tour operators and staffs of Tigray tourism and culture office is important issue.

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A STUDY ON THE SOCIAL NETWORK ANALYSES OF DIVE CENTERS AND SUSTAINABLE TOURISM DEVELOPMENT IN PEMUTERAN BALI, INDONESIA

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Abstract: The increasing interest of tourists over the last few decades in the Pemuteran Tourism Area has become a major challenge in its management and sustainability. The dive centers located in this area offer business services such as diving and snorkeling, which are the leading tourism activities in Pemuteran. These centers also experience various changes that are related to business operations and conservation strategies. This study aims to (1) determine the characteristics of these centers in the Pemuteran marine tourism area, (2) analyze the network pattern between these centers in these areas, and (3) formulate a sustainable tourism developmental strategy. In addition, the study made use of a descriptive and qualitative research method. The data used was collected through semi-structured census interviews on the entire population of the dive centers in the Pemuteran marine tourism area. The results show that the collaboration network between dive centers in Pemuteran is a centralized collaboration. Furthermore, this collaboration occured in both operational and conservational activities. The nationality of the owner and the year in which the centers were established, are factors that influence the collaboration of dive centers in Pemuteran. Conclusively, optimizing the role of the government, and the involvement of local communities around Pemuteran is an important task needed in developing sustainable Pemuteran diving tourism.

Key words: Social network analysis, dive center, sustainable tourism, diving, SWOT, collaboration, coastal, Pemuteran Bali

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INTRODUCTION

Indonesia is one of the largest archipelagic countries in the world today, with 17,500 islands and a coastline of more than 80,000 km (Marfai, 2014). This coastline is said to be the second-longest in the world (Marfai et al., 2019). Geologically, ecologically and biologically, these coastlines have also proven to be very important in human life (Febriansyah et al., 2012). Furthermore, complex geomorphological processes are the factors that shape the uniqueness of coastal landscapes (Marfai et al., 2008). The complexity of these processes in coastal areas provides various benefits such as landscapes and marine resources, including fishery, mangroves, and coral reefs. In addition, coastal resources are one of the main economic sources of the Indonesian society (Marfai et al., 2019). The abundant resources in coastal areas are one of the reasons for increasing the potential for ecosystem services through marine tourism activities. The increase in public interest in nature tourism has recently encouraged the acceleration of various tourist activities, including ecotourism (Franco et al., 2019). In addition, the tourist sector in general also helps to support a region's local economy and provide added value to its coastal areas (Suprayogi et al., 2020; Lu et al., 2019; Mardiatno and Mutaqin, 2011; Dimmock and Musa, 2015).

However, although tourism provides benefits related to increased economic and employment opportunities, it also has major effects on the sustainability of the ecosystem (Sriartha and Giyarsih, 2015; Gerungan and Chia, 2020). The features of dynamic coastal areas and their sensitivity to anthropogenic activities require innovations that are oriented towards sustainable use. Therefore, achieving the goal of sustainability in coastal management and effective tourism activities requires the integration of both social and ecological systems of society (Dredge, 2006; Plummer and Fennel, 2009; Gerungan and Chia,

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2020; Marconi et al., 2020). Bali is one of the most popular tourist destinations in the local and international market. Its leading economic sector is tourism and it attracts a wide range of potential tourists from all over the world (Trialfhianty and Suadi, 2017). Most of the tourist centers located in this region are well known for their diversity in ecosystems and marine culture, which are the main source of attraction for both local and international tourists. Bali is a member of the Coral Triangle Island with the largest marine biodiversity in the world. In addition, the diversity of marine resources makes this region the center of tourism activities such as diving and snorkeling (Blicharska et al, 2019). Buleleng Regency is one of the autonomous regions in Bali with the longest coastline and it is located in the northern part of the Island. Furthermore, Pemuteran is one of the leading coral reef tourism destinations in this Regency (Windayati et al., 2020). Based on the number of tourists visiting the regency, there was also a significant increase in the number of tourists visiting Pemuteran (Figure 1). In 2005 a total of 56,523 people visited this regency in Bali. In 2019, it increased to 1,084,168 tourists, which included both local and international visitors. This presented major challenges for tourism development strategies as they need to be able to accommodate the changes caused by an increase in the number of tourists visiting these areas.
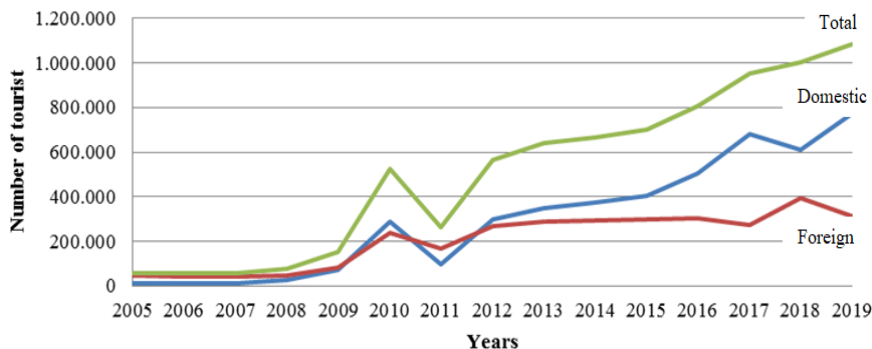
Figure 1. Number of tourist in Buleleng Regency 2005-2019 (Source: Buleleng in Figure, 2019)

The dive center is a marine tourism service business sector that provides services such as equipment rental and guides for underwater diving activities. The Pemuteran village is one of the leading diving tourism destinations in Buleleng Regency, with many of these centers existing as providers and facilitators of recreation. According to the Buleleng Tourism Office, these Pemuteran tourism centers have received many awards from various local and internationalawards, including 3 world-renowned awards such as the Equator Prize, PATA Gold, and G20 awards. In addition, in 2017, these Pemuteran tourism centers were nominated for the Indonesia Sustainable Tourism Award (ISTA) for their success in coral reef conservation through the application of Biorock technology and community participation. Furthermore, the biorock program succeeded in providing various benefits for both the surrounding community and underwater attractions by increasing marine biodiversity as well as diving and snorkeling activities respectively (Spalding et al., 2017; Jamison, 2009).

During, the developmental process, dive centers as one of the major commercial tourism service in Indonesia, experienced various changes related to service quality, business competition, and collaborative relationships while trying to increase the interest of local and foreign tourists in these places. Social networking among business owners in the tourism sector facilitates changes in governance in marine tourism development (Partelow and Nelson, 2018; Gerungan and Chia, 2020; Dimmock and Musa, 2015). The increasing tourist attraction for diving and snorkeling activities encourages sustainability challenges among business owners in developing Pemuteran diving tourism. An understanding of the characteristics and patterns of the diving service provider network and tourism environmental management may provide directions for future developments in tourism. Furthermore, research related to Social Network Analysis have been analyzed with various data and population strategies (Partelow and Nelson, 2018; Baggio et al., 2010).

A social network analysis approach can be used to assess the informal relationships between dive center owners that form the basis of collective action and environmental governance (Partelow and Nelson, 2018). In tourism, network science is an effective instrument for exploring the structure and performance of dive centers and, their complex tourism system (Scott et al., 2008; Baggio et al., 2010). In addition, social networking and collaboration between owners in tourist areas can be used to analyze various environmental problems (Bodin, 2017; Dimmock and Musa, 2015; Albrecht, 2013). This study aims to analyze the informal network between dive centers in relation to their business commitment and collective action to conserve the tourism environment and coral reefs. Commitment and collective action related to conservation are seen from the extent to which the dive center business adopts and implements environmental values into the company's operational standards and business behavior. In this study, the dive center is considered as one of the main factors needed in the success of environmental and coral reef conservation. This can be seen from their central role as a service provider and facilitator of tourism which is directly related to recreational diving activities. Furthermore, social, economic, and cultural influence are important aspects of tourism that need to be studied because of how they support the sustainability of the tourism system. They provide benefits that can be accepted by various parties, especially the surrounding community.

METHODOLOGY

The study was conducted in the marine tourism area of Pemuteran, Pemuteran Village. The village is one of the administrative areas in Gerokgak District, Buleleng Regency, which is located on the north coast of the island of Bali, Indonesia (Figure 2). Based on data acquisition, the data used in this study was divided into two, namely; primary and secondary data. The former was obtained directly from respondents in the form of owners, managers, and employees that were considered to know about the dive center. Its collection process was carried out through semi-structured interview techniques. The secondary data includes data obtained from sources outside the respondents that are needed to compile the research formulation and framework.
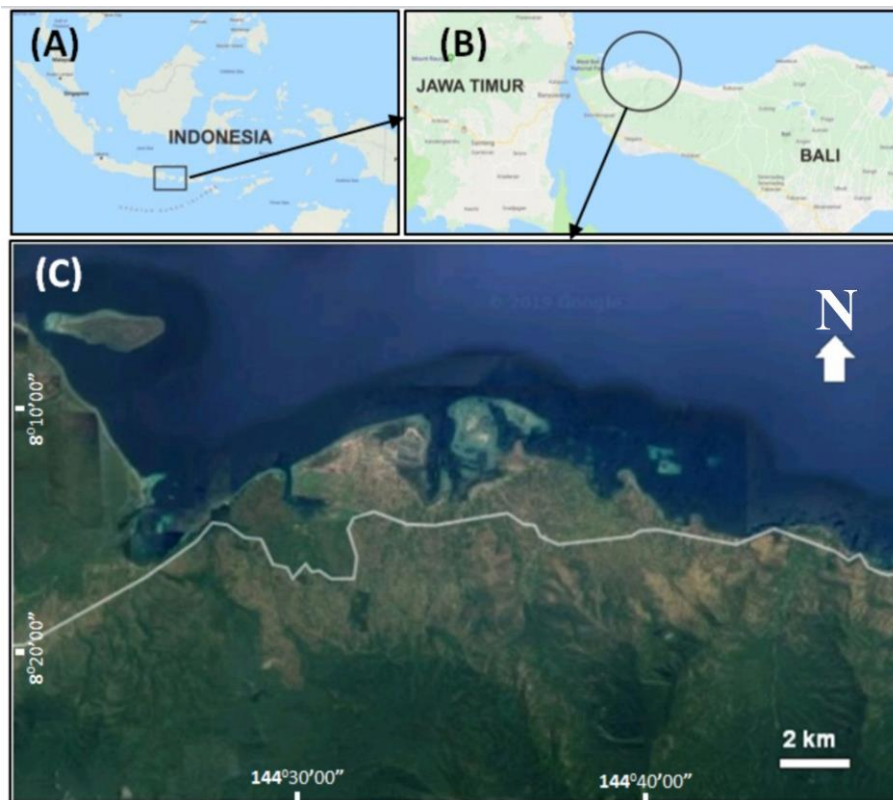
Figure 2. (A) Map of Indonesia and position of Bali Island, (B) Map of part of Bali island and study location, (C) Image of Pemuteran marine tourism study location (Source: Google Earth, 2019)

The population in this study were all the dive center tourism service providers in the Pemuteran tourism area, with a total of 30 dive centers. Data collection was carried out by means of a census at all these centers in the Pemuteran marine tourism area. Meanwhile, due to the pandemic, some of these centers did not operate fully while some were even closed permanently. This meant that in the research only 27 of these centers were interviewed. The pandemic had a major impact on tourism activities, forcing the author to make various alternative efforts in conducting this research. These efforts included online interviews, online questionnaires, and several interviews that were still being conducted at the research location using Covid-19 protocol. The data used in this study were collected through semi - structured and in - depth interviews with key informants including dive center owners or managers, leaders of local tourism organizations and local government officials. The interview aims to obtain information on the network or relationship between these centers and equipment management, exchange of employees, guides, and dive master certification. Furthermore, interviews with additional informants aimed to obtain in-depth information about the potential problems associated with future tourism development. Broadly speaking, the flow in this research is as in Figure 3. Several questions were asked to actor respondents, owners, managers, and staff that were considered to know the dive center business. The dive center data contained information such as year of establishment, owner's nationality, services provided, licenses, and number of employees. Furthermore, the data also made use of Partelow and Nelson's research (2018) to determine the orientation of the center's conservation commitments and network involvement. Questions about problems associated with tourism were adopted in the research of Dimopoulos et al. (2019) to determine the risk of impact of these problems on the diving tourism industry. Information related to dive center service standards and risk management for scuba diving tourism was obtained using the research of Setyoko and Kristiningrum (2019).
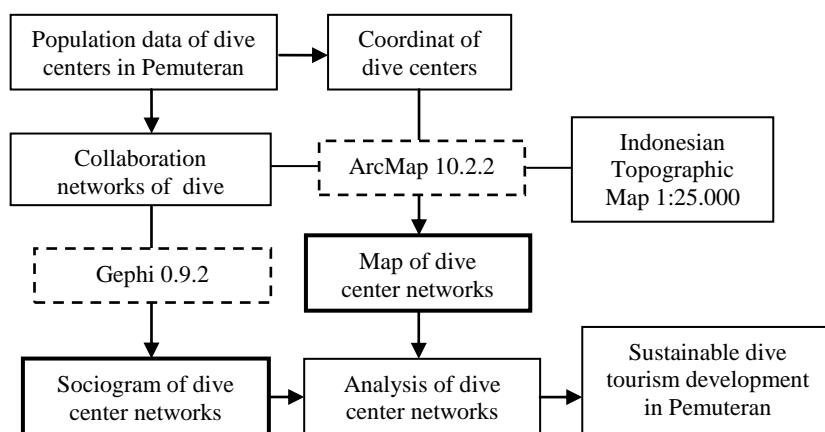
Figure 3. Flowchart of the research
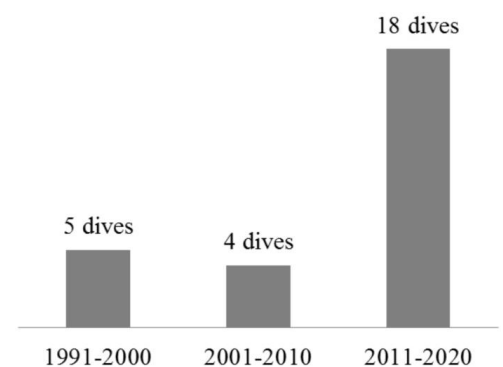
Figure 4. Number of dive centers established per 10 years in the last three decades (Source: Respondent data collection, 2019)

Furthermore, network analysis was performed digitally using Gephi software. The results of the analysis illustrated the network pattern regardless of the geographical location of the dive center unit. In Partelow and Nelson's (2018) research, information on the distance between 2 centers less than 50 meters of each other, were defined as neighbors and displayed in certain colors. Meanwhile, this study also displayed the network pattern by plotting the geographical coordinates of each center onto a map. Respondents were also asked to convey various internal and external problems faced by dive centers, as

well as the development of Pemuteran marine tourism in general. This information is intended to provide alternative solutions to the various social, economic, political, cultural, and environmental problems and challenges experienced by these centers and tourism developmental processes. Consequently, SWOT analysis is a process of systematically identifying variations in factors considered in a research, so as to formulate useful strategies (Kurniawan et al., 2020; Cahyadi et al., 2018). It (SWOT- Strength, Weakness, Opportunity, Threat) was conducted based on information in the field, including the perspective of respondents that are considered important people in leading tourism activities (diving) in Pemuteran. Furthermore, the findings or facts from various additional informants, as well as facts from literature studies were used as information needed in the formulation of alternative solutions to problems encountered in Pemuteran marine tourism.

Table 1. List of Dive Centers in Pemuteran Tourism Area, Bali

Dive Center	Year	Nationality	Number of staff	Certification	Service	Dive category
Dive 1	1991	Italy	11-20	PADI	diving equipment, guides	Dive shop
Dive 2	1995	Indonesia	6-10	PADI	diving equipment, guides, rent ship	Dive shop
Dive 3	1998	Slovenia	6-10	PADI	diving equipment, guides	Dive shop
Dive 4	2000	Australia	>20	PADI	diving equipment, homestay	Dive resort
Dive 5	2000	Indonesia	6-10	PADI	diving equipment, guides, homestay, transportation,rent ship,restaurant	Dive resort
Dive 6	2004	German	11-20	PADI, SSI	diving equipment, guides, homestay, rent ship	Dive resort
Dive 7	2007	Switzerland	6-10	PADI	diving equipment, guides, homestay, transportation,	Dive resort
Dive 8	2007	Indonesia	1-5	PADI	diving equipment, guides, homestay	Dive resort
Dive 9	2008	French	1-5	SSI, SDI	diving equipment, guides	Dive shop
Dive 10	2011	Indonesia	6-10	PADI	diving equipment, guides, homestay	Dive resort
Dive 11	2012	French	6-10	SSI	diving equipment, guides	Dive shop
Dive 12	2012	Indonesia	>20	PADI, SSI, RAID	diving equipment, guides, homestay, rent ship	Dive resort
Dive 13	2012	Indonesia	6-10	SSI	diving equipment, guides	Dive shop
Dive 14	2012	French	11-20	PADI	diving equipment, guides, homestay, rent ship	Dive resort
Dive 15	2013	Indonesia	1-5	PADI	diving equipment, guides	Dive shop
Dive 16	2014	Indonesia	6-10	SSI	diving equipment, guides, homestay, restaurant	Dive resort
Dive 17	2014	Indonesia	11-20	PADI	diving equipment, guides, homestay, restaurant	Dive resort
Dive 18	2015	America	11-20	PADI	diving equipment, guides, homestay,rent ship	Dive resort
Dive 19	2015	Indonesia	>20	PADI	diving equipment, guides, homestay, restaurant	Dive resort
Dive 20	2015	Canada	1-5	PADI	diving equipment, guides	Dive shop
Dive 21	2016	Indonesia	1-5	PADI	diving equipment, guides	Dive shop
Dive 22	2016	Indonesia	6-10	RAID	diving equipment, guides,rent ship	Dive shop
Dive 23	2017	Indonesia	1-5	PADI	diving equipment, guides	Dive shop
Dive 24	2018	Indonesia	1-5	PADI	diving equipment, guides	Dive shop
Dive 25	2019	Portugal	1-5	SSI	diving equipment, guides, homestay, rent ship,	Dive resort
Dive 26	2019	Indonesia	6-10	PADI	diving equipment, guides, homestay	Dive resort
Dive 27	2019	Indonesia	6-10	PADI	diving equipment, guides, homestay, transportation	Dive resort

RESULT
Identified Dive Center Characteristics

The results of the primary data are seen in Table 1. Based on the data and information obtained, the existence of a dive center as a diving tourism service provider started from 1980-1990 in Pemuteran. The first center recorded in the study has been operating for about 30 years. During this period, variouscenters emerged along with the increased interest of tourists in diving activities. A total of 18 dive centers from this study population have been established in the last decade (Figure 4).

The dive centers in Pemuteran are mostly owned by indigenes of the community, with only 40% having foreign owners. The foreign centers may have owners from America, Germany, Italy, Australia, Switzerland, Portugal, Slovenia, Canada and France. In addition, the dive centers operate businesses that only provide diving tourism services such as a dive shop and a homestay service known as a dive resort. However, several other services such as restaurants, transportation, souvenirs and other tourists needs, are provided by some of the diving centers. Consequently, the number of staff available can describe the scale of the business being run by the owner of the dive center. Most of the centers in Pemuteran run businesses that are mostly dominated by middle to small scale business owners with staffs in groups of 1-5 and 6-10 respectively.

Diving is an activity that requires skill, expertise, and the ability for you to be able to dive underwater without the availability of air needed to breathe. When carrying out an activity such as diving, divers are required to have a license (Ong and Musa, 2011), and are expected to know the rules that govern safe underwater practices. These licenses are issued by diving agencies that are recognized internationally, and each organization has different methods and levels of training and expertise respectively. In general, dive center business owners that are diving activists usually have a license issued by a recognized institution. The majority of these centers in Pemuteran chose PADI as their diving master's license (Figure 5).

In carrying out recreational diving activities, various diving equipment instruments are needed to be able to dive under water. Basic diving equipment such as a wetsuit, fint, diving mask, buoyancy control device, weight system, and scuba tank, are owned by all dive centers (Figure 6). Some Dive centers in Pemuteran already have basic diving equipment for rent to their

businesses. To reach a dive site that is far from the mainland, divers need a ship as a means of sea transportation. Boats are not owned by all dive centers in Pemuteran, only around 52% of dive centers own ships. A dive center that does not have a boat can borrow or rent another dive center that has one, sometimes they also share boats to meet customer needs.
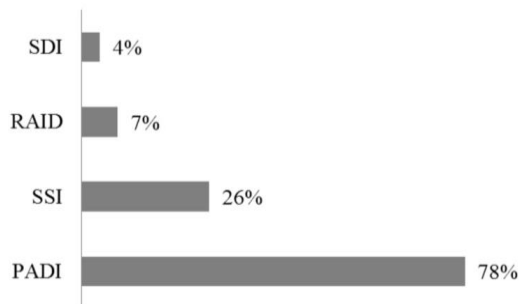
Figure 5. Diving license agencies used by dive centers in Pemuteran (Source: Respondent data collection, 2019)
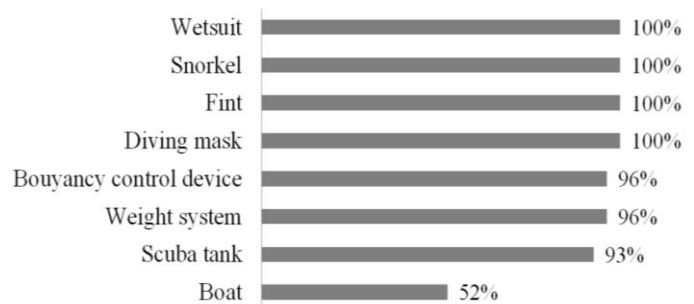
Figure 6. Availability of diving equipment at dive centers in Pemuteran Pemuteran (Source: Respondent data collection, 2019)

Dive Center Network Analysis

Social network analysis can be used to describe the network structure needed in sustainable tourism development (Nguyen et al., 2019; Otte and Rousseau, 2002). Network science methods can provide benefits in deepening knowledge about the entire system (Baggio et al., 2010). The basic idea of network science is that social structures influence decisions, individual beliefs and behavior (Scott, 2000; Garcia-Hernandez, 2020). In a study conducted by Trialfhianty and Suadi (2017), it is stated that the level of interaction will affect the way of thinking that it is important to restore coral reefs in Pemuteran.

The analysis of social networks among dive center operators is shown in Figure 7. It emphasizes more on the pattern of relationship rather than concentrating on individual behavior or the unity of the network system (Wasserman & Galaskiewicz, 1994). The network pattern diagram shows the cooperative relationship in the operation and provision of diving services. The dive network is represented by the depiction of elements in the form of points and the relationship in the form of a line connecting the points (Baggio et al., 2010). The difference in stain color represents the nationality of the owner and the size of the stain represents the degree of centrality based on the number of relationships. The stain label is represented by the year the dive center was established. Based on the characteristics of the relationship between dive center business owners in Pemuteran, the level of interaction between owners can be classified based on the network structure used by Bodin (2017) in his research. The network structure as stated by Bodin is an open triangular classification system. This meant that two friends connected by a node in the triangle may not necessarily be connected to each other. The entire trend in his classification system can be seen as a whole based on the extent in which members of the triangle related with each other. However, in some partial relationships among members, there are also network structures that are almost triangular.
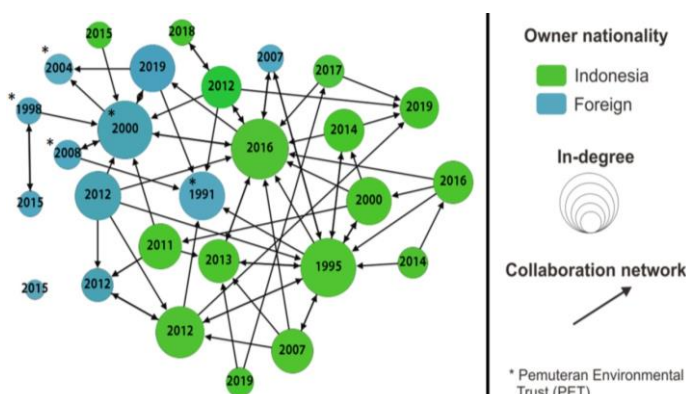
Figure 7. Sociogram of dive center networks in Pemuteran
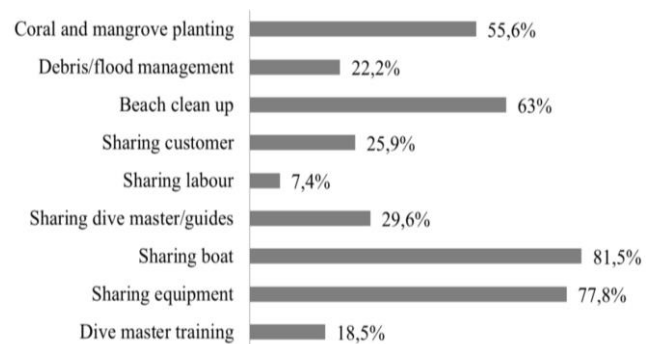
Figure 8. Kinds of collaborative activities between dive centers in Pemuteran Pemuteran (Source: Respondent data collection, 2019)

Furthermore, trust and social capabilities are two main driving factors for collaborative relationships among business owners in Pemuteran (Partelow and Nelson, 2018). Moreover, the social network that exists between dive center owners should be able to accommodate the change resulting from marine management and conservation, as well as maintaining the sustainability of tourism (Dimmock and Musa, 2015). Baggio et al. (2020) argued that tourism is a complex dynamic system that is moving further away from a static equilibrium. The increase in the number of dive center business operators has also created social changes, particularly in relation to price competition and service quality. In addition, the establishment of a new business center has a way of increasing price competition in the business sector of any unstable economy (Gerungan and Chia, 2020). Although price standardization has been achieved, and according to several respondents, divers admitted that there are still centers in Pemuteran that do not comply with the agreed price tag. Even though an agreement has been made, there should still be laid down rules and regulations that support the obedience of this agreement as well as guarantees punishment for its violators. Dive center businesses in Pemuteran are quite good at

supporting the protection of the tourism environment and the conservation of marine life. A collective identity as fellow dive service providers in Pemuteran tourism creates the collective awareness needed in protecting the shared marine space.

A sense of shared ownership of the tourism environment and marine life as a source of income leads to the establishment of common goals related to the sustainability of tourism in Pemuteran. Furthermore, increased concern for illegal fishing which results in degradation of coral reefs is a motivation for coral reef restoration through the biorock technique. Based on the dive center network in Pemuteran, it can be observed that there is every tendency for the network to collaborate with certain characteristics in common. Collaborative tendencies among dive center owners are connected and grouped based on the nationality of the owners. Moreover, in the network system there are central actors that connect the dive center sub-network. Owners that only interact with sub-groups of people with a certain homogeneity of characteristics find it easier to develop their own sub-culture, while owners that are connected in groups with a variety of backgrounds, roles, and resources benefit more in deepening the complexity of the problem and having more alternatives (Bodin, 2017). However, the collaborative relationship between local and non-local businesses is still quite good. It's just that small collaborative dive centers are only connected to other centers with the same national classification.

Partelow and Nelson (2018) argue that cultural heterogeneity is a factor inhibiting the possibility of collaboration due to increased transaction costs. The collaborative relationship between dive centers in Pemuteran is more intensive on operational relationships such as sharing boats and diving equipment. 81% of dive centers do collaborative activities in the form of sharing boats and 77.8% share diving equipment with other dive centers. 55.6% of the conservation cooperation in the form of planting coral reefs and 63% stated that doing beach clean-up activities as a collective dive center activity (Figure 8). Cooperation in terms of conservation and environmental management shows that it is less frequent than operational activities. The Pemuteran Environmental Trust (PET) was founded in 2009 after a lengthy debate about how conservation efforts could be made to offset exploitation of the tourism environment. It consists of dive business owners in Pemuteran that have the intention of contributing to environmental sustainability, realization of marine conservation, coastal management, and community services through various skill enhancement. Through this program, dive centers that are a part of PET facilitates various parties that wish to contribute to the sustainability of Pemuteran tourism.

This program accommodates a minimum funding contribution of IDR 25,000 per tourist, which is added to the bill for tourism services such as diving and snorkeling. Furthermore, it also facilitates parties that intend to help promote the project and make donations. This project is a form of awareness for dive center entrepreneurs to secure the interests of the next generation in enjoying tourism in line with the development of its complexity. Its members consist of 5 dive centers, all of which are non-local owned and were established from 1991-2008.
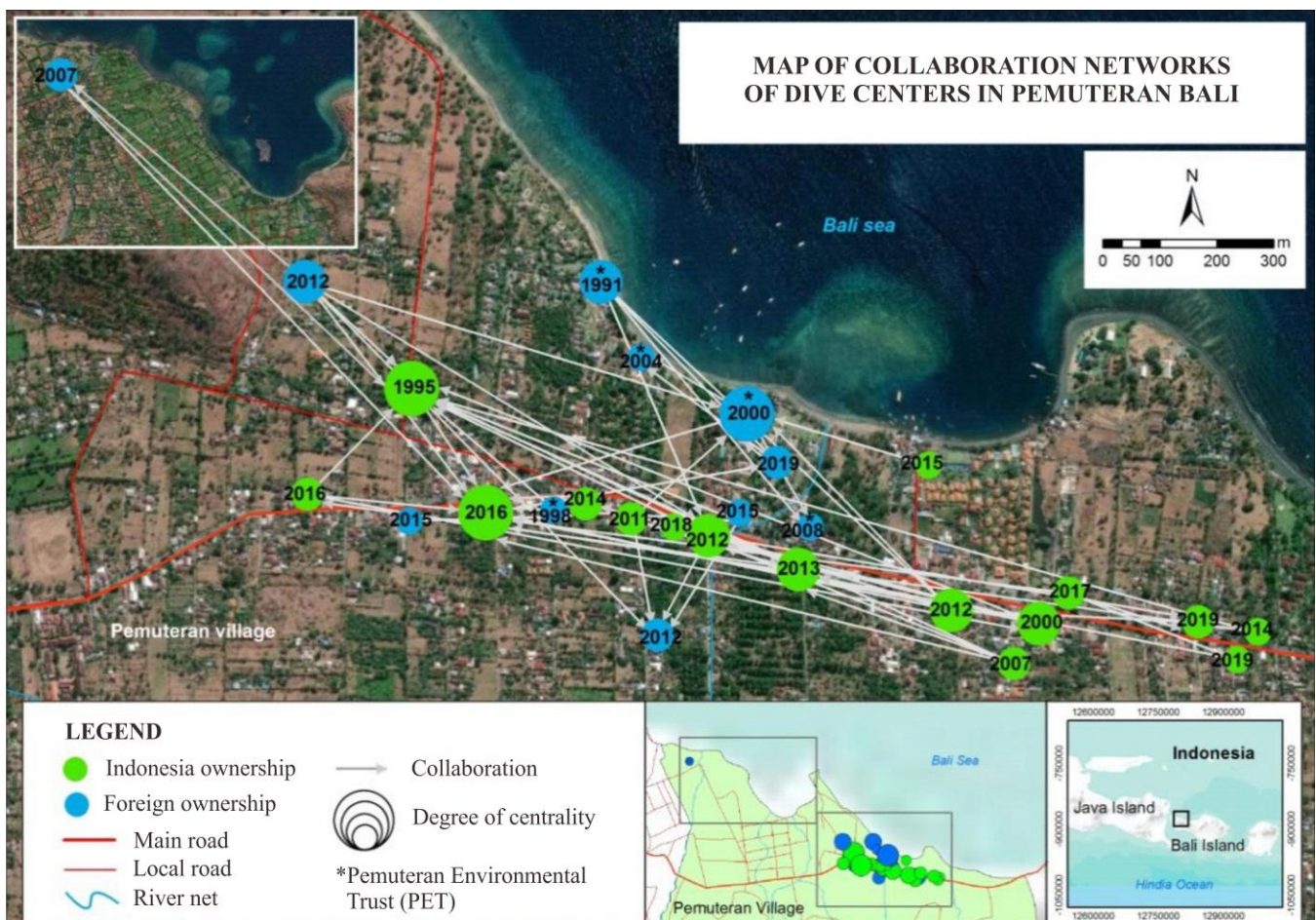
Figure 9. Dive Center Collaboration Network Map in Pemuteran Tourism Area, Bali (Source: ESRI USGS, UTM WGS 1984 50S)

Dive Network Spatial Analysis

In Partelow and Nelson's (2018) study, the dive network analysis was only carried out non-spatially without considering the distribution of the center's location. Furthermore, the depiction of the collaborative relationship between centers that are close to each other is represented by a certain color. This study aims to examine the relationship pattern of these business owner's collaboration in spatial terms, and how the role of the spatial aspect of their collaboration affects their network pattern. Figure 9 shows the distribution of the dive center consisting of a dive shop and dive resort in the Pemuteran tourism area. The study location is in the northern coastal area of Bali which includes the administrative boundary of the Pemuteran Village. The dive center as a diving tourism service provider shows a linear pattern distribution following the main road that connects between administrative areas on the north coast of Bali and the center of the Bali Province. The main road's access dominantly controls the distribution in which these business owners establish themselves. This indicates that for divers, proximity to the sea area is not as important as the ease with which customers find these centers and then choose the dive services offered.

Centers with dive shops that only provide diving equipment rental services and guides are more commonly found along the main road. Meanwhile, in locations far from the main road, there are more dive resorts with lodging amenities. This shows that there is an increased need for centers with dive resorts. The resorts provide a beautiful scenery for customers and improves their level of comfort drastically. The proximity of the dive centers in the Partelow and Nelson (2018) study is represented by level of neighboring collaboration, which also represents the distance between two of these centers of being not more than 50 meters apart. Collaboration based on distance can illustrate how effective and intensive a partnership can be. Cehan et al. (2020) guessed that geographic proximity stimulates social closeness because short spatial distances support social interactions and trust building. In this study, the spatial aspect was considered to not really be a major influence in the behavior of operational and conservational collaboration among dive center owners. Furthermore, closeness and proximity among dive centers is not significant factor that needs to be considered when establishing collaborative relationships amongst owners. Actors with larger collaborative networks tend to partner with other dive centers because of the extent of their level of operation and ownership of the ship. Moreover, another significant factor that needs to be considered in a collaborative relationship in tourism operations is ship ownership. Some divers often choose to share the boat if they get customers who want to visit Menjangan Island and its diving sites. This can reduce rental costs for fellow divers in question.

Another finding from the results of the dive distribution mapping shows that the distribution of dive centers with local ownership is more dominant in areas with access to the main road. It can also illustrate easier access to plots of land for residents to build their business buildings. Long-standing land ownership, both personal assets and inheritance from their ancestors, as well as ease in negotiations with close cultural ties between residents, can be the supporting background for this condition. Conversely, the dive centers with non-local ownership are spread out over lands that are far from the main road. Most of them choose to establish their business in places north of the main road but close to the sea. The need of foreign nationals to have a place of business in Indonesia goes through a variety of licensing processes and more complicated negotiations, both from the ease of connection and the negotiated price of land.

Network of Dive Centers in Sustainable Pemuteran Tourism

The business owners' perceptions of the survey questionnaire statements related to environmental issues, conservation, and network collaboration are shown in Table 2. The success of the coral reef conservation project in Pemuteran is influenced by the community's view on the matter (Trialfhianty and Suadi, 2017). Community can be formed when the population interacts to influence one another to form a socio-culture (Tonnies, 1999). On a smaller scale, the number of dive business owners that had interactions with members of the community represents the socio-cultural group of tourism service providers. They related to community perceptions, operational agreements, and conservation commitments in tourism activities.

Table 2. Divers' perceptions of conservation and collaboration networks in Pemuteran Tourism

No	Statements	Disagree	Neutral	Agree
1	The issues related to coastal environmental conservation/restoration of coral reefs in Pemuteran have been well managed	26%	15%	59%
2	The issue of shared waste and the recycling process in Pemuteran has been well managed	44%	22%	33%
3	Damage to reefs will occur frequently in the future	7%	15%	78%
4	There is support from outside donors related to environmental/reef conservation	11%	15%	74%
5	There are regular fees for environmental conservation in Pemuteran	15%	52%	33%
6	Many people catch fish	19%	30%	52%
7	Destructive fishing	52%	33%	15%
8	There is a tour guide service at this dive center	-	4%	96%
9	There is a briefing/appeal for tourists before diving in a safe and environmentally friendly manner	-	7%	93%
10	Collaboration with other businesses is easy on Pemuteran tourism	26%	26%	48%
11	More cooperation between dive centers is needed	19%	30%	52%
12	The more businesses on this tour the more difficult it is to cooperate and solve problems	26%	19%	56%
13	There is maintained local wisdom, such as traditional and religious ceremonies in Pemuteran tourism	-	-	100%
14	There is a cultural festival as an effort to promote Pemuteran tourism	4%	4%	93%
15	Willing to help if there is a cultural festival in the context of promotion	-	11%	89%

Based on respondents' statements, 59% of these individuals agreed that the issue of coastal environmental conservation and coral reef restoration in Pemuteran has been well managed. Meanwhile, only 33% of respondents agreed that the waste was managed properly. Furthermore, 78% stated that damage to coral reefs will occur frequently in the future. In addition,

restoration efforts are not the only way to stop the degradation of coral reefs in waters. Preventive solutions are still needed before damage occurs through the management of domestic waste on land. Additionally, issues related to illegal fishing are still a problem in reef conservation. Destructive fishing practices can cause the decline in productivity of coral reef ecosystems (Richmond, 2011; Dimopoulos et al., 2019). Recreational diving is known to have direct and indirect impacts on coral reef habitats (Giglio et al., 2020; Palma et al., 2019; Chung et al., 2013; Dearden et al., 2007). The direct impact of diving tourism activities includes increased sedimentation, damage, and diseases which cause a decrease in coral abundance (Lyons et al., 2015). The indirect impacts are related to changes in land use which result in waste disposal in coral reef habitats (Hughes et al., 2017; Guzner et al., 2010). The diver's perception shows that almost all of them emphasize that damage to coral reefs can disrupt diving activities (Table 3). Meanwhile, the statement that diving has an impact on coral reef stability originates from different perceptions. Most of the dive center operators agree that diving will not have a significant impact on coral reefs if it is carried out in a safe and friendly marine environment (Ha et al., 2020; Marconi et al., 2020).

Table 3. Dive business operators' perceptions regarding the impact factors of diving tourism in Pemuteran

No	Statements	Disagree	Neutral	Agree
1	The damage to the reef had an impact on the dive business	-	4%	96%
	The diving activities have an impact on coral reefs	37%	30%	33%
2	The price increases have an impact on the dive business	-	15%	85%
3	The decreased income and purchasing power had an impact on the dive business	11%	-	89%
4	The increase in fuel has an impact on the dive business	7%	15%	78%
5	The ease of access has an impact on the high number of dive tourism visitors	4%	4%	93%
	It is easy for foreign tourists to go to Pemuteran tourist sites	44%	11%	44%
6	Multinational outbreaks have an impact on dive tourism visits	-	-	100%
	Pemuteran tourism is safe from the pandemic (Covid-19)	15%	26%	59%
7	The social crime rate has an impact on diving activities	15%	7%	78%
	Pemuteran tourism is safe from social crime	15%	7%	78%
8	Political stability has an impact on dive tourism activities	11%	11%	78%
9	Strict visa regulations impact the dive business	4%	22%	74%
10	Travel restrictions for security reasons (disaster, terrorism have an impact on diving)	7%	-	93%

Table 4. Minimum standard of dive center business services in Pemuteran

No	Statement	Disagree	Neutral	Agree
1	Dive guides have the knowledge and track records of dive sites and locations	-	7%	93%
2	Dive guides have the capability to handle tourist safety, including in emergencies	3%	4%	93%
3	Dive guides have sessions to brief on procedures during the dive	4%	-	96%
4	The dive guide has a license from a reputable national/international training institute	4%	-	96%
5	Dive guides are licensed as dive instructors	7%	11%	82%
6	There is proper equipment: regulator, buoyancy control device (BCD), diving mask, fins, scuba tanks, wetsuit, scuba weight system, and air pipes	-	4%	96%
7	Having documentary equipment for using diving equipment	-	15%	85%
8	Having the necessary supporting facilities for diving: communication equipment, surface markers, ship flag buoys, first aid kits, and oxygen according to standard	4%	-	96%
9	Having a diving guidance competency training program	4%	11%	85%
10	Having a health assessment program for diving customers	4%	15%	81%
11	Having an environmentally friendly dive monitoring program	-	4%	96%
12	Following the rules of conservation and observation of marine life	4%	-	96%

They also agree that access to these centers is a factor that has a significant impact on tourist visits. Meanwhile, the statement regarding the ease of access of Pemuteran tourist sites shows the different perceptions of the dive business operators. Responses related to how easy it is to access these tourist sites are influenced by differences in perceptions and viewing accessibility. The first perception is that the ease of access to these tourist sites in Pemuteran is partly because of the good road infrastructures and main roads leading to these places. The second perception is that foreign tourists would find it difficult to reach these dive centers in Pemuteran because of the long distance between the airport and these centers. The minimum standard criteria for service in the dive industry are aimed at minimizing risks in diving activities. It is based on several factors, including the workplace, humans, and the natural environment (Setyoko and Kristiningrum, 2019). These three factors are described in several criteria as in Table 4. Based on the collection of information regarding the minimum standard of dive center services in Pemuteran, it is safe to assume that these centers meet a certain amount of these standards, even though it is not optimal in some criteria. Furthermore, some dive center owners in Pemuteran do not have licenses to own these sites, neither do they have the right to hire diving instructors in these places. However, in terms of providing basic diving equipment that is decent and meets certain standards, 96% of respondents meet this requirements. Meanwhile, the availably of other materials, such as documents on the use of tools and health assessment programs, has not been fulfilled by several owners of these centers.

Sustainable Pemuteran Dive Tourism Development Strategy

The respondents were also asked to provide information regarding potential and strategic issues related to tourism development in general and diving tourism activities specifically. Potentials and problems associated with tourism include four

SWOT parameters, namely Strength, Weakness, Opportunity, and Threats (Zheng et al., 2020). The SWOT approach is widely used in strategic planning (Liu et al., 2019). Furthermore, most research find it necessary to use dive business owners as factors that are directly related to diving tourism activities in Pemuteran. Based on the collection of this information, the research summarizes and identifies the main factors (internal and external) in Pemuteran tourism development (Table 5; Table 6; Table 7).

Table 5. Identification of SWOT factors

	Strengths (S)		Weaknesses (W)
S1	The charm of Menjangan Island	W1	Low involvement of local communities
S2	Underwater beauty and varied dive sites	W2	Lack of community skills in supporting tourism
S3	Beautiful rural conditions	W3	Lack of waste management
S4	The Biorock conservation project exists	W4	Illegal fishing activities
		W5	Domestic waste problem
	Opportunities (O)		Threats (T)
O1	Tourists have increased over the last decade	T1	There are more and more illegal dive businesses
O2	An annual cultural festival as a promotional effort	T2	More and more dive staff are not licensed
		T3	Price competition is unhealthy
		T4	Impact of a pandemic

Table 6. Matrix IFAS

No.	Internal Factors	Significant value	Weight	Rating	Score	Total
	Strengths (S)					
1.	The charm of Menjangan Island	2.280	0.251	3.67	0.920	
2.	Underwater beauty and varied dive sites	0.997	0.110	3.33	0.365	1.803
3.	Beautiful rural conditions	0.997	0.110	3.4	0.373	
4.	The Biorock conservation project exists	0.435	0.048	3	0.144	
	Weaknesses (W)					
1.	Low involvement of local communities	1.732	0.191	3.22	0.614	
2.	Lack of community skills in supporting tourism	0.758	0.083	2.74	0.228	1.509
3.	Domestic waste problem management	1.316	0.145	3.3	0.478	
4.	Illegal fishing activities	0.574	0.063	3	0.189	
Total		9.090	1			0.293

Table 7. Matrix EFAS

No.	External Factors	Significant value	Weight	Rating	Score	Total
	Opportunities (O)					
1.	Tourists have increased over the last decade	1.732	0.244	3.56	0.870	1.145
2.	An annual cultural festival as a promotional effort	0.574	0.081	3.4	0.275	
	Threats (T)					
1.	There are more and more illegal dive businesses	1.313	0.185	2.96	0.548	2.258
2.	More and more dive staff are not licensed	0.435	0.061	2.81	0.173	
3.	Price competition is unhealthy	0.756	0.107	3.26	0.348	
4.	Impact of a pandemic	2.280	0.322	3.7	1.190	
	Total	7.090	1			-1.113

Table 8. SWOT matrix formulation of sustainable dive tourism development strategies

Matriks SWOT		Strength (S)		Weakness (W)
Opportunities (O)	SO1	Increasing the promotion of Menjangan Island and Pemuteran tourism by optimizing more inclusive annual cultural festival activities	WO1	Optimizing local community involvement in annual cultural festival activities
	SO2	Facilitating tourists and donors to be involved in coral reef conservation	WO2	Making regulations related to local fishing activities and zoning for marine use
Threats (T)	ST1	Creating an institution that facilitates diving to set standard prices and quality of service	WT1	Outreaching to local communities and early tourism education, tourism skills training, and English
	ST2	The role of local government in enforcing business permits and divemaster screening	WT2	Collaborating with dive businesses and local communities in waste management and beach clean-ups
			WT3	The government's role in tourism operational certification with the new normal mechanism

The beauty of the Menjangan Island is the main cause of attraction for tourists in Pemuteran Village. The island has a lot of diving centers and it is a great place for diving and snorkeling activities. Moreover, the village itself is a supporting area for various tourism service providers such as dive centers, resorts, and other tourism support services (Marfai et al., 2020).

The village also has a lot of local culture and social-cultural activities that most tourists can use to gain new experiences. The existence of biorock as a forum for coral conservation which has been going on for a long time is also an internal force that supports the sustainable aspects of coral reef tourism. According to the SWOT analysis conducted, the weaknesses of

the study include any and all factors that hinder the development of a sustainable diving tourism sector in Pemuteran. In addition, the involvement of local communities is still not enough to support tourism development in Pemuteran Village. Community involvement is still limited to certain groups such as dive entrepreneurs, homestays, restaurants, and traders. These groups of individuals are local people that take advantage of tourism activities. Moreover, there are still a lot of local people that do not feel responsible and take part in such activities. Therefore, it is necessary to expand the service sector and other potential roles of tourist service providers, so as to support tourism in general. Thus, local communities should focus more on providing tourism services such as tour guides, cultural exhibitions, and the other daily needs of tourists. The problem of garbage disposal, illegal fishing, and domestic waste is still a weakness that can disrupt the preservation of coral reefs and marine life. External factors include opportunities and threats that may affect the development of Pemuteran diving tourism activities. These opportunities include an increase in the number of tourists in the last few decades and promotional efforts in the form of cultural festivals that have not been optimally utilized. The use of technology and social media is also a strategic choice to widen the market effectively and inclusively (Scholtz and Kruger, 2020). However, some of the threats experienced in the development of tourism activities in Pemuteran include unfair price competition (Gerungan and Chia, 2020), entry of new and unlicensed diving centers, and the presence of a large number of unlicensed diving instructors and staffs. The impact of the pandemic has also become a major problem or threat to tourism and tourist activities (Haywood, 2020), in Pemuteran. Its effect was felt by almost every tourist in the Pemuteran community. This impact will still be felt for a very long time, especially if there is no effort to adopt new habits after the epidemic.

Furthermore, through the identification of SWOT factors, strategic policies can be formulated by local policy makers in developing tourism (Sutikno et al., 2018; Harianto et al., 2020). This study aimed to analyze the various problems associated with tourism based on the point of view of the dive center operator. The SWOT indicator used in the study was subjected to the respondent's understanding and opinions on tourism (Liu et al., 2019). The formulation of strategies is also influenced by the ability of the researcher to understand the topic at hand. Strategy formulation in Pemuteran tourism development is made in the SWOT matrix and its priority as shown in Table 8 and Figure 10. A massive promotion or public awareness of the Menjangan Island may increase market interest, both locally and internationally. The annual cultural festival can be used as an effort to promote diving and snorkeling tourism as well as various local cultural exhibitions. So far, the benefits of this annual agenda have not been entirely felt by the respondents. Therefore it is necessary to restructure the festival agenda and mechanism by involving more parties, especially local communities.
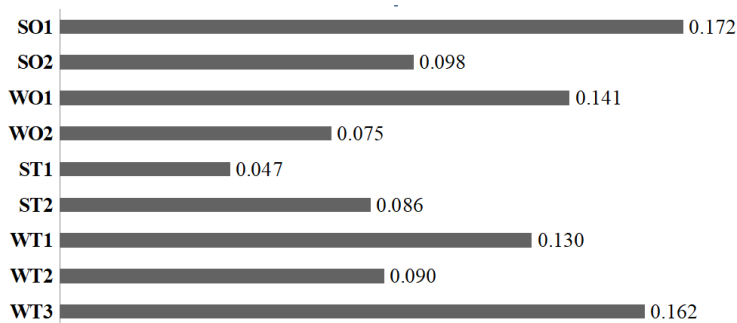
Figure 10. Priority of strategies

The involvement of various stakeholder elements is key in formulating policies and strategies for developing diving tourism in Pemuteran. Local government has an important role in creating a regulatory legality needed to regulate and guarantee various interests (Winther et al., 2020; Wondirad et al., 2020; Bennett et al., 2019; Klinger et al., 2018; Casari and Tagliapietra, 2018). Various roles such as enforcement of diving tourism business permit regulations, pricing, and minimum operational standards can be important contributions from local governments.

The increasing number of diving centers that are established without legal permits and do not comply with the set standards, is a trigger for unfair price competition (Gerungan and Chia, 2020). This may inevitably cause the creation of an environment that is less accommodating to collaborations among various stakeholders (Gerungan and Chia, 2020; Marconi et al, 2020). Revitalization and local government support for local tourism awareness organizations or groups are also needed to further legalize the institution's role in relation to tourism mechanisms and management. The impact of the pandemic should also strengthen the role of local governments to regulate new habitual arrangements for dive tourists. It should also prompt the need to guarantee trust and security for all tourists, during recreation with various adaptations to new habits.

Community involvement is also the key to success in creating a conducive tourism atmosphere. Local people that are more contributive and feel involved in tourism can create a friendly and comfortable environment for local and international tourists. In order to expand the role of local communities, it is necessary to develop the sectors and potential organisations that can support the needs of these tourists. Socialization of the community and provision of skills such as training in diving and English should be given more attention. If possible, various governments should adopt tourism education into their basic curriculum and improve tourism vocational education for local youth.

DISCUSSION

In Partelow and Nelson's (2018) study, a dive center network analysis was carried out on a small tourist island where socio-ecological characteristics play a role in the interdependence relationship between factors. The ecological conditions of small islands make it necessary to import various goods and develop their own public services (Partelow & Nelson, 2018). Pemuteran, which is located on the north coast of Bali, is a local village with rural characteristics where its socio-cultural customs play a greater role in the collaborative relationship between business owners. The characteristics of rural socio-cultural areas are identical to how traditional societies show social relations that are more personal, direct, and tied to the

same belief and values (Tonnies, 1999). However, in this study, the collaborative relationship in the dive center business network system is more dominant in the form of instrumental and formal relationships which represent a typical modern society. The nationality of owners also appear to be constraining factor in the informal collaboration between local and non-local dive center business owners. According to the social network analysis of dive center business owners in Pemuteran, the results show that business owners only come together so that they can achieve a common goal. Simmel (1955) explained the homophile phenomenon in social relations. The results of the research explained that people only associate with other people when they have similar interests, goals, and have the same characteristics. The similarity of these characteristics can be in the form of interests, hobbies, political aspirations, ideologies, and backgrounds (Ruiz et al., 2020; Ruef, 2002). In this case, the owner's national background becomes a hindrance in collaboration strategies thus, this ultimately results in various operational problems in the tourist business. The problems may include price competition and commitment to protecting the marine environment together. The idea of being owners of the same business that utilizes a shared sea area, should be sufficient enough to facilitate good collaborative relationships and operations needed in protecting tourist sites (Dimmock and Musa, 2015). This is because, any damage or loss that affects the sustainability of these areas of tourist attraction, the effect will be experienced by every business owner and not by a particular group. Therefore, it is necessary to prioritize environmental conservation and sustainability of tourism ecosystems as common main goals (Trialfhianty and Suadi, 2017; Gerungan and Chia, 2020; Marconi et al., 2020). PET (Pemuteran Environmental Tourism), which consists of non-local dive centers, is an indication of the lack of common commitment in the protection and conservation of tourism areas between local and non-local center operators. In addition, it is also necessary to know how socio-cultural barriers affect or hinder collaboration between local and non-local owners of the centers.

CONCLUSIONS

The dive centers in the Pemuteran tourism area can be identified based on several characteristics such as the nationality of the owner, the services provided, the diving certification body, and the number of staffs present. Based on services offered, dive centers are grouped into dive shops that only permit the rental of diving equipment and guides, and centers that offer homestay services in the form of a dive resort. In addition, based on nationality, the owners of the centers are mostly dominated by local individuals while some are dominated by non-locals from various countries. Judging from the size of the business and the number of working personnel, dive centers are mostly grouped into medium-sized businesses. PADI is the most preferred institution for the certification of diving business centers in Pemuteran.

The analysis of social networks among dive center businesses in Pemuteran tourism show distinctive collaboration characteristics related to operational and conservation activities. The network analysis conducted on the dive centers in Pemuteran show a centralized collaboration network pattern. This type of collaboration then shows the relationship between stains/actors that focus on a particular business owner. Central actors usually have more angles/relationships in the dive center collaboration network in Pemuteran, and they are mainly influenced by how long the centers have been in existence and the ownership of the boat. Boat ownership as a determining factor for collaboration between owners indicates an operational partnership. Collaborative relationships in conservation of coral reefs have also occurred with the formation of several institutions such as PET (Pemuteran Environmental Trust), the Tourism Awareness Group (Pokdarwis), and Biorock. The spatial factor or the proximity between dive centers is not considered to have a significant effect on collaboration between any centers in general. The characteristics of dive center collaboration patterns in Pemuteran tourism indicate a lack of optimal collaboration from stakeholders, especially between dive centers with local and non-local ownership. The socio-cultural characteristics of the owner's nationality are considered as one of the inhibiting factors for collaboration between local and non-local business owners. This difference in nationality could be assessed in further studies.

Pemuteran dive tourism development strategies are formulated based on a SWOT analysis of the internal and external factors derived from the point of view of owners of dive centers in Pemuteran. Problems such as price competition and illegal diving are a threat that many of these centers complain about. Furthermore, the role of local government is needed to ensure the legality of regulations that can be obeyed by all stakeholders (Agrawal, 2003). Lack of public awareness to engage in tourism is also an obstacle that affects the creation of a conducive tourist environment. In addition, the community also has an important role to play in maintaining a sustainable and tourist-friendly environment. Conclusively, the involvement of the government and local communities is the key to success in the sustainable management and development of Pemuteran tourism.

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DYNAMIC CAPABILITIES AND PERFORMANCE OF HOSPITALITY FIRMS IN SOUTH AFRICA: THE MEDIATING EFFECT OF INNOVATION

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Abstract: Dynamic capabilities describe a firm's ability to build, integrate and reconfigure internal and external competencies to address rapidly changing environments and improve firm competitiveness. The aim of the study was to investigate the effect of four dimensions of dynamic capabilities (sensing, learning, integrating, and coordinating) on the performance of hospitality firms. In addition, the study examined the mediating role of product innovation in the relationship between dynamic capabilities and performance. The study adopted the quantitative research design and the cross-sectional survey method was used for data collection. The Partial Least Square Structural Equation Modelling was used for data analysis. Based on a dataset of 135 respondents, the results indicated that sensing, learning and coordinating significantly affect the performance of hospitality firms. Innovation mediates the relationship between sensing and learning capabilities and performance. Theoretical and managerial implications are discussed. The provision of seminars and training on dynamic capabilities and innovation to top management and employees is important.

Key words: Dynamic capabilities, hospitality, firm, performance, innovation

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INTRODUCTION

The socio-economic development of many countries and regions around the world is dependent on tourism. Tourism is one of the strategies adopted by local authorities in South Africa to stimulate socio-economic development (Ntshangase and Ezeuduji, 2020; Gorochnaya et al., 2021). The tourism industry including the hospitality sector is one of the most important pillars of the South African economy. Tourism directly contributed 2.8% and indirectly accounted for 8.2% of South Africa's gross domestic product in 2018. In addition, the tourism industry directly accounted for 4.2% and indirectly contributed 9.2% of total employment in 2018 (World Travel and Tourism Council, 2019). Skokic et al. (2016) and Richard (2017) point out that the future of the hospitality sector especially hotels will be shaped by technological advancement, changing customer expectations, fierce competition in the market and uncertainties in the business environment. Hospitality firms in South Africa operate in a dynamic environment that is characterised by high levels of competition and innovative capabilities are one of the major sources of competitive advantage and survival (Chipunza, 2020; Senbeto and Hon, 2020). The South African economy is characterised by a low level economic growth and a high level of unemployment and these factors have negatively affected consumer confidence and the consumption of goods and services (Pasara and Garidzirai, 2020).

The building of capabilities becomes vital under these circumstances. Firms need to renew their resources in order to adjust to changing environmental conditions (Nieves et al., 2016). Dynamic capabilities (DC) describe a firm's ability to build, integrate and reconfigure internal and external competencies to address rapidly changing environments and improve firm competitiveness. DC enable a firm to sense and seize new opportunities and renew its existing market base and can be used to explain the association between the quality of management decisions, strategic change and firm performance (Teece et al., 2007; Barreto, 2010; Zhou et al., 2017). Pavlou and El Sawy (2011) point out that DC has four dimensions namely sensing, learning, integrating and coordinating. The effect of DC on firm competitive advantage and performance has been a major issue of debate by researchers (Peteraf et al., 2014; Zhou et al., 2017). Barreto (2010) contends that early studies assumed a direct relationship between DC and firm performance and used the construct to explain firm level competitive advantage, success and failure.

Teece et al. (1997) and Teece (2017) propose that DC have a positive effect on firm performance and the construct can be used to understand the fundamentals of firm-level competitive advantage. Makadok (2001) argues that DC are a causal mechanism that can be used by firms to create economic profit. Zollo and Winter (2002) contend that in changing environmental conditions, there is a direct and positive relationship between DC and superior performance and survival of firms. Nedzinskas et al. (2013) find that the direct effect of DC on financial performance is insignificant but the direct effect on non-financial performance is positive and significant. In contrast, another stream of research assumes an indirect relationship between DC and firm performance. Eisenhardt and Martin (2000) and Zott (2003) argue that DC do not automatically improve firm performance. Competitive advantage and improved firm performance do not necessarily rely on DC but on resource configurations that they create. Zahra et al. (2006) contend that the relationship between DC and performance is indirect and is obtained by the way that DC change the quality of substantive capabilities. In addition, DC can actually damage firm performance if used when not needed. Winter (2003) finds that the cost and long-term commitment of resources may make DC unnecessary and costly for a firm to develop and use. Zhou et al.

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(2017) note that the debate about the effect of DC on performance arose because the mechanisms through which DC affect firm performance is unclear. In addition, DC studies have been mainly theoretical and empirical studies have been lagging. Studies on mediating mechanisms have been scarce. Because DC can have a direct or an indirect effect on firm performance, it is important to identify the variables that can have mediating effects in the relationship between the two constructs. One variable whose mediating effect can be examined is innovation. This is because innovation is vital to a firm's competitive advantage and superior performance (He and Wong, 2004; Jensen et al., 2007; Ferreira et al., 2020). Kogabayev and Maziliauskas (2017) describe firm level innovation as the generation of new ideas and the creation of new products, processes and services that lead to increase in performance. Innovation can help a firm to adapt and shape the business environment and are vital to patronage and loyalty in the hospitality industry. The types of innovation used in the hospitality industry include product/service, process, organisational and marketing. This study focuses on product/service innovation. Product and service-centric innovations are vital for maintaining and attracting customers and the sustainability of hospitality firms (Martin-Rios and Ciobanu, 2018; Onojaefe and Nhepera, 2019). However, theoretical frameworks and empirical studies on how innovation mediates the relationship between DC and firm performance are scarce (Zhou et al., 2017).

Therefore, this study has two objectives: First, the study will examine the effect of DC on the performance of hospitality firms. Second, the study will investigate the mediating effect of innovation in the relationship between DC and performance. The study will contribute to knowledge in the following ways. First, although DC is an important framework for understanding firm competitive advantage, empirical research focusing on the hospitality industry is scarce (Nieves et al., 2017)) and studies focusing on mediating mechanisms are more scarce (Zhou et al., 2017). Second, recent studies have tended to adopt the multidimensional measure of DC (Teece, 2007; Nieves et al., 2017). However, empirical findings on the effects of the various dimensions of DC on performance are inconclusive. This study will contribute to the literature on the use of strategic management by hospitality firms and particularly on the direct or indirect relationship between DC and performance. This can assist hospitality firms to design strategic management policies that can help to improve their competitive advantage and performance. The study is structured as follows. Section two will review the literature and develop hypotheses. Sections three, four, five and six will focus on the research methodology, results, discussion and conclusion respectively.

LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES
1. Theoretical foundation of DC
The theoretical foundation of DC can be linked to the Resource-Based View (RBV). According to Teece et al., 1997), the foundation of RBV goes back to the 1960s and can be associated with the work of Penrose (1959) and Andrews (1971). However, Barney (1991) clarified the link between resources and sustainable competitive advantage. The RBV focuses on how a firm uses resources and capabilities to reach a position of sustained competitive advantage and a higher level of performance. According to the RBV, a firm is a collection of distinctive resources and capabilities that must be optimally employed by management. The RBV argues that firms are heterogeneous in terms of capabilities, competencies and resources and their long-term success depends on how they efficiently and effectively utilise these capabilities in the dynamic marketplace. In addition, for a resource to contribute to sustainable competitive advantage, it must be rare, valuable, inimitable, and nonsubstitutable. According to Amit and Schoemaker (1993), it is not just resources but also capabilities described as the ability of a firm to deploy resources and bundles of skills and knowledge that are the real causes of competitive advantages. In addition, capabilities can be operational or dynamic. Operational capabilities can be described as routines that allow a firm to accomplish tasks on an on-going basis by using the same techniques over time in the production of goods and services with solid demand in the market. Dynamic capabilities (DC) describe a firm's ability to make adjustments as it operates in a changing business environment (Helfat and Winter, 2011; Božič and Cvelbar, 2016; Seo et al., 2021).

2. Dynamic capabilities (DC)
Barreto (2010) points out that although researchers have provided a huge array of different conceptualisations of DC, Teece et al. (1997) offer what can be regarded as the most important study on this topic and the first widely acknowledged definition. Teece et al. (1997) propose that the DC approach as an extension of the RBV of the firm. Teece et al. (1997: 516) define DC as "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments". Helfat et al. (2007: 4) define DC as "the capacity of an organisation to purposefully create, extend, or modify its resource base'. Similar to Teece et al. (1997), Eisenhardt and Martin (2000:1107) define DC as "the firm's processes that use resources—specifically the processes to integrate, reconfigure, gain, and release resources—to match and even create market change". Drawing on previous definitions, Bareto (2010: 271) defines DC as "the firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base". DC have been classified into various dimensions by researchers. Teece et al. (1997) classify DC into three main dimensions, which are sensing, seizing and transforming. Teece's classification of DC is one of the most widely used approaches by researchers (Zhou et al., 2017). Pavlou and El Sawy (2011) argue that the framework of DC by Teece et al. (1997) has been produced at an abstract level and has failed to offer an appropriate measurement procedure. Based on these limitations, Pavlou and El Sawy (2011) propose an operationalisation of DC through four processes: sensing, learning, integrating and coordinating. This conceptualisation has been used by recent researchers on DC (Nieves et al., 2017; Rashidirad and Salimian 2020) and will be adopted by this study.

2.1. DC and performance
2.2.1. Sensing capability and performance
In a dynamic business environment, customer needs, competitor action and technology are regularly in a situation of flux. Sensing involves the scanning, creation and interpretive activities of new opportunities. Sensing entails investment in research

activity, probing of technological possibilities and customer needs, understanding latent demand, the evolution of industries and markets and the responses of competitors and suppliers (Teece, 2007; Nieves et al., 2017). Rashidirad and Salimian (2020) point out that sensing capability focuses on the search for opportunities and threats in order to shape and interpret opportunities in the market. Sensing capability has both an internal (firm-level) and an external aspect as it helps to create both inter-organisation and external information to monitor changes in the environment. In addition, sensing capability regularly explores and analyses information and knowledge to provide management with information to make effective decisions. Rashidirad and Salimian (2020) find that sensing capability is positively related to value creation defined as the non-financial aspects of performance measurement from the viewpoint of the stakeholders.

2.2.2. Learning capability and performance

Duchek (2020) remarks that because of growing complexity and uncertainty in the world, it is important to encourage the capability of individuals and firms to learn regularly in order to continuously adapt to changing environments. The ability to learn faster than competitors is one of the ways for a firm to create sustainable competitive advantage. Matysiak et al. (2018) describe learning capability as the ability of a firm to use the opportunities identified through sensing capability to develop and introduce new products and services. Learning can be internal or external. Internal learning can be acquired through the training of employees by a firm while external learning can be gained through interaction with customers and suppliers. Learning helps firms to create value in a dynamic business environment and is an asset that enables a firm to transform and use its resources appropriately (Zott, 2003; Nieves et al., 2017; Rashidirad and Salimian, 2020).

2.2.3. Integrating capability and performance

Teece et al. (1997) and Teece (2007) point out that integrating capability focuses on the transfer of information or technology amongst various units of a firm. Integration enables learning, sharing of knowledge and expertise and technology transfer within a firm. Integration capability enables a firm to appraise the value of existing resources and integrate them. This enables the firm to cultivate a new resource base and capabilities, which improves the ability of the firm to meet environmental challenges (Oliva et al., 2019). Integrating capability includes integrating the resource base in the firm as a whole, integrating existing and new knowledge obtained from external partners and integrating customer knowledge obtained from different units of a firm in order to gain new customers. Integrating capability helps a firm to combine the knowledge of different individuals and units into new operational capabilities (Nieves and Haller, 2014; Rashidirad and Salimian, 2020).

2.2.4. Coordinating capability and performance

Rehman and Saeed (2015) remark that coordination capability enables a firm to integrate all the tacit knowledge as well as codified knowledge in order to produce and deliver products and obtain data about the needs and demands of the customers. Coordinating capability helps to manage dependencies between firm activities and administers resources, task and activities in order to deploy the reconfigured operational capabilities (Aminu and Mahmood, 2015; Rengkung, 2018). Coordinating capability helps to assign resources to a task, appoint a right person to a right job, identify complementarities and synergies among tasks and resources and orchestrate collective activities. This enables a firm to manage a rapidly changing business environment, sustain competitiveness, maintain customers and improve performance through a dynamic redirecting and realigning the resource base (Pavlou and El-Sawy, 2011).

It is hypothesised that:

H 1-4: DC as measured by (a) sensing (b) learning, (3) integrating (d) coordination are positively related to performance.

3. DC, innovation and performance

Innovation can be described as a new idea, product, device or novelty. It is a multi-stage process that a firm uses to transform ideas into new products, services or processes to compete and differentiate itself in the market place (Baregheh et al. (2009). Product innovation also involves the introduction of new products and services through technological novelty with the aim of providing a hospitality firm with a competitive advantage by decreasing costs and opening the pathway to new markets. The introduction of new products by the hospitality firms can be internally or externally generated based on the degree of complexity with new technologically-oriented products being for the most part externally generated (Martin-Rios and Ciobanu, 2018). Jiang et al. (2019) point out that a firm can use product innovation to redefine its current product markets and develop new products to capture new market opportunities. Thus, product innovation is a key driver of sustainable competitive advantage and survival and especially in situations characterised by intense market competition, changing market preferences and technological discontinuities. Mabrouk and Mamoghli (2010) find that product innovation in the hospitality industry is a major driver of customer satisfaction, customer retention and profitability. The implementation of innovation enables a firm to become more flexible in its operations and drives the firm to improve the quality of its products, expansions of network and technology competitiveness According to Likoum et al. (2018), sensing describes the ability of a firm to respond to customer tastes and demand, changes in technological advancement and the market environment. Innovation occurs because of a firm's ability to sense the market and anticipate changes in the business environment (Alshanty and Emeagwali, 2019) find that market-sensing capability has a positive effect on knowledge creation and firm innovation and the knowledge creation process positively affects firm innovation. According to Migdadi (2019), learning enables a firm to appreciate and assimilate new ideas and is an antecedent of innovation. Learning involves acquisition, transmission and use of knowledge and is closely linked to innovation performance. Jiménez-Jiménez and Sanz-Valle (2011) examine the association between learning, innovation and performance and found significant positive relationships. Learning capability is a significant factor in firm innovation and

growth. Mesa et al. (2013) find that learning capability improves product innovation through the mediation of design management capability. Learning capability is an asset that enables a firm to transform and use its resources properly and a high level of innovation requires a high and effective level of learning capability. Integration capability can positively affect innovation by helping the firm to integrate new technology with existing one in order to create new products and improve firm process. Effective integration of internal and external knowledge leads to the development of new products that can positively affect firm performance (Zhou et al. 2017). Innovation activities of different individuals and units in an organisation need cohesiveness and coordinating capability in order to be effective and improve firm performance Rajapathirana and Hui, 2018).

It is hypothesised that:

H5-H8: DC as measured by (a) sensing (b) learning, (3) integrating (d) coordination are positively related to product innovation

H9: Product innovation is positively related to performance

H10-H13: Product innovation mediates the relationship between DC (sensing, learning, integrating and coordinating) and performance

RESEARCH METHODOLOGY

The study utilised the quantitative research design. Data was collected from the respondents through the cross-sectional survey method. The sample population was all hotels, lodges and guesthouses in South Africa. Before the actual survey, a pilot study was conducted with the owner/manager of twenty hotels, guesthouses and lodges in Polokwane. Two academics in the area of Strategic Management also examined the questionnaire. Based on the results of the pilot study, minor adjustments were made to the final version of the questionnaire. The survey was conducted between September 2019 and February 2020. The questionnaire was divided into four sections demographic variables, dimensions of DC, innovation and performance. The study focused on small and medium-sized guesthouses, lodges and hotels in Pretoria and Johannesburg in the Gauteng Province and Polokwane, Makopane and Bela Bela in the Limpopo Province. The Gauteng Province is the economic hub of South Africa and many hotels, guesthouses and lodges are located in the Province. The three towns in Limpopo province have a sizeable number of hotels. The participating guesthouses, lodges and hotels were developed by the researcher from the websites of the Tourism Grading Council of South Africa and Trivago. The Tourism Grading Council of South Africa is an independent assessment agency that has established standards by which guests can compare facilities in different guesthouses, lodges and hotels in South Africa. Trivago is a transnational technology company that specialises in internet-related products and services in the lodging, hotel and metasearch fields. The number of employees was used to classify the hotels. According to the National Small Business Act of South Africa (2019), a micro enterprise in the accommodation industry will have between 0-10 employees, a small enterprise between 11-50 employees and a medium-sized 51-250 employees. Accommodation firms that have more than 250 employees are considered as large.

Table 1. Questionnaire (author's adaptation)

Construct	Items	Adapted from	Response category
Dynamic capabilities			
Sensing capability	1. Frequently scan the en Table ironment to identify new business opportunities. 2. Periodically review the likely effect of changes in our business environment on customers. 3. Regularly review our service development efforts to ensure they are in line with what customers want. 4. Spend a great deal of time implementing ideas for new services and improving our existing services.	Pavlou and ElSawy, 2011; Nieves et al., 2016	1=strongly disagree, 5 strongly agree
Learning capability	1. Have effective routines to identify, value and import new information and knowledge. 2. Have appropriate routines to assimilate new information and knowledge. 3. Effective in transforming existing information into new knowledge. 4. Effective in utilizing knowledge in new services. 5. Effective in developing new knowledge that has the potential to influence service development.	Pavlou and ElSawy, 2011; Nieves et al., 2016	1=strongly disagree, 5 strongly agree
Integrating capability	1. Employee's individual contributions are channelled through their work group. 2. Members of the firm have a global understanding of each other's tasks and responsibilities. 3. Fully aware of who in the firm has specialized skills and knowledge relevant to our work. 4. Carefully interrelate actions between members of the firm to meet changing conditions. 5. Members of the firm manage to successfully interconnect their activities.	Pavlou and ElSawy, 2011; Nieves et al., 2016	1=strongly disagree, 5 strongly agree
Coordinating capability	1. Ensure that the output of each employee's work is synchronized with that of the rest of the group. 2. Ensure appropriate allocation of resources (e.g. information, time, reports. 3. Employees are assigned to tasks commensurate with their relevant knowledge and skills. 4. Ensure that employees' expertise is compatible with the work processes they are assigned to. 5. Our employees are well coordinated.	Pavlou and ElSawy, 2011; Nieves et al., 2016	1=strongly disagree, 5 strongly agree
Product innovation	1. Introduced many new services onto the market. 2. Introduced many modifications to existing services. 3. Constantly seeks out new services. 4. Introduced more new services than our competitors. 5. New services introduced have caused significant changes in the industry .	Nieves et al., 2016	1=strongly disagree, 5 strongly agree
Performance	1. Profit growth 2. Sales growth 3. Market share 4. Quality of products relative to competitors 5. Customer retention relative to competitors 6. Customer satisfaction relative to competitors 7. Customer retention relative to competitors	Spillan and Parnell 2006	T1=strongly disagree, 5 strongly agree

Micro lodges, guesthouses and hotels were excluded from the survey. Nieves et al. (2017) remark that higher category hotels are more formalised and professionalised are more likely to be involved in DC and innovative activities. The simple sampling method was used to select the participating establishments in the study areas. Managers/owners of accommodation establishments were formally contacted through telephone calls and e-mails to solicit their participation. A combination of email and self-administered questionnaire methods was used to collect data from the respondents. Confidentiality and anonymity were assured and the names of the hotels and or owner/manager were not requested and not included in the questionnaire. The participants in the survey were reminded weekly to complete the questionnaire through follow up phone calls and emails. If no response is received after two months, it was treated as a nonresponse. The questionnaire was adapted from previous studies with acceptable psychometric properties. The cover page of the questionnaire contained information about the objectives of the study and that participation is voluntary. The study used the Partial Least Square Structural Equation Modelling (PLS SEM) for data analysis. Table 1 depicts the questionnaire used by the study.

RESULTS
1. Response rate and biographical detail
Three hundred questionnaires were distributed and one hundred and thirty-five returned. The majority of the accommodation firms that participated in the survey have operated for more than ten years (82%) and can be regarded as small establishment (64%) with less than fifty employees. The characteristics of the respondents showed that the majority are males (62%), with a diploma/degree (85%) and in the 41-50-year bracket (56%).

Table 2. The measurement model (author's data analysis)

Construct	Measurement items	Mean and SD	Item loading	Cronbach's alpha	Composite reliability	AVE
SENSING (SEN)	SEN1	4.45 1.06	0.788	0.802	0.885	0.658
	SEN2		0.764			
	SEN3		0.821			
	SEN4		0.869			
LEARNING (LEA)	LEA1	3.96 0.99	0.866	0.781	0.899	0.642
	LEA2		0.849			
	LEA3		0.788			
	LEA4		0.769			
	LEA5		0.726			
INTEGRATING (INT)	INT1	3.06 1.02	0.801	0.725	0.858	0.601
	INT2		0.769			
	INT3		0.726			
	INT 4		0.804			
	INT5 deleted		0.388			
COORDINATING (PBC)	COO 1	3.48 1.04	0.771	0.808	0.872	0.577
	COO2		0.729			
	COO3		0.761			
	COO4		0.735			
	COO5		0.801			
PRODUCT INNOVATION (PROD)	PROD1	4.05 1.01	0.726	0.764	0.839	0.566
	PROD2		0.808			
	PROD3		0.742			
	PROD4		0.731			
	PROD5 deleted		0.382			
PERFORMANCE (PER)	PER1	4.08 1.04	0.728	0.815	0.898	0.556
	PER2		0.801			
	PER3		0.741			
	PER4		0.728			
	PER5		0.759			
	PER6		0.733			
	PER7		0.727			

Table 3. Discriminant validity (author's data analysis)

Construct	PER	SEN	LEA	INT	COO	PROD
PER	**0.752**					
SEN	0.604	**0.811**				
LEA	0.438	0.549	**0.801**			
INT	0.303	0.248	0.226	0.341	**0.775**	
COO	0.539	0.602	0.594	0.528	0.644	**0.760**
PROD	0.617	0.598	0.447	0.537	0.501	**0.752**

Table 4. Path coefficient and T-statistics (author's data analysis) P<0.01; ** <0.05

Hypothesised path	Beta	T-statistics	Decision
H1 SEN→PER	0.161	4.200*	Accepted
H2 LEA→PER	0.149	3.117**	Accepted
H3 INT→PER	0.069	1.008	Rejected
H4 COO→PER	0.152	3.005*	Accepted
H5 SEN→PROD	0.172	1.922**	Accepted
H6 LEA→PROD	0.099	1.826*	Accepted
H7 INT→PROD	0.048	1.114	Rejected
H8 COO→PROD	0.103	1.408*	Accepted
H9 PROD→PER	0.149	3.001*	Accepted

Table 5 Mediation results (author's data analysis)

Mediation path	Indirect effect	Total effect and T-statistics	Confidence interval bias (corrected) LL UL	Decision	VAF
H10 SEN→PROD→PER	0.088**	0.282** (3.771)	0.514 0.228	Accepted (partial)	31.20%
H11 LEA→PROD→PER	0.116**	0.291** (3.005)	0.068 0.314	Accepted (partial)	39.86%
H12 INT→PROD→PER	0.099	1.355 (1.006)	0.071 0.301	Rejected (no mediation)	6.64%
H13 COO→PROD→PER	0.092	1.022 (1.125)	0.066 0.188	Rejected (no mediation)	9.00%

*P<0.01; ** <0.05 Source

2. Structural equation modelling
2.1. Measurement model
Hair et al. (2019) point out that the evaluation of the measurement model should include the examination of factor loadings (>0.708), composite reliability (>0.790), Cronbach's alpha (> 0.700) and the AVE (>0.500). Table 2 presents the results of the measurement model. The values of the Cronbach's alphas are greater than 0.700, the values of composite reliability range from 0.839 to 0.900 and the values of AVE from 0.566 to 0.658. This implies an acceptable level of construct validity. The AVEs ranged between 0.566 and 0.658 suggesting a good convergent validity of the scales. The discriminant validity was assessed

through the Fornell and Larcker criteria. The results as depicted by table 3 showed that the square roots of AVEs depicted on the diagonals are greater than the corresponding correlation coefficients within the constructs. It can be concluded that the measurement model is satisfactory. Diagonals in bold signify the square root of the AVE while the other figures depict the correlations.

2.2. Structural model

To assess the structural model, the common method bias, the goodness of fit, the R^2, the Q^2 and the effect size were evaluated in line with the requirements of Hair et al. (2019). The summary of the results of the path coefficients and T-statistics are presented in tables 4 and 5. The results as depicted in table 4 show that three dimensions of dynamic capabilities (sensing, learning and coordinating) have direct and significantly positive relationships with performance. The effect of integration is positive but insignificant. Therefore, hypotheses one, two and four are accepted while hypothesis three is rejected. The relationships between sensing, learning and coordinating and innovation are significant and hypotheses five, six and eight are accepted. The relationship between product innovation and performance is significant and hypothesis nine is accepted. The two phases of mediation were examined. (1) the determination of the significance and magnitude of the indirect effects (done through a bootstrap of 5000 sub-samples and confidence interval to obtain information about the population distribution) and (2) the determination of the type of effect and or mediation which can be full or partial and competitive or complementary. The existence of full or partial mediation can be determined by the Variance Accounted For (VAR). If the VAR is less than 20%, mediation is close to zero, for VAR value between 20% and 80% (partial mediation and above 80% (full mediation) (Nitzl et al., 2016; Hair et al., 2019). Table 5 depicts the summary results of mediation. The indirect paths between sensing and learning and product innovation and performance are positive and significant. Thus a complementary partial mediation partial is confirmed. Hypotheses ten and eleven are accepted. The indirect paths between integrating and performance are insignificant. Hypotheses twelve and thirteen are rejected.

DISCUSSION

The study investigated the effect of four dimensions of DC on performance of hospitality firms. In addition, the study examined if product innovation mediates the relationship between DC and performance. This is because innovation is a vital to a firm's competitive advantage and superior performance. Although DC is an important framework for understanding firm competitive advantage, empirical research focusing on the hospitality industry is scarce. The results indicated that sensing, learning and coordinating capabilities significantly affect the performance of hospitality firms. The effect of integrating capability is insignificant. According to Nieves et al. (2017) and Rashidirad and Salimian (2020), sensing capability focuses on the search for opportunities and threats in order to shape and interpret opportunities in the market. The identification of new opportunities can increase sales and market share with a positive impact on performance. Learning capability is an asset that enables a firm to transform and use its resources appropriately and the appropriate use of resources can positively affect performance (Zott, 2003). Coordinating capability helps a firm to manage a rapidly changing business environment maintain customers and improve performance through a dynamic redirecting and realigning the resource base (Pavlou and El-Sawy, 2011; Rashidirad and Salimian, 2020). The findings of the study are consistent with previous empirical studies on DC and firm performance. Kimani and Otinga (2019) in a study done on manufacturing firms in Kenya find that DC significantly affect performance. The findings of the study by Pervan et al. (2017) based on a sample of 118 small manufacturing firms in Croatia reveal a statistically significant impact of DC on performance. Garrido et al. (2019) in a study that adopted Teece's conceptual dimensions (sense, seizing and reconfiguring) find that the three factors affect performance differently. While sensing and reconfiguration demonstrate a negative relationship with performance, the effect of seizing is positively associated with performance. Nedzinskas et al. (2013) investigate the effect of DC on the performance of SMEs in Lithuania.

The study based on a sample of 360 SMEs used both financial and non-financial measures to measure performance. The findings indicate that DC as measured by sensing, seizing and reconfiguration have positive effects on non-financial performance but their effects on financial performance are insignificant. Empirical studies have also examined the mediating effects of some variables in the relationship between DC and performance. Pattanasing et al., (2019) find that DC positively affect the performance of organisations. The findings of the study show that the indirect effect of DC on performance via the high-performance firm is significant Hernández-Linares et al. (2018) in a sample of 500 small and medium enterprises in Spain find that not all the four dimensions of DC are equally important for performance. In addition, the study finds the moderation effect of market orientation in the relationship between sensing and learning capabilities and performance. Zhou et al. (2017) in a sample of 204 Chinese firms find direct significant relationships between sensing and reconfiguration capabilities and firm performance. The direct relationship between integration and performance is not significant. In addition, technological innovation mediates the relationship between sensing and reconfiguration capabilities and firm performance. Market innovation also mediates the relationship reconfiguration capability and firm performance. The mediation effects of technological and market innovation in the relationship between other DC dimensions and performance are not significant.

CONCLUSION

The study investigated the effect of DC on the performance of hospitality firms in South Africa. In addition, the studies examined the mediating effect of product innovation in the relationship between DC and performance. The results indicated that three dimensions of DC (sensing, learning and coordinating) have significant positive relationships with performance. Product innovation mediates the relationship between sensing and learning capabilities and performance. The study has some theoretical contributions. First, the study conceptualised DC as a multidimensional construct made up of four variables rrather than treating the construct as unidimensional. Thus, the study was able to determine the effect of each DC variable on performance. In addition, the study examined the mediating effect of innovation in the relationship between DC and performance. Theoretically, the study established that the relationship between DC and performance can be direct and indirect

through the mediating effect of product innovation. In addition, while studies have tended to focus on the effect of DC on financial performance, the performance indicators used in this study included both financial and non-financial metrics. Empirically, the study adds to the body of literature on the relationship between DC dimensions, innovation and performance of hospitality firms. The study has some managerial implications. The findings show that three variables affect performance and the indirect effect of innovation. Therefore, it is important for top managers of hospitality firms to invest in DC to sustain competitive advantage. The findings also show that DC will be more useful when hospitality firms invest in product innovation. Thus, the provision of seminars and training on DC and innovation to top management and employees is important. Top management must foster an environment that supports the generation of new ideas by employees and the coordination of such ideas to improve products and services. The study has some limitations and proposes some areas for further study.

The survey was cross-sectional in nature and data was collected at only one point in time. Therefore, other studies can employ a longitudinal study design to better confirm causality. In addition, the mediating effects of environmental dynamism, market orientation and entrepreneurial orientation can be examined by other studies. In addition, the study focused on the indirect effect of product innovation. Other studies can investigate the mediating effect of other types of innovation (process, organisational and marketing). Furthermore, the moderating effect of age and size of the firm can be examined.

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ANALYSIS OF ECOTOURISM POTENTIAL OF BOTUTONUO
BEACH IN BONE BOLANGO REGENCY, INDONESIA

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Abstract: The ecotourism potential of the beach area in Bone Bolango regency, if developed optimally, is very high. Ecotourism development is a tourism activity that incorporates the principles of environment-friendly attitudes. It emphasizes the aspects of nature conservation, empowerment of the local community's economic, social, and cultural competence, as well as education. Botutonuo beach is among the coastal areas in Bone Bolango regency with high ecotourism potential. The present study aimed to analyze the ecotourism potential of Botutonuo beach based on the physical, sociocultural, economic, and institutional parameters. It employed an ecological-spatial approach by involving the Geographic Information System (GIS). The research method comprised field observation; the data were retrieved by field measurement, interview, and questionnaire. The data were analyzed in a quantitative manner with descriptive statistical analysis, scoring analysis, and qualitative descriptive analysis to result in the final evaluation score of the site's ecotourism potentials. The analysis result on the site's physical parameters (vegetation, environmental hygiene, materials, and water brightness) indicated that the Botutonuo beach has high potential. The same criteria were also given in other physical parameters that consisted of distance, facilities, accessibility, and site attractiveness. Moreover, high ecotourism potential was also shown by the site's other parameters (institutional, sociocultural, economic, and environmental parameters). The site's high ecotourism potential was due to the beach's characteristics. The site is a sandy beach that is naturally formed. On top of that, the community's contribution to constructing tourism facilities was influential in boosting the ecotourism potentials.

Key words: Botutonuo Beach, ecotourism, Geographic Information System

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INTRODUCTION

Bone Bolango Regency is one of the regency in Gorontalo province, which has many tourism potentials. Its natural and cultural diversity are the capital for development of tourism attraction, source of local revenue and economic growth. Currently, only small part of these natural and cultural potentials are explored to attract local and foreign tourists (Correia et al., 2011; Canavan, 2016; Ministry of Tourism and Creative Economy, 2020). Locally, Gorontalo tourism potentials are supported with its morphological and geological structures, such as natural resources potentials, limestone distribution, and geological structure. The study of Botutonuo Beach ecotourism in the development of tourist attractions that rely more on its natural potential, it is necessary to have a geological study which includes all aspects that can be measured and analyzed in the field (Eraku et al., 2017; Permana et al., 2019a, Permana et al., 2019b; Eraku and Permana, 2020; Permana et al., 2020; Permana

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et al., 2021a; Permana et al., 2021b). Ecotourism is one of the alternative tourism considered as one of the ways to improve the economic life of rural communities because it is considered to be able to provide job opportunities, business opportunities, and increase the development of business skills (Scheyvens, 2000). Ecotourism will provide a greater opportunity to control the use of natural resources in certain areas as one of the assets of ecotourism activities (Ashley and Roe, 1997; Fennel, 1999; Fandeli and Muhklison, 2000; Fuller et al., 2005). The problem that has arisen at this time is that the development of ecotourism potential on Botutonuo Beach has not been maximized due to the influence of the Covid-19 pandemic which has affected the decrease in visitors. Whereas the benefits of ecotourism have an impact in various aspects including aspects of conservation, empowerment and environmental education (Stem et al., 2003; Vitasurya, 2015).

The coastal area of Bone Bolango regency is potential to be developed as ecotourism sites. Ecotourism states that ecotourism is a responsible natural tourism in the local area, which takes into account environmental education, environmental awareness, and supports natural conservation efforts, and increases local income (Regulation of the Minister of Home Affairs Number 33 of 2009). In addition, the main target of this ecotourism is to integrate conservation efforts, community, and sustainable development (Ghorbani et al., 2015). These are things that should be considered in planning and development of ecotourism industry (Motlagh et al., 2020). Ecotourism offers the balance of integrated tourism values between enjoying the nature and preserving it. It is an important element of sustainable tourism (Haryanto, 2014; Hijriati and Mardiana, 2014; Motlagh et al., 2020). This ecotourism provides solution for tourism development problems. Ecotourism development brings social, economic, and environmental benefits of natural resources utilization and has direct impact on the increase of local revenue. This study expands the social capital that encourages collective action of citizens for rural tourism development. The data obtained can be through face-to-face interviews with community leaders and structured questionnaires with residents (Zambrano et al., 2010; Nyaupane and Poudel, 2011; Liu et al., 2014).

Botutonuo beach is a highly potential site for ecotourism in Gorontalo and its surrounding area. This beach has a long white sandy beach and a beautiful mountain view as its backdrop. These natural resources advantages are potentials to be developed as an ecotourism site. Through ecotourism, community is expected to be able to utilize this natural, cultural, and historical potential without having t destroy or sell them. This carrying capacity concept is developed to minimize the destruction or degradation of natural resources, hence, the preservation, the existence, and the function of the nature can be achieved, and at the same time community, as user of this natural resources also gain benefits (WWF, 2009; Yulianingsih, 2010). This tourism destination is developed synergically with amenities, public facilities, accessibilities, and community empowerment in sustainable and integrated ways (Ministry of Tourism and Creative Economy, 2020). Therefore, an analysis of ecotourism potentials is important to be carried out as currently there is no research on ecotourism potentials in Botutonuo Beach site. Hence, this research aims at analyzing the ecotourism potentials of the Botutonuo beach based on its physical parameters of socio-cultural, economic, and institutional parameters (Asrul, 2017). The hope of this research was that the parameters, methods and analysis used can complement each other to produce a clear understanding of the development of ecotourism on Botutonuo Beach. The parameters and methods used can be used as input for ecotourism research in other locations. The main objective of this research is to analyze the ecotourism potential of Botutonuo Beach using the Geographic Information System (GIS).
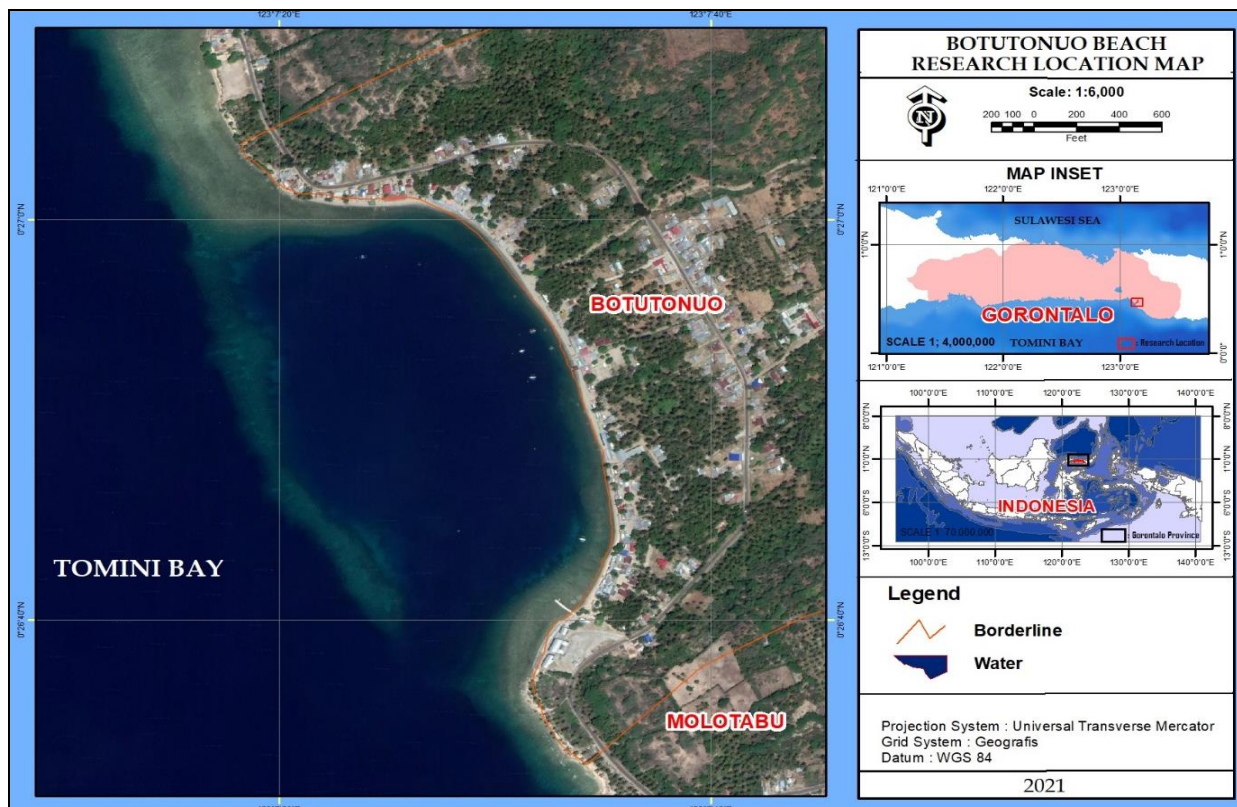

Figure 1. Research location map of Botutonuo Beach of Bone Bolango Regency (Source: Quickbird Image SAS Planet, 2020)

MATERIALS AND METHODS

Botutonuo is a coastal village in Bone Bolango Regency, which has beach tourism potential. It is located in Kabila Bone district of Bone Bolango regency. Based on the village potential data, it is noted that the village stretch in an area of ± 3100 Km^2 see Figure 1. It is situated in the northern hill side of Bone Bolango Regency. In the north, the border is the Suwawa district; in the south, the border is Tomini Bay; whereas in the east, the border is Bone Pantai District; and the west border is Botupingge district. Morphologically, large proportion of this village consists of hill side and low land area. Botutonuo village consists of four hamlets: Botutonuo Timur, Botutonuo Barat, Pancuran and Bunga hamlet. This research employs spatial ecological approach with Geographical Information System (GIS) (Bunruamkaew and Murayama, 2011). Data collected in this study are primary and secondary data, where primary data are collected through observation method (directly taken from the field), interview, and distribution of questionnaire. Whereas, secondary data are obtained from interview with related stakeholders and literature review. Quantitative analysis is also employed in this study, in which descriptive statistic method is used to interpret the feedback of the questionnaires, and scoring analysis for physical parameters, and descriptive qualitative analysis for final appraisal of ecotourism potentials of Botutonuo Beach (Pramudya, 2008; Asrul, 2017).

A. Data Collection

The potential appraisal for a tourism object is carried out based on its physical parameters by quantifying the value of each parameters with its quality. The results of each parameters then combined to form a total result for physical parameters of ecotourism potentials. The parameters are made up of distance, infrastructure, accessibility, attraction and availability of fresh water see Table 1.

Information:
PP : Physical Parameter
WV : Weight Value
D : Distance
I : Infrastructure
Ac : Accessibility
At : Attraction
AFW: Availability of Fresh Water

PP Scoring Method (Gunn, 1979 modified model in Asrul, 2017):
$$(WV \times D) + (WV \times I) + (WV \times Ac) + (WV \times At) + (WV \times AFW)$$

Table 1. Tourism Criteria Based on Physical Parameters (PP) Source: (Gunn modified model, 1979 in Asrul, 2017)

No	Parameter	Potential Value				
		Very Weak (1)	Weak (2)	Moderate (3)	Strong (4)	Very Strong (5)
1	Distance (D)	> 60 km	44.01- 60 km	30.01- 45 km	15.01-30 km	> 15 km
2	Infrastructure (I)	No infrastructure available within the radius of 1 km	Infrastructure are available within the radius of 1 km	There are 2 – 3 infrastructure available within the radius of 1 km	There are 4 types of infrastructure within the radius of 1 km	There are >4 types of infrastructure within the radius of 1 km
3	Accessibility (Ac)	> 1,000 m from the main road	500- 1,000 m from the main road	< 500 m from the main road	< 500 m the main street	< 500 m from the main avenue
4	Attractions (At)	There are >3 similar attractions within the radius of 1 km	There are 3 similar attraction within the radius of 1 km	There are 2 similar attraction within the radius of 1 km	There is 1 similar attraction within the radius of 1 km	There is no similar attraction within the radius of 1 km
5	Availability of Fresh Water (AFW)	The distance between the water source and the site is >4 km	The distance between the water source and the site is > 3.1 - 4 km	The distance between the water source and the site is 2.1 – 3 km	The distance between the water source and the site is 1.1-2 km km	The distance between the water source and the site is 0-1 km

The natural and cultural tourism potential assessment is based on institutional parameter, socio-cultural parameter, and economic and environment parameter. The method to determine the scoring value for ISCEP is similar to those of physical parameter (PP), where each institutional parameter, social parameter, cultural parameter, and environmental parameter (ISCEP) are multiplied with the quality of the parameter, and totaled using the scoring formula listed below. The parameters are made up of management, attraction, security, food and souvenir stalls and spatial arrangement Table 2.

Information:
WV: Weight Value
M : Management
At : Attraction
S : Security
FSS: Food and Souvenir Stalls
SA : Spatial Arrangement

ISCEP Scoring Method (Gunn, 1979 modified model in Asrul, 2017):
$$(WV \times M) + (WV \times At) + (WV \times S) + (WV \times FSS) + (WV \times SA)$$

Table 2. Tourism Criteria based on Institutional, Social, Cultural, and Environment Parameters (ISCEP) (Source: Gunn, 1979 modified model in Asrul, 2017)

No	Parameter	Potential Value		
		Very Weak (1)	Moderate (2)	Very Strong (3)
1	Management (M)	Management unavailable		Management available
2	Attraction (At)	No tourism attraction available	Attraction available 1 – 2 months	Attraction available > 2 months
3	Security (S)	Security personnel not available		Security personnel available
4	Food and Souvenir Stall (FSS)	No food and souvenir stalls available	1 – 5 food and souvenir stalls available	More than 5 food and souvenir stalls available
5	Spatial Arrangement (SA)	Not in accordance with spatial planning		In accordance with spatial planning

B. Data Analysis

Data analysis to assess the potential value of an ecotourism obtained through average score of physical parameters (PP) and socio-cultural, economic and environment institutional (ISCEP) combination (Pramudya, 2008; Asrul, 2017).

$$\text{Tourism Potential Score (TPS)} = \frac{\sum PP + \sum ISCEP}{2}$$

$$\text{Class Interval} \frac{\sum maxscore - min\sum score}{\sum Criteria}$$

Then the score is entered into the assessment classification (Table 3) as tourism potential from very low potential to very high potential with an interval of suitability classes determined by the formula (Walpole, 1982).

Table 3. Tourism Potential Assessment Classification (Walpole, 1982)

No	Total Score	Information
1	1 - 2	Low Potential
2	2.01 - 3	Moderate Potential
3	3.01 - 4	High Potential
4	4.01 - 5	Very High Potential

RESULTS AND DISCUSSION
A. Physical Parameter (PP) Scoring Method

Determining the potential value of a tourist attraction based on physical parameters (PP) is done by multiplying the value of each parameter by the weight value of a parameter. After obtaining the results of the operation, the values of the physical parameters of the object being analyzed are summarized. The results of the score calculation from the physical parameters (PP) can be seen in Table 4.

PP = (WV × D) + (WV × I) + (WV × Ac) + (WV × At) + (WV × AFW)
PP = (0.3 x 4) + (0.2 x 4) + (0.2 x 4) + (0.2 x 3) + (0.1 x 3)
PP = 1.2 + 0.8 + 0.8 + 0.6 + 0.3 = 3.7

Note: a. Weight values have been determined based on parameters (Gunn, 1979)
    c. The potential value is determined based on the results of the research location survey
    d. Final score is determined based on the multiplication of weights and scores

B. Institutional, Social, Cultural, and Environment Parameters (ISCEP) Scoring Method

Determining the potential value of a tourism object based on the socio-economic and cultural institutional parameters (ISCEP) is done by multiplying the value of each parameter by the weight value of a parameter. After obtaining the results of the operation, the ISCEP values of the analyzed objects are summed. The results of the score calculation from the socio-economic and cultural institutional parameters (ISCEP) can be seen in Table 5.

Table 4. Tourism Criteria Based on Physical Parameters at Botutonuo Beach

No	Parameters	Weight Value (WV)	Potential Value
1	Distance (D)	0.3	4
2	Infrastructure (I)	0.2	4
3	Accessibility (Ac)	0.2	4
4	Attractions (At)	0.2	3
5	Availability of Fresh Water. (AFW)	0.1	3
	Total	1	

Table 5. Tourism Criteria based on Institutional, Social, Cultural, and Environment Parameters (ISCEP) at Botutonuo Beach

No	Parameters	Weight Value (WV)	Potential Value
1	Management (M)	0.2	3
2	Attraction (At)	0.1	3
3	Security (S)	0.3	3
4	Food and Souvenir Stall (FSS)	0.1	1
5	Spatial Arrangement (SA)	0.3	3
	Total	1	

ISCEP = (WV × M) + (WV × At) + (WV × S) + (WV × FSS) + (WV x SA)
ISCEP = (0.2 x 3) + (0.1 x 3) + (0.3 x 3) + (0.1 x 1) + (0.3 x 3)
ISCEP = 0.6 + 0.3 + 0.9 + 0.1 + 0.9 = 2.8

Note: a. Weight values have been determined based on parameters (Gunn, 1979)
    c. The potential value is determined based on the results of the research location survey
    d. Final score is determined based on the multiplication of weights and scores

C. Tourism Potential Scoring Method

The tourism potential scoring of Botutonuo Beach is determined by calculating the average value of the final value of tourism objects from the two assessment groups, namely Physical Parameter (PP) Scoring Method and Institutional, Social, Cultural, and Environment Parameters (ISCEP) Scoring Method.

$$\text{TPS} = \frac{\sum Pf + \sum PKSEL}{2} = \frac{3.7 + 2.8}{2} = 3.25 \text{ (High Potential)}$$

D. Analysis of Ecotourism for Botutonuo Beach

Botutonuo beach is located in Kabila Bone District of Bone Bolango regency. Beach vegetation is a vegetative group that grow in intertidal area up to the land area that still receive influence form the sea. The vegetation in Botutonuo beach area are *Cocos nucifera* tree and *Terminalia catappa* tree. There are also well-preserved white sandy beach filled with sand, pebbles, and medium size stones. The strong wind and sea waves bring small particles of corals and other materials to the beach. The water in this area is very clear. Thus, it is suitable for swimming, diving, rowing and fishing. This beach area is also clean and the local community maintains the cleanliness in this area. Based on the analysis of physical parameters of the beach, which consists of vegetation, environmental hygiene, beach materials and water brightness, the Botutonuo beach is highly potential to be developed.

Botutonuo beach located about 22.83 km from the capital city of Bone Bolango regency and can be reached in about 30 minutes using two and four-wheeled vehicles. The distance is measured by gusing the length of the road from the capital city

of the regency to a tourism site in each regency. This measurement is carried out using the shortest route tool within the Quantum GIS software. This tool requires the coordinate point of the initial location and the destination measured from the capital of the regency to the coordinate point of the ecotourism site. The accessibility to this tourism site is also quite good due to the availability of the paved road. The Botutonuo beach has been managed by the local community as a tourism site since early 2000s. The local community have cooperated to build several gazebos for the tourists to sit and place their belongings. From its initial establishment in 2000 to 2002, the gazebos' roofs were made of thatch roofs. In 2003, the local community collectively changes the roofs to tin roofs. Within the radius of one km, the available amenities are cottages, mosque, and health care center. In addition, within the area, the amenities are tire floaters, small boats for rent, and gazebos.

Based on the attraction parameter, the tourism site assessment is carried out by creating a buffer of one km for each tourism object and tourism site type within this buffer area is identified. Based on the assessment result of the ecotourism potentials of the Botutonuo beach, it is categorized as high potential due to various ecotourism activities that can be done within this site. Those activities are: swimming, boating, snorkeling, diving, fishing, and other beach sports and fun activities. The availability of clean fresh water in this area is also important for rinsing and other cleaning purposes. The clean and fresh water source is available within the radius of one km of the tourism site, thus it strongly supports the development of beach ecotourism.

Most of the tourists in Botutonuo beach are local visitors from Bone Bolango regency, Gorontalo municipality, and Gorontalo regency. They come in groups, either family groups, school groups, government institution groups, and youth groups. The assessment based on the institutional, socio-cultural, economic, and environment parameters are strongly supportive. This is due to the natural development of this tourism site as the community themselves initiate the development of this site by building the tourism facilities to support this site attraction as well as for their source of income.

Therefore, the management of this site tend to be collectively managed by the community. Administratively, Botutonuo beach is under the management of the Tourism and Creative Economy Department of Bone Bolango regency. Local community's involvement in the management of this tourism attraction are mostly as merchants, parking lot management, and cottage owners. In addition to natural attraction in this area, the tourists can also enjoy the unique experience of traditional fishermen's lives. In this area, tourists can see fishermen activities, from fishing, to selling their catch in the fish market, and enjoying the traditional culinary made of local fishermen catch. These can attract tourists to come to Botutonuo. The tourism development activities within this site is beneficial for the community in this area. Based on the final scoring of the physical parameters and institutional, social, economic, and environmental parameters, it is revealed that the Botutonuo beach is highly potential. The community are utilizing the intact natural beauty, cultural dan history values of the local people. Botutonuo Village originated from the name of a hamlet originating from the main village of Molotabu. It was named Botutonuo because in ancient times there was a Tobelo kingdom, which reportedly said that Tobelo was a man-eating man. They were expelled from the village of Bune and then they ran to the coast, it is said that during the escape they stopped and lived temporarily in a large rock in this village to release tired before continuing the journey to the eastern part of the coast. In the local language of Gorontalo, a stopover and temporary stay is called "*Loti Tonuo*" and by the previous people who opened this village, the stone which became a place to stop and live temporarily by the Tobelo people was called Botutonuo which was later used as the name of this village, namely "*Botutonuo*". Botutonuo was opened in the 1600s when it was still a wilderness filled with thickets (Botutonuo Village Profile, 2012). The beautiful natural view, underwater site of snorkeling and diving, culinary tourism, and the site attraction have made this site to have abundant tourism potentials to be developed.

This tourism site also contributes to the income of local community. Large number of visitors will ensure higher income for local community, and in turn, will have positive impact on their livelihoods. Based on the results of interviews with the Abdullah Gaib community as well as the manager of the Botutonuo Beach tourist attraction, this coastal ecotourism area was managed by the community as a tourist spot before 2000. The community worked together to build several gazebos as tourist attractions. Since the beginning of construction until 2002, the gazebo still uses a thatched roof, after 2003 the community raised funds and replaced the roof with zinc. The facilities and infrastructure available at Botutonuo Beach within a radius of 1 km are lodging, houses of worship and health facilities in the form of a health center. The same thing was conveyed by other people, namely Aus Kamba, various facilities that can be enjoyed in the form of swimming tires for playing water, boat rentals and shelter (gazebo). The income earned from renting swimming tires, renting boats and gazebos can meet the needs of his family.

CONCLUSION

Botutonuo beach is a highly potential site. This is based on the physical parameters analysis of the beach: its vegetation, environmental hygiene, beach materials, and water clarity. Similar result is also obtained from the physical parameters of distance, amenities, accessibilities, and attractiveness of this site. In addition, the institutional, socio-cultural, economic, and environment parameters also yield similar result. In addition, the community participation in developing the tourism facilities also serve as additional value for the development of ecotourism in Botutonuo beach. The local community utilize the intact and beautiful natural view, its culture and history without having to destroy or to sell them. The natural view potential, underwater attraction for snorkelling and diving, culinary tourism, and recreational site have made this site to have diverse tourism resources. This potential can be developed to support the local economy and increase the welfare of the people in this area.

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IDENTIFICATION OF THE GEOTOURISM POTENTIAL
OF AFGHANISTAN, A CASE STUDY: BAMIYAN COUNTY

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Abstract: Afghanistan is a wilderness and varied country in the geo-tourism sector. The aim of this study was to investigate the capabilities of geotourism and also to identify the capacities of geotourism development in Bamiyn province. In this area model Hadžić et al (2010) has been used, the survey was conducted using 20 tourists and 5 experts. Geographic information system were effectively used for identification of the potential ecotuorism sites. It is the indicator of a vast range of geological and geomorphic forms in Bamyan state. The result indicates that the study area has strengths and opportunities for the development of geotourism that are not well identified and introduced.

Key words: Afghanistan, Geotourism, Dynamic Model, Local Development

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INTRODUCTION

Tourism is typically associated with certain economic benefits, including income, employment and, in the case of international tourism, foreign exchange earnings, which then stimulate wider economic growth (Sharpley, 2009). In fact, the tourism structure of a place can affect the tourist's demand (Law, 2002) and the organization of tourism in one place begins with a plan to understand the behavior of tourists in that place (Bansal et al., 2004). The natural landscapes have structured attractions in themselves which make people more motivated to demand tourism and visit them. Geomorphologic, climatic, mineral water, vegetation, and animal species attractions along with underground waterways, with or without water, are among the most important factors in economic tourism studies and policies (Fennel, 1999). The basic disciplines associated with geotourism include science, economics, social science, education, and media (Olafsdóttir et al., 2018). Visiting natural places with scenic beauty is a traditional practice. However, the concept of geotuorism taken shape in recent times (Singhand and Ghosh, 2021). Geotourism is often defined by researchers in the general context of tourism in geological prospects of geomorphology (Hadžić et al., 2010; Coratza and Giusti, 2005; Nemanj, 2011; Gordon, 2018; Maghsoudi, and Rahmati, 2018). While geotourism is not mere tourism in geological, geomorphological prospects, but geotourism inclusion is very grate (Dowling, 2008). Thus, geotourism means the tourism that maintains or enhances the geographic identity of a place, encompasses not only the environment, but also the heritage of the culture and aesthetics of the place, and most importantly the welfare of the locals (Pereira and Dias, 2008). Geotourism targets are often geosites or geographical phenomena that can be used as geopolitical heritage in the form of a geopark as a tool for tourism development (Abdi et al., 2005). Geomorphologic tourist places are defined as geomorphologic forms and processes. Therefore, human perception of the geological, geomorphological, historical, and social influences of these places has aesthetic, scientific, historical, or socio-economic values (Mokhtari et al., 2012). These geomorphological attractive geological locations are defined as geomorphosites (Panizza, 2001).

Geomorphosites are one of the new concepts that have entered the tourism literature with an emphasis on recognizing special places (Ielenicz, 2009). Geomorphosites refer to the geomorphological assets of geological heritage, the term being a contraction of 'geomorphological sites' (Panizza, 2001). According to human perception, geomorphosites can be said to have two principal values, sciences and value added (Reynard, 2007; cited in Shayan et al., 2014). Today, Geomorphosites have a high value among scientists and the general public which causes cultural syncretism and increased interactions between different places while helping the local economy of neighborhoods of Geomorphosites. These places have a huge potential for attracting tourists, according to which most countries and organizations are planning to introduce and promote such areas to attract tourists from all over of the world. The geopark information system of Iran was created in 2009 with the assistance of the Geological Survey of Iran, based on the model of the UNESCO international geopark network by geoscience databases (Koshraftar, 2007). The UNESCO Organization identifies the most important tourist potentials of these places as follow. Caves, valleys, faults, waterfalls, springs, synclines and anticlines, volcanoes, exterior igneous materials, stalactite and stalagmite within caves, canyons and man-made forms related to geomorphologic factors. For example, inscriptions on the steep walls are among the most important sources of tourism land (Rahimpour, 1991). Anna and Zadzillo consider geotourism to be of four main perspectives: scientific research, education and training, access to geotourism and conservation. The typology of site classification includes the following domains: geochemistry, geomorphology, soil science, history, hydrogeology, mineralogy, palaeogeology, paleontology, petrography, sedimentation, stratigraphy, structural tectonics, mineral

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deposits science (Solarska and Zdzisław, 2010). Assessing the geotourist capability of areas is a process to identify and predict the potential of the regions in such a way that the findings from its implementation are used to plan for the improvement or approval of areas (Coratza and Giusti, 2005). The main methods for conducting environmental assessments in the world are the matrix, anatomical checklist, integration and system analysis (Canter, 1992). On the global level, there has been a great deal of research on the assessment of the potential of geotourism in different regions, the most important of which are the following. Pralong (2005) introduced the method of using an identification card as a document for evaluating and managing geomorphologic locations that was widely researched by researchers. Brilha (2009) examined European geological heritage, including the Portuguese geoparks, and developed the necessary strategies to protect the geoparks. Hadzik et al. (2010) determined the value of geoparks using a dynamic model. In this study, the criteria for geotouristic attraction of areas were determined and then evaluated. Nemanj (2011) examined the Geotourist potential of the Lazar Canyon.

In this research, using the questionnaire of geotourism features of the area, the tourist value of the Lanzar canyon was evaluated. Comanescu (2011) studied the capability of the Ponoare protected geomorphosites. In this research, five scientific, aesthetic, cultural, economic and management indicators were introduced for evaluating of geomorphosites. Due to the increase in geoconservation studies, several methods of qualitative and quantitative assessment of geosites have been published since the 1990s (Mucivuna et al., 2019). The recognition of geological structures and geomorphological landforms as heritage, however, is relatively ancient (Reynard et al., 2016). In Afghanistan, with its geological potentials, little effort has been made to introduce them to tourists and the public and to interpret their scientific value. Due to the lack of familiarity with dealing with land heritage and its capacity, it has caused damage to sites and environmental degradation. Therefore, this study was conducted to identify the geotourism potentials of Bamyan region.

STUDY AREA

Most of the mountains in Afghanistan are located in the center, east and northeastern parts of the country. The Bamiyan province (Figure 1, 2) is an intramountainous basin, subsequently filled with debris material originating from the surrounding mountain ranges. Bamiyan is located at 2,540m elevation on the N edge of the 600-km-long EW valley along the Herat fault, at the confluence of three different rivers (Reineke, 2006). Where most of these areas are cold in the winter and more precipitation is in the form of snow. Mountainous areas of Afghanistan have many fertile fields where people are farming and livestock raising.
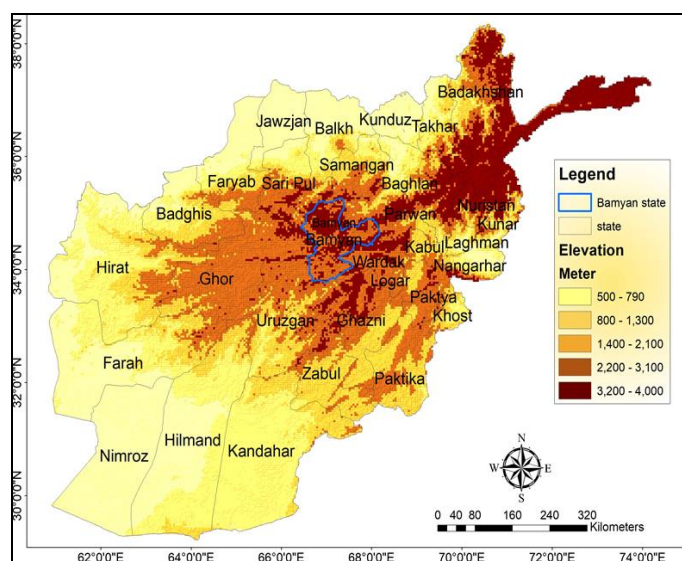
Figure 1. Location of Bamyan state and its topography (DEM)   Figure 2. Bamyan state and its Landuse
(Source: National Renewable Energy Laboratory, 2020)

MATERIALS AND METHODS

Research methodology is based on literature review, taking advantage of the valuable experiences of other countries and researchers in the field of tourism. In this study, by examining geological maps, topography and field Study, the characteristics of geotourism in the study area were investigated. Geomorphological and geological data in GIS were used to locate areas potential to geotourism (figure 1, 3). Geological map of the region (Figure 3) was used to determine the type of formations and faults in the region. The research methodology is an applied analytical study that evaluates the research from a geotourism location based on the research model and data available in the model. In this research, Hadzik et al. (2010) model was used. There are many models for assessing the tourist value of a region. However, the present model has a preference, compatibility and greater flexibility with the realities and the amount of tourist value of the place, due to the opinions of the experts and tourists of that area. In this model, the word "land heritage" is a combination of several elements including cultural, social, historical, beauty landscape, archaeological, educational, scientific, entertainment, physiological and artistic elements. The value and importance of any geotourism location in this method are estimated by 3 scientific value indicators (Table 1) sub-values (Table 2) and the vulnerability of that geotourism location. The scientific value is estimated based on the following equation (Hadzik et al., 2010) the signification each term indicate in table 1 and 2.
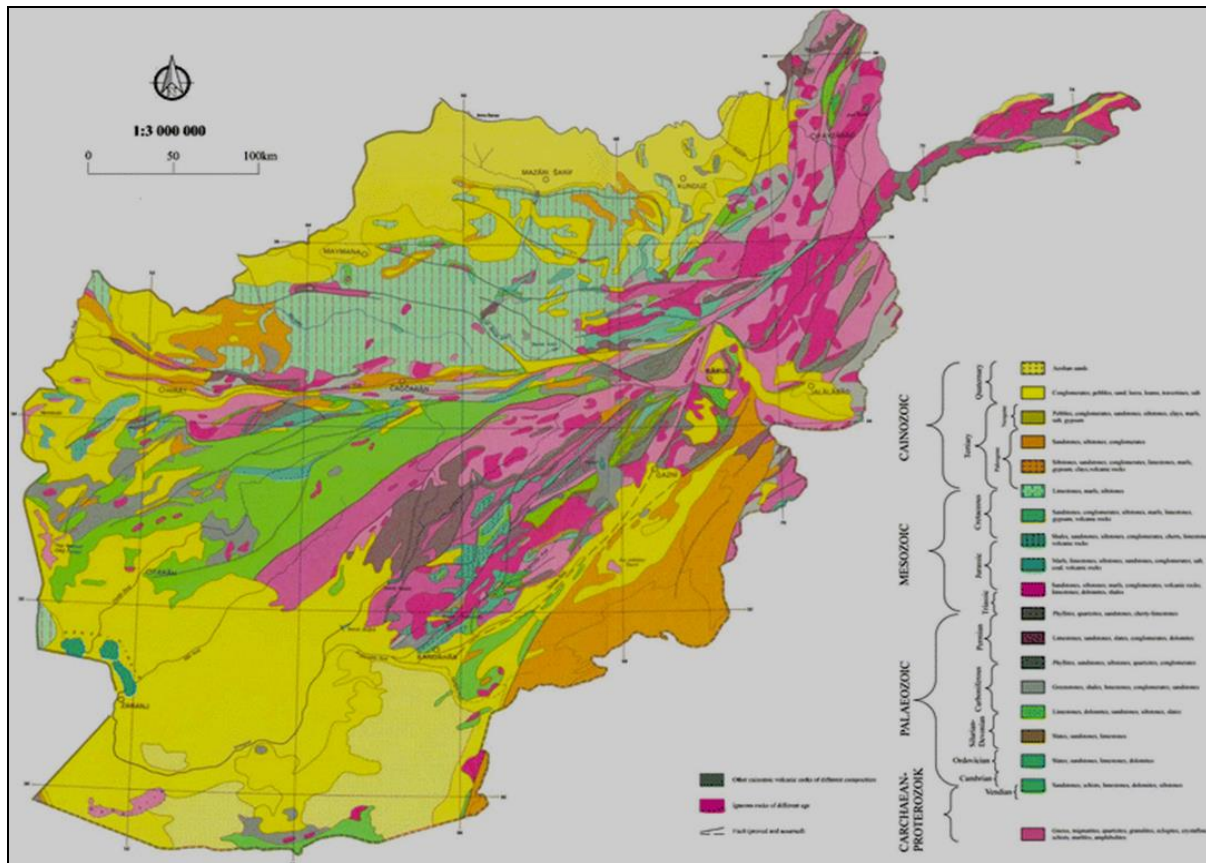
Figure 3. Geology map sheet of Afghanistan (Source: USGS, 2007)

Table 1. Sub-indicators of
of a geotourist location scientific value

Evaluation indicators	Sub-indicators	Symbol
Indicators of scientific value	Rareness at the regional level	Ra
	Integrity (unfair)	In
	Representative of Geomorphological Processes	Rp
	Variety in geomorphic forms	Dv
	Other geological features along with cultural heritage value	Ge
	Scientific knowledge	Kn
	Educational benefits	Ed
	Rarity at the national level	Rn

Table 2. Sub-indicators of the surplus value of a geotourist location (Nemanj, 2011)

Evaluation indicators	Subindicators	Symbol
Index of surplus value	The value of the landscape	ScV
	Ecological value	Ec
	Indicator at destination	Ex
	The experimental components of the product of geotourism	ReD
	The amount of communication with some artworks	AW
	The rate of communication with the social development of local settlements	DLC
	Possibility to organize for certain cultural events	OCE
	Interpretative value (related to good stories)	In
	The presence of natural elements and cultural heritage	Com
	Quality of geosite management	Qu
	Supportive facilities and services	Ess
	Accessibility	Acc
	Visibility	Vi

$$ScV = Im(Ra)xRa + Im(In)xIn + Im(Rp)xRp + Im(Dv)xDv + Im(Ge)xGe + Im(Kn)xKn + Im(Ed)xEd + Im(Rn)xRn \qquad (1)$$

In this model, weight values of the opinion of the experts are different from the view of tourists, on the basis that the importance of each of the subcategories (Im) is assessed by tourists from zero to one. While experts' opinions are evaluated for each of the subcategories from one to five, then by summing up each of the subcategories the scientific value of the geo-tourism location is determined according to the equation one. The next index is the Research Model, whose indicators are presented in Table 2 below. This indicator is also exactly the same as the scientific index.

$$AdV = Im(ScV)xScV + Im(Ec)xEc + Im(Ex)xEx + Im(ReD)xReD + Im(AW)xAW + Im(DLC)xDLC + Im(OCE)xOCE + Im(In)xIn + Im(Com)xCom + Im(Qu)xQu + Im(Ess)x Ess + Im(Acc)xAcc + Im(Vi)xVi \qquad (2)$$

The last indicator is the geosite vulnerability index, which has no sub-indicator and is evaluated solely by experts. It is between 1 and 5, where 1 represents the maximum vulnerability, and the number 5 represents the maximum strength of the geosite against the vulnerability. The final result of the tourist evaluation (TE) is obtained by aggregating the scientific indicator, sub-indicators and geosite vulnerability as following equation (Hadzik et al., 2010):

$$TE = ScV + AdV + Vu. \qquad (3)$$

The present model is more preferred, adaptive, and flexible with the realities and the amount of tourist value of the place because of both the opinion of both experts and visitors of the area. Some of the sub-indicators are thematic (for example, the value of the landscape), which explores the views of tourists and visitors from that area. In this method, there are many indicators that examine scientific and historical values, outlook, ecological, cultural and other factors (Figure 4). Considering that geotouristic locations require at least the necessary knowledge regarding the formation of geological and geomorphological forms.
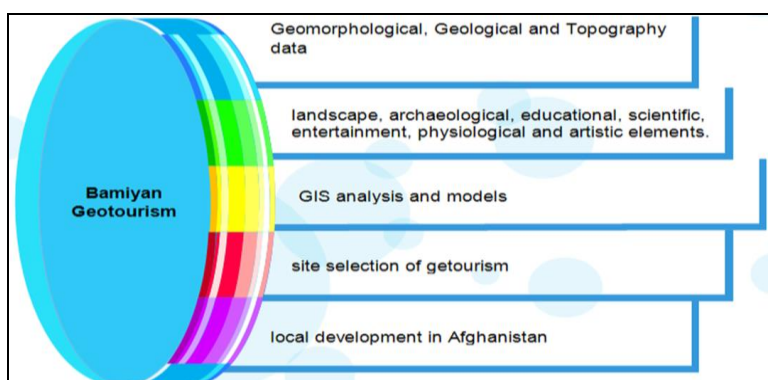
Figure 4. Process of geotourism analysis in Bamiyan, Afghanistan

Table 3. Final evaluation of the geotourism value of the study area

assessment of tourist value of Geopark	Obtained score
Excellent	100-130
Very good	70-100
Good	40-70
Average	20-40
Low	0-20

And given the fact that most tourists are not from the scientific community and do not know the exact geomorphological form and geomorphological processes in the site, experts' opinions will be higher than that of tourists. If all the tourists and experts give the highest score to a geopark, based on this index, its score will be 130. Therefore, based on the final result of the score, experts and tourists can provide an assessment as shown in the table below.

DISCUSSION AND RESULTS

Afghanistan has a wide range of geomorphic elements and processes to attract tourists interested in earth sciences. Many river processes including the formation of sandy sculptures, a variety of meanders) free meanders and valley meanders (cutting the banks of the river walls and other forms are visible (Figure 3). Also, there are wide variations of mass wasting including slopes, stones, landslides, falls and creeps in the area (Figure 4). Due to the existence of almost soluble formations including gypsum in some parts of the region there is capacity of creating caves of different sizes and caves have been created in different shapes. There are more than 2,000 large and small caves in Afghanistan. Regarding the tectonic activation of the area due to the presence of various faults visible in the valleys and steep walls (Figure 5).

The study area with regard to natural features, such as national parks and unique protected regions, like Band-e Amir national park (figure 6), Wakhan protected national park, visual water falls along with the acquisition of valuable cultural assets can have a special place in south Asia (Movahed and Aman, 2019). for example: Band -e- Amir: it is a national park and one of natural heritages is the world that has 4200- hectares area it was shelter birds to different kinds of fish in 1973 (Aman, 2016). These factors have led to the creation of unique geosites in the region:

1- Existence of carbonate and carbonate dolomite formations.
2- Expansion of gap systems (due to mechanical and chemical weathering).
3- Relatively suitable rainfall and water circulation inside the limestone.
4- Suitable height and predominance of acidic waters.
5- Solubility process in carbonate and dolomite rocks

Figure 5. The mountain pattern of the Bamyan

Figure 6. Types of slopes overlooking the lake (National park of Amir)

The shape created in this area is influenced by fiction karst including cave, Dolin, spring, natural bridge (Figure 7). Weathering processes have led to the massive destruction of bare and naked stones, and the result of this process is the formation of very large debris cones in favorable slopes. Almost all active geomorphologic elements in semi-humid areas can be identified in this area. In Afghanistan, from the east to the west, the height of the mountains is reduced, and the high mountains gradually move to deep valleys, deserted and windy plains. But in the center of the country as far as the eye can reach there are mountains and mountains, and deep valleys have clear days and extremely cold nights. This region is considered to be the most structurally complex part of Afghanistan (Shareq, 1981). The study area has a wide range of geomorphic elements and processes to attract tourists interested in earth sciences. More than river processes, including the formation of sand benches, different types of meander. Even the passageways of this land are in some areas with an altitude of over 2000 meters above sea level. Indeed, Afghanistan, with its immense masses, is a wonderful world of beauties. This rugged highland is interspersed with valleys and basins, all of which have a general northeast trend (Treloar and Izatt, 1993)

The melting of glaciers in "Badakhshan" and the Hindu Kush mountains is associated with flooding and rivers rage, and in many snowy areas sliding glaciers also occur. In the vast region of Jaghatu to Jaghori, there are about 2,500 historical caves of the Paleolithic, Paleolithic, Medieval, Neolithic, Historical and Indigenous Periods of the Buddhist period, and in the period of the Kings of the region, in which there are many works of mixed Indian, Greek, Roman, and Sassanid arts (Azimi, 2015).
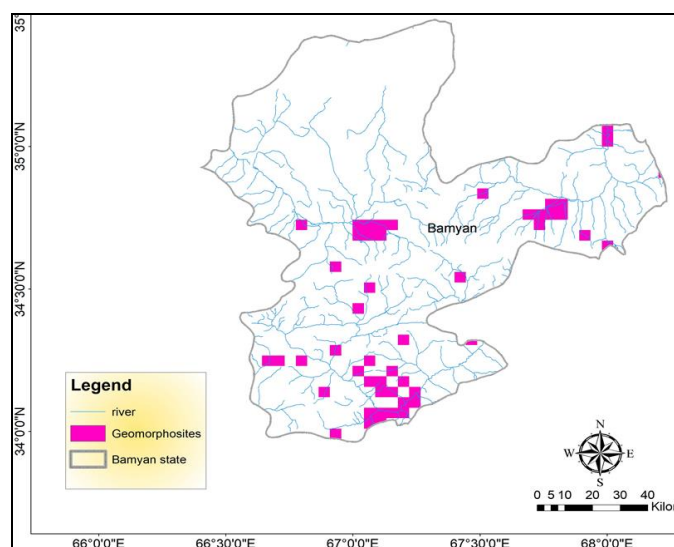
Figure 7. Site selection of getourism in Bamyan

Table 4. Evaluation of Bamyan State Value Indicators with Visitor's and Experts' Views

Evaluation indicator	Sub-indicators	Score of visitors	Score of experts
Scientific value indicators	Rareness at the regional level	81%	4.2
	Integrity (indisputable)	92%	4.3
	Representative of Geomorphological Process	91%	4.1
	Variety in geomorphic forms	95%	4.3
	Other geological features along with valuable cultural heritage	89%	3.9
	Scientific knowledge	83%	3.9
	Educational profit	90%	4
	Rareness in national level	53%	3

Table 5. Evaluation of sub-value indicators with Visitor's and Experts' Views about Bamyan Area

Evaluation indicator	Sub-indicator	Visitors scores	Experts scores
Surplus value indicator	Landscape value	0.92	4.5
	Ecological value	0.84	4.2
	Indicator at destination	0.79	4.3
	The experimental components of the product of geotourism	0.74	3.9
	The amount of communication with some artworks	0.45	2
	The rate of communication with the social development of local settlements	0.75	2.1
	Possibility to organize for certain cultural events	0.40	1.4
	Interpretative value (related to good stories)	0.45	1
	The presence of natural elements and cultural heritage	0.96	5
	Quality of geosite management	0.10	1
	Supportive facilities and services	0.10	1
	Accessibility	0.20	1
	Visibility	0.52	1.9

In order to assess the geotourism potential of the study area, based on the research model, on September 11, 2017, 20 tourists were surveyed who came to visit the area. According to specialized research questions and questionnaire, the questionnaire was described generally before the completion of the questionnaire by tourists regarding the questions (Table 4, 5). In order to assess the opinion of experts, 4 specialists who had master's degree and Ph.D. degree in geography, geology and tourism were used. In evaluating the opinions of specialists, people were firstly familiarized with the studied area and at least once went to the area, and they had acquaintance with the concepts of tourism science. For this reason, the number of experts was reduced in terms of the criteria. The results of the evaluation of the scientific value indicators by tourists and specialists are presented in Table 1. According to the table of geological characteristics along with the cultural heritage has obtained the highest score among specialists and tourists, which indicates a very wide range of geological and geomorphic forms in the area. The rareness index at the national level has the lowest score and it is quite logical. The main point in Table 1 is the disagreement between the two groups in geomorphological indicators and the index of diversity in geomorphologic forms.

As tourists rated the two indexes higher, while the experts gave the two indexes a near average rating. Considering the specialized nature of the two indicators, it can be said that the region is in the medium of two indicators. In this regard, experts can be considered superior to tourists, because the answer to this question requires familiarity with a wide range of Earth science phenomena. In other indicators, the opinions of the experts and the views of tourists are similar. The relationship between the two groups was evaluated and the score below the scientific value indices was 21.752.

$$ScV = 0.81 (Ra)x 4.2 + 0.92 (In)x 4.3 + 0.91 (Rp)x 4.1+ 0.95 .(Dv)x 4.3 + 0.89.(Ge)x 3.9 +0.83.(Kn)x 3.9 + 0.90 (Ed)x 4 + 0.57 (Rn)x 3= 27/22 \qquad (4)$$

Source: (Hadžić et al., 2010) components of the formula has been explained in Table 2

The results of the evaluation of the sub-indicators are shown in Table 2. It needs to be explained that the answer to the indicators of scientific values does not require much scientific and specialized knowledge in the subject matter of the research. Therefore, the comments of each questioner can be cited. Based on the table below, the index of the presence of natural elements and cultural heritage has earned the highest score. The presence of cultural elements related to historical periods in most parts of the studied area along with the natural and active elements of the region caused the region to become a tourist site and this factor has been found by experts and tourists. The landscape indicator has earned a very high score. The region has a fantastic beauty effect that gives it more points. The interpretive value index has earned the lowest score for both groups. A very noticeable point in this table is that the indicators that are related to the management of geosites, facilities and supportive services, and accessibility due to the availability of reliable and good ways in terms of both groups have received the lowest score which indicates that the study area has a major management weakness that failed to provide the necessary infrastructure for the development of geotourism and tourism in the region despite the availability of the potential which was found typically in experts' views. Therefore, it is necessary to provide integrated management and facilities for better development and attraction of domestic and foreign tourists. This is due to the fact that in the studied area there is no suitable accommodation for tourists. By providing the conditions, cultural programs can provide educational programs for students or geoscientists interested in the potential of almost the entire region. The amount of vulnerability assessment was 3, due to the fact that one of the main criteria for attracting tourists in this region is the existence of historical monuments. Due to the long history, these highly weathered works are very vulnerable to natural destructive factors. These historic monuments are also beside headlands or hillsides that sharpen the vulnerability. On the other hand, geotouristic forms of this region are located in exacerbated geological formations and are dominated with sharp hillsides, so vulnerability of natural forms with geotourist values increases by natural disasters. Major landslides and riverbeds in loose formations every year have caused geotourism to be eroded or sometimes create other forms. One of the major criteria for vulnerability is the amount of attention, support, and protection of related organizations from geosite. According to the data obtained from the questionnaire and field surveys, the level of protection from the historical and geotouristic forms of the region is low (Hadžić et al., 2010).

$$AdV = 0.92 (ScV) x 4.5 +0.84 (Ec)x 4.2 + 0.79 (Ex)x 4.3 + 0.74(ReD)x 3.9 +0.45 (AW)x 2 + 0.75 (DLC)x 2.1+ 0.40 (OCE)x1.4 +0.45 (In)x 1 + 0.96 (Com)x 5 + 0.10 (Qu)x1+ 0.10.(Ess)x 1+ 0.10 (Acc)x 1 +0.52(Vi)x 1.9= 24/475 \qquad (5)$$

Final evaluation of the geotourism value of the region

Finally, with the sum of the indicators of scientific values, secondary values and vulnerability of the geosite, the final score of the geosite is estimated. The final value of the site was 53 as shown in equation (6). According to Table 3, the tourist value of the area is good. It should be noted that factors that reduce the tourist value of the study area are mostly the indicators related to the management and welfare facilities available in site, whose improvement will increase significantly in terms of amenities in the region's tourism value. The dynamic model, studied in this study shows the potential and capability of the region to attract tourists especially in the field of earth tourism, which, in case of providing the weaknesses in this research, it will be one of the active tourist hubs.

$$TE =24.4 + 27.22 + 3=54.62 \qquad (6)$$

CONCLUSION

Tourism, which emphasizes the maintenance and protection of the five key dimensions of the graphic features of a region - the environment, culture, beauty, science, education, and the well-being of local people, can play a special role in preserving the capacities of local communities. In this study has been discussed about tourism capability of Bamyan province. This area has a wide range of elements and geomorphic processes to attract tourists interested in earth sciences. It is one of the most important historical centers of Afghanistan culturally and historically. Considering the nature of tourism which in addition to assessing the tourism features of its regions and its attractiveness, also addresses the structure and functioning of the -site management, so one should use a model to cover all -tourist aspects of the areas.

On the other hand, according to a highly specialized tourism discussion, it is not merely possible to estimate the value of a -site with the reliance of tourists' opinions. Accordingly, we should use tourist and morphology specialists' view. In this research, we have used the dynamic model to consider the above considerations to a large extent. Many of the river processes, the types of slopes, the existence of almost pure soluble formations including Gypsum in the parts of the area and the ability to form caves in different sizes and shapes, and existing of visible tectonic activation in valleys and steep walls and the creation of very beautiful scenes with different types of faults and fault elements, high temperature difference during seasons, and performance of weathering processes there are special -tourist attractions in this place which has a scientific value for earth scientist and educational value for students of the Earth sciences. Therefore, assessing the tourism

value of the region will provide significant assistance in terms of economic, cultural, tourist, ecological and sustainable development of the region. On the other hand, whether the lack of knowing these capabilities or believing that they are not attractive tourist attractions by the relevant authorities, the lack of appropriate communication paths, the lack of suitable accommodation facilities for tourists, the lack of a tour guide aware of tourism capabilities and historical value of the region are of most important problems and weaknesses of the region for developing of tourism.

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SALT LAKES OF THE WEST KAZAKHSTAN REGION AS OBJECTS OF MEDICAL TOURISM

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Abstract: West Kazakhstan region is also rich in unique balneological hydromineral resources. The aim of the study was to review the studied, as well as little-known and promising, salt lakes of West Kazakhstan region, which have hydromineral resources suitable for balneological and recreational use is given. As a result of the field and laboratory researches in 2017-2020, 7 promising balneological sites were studied – the Lakes Bolshoy Sor, the Alzhansor, the Sorkol, the Hakisor, the Aralsor, the Edilbaysor, the Koysarysor. It was established that the studied peloids correspond to the genetic type of mainland silt mineral (sulphide) therapeutic mud typical of arid regions. According to the main indicators, the studied peloids are generally suitable for use in recreational, therapeutic and medical purposes, and in terms of the content of salts and therapeutically valuable components, they are not inferior to the medical mud of the resorts of Western Kazakhstan and the Dead Sea recognized in balneological practice.

Key words: salt lakes, therapeutic mud, peloid, tourism, balneology, physicochemical properties, West Kazakhstan region

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INTRODUCTION

In the modern world, peloids are actively studied and used for various purposes. The scientific community is discussing a single concept and classification of peloids (Gomes et al., 2013), as well as the advantages and risks of using therapeutic clays for therapeutic and cosmetic purposes (Gomes, 2018), many works are devoted to the unique black hypersaline mud mined on the shores of the Dead Sea (Nissenbaum et al., 2002; Ma'or et al., 2005) investigate the features of natural peloids (Gomes et al., 2015) and the use of local natural thermal mud for therapeutic, aesthetic and pharmaceutical purposes (Karakaya et al., 2010). The chemical composition of therapeutic mud is investigated (Doretti et al., 1992; Bokuchava, 2009; Solonenko, 2015; Tserenkhand and Badnainyambuu, 2016; Díaz Rizo et al., 2018; Gupta et al., 2018; Bolshoiovic et al., 2020) and the influence of human society on the composition of peloids of modern salty lakes (coastal zones of the Black, Azov and Dead Seas) (Kotov et al., 2019). Mud making in the territory of modern Kazakhstan was known in the XIII century. The first works on the healing properties of therapeutic mud were published in Russia in the XVIII-XIX centuries. From the middle of the XX century a comprehensive study of therapeutic mud began. In Kazakhstan, the hydromineral resources of Lake Zhalanashkol (Tokpanov, 2016), deposits of sulphide therapeutic mud of the lakes Zhaman, Minkeser, Kishkenesor, Karasor of the North Kazakhstan region (Fomin et al., 2012) and therapeutic mud of lakes Arasan-Kundyzdy, Tuzkol, in Almaty region (Kan et al., 2019) were investigated. Also, Kazakhstan has a large number of deposits of therapeutic mud: Tuzkol (Almaty region); Zhasybay, Alamergen (Pavlodar region); Borsykty, Sorkol, Aksuatsor (Kostanay region); Karasor (Karaganda region); Karabulakkol (East Kazakhstan region), etc. (Dzhangeldina and Ospanova, 2017). Salt lakes are widespread on the left-bank part of the Irtysh River (Lake Kalkamanskoye, Lake Kishken-Tuz, etc.) (Belgibaev and Zhaparova, 2020).

In Almaty region, the physicochemical properties of cover waters (rapa) and therapeutic mud of Lake Zhalanashkol were studied, during laboratory studies it was found that the cover waters (rapa) of the lake is of the type sulphate-chloride-sodium (Asubaev and Esmseitova, 2015). Modern mud resorts of Kazakhstan include Moyyldy (Pavlodar region), Zhanakorgan (Kyzylorda region), Atyrau (Atyrau region), Shchuchinsky (Akmola region), Saryagash (South Kazakhstan region), Akzhayyk (West Kazakhstan region) and others where local resources are actively used in the treatment of many diseases.

West Kazakhstan region is also rich in unique balneological hydromineral resources. Among them, the healing mud of salty lakes, which in recent years has been actively studied by us, stands out (Akhmedenov, 2018; Akhmedenov, 2020a; Khalelova et al.,2020). In the West Kazakhstan region, there are more than 7.000 large and small lakes with a total area of over 29.8 thousand km^2, most of which are dense and extremely small. The area of their water mirror, usually, does not exceed 1 km² (Filonec and Omarov, 1974; Baisholanov et al., 2017). The origin of many lakes in the region is associated with the processes of halokinesis and spatial transfer of salts by groundwater within the borders of the Caspian salt-dome basin (Sotnikov et al., 1971; Filonec and Omarov, 1974). Kazakhstan is actively developing research on various aspects of tourism (Wendt, 2020). A number of studies have been conducted to assess the natural and recreational potential of West Kazakhstan region (Akhmedenov, 2020b; Koshim et al., 2020; Chashina et al., 2020). The purpose of our study is to assess the possibilities of using salty lakes of West Kazakhstan region for the development of medical tourism.

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MATERIALS AND METHODS

In West Kazakhstan region, accumulative plains of marine origin associated with the era of maximum Khvalyn transgression prevail within the Caspian lowland (Doskach, 1956). Their flat-wavy surface is complicated by a large number of shallow dryless westerns and weakly cut channels of temporary rivers and a duct opening into flat, more often elongated lake-shaped depressions. In summer, ducts and lake-like depressions partially or completely dry out, forming salty lakes known as burrows. The locations of many sorrows are due to the latest tectonic movements, which manifested themselves either in the formation of regional zones of tectonic deflections (large saline depressions), or caused by salt tectonics (bursts confined to inter-dome depressions, compensatory mulds and sedimentation mulds). Among the latter, lake depressions stand out, associated with the especially active latest deflection of depressed compensatory mules, complicating the salt massifs of actively growing domes (Lake Baskunchak, Inder, Elton, etc.). Compensatory mulds, which were actively bending in modern times, correspond to lakes Elton, Baskunchak, Inder, Shalkar, Zhaltyrkol. Many smaller lakes and burrows correspond to the grabs of domes and mulds of subsidence, active in modern times (Sidorenko, 1970).

Sors (a local name of saline) are also found in the sandy massifs of West Kazakhstan region, they are widespread, and their number increases from north to south, that is, towards the Caspian Sea (Badyukova, 2020). In the northern part of the sands, the greatest distribution of saline is observed in the area of the Kamysh-Samara Lakes, Lake Aralsor and the mud of Khaki. In the southern part, a significant number of burrows are noted around major depressions (Dongelek-Sor, Bolshoi Sholan) and hills (Beschoky, Koshalakty, Myntyube), but at the same time they are found everywhere among various sands and soils. In most cases, quarries have an elongated shape and in orientation obey mainly the general slope of the area (Badyukova, 2020). The size of the weeds is very diverse and varies from a fraction of a 0.01 to 0.5 km². The width of the elongated pile ranges from tens of meters to 200-300 meters, and the length reaches 1-2 km (Badyukova, 2020).

Depending on the degree of replenishment of lakes with spring fresh water and on the meteorological conditions of the year, the degree of mineralization of water in lakes varies, but they usually have brackish or salty water (Kamensky et al., 1960). Deposits of saline with a thickness of 0.5 to 4 meters are expressed in silt sands, sandy loam and loam with gypsum crystals. Often there is an alternation of silt sands and sandy loam. In these deposits, overfished plant remains are observed, so they have a sharp smell of hydrogen sulphide (Kamensky et al., 1960).

The collection of materials on the study of the modern state of the salty lakes of West Kazakhstan region was carried out in 2017-2020. The study was carried out using the following methods: literary and cartographic, comparative-historical. As a result of the field and laboratory researches in 2017-2020 7 promising balneological sites were studied – the Lakes Bolshoy Sor, the Alzhansor, the Sorkol, the Hakisor, the Aralsor, the Edilbaysor, the Koysarysor (Figure 1).
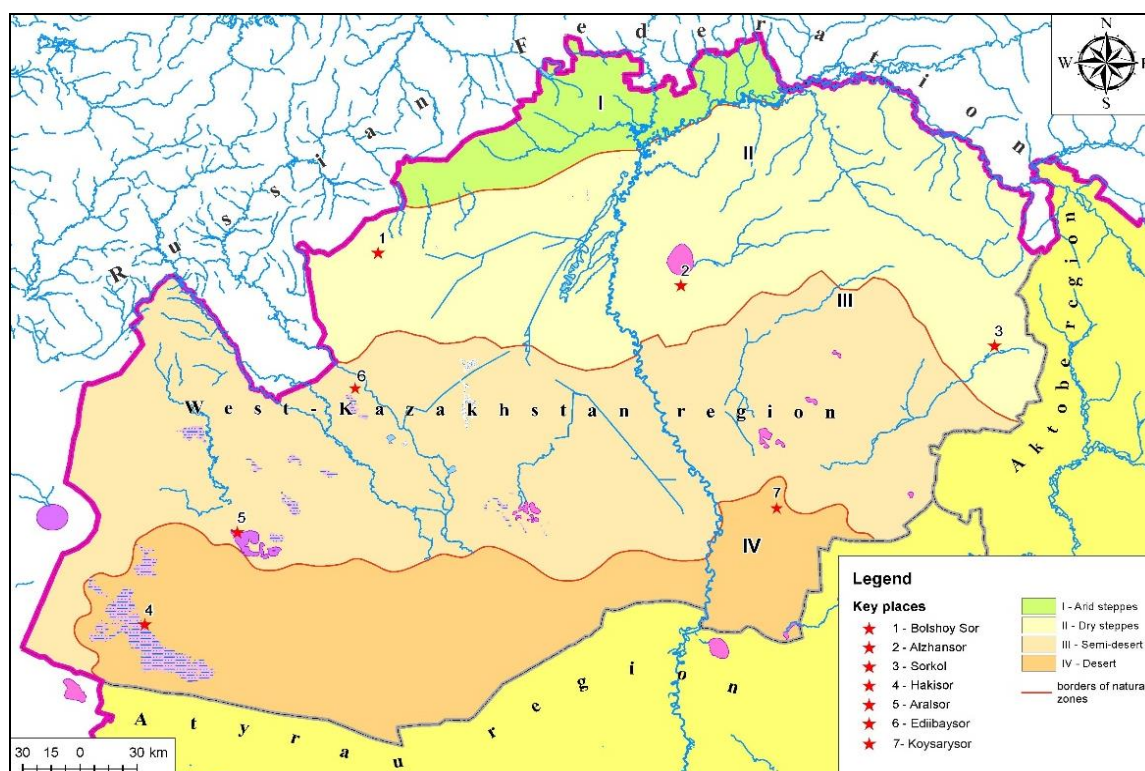
Figure 1. Location of the studied salt lakes West-Kazakhstan region

During the field study, key salty lakes with therapeutic mud were identified, and their description was carried out. Little-studied salty lakes Hakisor, Alzhansor, Bolshoy Sor, Sorkol basins of which are genetically associated with mulds of sedimentation of salt domes were chosen as research objects for assessing the balneological value of peloids. In physical and geographical terms, they belong to the desert-steppe regions of the Caspian (Volga-Ural) desert-semi-desert region (Kopyl and Nikolaev, 1984). According to hydroecological conditions, they are attributed to the Zhaiyk-Zhemsky hydroecological district,

the total area of which is 772.8 thousand km², and the lake area is 0.25-0.50% (Medeu et al., 2010). To conduct a full range of physical and chemical analyses and a primary assessment of the balneological properties of the peloids of the lakes Hakisor, Alzhansor, Bolshoy Sor, Sorkol during the spring-summer season 2017-2020, samples of peloids from mud deposits and samples of cover waters (raps) of lakes were selected. Sampling was carried out according to accepted techniques (Bahman et al., 1965; Mikheeva and Trebukhov, 1975) with fixation in place: a) parameters of the reservoir and sampling conditions (name of the reservoir, temperature of air and water, date and place/coordinates of sampling, depth of sampling, capacity of the mud deposit, height of the rapeseed layer above the surface of the mud deposit); b) organoleptic indices of dirt samples (color, smell, consistency, structure); c) presence and nature of inclusions (salt crystals, sand, plant residues).

For assessment of balneological value of peloid laboratory analyses of their main physical and chemical properties and content of heavy metals, toxic for the person, which were made in the accredited testing laboratory of chemical analysis researches of U.M. Akhmedsafin Institute of hydrogeology and geoecology (Almaty, the Republic of Kazakhstan) according to the accepted techniques of studying therapeutic muds and carrying out physical and chemical analyses (Bahman et al., 1965; Mikheeva and Trebukhov, 1975; Radulescu et al., 2014). The obtained data (Table 1) were compared with regulatory requirements for the quality of therapeutic mud (Mikheeva and Trebukhov, 1987; Adilov et al., 2000), and published data on exploited peloid deposits, including the Dead Sea (Nissenbaum, 2002; Myazina, 2013; Belenitskaya, 2013; Kotova et al., 2015; Lopatina, 2016; Dikke, 2016; Kovtun, 2017; Malkhazova et al., 2019; Kalioujnaia et al., 2019; Akhmedenov, 2020a).

The study of hydromineral resources is closely related to the problem of determining the need to determine the degree of their suitability for the development of health and ethnographic tourism. To this end, numerous published research materials carried out in the territory under consideration in different years were used. Based on the generalization of hydrogeological, geomorphological and geoecological materials on the state of salt lakes, as a result of expeditionary and laboratory studies, we established differences and similarities in the chemical composition of water and therapeutic mud, and assessed the recreational potential of salt lakes in West Kazakhstan region.

RESULTS AND DISCUSSION

Based on the analysis of literary sources and survey data, 40 salt lakes with natural accumulations of therapeutic mud and healing water were allocated in the West Kazakhstan region (Sdykov et al., 2010):
- in Shyngyrlau district there are 3 lakes: Akkol, Sorkol, Kindikty;
- There are 7 lakes in the Syrym region: Aydar, Ashy, Zhangabylsor, Esentemir, Aybar, Dongelexor, Tuzsay;
- in Taskalinsky district there are 2 lakes: Bolshoy Sor, Nurlybaisor;
- in Terektinsky district 1 lake: Alzhansor;
- 7 lakes in Akzhayyk region: Tuzdykol, Zhienbaysor, Baigutty, Koltai, Aralsor, Zhaltyrkol, Koisary;
- in Zhangalinsky district there are 3 lakes: Sorkol, Sarykol, Maly Kyzyloba;
- There are 11 lakes in the Kaztalov region: Araltobe, Batpak, Bayar, Edilbaysor (Bolshoi and Maly Sakryl), Shoityn, Akkol, Kazbek sor, Zhalpak, Kamystykol, Turkesor, Tagaysor;
- in Bokeyorda district there are 4 lakes: Aralsor, Batpak, Hakisor, Botkul;
- in Karatobinsky district 1 lake: Zhibexsor.

For a more detailed study, we have chosen 4 lakes: Alzhansor, Bolshoy Sor, Sorkol, Hakisor. One of the criteria for assessing the balneological properties of therapeutic mud is their chemical composition. Therefore, we conducted a study of the chemical nature of the mud of the salty lakes of West Kazakhstan region. The results of the studies were compared with the Dead Sea peloids (Table 1, Figure 2 and 3). A study of some lakes in West Kazakhstan region showed that the composition of their therapeutic mud is not inferior to the quality of the healing mud of the Dead Sea. The Dead Sea is a deep-sea saline basin corresponding to a tectonic lake located in a shear-type structure within the Afro-Arabian inner-intercontinental folding belt (Belenitskaya, 2013). Comparative results of analysis of basic physicochemical properties of Dead Sea peloids and lakes of West Kazakhstan region determining their balneological value are presented in Table 1.

Table 1. The main physicochemical parameters of the peloids of the WKO lakes and the Dead Sea
Data source: (personal original data, and also Lopatina, 2016; Dikke, 2016; Kovtun, 2017; Adilov et al., 2000)

Indicators and standard	The Dead Sea	Alzhansor	Bolshoy Sor	Sorkol	Hakisor
Humidity, 25-75	37.17	47.3	40.1	27.9	23.1
Volume weight, g / cm³, 1.1–2.0	1.77	1.47	1.65	1.88	1.80
Shear resistance, dyne / cm², 1500-4000	1153	4090	3196	1990	31500
Particle contamination 0.25-5.00 mm, <3.0	0.03	1.4	1.06	20.7	0.2
Mineral inclusions with a size of >5.0 mm, no	absent	sand, plant residues	absent	sand, small stones	absent
pH, 7.0-9.0	5.7	7.97	7.11	8.39	7.21
Oxidation-reduction potential, Eh, mb –500–0	+230	+310	+214	+394	+112
Heat capacity, cal / g. hail, 0.4-0.8	0.497	0.579	0.521	0.423	0.385
Iron sulphides, % for wet mud, not less than 0.01	0.04	0.1	<0.1	<0.1	0.2
Mineralization of mud solution, g / dm³, >150	320.7	152	124	195	160
Bromine, mg / dm	5985	1043	1238	1394	1208
Boric acid, mg / dm³	163	8.10	3.00	23,60	8.90

Humidity, volumetric weight and shear resistance of the Dead Sea peloids and the considered lakes of the West Kazakhstan region, which determine the viscous plastic properties of the peloids, are within the normative values (Table 1),

which allows them to be used in their natural form, without preliminary liquefaction. High heat capacity values allow mud to accumulate a fairly large amount of energy during heating and contribute to a slow heat release during balneoprocessing. The pH value and negative redox potential characterize the peloids as a substrate in which reducing processes take place. According to the totality of the main physicochemical indicators, the peloids of the Dead Sea and lakes of West Kazakhstan region meet the criteria for the suitability of silt sulphide mud for medical procedures.

Peloids lake Sorkol for most physicochemical indicators also meet the criteria for the suitability of silt sulphide mud. However, the high degree of clogging of samples lake Sorkol (20.7%) with mineral particles with a diameter of 0.25-5.0 mm reduces the plastic properties of dirt, and the presence of solid mineral inclusions larger than 5 mm can lead to damage to the skin during balneoprocedure. Therefore, before use they must be brought to the appropriate regulatory parameters by pre-treatment on vibrosites to remove sand and fine stones, as well as by dissolving crystals of salts with fresh water, while maintaining the recommended humidity values (25-75%) (Mikheeva and Trebukhov, 1987; Zhuravleva, 2008). The main therapeutically valuable components of lake peloids are water-soluble salts, sulphides and hydrogen sulphide, as well as a number of trace elements - bromine, boron and iodine. The largest content of bromine and boric acid is observed in Lake Sorkol (1394 mg/dm and 23.60 mg/dm³), which is more comparable to the Dead Sea. Dead Sea mud is characterized by the lowest sulphur content (0.4-0.8%) compared to West Kazakhstan region lakes (10-44%), as well as the highest calcium content (9-13% against the background of 0.7-2.6% in the mud of West Kazakhstan region lakes). Only lake Bolshoy Sor in terms of calcium content (14%) is comparable to the Dead Sea. The amount of chlorine in the mud of all West Kazakhstan region lakes varies from 55 to 97%, which exceeds the chlorine content in the Dead Sea (5-10%) (Kotova et al., 2015).

Obviously, the relatively low sulphur content is due to the small amount of sulphates in the mud of the Dead Sea, which is consistent with the established mineral-salt type of these mud - chloride-carbonate; it is believed that it was the apparent predominance of carbonates in the mud of the Dead Sea that caused a relatively high calcium content in their composition (Nikanorov, 2001). At the same time, the mineralization of the peloids lakes Karabatan and Sorkol are significantly higher than the rest of the lakes of Western Kazakhstan (Nikanorov, 2001) (Figure 2).
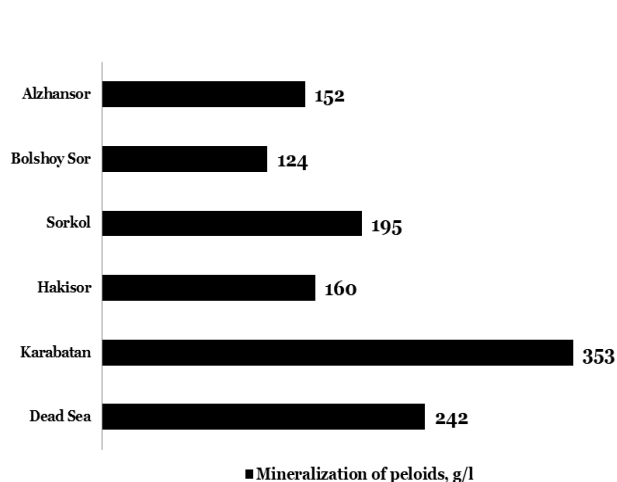
Figure 2. Mineralization of peloids of lakes in Western Kazakhstan and the Dead Sea Data source: (personal original data, and also Khalelova et al.,2020)
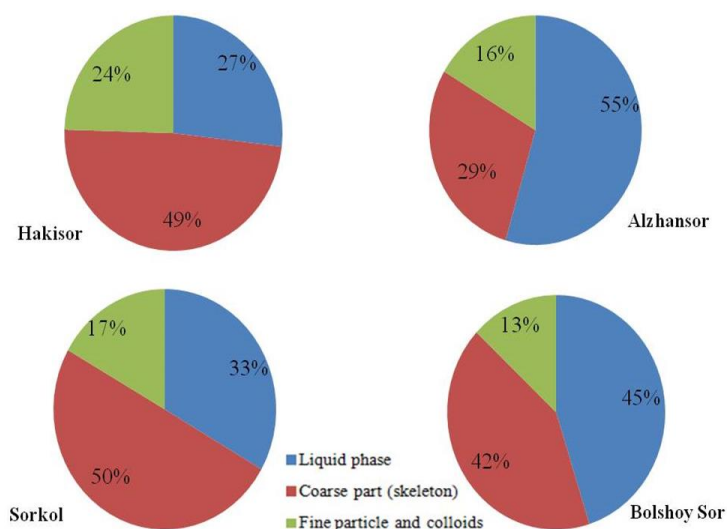
Figure 3. The ratio of the components of the structure of the peloids of the lakes of West Kazakhstan region, % (Data source: personal original data, and also Khalelova et al., 2020)

In terms of ionic composition and mineralization, the peloids and cover waters (rapa) of the lakes of Western Kazakhstan are fairly typical strong brines - chloride-sulphate sodium (Sorkol, Hakisor) and chloride sodium-magnesium (Bolshoy Sor, Alzhansor), sulphate-chloride-sodium. The ratio of three interconnected components of the structure of peloids - the liquid part, the coarse-dispersed part (backbone) and the colloidal complex, is also one of the indicators determining the balneological value of mud (Olefirenko, 1986; Zhuravleva, 2008; Muradov, 2014; Fedotchenko, 2010). The analysis showed that the peloids of lakes have great skeletal strength and a high content of liquid fraction (Figure 3).

Sufficient saturation with the colloidal complex (Hakisor 24% and Sorkol 17%) determines the good plasticity of mud, its moisture intensity and thermal properties (Khalelova et al., 2020). At the same time, in the skeleton of the peloids Lake Sorkol and Hakisor there is a high content of calcium carbonates (23.5%) and (2%), respectively, and in the skeleton of the peloids oz. Alzhansor, Bolshoy Sor - a significant amount of gypsum (6.3%) and (12.5%), which can negatively affect the viscoplastic properties of mud. Among the peloids we studied, there was a high content of organic substances in Lake Bolshoy Sor (2.09%) and Sorkol (1.58%), Alzhansor (1.40%), the smallest in Lake Hakisor (0.19%). These indicators are higher than in the mud of the Dead Sea, but there is a similarity with the continental sticky hydrosulphide peloids of Mongolia. In the salt lakes of Mongolia, the concentration of total organic carbon in all continental sticky hydrosulphide peloids is 0.4 to 3.1% (Tserenpil et al., 2010). For our region, the therapeutic value of the studied peloids is enhanced by the presence of organic substances in them, due to the activities of galobiont microorganisms (gill-legged crustaceans *Artemia salina*) found in samples, enriching dirt with biostimulants (humic substances, enzymes, vitamins, hormones, etc.). The

solution squeezed from such mud can be used as an independent treatment agent in the form of compresses, lotions, rinses and other procedures, as well as for the production of drugs and cosmetics (Khalelova et al., 2020).

In general, the mud of West Kazakhstan region lakes is characterized by higher organic content compared to the Dead Sea. Thus, our results suggest that the presence of known bioactive organic compounds such as humic acids, lipids and carbohydrates, as well as hydrogen sulphide, increases the balneological value of the peloids of West Kazakhstan region.

All of the above mentioned components are balneologically significant and have beneficial effects in the treatment of musculoskeletal system, cardiovascular system and other diseases. Lakes are popular and in summer tourists come here in large numbers to take medical and recreational procedures. From the point of view of medical recreation, the chemical properties of lake waters are of particular interest. The medicinal importance of lakes consists of many factors, and above all, depends on the composition and content of salts in their waters and the characteristics of therapeutic mud. It is well known that swimming in salt water in combination with air-solar procedures has a healthy and generally strengthening effect on vacationers, which attracts tourists to the salt lakes of West Kazakhstan region. At the same time, our research has made it possible to solve a number of independent, equally important issues related to the assessment of the prospects for using the therapeutic mud of the salt lake for tourist and recreational purposes. We have evaluated promising salt lakes with silt mud for recreational and tourist use, these are lakes Hakisor, Alzhansor, Edilbaysor, Koysarysor (Figure 4).

Figure 4. Perspective balneological salt lakes of West Kazakhstan region: A - a general view of Lake Hakisor;
B - a general view of Lake Alzhansor; C - a general view of Lake Edilbaysor; D – a general view of Lake Koysarysor

Lake Hakisor is located in the Bokeyordinsky district of the West Kazakhstan region and represents the final phases of the lakes die-off in an arid climate - the phase of salty mud, periodically and not completely covered by a thin layer of cover waters (rapa). Hakisor is one of the largest salt marshes in the world, covering an area of   more than 1000 square kilometers (Figure 4). In length, this saline reaches 80 km, its width is 15-25 km, and the depth of the depression containing it is more than 15 m (Abaturov and Konyushkova, 2020). The surface of Hakisor is covered with a thin crust of salt 0.3-3 cm thick, under which saline clay deposits lie. In spring, the surface of Hakisor is covered with a thin layer of cover waters (rapa), which in summer is preserved only in micro-depressions (Abaturov and Konyushkova, 2020).

Lake Alzhansor is located on the territory of the Terektinsky district of the West Kazakhstan region, 22 km south of Lake Shalkar, 15 km northwest of the Kuralysay village, 110 km southeast of the Akzhayyk sanatorium and 10 km east of

the Duana village. The area of the lake is 0.2 square kilometers. The lake is included in the list of objects of the state nature reserve fund of republican significance by Decree of the Government of the Republic of Kazakhstan No. 932 dated September 28, 2006. The banks are steep, their height is from 2 to 5-7 m (Figure 4). By origin, the salt-domed negative structure. In the north-eastern part of the lake flows a small drying river, which is fenced with dams.

The lake has balneological significance, the local population considers it a holy place. Edilbaysor has a mineral aquifer covering an area of 5.5 square kilometers (Figure 4). Mud and water have healing properties and used for the treatment of joint diseases. According to legend, in the 19 century in this lake for three days Zhangir Khan (khan of the Bukeyev horde (1823 − 1845)) took medical procedures, arriving on the lake on three pairs of horse carts. In Kaztalov and Zhanazhol rural districts where the salt lake is located a large number of people from the eponymous genus "Edilbay" live and breed sheep of the Edilbay breed. On the watershed of the Karaozen and Saryozen rivers there are two salty lakes - the Bolshoy Salty Sakryl and the Maly Salty Sakryl. They are known from the local population called Edilbaysor and are huge dried closed salty basins filled only with melted spring waters. For most of the year, salt water is kept only isolated from each other by small areas. Lake Bolshoy Sakryl is located 30 km northwest of the village of Zhalpaktal. Maly Sakryl is located half a kilometer south of Bolshoy Sakryl. The area of   Lake Bolshoy Sakryl is 260 square kilometers, Lake Maly Sakryl - 70 square kilometers. At the bottom of the Bolshoy Sakryl there are several gas-bearing springs, the mud of which is considered high-healing by the local population (Ivanov, 1951). A series of gas springs is located in the south-eastern part of the lake on a peninsula stretched parallel to the shore and connected to it by a narrow isthmus.

Lake Koysarysor (Figure 4) is located 8 km north of the Zhamankuduk village of Bazarsholansky rural region, Akzhaik district, West Kazakhstan region. Nearby is the necropolis of Koysary Aulie, where the Koisary batyr from the Kazakh clan Alash is buried. On the old Soviet map it was marked as "Karagaimola". According to legends, earlier Koysarysor was a freshwater reservoir. Before Koysary's death, the batyr told descendants that after his death, this lake would turn into salty weed, and his dirt would treat the sick. The place is revered as holy and in 2006 one of the descendants of Koysary batyr built a mausoleum of red brick. In West Kazakhstan region, the national tradition of using salty lakes has been preserved. In the West Kazakhstan region, July-August months are called the "salt month." This is the time to "plunge" into the healing black mud of a salty lake and get treatment. There are many such healing places in the region. Traces of their spontaneous use for self-treatment in salt lakes are found almost everywhere. But, unfortunately, its civilized use, the creation of modern health facilities and public service are not established. At the height of the year, which the Kazakhs call "forty days of July," the older generation gathered on a salt lake to adopt medical procedures. Almost every salty lake has a saint protecting this healing place. There are special rituals for the use of salty lakes for medicinal purposes. At first they visited the burial place (grave) of the saint, prayed and tied nodules of white cloth with coins at the grave of the saint. Then, a yurt was placed on the shore of a salty lake and cattle were slaughtered. While women care for the hearth boiler, men dig a "well" with a wide top and a narrow bottom near the shore of the salty lake. A little later, the bitterly salty water of the lake begins to accumulate to the bottom of the pit. This water is needed to wash away healing mud. And pits with healing mud are dug closer to the center of the lake 10-15 meters from the shore of the lake. You can't swim in salt on a hungry stomach.

The time of treatment mud is also limited, lasting no more than one hour. Then they completely wash the salt water of the lake and dress densely. More often, procedures with therapeutic mud are taken three times at certain intervals. In the break between procedures, you need to drink hot tea and lamb broth. The main condition is not to wash up to three days after the adoption of procedures. Dress tightly, avoid wind and cold. These days, human skin is especially softened, often sweating, salt is absorbed into the skin and the surface of human skin remains white. Only three days later, a person completely washes up with clean water and changes clothes. Leaving such a "sanatorium" people tie a handkerchief with a monetary trifle, a multiple of 7 - for good luck. Each year, a person who had undergone such treatment was cleared of skin diseases and drove away the cold accumulated in the joint. We can say that the centuries-old traditions and customs of using healing mud and salts remain unchanged. Salty lakes of West Kazakhstan region are far from classic tourist places.

Salt lakes attract many visitors, who are mainly attracted to the healing properties of salt water and mud. For the development of tourism on the salty lakes of West Kazakhstan region various options for tourism can be combined (environmental tourism, ethnographic tourism, gastronomic tourism, health tourism). It is possible to develop ecological trails using medical procedures. To organize one-day and three-day tours. Along the coast of the lakes establish stands with information about the lake and legends about its origin. To place visit centers, put Kazakh yurt, place structures with rooms - shower, toilet and locker room. Developing an ecological trail, it is possible to imagine Kazakh culture here, this is a free niche in the market of tourist services in West Kazakhstan region, this idea should be in demand. One of the main problems is the remoteness of objects from civilization and off-road. But this can also be used as an advantage by organizing jeep tours - trips to salty lakes on off-road. At the same time, it is not necessary to build expensive fashionable hotels with helpful staff or sanatoriums, although this can be organized on some large lakes. West Kazakhstan region salt lakes are not inferior in medicinal properties to world sights, like the salt lake Uyuni in Bolivia, the Dead Sea in Jordan, the hot spring Kangal in Turkey and the Blue Lagoon in Iceland (Atkinson, 2007; Kotova et al., 2015; Ozer et al., 1987; De Almeida, 2018).

We consider ethnographic tourism as one of the possible strategic directions for preserving and developing the economy of traditional agriculture, contributing to the preservation of natural and historical and cultural heritage and is a factor in the sustainable development of territories. The Kazakh people are the bearers of a unique culture and economic system, therefore, the development of ethnographic tourism is promising in conjunction with the development of ecological and recreational tourism in West Kazakhstan region. Despite the presence of salty lakes in the West Kazakhstan region, they do not have official medical reports for use, except Lake Alzhansor. According to a medical report issued on 29 May 2014 by the Research Institute of Cardiology and Internal Diseases (Almaty), the mud of Lake Alzhansor belongs to highly mineralized medium-

sulphide silt mud with operational reserves of therapeutic peloids of 1-5 thousand cubic meters per year. The hydrological system of salt lakes and their surroundings is extremely vulnerable to climate change and human intervention, but available local and regional information is scarce. Examples of negative changes in salt lakes during their irrational use are known.

For example, Lake Elton [49 ° 08 ′ N 46 ° 42 ′ E] in Russia with a surface area of 155 square kilometers and salt water with a salt concentration of 300 grams per liter is known as one of the largest and most salty inland lakes in Europe. After the high water flooded the Elton health resort on the lake in 2005, dams were constructed to prevent future floods and mudflows. However, the resort uses mineral-rich mud to treat skin diseases, and dams seem to threaten the existence of mud, reducing the amount of sediment entering the lake (Argaman et al., 2012). Therefore, it is very important to understand the hydrological system before interfering and dramatically changing the dynamics of a fragile system, such as a salt lake.

CONCLUSION

1. The origin and basic properties of the peloids of the studied lakes correspond to the genetic type of mainland silt mineral (sulphide) therapeutic mud typical of arid regions. According to the composition, the main organoleptic and physicochemical indicators, the absence of heavy metals and the peloids of the salty lakes of West Kazakhstan region as a whole meet the criteria for the suitability of silt sulphide mud for medical procedures.

2. Own deposits of therapeutic mud served as the basis for the development of health tourism. However, the unique natural healing resources, which ensure the high efficiency of treatment of most diseases and recovery of the population, have not yet been properly used. In this regard, the need for a comprehensive study of the peloids of the salt lakes of Kazakhstan with the prospect of building balneological centers is ripe. Salty lakes of West Kazakhstan region have potential for their use in health and ethnographic tourism.

3. Currently, the most famous and curative reservoirs in West Kazakhstan region are salt reservoirs - this is Lake Alzhansor, the therapeutic mud of which is already used in local sanatoriums. Other lakes the Bolshoi Sor, the Sorkol, the Hakisor, the Edilbaysor and the Koysarysor listed above are less popular and little mastered, although they have balneological properties, and therefore they are promising for use in medical and recreational purposes.

4. As a result of the work done, it is recommended to organize recreational complexes for tourists who rest without trips for the purpose of tourist and recreational use of salt lakes. With appropriate engineering improvements, the recreational potential of the lakes will increase significantly. At the first stage of the work, it is necessary to create summer towns in a tent, light prefabricated version; arrangement of tent sites; construction of sanitary units and waste collectors; accommodation of trading tents-pavilions. In the next stages - the construction of tourist centers, holiday homes for families with children, campsites, etc. For organizational works it is necessary to conduct a survey of the recreational resources of salt lakes, determine the sustainability of the natural landscapes of these places, calculate the number of tourists, determine the needs for quantities and types of recreational facilities, develop a model of the tourist system and environmental routes.

6. The spontaneous use of therapeutic mud leads to their depletion and microbiological pollution. Lakes need protective events and a comprehensive study of its therapeutic and recreational resources for the purpose of their rational use, in the study of the resort and recreational potential of the lake and the surrounding area.

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UNDERSTANDING YOUNGER TOURIST' INTENTION
TOWARD ENVIRONMENTALLY RESPONSIBLE BEHAVIOR

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Abstract: Despite the significant contribution of the tourist growth to the economics, besides the concern of its impact on the environment has gained much attention. This integrated green image in the theory of planned behavior to determine the factor influencing Younger tourist environmentally responsible intention behavior particularly recycling behavior intention. The study identified the factors influencing tourist environmentally responsible behavior within the lens of the theory Of Planned Behavior (TPB). The framework was tested with regression analysis with data collected from 229 younger traveler visiting in Bali, Indonesia. The result showed that environmental attitude, subjective norm have a positive impact on younger tourist environmentally responsible intention (recycling intention). Whereas, perceived behavior control does not influence intention. Further, Destination Green Image has a positive impact on environmental attitude. This finding provide an additional knowledge and understanding to the existing body literature of tourist behavior particularly in context of tourism environmentally responsible behavior. Practical and theoretical implication for sustainable tourism are proposed on this study.

Key words: Recycling, sustainable tourism, younger, Indonesia, intention behavior, environmentally responsible behavior, tourist behavior

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INTRODUCTION

The increasing demand in tourism industry has a potential positive contribution to the global economic (Han et al., 2016; Janmaimool and Khajohnmanee, 2019). The tourism industry has the fastest market growth, and this growth brings an enormous benefit to the tourist destinations in any sides such as improving the economics, socio-cultural and environment (Chia et al., 2020). However, this rapid transformation makes the tourism industry more vulnerable cause by the human activity; consumption pattern and human mobility. Despite the fact that tourism activities have positive contribution also bring about enormous challenges to the local communities local environment (Landon et al., 2018; Biswas et al., 2000).

Maintaining the environmental quality is one way to foster a prosperous sustainable tourism industry. Although individuals are aware of the consequence of their behavior, consumption pattern, the tourism destination is often facing the challenges such as a waste generation andpollution. Some studies indicated that tourist post-consumption behavior brings a major negative impact to destination environment (Nunkoo et al., 2019; Zhang et al., 2019a; Zuo and Huang, 2019; Patwary et al., 2020). This is due to the fact that people are less environmentally friendly when traveling (He et al., 2018). Budeanu, (2007) noted only small percentage of tourism engaged in sustainable behavior when traveling.

With reference to Arbulu et al., (2017) in study related to the impact of tourist, they noted that the increasing number of tourists on arrival would increase the waste generation flow. Yet, during the pandemic Covid-2019, this issue has decline due to some regulation and restriction, and the environmental quality improves. Yet, understanding the tourist behavior and what drives that behavior is needed in order to tackle these issues in a long run.

The study focused on environmentally responsible behavior (ERB) has gained much attention from various fields and become a distinguished topic interest in tourism research (Xu et al., 2019; Han et al., 2016; Kiatkawsin et al., 2020; Najib et al., 2020). TERB refers to the tourist's commitment to contribute in minimizing the environmental impact caused by the consumption pattern (Kiatkawsin et al., 2020). Tourist environmentally responsible behavior (TERB) have been conceptualized differently depending on the context. TERB is referred to by different scholars as the behavior related tourist concerned about the environmental problem namely littering behavior, environmentally friendly behavior and so on (Cheng

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and Wu, 2015; Han et al., 2016; Kim et al., 2017; Xu et al., 2019). In this work we conceptualized tourist environmentally responsible intention behavior (TERIB) as the tourist's intended behavior to recycle their waste when traveling (Nindyati, 2015; He et al., 2018). Studying TREB is crucial in promoting sustainable tourism in tourist destination (Lee and Jan, 2015; Cheng and Wu, 2015; Pan and Liu, 2018; He et al., 2018). Prior scholars argued that TPB is one of the most relevant theory to explain the TERB (Wang et al., 2019). Theory of Planned Behavior (attitude, intention behavior, subjective norm, and perceived behavior control) is considered as a suitable theory to predict individuals' intention to engage in sustainable behavior (Han et al., 2016; Han et al., 2018; Landon et al., 2018). The present study aims to explore younger tourist environmentally responsible intention behavior using extended Theory of Planned behavior. This model integrated destination Image in the lens of theory of planned behavior. Prior urged that tourists are more likely to engage in environmentally friendly way in tourist destination area that is perceived as a green destination (Pan and Liu, 2018; Ashraf et al., 2019).

Han et al., (2018) explained that green destination image can elicit one's behavior to support a green behavior. Hence, it's coherent to assume that green image can influence TERIB. However, to the best of our knowledge there is little done in addressing the question on Does destination green image influence the TERIB. This propose to identify the determinant of this particular using extended theory of planned behavior, among younger tourist in Bali, Indonesia. The objectives are (1) to determine the relationship of environmental attitude, subjective norm, perceived behavior control and green image on ERIB; (2) to determine the mediating role attitude in the relationship between green image and younger tourist environmentally responsible intention behavior (YTERIB). The findings expected to determine the factor influencing young tourist intention behavior to expand to the literature of TERB. In respect to provide an additional understanding for managerial implication and policy implication in shaping a strategy to promote sustainable behavior (recycling) in tourism destination.

TPB and Tourist Environmentally Responsible Intention Behavior

The theory of planned behavior (TPB) (Ajzen, 1991) is one of the prevalent theory to determine ones' behavior. TPB suggested that behavior is determined by intention behavior (Ajzen, 1991). Intention refers to the tendency and probability of an individual to perform a certain behavior in the future. Ajzen (1991) advocated three elements that determined intention namely attitude, subjective norm and perceived behavior control. This study expended TPB with destination green image to explain the YTERIB particular in recycling. Past scholars have argued that TPB is the fundamental theory to examine pro-environmental behavior related (Han et al., 2018; Hu et al., 2018; Kumar, 2019 Clark et al., 2019; Tweneboah-Koduah et al., 2019). TERB refers to the contribution of tourist to minimize the negative impact and protect the environment through their activity during their traveling. TERIB refers to the intended behavior of tourist to engage in environmentally friendly when traveling, including recycling, choosing eco-tourism destination (Zhang et al., 2019), littering (Arrow et al., 2017; Hu et al., 2018), choosing eco-friendly and green transportation and actives, energy and conservation, ecological (Chueng, 2016), energy conservation (Lee and Jan, 2015; Han et al., 2016; Fang, 2017; Kiatkawsin and Han, 2017; He et al., 2018; Abdullah et al., 2019; Kim and Stepchenkova, 2019; Su et al., 2019; Janmaimool and Khajohnmanee, 2019; Xu et al., 2019; Zhou et al., 2020).

Environmental Attitude and Tourist Environmentally Responsible Intention Behavior

Attitude refers to the psychological judgment outcome of an individual toward behavior. Ajzen and Fishbein (1980) proposed the most adapted definition of attitude. They refer to attitude as "person's belief and evaluation towards a behavior". Attitude might be favorable or unfavorable, positive or negative, like or dislike (Fang, 2017; Tweneboah-Koduah et al., 2019; Ibnou-laaroussi and Rjoub, 2020). Attitude is categorized in two type namely general attitude and specific attitude. Ibnou-laaroussi and Rjoub (2020), distinguished that general attitude broaden to one's perception toward environmental while specific attitude is the specific perception of an individual such as attitude toward recycling. In this context, author conceptualized general attitude toward environment or environmental attitude to refer one's perception on the environment.

Several studies related to sustainable behavior established that attitude is a best predictor of intention behavior (Cheung and Fok, 2014; Wang et al., 2018; Pan et al., 2018; Liu et al., 2020; Patwary et al., 2020). Previous literature outlines a positive relationship between attitude and intention behavior. Dixit and Badgaiyan (2016) demonstrated that positive attitude encourage individual to support sustainable behavior such as recycling and reuse. Further, Hu et al. (2018) asserted that environmental attitude strengthen the likelihood of an individual to engage in sustainable behavior (recycling behavior).

These evidences are in the same line with the empirical findings of Line and Hanks (2016), Patwary et al. (2020), and Melbye et al. (2017) argued that environmental attitude is positively associated with intention. Further, positive attitude of individual can predict their intention to engage in pro-environmental way (Arrow et al., 2017; Chen and Jai, 2018). Tourists who are more favorable with environment of the destination are more likely they will be engaged in environmentally responsible manner (Wang et al., 2019). Recent study by Khan et al., (2019) followed by Kumar (2019), supported these evidence and concluded that when individuals have a positive perception on the environment they would intend to minimize the negative impact of their behavior on environment. Similarly with findings of Wang et al., (2020) on the study examining pro-environmental behavior among tourists in Zhongshan. In another word, if the degree of positive attitude toward environment increased, the more likely a tourist intends to reduce the environment impact through recycling.

Given these evidence, this study argued that environmental attitude foster young tourist ERBI (recycling intention).

Hypothesis 1: Environmental attitude has a positive influence on younger tourist ERBI

Subjective Norm and Tourist Environmentally Responsible Intention Behavior

Subjective norm refers to the pressure from the social which pushes ones' weather to perform a behavior or not. The

pressure might come from family members, friends, peers or/and anyone around you who can influence you to act in certain manner or not (Ajzen, 1991). Several scholars urged that environmentally responsible intention of an individual can be predicted with the degree of their social pressure (Khan et al., 2019; Kumar, 2019; Nguyen et al., 2017; Pikturnienė and Bäumle, 2016; Tweneboah-Koduah et al., 2019). Studies show a positive link between subjective norm and intention behavior (Fang, 2017). Hu et al., (2018) proposed that subjective norm is one of the elements that shapes our intention behavior. Suggested by Khan et al., (2019) that increasing the social pressure toward individual they would incline their intention toward pro-environmental behavior. Further, Kumar (2019) asserted that strengthening the social pressures would foster the behavioral intention of individual to support environmentally responsible behavior. Prentice et al. (2019), Wang et al. (2019) and Wang et al. (2019) supported these past findings with the investigation related to TERIB. However, in anticipation to this argument Pikturnienė and Bäumle (2016), Tweneboah-Koduah et al., (2019) and Liu et al., (2020) argued that increasing the subjective norm does not incline the intention of individual to engage in environmentally responsible behavior.

Given to these evidence, this study argued that stronger the social pressure on the younger tourist the more likely they intend to recycle.

Hypothesis 2: Subjective norm has a positive influence on younger tourist ERBI.

Perceived Behavior Control and Tourist environmentally Responsible Intention Behavior
Perceive behavior control refers to "Self-efficacy and perceived controllability are the two factors that are associated with behavioral performance" (Ajzen, 1991). Numerous scholars on sustainable behavior considered this construct as a crucial determinant of intention behavior. Previous study illustrated that perceived behavior control is positively related to intention (Hu et al., 2018; Kumar, 2019). In other words, willingness to perform in certain behavior can be explained by the ability of an individuals to control of their action when perform in certain manner. Wang et al., (2019) indicated if individuals possess a higher control of their behavior they intend to perform that behavior. Although, this evidence shows the positive influence of perceived behavior control on intention toward environmentally responsible behavior, these findings are inconsistent to Pikturnienė and Bäumle (2016) and Tweneboah-Koduah et al. (2019). Furthermore, Khan et al. (2019) and Liu et al. (2020) also outlines that perceived behavior control is not associated with intention toward pro-environmental behavior.

Therefore, based on previous argument we assumed that the stronger the young tourist's ability to control on their behavior the higher their intention to engage in recycling.

Hypothesis 3: Perceived behavior control has a positive influence on younger tourist ERBI.

Destination Green Image and Tourist Environmentally Responsible Intention Behavior
Destination image is a subjective construct (Iyer and Reczek, 2017). Destination image define as the physical characteristic, attribute and appearance of the tourist destination that visitors perceived on the destination (Chui et al., 2013). Hahm et al., (2018) refers destination image to the visitor perception about the destination. It has been discussed in the literature of tourist pro-environmental behavior. Green destination image is one of the factor affecting perception and behavior (Cheng et al., 2018). Destination green image refers to the tourist perception on the green attributes of the destination area.

Past empirical tourism research investigated the influence of destination green image on tourist perception (Cheng and Lu, 2013), satisfaction (Bui and Le, 2016) and behavior (Line and Hanks, 2016). Line and Hanks (2016) revealed that destination image is associated to environmentally responsible behavior. Abdullah et al., (2019) proposed that destination green image would be associated with pro-environmental behavior. Previous literature have demonstrated the potential effect of destination green image in inclining intention toward pro-environmental behavior. Carballo and Carmelo (2017), Hahm et al., (2018), and Chen et al., (2018) raveled that destination green image have a positive influence on intention behavior. However, this link is seemingly mediated by attitude; Cheng and Lu, (2013) and Hahm et al., (2018) suggested that positive perception toward the environment of destination area is enhanced by the green destination image. When tourist perceived and believe that the particular destination is aware about the environmental issues, the higher their intention to behave accordingly. In other words, destination green image positively shape the young tourist ERBI.

Therefore, this study suggested that the higher the green image the higher the environmental attitude that leads to higher TERIB.

Hypothesis 4: Destination green image has a positive influence on environmental attitude.

MATERIALS AND METHODS
The model was tested with Data gathered from 229 younger tourists. Survey was conducted in Bali Island, Indonesia (tourist destination area) to investigate the ERIB of younger tourists. Self-administrated questionnaires were used to collect the information using convenience sampling method. The questionnaire consists of three sections: the first part consists of a short introduction about the research topic and instruction about the questionnaire. The second section consists of the demographic in order to gain more information about the participant characteristic including: Gender, Age, Education, Profession, Religion and so on. The third part consists of the questions for each construct: each construct comprised items adopted from prior research which have been well established and validated in various context. Since, the research objective is to identify the ERIB among young travelers. This study targeted individuals between 18 years old and 26 years old (He et al., 2018) who visit Bali Island, Indonesia for tourist purpose. Respondents must require to acquire a general knowledge about research topic. The usable data collated from the survey were processed and analyzed with the help of SPSS23 and

eViews10, linear regression were conducted to statistically analyze and test the model. Measurement model evaluation will be conducted including reliability, validity and assumption classic. All the construct was adapted from previous literature and measured through a self-reported using seven-point likert scale ranging from 1 (strongly agree) to 7 (strongly disagree) (Ciocirlan et al., 2020). All the items used to measure each construct were borrowed and modified from previous literatures (Table 2). Tourist behavior intention to reduce waste (recycling and Reuse) was measured with five items adopted from Ajzen (2002), Chu and Chiu (2003), and Lizin et al. (2017). Environmental attitude was conceptualized with four items borrowed from Lee and Jan (2015) and Janmaimool and Khajohnmanee (2019). Subjective norm was measured with four items borrowed from Ajzen (2002), Kumar (2019); Nguyen et al. (2017), Pikturnienė and Bäumle (2016). Perceived behavior control was measured with two items adapted from Kumar (2019), and Pikturnienė and Bäumle (2016). Destination green image was operationalized with four items adapted from Han et al. (2018).
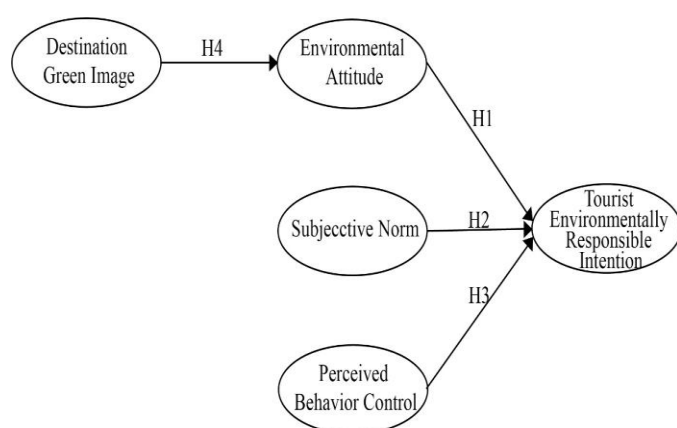
Figure 1. Conceptual framework (Source. Extended TPB (Ajzen, 1991) conceptualized by Author)

Table 1. Sample Characteristic

Gender	N	%	Level of Education	N	%
Female	147	64.2	Secondary School	21	9.2
Male	82	35.8	Sophomore	42	18.3
Total	229	100	Bachelor degree	115	50.2
			Master degree	46	20.1
Age	**N**	**%**	Others	5	2.2
18-20	15	6.6			
21-23	75	32.8	**Occupation**	**N**	**%**
24-26	139	60.7	Student	134	56.5
			Government	18	7.7
Length of Stay	**N**	**%**	Private sector	29	9.3
Less than 2 Weeks	66	28	Entrepreneur	39	18.5
2 Weeks- 1 month	162	70.7	Unemployed	11	4.8
More than 1 month	1	4	Others	8	4.4

Sample characteristics

Table 1 represents sample characteristics of the 229 respondents in this study. The sample consists of 82 (35.8 %) male and 147 (64.2%) female. The sample age ranged as follows: 18-20 present 6.6%, 21-23 present 32.8%, 24-26 present 60.7%. Participants having finished secondary school were 21 (9.2%), finished sophomore 42 (18.3), 115 (50.2) have a bachelor degree and 46 (20.4) hold a master degree, other 5 (2.2%). The length of stay of the majority of the tourist in Bali island between 2 weeks to 1 month 162 (7.7%).

Reliability and validity were assessed to determine the consistency and accuracy of 5 variables and 19 items used in this study (Hair, 2014) see Table 1. The result of the KMO and Bartlett's test (KMO score= 0.940, chi-square= 29976.353, df=190, p= 0.000) and the Chronbach'Alpha score of the 18 indicators were 0.920. Thus, this indicated that the measure used were reliable as the Chronbach's Alpha score meets the criteria by Sekaran and Bougie, (2016) which required to be above 0.7. Further, the loading factors of each indicators were ranged from PBC=0.554, ATT=0.933, DGI= 0.881, SN= 0.621 and TERIB= 0.898. The loading factors of each indicators met the requirement above 0.40 by Hair et al (2014).

Table 2. Reliability and validity test

Constructs	Items	Construct Retained	Factor loading	Cronbach' Alpha
Destination green image	- "In general, the destination has a fine environmental reputation in the minds of its visitors". - "The tourist destination has a clean and natural environment". - "The tourist destination has an exotic natural atmosphere". - "I think that the tourist destination has a strong eco-friendly activities".	-DGI1 -DGI2 -DGI3 -DGI4	0.619 0.793 0.625 0.822	0.881
Subjective norm	-"My friends would approve of me performing recycling". - "Most people who are important to me think that I should recycle". - "My government expect me to minimize my waste".	-SN1 -SN2 -SN3	0.435 0.569 0.710	0.621
Perceived behavior control	- "If I wanted to, I would not have problems in succeeding to recycle my waste". - "I have full control over recycling my waste".	-PBC1 -PBC2	0.557 0.744	0.554
Environmental attitude	-"We are approaching the limit of the number of people the earth can support". -"Humans have the right to modify the natural environment to suit their needs". - "The balance of nature is very delicate and easily upset". -"The earth is like a spaceship with very limited room and resources".	-ATT1 -ATT2 -ATT3 -ATT4	0.840 0.842 0.883 0.829	0.933
Intention to recycle	-"I plan to make plans to engage in recycle regularly during my traveling" -'I am willing to engage in environmentally responsible behavior when traveling" -"I intend to recycle my waste". -"I probably support recycling to reduce the negative impact of trip to the environment". -"I will engage in environmentally responsible way such as recycling during my visit".	-TERIB -TERIB -TERIB -TERIB -TERIB	.779 .802 .755 .733 .802	.898

Assumption classic

Breusch-Godfrey Serial Correlation LM Test assessed to identify the auto correlation problematic. The result shows (F= 0.221, R2= 0.456, *p*. F = 0.801, *p* Chi-square= 0.796) the *p*. chi-square is > 0.05, means that the model is autocorrelation problematic free. VIF was demonstrated to identify the multicollinearity problematic. Table 3 shows that that the VIF of each constructs are between 0.1 and 10 indicated that there was no mutlicolinearity found. Further, heteroskedasticity ARCH test issue were identify the heteroskedasticity problem. The P chi-square required to be greater that the significant level. The result (F=1906, R^2 =9,235, *p* F (1,211) = 0.099, *p* Chi-square=0.100) indicated that there is no heteroskedasticity problem found. Table 4 shows the correlation of TPB and destination image to identify the correlations, the table shows that each correlation were significant and did not exceeded 0.8 (Akoglu, 2018).

Table 3. Variance Inflation Factors

	Coefficient	Uncentered	Centered
Variable	**Variance**	**VIF**	**VIF**
C	0.067	52.476	NA
ATT	0.003	95.025	2.116
SN	0.001	50.964	1.730
PBC	0.001	31.671	1.304
DGI	0.001	25.769	1.248

Table 4. Correlation of TPB and destination Image

	ATT	DGI	PBC	INT	SN
ATT	1				
DGI	0.445 ***	1			
PBC	0.471 ***	0.234 ***	1		
INT	0.802 ***	0.375 ***	0.398 ***	1	
SN	0.643 ***	0.304 ***	0.381 ***	0.660 ***	1

Note: Significant level ***<0.001

ATT: Attitude, DGI: Destination green Image, PBC: Perceived behavior control, SN: Subjective norm, INT: Intention

Table 5. Regression analysis

	Variable	β	S.E	t	p-value
	C	0.696	0.259	2.686	0.007
H1	ATT> INT	0.644	0.055	11.556	***
H2	SN> INT	0.219	0.044	4.944	***
H3	PBC>INT	0.000	0.033	0.008	0.993
H4	DGI> ATT	0.340	0.045	7.490	***

Note: Significant level *<0.05, **<0.01, ***<0.001

RESULTS AND DISCUSSION

The regression analysis was conducted to confirm the proposed model Table 5. The model is relatively good with R^2 (0.679), Adjusted R^2= 0.673, S.E. of regression= 0.541, F-statistic 118.726) with p (F-statistic) < .000. The 67% the variance in TERB is explained with the model.

The regression analysis shows a significant positive influence of environmental attitude on intention (H1) with (β: 0.644, S.E: 0.055; t-statistic: 7.490), and a p-value 0.000 which is < 0.001 significant level. Thus, the finding supported the H2. The hypothesis H2 suggested that subjective norms have a positive influence on environmentally responsible intention behavior (ERIB). The regression result supported the hypothesis with (β: 0.219, S.E: 0.044; t-statistic: 4.944), and a p-value 0.000 < 0.001 significant level. Thus, H2 was supported. The hypothesis H3 posits that perceived behavior control has a positive influence on ERIB. The Table demonstrated (β: 0.000, S.E: 0.033; t-statistic: 0.008), and a p-value 0.993 greater that the significant level. Therefore, the statistical result did not support the hypothesis H3. Hypothesis H4 determined the positive influence of destination green image on ERIB. The result statistically showed a (β: 0.340, S.E: 0.045; t-statistic: 7.490), and a p-value 0.000 which is < 0.001 significant level. The finding supported the proposed hypothesis H4.

Previous study suggested that the TPB elements (attitude, Subjective norm, Perceived behavior control) are the primary antecedent of intention behavior (White and Simpson, 2013; Ham et al., 2015; Hu et al., 2018). Few studies have proposed the importance of destination image on the model (Wang et al., 2020). The construct integrated in model explained the 67% of the variance of ERIB, the rest can be explained with different factors which is not considered in this study. This study shows that destination is related to environmental attitude that relationship can enhance intention behavior of tourist. Similarly to past study Ashraf et al. (2019), tourist judgment of the environment determined by their perception of the destination. Tourist would be more favorable with a destination that is considered to be green, destination that have environmental activity related. The green perception that tourist have toward tourist destination area the more they display a positive attitude toward the surrounding environment. Further, positive effect of influence of environmental attitude and subjective norm on ERIB also were found. The findings are consistent with the prior study by Cheng and Lu (2013), Cheng et al. (2018), and Hahm et al. (2018) in which they highlighted the positive impact of these two TPB constructs (attitude and subjective norm) on intention to behave in environmentally friendly when traveling. This work validated the proposed hypothesis that environmental attitude explained intention toward ERB. This finding is in the same line with past empirical study findings Hu el al. (2018) Line and Hanks (2016), Melbye et al., (2017) Arrow et al., (2017), and Wang et al., (2020). When younger tourists have higher positive attitude toward the environment tourist destination they would behave more environmentally friendly and engaged environmentally responsible way reduce their environmental footprint. They are willing to engage sustainable behavior such as recycling. Thus, this noted that younger tourists considered environmental attitude in respect of ERIB.

The respondents of this study considered the social pressure as driven force of their behavior. This finding supported the previous findings of Hu et al., (2018), Khan et al., (2019), Kumar (2019), and Wang et al., (2020) in which they argued that subjective norm determined intention behavior toward ERB when traveling. This work confirmed that the stronger the social pressure toward an individual to engage in environmental way the more likely they are willing to behave accordingly. Albeit, traveling away from home tied with the idea of seeking a personal freedom, going away from daily life and habit (Xu et al.,

2020). Younger tourists are still tight with their social norm, their intention to support ERB is determined by what social expected them to do. Surprisingly, our findings did not supported the link between perceived behavior control and TERIB. The result shows an insignificant link between perceived behavior control and TERIB. In reference to Pikturnienė and Bäumle, (2016) and Tweneboah-Koduah et al., (2019), Khan et al., (2019), Liu et al., (2020), and Wang et al., (2020) have shown that perceived behavior control does not influence intention toward ERB. This result revealed that the younger tourists did not considered this factor as an antecedent of their intended behavior toward ERB. In other words, they intended to behave in environmental way regardless their ability to take control over behavior.

Hypothesis H1, H2 were confirmed, attitude and subjective norm have positive influence on younger tourists' intention behavior toward ERB. This adds to the literature of ERB in context of younger tourist behavior more specifically in recycling when traveling. Further, the result rejected the H3, although the past study and TPB proposed the idea that this variable is considered to determine intention behavior. This empirical work did not validate the model on (positive influence of perceived behavior control on ERIB). However, few prior study have demonstrated a similar finding with the present study. Furthermore, integrating destination green image increased the variance of the initial TPB model. This research, demonstrated the importance of destination image in the theory of planned behavior in explaining the ERIB in context of younger tourist.

CONCLUSION

The aim of this study is to explain the TERIB by integrating destination image in TPB. The study focused on younger tourist intention to engage in recycling when traveling. The result of this study contributes to the extent of theory of planned behavior in context of ERB. Also, the results showed that younger tourists are attached with their social norm when traveling. They will behave appropriately to the expectations of the people who are important to them. Positive attitude toward the environment encourage younger tourist to minimize the negative environmental impact of their behavior when traveling. The findings also highlight the importance of destination image in shaping sustainable behavior.

Tourist visiting destination that with green activities and have some green attribute are more likely to support the eco-friendly or green manner necessary to protect the environment of the destination. Further, this revealed that perceived behavior control does not reinforce tourist intention to participate in recycling. This study provides a theoretical and practical contribution. Environmental attitude found to be the one of the important factor to be considered in TPB, particularly in TERIB. The current research found that there is a potential contribution of destination green image on TPB. Destination green expressed favorable attitude toward the environmental. This findings contribute to the theory that destination green image plays an important role in theory of planned behavior, it might influence the intention toward environmentally responsible behavior through environmental attitude. Although, the green image of the destination contribute to the TPB, there are some internal factors that future research should be considered that influence the TERIB such as value, knowledge and emotion. For practical implication, tourist destination are encouraged to introduce green environmental practices and provide such eco-friendly activities. Ecotourism and green tourism activities would promote environmental friendly behavior. Based on the findings, tourists are more likely to behave in sustainable manner in destination that they promote green practices. Thus, destination management are encouraged to introduce eco-friendly and/or sustainable activities related to younger tourists. Further, tourist destination also recommended to leverage social norm as it can motivate individual to reduce their environmental footprint when traveling.

Local community are encouraged to set norm that encourage tourists and visitors to support the environmental protection in destination. To illustrate, local community in the tourist destination should promote recycling. The result of this study is not only to propose to improve tourist's environmental behavior but also give an understanding on the significant role that destination itself play in enriching such a behavior. Notwithstanding, there are few limitation that need to be taken into account in this study. Although this study focused on younger tourist behavior, the sample was limited to younger respondents (18-26 year old) which cannot represent the younger generation as a whole. This study was conducted in Bali Island Indonesia, so the result is limited to younger visitors who visited the Island. We recommend future researchers to implement and measure the model in different settings, cross-cultural studies are highly recommended to provide a broader knowledge. Comparison study between domestic visitor and international also should be taken into account. The study was conducted in limited time period, further study should conduct longitudinal studies to provide better understanding on the changes over time. The method implied in this study did not give an explicit result.

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THE EVALUATION OF UNDISCOVERED ARCHEOLOGICAL GEOHERITAGE POTENTIAL – THE CASE OF RUDNA GLAVA SITE (EASTERN SERBIA)

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Abstract: As one of the oldest documented mines in Europe, Rudna Glava should be at the very top when it comes to geotourist visits in Serbia and the Balkans. The research goal is to point out the possibilities of geotourism development in this part of Serbia, while the findings aim to identify the existing problems for geotourism development in the area. The study will analyze the geotourism potential of this archaeological site by using the Geosite Assessment Model (GAM), combining the main and additional values. The GAM involves grades given by experts and provides a relatively actual image of the geoheritage state based on which it is practicable to plan and enhance the activities for the observed sites. The outcomes showed that the observed site has a high score of the main, and a low score of additional values. This means that the site should be additionally protected, and included in various tourist programs.

Key words: geotourism, assessment, GAM, Rudna Glava, Serbia

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INTRODUCTION

Archeological geoheritage, as a unity of the cultural monuments and the corresponding natural environment, is an indicator of paleoecological conditions on the Earth and the people's attitude toward the natural environment. It comprises the settlements and various structures from the prehistory to the Ancient times, as well as the archeometallurgical structures, i.e. old mines and the accompanying ore-processing facilities. In the last decades, the interest of the scientists of different profiles within the geo-sciences has been directed toward creating the inventory of various geoheritage objects and their valorization for the needs of tourism. Scientist from different regions focus their research on the connection between cultural monuments and the natural environment (Kavčič and Peljhan, 2010; Bujok at al., 2015; Goemaere at al., 2015), as well as on the relation of geoheritage and tourism (Endere and Prado, 2014; Ólafsdóttir and Dowling, 2014; Sellier, 2016). Managing the archeological geoheritage and its promotion for tourism purposes is of great importance for its preservation and protection, as well as for the achievement of the appropriate economic effects, employment of the local population, and reconfiguration of the territory it is located on (Lazzarotti, 2003). Greater concentration of archaeological geoheritage objects in one place, i.e. locations in the immediate vicinity of each other, enable joint analysis, which creates an opportunity to strengthen their own values (Ludwikowska-Kedzia and Wiatrak, 2020). It is imperative not only to emphasize their existence, but also to highlight them as possible geotourism resources with their specific archaeological value (Abdelmaksoud, 2020). Geoheritage, as a result of the evolution of the Earth's crust, has outstanding scientific, historical, economic, and aesthetic features (Paungya et al., 2020), and can be an important driver of sustainable development from the point of geotourism (Di Gregorio et al., 2014). Sustainable development does not only refer to activities that protect nature, but also promotes the well-being of the local community. These activities can be carried out through individual tourist visits to geological sites or through guided tours through geotourism routes. The involvement of the local community is reflected through the provision of services of geo-inns, geo-restaurants and geo-souvenirs, with the support of the local authorities in providing the necessary infrastructure, in order to achieve a development of geotourism destination (Hadian et al., 2021). Geotourism is a form of tourism that maintains and

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enhances the identity of the area, taking into account the geology of the surroundings, culture, aesthetics, heritage and well-being of local residents (Matshusa et al., 2021). It is ecologically and culturally responsible tourism, and, at the same time, synergistical, which means that it gathers all the elements of geographical space to create a travel experience that is richer than the sum of its parts and attractive to visitors with different interests (Arora et al., 2020). Geotourism has received its full affirmation within geoparks that serve the preservation of national and geological heritage and are used as local and economic protection. UNESCO has set very high criteria for an area to be included in the global network of geoparks. Geopark management should be such as to eradicate poverty, create jobs for local people and protect the environment (Bhinekawati et al., 2020).

In that context, Rudna Glava, with its potential, should be included in the top ones when it comes to the tourist visits on the territory of the Djerdap UNESCO Global Geopark and eastern Serbia. Many scientists believe that Rudna Glava is the first documented mine not only in Europe, but in the world as well (Jovanović, 1971, 1978, 1982, 1986, 2009; Jovanović and Ottavai, 1976; Borić, 2009; Roberts et al., 2009). The mine was in use in the late sixth and in the first half of the fifth millennium BC, i.e. during the late Neolith, in the times of the Vinča culture, and during the early Eneolithic period. Rudna Glava mine was also occasionally used during the Roman times, in the 4th century. From the Roman times to the Modern ages, the iron ores were exploited from Rudna Glava, and it was the primary ore on this ore deposit, whereas the carbonate copper ore (malachite and azurite) represents the secondary phenomenon (Antonović, 2018). The important fact is that Rudna Glava provides the reconstruction of mining techniques, tools, and processes, and gives a rare insight into the social and symbolic meanings of copper mining in the prehistory. The aim of this paper is to assess the applicability of GAM matrix – the model for determining the tourist potential of Rudna Glava archeological geoheritage object in the context of geoheritage management and geotourism development so that this site could attract more visitors

THE OBSERVED CASE STUDY: RUDNA GLAVA SITE

The region of eastern Serbia, including the border regions of the Carpathians and the Balkans, is characterised by a complex geological structure with eruptive rocks in the central part. Different rocks, according to their origin, such as igneous, sedimentary, and metamorphic, were formed in different periods of the geological history of the Earth, from Paleozoic to Quaternary. They are related to different geomorphologic forms. On the west, there are calcareous ridges of Veliki Greben, Liškovac and the Homoljske Planine Mountains, and Veliki Krš, Kučaj, and Veliki Maljenik, between which lies Crni Vrh of volcanic origin. Southeast and south of the calcareous zone of the eastern Serbia, there are volcanic massifs of Rtanj and Tupižnica Mountains which are mostly composed of andesite. In the southeast is Stara Planina Mountain composed of granite, and Deli Jovan, with the zones of gabbros in the northeast. Here we will mention only the most important metallogenic zones in eastern Serbia that are rich in gold, silver, copper, iron, and lead ores, and which are exploited even today. They are primarily the zone of Bor, with the deposits of copper and gold, and the zone of Poreč – Stara Planina, with the deposit of magnetite (Rudna Glava) and gold quartz trails, and finally, the zone of the Homoljske Planine Mountains – Beljanica, with its quartz trails which contain gold and tungsten. There are also secondary deposits of gold in the valleys of the rivers Pek, Crni Timok and Beli Timok, and their tributaries (Petković, 2009).

Figure 1. Some of the artifacts from the site of Rudna Glava are exhibited in the Museum of Mining and Metallurgy in Bor – upper level, from left to right: stone and bone tools, and so-called "ceramic altar", and lower level: ceramic vessels from 6-5th millennium BC

Figure 2. The map of cultural and natural potentials – the Majdanpek Municipality, Serbia

Figure 3. The observed site – view from the east (Milovanović, 2013)

Rudna Glava ore deposit was researched by Borislav Jovanović in the 60s of the last century. Namely, at the depth of about 12 m below the surface, the miners discovered an 'altar lamp' made of clay and decorated with deer heads which is exhibited in the museum in Negotin. This item attracted the attention of the archeologist Borislav Jovanović and inspired by it, together with Ilija Janković, the director of the Museum of Mining and Metallurgy in Bor (the town in Eastern Serbia), he discovered the shafts and the ceramic of the Vinča culture on the slopes of Rudna Glava (Figure 1). After that, detailed archeological research of Rudna Glava site was conducted in the period between 1968 and 1986. During that period, around 40 mining shafts were discovered. Some of them were almost intact and 5 'niches' contained pottery. Tools made of stone and horns were also excavated. This site provided rich evidence of the early works in copper mines and enabled an important insight into the prehistoric mining activities in Europe. Rudna Glava is located 20 km southeast from Majdanpek, in Eastern Serbia (Figure 2), and magnesite ore, which this region is rich with, as well as azurite and cuprite, were excavated from this mine (Filipović, 2015).

Even though Rudna Glava is protected as cultural property, it is in a very bad state regarding the fact that it is exposed to erosions, rock slides and landslides (Figure 3), with no protective construction that would protect the site from further devastation. The discovered artifacts from the site are kept in the Museum of Mining and Metallurgy in Bor. Far back in 1984, Čedomir Vasić and Borislav Jovanović created a technical solution for the protection of the site in order to enable its conservation and presentation. Their solution was elaborated in 2001 by the curator of the museum in Majdanpek, Paun Durlić. The project was supposed to be realized by the institutions in Serbia – local museums, the Archeological Institute in Belgrade, the Department for the Protection of Cultural Properties in Niš, and the partner companies from Germany.

The only thing that has been done so far was the geodetic screening of the terrain in 2001, which was supposed to be the preparation for further activities. The further activities were not carried out due to the lack of finances (Filipović, 2015).

METHODOLOGY

When it comes to the methodological approach for tourist valorization of geoheritage objects, various methods are implemented in a variety of studies worldwide, including the valorization of scientific, educational, economic, conservation, and additional values (Brilha, 2016; Gorska-Zabielska, 2020), "Reynard Model" implementation (Reynard, 2008; Arora et al., 2020), a method that includes 20 criteria that assess the material value, location value, cultural value, availability and accessibility of information about the observed object (Dmytrowski and Kicinska, 2011; Ludwikowska-Kedzia and Wiatrak, 2020), qualitative approach (Aoulad-Ali et al., 2019; Mirari and Benmlih, 2020), and the GAM model (Hose, 1997; Pralong, 2005; Serrano and González-Trueba, 2005; Pereira et al., 2007; Reynard et al., 2007; Zouros, 2007; Reynard, 2008; Vujičić et

al., 2011). So far in Serbia, the GAM model and its modified version (M-GAM) have been primarily used for tourist valorization of natural stone bridges (Antić et al., 2020), earthen pyramids (Jonić, 2018), canyons (Tomić and Božić, 2014), speleological objects (Tomić at al., 2019), mountains (Petrović et al., 2013; Vukoičić et al., 2018), rock profiles and artesian springs (Petrović et al., 2017), etc. Considering that the evaluation of Rudna Glava site for the purposes of geotourism has not been done so far, this paper aims to make a comprehensive assessment having in mind its relevant scientific, educational, and cultural value. In this respect, the Geosite Assessment Model – GAM was implemented as the most useful instrument with the goal to point to the current state of the basic and additional tourism values of the geoheritage objects which have not achieved their maximum potential yet. This provides a relatively real image of the geoheritage state based on which it is possible to plan and improve the tourist activities for the analyzed objects (Vujičić et al., 2011). This model was applied in the tourism valorization of the archeological site of Rudna Glava since the site is still rarely visited by visitors, so it was not possible to apply the advanced M-GAM model (Petrović et al., 2017; Miljković et al., 2018; Vukoičić et al., 2018), which primarily evaluates the opinion of visitors, and not only of the experts.

GAM model consists of two key indicators: main and additional values. The main values have 12 subindicators grouped into three categories: scientific-educational values (VSE), special aesthetic values (VSA), and protection (VPr). On the other hand, the additional values have 15 subindicators grouped into two categories: functional values (VFn) and tourist values (VTr). Their values range from 0 to 1 and they are: 0.00, 0.25, 0.50, 0.75, and 1.00 (Vujičić et al., 2011; Petrović et al., 2013).

$$GAM = \text{Main values (VSE+VSA+VPr)} + \text{Additional values (VFn+VTr)}$$

Table 1. The Main Values of the GAM model (Vujičić et al., 2011)

Main indicators/ subindicators	Values (0–1)				
Value	0	0.25	0.5	0.75	1
I Scientific-educational values (VSE)					
1. Rarity	local	regional	national	international	a unique phenomenon
2.Representativeness	no	low	moderate	high	the highest
3.Knowledge about geoscientific questions	no	local publications	regional publications	national publications	international publications
4.Interpretation level	no	A moderate level of the process, but difficult to explain for those who are not experts	A good example of the process, but difficult to explain for those who are not experts	A moderate level of the process, but easy to explain for all the visitors	A good example of the process, and easy to explain for all the visitors
II Special aesthetic values (VSA)					
1.Lookouts (each of them has to represent the certain angle of the view and be at least 1 km away from the spot)	none	1	2 to 3	4 to 6	More than 6
2.Area (each is quantitatively considered in comparison with others)	small	-	medium	-	large
3.Surrounding landscape and nature	-	low	medium	high	the highest
4.Environment state	unsuitable	-	neutral	-	suitable
III Protection (VPr)					
1.Current state	Completely damaged (as a result of human activities)	Greatly damaged (as a result of natural processes)	Partly damaged (with the preserved basic geomorphologic features)	Slightly damaged	Undamaged
2.Protection level	none	Local	Regional	National	International
3.Vulnerability	Irreversible (with the possibility of a complete loss)	High (can easily be damaged)	Medium (can be damaged by natural processes or human activities)	Low (can be damaged only by human activities)	Not existing
4.Suitable number of visitors	0	0 to 10	10 to 20	20 to 50	More than 50

The **main values** (Table 1) include scientific-educational values, special aesthetic values, and protection, while the **additional values** (Table 2) include functional and tourism values.

Scientific-educational values:

Rarity is a very important characteristic of the geoheritage objects, and it represents the assessment of their uniqueness and particularity within the group of similar phenomena;

Representativeness describes the educational-didactic characteristics of a geoheritage object. It represents a physical presentation on the spot of its appearance and in museums and collections, the presentation in publications and media, as well as a popular presentation in school textbooks, newspapers, on television, lectures, etc.;

Knowledge about geoscientific questions represents a scientific-expert presentation in magazines, journals, and monographs;

Interpretation level is an indicator that refers to the presentation of geoheritage objects in an interesting and easy way, so that tourists can enjoy themselves and learn about it (Petrović et al., 2013).

Special aesthetic values:

Lookouts belong to the special aesthetic values. Their larger number enables the observation of geoheritage objects and they contribute to a more impressive experience of the entire space among the tourists;

Area, surrounding landscape, and the environment state in terms of the equipment of the site are complementary values with the values of geological resources (Petrović et al., 2013).

The protection includes:

The gradient of the *current state of an object* measures if there is a damage on the object or not;

Protection level measures the level of protection from the local to the international level;

Vulnerability indicates the endangerment level of the geosite from natural and anthropogenic activities;

Suitable number of visitors is the allowed number of visitors on a geosite in a certain period so that no damages would occur.

Functional values:

Accessibility indicates the possibility of accessing a geosite on foot or by some means of transport;

Additional natural and anthropogenic values represent the addition to the tourism attractiveness of a geosite, where the type of area, diversity, nature preservation, the arrangement of the surrounding area, and the purpose of the area are valued;

Proximity of the outbound centers and important road networks are very important values because the number of potential visitors and the affirmation level of geosite object as a tourism destinations depend on them (Petrović et al., 2013);

Additional functional values reflect in the number of parking places, gas stations, etc.

Tourism values:

Promotion on the tourism market is a way of promotion through brochures, films, internet presentations etc.

The *number of visitors* within *organized visits* is the number of tourists who come through tourist agencies, and there is also the *total number of visitors*;

Proximity of visitors' centers is the distance of a geosite from visitors' centers;

Interpretative panels and *tourism infrastructure*, as well as the types of tourism services, *accommodation, restaurant services*, and a *quality guide service* are important because the visitors' knowledge and their overall experience of the geosite object depend on them (Petrović et al., 2013).

Table 2. The Additional Values of the GAM Model (Vujičić et al., 2011)

Additional indicators/subindicators	Values (0–1)				
Value	0	0.25	0.5	0.75	1
I Functional values (VFn)					
1.Accessibility	Inaccessible	Low (on foot with special equipment and an expert guide)	Medium (by bicycle or other motor vehicle)	High (by car)	Highest (by bus)
2.Additional natural values	none	1	2 to 3	4 to 6	More than 6
3.Additional anthropogenic values	none	1	2 to 3	4 to 6	More than 6
4.Proximity of outbound centers	More than 100 km	100 to 50 km	50 to 25 km	25 to 5 km	Less than 5 km
5.Proximity to important routes	none	local	regional	national	international
6.Additional functional values	none	small	medium	high	highest
II Tourist values (VTr)					
1.Promotion	Not existing	Local	Regional	National	International
2.Number of visitors within organized visits	none	Less than 12 a year	12 to 24 a year	24 to 48 a year	More than 48 a year
3.Proximity of visitors' centers	More than 50 km	50 to 20 km	20 to 5 km	5 to 1 km	Less than 1 km
4.Interpretative panels (the characteristics of the text and graphics, quality of the material, size, adjustment to the environment, etc.)	no	Low quality	Medium quality	High quality	Highest quality
5.Annual number of visitors	none	Low (less than 5,000)	Medium (5,001 to 10,000)	High (10,001 to 100,000)	Highest (more than 100,000)
6.Tourism infrastructure (hiking trails, rest areas, toilets, waste bins, etc.)	none	Low	Medium	High	Highest
7.Guide service (level of expertise, knowledge of foreign language, interpretative skills, etc.)	none	Low	Medium	High	Highest
8.Accommodation	More than 50 km	25–50 km	10–25 km	5–10 km	Less than 5 km
9.Restaurant service	More than 25 km	10–25 km	10–5 km	1–5 km	Less than 1 km

By adding up the results for any geoheritage object, we get its position in the GAM matrix. The matrix cells are defined in the following way and they are presented in Table 3:

Z_{11} – low main values and low additional values;

Z_{12} – low main values and medium additional values;

Z_{13} – low main values and high additional values;

Z_{21} – medium main values and low additional values;
Z_{22} – medium main values and medium additional values;
Z_{23} – medium main values and high additional values;
Z_{31} – high main values and low additional values;
Z_{32} – high main values and medium additional values;
Z_{33} – high main values and high additional values.

Table 3. GAM matrix of the calculated values

Additional values	10.1–15	Z (1.3)	Z (2.3)	Z (3.3)
	5.1–10	Z (1.2)	Z (2.2)	Z (3.2)
	0–5	Z (1.1)	Z (2.1)	Z (3.1)
		0–4	4.1–8	8.1–12
	Main values			

Table 4. The sum of the main values of Rudna Glava archeological geoheritage object

Main indicators/ subindicators												
I Scientific-educational values (VSE)				II Special aesthetic values (VSA)				III Protection (VPr)				Total
1.	2.	3.	4.	1.	2.	3.	4.	1.	2.	3.	4.	
0.75	1	1	1	0.5	0.5	0.75	0	0.25	1	0	0.75	**8.50**

RESULTS AND DISCUSSION

The sum of the main values for Rudna Glava archeological geoheritage object is 8.50 (Table 4). Scientific-educational values are very high, since their sum is 3.75. Rudna Glava is not the only phenomenon, but it has an international character when it comes to the rarity of the phenomenon as a subindicator because it provides an insight into the prehistoric mining activities on the territory of the whole Europe. That is why the representativeness, knowledge about geoscientific questions, and the interpretation level also achieved the highest scores. Educational-didactic characteristics of the object are very high, even though the physical presentation on the spot of the appearance is endangered by natural processes and human negligence. However, numerous artifacts discovered on this site are kept in the Museum of Mining and Metallurgy in Bor. Rudna Glava has been written about in numerous scientific and expert papers printed in domestic and international journals, while the site represents a good example of the mining processes in Eneolithic Age with the possibility of understandable description for all the visitors.

Rudna Glava may be observed from the east and from the west side at the distance of 1 km, which contributes to a tourist's better impression of the whole area. The area of the site belongs to the medium category, while the state of the environment and of the surrounding landscape as complementary values with the site, are at a very high level. This causes the sum of special aesthetic values of Rudna Glava archeological object to be 1.75. The current state of the object is very bad since the site is exposed to the harmful effects of the natural processes, and there is a danger of the irreversible loss of the site. So far the site has been under the protection of the state as cultural property, and is a part of Djerdap UNESCO Global Geopark, which has been in the UNESCO global network of geoparks since July 10, 2020. The project that was created by Vasić and Jovanović refers to the conservation and presentation of the site, and it relies on the organisation of the whole area and the function which a site should have and give to the potential visitors, and which comes from the conditions imposed by the terrain itself. The parking lot that would be made by a partial cutting in the hill and on the part of the plateau formed of the tailings thrown away during the modern exploitation of the mine, would be reached by the new route. The rest of the plateau space would contain the relocated traditional houses characteristic for this area.

They would contain an exhibiting area, guide service, and the site protection and maintenance service. The exhibiting setup would enable the visitors to get informed about the early Neolithic mining on Rudna Glava. From there, the plateau would be reached by the arranged paths at the bottom of the faults from which the visitors could see the spaces where the mining work was done in the early Eneolithic age, the central fault with the examined early Eneolithic shafts, as well as the Ancient gallery. From the lookout plateau, they could also reach the examined platforms of the central fault and the western platforms of the fault, where there are the shafts covered by the protective construction whose position and appearance were designed to fit the extraordinary surrounding. Below the designed construction, the technology of early Eneolithic copper mining used in Rudna Glava would be presented. After this, the visitors would be able to take a tour around the galleries and go down to the conserved shafts in the central fault. That would be the way to conserve, protect and present the site, along with remedying the consequences of erosion and denudation (http://www.heritage.gov.rs/cirilica/Download/ Saopstenja/Saopstenje-XVI1984/Saopstenje_XVI_1984_Mogucnosti_zastite _i_prezentacije_ranoeneolitskog_i_antickog_ rudnika_bakra_Rudna_Glava.pdf\). The allowed number of visitors that could visit the site, which would enable to avoid the damages due to tourism activities, ranges from 20 to 50 at one instance. The sum of the subindicators related to the protection of Rudna Glava archeological geoheritage object is 2.0.

The sum of the additional values for Rudna Glava archeological geoheritage object is 4.50 (Table 5). The accessibility to the site is high, regarding the fact that it is possible to reach the site by car. Additional natural and anthropogenic tourism values as complementary values, complete the tourist offer of the site, and there are numerous special natural values in the proximity of Rudna Glava. On the territory of the municipality of Majdanpek, within which Rudna Glava archeological geoheritage object is located, there are also the following protected natural objects: Djerdap National Park, Rajkova Pećina cave, Beli Izvorac tufa reservoir, Valja Prerast natural stone bridge, and the protected cultural monuments: Lepenski Vir archeological site, the Church of the Holy Apostles Peter and Paul, the Church of St Nikola, Kapetan Miša's Mansion, and Tenkina kuća. Rudna Glava archeological geoheritage object is located 190 km from Belgrade, the largest outbound tourism center in Serbia, and 25 km from Djerdap Highway and the Danube River as an important route – Corridor VII. However, additional functional values in terms of the proximity of parking spaces, gas stations etc. are very small. The sum of the functional values for Rudna Glava archeological geoheritage object is 1.75.

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Table 5. The sum of the additional values of Rudna Glava archeological geoheritage object

Additional indicators / subindicators														Total
I Functional values (VFn)						II Tourist values (VTr)								
1.	2.	3.	4.	5.	6.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0.75	1	0.75	0	1	0.25	0	0	0.25	0	0	0	0	0.25	0.25	4.50

Table 6. The sum of the main and additional values of Rudna Glava archeological geoheritage object

GAM Geosite Label	Values		
	Main	Additional	
	VSE+VSA+VPr Σ	VFn+VTr Σ	Z
Rudna Glava	8.50	4.50	3.1

The sum of the tourism values is very low, and it is only 0.75. This is the consequence of no existence of promotions of the site itself through brochures, films, and internet presentation. Also, there are no organized visits to the site, except the rare excursions of geosciences students. Even though it is archeologically a very important site of international significance, there is no guide service on the site, no interpretative board or panel, or any tourism infrastructure in terms of hiking trails, rest areas, toilets, waste bins, etc. The visitors' center within Lepenski Vir archeological site is at the distance of 40 km from Rudna Glava archeological geoheritage object. The Golden Inn Hotel in Majdanpek is categorized with 3 stars and offers its guests the maximum capacity of 136 beds in 65 accommodation units. All the rooms are equipped with a bathroom, mini-bar, AC unit, cable TV, and internet connection. All the rooms, as well as the suites, have a balcony or a terrace.

The hotel also includes a restaurant with 300 seats, a banquet room, VIP room, two conference halls, a coffee-bar, and a garden. The hotel is 25 km away from Rudna Glava. The research provided the results as a sum of the main and additional values, and, based on them, the position of Rudna Glava on the GAM matrix is – Z (3.1) (Table 6), which means that the archeological geoheritage object has high main values and low additional values.

CONCLUSION

Rudna Glava represents a rich archeological and geological heritage which exhibits the prehistoric and mining activities on the territory of Europe. The fact that Rudna Glava archeological geoheritage object is located within Djerdap UNESCO Global Geopark is of great importance since it includes the main activities oriented toward research, protection and promotion of geoheritage not only on the regional and national, but also on the international level. Also, the activities of a geopark include the promotion of both natural and cultural resources and values of the given area. Thus, a geopark becomes a unique natural laboratory and an open-air museum where geological, ecological, and civilization history of this part of southeastern Europe is presented. Through the development of geotourism, local community is stimulated and engaged; geoconservation and economic development is also carried out along with the environment protection in terms of sustainable development, while the interests of tourists are directed toward acquiring new skills and knowledge, so the popular educational programs in the field of geosciences could be updated and raised to a higher level for the whole tourist offer of the region.

Based on the tourism valorization of Rudna Glava as an object of archeological geoheritage, it has been concluded that Rudna Glava has a great tourism potential which, unfortunately, is not used. Very high scientific-educational values have been registered, whereas additional actions should be taken toward the improvement of the specific aesthetic values and the protection, which could be achieved by getting material assets for the realization of the existing project of conservation and presentation of the site. Also, it is necessary to improve the functional and tourism values.

The improvement of the functional values primarily regards the provision of a sufficient number of parking places, gas stations, rest areas, etc., that is, the additional functional values. The improvement of tourism values primarily includes the promotion of the site, posting the interpretative boards and panels, provision of adequate guide service at the site, provision of tourism infrastructure, and organisation of visits in accordance with the bearing tourist capacity of the site.

As a tourist attraction, Rudna Glava puts a focus on the market niche – cultural-educational groups, scientific and recreational tourist activities and geotours where interpretation and storytelling are essential for the tourist experience. Moreover, the endangerment of the site due to natural processes requires a strict implementation of the guidelines for the visitors' management with regards to the limitations of the bearing capacity of the site. In the future, Rudna Glava, as other similar sites, should find a balance between the tourism potential of the destination and its ability to cope with negative effects of tourism. That is why a clear strategy should be developed on how tourism will be developed on the site because there is often a gap between the real tourism potential and tourism marketing. This assessment of the potential of a geoheritage object is of great importance for the planning of sustainable tourist activities and adequate conservation actions which ensure a long-lasting protection of the site. Including Rudna Glava into various tourist programs is a long-lasting matter that needs to be observed in a wider context of the development of tourism in Djerdap UNESCO Global Geopark and in Serbia as a whole. It should be protected, repaired, and arranged in a way that it could preserve its authenticity and guarantee the competitiveness and sustainability within which geoheritage represents the primary tourism resource.

The basic recommendations based on the study's findings are the following: preservation of Rudna Glava site as a tourist attraction through restoration; protection with maximum investment attraction; rationalization of socio-economic activities and their implementation with sustainable principles; construction of tourist infrastructure and superstructure in accordance with the surrounding landscape; development of international tourism; the construction of a visitor center with museum exhibits which would stimulate scientific and cultural events in this area as well as the inclusion of archaeological geoheritage in its sustainable development; use of various tools for tourist promotion of the archeological geoheritage site; raising the awareness of the local population about the importance of geoheritage and its role in economic and social development and developing the creativity and innovation of the local population in order to develop a tourist destination; the development of geotourism would influence the progress of other branches of the local economy, including agriculture,

crafts, various service, etc., which would create new jobs and keep young people in this area; management of this area should be an important aspect of geotourism in Serbia, because the preservation and conservation of archaeological geoheritage should be seen as a project of national importance. Further research of archeological geoheritage sites and their geotourism affirmation could be achieved by connecting the region of eastern Serbia and Djerdap UNESCO Global Geopark with the Transdanubian region of the Mehedinti plateau in Romania, which is a nature park in that country and is under state protection. Such an endeavor would require additional multidisciplinary research and projects for the sustainable development of geotourism in this part of Europe, which would achieve multicultural and scientific cooperation, and geotourism would develop as a secondary tourism product on the Serbian market.

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A MODEL OF FACTORS AFFECTING DOMESTIC TOURIST SATISFACTION ON ECO-TOURISM SERVICE QUALITY IN THE MEKONG DELTA, VIETNAM

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Abstract: The objective of the present study is to explore the factors affecting domestic tourists' satisfaction with the quality of ecotourism services. Survey data collected from 457 visitors visiting Mekong Delta, Vietnam were analyzed to provide evidence. Results from multiple regression analysis using SPSS software have determined that Food and beverage Shopping & entertainment services, Perceived price, Nature destination landscape, Security and Safety, Transportation had positive associations with domestic travelers' satisfaction. Besides, this research also showed that female tourists tend to be more satisfied than male tourists. The main findings of this study provide practical implications for travel agencies and tourism managers. It implies that they should improve these factors in order to maintain and enhance domestic tourist satisfaction with the quality of ecotourism services in Mekong Delta, Vietnam.

Key words: tourist satisfaction, service quality, Mekong Delta, ecotourism

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INTRODUCTION

Tourism is one of the fastest-growing industries in the world and it plays an important role in the economy and stimulates the growth of other economies as well (Osman and Sentosa, 2013). Dubbed the "smokeless industry", the tourism industry outperformed the global economy in 2019 and the development is faster than manufacturing, retail, financial services, and media. Tourism brings many other benefits to both economy and society such as the increase of revenue, creating many job opportunities, the strong attracting of investment resources, especially strategic investors to major areas of Vietnam tourism. Besides, the tourism industry also contributes to restoring, preserving, and promoting the value of heritage, tangible and intangible relics in localities. The development of tourism significantly contributes to poverty reduction and economic restructuring. When the people's life is better, the demand for tourism also becomes popular. Indeed, there are many profits from traveling like releasing stress, experiencing new things, and improving the knowledge of culture, traditions, and cuisine in unfamiliar lands (Goliath-Ludic and Yekela, 2020).

And once the human demand increases, the quality of tourism services is also stricter. Thus, the managers do not focus on the service quality, tourists feel dissatisfied and give up the destination in turn. On the contrary, if managers grasp and respond to these needs, this will be one of the reasons why they are willing to return. The significant contribution to the development of Vietnam's tourism is the participation of many Southern provinces and cities. Toward Tourism in Southwest Vietnam, especially the type of Ecotourism with mangrove ecosystems, melaleuca forests, island systems, bird sanctuaries, traditional festivals have created a unique color for Ecotourism in the South West, Vietnam. In order to improve the level of domestic customer satisfaction for tourism development in the province, the objective of this study is to examine factors affecting domestic tourist satisfaction on the quality of tourism services in the Mekong Delta Vietnam.

LITERATURE REVIEW
1. Tourism, Traveler and Eco-Tourism

According to Hunter and Green (1995), tourism is a leisure activity in people's free time related to traveling and staying in places outside their usual environment for leisure, healthcare, physical and mental development, knowledge improvement purposes, along with the consumption of natural, economic and cultural values. According to Setokoe (2020), tourism comprises activities related to people traveling to places outside their usual environment for visiting, learning, relaxing, and

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leisure purposes within a particular period of time. Giao et al. (2020) define a visitor as a traveler taking a trip to the main destination outside his/her usual environment, for more than 24 hours and less than a year for business, leisure, or other personal purposes other than to be employed by a resident entity in the country or place visited.

Based on Patwary et al. (2021), a visitor is a person traveling or combining tourism purposes on a trip, except for income-generating purposes at the destination. Thus, a tourist is a person who travels and stays outside of his / her regular residence to visit, learn, entertainment or relaxation for a certain period of time. In relation to Stonehouse (1999), ecotourism is an activity in which people travel to natural areas which are less polluted and not used for any special purposes including research, appreciation of nature, and wild flora and fauna (both in the past and the present) explored in these areas. Besides, Wood (2002) considers ecotourism as an activity in which people travel to pristine areas to learn about the history of the natural environment and the culture without affecting ecosystems, and generates economic opportunities to preserve the environment and bring financial benefits to local residents.

2. Service Quality

A service is an activity or a chain of activities that take place when there is an interaction between two parties, a consumer and a service provider (Gronroos, 1990). Zeithaml and Bitner (2018) consider service as an activity, a process, and a way to perform a job to create value for customer satisfaction in the present time. Kotler and Keller (2012) define a service: A service is an activity or benefit provided for exchange that is primarily intangible and does not result in a transfer of ownership. The performance of service may or may not be associated with a physical product.

Gronroos (1990) said that service quality is measured by comparing the value that customers expect before using the service and the value that customers receive when using the service. Parasuraman et al. (1988) show that service quality is the level of difference between the consumer's expectation of service and their perception of the result of the service. In other words, service quality is the difference between the quality expected by the customer and the quality they perceive to be actually delivered. According to Chuchu (2020), the quality of tourism service is the suitability level of services by tourism suppliers that satisfy the needs of tourists in the target market.

3. Customer satisfaction

There are many studies on customer satisfaction, under which authors also have many different definitions of customer satisfaction. According to Oliver (2010), satisfaction is a result of the comparison between the pre-use expectation and their feeling after the customer has used the product. In relation to Zeithaml and Bitner (2018), customer satisfaction is the key to the success of a business and is the basis for evaluating the quality of services that businesses have provided to customers. Meeting and satisfying customers' needs are considered the most useful strategy to attract and retain customers in the current period.According to Pizam et al. (1978), customer satisfaction is a result of the interaction of real experience and the expectation about the destination of customers. Likewise, Oliver (2010) believes the disparity between customer expectations and their real experience that tourism products affect their emotions will determine the level of satisfaction with those products.

4. The relationship between service quality and customer satisfaction

Over the past decades, many studies on customer satisfaction have been performed. Besides, the topic of the relationship between service quality and customer satisfaction has also been discussed continuously. In general, research all concludes that service quality and satisfaction are two separate concepts but have a close relationship as customer satisfaction is seen as a result, service quality is seen as a reason; satisfaction is predictable, and service quality is an ideal benchmark. According to Zeithaml and Bitner (2018), customer satisfaction is affected by many factors including products, service quality, prices, situational factors, and personal factors.

Oliver (2010) considers that service quality affects customer satisfaction levels. The more the service provided meets customer expectations, the more satisfied customers will become. According to Parasuraman et al. (1988), service quality is determined by many constituent factors and is the main determinant of customer satisfaction. Service quality is the factor affecting customer satisfaction the most (Cronin and Taylor, 1992). If a service provider gives customers quality products that satisfy their needs, that business will initially make customers satisfied. Research by Spreng and Mackoy (1996) also states that service quality is the premise of customer satisfaction. Therefore, in order to improve customer satisfaction, service providers must improve service quality. In other words, service quality and customer satisfaction are closely related. Service quality is first achieved before determining customer satisfaction.

HYPOTHESIS DEVELOPMENT

This study selected a model based on the service quality measurement model of Gronroos (1990), Parasuraman et al. (1988), and the model to measure satisfaction by Zeithaml and Bitner (2018). These are selected models studied in many fields in many Asian countries, including some tourism researches. In addition, research-based on empirical studies on satisfaction with service quality has been carried out by some researchers, including Narayan et al. (2008), Hau and Omar (2014) to study customer satisfaction with tourism service quality. This will be a solid theoretical basis to help research and apply the model suitable to the research conditions in Vietnam's Mekong Delta.Based on qualitative research findings, 2/3 of the members have agreed with 06 factors affecting the level of satisfaction with the quality of tourism services: (1) Tourism infrastructure, (2) Nature destination landscape, (3) Transportation, (4) Food and beverages, Shopping and entertainment services, (5) Security and safety, (6) Tour guide. Also, the group added another factor that was assessed as having a significant influence on the satisfaction of tourism service quality, (7) Perceived Price, to the study in the Mekong Delta, Vietnam (Figure 1).

1. Tourism Infrastructure

Tourism infrastructure is an important factor affecting the satisfaction of tourists because of its capacity and utility. Man uses technical facilities to exploit the value of tourism resources to create services and goods for tourists. In addition to resources, the diversity, abundance, modernity, and attractiveness of the facilities and techniques also create the diversity, abundance, and attractiveness of tourism services. The infrastructure comprises all of the existing physical foundations in tourist attractions on which tourism service operators can conduct business, providing services for the enjoyment of tourists: restaurants, hotels, motels, tourist attractions, ease of travel, access to attractions. The research conducted by Foroni et al. (2019) pointed out the relationship between tourism infrastructure and tourist satisfaction. The above arguments lead to hypothesis H_1:

H_1: *Tourism infrastructure correlates to domestic tourists' satisfaction with the quality of ecotourism services in Vietnam's Mekong Delta.*
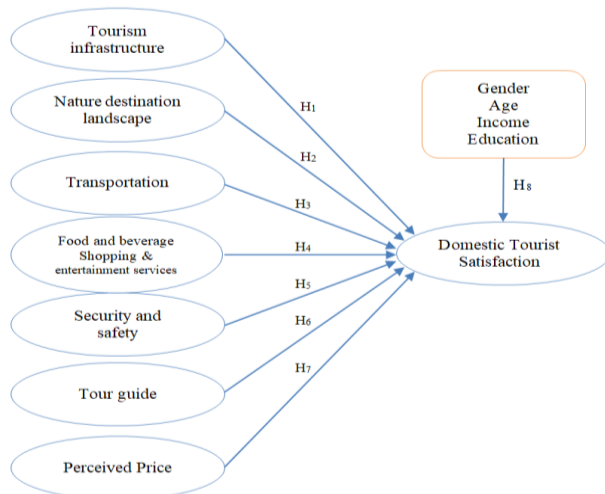

Figure 1. The research model (The model was proposed by the authors)

Table 1. The Tourist Characteristics

		Frequency	Percentage (%)
Gender	Female	163	35.7
	Male	294	64.3
Age	18-25 years old	93	20.4
	26-35 years old	274	60.0
	36-45 years old	60	13.1
	> 45 years old	30	6.6
Income	< 5 million	141	30.9
	5 – 10 million	124	27.1
	10 – 15 million	152	33.3
	>15 million	40	8.8
Education Level	High School	40	8.8
	College	60	13.1
	Bachelor	348	76.1
	Postgraduate	9	2.0
	Total	457	100.0

2. Nature destination Landscape

Nature destination landscape is a basic element of a tourist destination, drawing the interest of tourists and tourism managers. People are always excited about the beautiful natural scenery or the cool, fresh climate. Tourism is an opportunity for visitors to admire and experience magnificent things with their naked eyes or learn lessons from nature, history, and culture that people have created. The better impression that the tourism landscape gives visitors, the more satisfied they will become. Therefore, finding, exploiting, maintaining, and conserving natural resources and unique cultural features of the local people is of immense importance. Therefore, it can be said that the tourism scene is an important tourism engine, affecting tourist satisfaction. Research by Jiménez-García et al. (2020) has shown a positive relationship between the tourism landscape and tourist satisfaction. The above arguments lead to hypothesis H_2:

H_2: *Nature destination landscape correlates to domestic tourists' satisfaction with the quality of ecotourism services in the Mekong Delta, Vietnam.*

3. Transportation

Transportation is instrumental in facilitating visitors to easily follow the route combining sightseeing destinations, safe, fast, and shorten journey times. Waterway transport can be combined with sightseeing tours along the river with the system of facilities for modern comfortable trips. Convenient means of transportation for tourists is a condition that influences the choice of destination for tourists and contributes to their satisfaction. Kanwal et al. (2020) confirmed that a positive relationship between Transportation and tourist satisfaction. The above arguments lead to hypothesis H_3:

H_3: *Transportation correlates to tourists' satisfaction with the quality of ecotourism services in the Mekong Delta, Vietnam.*

4. Food and beverage, shopping, and entertainment services

Food and beverage services, shopping, and entertainment services have an impact on the quality of tourism services. It is imperative to serve visitors at restaurants, hotels, and other food and beverage establishments with diverse regional foods, traditional features, types, good hygiene, food safety, attentive and polite service style with a network of professional stores to meet diverse and diverse needs, from food and vegetable stores, souvenir shops to specialized tourism shops, consumer goods stores. Sports facilities include sports facilities, sports halls or sports centers of various types, specialized equipment for each type. Cultural centers include cinemas, theaters, tribal trees, galleries. The study of Narayan et al. (2008) pointed out a positive relationship between food service, shopping and entertainment, and tourist satisfaction. The above arguments lead to hypothesis H_4:

H_4: *The quality of food and beverage services, shopping and entertainment services correlates to domestic tourists' satisfaction with the quality of ecotourism services in the Mekong Delta, Vietnam.*

5. Security and Safety

Security has an increasingly stronger impact on the quality of tourism services when courtesy, politeness, as well as security maintenance, safety, and hygiene are required to develop tourism, while acts of robbery, hacking, forcing tourists should be eliminated. The study of Narayan et al. (2008) showed a correlation between security and safety and the satisfaction of tourists. The above arguments lead to hypothesis H_5:

H_5: Security and safety correlate with domestic tourists' satisfaction with the quality of ecotourism services in the Mekong Delta, Vietnam.

6. Tour Guide

Tour guides and staff at tourist sites interact directly with tourists. Any tourist who comes to a new place wants to be warmly welcomed and well-treated by the tour staff and residents of this place. Therefore, we can say a tour guide is an important factor affecting the satisfaction of visitors when they come to a tourist destination. The willingness of tour guides, staff, and managers at tourist sites to give help and guidance when welcoming tourists to visit and during the tour of tourists is as well as their enthusiastic and cheerful service will make tourists feel happier and more satisfied with their experience. The above arguments lead to hypothesis H_6:

H_6: Tour guides correlate to domestic tourists' satisfaction with the quality of ecotourism services in the South West, Vietnam.

7. Perceived Price

Price is the amount of money spent by tourists to enjoy products and services at the tourist destination, including the tour price, accommodation, transport, local transport; and prices of food in restaurants, resorts, shopping prices. Narayan et al. (2008) demonstrated that a correlation between price perceived and traveler satisfaction. From the above arguments, we have a hypothesis H_7:

H_7: Perceived price correlates to domestic tourists' satisfaction with the quality of ecotourism services in the South West, Vietnam.

8. Control variables

Demographic variables, such as age, gender, income, and educational background, are called customer characteristics. To a certain extent, these characteristics are a significant determinant of consumer behavior (Kwok et al., 2016). Therefore, the author proposes hypothesis H_8 as follows:

H_8: There is a difference in domestic tourists' satisfaction with the quality of ecotourism services in the Mekong Delta, Vietnam, depending on individual characteristics.

RESULT

1 Overview of ecotourism in the Southwest, Viet Nam

According to Southwest Region Information Tourism and Promotion Center, Viet Nam, there were over 1.2 million tourists visiting the Southwest region of Vietnam in 2019; including more than 1.15 million domestic tourists. Compared to 2018, the number of visitors in 2019 increased by 21.7. The area of Viet Nam's Southwest is 5,294 square kilometers. It has two mangrove and wetland ecosystems in South West Cape National Park, Vietnam, and U Minh Ha National Park, which is belonging to the South West Cape World Biosphere Reserve, Vietnam. Based on the advantage of nature, the province developed ecotourism products. Besides that, the province also organizes humanistic tourism potentials such as the Nghinh Ong Song Doc festival, jokes by folk artist Nguyen Long Phi (Ba Phi), many cultural and historical relics that may be unique elements of sightseeing programs of the province. The Southwest of Viet Nam has many tourist attractions such as: Ca Mau National Park, Khai Long tourist area, Ong Trang islet, Forest fishing ground 184, Hon Khoai Island cluster, historic site - Silver stone scenic spots, bird sanctuary city Southwestern, Vietnam, ecological conservation area of forest and fishery of Trem River, U Minh Ha National Park. Moreover, U Minh Ha National Park has attracted many foreign tourists and scientists to research. U Minh Ha has a rich biological resource with 12 amphibian species, 32 reptile species, 100 bird species, 18 mammal species (Vietnamplus, 2019). The tourism activities that occur here have to follow a range of criteria such as ensuring conservation and history, using tourism resources appropriately, maintaining essential ecosystems of forests, ensuring a stable life for local communities. With a diverse ecosystem and the Southern point of the country, the Southwest region of Vietnam has many advantages in tourism development. However, Southwest Viet Nam is speeding up toward the socialization of tourism to effectively exploit available resources.

The big turning point of tourism in the Southwest, Vietnam is that the Ho Chi Minh route from Nam Can to Dat Mui has been through technical traffic, officially connecting Ho Chi Minh road from the starting point at Pac Bo (Cao Bang) to the endpoint at Dat Mui (South West), Vietnam. Therefore, visitors are able to reach the southernmost point of the country by road, saving time and creating more transportation options rather than waterways. In the southwestern region, Vietnam has always identified tourism as a crucial economic sector, so tourism development does not focus too much on immediate profits but ensures how to get long-term profits. In the master plan on tourism development in the southwestern region, Vietnam to 2025 and orientations to 2030, the province has identified the viewpoint as "Tourism development is associated with sustainable socio-economic development, national defense, social order and safety, preservation and promotion of cultural values of the nation" (Chinhphu, 2020).

2. Descriptive statistics

The study was conducted in the southwestern province of Vietnam, and the survey subjects were domestic tourists visiting and staying here. Total 462 questionnaires were responded to by tourists in the South West, Vietnam in 2019. However, there are 457 valid samples (response rate 98.92 %) that meet the criteria used for the study. The questionnaire was coded and data processed using SPSS 20 software for analysis (Table 1). The results show that there is a remarkable difference in terms of gender in the sample size and the majority of survey tourists are male. The surveyed participants are from 26 to 35 years old, and the income from 10 to 15 million accounts for a high percentage. Besides, visitors participating in the survey with university degrees accounted for 76.1%.

3. The assessment of Reliability and Validity

The scale was first to be analyzed for Cronbach's Alpha reliability coefficient, variables with an item-total correlation less than 0.3 will be rejected and the scale will be accepted for analysis in the following steps when Cronbach Alpha's reliability is from 0.7 and above (Giao et al., 2020). After testing Cronbach's Alpha two times, there are 4 observed variables CSHT2, CSHT4, HDDL1, HDDL4 that were eliminated due to Cronbach's Alpha coefficient <0.7. Besides, in the first discovery factor analysis, the variable PCDL3 < 0.5 was also eliminated. The figure shows that the Cronbach's Alpha coefficient of the scale fluctuates in the range from 0.820 to 0.930 and the smallest correlation coefficient of the observed variables of the scale is 0.515. Overview, Cronbach's Alpha coefficients of the scales were quite high (> 0.7) and all observed variables of this scale had a total variable correlation coefficient greater than 0.3, thus they achieved very good reliability. In addition, Vuong and Suntrayuth (2020) have proposed to use the coefficients of the discovery factor to measure the value of scales of the study. Factor load factor should be greater than 0.5 and it is considered to be of practical significance. As shown in Table 2, most values of the load factor for each index are higher than 0.5 (minimum value 0.625). Consequently, each structure exhibits a good convergence value. From the results above, we can conclude that the scales applied in the research model are achieving very good reliability and validity. Therefore, these scales will be used for analysis in multiple regression models.

Table 2. Reliability and Validity

Scale	Observed Variables	Validity calculation	Reliability		Matrix Correlation						
		Factor Loading	Cronbach's alpha	Minimum variable-total correlation coefficient	CSHT	PCDL	PTVC	DVAU	ANTT	HDDL	GCCN
Tourism Infrastructure	CSHT3	0,902	0,903	0,775	1						
	CSHT1	0,901									
	CSHT5	0,890									
Tourism Landscape	PCDL1	0,754	0,737	0,539	-0,597**	1					
	PCDL2	0,692									
	PCDL4	0,664									
Transport	PTVC2	0,840	0,820	0,515	-0,292**	0,456**	1				
	PTVC4	0,823									
	PTVC3	0,774									
	PTVC1	0,687									
	PTVC5	0,625									
Food and Beverage & Shopping Entertainment Service	DVAU3	0,801	0,858	0,639	-0,485**	0,527**	0,362**	1			
	DVAU1	0,777									
	DVAU2	0,743									
	DVAU5	0,686									
	DVAU4	0,672									
Security & Safety	ANTT1	0,812	0,847	0,631	-0,598**	0,549**	0,386**	0,597**	1		
	ANTT2	0,769									
	ANTT3	0,723									
	ANTT5	0,689									
	ANTT4	0,663									
Tour Guide	HDDL2	0,920	0,920	0,801	0,661**	-0,332**	-0,106*	-0,378**	-0,478**	1	
	HDDL5	0,894									
	HDDL3	0,842									
	QDDT3	0,799									
Perceived Price	GCCN3	0,861	0,830	0,598	-0,287**	0,157**	0,150**	0,399**	0,508**	-0,284**	1
	GCCN1	0,770									
	GCCN2	0,691									
	GCCN4	0,653									
Tourist's satisfaction	SHL2	0,862	0,866	0,684	0,429**	0,537**	0,422**	0,639**	0,607**	0,288**	0,487**
	SHL1	0,855									
	SHL4	0,843									
	SHL3	0,821									
Note: ***: significance level <0.0001; **: significance level <0.001; *: significance level <0.05											

4. The Correlation Analysis and Regression

Before the implementation of regression analysis, the author applied Pearson's correlation coefficient to quantify the rigor of the linear relationship between two independent and dependent variables (Vuong and Giao, 2020). In Pearson correlation

analysis, there was no distinction between the independent and the dependent variables, all variables were considered equally. However, if the variables are strongly correlated, the multi-collinearity problem must be considered after regression analysis. The results of the correlation matrix (Table 2) show that the significance of most coefficients is very small (sig = 0 <0.05), so most of the correlation coefficients are statistically significant and they were enough conditions for regression analysis.

On the basis of the scale of factors affecting visitor satisfaction, a linear correlation was considered, continuing to use regression analysis to see the relationship between these factors. The multicollinearity evaluation is the first step in a regression analysis. This procedure is necessary to ensure that the coefficients estimated by regressing the independent variables on the dependent variable are not biased. In regression, multicollinearity exists when two or more independent variables are highly correlated. The multicollinearity of the regression increases the standard error, making the important tests of the independent variables unreliable. High multicollinearity weakens a researcher's ability to make judgments about the relative importance of one variable independent of another (Giao et al., 2020). Therefore, when multicollinearity is high, the researcher must avoid a comparative analysis of the importance of the index based on path weights. According to (Giao et al., 2020), multicollinearity can occur if the magnified variance coefficient (VIF) exceeds 5. According to Table 3, the VIF coefficient reaches the maximum value of 2,631 (less than 5). These independent variables do not have a close relationship with each other, so there is no multicollinearity phenomenon occurring. The quality of the regression model should be assessed by the suitability index of the modified R^2 model Vuong et al. (2020). These authors also proposed that the adjusted R^2 coefficients are above 0.26, indicating that the quality of the model has a large influence; ranged from 0.13 to 0.26 for medium effect and less than 0.02 for a small effect. Based on figure 3, the result shows that the adjusted R^2 value of model 1 is 0.657, which means 65.7% of the variation. Domestic tourist satisfaction is explained by the variation of 05 independent variables such as tourist landscape, transports, Food and Beverage Service, Shopping and Entertainment Service, Security and Safety, Perceived Price.

Based on the results of multiple regression analysis (Table 3), the regression model shows that 05 independent variables GCCN, PTVC, PCDL, DVAU, ANTT have a positive impact on the dependent variable SHL because of the standardized regression coefficients. (β) of these variables are positive and statistically significant (Sig. <0.05). Comparing the impact of these 5 variables on the dependent variable Domestic Visitor Satisfaction (SHL) in descending order as follows: we see that the variable Food service, shopping, and entertainment (DVAU) has the strongest impact (β4 = 0.314), followed by perceptible price variable (GCCN) (β7 = 0.246), followed by the variable Nature destination landscape (PCDL) (β2 = 0.218), followed by the variable Security order (ANTT) (β5 = 0.166), and the lowest impact is the variable Means of Transport (PTVC) (β3 = 0.121). Thus, hypotheses H2, H3, H4, H5, H7 are accepted at a 95% confidence level. Finally, research results have shown that gender has an opposite effect on domestic tourist satisfaction (β = -0,254; and P-value = 0,000). In other words, female tourists tend to have a higher level of satisfaction than female tourists who travel in the South-West province of Vietnam. Gender refers to a set of characteristics that distinguish between men and women. In addition to physical or biological differences, men and women may have different characteristics, and their attitudes could influence consumer behavior (Hoyer and Maclnnis, 2010). Indeed, there are significant differences like observe the environment; process, evaluate and retrieve information regarding man and woman (Hoyer and Maclnnis, 2010). For example, women pay attention to both personal information and other information and they tend to assess in detail, in-depth messages, and make extensive decisions based on attributes. of the product. However, men focus only on personal information (and tend to use simple guesswork methods and process information based on certain details (Hoyer and Maclnnis, 2010).

Table 3. Summary table of regression analysis results of the model

Variables	Tourists' Satisfaction		VIF	Conclusion
	Beta coefficient	P-value		
Tourism Infrastructure	0.027	0.587	2.631	Reject
Nature Destination Landscape	0.218	0.000	2.080	Accept
Transport	0.121	0.001	1.347	Accept
Food and Beverage & Shopping and Entertainment Service	0.314	0.000	1.816	Accept
Security & Safety	0.166	0.001	2.433	Accept
Tour Guide	0.047	0.276	1.901	Reject
Perceived Price	0.246	0.000	1.451	Accept
Model explanation level (adjusted R2)	0.657			
Control variables				
Gender	-0.254	0.000	1.014	Accept
Age	-0.072	0.159	1.279	Reject
Income	-0.014	0.791	1.285	Reject
Education level	0.007	0.880	1.097	Reject
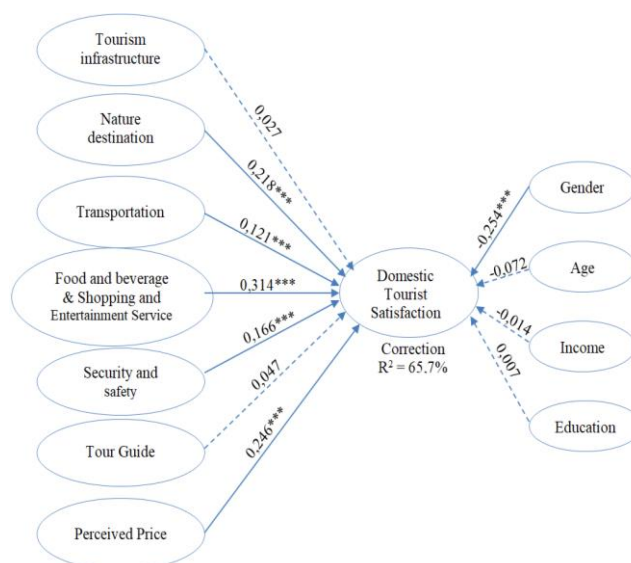
Figure 2. Model of the outcome of research
(The model was drawn from data analysis)

Accordingly, it can be argued that women pay more attention to quality because they consider and evaluate in detail every aspect of the product and/or service they purchase whereas, male customers access aspects generally. Therefore, it is not surprising that a woman's product or service expectations are likely to be higher than that of male customers and their

perception of the service is also lower than male customers, thus it affects the level of satisfaction. The results of this study indicated that the level of satisfaction of female tourists toward the service quality is higher than male tourists. The findings were in line with the researcher's expectations. Because women seem to emphasize quality aspects, they tend to collect further information and are more likely to evaluate after engaging in a detailed and comprehensive review of a message.

CONCLUSION AND IMPLICATION
1. Conclusion
Based on the general theory, a research model has been developed for this study. This model was tested with a sample of 457 domestic tourists to the South West of Vietnam. The research results show that there are a number of factors affecting domestic tourists' satisfaction with the quality of ecological services in Vietnam's Mekong Delta. With the results obtained, this study has positive contributions to management practices, as follows: (1) In terms of the scale used in this study, the results show that the entire scale used in the study is reliable (Cronbach's Alpha> 0.7) and could be used for other studies. (2) Pointed out factors affecting domestic tourists' satisfaction with the quality of ecotourism services in Vietnam's Mekong Delta. Specifically, the study has identified 5 factors affecting domestic tourist satisfaction, from strong to low, as follows: Food service, shopping, entertainment, perceived price, tourist landscape, security, order and safety, transportation. (3) Analyzed differences in satisfaction according to individual characteristics by independent sample T-test method, ANOVA showed that there was a difference in satisfaction by gender of visitors (Figure 2).

2. Implication
Food and Beverage & Shopping and Entertainment Service
The research results show that "Food and beverage services, shopping and entertainment" are the factors which have the strongest influence on domestic tourists' satisfaction with the quality of ecotourism in the Mekong Delta, Vietnam. To increase the satisfaction of domestic tourists through this factor, the author proposes some governance implications as follows: The research findings show that the local goods are not rich and diverse, offering tourists too few choices for their shopping activities when traveling here. Therefore, the Department of Tourism in the Mekong Delta, Vietnam needs to have activities to create many unique products for the locality and regions such as U Minh Honey, Dat Mui Dried Prawn, Rach Goc Sesarmid Crabs. Besides, at tourist attractions, night markets should be organized to focus on specialties and deliver them to tourists. Besides, the results show that the number of shopping shops is too few and does not attract tourists.

To expand and develop shopping stores, it is necessary to have support from the state and relevant departments. Administrators need to call for investment, build shopping stores, supermarkets by cooperating with large domestic supermarket groups such as Co.op Mart, VinMart. In the Mekong Delta, Vietnam, there are many specialties such as grilled snakehead fish, grilled Anabas fish, fish sauce hot pot, goby porridge, a fried hamster with chili, hot pot, fried rice with tamarind, crab in the Vietnamese restaurants and eateries at tourist destinations should include these traditional dishes in the menu as well as diversify and process more dishes from specialties of each locality. The Department of Tourism of the Mekong Delta needs to build up a relationship with neighboring provinces such as Kien Giang, Bac Lieu, Soc Trang, Can Tho on tourism promotion to create conditions for travel business companies to cooperate with each other in organizing tours, improving the service quality. Travel agencies need to organize for tourists to participate in outstanding activities in the South West, Vietnam such as the Nghinh Ong festival, Tian Hou ceremony, Ky Yen festival, Than Nong ceremony, boat race. Also, the Department of Culture and Tourism should organize cultural activities on the weekends to promote distinctive folk songs and tales of the South. Besides, it is necessary to strongly develop the model of "miet vuon" (garden) tourism - During the day, guests and local residents go fishing, catch cramps, clams, crabs together to process and enjoy rustic dishes. At night, the family gathers to eat and drink, sing old folk songs, catch crabs and shrimps, and the model of "miet rung" (wilderness) - Getting honey with the local, taking pictures, picking wild vegetables processed into folk dishes such as grilled snakehead fish, stir-fried poems, young bee salad. At night, they would spend the night on a simple tray of rice, sip a few glasses of rice wine, humming some fairy tales, and listening to stories of Uncle Ba Phi. Finally, to ensure food is clean, it is necessary to have the attention of the Food Safety Department to food and beverage businesses such as progressing to periodic checks, sudden checks on hygiene, and food safety. At the same time, granting certificates of eligibility for food hygiene and safety to businesses to help visitors feel secure when using their services.

Perceived Price
The research results show that "Perceived price" is the second-factor affecting domestic tourists' satisfaction with the quality of ecotourism in the Mekong Delta, Vietnam. In order to increase the satisfaction of domestic tourists through this factor, the author proposes some governance implications as follows: The results show that the entrance fees of tourist attractions are not reasonable. The Department of Culture and Tourism needs to control the entrance fee properly by posting the entrance fee for tourist attractions, avoid higher fares than regulations. Besides, research shows that the prices of goods and services do not commensurate with the quality received by tourists. Therefore, managers at tourist destinations need to control prices for goods and services by collecting customer opinions, reviews, and feedback to adjust prices so that they commensurate with the quality. The results showed that shopping prices did not match the expectations of visitors. Therefore, the managers of tourist attractions need to review the prices of products and goods sold in their resorts. At the same time, there is a need to have a customer care team to receive customer feedback, expectations, requests from tourists for the products they buy. Moreover, food and drink prices at tourist destinations are not suitable for tourists. Therefore, food and beverage prices must be clearly publicized on menus by individuals and organizations engaged in the food and beverage business. There are

instructions for visitors to notify relevant local authorities when they are ripped off so as to quickly and thoroughly resolve the issue. In addition, it is essential to make bulletin boards in central locations where many tourists come, naming the restaurant or hotel that rip off their customers, or propagating and criticizing bad acts against tourists on social media. The local authorities which fail to solve this situation should be punished using appropriate measures.

Nature destination Landscape

The research results show that "Nature destination landscape" is the third-factor affecting domestic tourists' satisfaction with the quality of ecotourism in the Mekong Delta, Vietnam. In order to increase the satisfaction of domestic tourists through this factor, the author proposes some governance implications as follows: The results show that the artificial designs at the points are unable to impress tourists, thus failing to make them feel satisfied. Therefore, administrators at tourist sites need to call for investment in the construction of artificial works such as monuments, entertainment areas, artificial beaches, large-scale eco-resorts to attract and meet the needs of tourists. Besides, tourists deem Mekong Delta's scenery not yet diverse. The landscape in the South West of Vietnam has not been fully exploited. Therefore, the authorities need to have a plan to exploit the unique characteristics of the mangrove area along with this special ecosystem. The administrator should have programs and activities on floating markets so that tourists can feel the fresh river atmosphere, enjoy songs and melodies.

Security & Safety

The research results show that "Security and order" is the fourth-factor affecting domestic tourists' satisfaction with the quality of ecotourism in the Mekong Delta, Vietnam. It shows that domestic tourists are not satisfied with the security and safety in tourist destinations in the Mekong Delta, Vietnam. To increase the satisfaction of domestic tourists through this factor, the author proposes some governance implications as follows: The results show that there are no warning signs in dangerous areas for tourists, and tourist spots are not equipped to ensure safety for tourists. Therefore, administrators at tourist sites need to check and provide warning signs in dangerous areas that are likely to threaten the safety of visitors' lives and possessions such as providing protective equipment, including swimming buoys, helmets, gloves for visitors when participating in activities on waterways, roads. Also, at each tourist site, it is necessary to establish a rescue team in case of unexpected events. The results showed that the fact that tourists are dragged to shop and take photos at the attractions is still happening. This makes tourists feel uncomfortable. To address this problem, tourist sites should have security forces to observe and take preventive measures. The state needs to propagate to the people to have an awareness that tourism will give them a chance to improve their lives. From there, people will behave more friendly to tourists.

The state must strictly manage the population and create local rules. To ensure food safety and hygiene, the local food safety department should conduct regular inspections at tourist sites. Administrators need to check the food supply, ingredients, as well as processing process to ensure food safety for tourists. Moreover, at tourist sites, it is necessary to have a medical room to provide timely first aid in the event of a bad situation. In order for the sights to be safer, the administrators need to put in place a clear process for tourists to visit, to avoid crowding, pushing, and causing the lack of order, littering, and creating opportunities for thieves to sneak up on tourists' possessions. Finally, the state needs to support the police to patrol the tourist sites and impose sanctions on those violating the law.

Transportation

The research results reflect that "transportation" is the fifth-factor affecting domestic tourists' satisfaction with the quality of ecotourism in the Mekong Delta, Vietnam. To increase satisfaction through this factor, the author proposes some governance implications as follows: tourism organizations need to equip and invest in more comfortable and modern means of transport such as bed cars, which have televisions, wi-fi, toilets. The results show that the current means of transportation to tourist destinations is not diverse in terms of quantity and types. Therefore, tourist destinations need to cooperate with transport companies: car companies, boats, buses so that tourists have more choices of transportation to tourist attractions. Furthermore, in order to easily find information and buy tickets, there should be clear instructions on means of transport, prices, and schedules on the website of tourist destinations. Finally, tourist sites need to collect tourists' comments on modes of transport to improve transportation such as increasing river transport by boat, canoe to tourist destinations so that visitors can have an enjoyable experience.

Gender

This study shows that women's consumption expectations are higher and that they consider every aspect of the services they receive. Women's satisfaction is determined by their experience with the quality of services they receive, which is in contrast to that of men's. The findings in this study are also beneficial from the administrators' perspectives. The results showed that female tourists were more aware of service quality than male tourists. The number of female tourists is increasing, which is changing the market. Therefore, tourism marketers should review existing service strategies and introduce newer ones to suit the market.

THE RESEARCH LIMITATION AND THE FUTURE RESEARCH

Although the research has achieved the proposed research objectives, there are still some limitations as follows: First, the study was only conducted with research subjects who are domestic tourists. The results of the study are not highly representative. Therefore, the next study should survey domestic and foreign tourists for a better-rounded view. Secondly, this study only explains 65.74% of the variation of domestic tourists' satisfaction with the quality of eco-services in the

Mekong Delta, Vietnam by the variation of 05 variables. As such, there are many other factors affecting satisfaction that the study has not found. Therefore, the next study needs further research to find out some new factors affecting the satisfaction of domestic tourists with the quality of ecological services in the Mekong Delta, Vietnam.

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APPRECIATION OF SOCIAL MEDIA BY TOURIST ACCOMMODATION OWNERS IN GREECE

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Abstract: The primary aim of this paper is to examine the use of social media by managers in the field of tourism, especially in small and medium-sized businesses in Greece. An explanatory quantitative survey has been applied to collect, process and analyze primary data using questionnaires answered by 302 tourist accommodation owners, originated from 35 prefectures across the mainland and the islands of Greece. The research has indicated that the degree of social media dynamics is also large in small and medium-sized businesses. Regarding the goals that every business wishes to achieve by using social media, it has come up that businessmen seem to be content with their simple preserve on social media and retain mainly an informative and advertising approach. Based of the findings, it has become apparent that social media use, even for advertising purposes, occurs but without being a part of a general strategy promotion, thus with no specific plan or goals, without realizing the benefits of their advantages, and with no results measurements.

Key words: tourism, small and medium-sized businesses, social media, survey, marketing strategy

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INTRODUCTION

The basic subject of this study is to examine how and why social media are being used by small and medium-sized tourism accommodation and hosting businessmen. Consequently, in order to be clear whether the businessmen of the field are for starters familiar with social media and later on, whether they have already included it in their general strategy of recognition and promotion of their businesses. Since:

- Platforms and social media applications are widely adopted with unprecedented access to users-consumers.

- Social media provides for the hosting industry the opportunities to manage and present a business content, and serves as a tool to determine the basic principles that attract customers.

- The tourism business is mainly consisted of small and medium-sized businesses (European standards).

- A relevant research is still on-going and there are no studies, especially in Greece, concerning the use of social media by small and medium-sized tourism businesses.

It is highly important to perform more researches, as this one, in order to examine how businessmen use social media and what are their goals and expectations. In a wide concept, social media refers to a distributed way of creating content, propagation and communication among communities. Differentiated from traditional mass media, social media has broken the limits between writers and readers, while the process of propagation and information consumption is innately related to the process of production and information exchange. Taking under consideration all the benefits that social media can offer, it seems that it possesses all these characteristics to help in marketing and advertising. This is especially important for the tourism and hosting area, due to the fact that these certain professions have to do with the human factor. Social media seems to be a choice for the hosting industry, as it provides opportunities to manage and present business content, as well as it helps to identify fundamental values in order to attract customers. Most companies will benefit from a cohesive strategic plan that encompasses all social media efforts in the general marketing attempt (Buted et al., 2014). Zeng and Gerritsen (2014) suggest that almost every on-going study applies a micro-approach, focusing only on certain aspects of the subject, such as the type of social media and the stages of the procedures on travel planning and/or making decisions.

According to Yilmaz (Yilmaz, 2019) studies on bibliography focus in general on the social media use by the consumers. It appears to be that the number of the studies relevant to the use of social media by tourism businesses are not in the desired level. In a research conducted on hotel units in Balikesir county, it became clear that businesses use social media for

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advertising; ignoring all other possible uses, like relationships management with customers. Another crucial fact, according to the author, is that businesses do not use measurements relevant to the use of social media in order to reach their goals more easily. However, according to the authors, there are no other studies, neither internationally, nor in Greece, that record which social media, how and why small and medium-sized hosting businesses make use of it. Most researches concern large hotel units and they are mostly "case studies". Due to the importance and the necessity to use social media in tourism businesses, along with the lack of relevant studies under the scope of small and medium-sized businesses, emerges a need to make a more thorough investigation on the use of social media from small and medium-sized businesses in Greece, which is in fact the subject of this study. The findings of this research could be of great help to small and medium-sized businesses in relation to the use of social media and could also play an important role in defining a policy on behalf of the hotel businesses, such as the Hellenic Chamber of Hotels and the hotel unions in places (particularly under the current, very hard circumstances due to COVID 19 pandemic) and by educational and vocational training operators for hotel employees.

Social Media and Tourism
Social Media in Tourism

Social media has transformed the way people communicate with each other and with companies as well. This is true especially in the field of tourism, where people seem to interact with each other more and more on social media, while planning their trips and journeys, especially when they seek for information (Xiang and Gretsel, 2010, Shao, 2009). The growing role of social media in tourism has been increasingly an emerging research topic (Datta, 2019). People use social media to share their views and experiences and to create user-generated content (UGC), which in turn affects the travel choices of other travellers (Singh and Srivastava, 2019) In fact, in this phase of the consumer's behavior process, several social aspects, such as the exchange of opinions and the recommendations between friends, play a major role (Minazzi, 2015:33).

Additional Web 0.2 applications, such as collaborative travel planning tools or online games appear to provide travelers with the opportunity to become part of business operations in multiple ways (eg. Development of new services), (Sigala et al., 2012). Customers seem to create a special content, such as customers reviews, travel logs, etc. which has taken the form of the basic source of information addressing to travelers. Electronic word-of-mouth (Ewom) offers no-financial, authentic and experiential information in detail concerning travel destinations and operators that become more and more reliable, because they are not being operated by any firm (Buttle, 1998). Travelers are now able to select their destination and plan their trip based on advice and comments shared on electronic media by fellow travelers without having the need of travel agencies (Egresi and Prakash, 2019). Consequently, there has also been a change concerning relationships with companies, as well as a change in traveler's habits. Actually, according to statistics, consumers prefer to use social media in order to interact with firms and service providers (Nielsen, 2012). Wang and Fesenmair (2004) suggested that social media is quite useful for managing relationships with customers, due to their very unique ability to attract customers through a focused, well-centered contents produced by the users, also to engage their customers through social interactions and retain them through relationships that occur between customers and themselves. Dellarocas (2003) claims that social media offers striking opportunities to tourism businesses to comprehend and respond efficiently to the needs of the consumers. Through an analysis made upon hotels reviews that took place within online communities, hotels and other companies that are engaged with tourism and travelling are proved to better understand the likes and the dislikes of their guests, and their competitors as well.

Social media play a significant role in many aspects of tourism, especially in information search and decision-making behaviour, tourism promotion and in focusing on best practices for interacting with consumers (Datta, 2019). They also play a crucial role in promotional activities, distribution of goods, communication, management and research (Leung et al., 2013). Even if, still today professionals use social media specifically as promoting and communicational tools, rather than as independent distribution channels, the future trend in social media marketing could be shifted from contemporary brand marketing to conversions and sales (Minazzi, 2015). The use of social media as a communication tool with the proper management can attract customers and thus lead to an increase in sales and revenue (Dellarocas, 2003; Chevalier and Mayzlin, 2006; Dellarocas and Thang, 2007). Social media data can serve as an important source of customer analysis, market research, and crowdsourcing of new ideas, while capturing and creating value through social media data represents the development of a new strategic resource that can improve marketing outcomes (Gnizy, 2019).

Reasons to absorb Social Media by Hotel Companies

According to Minazzi (2015) based on the degrees of the engagement of the customers and the level of completion between social media and business strategies, we can identify the following four approaches that describe the way businesses make use of social media: presence in the media, social media projects, "call to action" and social CRM. These are considered as the four steps in a continuity that leads businesses from just being on the social media to a fully-organized strategy, targeting to learn from their customers and establish a relationship with them. In general, the phase of a strategic entry to social media is the simple presence of the companies in them. In this case, businesses work to achieve recognition and to create a supporting content for their existing marketing strategies, without being fully connected to them. Furthermore, businesses at this stage do not have a particular action for each social media and it is highly unlikely to develop certain measures to track down the results.

There is an improvement in connection with the previous approach that is determined by the development of "social media projects" for multiple social media platforms in order to engage users through bidirectional interactions and conversations. For the most part, businesses at this stage seem to be moving forwards in order to connect various media. They begin to keep track on their popularity on the Internet using some kind of analytical data, in some cases they respond on line, and they are willing to improve their services. The third approach of social media regards it as a tool used in order to "call to action" the users

engaged. That means that certain companies by seeking for the cooperation of the users, they point out the way for purchases (online or offline). This specific approach views social media as distribution and communication channels that support and incorporate marketing strategies. Approach number four that can be named as "Social CRM", considers that social media and business strategies are fully activated. Social media is used by businesses in order to learn about their customers and their perspectives (customers profiles), trying this way to comprehend certain possibilities or threats originated by the market. Moreover, this approach offers the possibility to harmonize with the needs of the customers and expectations in order to create value. Social CRM strategy is a form of collaborative interaction, including firm–customer, inter-organizational, and inter-customer interactions, that are intended to engage and empower customers, so as to build mutually beneficial relationships with the firm and lead to superior performance (Li et al, 2021). According to Rowley et al. (2007) expect, not just collecting and analyzing the opportunity to use online social communities, but also to activate cooperation and interaction with single customers or communities of clients with the purpose to : create and evaluate new ideas, design and put new services or new products on test and plus, to develop and support social innovation (Nambisan, 2002), in order to create and maintain the relationships between the customers and the businesses, the services they provide and the procedures.

In relation to the aim of every tourism business that uses social media, the latter can be categorized as follows:

• Target group identification: It is a fact that online users get organized in communities depending on their interests. Although there are platforms, such as Facebook that seems to be addressing to everybody, most users belong to a certain "type", thus it is quite essential for the business to identify which social media constitutes the best potential market for them.

• New customers approach: A powerful presence in the social media allows tourism businesses to get constantly informed about forthcoming events, promotions, amenities and services within a huge range or potential customers, without having to spend enormous amounts of time and money on advertising.

• Focused marketing and advertising: Social networking sites enable travel hosting business to target specific customers based on their age, income, interests, geographical location, circle of friends and several other criteria. Later on, it is quite easy to create tailored marketing campaigns.

• Create a bond with customers: The stronger an emotional relationship becomes between a guest and the hotel, the more likely it is for the guest to visit again and by all means, the preservation of the customers is one of the major factors that can guarantee a hotel's success.

• Branding: Through a clever combination of marketing techniques and its presence on several social media platforms, the hotel can target specific markets using appropriate advertising, and next, create a relationship with guests, or potential guests, who will trust the business and its services.

• More booking: Although Facebook through "Facebook book" new button service offers the ability to book, indirect distribution channels appear to be more successful. TripAdvisor, Booking.com, Cubilis Booking Engine, Hotelbeds, Hotel4u, Expedia, HotelChatter, bugbitten, placeblogger, realtravel, travelpod, offer tools and possibilities with numerous options and reservations filtering.

• Hire talented staff: Another attribute for supporting travel hosting businesses on behalf of social media, is the potential to recruit appropriate personnel.

Align Social Media Initiatives with Strategies
Tourism product promotion is one of the most complicated kinds of marketing mostly because it is made up of both goods and services. Its consumption has to do primarily with the acquisition of experiences rather the acquisition of goods. Thus, it becomes clear, that it includes services and structures that are developed based on how each management comprehends that their product covers the needs of the consumers. The market is so large and there are numerous standards and needs: therefore, it has to deal with various difficulties in identifying, approaching and meeting it. The tools used to meet and identify are research, analysis, design and consensus among all parties that are actively engaged in the tourism product promotion program, so as to create an appealing and competitive product (Pafili and Pafili, 2017). Considering the dynamic nature of hotel industry, traditional management approaches are proven to be dysfunctional. Aiming to compete efficiently, hotels ought to adopt a more dynamic way of thinking and develop deliberate and emerging strategies.

Social media as distribution channels for the tourism industry is divided in two categories:

• Immediate: the tourist product reaches the consumer directly, without the intervention of a third party. In this category belong Facebook, Instagram, Twitter, YouTube, Snapchat, Viber, and Facebook Messenger.

• Indirectly: Third parties, financially independent businesses mediate between the business itself and the customer, such as, Booking.com or TripAdvisor.

Owners of hotel units are required to make decisions about which distribution channel is most suitable, always in relation to the products or the services it offers. Research on social media in tourism, has expanded a great deal world widely. Initially, research focused mainly on a more general discussion concerning the consequences social media may have on tourism industry, especially in tourism businesses and businessmen themselves (Dwivedi et al., 2011; Thevenot, 2007).

The European Council Assembly in Lisbon, pointed out the need to create an atmosphere more favorable to small and medium-sized enterprises (SMEs) as a means to create a dynamic and financially competitive Europe. European SMEs policy puts forward a cohesive and practical framework that promotes entrepreneurship and the creation of a favorable atmosphere that will enable them to become more competitive. The Lisbon strategy also stressed out the importance of innovation as a key point for competitiveness and financial development, especially in the case of small and medium-sized enterprises. The tourism sector is mainly set by small and medium-sized business (1 of 240 employees) most of them

employ less than 50 employees. Small and medium-sized businesses (SMEs), appear to be a basic component of economy, an important source of business skills and innovation, and they are regarded as key factors of social cohesion, due to the fact that they stand for a large percentage of employment. European Union's Strategy underscores the significant role that SMEs play in revitalizing economy, achieving stronger and more sustainable growth and employment.

According to their research, Lu et al. (2017) "*social media is being broadly used by tourism and hosting companies, and by tourists as well*". The findings of this study indicate that social media, in number of areas of hospitality and tourism has not received much attention from academia. Furthermore, the use of social media in the hotel area is being investigated mostly in the context of multi-stars hotels, particularly those with four or five stars. The use of social media in other types of accommodation, such as mid-range hotels, hostels and B&Bs, has not yet been under question (Domínguez-Navarro and González-Rodríguez, 2020; Varkaris and Neuhofer, 2017; Garrido-Moreno and Lockett, 2016),

RESEARCH METHODOLOGY

The following figure illustrates the research framework:

Specifically, in this assignment certain research questions are under investigation, which can be considered as the examined factors in order to appraise the degree of the appreciation of social media by managers in the Greek tourism sector:

- Degree of social media use.
- How to manage social media.
- Goals of using social media.
- Type of social media content.
- Reasons not to use social media.

In particular, there has been an

Figure 1. Research framework

investigation on the current situation of small and medium-sized tourism businesses through an explanatory quantitative survey in order to collect, process and analyze primary data. The technique of a questionnaire and the statistical analysis were chosen. The questionnaire was chosen, mainly because it is considered to be the most suitable tool, as it requires only a small amount of time to answer. The questionnaire used for the collection of primary data took the form of 3 basic sections: the accommodation profile, the use of social media for business purposes and the non-use. At the end of the first section there was the question whether social media is used, and depending on the answer (Yes/No), the businessman could enter "section 2" (Yes) or "section 3". The second section was based on 3 key points: the current situation, the specific goals and the degree of fulfillment via the use of social media. The third sector posed two questions: what are the reasons for not using social media, and whether future use is likely to happen. The total of questions, in all 3 sections is 22, all closed-ended questions (multiple choice, Yes/No, list, five-point Likert scale). The choice of closed-ended questions was realized in order to simplify and reduce the time required to fill in by the respondents, and the easier coding and handling of the questions. Moreover, all the questions were obligatory in order to achieve cohesion and reduce the negative aspects of the questionnaire. The formation of the questionnaire was realized by using google forms. In this study, a simple, random sampling was chosen in order to secure the same possibility for every citizen to be included in the sample (the part of the population was chosen by the population). Concerning the compilation of the list, there was an effort to include population from as many areas of the country as possible, from different types of accommodation and lastly, to be as large as, possible.

The selection of the data was made by distributing the questionnaire to a random sample of small and medium-sized tourism businesses via e-mail. The process to locate the sample was time consuming. At first, an e-mail was sent, with the link of the questionnaire along with the request to be distributed to their members, to Panhellenic collective organizations of tourism companies, such as SETE (Association of Greek Tourism Enterprises), SETKE (Confederation of Business Tourism Accommodations of Greece), Hotel Federation of Tourist Accommodations and POX (Panhellenic Federaction of Hoteliers). Next, a list of 590 tourism businesses was set and the research questionnaire was sent to all of them.

All together, the same e-mail was sent to as many local collective bodies of the country could be traced. The members of the associations, units, federations responded and 302 answers were collected from 35 prefectures of the country, between the period: 05-18/04/2020. For the introduction processing, analysis and presentation of the questionnaire data, the SPSS statistic package was used as the most appropriate tool. The necessary preparation took place: coding the questions and answers, weighting, introduction of respective variables in SPSS, control and test using virtual answers. Later on, the answers to it were entered in the form of a Microsoft Excel spreadsheet, as it appeared in the google forms.

After the weighting and coding the answers data, and introducing them to SPSS statistical program, the Cronbach's Alpha was checked. Afterwards, Chi-Square and Factor Analysis tests were carried out.

RESEARCH RESULTS
Sample Identity

Answers were selected from 302 businesses, originated from 35 prefectures across the mainland and the islands. The sample includes businesses with great tourism activity, such as the Cyclades, Chania, Kephalonia, Attica, and Thessaloniki; but
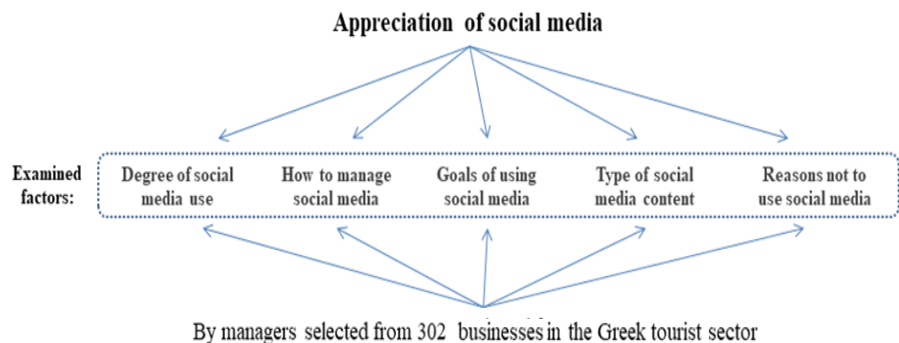
also with less tourism as Pieria, Xanthi, Fhtiotida, Grevena, etc. All businesses are small and medium-sized (with less than 250 employees, with the great majority (75.5%) to employ 1-10 employees. Nearly all businesses (98.7%) own less than 100 beds.

The 47% belong to the "furnished rooms-apartments to rent" category, and the 45.7% to the "Hotel" category. The majority of the hotels (19.2%) carry 4 stars and then there are the 3-stares hotels (17.9%), whereas the majority of furnished rooms-apartments have 2 keys and then follow those with 3 keys at a rate of 15.9%. Most businesses (25.8%) operate for 11-20 years, the next higher percentage (21.9%) are those with 21-30 years of operation, whilst the percentage of businesses operating more than 30 years is quite remarkable, which comes up to 19.9%. In regard to the use or no-use of social media 88.7% of the respondents gave a positive answer: the 89.9% of hotels and 87.3% rented rooms-apartments while studying the Homogeneity of Variation (one way ANOVA) among the different types of accommodation in relation to the use of social media, it becomes apparent that the variations do not differ (Levene p=0.156). This fact indicates that, there is no difference among the different types of accommodation in the use or no-use of social media. The businesses that belong to the smaller categories based on the keys or the stars, are the ones that present the lowest percentage of social media use, 75% in both categories. Businesses with the shortest period of operation (1-5 years) are the ones that appear to use social media the least (83.3%). Half of the businesses use social media more than 5 years whereas, the percentages are almost the same for variations of 2-3, 3-4 and 4-5 years.

Degree of use of Social Media

For the second section of the questionnaire a number of specific social media that are frequently used was initially given, namely: Facebook, Trivago, Booking.com, Instagram, Printerest, Twitter, Youtube, TripAdvisor, Facebook Messenger, and responders were asked to answer to what extend they use each one of them.

According to the findings: 27.61% make moderate use and 25.37% use Facebook a lot, 32.09% do not use Trivago and 23.88% use it a little, while the majority (57.46%) uses Booking.com very much and by 20.00% a lot. Instagram does not appear to be among the business favorites, as the largest percentage (32.09%) do not use it at all, and 19.40% make moderate use. Printerest seems to be rather indifferent to tourism businesses, as 73.88% do not use it and 13.43% use it just a little. The same thing applies for Twitter more or less, since 72.39% do not use it, 11.94% use it a little and 11.19% make moderate use. YouTube as well, do not interest the tourism business, since 54.48% do not use it, and 20.90% make moderate use. On the other hand, 84.33% deals with TripAdvisor and 28.36% vary from a little to very much. At last, 26.87% of accommodations do not use Messenger, 23.88% use it a little and 16.42% in the categories of moderate, a lot and very much. The average use of the social media networks under examination is presented in the following graph:
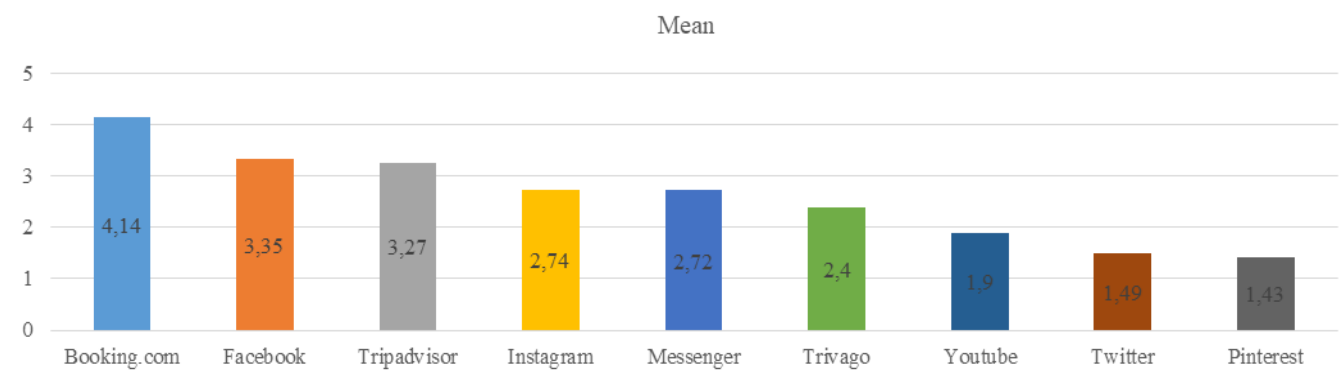
Figure 2. How do you use Social Media in your business?

As a whole, the tourism entrepreneurs of the sample seem to give priority to Booking.com and TripAdvisor, and then follows Facebook which comes first in the preferences of the users worldwide. Later, a Chi-Square test was conducted, among the businesses that use social media, in order to detect a possible relation between the type (category) of accommodation and the social media platforms they use. P values are spotted in almost all cases of >0.05, which means that there is no significant relationship between the type of the accommodation and the degree of use of each social networking platform.

Finally, there was a Factor Analysis of the questions concerning the goals from the use of social media; the value of the KMO index was found equal to 0.731, which means that all the data are appropriate for factor analysis, whereas the value p=0 shows that there is an important correlation between certain variables. The application of the method of factor analysis presented 3 factors-initial Eigenvalues with a value more than 1. In the first factor, questions (in order of importance, in relation to the load of each factor) are included: Twitter, You Tube, and Instagram. A typical interpretation of the first factor is "Social Media Platforms of special interest". The second factor includes questions (in order of importance, in relation to the load of each factor): Trivago, TripAdvisor, and Booking.com. A typical interpretation of the second factor is "Booking Platforms". The third one includes the questions (in order of importance, in relation to the load of each factor): Instagram, Messenger, and Facebook. A typical interpretation I: "The most common social media platforms nowadays". The use of Instagram participates in both the first and third factor with more or less the same percentage.

How to manage Social Media

The following question of the second section of the questionnaire was relevant to how businessmen manage social media; it became quite clear that the management is done only by the businessmen themselves. 68.66% of them manage social media by

themselves, 14.18% by themselves but they seem to appoint certain services to professionals, 11.19% receive instructions from professionals, and only 5.9% hire professionals, as shown in the following chart:

Percent

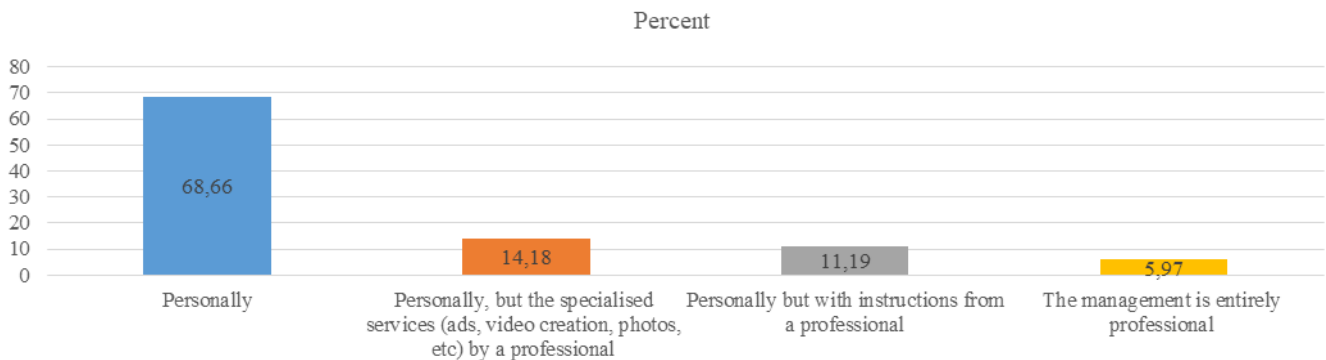Figure 3. How do you manage Social Media in your business?

The way of managing social media is relevant to the size of the accommodation in beds (Pearson Chi-Square = 46.704, p=0.000<0.05), to the type of accommodation (Pearson Chi-Square = 35.226, p=0.002<0.05) and the number of employees (Pearson Chi-Square = 33.565, p=0.000<0.05) that it is obvious that only large hotel units appoint the management of social media to professionals. Therefore, assumption number 2 is verified = H2: The management of social media is done mainly by businessmen themselves without any professional guidance or help; with the exception of large hotel units that either appoint the whole social media management to professionals, or appoint them specialized relevant services. Later on, respondents were asked whether the results - benefits of social media (ROI) are of any importance to them. 46.27% claimed that they do measure the effectiveness of the use of social media, but on the other hand 53.73% do not.

Objectives of using Social Media

A set of 12 questions relevant to the objectives of using social media by tourism businesses followed next, aiming to investigate whether there are certain objectives and to what extent they are of interest to businessmen. As a result:

- Businessmen are highly interested in promoting their business (47.01%) and only 26.87% a lot.
- Recognition is of primary importance to a rate of 37.31% of the respondents and a lot for 21.64% of them.
- Engagement of (potential) costumers is of moderate interest (30.60%) and very much 21.64%.
- Communication with the costumers and improving their relationships with them is a major objective for the respondents 32.84%, whereas a 25.37% is partially interested or a little.
- Attracting new customers is a goal of using social media with a very high score 37.31%, and a moderate score for 25.37%.
- The objective of the "Development of new services based on the interests of the customers" is of moderate (25.37%) and very high interest (21.64%).
- The majority of the respondents uses social media in order to create offers, ranging equally from "a little" to "very much".
- The degree of interest to create business relationships through the use of social media is moderate (31.34%) and very much in 20.15% of the respondents.
- The reduction of advertising expenses is moderate (24.63%) to very much (21.64%) through the use of social media.
- The majority of the respondents uses social media to gain competitive advantages.
- The use of social media with the purpose to find and employ staff is very low (none: 49.25%, and a little 20.45%).

Mean
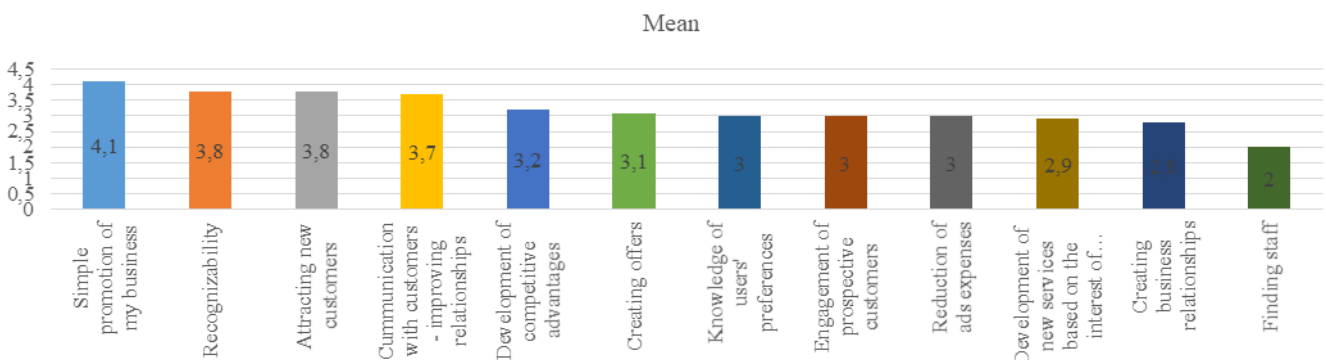
Figure 4. To what extent do you use social media to achieve the following sub-goals?

After controlling the averages of the degrees of using the social media to achieve these specific objectives (Figure), it is clear that the primary objective of the businesses is their mere promotion, then follows recognition, and later on the attraction of new customers, and lastly, on a declining course, communication with customers, creation of offers, development of competitive advantages, knowing users interests, new customers engagement, reduction in advertising costs, new services development relevant

to the interests of the customers, establishing business relationships and finally, finding personnel, showing a very little interest. Lastly, after the final Analysis check of the questions concerning the objectives of social media use, the value of KMO index was found to be equal to 0.903, rather high and above 0.8, which means that the data is not appropriate for productive analysis.

Type of Content on Social Media

The following questionnaire questions investigated the type of content of social media posts monthly. Possible answers are also presented on five-point Likert scale:

- Almost the total of the respondents publish photos of general interest: a lot (49.25%) and very much (30.60%)
- However, they avoid posting customers photos in a rate of 40.30%, while 19.40% claimed they do post photos of this kind.
- A big percentage of respondents post a little (20.90%) or no video-content at all (27.61%), while 17.91% stated that they post videos a little.
- There seems to be a preference to post the business services on social media, 29.10% saying "a lot", 26.87% "moderate" and 23.88% "very much".
- Moreover, almost the total of the respondents prefer to "upload" events on social media a little (22.39%) - to a lot (17.16%).
- Businessmen do not pay attention to questionnaires on-line, since in their majority and at a rate of 62.69% do not care about them, and only a 17.91% deals with them.
- However, they seem to use social media in order to promote offers; the largest percentage of respondents (24.63%) "a lot", and "very much" 20.90%.
- In addition, guests' reviews appear to be a favorable topic, since 85% post reviews at a range of "a little" to "very much".
- There is also a preference for content of general interest, whereas only a 12.69% of the respondents do not deal with this kind of content.

By examining average rates, on increasing ranking of content's preferences of social media posts, is formed as shown in the following chart:
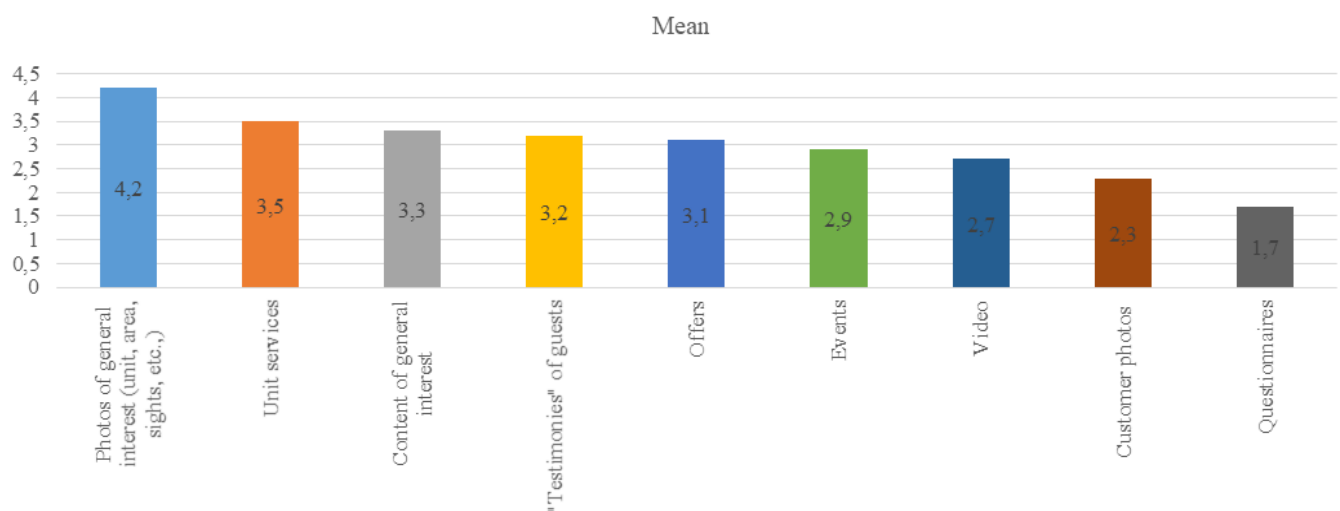
Figure 5. Content Type

During the Chi-Square test of cross-tabulations among all accommodation features and the types of content that they use on social media, it became clear that there is a connection between the location of the accommodation and the number of photos of general interest posted on-line (Pearson Chi-Square=232.986, p=0.000<0.05). There is also a connection between the capacity of the accommodation and events posting (Pearson Chi-Square = 24.727, p=0.016<0.05), with 21-50 bed accommodation preferring to post events. There seems to be no other connection between the contents of posting on social media and the accommodation features. However, there is an obvious connection between spending time on social media and posting general interest photos (Pearson Chi-Square = 44.996, p=0.006<0.05). The more businesses use social media, the more they prefer to post this type of content on-line. Furthermore, there is another connection between spending time on using social media and posting the unit's services (Pearson Chi-Square = 37.706, p=0.037<0.05). Participants were asked to answer the question: "14. How often do you update the content of your pages on Social Media within a month (on average)"? They majority of them (83.85%) update their pages 1-10 times a month, whereas a percentage of 10.45% of them update their pages 11-20 times. A Chi-Square test was performed along with correlation coefficient between the frequency of content updating and all the previous questions, according to which there seems to be no correlation; for example, the frequency with which businessmen post any content.Conclusively, a Productive Analysis test of the questions relevant to the goals for the use of social media, showed that the value of the KMO index was found to be 0.812, which means that the data are appropriate for productive analysis, as the value p=0 indicates that there is an important correlation among certain variables. The application of the method of productive analysis indicated two factors. The first one includes the following questions (in order of importance, depending on the importance of each factor): Offers, Photos of general interest, Services of the unit, Content of general interest, Events, "Reviews" of guests. A typical interpretation of this one could be: "General Content". The second

includes the following questions (in order of importance, depending on the significance of each factor): "Reviews" of guests, Customers Photos, Videos, and Questionnaires. A typical interpretation of the second factor could be: "Specialized, personalized content". The posting of events exists in both factors with a greater significance in the first one (0.547 & 0.309 respectively).

Reasons for not using Social Media

The third section of the questionnaire was seen only by the businessmen who do not use social media, where two specific questions were included: "Why don't you use Social Media in your business;" the possible answers were: {1. I do not require the appropriate knowledge, 2. There is no required time, 3. I am afraid (of negative reactions-comments, user's rating, possible mistakes, etc., 4. I do not think they can be useful, 5. I cannot afford to hire a professional, 6. Addition of "Free choice"}, and secondly, "However, is it likely to add social media use in your business strategy sometime in the future?" with possible options, Yes or No. 26.67% of respondents suggest that they do not use social media because there is no required time and because they cannot afford a professional fee (same percentage). 20.00% reply "I do not possess the required knowledge", and another 20.00% response "I do not think can be useful". At last, 6.67% say that they are afraid of the negative reactions of users. All answers are independent and unrelated to the features of accommodation. Yet, just over two-thirds of those who do not use social media consider future use possible. In addition, all answers are independent of any feature of the accommodation profile.

CONCLUSIONS

The examination of how and why small and medium-sized tourism hosting businesses use social media is the fundamental subject of this specific research. According to the findings of the primary research, the majority of businesses uses social media, regardless of their type (rooms to let, villas, hotels, e.tc.). 90.3% of the businesses with 2 keys use social media, 87.5% of them with 3 keys and 84.6% of them with 4 keys use social media pages. Respectively, 85.7% with 2 stars, 88.9% with 3 stars and 93.1% of the businesses use social media. However, businesses that belong to smaller categories (75% of them with 1 key or 1 star) use social media in the lower rate. All businesses have been using social media for years and most of them for more than 5 years. Thus, it becomes evident that the degree of the invasion of social media is great in small and medium-sized businesses as well, regardless of whether their characteristics follow the current trend.

After studying the answers of the respondents, it has become obvious that the management of social media pages is mostly done by the businessmen themselves, with 14% of them to appoint specialized services to others. However, only large hotel units seem to appoint management exclusively to professionals, confirming this way the second assumption of this study, that basically, businessmen use social media by themselves without any professional guidance or assistance.

As far as it concerns the goals of using social media, it is a fact that all businesses independently target to their mere presence, then recognition, thirdly new customers attraction, and next follow communication with the customers, offers creation, competitive advantages development, users' preference knowledge, (potential) customers' involvement, advertising costs' reduction, and finally, hiring personnel, showing no special interest. Thus, businessmen seem to be content with their mere presence on social media and their approach is mainly for informative and advertising purposes. These findings are in accordance to foreign past studies (e.g. Yilmaz, 2019), coming to the conclusion that businesses use social media for advertising ignoring other potentials, as communication management with the customers.

The previous assumption becomes stronger depending on the content they prefer to post on social media platforms: mainly general interest photos, units' services presentation, offers for simple promotion and recognition, and hardly any customers' involvement content nor videos that are regarded as the highlight of content. Productive Analysis showed that the businessmen who make general interest content posts (Offers, Photos of general interest, Services of the unit, Events, Guests' reviews) are very content with social media use. Moreover, it seems that the more they post general interest content, they more the use booking platforms (Booking.com, TripAdvisor and Trivago). Nevertheless, videos themselves, as a content or a means for advertising on social media are emerging all the more. "During the past years short videos have become most loved on the Internet" as Liu et al. (2019) report in their work "Research on the Influence of Social Media Short Video Marketing on Consumer Brand Attitude", claiming that the effective use of short videos on social media has become a hot issue among academia. It has become evident that social media use is performed although it hasn't yet been integrated in the general strategic businesses' promotion, so to speak, without a specific plan or goals, without apprehension or benefit of all advantages and without any performance measurements. These are 11.30% of the respondents who do not use social media, mostly because there is no required time or because they cannot afford the cost of a professional.

In general, according to the international social media and economic current agenda social CRM is crucial for every tourism business, meaning that social media and businesses' strategies should be fully integrated. However, in order to achieve social CRM businessmen before all, should realize its importance and then apprehend the potentials of social media use, be aware of the fact that social media pages and web sites as well, are powerful investment tools, for which there are specific ways and agents to measure their performance. Social media use needs to be based on a strategy, along with specific goals, steps and measurements, while making use of all its potentials. It should be part of a more general strategy on behalf of the tourism business, and not taken as an, almost unknown, tool for the mere promotion of the business.

This paper could be expanded with the examination of social media use in places around the country or depending on different tourism types (healing, religious, athletic, etc.), or by tourists' categories. Furthermore, businessmen themselves could report their goals, if any and their expectations from using social media, as well as ask themselves whether they acknowledge certain characteristics. There is no doubt, that further investigation must take place, as small and medium-sized tourism businesses around the country, although they have been using social media for years, they don't seem to be fully aware of them nor follow a strategy, and finally, due to the fact that relevant research is not satisfying.

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COMPETITIVENESS OF HOTEL, RESTAURANT
AND TOURISM BUSINESS: FACTORS AND TOOLS

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Abstract: The aim is to find ways to ensure sustainable development and increase the hotel, restaurant, and tourism business's competitiveness. The authors used the correlation-regression dependence of the number of tourists going abroad Y on the income of the population X and Fisher's statistical criterion to check the model's adequacy. Authors proposed the system for ensuring sustainable development and competitiveness of the hotel, restaurant and tourism business. The peculiarity of the proposed system is that it covers all aspects of sustainable development, includes multi-level governing bodies, integrable legal forms of organizations and science, making it possible to form interrelated elements of sustainable development and increase the competitiveness of the hotel and hotel industry, tourism in general. In years of political instability, the number of domestic tourists, with a positive upward trend, is falling sharply, despite rising incomes. Fisher's statistical criterion indicates this model's adequacy: an increase in income of the entire population of Ukraine by UAH 10 mln. would lead to the additional appearance of about 8 Ukrainian tourists travelling abroad. The coefficient of elasticity Ex (Y) = 0.9193 shows that an increase in the income of the entire population of Ukraine by 1% would increase the flow of Ukrainian tourists travelling abroad by about 0.9%. The article is devoted to the search for ways to increase the competitiveness of the hotel and restaurant and tourism business. The analysis showed that 2019 was a good year for the entire HRTB. However, the global pandemic COVID-19 in 2020 significantly affected this area: border closures, cancellation of messages between countries, total quarantine, weekend quarantine and other prohibitions. Therefore, the search for a strategy to increase the competitiveness of HRTB facilities in 2020/2021 is the most relevant. The authors proposed a system for ensuring sustainable development and competitiveness of the HRTB. The system covers all aspects of sustainable development.

Key words: competitiveness, COVID-19, hotel, restaurant and tourism business (HRTB), hotel, restaurant and tourism organizational structure (HRTOS), sustainable development

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INTRODUCTION

Today, the hotel and restaurant and tourism business (HRTB) play an essential role in the economy of any society. As a result of the development of HRTB, the country receives such benefits as job creation and income growth; attracting investments (including foreign ones); cash flow growth (including foreign currency inflows); GDP growth; increase in tax payments; accelerated economic development of the country (Karimi and Honarvar, 2018; Cherniavska et al., 2020).

With significant potential, the Ukrainian hotel, restaurant and tourism sector could take one of the first places in the world market. But the annual unearned income from international tourism in Ukraine is estimated by experts at $ 13.30 billion. Such statistics indicate the non-competitiveness of HRTB Ukraine and not using the country's potential to the full (Bashynska et al., 2019; Robul et al., 2020). The practice of running a hotel, restaurant and tourism business on the territory of Ukraine reveals the problem of introducing advanced technologies of international hospitality, including managerial ones, which is associated with: 1) insufficiently high controllability of all economic processes; 2) insufficient conjugation of the personal and group interests of the participants in the production and implementation processes of the hotel and restaurant direction with the

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interests of society; 3) insufficient transparency of the activities of the managed structures of the field of modern hospitality; 4) the problems of training and employment of specialists in a highly categorized hotel and restaurant direction. Therefore, domestic hotel and restaurant organizational structures should systematically cover the advanced methodology and technology of international hospitality and use the factors and mechanisms of competitive behavior models that would allow, in the conditions of domestic hotel production, to create a more perfect consumer offer that can become a unique competence, and therefore increase the level of competitiveness of the business. Thus, the search for factors that affect the competitiveness of the hotel, restaurant and tourism business, as well as tools to improve is becoming increasingly important.

Theoretical part: competitiveness of hotel, restaurant and tourism business (HRTB): essence, factors, mechanisms
1. Literature review
A significant contribution to the theoretical study of the essence of the competitiveness of the hotel and restaurant and tourism business was made by Karimi and Honarvar (2018); Prokopenko et al. (2020); Shmygol et al. (2020). The topic of innovative methods of improving the management of enterprises in the service sector (in particular, hotel and restaurant and tourism business) by such scientists as Bashynska et al. (2019); Yakushev (2020). Trends in the hotel and restaurant and tourism business, in particular in Ukraine, were studied by Szewczyk and Lipianin-Zontek (2019); Yukhnovska, (2019); Halkiv et al. (2020); Moyeenudin et al. (2020). Despite the significant interest of scientists in the competitiveness of hotel and restaurant and tourism business, the rapid development of new technologies, information saturation of the environment necessitates a comprehensive study of the prospects of new mechanisms in the management of hotels and restaurants and tourism industries.

2. Analysis of hotel and restaurant and tourism business in Ukraine
Before developing methodological recommendations, it is necessary to analyze the current state of the HRTB (Table 1-2).

Table 1. Number of business entities in restaurants and mobile food service in 2010-2019
(compiled by the author based on data from the State Statistics Service of Ukraine)

Years	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Restaurants and mobile food service activities										
Total, units	29950	24933	28142	32957	37557	38345	38199	38545	41860	48398
Including natural entities-entrepreneurs, units	23857	18774	22441	26896	32727	33633	34207	34102	37283	43572
in % to the total of business entities of the corresponding type of economic activity	79,7	75,3	79,7	81,6	87,1	87,7	89,5	88,5	89,1	90
Event catering and other food service activities										
Total, units	4635	3820	4350	5077	5607	5366	5293	4977	5094	5415
Including natural entities-entrepreneurs, units	3981	3133	3745	4488	5135	4902	4900	4564	4666	4991
in % to the total of business entities of the corresponding type of economic activity	85,9	82	86,1	88,4	91,6	91,4	92,6	91,7	91,6	92,2
Event catering activities										
Total, units	615	512	609	710	790	696	785	734	733	845
Including natural entities-entrepreneurs, units	554	436	521	625	718	636	741	686	680	790
in % to the total of business entities of the corresponding type of economic activity	90,1	85,2	85,6	88	90,9	91,4	94,4	93,5	92,8	93,5
Other food service activities										
Total, units	4020	3308	3741	4367	4817	4670	4508	4243	4361	4570
Including natural entities-entrepreneurs, units	3427	2697	3224	3863	4417	4266	4159	3878	3986	4201
in % to the total of business entities of the corresponding type of economic activity	85,2	81,5	86,2	88,5	91,7	91,3	92,3	91,4	91,4	91,9
Beverage serving activities										
Total, units	5335	4433	4859	5578	6283	6670	6684	6428	6604	7038
Including natural entities-entrepreneurs, units	4046	3184	3806	4561	5485	5918	6066	5725	5867	6279
in % to the total of business entities of the corresponding type of economic activity	75,8	71,8	78,3	81,8	87,3	88,7	90,8	89,1	88,8	89,2

It should be noted that growth is observed in all areas of the restaurant business, albeit insignificant (from 2 to 6%). The most massive increase in the number of units is observed in restaurants and mobile food service activities (6% over the past 10 years and 12% over the past 2 years). In the tourism sector, there has also been an increase in both income (by 35% in 2019), and the number of tourism activities (by 2% in 2019) and the average number of state workers (by 2% in 2019), while it is worth noting the efficiency work of subjects: with a slight increase in the number, income increased significantly. For the development of more effective tools, it is necessary to consider in more detail some aspects of the activities of the subjects of the tourism sector (Figure 1 and 2). The figure shows that the primary purpose of travel is leisure, rest (93.2% in 2018 and 94% in 2019). Consider the leading countries where Ukrainian tourists go (Figure 2). As you can see, the largest per sent falls on Egypt and Turkey. This situation clearly shows the operation of the Pareto law or the "20/80 Principle" (20% of the force gives 80% of the result) (Koch, 1997). Thus, the analysis showed that 2019 was a good year for the entire HRTB.

However, the global pandemic COVID-19 in 2020 significantly affected this area: border closures, cancellation of messages between countries, total quarantine, weekend quarantine and other prohibitions. To survive domestic HRTB entities need to change their strategy. The analysis of the tourism sector showed that Ukrainian tourists prefer a reasonably economic form of recreation; catering is essential, which is why Turkey and Egypt are the most popular destinations. The growth of

income in the restaurant and hotel sector shows that Ukrainians are increasingly visiting restaurants and cafes. That is why the search for a strategy to increase the competitiveness of HRTB facilities in 2020/2021 is the most relevant.
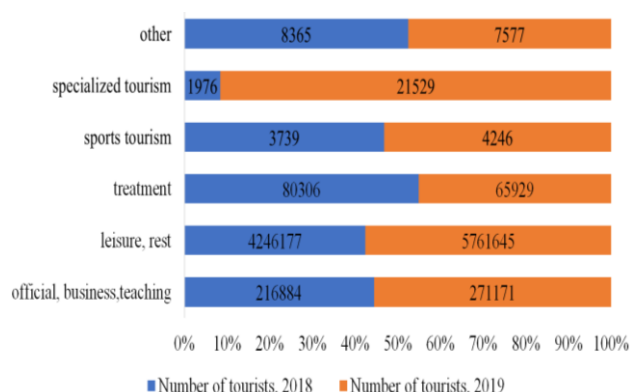

Figure 1 – Distribution of tourists by the purpose of travel and types of tourism, 2018-2019 (compiled by the author based on data from the State Statistics Service of Ukraine)
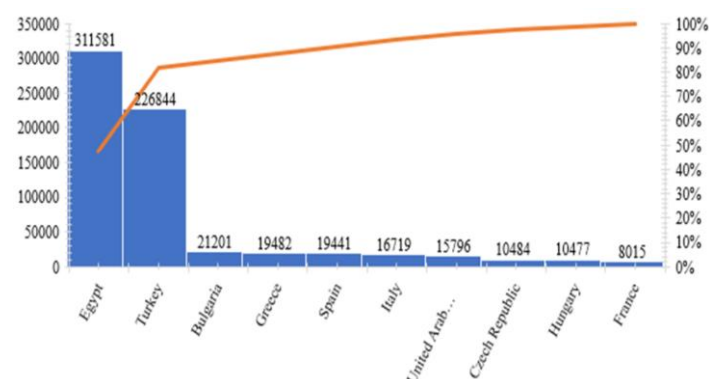

Figure 2 – Distribution of citizens of Ukraine by leading countries, to which they travelled, 2019 (compiled by the author based on data from the State Statistics Service of Ukraine)

Table 2 – General characteristics of tourist activities in Ukraine (compiled by the author based on data from the State Statistics Service of Ukraine)

Business entities	2018				2019			
	Total	tour operators	travel agents	entities engaged in excursion activities				entities engaged in excursion activities
Legal entities								
Number of tourism entities, units	1833	529	1243	61	1867	538	1259	70
The average number of full-time employees, pers.	8934	4809	3934	191	9120	4826	4064	230
Income from the provision of tourist services (excluding VAT, excise tax and similar mandatory payments), thousand UAH	21069268,5	20307544,1	715185,5	46538,9	31948701,2	31160995,2	744002,5	43703,5
including from excursion activities	89220,9	37487,8	9832,6	41900,5	113651,0	63312,1	11602,1	38736,8
The number of commissions, agency and other rewards, thousand UAH	969551,5	306209,8	650430,9	12910,8	1086118,7	403278,2	677298,6	5541,9
Operating expenses incurred by the subject of tourist activity for the provision of tourist services - total, thousand UAH	17925877,5	17125548,9	772022,3	28306,3	19060637,7	18067330,5	959263,9	34043,3
Individual entrepreneurs								
Number of subjects of tourist activity, units	2460	x	2322	138	2797	x	2644	153
The average number of full-time employees, pers.	2943	x	2808	135	3345	x	3208	137
of them have higher or secondary special education in the field of tourism, pers.	1067	x	1029	38	1173	x	1144	29
The average number of freelancers (working for agreements and external part-timers), pers.	96	x	92	4	107	x	107	–
The number of unpaid employees (owners, founders of the enterprise and members of their families), pers.	1363	x	1281	82	1466	x	1374	92
Income from the provision of tourist services (excluding VAT, excise tax and similar mandatory payments), thousand UAH	556652,4	x	501180,1	55472,3	751474,8	x	688598,9	62875,9

1.2 Concept of ensuring the competitiveness of the HRTB object

In the modern understanding, the competitiveness of an HRTB facility is its ability to successfully compete with similar organizational units that function in a specific, strictly defined segment of the consumer hotel and restaurant and tourism market. At the same time, competitiveness can also manifest itself in the part of the management processes of the hotel and restaurant and tourist organizational structure (HRTOS), as well as in terms of its departments, hierarchical levels, etc.

The concept of ensuring competitiveness in the field of modern HRTB implies a situational combination of HRTOS competitiveness factors that determine the potential capabilities of this object to compete with similar objects within the

selected segment of the planned market and is based on the principles of ensuring competitiveness and the laws of strategic management. The competitiveness management process should include the development of a competitive HRTOS strategy based on a comprehensive understanding of the competitive rules that determine the attractiveness and profitability of various types of modern HRTB. The rules of competition combined the interaction of five driving forces of competition and were later called the theory of driving forces of competition, namely:

1) new competitors entering the market;
2) the threat from substitutes;
3) the bargaining power of buyers;
4) the bargaining power of suppliers;
5) the rivalry between competitors operating in the market (Kotler, 1980; Porter, 1980; Prokopenko et al., 2020).

In HRTB, the combined action of the above five forces determines the facility's ability to generate an average return on capital investment in excess of the cost of capital. The total power of these five forces differs depending on the categorization, specific or consumer niche of the hotel industry, and may change as it develops. The practical application of this theory provides an opportunity to identify strategic innovations, the use of which contributes to the maximum increase in HRTOS profits, and its primary goal is to increase the chances of management in finding the necessary strategic innovation in the process of managing the competitiveness of hospitality facilities. The cycle of competitiveness management in the field of modern HRTB should be based on the stages of strategic management, which include mechanisms for stabilizing variable modifications of the foundations of the strategic goal-setting of the hospitality object. Namely:

1) development of the HRTOS strategy;
2) development and implementation of algorithms for adapting the developed strategy to the specific features of HRTOS, functioning in the conditions of the Ukrainian HRTB market;
3) development and use of mechanisms for the implementation of the strategy, reducing the possibility of unfavourable modification of the basic principles of HRTOS.

The HRTB business strategy of an integrated HRTOS management plan should strengthen the position of the facility in the market of competitors and thus ensure the coordination of HRTOS efforts and capabilities aimed at attracting and satisfying potential clientele, successfully competing, achieving global goals, and considering the nuances of the competitive conditions of the hotel market in Ukraine. The process of developing a strategy should be based on a detailed analysis of all possible directions for the development of the hotel and restaurant and hotel industry, as well as based on an analysis of the activities of the leading direct competitors for each categorization and specific segment. Therefore, the strategy algorithm consists in choosing:

1) the general business direction for HRTOS;
2) the categorization and specific segments of the domestic hospitality market being mastered;
3) the served segments of consumers;
4) the methods and methods of hotel competition;
5) the resources involved, 6) the models HRTOS management.

When investing in the domestic hotel and restaurant and hotel business sector, it is necessary to realize the complexity and long-term payback of such enterprises, as well as the fact that before starting to sell a hotel product it is required to bring it to a state of competitiveness in the conditions of domestic production. The experience of international corporations that successfully use the opportunities of establishing their business within the framework of the domestic market shows that the strengths of a successful modern HRTOS are (Figure 3).

Figure 3. The factors of a successful modern HRTOS

Factors influencing the success of modern HRTOS:
1) skills and experience;
2) valuable tangible assets;
3) qualified personnel;
4) valuable organizational resources;
5) valuable intangible assets;
6) competitive opportunities;
7) partnership or joint cooperation.

At the same time, the experience and knowledge of HRTOS, its intellectual capital, competitive capabilities, unique skills, strategically valuable assets, market achievements, in the aggregate, will constitute the resource hotel potential, which is extremely necessary for the face of increasing competition in the domestic hotel sector. Success in the competition will also be determined by the number of the above-mentioned resource indicators and the ability of the organizational unit to mobilize them at a time favourable for the business. Thus, the main task of the domestic hotel HRTB should be the transformation of the competitive strengths of the Ukrainian accommodation and catering facilities into a sustainable competitive advantage, as well as the definition of a list of strategic actions that will be able to eliminate the competitive disadvantages of the considered organizational units in the future. Besides, if HRTOS has a significant competitive edge in hospitality sectors where competitors are weak, it will allow it to take the offensive and take the lead.

2. Practical part: Tools for the competitiveness of hotel and restaurant and tourism business
2.1 The system for ensuring sustainable development and competitiveness of the hotel, restaurant and tourism business
The analysis showed that right now, the most urgent problem is the survival of the objects of the hotel and restaurant and tourism business by increasing their competitiveness. Taking into account the huge potential of the country, the global pandemic COVID-19, and the insignificant contribution to the economy, a system should be developed to ensure sustainable development of tourism and hospitality in general and the hotel industry in particular (Figure 4).

The key players ensuring the formation, functioning and increasing the competitiveness of the system are tourism business entities, national tour operators, hotel and restaurant entities, state HRT authorities, scientific and educational institutions and associations, unions. Joining efforts and coordinating the actions of players (business, government, public associations and

non-profit organizations, science) into a single whole contributes to a deep understanding of the industry's problems and the adoption of more effective measures to solve them (Szewczyk and Lipianin-Zontek, 2019).
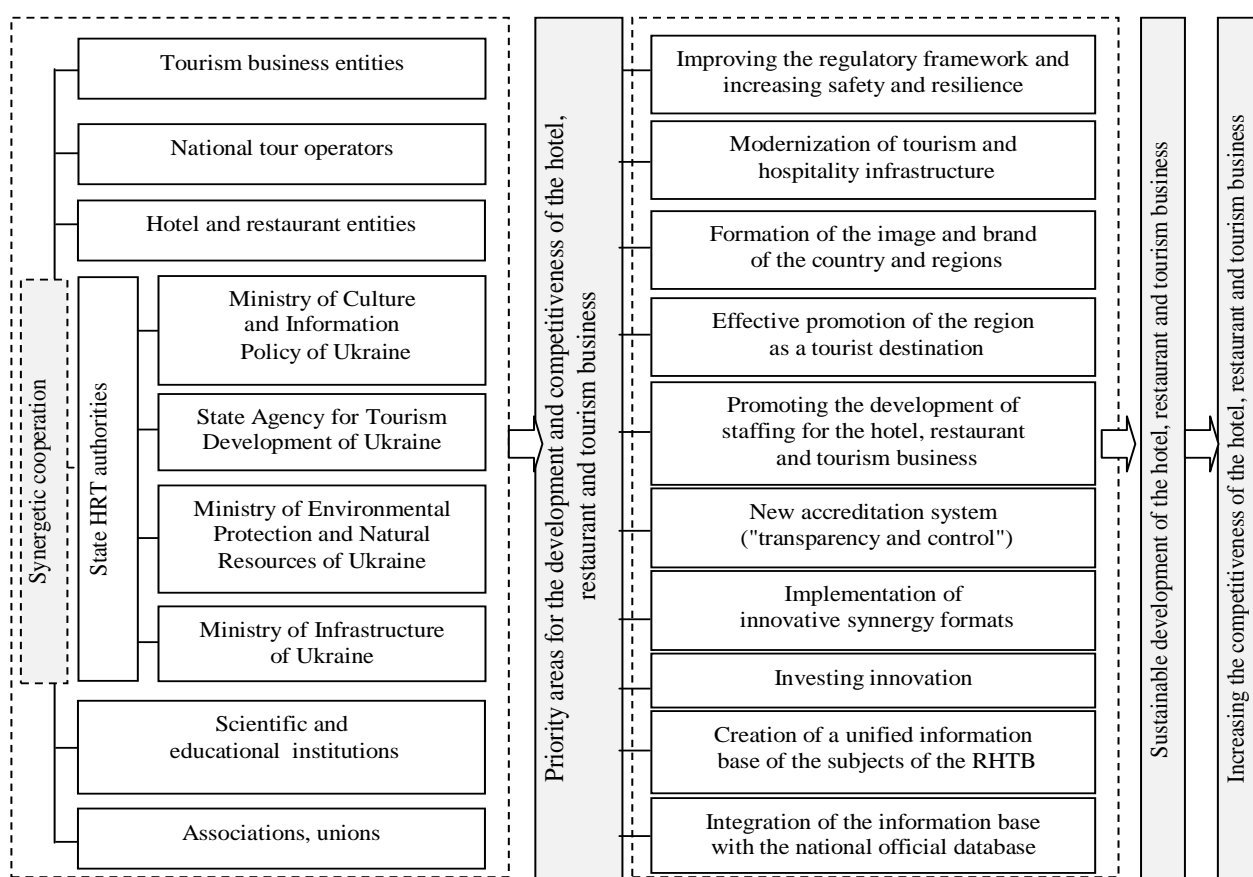

Figure 4. The system for ensuring sustainable development and competitiveness
of the hotel, restaurant and tourism business (Source: developed by authors)

This presupposes the formation of elements of a system for ensuring sustainable development and competitiveness of the hotel, restaurant and tourism business based on the elaboration of priority areas for the development and competitiveness.

1) Improving the regulatory framework and enhancing safety and resilience. Laws are the basis for development and must comply with the requirements of a changing economic situation; therefore, it is necessary to develop new conditions, standards and norms that will ensure sustainability in all areas: the legal regulation of energy conservation and renewable (alternative) energy sources, district planning (criteria for reconstruction and site selection and materials for the construction of new hotels and other tourist facilities, taking into account the traditions of local architecture). They also include laws on the basics of tourism, creating a favourable climate for national and foreign investments, on supporting small and medium-sized businesses, promoting innovation and research, on the rights of workers and protecting consumer rights, on ensuring the security of the region.

2) Government authorities, together with relevant organizations, should develop a strategic plan for the modernization of tourism and hospitality infrastructure, including activating and supplying tourist resources with the necessary services (housing and communal services, transport, information, financial, etc.) by the recommended international standards, which, in turn, ensures an increase in demand in the market for enterprises of the hotel industry and contributes to an increase in the quality of service and life of the local population.

3) Formation of the image and brand of the country and regions should be one of the priority directions of the concept of long-term socio-economic development of the country. This vector of development of player relations is aimed not only at creating a positive image, reputation and gaining a larger share of the international market but also at strengthening the country's position in the international arena. It is advisable that the country has an image reflecting its versatility. This can be done with national brands based on aspects such as tourism, export, culture, sports, investment, government, etc. International practice proves that in most cases, tourism is the most common dimension that governments choose to develop a national brand. This contributes to the sustainable dissemination of information and awareness of the region's resources.

4) Cooperation of participants' activities to promote the region as a "renewed tourist destination" at the interregional and international level, allows you to concentrate all resources and use modern marketing tools and achieve a synergistic effect.

5) Qualified and competent personnel is the most critical factor in the successful hotel and restaurant and tourism business and one of the most important reasons for the fluctuations in the quality of this type of service associated with unskilled labour and staff turnover. Coordination of the interaction of players will allow to quickly respond to the market requirements for the qualifications of specialists of various categories and to form state targeted efficiently and commercial staffing programs, including educational programs in universities, as well as advanced training and employee accreditation.

6) The introduction of a new accreditation system for hotel enterprises implies the application of a unified international classification system for hotels, which must be accredited by regional and local authorities and associations, i.e. it will be aimed not at organizing corruption schemes, but as transparent as possible, but at the same time ensuring control and consumer rights.

7) Innovative formats of the hotel business are aimed at increasing the overall socio-economic and environmental sustainability of HRTB participants, reducing the risks associated with environmental variability, the impact of crises and pandemics. This, in turn, will lead to diversification of the sphere.

8) The cooperation of the players creates a favourable investment and innovation climate for the introduction of new technologies and techniques, affecting all elements and stages of service.

9) The creation of a unified information base of the subjects of the hotel, restaurant and tourism business and its integration with the national database of official data will allow the authorities to monitor the industry, and the enterprises themselves that form this industry - to track and take into account the main trends and prospects for the development of the hotel business. This database will help to objectively assess the real state of activity in the region, which, in turn, will ensure higher management efficiency and optimal results. Combining with such an application as "Diya" will significantly simplify the provision of services to consumers, reduce possible criminogenic factors because the consumer will not take original documents with him on vacation. Moreover, most hotels currently pay from 10% to 25% of a foreign company when booking through the Booking resource. The establishment of the commission, for example, at 5% will not only reduce the tax pressure on the industry but also receive additional financial injections into the national economy.

2.2 Economic and mathematical modelling

Based on the statistical data of tourist flows for the period 2000-2019 (Table 3) and the analysis of their dynamics, it is possible to identify the main influencing factors. Using correlation-regression analysis, a number of econometric models of the corresponding dependencies are proposed. MS Excel was used for calculations.

Table 3 – Number of tourists served in 2000-2019 (compiled by the author based on data from the State Statistics Service of Ukraine)

Year	Number of tourists served by tour operators and travel agents, total	Including			Household income
		incoming (foreign) tourists	outbound tourists	domestic tourists	
2000	2013998	377871	285353	1350774	86833
2001	2175090	416186	271281	1487623	108835
2002	2265317	417729	302632	1544956	191946
2003	2856983	590641	344332	1922010	211922
2004	1890370	436311	441798	1012261	264382
2005	1825649	326389	566942	932318	365923
2006	2206498	299125	868228	1039145	475200
2007	2863820	372455	336049	2155316	625868
2008	3041655	372752	1282023	1386880	850232
2009	2290097	282287	913640	1094170	897669
2010	2280757	335835	1295623	649299	1101015
2011	2199977	234271	1250068	715638	1251005
2012	3000696	270064	1956662	773970	1407197
2013	3454316	232311	2519390	702615	1529406
2014	2425089	17070	2085273	322746	1516768
2015	2019576	15159	1647390	357027	1772016
2016	2549606	35071	2060974	453561	2051331
2017	2806426	39605	2289854	476967	2652082
2018	4557447	75945	4024703	456799	3248730
2019	6132097	86840	5524866	520391	3699346

The table shows that in years of political instability, the number of domestic tourists, with a positive upward trend, falls sharply, despite rising incomes. The table clearly shows the crisis of 2008, when the number of incoming tourists decreased to 0.1% from the previous year, and the number of outbound increased by 281.5%. The confidence of domestic consumers of tourism products in tourism entities is declining. For a number of statistics, this can be described: a linear econometric model of the dependence of the number of tourists Y served by the subjects of tourist activity of Ukraine on the number of domestic tourists X (source: developed by authors):
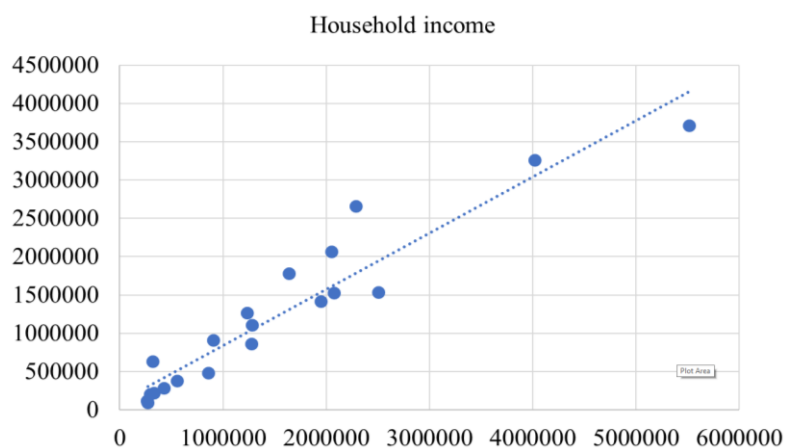

Household income

Figure 5 – Correlation-regression dependence of the number of tourists going abroad Y on the income of the population X

$$Y = -24787x + 521954; R^2 = 0.7788 \qquad\qquad (1)$$

where Y – the number of tourists served by tourist organizations of Ukraine;

X – the number of domestic tourists;

R^2 – the coefficient of determination, which shows that 77.88% of the variation of the dependent variable Y is explained by the independent variable X.

The correlation coefficient $r = \sqrt{R^2} = 0.8825$ characterizes a fairly high degree of density of the linear relationship between random variables (X, Y). The elasticity Ex(y) = (dy / dx) * (x / y) = y' (x / y) expresses the approximate percentage increase of the function Y, which corresponds to a one percent increase in the argument. The coefficient of elasticity was calculated when the argument (data) was about 0.82, which means that an increase in the flow of domestic tourists by 1% would increase the number of tourists served by travel agencies by about 0.82%. The number of Ukrainian tourists travelling abroad Y increases with the income of the population X of Ukraine (Figure 5).

For statistical data for 2000-2019 authors proposed linear correlation-regression model:

$$Y = 0.7333X + 105644; R^2 = 0.9023, r = 0.9499 \qquad\qquad (2)$$

The use of Fisher's statistical criterion indicates the adequacy of this model. As we can see from the model, the increase in income of the entire population of Ukraine by UAH 10 million would lead to the additional appearance of about 8 Ukrainian tourists travelling abroad. The coefficient of elasticity *Ex(y) = 0.9193* shows that an increase in the income of the entire population of Ukraine by 1% would increase the flow of Ukrainian tourists travelling abroad by about 0.9%.

CONCLUSION

The modern market economy is a complex organism, which consists of a wide variety of industrial, commercial, financial and informational structures interacting against the background of a complex system of legal norms of business and united by a single concept – the market. An important concept that describes the essence of market relations is the concept of competition. Competition is a dynamic process that serves to better provide the market with goods and services. In these modern times of uncertainty, crises and pandemics, increasing market competitiveness is not just a development issue, but an essential aspect of survival. Ukrainian hotel, restaurant and tourism business is a unique phenomenon since it differs in its traditions and cultural environment from the hotel markets of Europe, the USA and Asia.

The territory of Ukraine is very diverse, as well as the climate, cultural traditions, historical monuments – a unique combination of these factors forms favourable trends in the development of domestic tourism, as well as worthy participation in the international tourism and hospitality industry.

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EXAMINATION OF IMPACT OF RESPONSIBLE TOURISM PRACTICES
ON QUALITY OF LIFE OF DESTINATION COMMUNITIES

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Abstract: The study endeavors to find out the perceived impact of Responsible Tourism Practices (RTPs) on destination communities' Quality of Life (QOL). Besides, the investigation tests the mediating role of community involvement in the relationship between RTPs and QOL. A well-designed questionnaire developed from the existing literature was distributed among the tourist destination residents of Pahalgam, Kashmir Valley, India. In addition, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) was performed to validate the EFA findings through AMOSS 22. Structural Equation Modelling (SEM) technique was also applied to ascertain the impact of RTPs on QOL. Finally, the mediating role of community involvement was examined and, subsequently, the results were reported. The study's findings resulted in a significant relationship between RTPs and QOL; thereby, RTPs have a pivotal role in enhancing the QOL of the communities. Furthermore, the investigation revealed that community involvement mediates the relationship between RTPs and QOL. Thus, the study's achievements suggest that the locals should be involved in tourism activities to enhance the communities' QOL.

Key words: travel industry, Responsible Tourism Practices, Qualify of Life, destination communities, Pahalgam, mediating factor

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INTRODUCTION

Tourism is considered to be an economic driver for various tourist destinations worldwide (Zhou et al., 1997; Hanafiah and Harun, 2010). Its dominance as a significant income contributor has made it a vital component to the strategic planning efforts and has been widely recognized (Hanafiah and Harun, 2010). Tourism has brought together cultures across the globe (Urry, 2001). Today, there are several challenges that the world is facing in terms of financial instability (Chemingui and Ben Lallouna, 2013), global warming, sustainability issues (Dávid and Baros, 2007), terrorism. There are apparent consequences of these challenges, and a stream of research is being conducted to examine these challenges. Responsible tourism is being considered as an alternative to address these issues (Carasuk, 2011; Husbands and Harrison, 1996).

According to Hanafiah et al. (2016), the association between responsible tourism practices and local communities' quality of life is gaining momentum in the tourism literature. Globally, the debate on responsible tourism practices has received considerable attention due to its full acceptance at the international level (Harrison, 1996), "which regard the host's characteristic, constructed and social conditions (Babbie, 2015) and the interests of all gatherings concerned" (Smith, 1990) and limit "the adverse effects on the destination" (Stanford, 2008). Responsible tourism is considered to be the best tool to minimize the negative impacts of tourism activities at the destination (Crotts and Holland, 1993; Garau-Vadell et al.,

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2018). The travel industry territories' improvement includes different socially cognizant strategies, for example, supporting and ecoing the travel industry, the ethical tourism and other best practices for advancement of the travel industry (Mowforth and Munt, 1998). The tourism industry is people-based and depends on the interaction between them, and is highly sensible to the destination's social and cultural setup (Hanafiah and Harun, 2010) as the tourism industry is facing several issues related to sustainability, resource management, social and economic disparity, fluctuations in the tourist demand. For this reason, destination communities must be benefited from tourism activities to minimize the detrimental effects of tourism, which is why RTPs were incorporated to address all these issues. RTPs have become an essential aspect of tourism research, improving the current manageable tourism practices (Spenceley, 2010).

RTPs focus on maximizing the economic, socio-cultural and environmental benefits of tourism while also dealing with how to minimize these impacts. Besides, RTP is the most favored industry term and approach to set up a travel industry goal for the most part of the African and European countries (Bramwell et al., 2008).

The tourism industry can be developed well with the support and involvement of residents of a destination. As primary stakeholders, destination communities play a significant part in regulating and maintaining the development of tourism. Local community involvement acts as an axiom for successful tourism development at any destination. The local government has to engage the destination communities in tourism activities to get the maximum benefits. This is what the implementation of RTPs focuses upon, as destination communities' attitudes may directly or indirectly influence tourism growth in the destination (Ling and Rani, 2011). As the authorities face difficulties in community involvement while planning and managing tourism at the destination, the RTPs have proven to be a viable tool in easing these difficulties (Shani and Pizam, 2012).

Despite the developing enthusiasm in evaluating the association between the travel industry and QOL and the far-reaching learning that the travel industry has an excellent perspective for upgrading the QOL of residents, only a few investigations have assessed the effect of the travel industry on inhabitants' QOL (Kim, 2002; Benckendorff et al., 2009). Though, a study by Hanafiah, 2016 has analysed the relationship between RTPs and QOL, RTPs have been considered as mediators in this relationship. Thus, in the present study the RTPs acted as an independent variable, community involvement has been examined as a mediator in the relationship between the independent variable (RTPs) and dependent variable (QOL). So far no such study has been carried out where it was tested as a mediator in the relationship of RTPs and QOL. To bridge this gap, the investigation directs to evaluate destination communities' perception concerning RTPs and their effect on QOL. More specifically, the study aims to analyse the mediating role of community involvement in enhancing the QOL of destination communities in the light of RTPs.

The present study assesses the residents' perception of the effect of RTPs on their QOL domains in leisure-based tourism destinations, where no such research has been carried out yet. Secondly, this research aims at testing which QOL domain of destination communities is mostly affected through RTPs. These kinds of examinations are vital for both the government and non-government organizations in formulating and executing responsible tourism practices – RTP techniques to produce positive travel industry impacts on inhabitants' QOL. The study presents a thorough review of the impacts of tourism on destination communities' QOL and displays the relevance of linking the RTPs' impacts on their QOL. After the review, a description of empirical examination is introduced, followed by the methodology section in which the data collection techniques are discussed. After this, the results of the study are presented, while in the end the authors explain the practical implications to characterize responsible tourism advancement procedures that improve the residents' QOL.

Theoretical background and hypotheses formulation

Destination communities' perceptions regarding the effects of tourism development have been researched exhaustively, creating the comparative outcomes of the travel industry's influence on the economic, environmental and social formations of the tourist destinations (Lee, 2013; Hanafiah and Hemdi, 2014). Studies have found out that the local communities perceive tourism as a tool for economic improvement, socio-cultural and ecological preservation (Shani and Pizam, 2012). Some studies, at the same time, have evidenced the contradictory results that destination communities perceive tourism development negatively (Nunkoo and Gursoy, 2012). The development of tourism has great potential to affect the lives of the communities and, subsequently, the residents face challenges related to various aspects of life (Lepp, 2007). Therefore, the tourist destination residents also face challenges, and their quality of life is being largely influenced by tourism activities (Matarrita and Brennan, 2010).

Despite these differences, a few studies have explicitly explored the travel industry's effect on occupants' QOL (Kim et al., 2013). In any case, it is widely perceived that the refinement of occupants' QOL ought to be the priority of the destination management organizations (DMOs). As pointed by Yu et al., 2014, "one of the significant purposes of tourism development in a destination is to improve the Quality of Life (QOL) of the host community." Thus, it is generally perceived that all travel industry improvement systems should be structured and actualized to improve the QOL of all operators, including the locals being a standout amongst the most significant specialists to accomplish a travel industry goal. To evaluate every aspect of the residents' QOL affected by the travel industry advancement, according to Jeon et al. (2016), "residents' quality of life should be conceptualized with an aggregation of residents' perception of economic, social, and environmental conditions as well as the comprehensive perception of well-being in the host community, embracing residents' subjective well-being and objective well-being." Some researchers have contemplated the QOL construct's pertinence in the travel industry and its different areas (Andereck et al. 2007). QOL measure is dependent on four domains: material prosperity (containing two measurements: pay and work and the average cost for essential items), network prosperity, enthusiastic prosperity (calculating two measures: recreation prosperity and profound prosperity) and well-being and security prosperity (Kim, 2002). However, few studies (Hanafiah, 2016; Mathew and Sreejesh, 2017) have analysed the relationship between RTPs and residents' QOL.

Most of the published investigations are uncovering, that the travel industry affects residents' QOL positively. It may likewise effect locals' QOL contrarily when it adds to the loss of social character (Jeon et al. 2016), causes ecological disturbance, expands average costs for essential items (Liu, 2015), brings in lifestyle changes (Doğan, 1989; Kasim, 2006), creates traffic congestion (Mathieson and Wall, 1982). In this way, the travel industry development does not generally affect the inhabitants' QOL positively. When the travel industry expenses surpass the apparent advantages, it may add to a reduction in inhabitants' QOL. The above context has presented a complete linkage between the tourism development impact studies and residents' QOL. However, there has been a shortage of research that has examined the role of RTPs in communities' QOL. Thus, the present investigation aims at bridging this gap by examining the relationship of RTPs with the residents' QOL. Furthermore, the studies have uncovered a reliable connection between the occupants' satisfaction and recreational facilities, shopping and administration offices (Faulkner and Tideswell, 1997), so we postulate the first hypothesis as follows:

H1: Residents' QOL (Quality of Life) is being influenced by the RTPs (Responsible Tourism Practices)

Network contribution portrays the degree to which communities are associated with offering concerns about their lives to their networks. A few examinations have surveyed the help of the host inhabitants for the travel industry advancement with an attention on the degree to which these inhabitants are engaged with the travel industry (Simpson, 2001; Goodwin, 2002; Fallon and Kriwoken, 2003; Ndivo and Cantoni, 2016; Rasoolimanesh et al., 2018). Community participation is a fundamental aspect of community-based tourism's (CBT) success (Goodwin and Santilli, 2009). "The involvement of community assumes a critical job in improving network-based travel industry because network investment can build the estimation of a network by upgrading the beneficial outcomes of the travel industry and diminishing its negative impacts" (Jamal and Getz, 1995). Given the idea that native support must be joined by power redistribution, Arnstein (1969) built up a stepping stool of domestic investment as a model to clarify the natural transformative strides of this procedure.

As per this model, three dimensions of slow development, comprising non-cooperation, degrees of tokenism and degrees of inherent power are utilized to evaluate network inclusion and investment in the network-based travel industry (Okazaki, 2008; Selin and Chavez, 1995). The travel industry studies demonstrate that drawing in the community participation in the board and essential leadership can persuade the network of the need to incorporate the travel industry into the local economy (Simpson, 2001; Wang, and Pfister, 2008; Sebele, 2010; Bello et al., 2018). Engagement of the host community in the tourism-related activities opens new doors of profit for the locals (Sebele, 2010).

A few researchers of the travel industry have utilized the seen advantages and expenses as the mediating factors of community involvement for the travel industry advancement (Nicholas et al., 2009), also as the ecological frame of mind (Gursoy et al., 2002; Nicholas et al., 2009) and as a method for evaluating hypothetical models. Butcher (1997), likewise, proposed that both immediate and circuitous community involvement are valuable because both reinforce the benefit base of practical improvement of the travel industry. Accordingly, this examination states that inhabitants with economic travel industry improvement frames of mind will be effectively linked with network associations and open undertakings. Along these lines, community involvement may have an interceding impact between RTPs and QOL of local communities. Thus, the present investigation has formulated the second hypothesis:

H2: Community involvement mediates the connection between RTPs (Responsible Tourism Practices) and QOL (Quality of Life)

Research framework

The present examination aims at evaluating the perceived impact of responsible tourism practices on the quality of life of communities/residents in the Kashmir Valley. As was said before, the study also tests the mediating role of community involvement in the relationship between RTPs and QOL. An exhaustive literature review was conducted related to these variables and, consequently, a research framework was developed (Figure 1). The exploration structure embraced for the present investigation covers the examination's objectives, which incorporate all the measurements that shape and impact communities' perception regarding RTPs.

RESEARCH METHODOLOGY

For the present study both the primary and secondary data have been used to evaluate the role of RTPs in the local community's Quality of Life and the relationship between these two variables in the presence of a mediator – community involvement (Mertler and Vannatta, 2004). The secondary data was collected from various international and national journals and reports. The primary data was compiled through a questionnaire drafted on existing literature and distributed among the residents of the Pahalgam destination.

1. Research Instrument

Host communities' perception of the significance of RTPs in the QOL of communities was measured through a scale developed by considering the previous literature (Chiappa et al., 2016, Hanafiah, 2016; Mathew and Sreejesh, 2017). It consisted of 20 items, measured on a five-point Likert type scale, where grade 1 represented strong disagreement, grade 5 – strong agreement. The second construct, i.e. the Quality of life, was developed from the study of Kim, Uysal and Sirgy (2013) and was measured on a five-point Likert type scale (from 1 = strong disagreement to 5= strong agreement). The mediator, i.e. the community involvement, was adopted from the studies of Lee, 2013; Cheng et al., 2017 and was subsequently measured on a five-point Likert scale, too. To extract dimensions from responsible tourism and QOL, *Exploratory Factor Analysis (EFA)* was carried out. To validate the EFA, *Confirmatory Factor Analysis* (*CFA*) was also applied. Finally, the *Structured Equation Model* (*SEM*) was used to test the proposed hypotheses and to evaluate the effect of responsible tourism practices on QOL.

2. Sampling Design

The study was conducted in Pahalgam, a famous tourist destination, Kashmir region, Jammu, and Kashmir, India. The study sample was created from the residents whose age was 18 years or above, living in the selected villages. The sample frame was obtained from the electoral roll record of 2011 of the concerned Block Development Officer (BDO) area. The method of collecting quantitative data from the respondents' sample of these identified and independent sampling units has been systematic. Initially, the sampling interval was obtained using the formula (total number of household residents, collected from the electoral voter list / sample size obtained applying the formula of Taro Yamane).

Using the random number table, we selected a family number between 1 and the obtained sampling interval. These families were then contacted via door-to-door format to gather information.
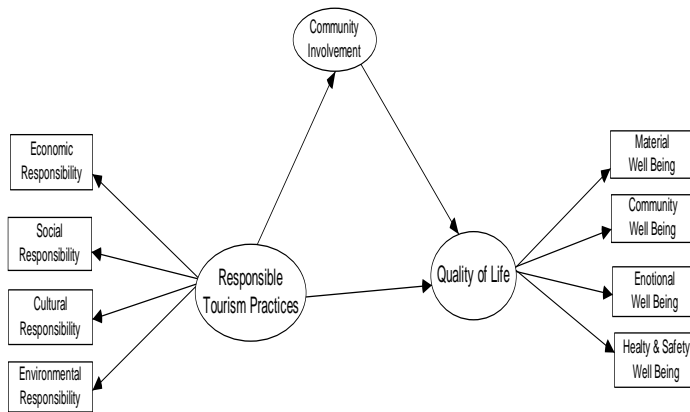

Figure 1. The Research Framework (Source: own compilation)

Table 1. Results of the Reliability Test (Source: own compilation)

Dimensions	No. of items	Cronbach Alpha (α) Value
Economic Responsibility	04	.912
Social Responsibility	03	.865
Cultural Responsibility	03	.838
Environmental Responsibility	04	.913
Responsible Tourism Practices (RTPs)	**14**	**.863**
Material Well-being	03	.882
Community Well-being	03	.859
Emotional Well-being	02	.706
Health and Safety Well-being	03	.766
Quality of Life (QOL)	**11**	**.805**
Community Involvement	05	.935
Note: Cronbach Alpha (α) for all the constructs are above the threshold level of .60		

3. Sample Size

Selection of optimum sample size is the researchers' core concern to come up with a reliable study. The present study sample was calculated using the Taro Yamane (1973) formula with a 95% confidence level. The formula of Taro Yamane is presented as follows.

$$n = \frac{N}{1 + N(e)2}$$

where:

n = sample size required
N = number of people in the population
e = allowable error (%)

As per the Block Development Officer, the destination's electoral roll (core zone) as of September 2018 was 2367. Therefore, the sample size by using the Taro Yamane (1973) formula for the study was 342.

DATA ANALYSIS AND RESULTS

Initially, problems related to missing values and outliers were experienced. Then reliability was checked through the Cronbach Alpha (α). The results of Cronbach Alpha (α) were above the threshold level of **0.60** (***Table 1***), thus indicating the internal consistency (Nunnally, 1978). The normality of the variables was checked through skewness and kurtosis and was in the range of ±2.00, indicating the data's normality. As indicated in ***Table 2***, 57.3% (n=196) of respondents were males, while 42.7% (n=146) were females. Approximately 41% (n=141) of households were residing there for the last 10-20 years. The majority of the participants were associated with the local business (59%, n= 87), and only 16% (n=23) were involved in governmental jobs. Most of the respondents were between 31-43 years (43%, n=135). The respondents' majority (44%, n=152) was directly involved in the tourism activities at the destination.

Table 2. Demographic profile of the respondents (Source: own compilation)

Profile of respondents (Demographic)			
Age	18 to 30 years (28.9%)	31 to 43 years (39.5%)	44 to 56 years (22.2%)	57 and above (9.4%)
Gender	Male (57.3%)	Female (42.7%)		
Occupation	Local Business (59%)	Govt. Job (16%)	Professionals (19%)	Others (6%)
Years of Residency	1-10 years (18.1%)	10-20 years (41.2%)	20-30 years (31.6%)	above 30 years (9.1%)
Household income (annual)	Less than Rs. 1,00,000 (32.7%)	Rs. 1,00,000 – Rs. 2,00,000 (51.2%)	Above Rs. 2,00,00 (16.1%)	
Involvement in tourism	directly employed (44.4%)	indirectly employed (31.9%)	not employed (13.5%)	employed in the tourism industry other than my village (10.2%)

1. Factor Analysis Results

To extract the Responsible Tourism Practices (RTPs) and Quality of Life (QOL) factors Principal Component analysis and VARIMAX Rotation with Kaiser Normalization were performed. The scale consisted of **14** items for RTPs and **11** items for QOL. The 14 items of RTPs got converted into 04 factors, namely Economic (04 items), Social (03 items), Cultural (03 items) and Environmental (04 items) responsibilities, and accounted for 78.714% variance. The value of Kaiser-Meyer-Olkin (KMO) test for Responsible Tourism Practices was **.832,** indicating an adequate EFA sample.

Table 3. Results of the Exploratory Factor Analysis with descriptive statistics (Source: own compilation)

| Attributes	Factor loading	Mean	SD	Commu-nalities	VE
Factor 1: ECONOMIC RESPONSIBILITY					
Responsible Tourism creates more employment opportunities for residents in the community (**EcR1**)	**.920**	3.76	.914	.899	
Responsible Tourism provides skill development and vocational training opportunities for local residents (**EcR3**)	**.874**	3.77	.955	.815	**36.74%**
Responsible Tourism creates a new market for local products (**EcR2**)	**.870**	3.79	.956	.787	
Responsible Tourism Prefers the local candidates in recruitment (**EcR4**)	**.821**	3.79	.954	.695	
Total		3.81	.866		
Factor 2: ENVIRONMENTAL RESPONSIBILITY					
Responsible Tourism gives special attention to environmental conservation and the protection of natural eco system (**EnvR1**)	**.882**	3.75	1.13	.830	
Responsible tourism controls the littering activities by providing the recycle and reuse concept (**EnvR4**)	**.859**	3.73	1.14	.795	**19.27%**
In Responsible Tourism building materials are from green or sustainable sources (**EnvR3**)	**.850**	3.64	1.13	.800	
Responsible Tourism promotes Eco friendly vehicles (**EnvR2**)	**.828**	3.79	1.09	.755	
Total		3.94	.960		
Factor 3: SOCIAL RESPONSIBILITY					
Responsible Tourism takes initiatives for social and infrastructure community development (**SolR2**)	**.865**	3.85	1.22	.797	
Responsible Tourism engages with local communities (**SolR1**)	**.861**	3.94	1.16	.804	**13.13%**
Responsible Tourism develops the sense of personal guardianship of heritage (**SolR3**)	**.825**	3.89	1.10	.769	
Total		3.69	.937		
Factor 4: CULTURAL RESPONSIBILITY					
Responsible Tourism has increased residents' pride in the local culture towards community through their participation in the decision making (**CulR1**)	**.886**	4.00	.935	.814	**9.57%**
Responsible Tourism helps in preservation of culture and heritage (**CulR3**)	**.865**	4.00	.955	.764	
Responsible Tourism builds awareness/appreciation of cultural heritage (**CulR2**)	**.819**	4.06	.925	.695	
Total		3.90	.784		
Factor 1: MATERIAL WELL-BEING					
Economic Security of Job (**MWB1**)	**.891**	4.01	.938	.840	
Income at Current Job (**MWB3**)	**.878**	4.00	.996	.820	**34.59%**
Family Income (**MWB2**)	**.847**	3.92	1.03	.773	
		3.85	.783		
Factor 2: COMMUNITY WELL-BEING					
Services and Facilities (**CWB3**)	**.889**	4.12	.991	.818	
Community Environment (**CWB1**)	**.865**	4.04	1.00	.767	**18.80%**
Community Life (**CWB2**)	**.839**	4.09	.984	.761	
		3.93	.786		
Factor 3: HEALTH AND SAFETY WELL-BEING					
Air Quality (**HSWB1**)	**.845**	3.73	.946	.729	
Water Quality (**HSWB2**)	**.830**	3.73	.981	.704	**13.46%**
Safety and Security (**HSWB3**)	**.735**	3.94	.924	.640	
		3.34	.642		
Factor 4: EMOTIONAL WELL-BEING					
Religious Services (**EmWB1**)	**.867**	3.67	1.04	.788	**9.53%**
Spiritual Life (**EmWB2**)	**.840**	3.74	.987	.765	
Total		3.04	.642		
Note SD = Standard Deviation, KMO; VE = Variance Extracted					
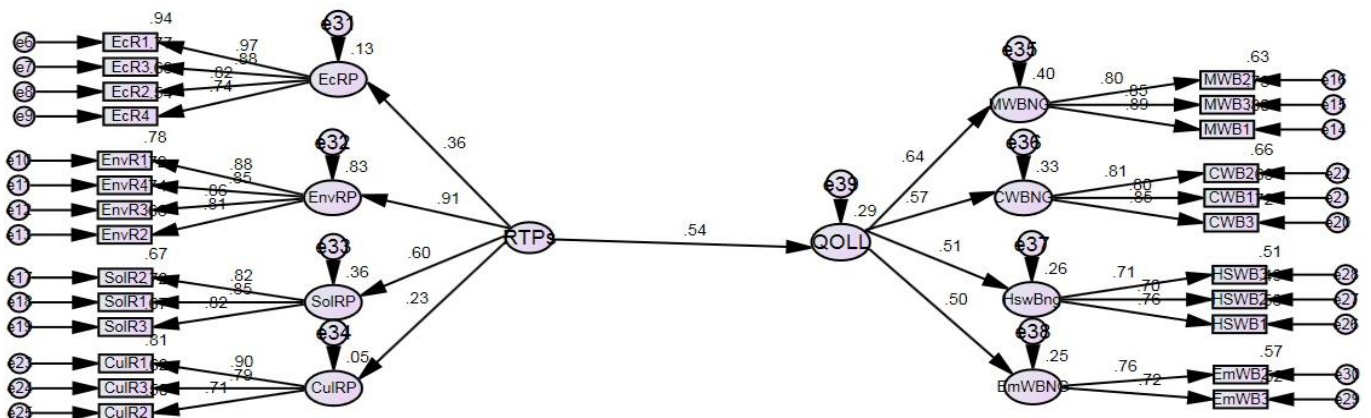
Figure 2. Relationship between the RTPs and the QOL (Source: own compilation)

The 11 items of Quality of Life were extracted into 04 factors as well, namely: Material Well-being (03 items), Community Well-being (03 items), Emotional Well-being (02 items), Health and Safety Well-being (03 items). The results of Kaiser-Meyer-Olkin (KMO) test for QOL was **.716**, thus affirming the EFA data suitability. The value for Bartlett's test of Sphericity appeared to be **3115.66** for RTPs (.000 significance with a degree of freedom 91) and **1696.08** for QOL (.000 significance with a degree of freedom 55), thereby indicating that factors are related to each other. One item for Emotional Well-being (Cultural Exchange) got deleted because of the cross-loading. Table 3 shows the results of the exploratory factor analysis.

Table 4. Results of the Confirmatory Factor Analysis (Source: own compilation)

Dimensions	Items	Loadings	AVE	CR
Economic Responsibility	EcR1	**.969**	0.733	0.916
	EcR3	.878		
	EcR2	823		
	EcR4	.737		
Environmental Responsibility	EnvR1	.885	0.725	0.913
	EnvR4	.845		
	EnvR3	.857		
	EnvR2	.817		
Social Responsibility	SolR2	.816	0.684	0.866
	SolR1	.850		
	SolR3	.814		
Cultural Responsibility	CulR1	.897	0.643	0.843
	CulR3	.788		
	CulR2	.710		
Material Well-Being	MWB1	.883	0.719	0.885
	MWB3	.858		
	MWB2	.801		
Community Well-Being	CWB3	.850	0.670	0.859
	CWB1	.786		
	CWB2	.818		
Health and Safety Well-Being	HSWB1	.748	0.524	0.767
	HSWB2	.691		
	HSWB3	.731		
Emotional Well-Being	EmWB1	.722	0.547	0.707
	EmWB2	.757		
Community Involvement	CInv4	.932	0.745	0.936
	CInv2	.900		
	CInv5	.855		
	CInv1	.783		
	CInv3	.838		

Note:
X^2 = Chi-square;
df = degree of freedom;
GFI = goodness of fit index;
AGFI = adjusted goodness of fit index;
CFI = comparative fit index;
IFI = incremental fit index;
RMSEA = root mean square error of approximation;
AVE = average variance extracted,
CR = composite reliability

Goodness of fit indices (GFI)

X2	558.183
df	370
GFI	0.906
AGFI	0.883
CFI	0.970
IFI	0.971
RMSEA	0.039

2. Measurement model

A measurement model with nine factors, including the mediator (community involvement), was tested by confirmatory factor analysis. The results indicate the suitability of the data for model fit. ***Chi-square = 558.183***, with degree of freedom = 370 at probability level = .000 (P < 0.05), ***CMIN/DF = 1.509, GFI = 0.906, AGFI = 0.882, CFI = 0.970, IFI = 0.971, TLI = 0.965, RMSEA = 0.039***. The results of the CFA indicate that the data fits the model very well.

Table 5 shows the convergent validity and discriminant validity results, thus affirming the Composite Reliability (CR). The table results depict that the values of CR are higher than the threshold value of 0.60 (Koufteros, 1999), which reconfirms the convergent validity (internal consistency of variables).

Besides the CR values, the values of the average variance extracted (AVE) were also higher than the suggested threshold value of **0.50** (Fornell and Larcker, 1981). These results verify the convergent validity of the dimensions measured. Furthermore, we examined the constructs' discriminant validity by examining the square of all the pairs of correlations with AVE values. The values of the square root of the AVE were higher than the values of the correlation coefficients (Fornell and Larcker, 1981), presenting hereby the proof for discriminant validity.

Table 5. Results of the Convergent Validity and the Discriminant Validity (Source: own compilation)

	CR	AVE	HswBng	CoInv	EcRP	EnvRP	MWBNG	SolRP	CWBNG	CulRP	EmWBNG
HswBng	0.767	0.524	**0.724**								
CoInv	0.936	0.745	0.199	**0.863**							
EcRP	0.916	0.733	0.118	0.229	**0.856**						
EnvRP	0.913	0.725	0.186	0.222	0.315	**0.851**					
MWBNG	0.885	0.719	0.337	0.310	0.155	0.289	**0.848**				
SolRP	0.866	0.684	0.117	0.092	0.218	0.554	0.145	**0.827**			
CWBNG	0.859	0.670	0.424	0.349	0.112	0.425	0.262	0.147	**0.818**		
CulRP	0.843	0.643	0.012	0.204	0.335	0.173	0.166	0.156	0.051	**0.802**	
EmWBNG	0.707	0.547	0.123	0.275	0.073	0.199	0.503	0.049	0.192	0.109	**0.740**

*Notes: The values in the diagonal of the above matrix are the square root of the AVE. **HswBng** = Health and Safety Well-Being; **CoInv** = Community Involvement; **EcRP** = Economic Responsibility; **EnvRP** = Environmental Responsibility; **MWBNG** = Material Well-Being; **SolRP** = Social Responsibility; **CWBNG** = Community Well-Being; **CulRP** = Cultural Responsibility; **EmWBNG** = Emotional Well-Being*

3. Structural Model and Hypotheses Testing

After the confirmatory factor analysis the next step was to test the proposed set of hypotheses through SEM.

The results of the model showed that the data fits it very well. ***Chi-square = 502.202***, with degrees of freedom = 267 at probability level = .000 (***p<0.05***); ***CMIN/DF = 1.881***; ***GFI = 0.900; AGFI = 0.878; CFI = 0.951; IFI = 0.951; TLI = 0.945; RMSEA = 0.051***. The results of structural equation modelling, along with path coefficient are shown in the Figure 2. The study revealed that Responsible Tourism Practices explained a **29%** variance on the communities' QOL. From the examination of way coefficients it was discovered that QOL is being influenced by the RTPs (***β = 0.54, p<0.05***).

4. Results of the Mediation Test

To analyze the mediating effect of community involvement between responsible tourism practices and communities' quality of life, the sample number was set to 2000. The 95% confidence interval was obtained by the help of the bootstrap

method. The indirect effects of Responsible Tourism Practices and Quality of Life were significant (*.105, p<0.05*). The examination of the direct path of RTPs on QOL in the presence of a mediator (community involvement) showed that the direct impact was also significant (*.450, p<0.05*). Thus, we could indicate the mediating effect of community involvement in the relationship between the responsible tourism practices and quality of life.

DISCUSSION AND IMPLICATIONS

The study undertook to assess the relationship between the Responsible Tourism Practices (RTPs) and Quality of Life (QOL), and also check the role of RTPs in enhancing the QOL of the destination communities. Besides, the study endeavoured to analyze the mediating effect of community involvement in the relationship between R.
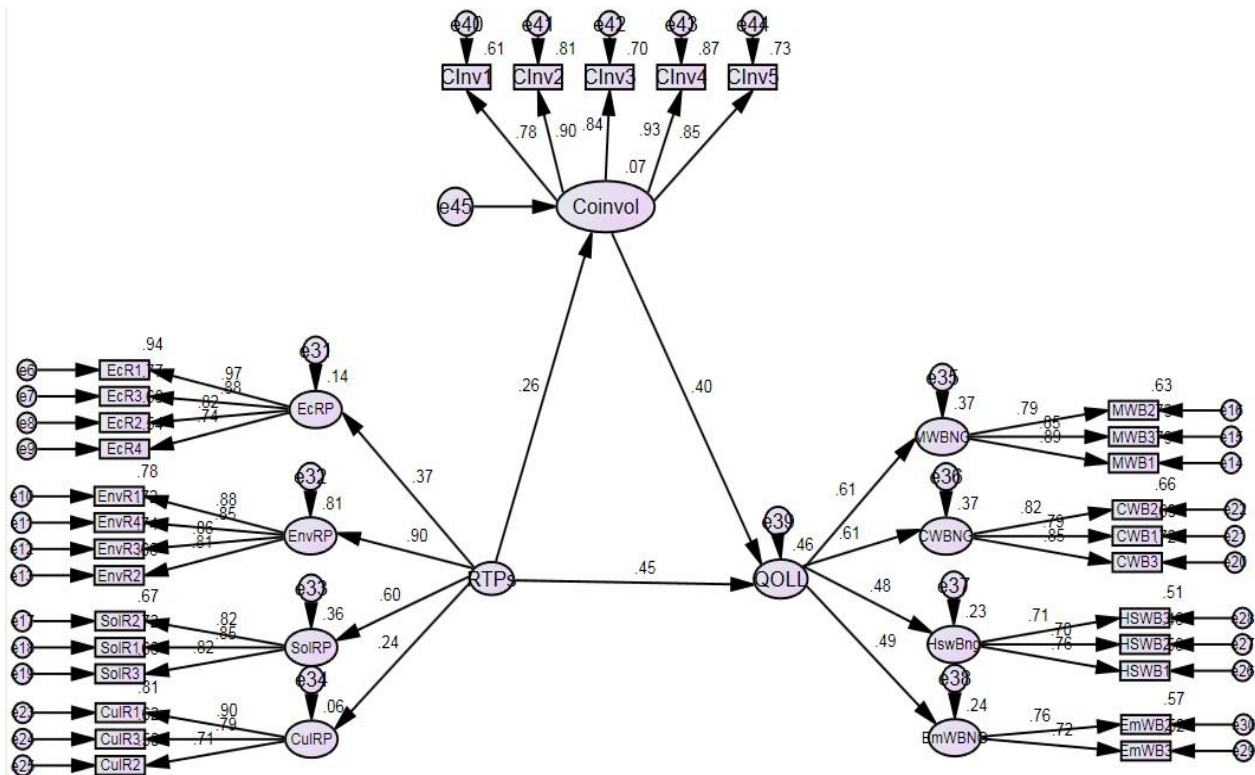

Figure 3. The mediating effect of community involvement (Source: own compilation)

TPs and QOL. The study's findings revealed that host communities perceive that both RTPs and QOL consist of four 2nd order constructs: Economic Responsibility, Environmental Responsibility, Social Responsibility, Cultural Responsibility and Material Well-Being, Community Well-Being, Emotional Well-Being, Health and Safety Well-Being respectively. The four dimensions of Responsible Tourism Practices significantly influence the residents' QOL (*β = 0.54, p<0.05*). It was also found out that destination communities perceive the important role of RTPs in enhancing their quality of life. The findings of the investigation uncovered that RTPs are a crucial indicator to impact the QOL of host communities.

The majority of respondents agreed that RTPs create more employment opportunities for residents in the community (*mean = 3.76; EcR1*), provide skill development and vocational training opportunities for them (*mean = 3.77; EcR3*) and create a new market for the local products (*mean = 3.79; EcR2*). Likewise, residents agreed that RTPs engage the local communities (*mean = 3.94; SolR1*), take initiatives for social and infrastructural community development (*mean = 3.85; SolR2*), develop a sense of personal guardianship of the heritage (*mean = 3.89; SolR3*), increase residents' pride in the local culture towards the community through their participation in the decision making (*mean = 4.00; CulR1*), build awareness/ appreciation of the cultural heritage (*mean = 4.06; CulR2*). Furthermore, the practices drive special attention to environmental conservation and the protection of the natural ecosystem (*mean = 3.75; EnvR1*), control the littering activities by providing the recycle and reuse concept (*mean = 3.73; EnvR4*), promote the eco-friendly vehicles (*mean = 3.79; EnvR2*) and the building materials from green or sustainable sources (*mean = 3.64; EnvR2*).

The results of the study revealed that the Material Well-Being domain of the Quality of Life has the highest variance (**34.59%**). The factors inside it are appraised as generally essential to inhabitants, like Economic Security of Job (*mean = 4.01; MWB1*), Income at Current Job (*mean = 4.00; MWB3*) or Family Income (*mean = 4.01; MWB2*), followed by Community Well-Being that shows a **18.80%** variance with the item Services and Facilities (CWB3), having a mean value of **4.12**, Community life (CWB2) with a mean value of **4.09** and Community environment (CWB1) with a mean value of **4.04**. The third construct of Quality of Life, Health and Safety Well-Being has a **13.46%** variance. The items in this variable comprise of Safety and Security (HSWB3), having a mean value of **3.94**, followed by Air Quality (HSWB1) with a mean value of **3.73** and Water Quality (HSWB2) making up a mean value also of **3.73**. The fourth dimension of Quality of Life, Emotional Well-Being, shows a 9.53% variance. In this construct, the item Spiritual Life (EmWB2) has the highest mean value of **3.74**,

followed by Religious Services (EmWB1) with a mean value of **3.67.** As it is evident from the SEM results, Responsible Tourism Practices (RTPs) have the highest impact on Environmental Responsible Practices (EnRP) (*β=.91; p<0.05*), thus indicating that ERP has a tremendous role in RTPs. This is why DMOs should incorporate environmentally responsible practices at tourist destinations for proper implementation of RTPS. It can be achieved by implementing eco-friendly procedures like reducing waste production and it's recycling, avoiding the use of plastic cutlery, applying reusable bags and containers, having alternative sources of energy like solar batteries etc. Through this, the negative environmental impacts can be minimized and the destination sustainability can be achieved. Besides, it is also suggested to use local materials and implement local architecture while designing any tourist destination infrastructure.

It is evident from the results that there is a moderate contribution of Cultural Responsible Practices (CuRP) (*β=.23; p<0.05*), thereby indicating that much attention needs to be given while incorporating Responsible Tourism Practices at a particular tourist destination. The authorities concerned should promote heritage sites, monuments and landmarks, museums and exhibitions through various social media platforms to encourage visiting the valley in order to gain a rich cultural experience. Thus, the earned income can be used to preserve the rich cultural heritage of the destination. DMOs should develop responsible tourism with dignity, respecting and nurturing local cultures (including religion) to enrich the tourism experience and build pride and confidence among the local communities. Besides, sufficient support has to be given to developing sustainable local handicraft enterprises by improving the design, production, packaging and marketing skills of the craft workers adapting to the market demand. It is also suggested to encourage the production of local cultural products, crafts and artefacts so that the local community could get the maximum benefits from the tourism activity. Through these practices, the destination's rich cultural heritage can be sustained for a longer period. Accordingly, the destinations can become competitive by offering the tourists a unique and rich cultural experience.

The findings of the study have revealed that Economic Responsible Practices (EcRP) have a better contribution (*β = .36; p<0.05*) towards RTPs. So, tourism authorities should give due consideration while incorporating the Economic Responsible Practices in RTPs so that by implementing RTPs the QOL of destination communities could be enhanced. For these, best employment opportunities for locals, various economically rich initiatives (like developing niche products based on local raw materials) should be created. The small, medium and micro-enterprises should be encouraged to employ locals and enhance their service standards in order to maximize their revenue potential. Furthermore, the focus should be given to encouraging tourists to buy locally made products and to use locally produced services from locally operated businesses, so that the best of the economically responsible tourism practices could be utilized and implemented. It is also suggested that locals must be consulted while designing any policy and strategy regarding the responsible tourism practices. It is of utmost importance to promote awareness concerning responsible tourism's potential benefits to QOL among the residents.

The results of the research have also disclosed that Community Well-Being (CuWB) has the highest impact (*β = .57; p<0.05*) on the quality of life. This means that it is a good predictor of QOL. Based on the indicators proposed in the study, Services and Facilities (CWB3), Community environment (CWB1) and Community life (CWB2) have to be taken to the fore of the agenda of tourism. Due consideration should be given to these indicators to enhance the QOL of destination communities. It is also revealed that Health and Safety Well-Being (HsWB) has the lowest contribution (*β = .51; p<0.05*) towards QOL, thus indicating that communities do not perceive much contribution in this regard. A possible reason for this might be that destination communities are not so health-conscious. As it was said before, community involvement has a mediating role between the relationship of RTPs and QOL of communities. Therefore, governments and local authorities should focus on locals' participation in tourism activities to enhance their QOL. This can be achieved by the involvement of locals in the decision-making process and by giving more opportunities for communities to participate in tourism-related activities, for example, privileging the locals in employment to realize the tourism's actual benefits. Besides, promotional campaigns and programs should emphasize the involvement of locals. Their increased participation in tourism-related activities is crucial for the support of Responsible Tourism Practices. Thus, the research results offer a significant insight for local authorities in community participation for the advancement and development of responsible tourism practices.

CONCLUSION AND DIRECTIONS FOR FUTURE STUDIES

The findings of the investigation revealed a positive relationship between RTPs and QOL, and that responsible tourism practices have a significant role in enhancing the quality of life of the destination communities. The results proved that community involvement mediates the relationship between RTPs and QOL. To sum these up, we can state that the communities' perception of Responsible Tourism Practices incorporates the economic, socio-cultural and environmental dimensions that influence the destination domains' quality of life. Despite its commitments, this investigation has a few limitations that ought to be expanded in the future research. This study focused only on one destination community. Examination of various types of local communities, such as native networks, horticultural networks etc. may lead to contrary conclusions for implementing responsible tourism practices. Future studies should lead to comparable results over a wide range of destination communities to overcome this impediment. Given the need to survey the impacts of RTPs and QOL on support for the practical advancement of RTPs, the future research ought to thoroughly inspect this conduct model regarding the host communities by testing the community involvement as a moderator. Subsequently, it is important to evaluate, whether this model can be connected to different network-based types in the travel industry.

Besides, only communities directly associated with the tourism activities were examined. It would be intriguing to study the perceptions of those that are not associated with the tourism phenomenon or not involved in tourism. Future research has to include them as well and also the others that are most certainly not engaged with the travel industry improvement at all. These communities must be looked at by the moderating effect of community involvement in the travel industry. As the present

study's design was cross-sectional, longitudinal sectional studies should be carried out to test the mediation effect of community involvement with other variables such as community attachment and support for future tourism.

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NATURE-BASED TOURISM ENTERPRISE ADAPTIVE RESPONSES TO COVID-19 IN SOUTH AFRICA

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Abstract: COVID-19 is forcing a re-orientation of tourism research agendas. Emerging themes relate to ramification, transformation and adaptation. The aim of this paper is to contribute to the research cluster on adaptation by examining tourism business adaptive responses to COVID-19 through the lens of a case study destination in the global South, namely Bushbuckridge in Mpumalanga Province, South Africa. The methods implemented were qualitative, using semi-structured interviews. Data was analysed from 20 interviews conducted with enterprise owners or managers in a nature tourism destination which is one of South Africa's tourism-dependent areas and thus most exposed to the negative impacts of COVID-19. The results show that adaptation to the crisis has been challenging because of the financial impacts experienced by these enterprises in the wake of minimal government support. The enterprise adaptive responses included staff reductions and wage cuts, adjustments towards the domestic market through price cutting and changes in marketing as well as adjusted tourism product offerings towards an emerging Black middle class domestic market. Of critical importance is the finding that these adaptive measures cannot replace the revenues formerly generated from the international tourism market. Accordingly, without a change in government policy and the availability of direct government financial support, there is a danger that in the short term the tourism product base will be diminished as many lodges and other tourism businesses are in danger of permanent closure.

Key words: x COVID-19; nature tourism; business adaptation; South Africa

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INTRODUCTION

The United Nations Conference on Trade and Development regards COVID-19 as "a health and economic crisis on a global scale" (UNCTAD, 2020: 7). Indeed, the pandemic has posed critical international health challenges and is severely threatening the achievement of the United Nations Sustainable Development Goals for ending poverty by 2030 as increased global poverty is projected for the first time since 1990 (Buheji et al., 2020; Grech et al., 2020; Nicola et al., 2020). The challenge of COVID-19 for poverty and the need for appropriate responses by all key stakeholders is especially great in Africa, the world's poorest continent, which it is projected to "experience the greatest economic loss in recent years" (Buheji et al., 2020: 216). The OECD (2020a) argues that the current crisis threatens to erase years of development gains in Africa.

For the global tourism industry COVID-19 has produced a profound crisis as it has effectively halted the operations of the tourism sector (Hall et al., 2020; Gössling et al., 2021; Kvirkvelia and Tsitsagi, 2021; Sharma et al., 2021). Certain scholars are reflecting that as COVID-19 has catastrophically disrupted consumer demand and supply chains, it represents a turning point for global tourism (Bianchi, 2020; Sigala, 2020). For example, as observed by Bianchi (2020: 80) "in contrast to previous disruptions, whether brought about by terrorism, natural disasters, financial crises or indeed previous pandemics, the outbreak of the COVID-19 pandemic has precipitated an unprecedented shutdown of travel and tourist destinations on a truly global scale". Implementation of strategies to flatten the COVID-19 curve such as lockdowns, stay-at-home orders, social distancing or travel and mobility restrictions have resulted in the temporary closure (and increasingly permanent closure) of many tourism establishments (Gursoy and Chi, 2020). Arguably, the global crisis accompanying the pandemic's spread is producing a shift in research agendas and changes in the topics of business and tourism research (Brouder, 2020; Kock et al., 2020; Persson-Fischer and Liu, 2021; Wood, 2021). Verma and Gustafson (2020) conducted a bibliometric analysis of COVID-19 scholarship in the domain of business and management and revealed four major topical foci surrounding overall impacts, technology, supply chain management and the service industry, including tourism and hospitality. For tourism scholars COVID-19 represents a critical challenge as "research that contributes to industry practice will need to reorient the focus of studies, given that the industry will undoubtedly change with new normal practices in place" (Kwok and Koh, 2021: 386).

An international thematic content analysis of COVID-19 specific literature on tourism disclosed a number of critical themes that are emergent as well as new areas that merit further attention. Three thematic clusters of work were distilled in the content analysis performed by Kwok and Koh (2021).The first relates to 'ramification' which encompasses empirical assessments of the pandemic's impact on tourism, including changes in tourism demand as well as evaluations of the impacts

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of government support (see eg. Deb and Nafi, 2020; Kusumaningrum and Wachyuni, 2020; Rogerson and Rogerson, 2020a; Rutynskyi and Kushniruk, 2020). The second relates to 'transformation' which relates to a major corpus of work which is forward-looking to the extent that it is analysing the prospects for restructuring future tourism and offering post-pandemic outlook analysis (Bianchi, 2020; Brouder, 2020; Higgins-Desbiolles, 2020a, 2020b; Niewiadomski, 2020).

The third cluster concerns 'adaptation' which is a stream of investigations including responses in terms of the application of new technologies as well as explorations of the capacity of destinations and tourism businesses to adapt to change and build resilience (see eg. Seyitoğlu and Ivanov, 2020; Bressan et al., 2021). The aim in this paper is to contribute to this third research cluster by examining tourism businesses adaptive responses to COVID-19 through the lens of a destination case study in the global South, namely Bushbuckridge in the Mpumalanga Province, South Africa. Within Africa, South Africa is the worst affected country by COVID-19 health impacts as well as with devastating consequences for the tourism sector (Rogerson and Rogerson, 2020b, 2021a). Rogerson and Baum (2020) suggest that an appropriate African research response to COVID-19 in the context of tourism must embrace a genuine transdisciplinary approach and draw in researchers who would not, historically, have operated in the tourism space. In addition, it requires a resetting of the thematic foci of the African tourism research agenda. In the wake of the economic crisis generated by the pandemic in Africa as a whole, and South Africa in particular, the relevance of pursuing research on tourism businesses adaptation as part of this emerging new agenda is self-evident.

LITERATURE REVIEW

As highlighted by Kwok and Koh (2021: 390) in their thematic content analysis of COVID-19 tourism scholarship questions around "mitigation efforts" and the adaptation of destinations and businesses are issues in need of further investigation. At the outset the adaptation of businesses must be understood in relation to the ramifications COVID-19 and most especially in terms of changing consumer demand. The magnitude and duration of the pandemic is reshaping former patterns of tourism demand and supply which need to be understood. As Kock et al. (2020: 1) stress COVID-19 "will reshuffle taken-for-granted determinants of tourism as we know it". The pandemic represents a paradigm shift for research about tourist behaviour as it is viewed that "what was previously taken for granted may not hold anymore in the COVID-19 era" (Kock et al., 2020: 2). Zenker and Kock (2020) identify the emergence of a new 'tourism psyche' in the wake of the COVID-19 pandemic to which tourism businesses need to adapt. Across international scholarship several dimensions of this new tourism psyche are identified (Rogerson and Rogerson, 2021b). Among the most important are that exposure to a disease threat can make people more 'collectivistic' by giving preference to domestic over foreign travel and seeking to support their own local economy in a form of behaviour which is styled as 'tourism ethnocentrism' defined as "an individual's prescriptive beliefs and felt moral obligation to support the domestic tourism economy" (Kock et al., 2019a: 427-428). Second, is the 'home-is-safer-than-abroad bias' in terms of which tourists regard their home country as a 'safe' destination and that "home is safe, no matter where home is" (Wolff et al., 2020). Three, COVID-19 threats make people alert of and avoid crowded situations, a mind shift about 'crowdedness' that results in preferences for visits to more remote and less populated tourist areas (Rogerson and Rogerson, 2021b, Rogerson, 2021). The new tourism psyche around perceived risk underpins observed changes by international researchers in consumer mobilities and patterns of demand. In relation to changing mobilities the most significant finding is that consumers are pivoting away from modes of transport that involve higher perceived risks and exposure to other tourists – most notably cruise ships, air travel, as well as certain public bus and rail transport – and towards private forms of mobility, including private cars, rented cars and, in some countries, for campervans (Rogerson and Rogerson, 2021b).

Concerning changing patterns of demand and destinations, the emerging new tourism psyche together with shifting travel mobilities is resulting in new patterns of consumer demand for particular forms of tourism products and destinations. Safety, cleanliness and hygiene management are key drivers of new consumer demand intentions. The OECD (2020b) and United Nations World Tourism Organisation (UNWTO, 2020) argue that the COVID-19 pandemic highlights, more than ever, the role of tourism in rural and remote areas which offer significant opportunities for recovery as, with changes in consumer demand, tourists look for less populated destinations and open-air experiences and activities. Nature-based and ecotourism areas are projected to increase in demand, and in the (post) COVID-19 environment a highly significant role will be assumed by 'green spaces' as a whole and by national parks and nature reserves in particular. Overall, as a reflection of the new tourism psyche about crowdedness, it is evident that natural areas "are likely to exert a stronger pull than before, with travellers and tourists seeking to avoid crowds and polluted cities" (Spalding et al., 2020: 2). Finally, the importance of reduced contact or of 'untact tourism' is a further critical consumer trend that businesses must adapt to in their operations (Bae and Chang, 2020; Rogerson and Rogerson, 2021b). As compared to this burgeoning literature on the ramifications of COVID-19 on changing tourism demand much less attention as yet has been given to detailed investigations of supply-side responses and tourism enterprise adaptations to the changing environment occasioned by the pandemic. The richest studies are those by Alonso et al. (2020) and Alonso et al. (2021). These investigations underscore that financial impacts and uncertainty are central for driving adaptation measures. Against this backcloth our case study of Bushbuckridge is of particular interest for scholarship on tourism businesses adaptation because of its concentration on nature-based tourism, an activity which is projected to increase in consumer demand. Further it is a nature-based tourism destination in South Africa, where the contraction of tourism and loss of revenues experienced by tourism businesses has highly significant implications for communities living in and around protected areas set aside for nature-based tourism (Hockings et al., 2020).

CASE STUDY AND METHODS

The case study area of Bushbuckridge has been described by Thornton (2002: 219) as "a complex and sensitive environment of human settlement, commercial agriculture and nature reserves". In terms of location the area is within the

Mpumalanga Province and the largest closest centre is Mbombela, the provincial capital (Figure 1). The area is geographically distant from South Africa's major metropolitan areas but close to Kruger National Park, one of the country's most iconic tourist attractions for nature-based tourism. The region hosts several game reserves and nature-based tourism conservation projects. Since democratic transition in 1994 tourism has "vastly increased" with over 30 new safari lodges which opened in the area during the first decade of political change (Thornton, 2002: 219). The tourism sector thus became the lifeblood of the local economy (Shackleton, 2000). One recent study of local economic development in this municipality confirms tourism's importance for the Bushbuckridge local economy (Nkuna, 2017). Another investigation points to the challenges that face small business development in the area, including for tourism enterprises (Mukwarami et al., 2020). The importance of tourism for local development and livelihoods must be understood in the context that the locality of Bushbuckridge which experiences chronic high levels of poverty and unemployment (Niyimbanira, 2016).
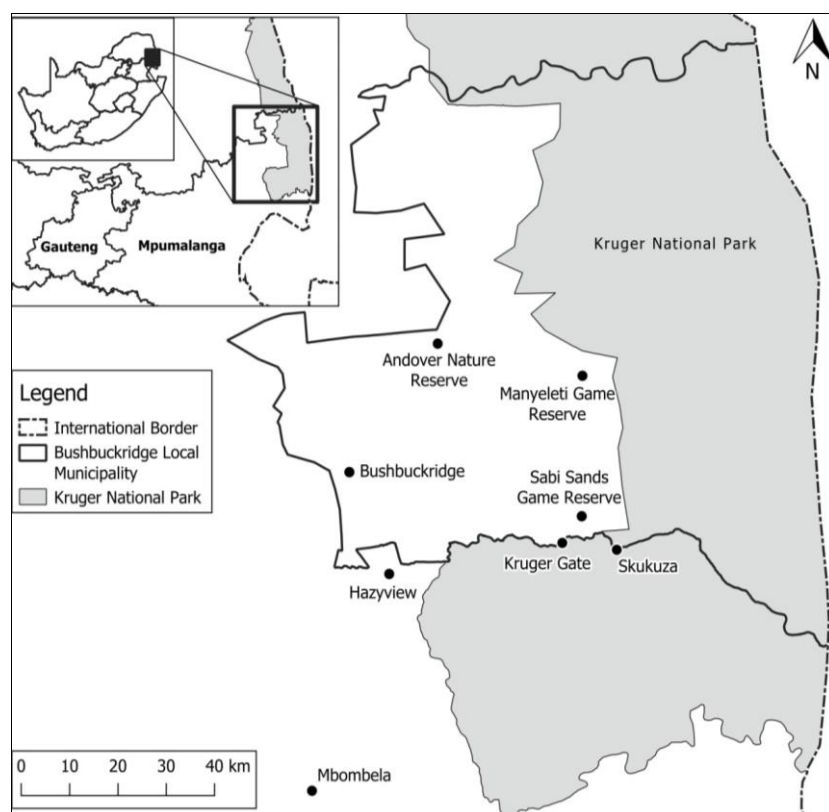

Figure 1. Bushbuckridge Location Map (Source: Authors)

Table 1. Profile of Bushbuckridge Tourism Economy in Pre-COVID 2018 (Source: Authors based on unpublished IHS Global Insight data)

Total of Tourist Trips	361 297
Number of Leisure Trips	60 602 (16.8%)
Number of Business Trips	17 564 (4.9%)
Number of Visiting Friends and Relatives Trips	243 799 (67.5%)
Domestic trips	268 458 (74.3%)
International trips	92 839 (25.7%)
Total of Bednights	1 391 803
Domestic Bednights	566 897 (40.7%)
International Bednights	824 906 (59.3%)
Total Tourism Spend (R'1000 Current Prices)	5 394 177
Total tourism Spend as % of Gross Domestic Product (GDP)	32.2%

The local municipality's Integrated Development Plan reinforces the significance of growing the tourism sector for driving local economic development and addressing the area's problems of poverty and dearth of employment opportunities (Bushbuckridge Local Municipality, 2017). Nevertheless, for Khoza (2016: 193) tourism is as yet "underdeveloped" in the Bushbuckridge Local Municipality with core challenges relating to infrastructure shortcomings, poor signage and lack of skilled labour. Despite this, the local municipality ranks as the fifth-most tourism dependent in the country (Rogerson and Rogerson, 2020a). As a region of outmigration, Bushbuckridge experiences a reverse flow of large numbers of seasonal Visiting Friends and Relatives (VFR) domestic travellers into the area, shown in Table 1 below (Rogerson, 2017). For employment and income generation, however, the area is highly dependent on leisure tourism with major reliance, in the pre-COVID-19 era, on the segment of international tourism (Rogerson and Rogerson, 2021a). It is also clear that tourism forms a significant portion of the total GDP of the region. Across the area of the local municipality and its surrounds the core tourism product is that of nature-based tourism, most of which feeds into the adjacent Kruger National Park. Khoza (2016: 200) argues further that the area "has a huge ecotourism potential". Indeed, the municipal area enjoys major nature tourism assets which include Manyeleti Game Reserve, Sabi Sand Game Reserve, and Andover Nature Reserve. The local tourism product mix contains attractions and accommodation service offerings which target both high-end international tourists as well as the domestic tourism market (Khoza, 2016; Lubbe et al., 2016). Within the municipality are a wide range of accommodation service providers from, on the one hand, exclusive all-inclusive up-market safari lodges to family-friendly self-catering accommodation to, on the other hand, a range of budget accommodation providers including bush camps, caravan and camping facilities as well as backpacker hostels (Khoza, 2016).

As is the case for the tourism sector in South Africa as a whole, tourism in Bushbuckridge and its surrounds has been severely impacted by the pandemic. In interrogating tourism businesses responses to the impacts of the COVID-19 pandemic a qualitative approach was adopted with semi-structured interviews undertaken with a cross-section of 20 key private sector tourism product owners. Many businesses were contacted to participate in the study. The respondents were selected based on their availability as well as taking into consideration a cross-section of different relevant business types in the area. Convenience and snowball sampling techniques were implemented for respondent selection. The interviews were undertaken during the period January-February 2021. Of the total interviews 11 (55 percent) were conducted in-person with respect to essential social distancing; the remainder were telephonic interviews. For many enterprises the necessity for telephonic

interviews was a result of local flooding of roads which made access impossible for planned face-to-face interviews. The interview schedule was designed to determine issues of COVID-19 responses of enterprises and challenges, the role of government regulation and future business prospects. The data was analysed through thematic content analysis. A content analysis approach was utilised to interrogate the transcribed qualitative interview data.

Businesses included in this investigation consisted of a range of tourism operators based in and around the Bushbuckridge municipality. The study encompassed tourism operators located within the Bushbuckridge municipality as well as those in bordering towns, which feed into the Kruger National Park and from which the majority of staff is based in Bushbuckridge. This included towns such as Hazyview, just over the border of the Bushbuckridge municipality, as well as operators with main offices in Mbombela but which operate in the lower Kruger region, serving parts of the park found within Bushbuckridge, most importantly Paul Kruger gate and Skukuza camp. Of the 20 businesses which were interviewed, most (10) operate out of Hazyview, five were located directly in Bushbuckridge municipality, while the remaining five have offices based in Mbombela. The majority of businesses interviewed were accommodation establishments, mostly lodges due to the nature of accommodation in the area, with another two hotels, one guesthouse and one backpacker hostel. In addition, interviews were also conducted with representatives of two major private game reserves which border Kruger National Park, each of which houses several camps with various accommodation offerings. Other than accommodation, seven businesses were safari and tour operators (with some overlap with accommodation operators), two provide wildlife interactions and one restaurant was included in the research. A profile of the businesses that were interviewed in the Bushbuckridge cluster is given on Table 2.

Table 2. The Sample of Interviewed Enterprises in Bushbuckridge (Source: Authors)

Identifier	Type of Establishment	Years in Operation	Number of Permanent Employees
B1	Spa	10	4
B2	Wildlife Interaction	12	40
B3	Hotel	2.5	20
B4	Lodge	15	1 (previously 7)
B5	Wildlife Interaction	12	5
B6	Lodge	12	7
B7	Backpackers	10	5 (previously 10)
B8	Safaris/Tours	27	1
B9	Tours; Guesthouse	6	1 permanent, 3 freelance
B10	Game Reserve	59	175
B11	Safaris/Tours	7	2 permanent, freelance as needed
B12	Lodge	11	28 (previously 38)
B13	Safaris/Tours	15	1 permanent, 14 freelance
B14	Safaris/Tours; Lodge	2	Lodge - 28 permanent (previously 31); Safaris - 23 permanent, 10 freelance
B15	Safaris/Tours	11	11 permanent, 6 freelance
B16	Lodge	15	17
B17	Restaurant	2	2
B18	Lodge; Restaurant	Restaurant - 6 months; Lodge - 2 months	170
B19	Hotel	10	150
B20	Game Reserve	20	240

It is evident from Table 2 that there was a wide range in years of operation of the various businesses, with one in operation for 59 years and another having opened as recently as December 2020. Half of the respondents have been in operation for approximately 10-20 years, with another three over 20 years and the remaining seven operating less than 10 years. The sizes of the operators, in terms of staff, also varied significantly albeit these numbers have changed since the onset of the pandemic. Some have employee numbers as high as 240, while several only have one or two permanent employees (these are largely owner operated). The nature of several of these businesses mean that they engage a number of freelance staff, primarily in the form of game rangers and safari guides. The overall impact of the pandemic from the perception of the Bushbuckridge cluster of respondents was overwhelmingly negative. Several respondents used words such as "*disastrous*", "*devastating*" or similar such phrases. Others included phrases such as "*unfair*" (B16), "*life-changing*" (B7) or related it to their current financial status, for example "*loss of income*" (B5).

In general, there was a clear sense of the severity of the impact of the pandemic on these businesses across the board. In the Bushbuckridge area the debilitating impact of the pandemic was exacerbated by the fact that most businesses are dominated by international tourists rather than the domestic market. Of the 20 interviewees only two had a majority share of domestic tourists, namely a wildlife interaction centre and a tour guide/operator out of Bushbuckridge, who mostly takes local tourists to neighbouring countries. Among the remaining businesses, a significant proportion (8 operators) had upwards of 90% of their market share from international tourists. Another six enterprises said international tourists accounted for more than 80% of their clients while the remaining six businesses stated that international tourists accounted for between 60% and 80% of the clientele. Respondents were probed about their perceptions of government regulations during the pandemic. All but two enterprises stated that the government had negatively impacted their businesses, while one said there were some positives albeit it was mostly negative. These findings confirm those reported both from earlier academic investigations (Rogerson and Rogerson, 2020a, 2020b; Sucheran, 2021) as well as three surveys commissioned by national government (Department of Tourism, Tourism Business Council of South Africa & International Finance Corporation, 2020a, 2020b, 2020c). Of the 20 interviews in Bushbuckridge only one respondent (B19) stated that the lockdown regulations introduced by the South African government had been positive. When elaborating on these perceptions, respondents were asked about which specific regulations and in what specific ways their businesses were most considerably impacted. One of the most significant, mentioned by the majority of Bushbuckridge businesses, was the travel ban because of the area's orientation towards the high-end international tourist market: "*The travel ban itself was a big hit*" (B11). Most enterprises were significantly impacted by the international travel ban as nearly all businesses are overwhelmingly reliant on the international market. The interprovincial travel bans were also critical as the majority of domestic tourists to the area come from Gauteng.

One of the two business which have a high proportion of domestic clients stated, the "*interprovincial travel ban was the worst for us. We depend primarily on the Gauteng market*" (B5). In addition, the South African government's introduction of several bans on the sale of alcohol ban was flagged by many as detrimental to their businesses. One respondent said "*It's a holiday destination. People want to drink. Especially South Africans*" (B18). Some encountered issues with guests demanding alcohol. "*The alcohol ban was also significant. Level 4 was difficult. Guests would arrive thinking we would serve them alcohol*" (B20).

ENTERPRISE ADAPTIVE RESPONSES

The Bushbuckridge tourism enterprise respondents were questioned about their adaptation strategies as a result of the pandemic, specifically the need to change or adjust their offerings, both in light of the pandemic and re-orienting their products towards the domestic tourism market. The primary adaptation strategy among businesses has been to reduce prices. The extent to which this was done varied based on the products offered. One respondent stated "*We now have a very domestic rate*" (B19). In addition, one 5-star lodge struggled with deciding how low to reduce their prices for the domestic market: "*Once we introduced domestic rates, the lodge started being booked. Domestic clients, though, only started book once we hit the 'sweet spot' in terms of price reductions*" (B18). Another said: "*We've created lower rates that locals bite into*" (B19). Some have introduced self-catering units. "*We have introduced self-catering units specifically catering for locals*" (B6). With the pandemic most businesses acknowledged that nearly all their 2020 clients are domestic tourists, albeit the revenue from these domestic tourists did not come close to making up for the missed revenue from international tourism. Many respondents pinpointed that their products are simply not geared for the domestic market. One operator of safari tours stated "*South Africans like to self-drive and stay in the park. They don't want to pay for the safari experience.*" (B13). This sentiment was echoed by other safari tour operators who indicated that despite significant price reductions they struggle to get South African clients: "*Even if you try, South Africans usually self-drive*" (B11). In addition, some of the high-end lodges noted that South Africans are visiting the area because they have no other choice at the moment and that it probably will not sustain into the future, saying "*Our current guests will probably end up going overseas in the future*" (B18).

Several respondents noted issues faced in adapting their products, particularly prices. "*Originally we gave large discounts for our luxury accommodation. One problem was the quality of guests really deteriorated, causing major problems. Once the police actually had to be called. Now we just give free upgrades on arrival. This has been really beneficial for word of mouth marketing. This usually gets mentioned in our reviews*" (B12). The issues surrounding problems with 'specific types of guests' was echoed by others, "*Specific self-catering units are reserved for local tourists as they are rowdier*" (B6). Arguably, all business have had to adapt their business operations to the safety protocols: "*We are very aware of COVID protocols*" (B19). The challenges with this adjustment are discussed below. However, a number of respondents noted that tourism in the area is very COVID-friendly. One respondent stated "*We have separate suites and outdoor activities which made it easier to adhere to protocols*" (B20).

Another said that they have had to adapt somewhat stating "*A little bit. COVID isn't as intense in this area [the Lowveld]. Everything is open, there are less cases here*" (B19). Some establishments stated that they have been able to use the South African tourism market to experiment with different approaches "*We've changed meal format from Breakfast, Lunch Dinner to Morning Tea, High Tea and dinner – We will probably keep this in the long run as it seems to be working better*" (B10).

Another proceeded with the building of the guesthouse because she saw the opportunity to potentially have long-term guests who are working remotely: "*I can also rent the guest house if needed, monthly*" (B9). One of the budget accommodation operators, a backpacker hostel, stated that they built some facilities to accommodate a wider range of domestic tourists, since that market was increasing. "*We are now trying to accommodate local business travellers with wifi in order for them to be able to work while staying on the premises*" (B7). Several others discussed how they adapted their marketing strategies and gear it much more towards domestic tourists, for example "*Marketing has been difficult as we originally oriented all our marketing towards the international market and have had to completely re-adjust*" (B18). In terms of the primary challenges faced by local businesses in adjusting their product offerings, financial implications were the most prominent. Some noted costs caused by safety measures. "*The cost implication of safety protocols are another issue - the cleaning, Personal Protective Equipment.*" (B18). Another noted that it is not only the cost implications of safety protocols but also the time needed for cleaning measures in accommodation establishments: "*Cleanliness has a big impact. We used to spend 30 minutes cleaning each room each day, now it's up to two hours per room*" (B19). Many Bushbuckridge respondents indicated that staffing has been a major issue, as they have had to cut staff or at least decrease hours of remaining staff members. Staff reductions are not only a result of the long closures during the various stages of lockdowns, but also due to the pressure to decrease prices. This was noted primarily by the lodges and up-scale game reserves. Given the price reductions, these enterprises are barely able to survive, yet alone produce profit, a situation that inevitably has caused many reductions in staff salaries or retrenchments. One game reserve respondent observed that they have currently decreased their prices by around 65%: "*All of our services and products are geared towards the international rate. We are struggling to provide the same product at 65% off of the standard rate. Staffing issues are particularly problematic.*" (B10) Although the game reserve operators expressed that they were grateful for any business, including from the domestic market, in the long-term the situation is viewed as not sustainable, a sentiment which was echoed by many lodges.

A further business challenge highlighted by several of the lodges is the seasonality of the domestic tourism market. South African domestic tourism consists of sets of travelers: weekend visitors from South Africa's economic heartland, Gauteng province, and visitors during holiday periods (most notably school holidays): "*Midweek is very quiet with the domestic market. Most are weekend visitors*" (B18). This is challenging, as the international market tended to make up for low periods, as they would travel at different times and often stay for longer periods. One lodge respondent said "*South Africans are struggling to book ahead because of lack of clarity with school holidays*" (B16). This is related, then to uncertainty in several aspects of life, preventing those from planning ahead. This is coupled with the clear fact that many people have lost part or all of their income as a result of the pandemic which has caused an economic crisis. Another respondent, a hotel operator, put it clearly "*There are*

two problems. One is that people are scared to travel. Two is that people are careful as to how to spend their money" (B19).

Similarly, many noted the differences in booking patterns among domestic tourists versus their international counterparts. Several respondents indicated that South Africans tend not to book very far in advance. "*Another big thing has been the growth in last minute bookings. It used to not be possible but it's possible now because of COVID*" (B12). Another stated clearly that "*Domestic tourists are very last minute in their booking*" (B18). The problem businesses face with this, particularly in the current COVID-19 environment, is the need to ensure all the necessary preparations are in order for when visitors arrive. This includes ensuring adequate staff is available and on the premises: "*Staffing is a major problem with last minute bookings*" (B18). Then there is the necessary food and beverage requirements and that all facilities are adequately sanitized, among other concerns with last minute bookings, particularly when lodges are often sitting empty for periods of time. "*Last minute bookings are hard to deal with. We need to make sure all the necessary staff is available and that the facilities are properly sanitized. It's even hard to make food orders with last minute bookings when the lodge is largely empty*" (B16).

One notable challenge, which was discussed in detail by an operator of safari tours, was a lack of information on the wants and needs of the Black South African leisure tourism market. "*If we are going to be dependent on the domestic market, we need to learn the Black market*" (B13). It was noted that their requirements and wants, specifically in the context of nature-based and safari experiences, differed significantly from their typical international clientele. One additional challenge was issues with age restrictions implemented by South African National Parks (SANParks) on open-drive safari vehicles. "*There are major issues with SANParks regulations. Especially with kids - Black families with very young children. Children under three years aren't allowed on open vehicles but the whole family needs to come on the trip*" (B13). It was also indicated that the company had been able to access marketing studies which had examined the demands of other population groups (specifically mentioning the Indian South African market), and that they had pretty extensive knowledge of both the English and Afrikaans domestic tourism markets, but that there was little information they could access on the Black South African tourism market. This lack of insight was viewed as a significant challenge in trying to re-orient their products to cater to this emerging, and rapidly increasing, domestic tourism market. "*Local cultures and beliefs are significant in understanding the market*" (B13).

In relation to opportunities for the demands of the domestic tourism market the majority of respondents either said they do not see any opportunities, that the domestic market is unsustainable for their business models or that they are not really interested in expanding their domestic market share once the international market is re-introduced. "*The lodge isn't built for South Africans. There's no self-catering. There's no braai areas. There's no TVs*" (B14). A few businesses, however, specifically noted an increase in the Black South African tourism market, one which had not been as prevalent in previous years; indeed the limited engagement of Black South Africans with the country's nature-based tourism attractions is a theme highlighted in earlier works by Butler and Richardson (2013, 2015). One lodge manager observed: "*There has been a big increase in the Black middle class coming to the area*" (B12). Another lodge owner stated "*Yes, we have had an amazing upturn in Black South Africans.*" (B6). Potential significant opportunities were identified in particular subsectors of this market. "*A big market we've noticed is single Black women travelling in groups*" (B13). Other enterprises expressed appreciation of the domestic market due to their role in sustaining the businesses during the pandemic. Several indicated that they had not thought about marketing to domestic tourists before but would continue to do so in future. For most enterprises, however, it appears that re-orienting completely towards a South African market was financially unsustainable in the long term. "*All of our services and products are geared towards the international rate. We are struggling to provide the same product at 65% off of the standard rate. Staffing issues are particularly problematic*" (B10). Another adaptation is that in light of price reductions given to local visitors, enterprises were able to use this time as an opportunity to try out new products and change existing products, stating "*the South African market is sort of like guinea pigs. We have felt the freedom to try out re-orienting services and trying out new things, for example with the menu.*" At the game reserves and lodges it was noted South Africans are vocal about their complaints and concerns (B10 and B16). This, coupled with the fact that many South Africans have had experiences at other "bush" accommodation or safari experiences, meant that enterprises found the feedback useful. Respondent B10 noted that the South African market was one they never really had to explore before but that they are now thinking of providing South African rates into the future, using what they called "price apartheid." It was stated as follows: "*The South African market has been so good to us in our time of need that we need to really look at them in the future*" (B10). A game reserve respondent noted "*There are talks of how good the domestic market has been to us. We will accommodate the domestic market going forward*" (B20).

When asked if they planned to introduce any new products or offerings, the majority had no such plans. "*Not now. We are saving all our Rands and cents until the market opens up properly*" (B13). Many did indicate that they are re-orienting their website and marketing to attract more local tourists. Those who were introducing new products, in terms of the built environment, all had plans for expansion previously. One lodge operator, however, reported repurposing some accommodation units in order to allow for self-catering (B6). Several respondents are in the process of introducing new technology products. A safari tour respondent is in the process of developing a travel app in order to assist in planning trips and also do virtual guiding for those on self-drives. Another game reserve respondent had introduced virtual safari experiences during lockdown and currently are maintaining a YouTube channel which has grown exponentially and will hopefully encourage future visitors. "*We also utilized our existing YouTube channel and created content during lockdown called 'Rangers in isolation' this is continuing with 'Mala Mala Safari Moments.' We went from 27,000 subscribers to 125,000 subscribers during lockdown*" (B10).

Some respondents discussed ways in which they are trying to adapt technology to improve their products in the COVID-19 environment. The awareness of the contactless economy and a South African form of untact was clear: "*There is a lot of possibility with technology. No touch tech. We are looking into using your phone as a key to get into your room*" (B19). The same operator discussed the implementation of facilities for webinars and virtual conferences: "*We are looking into installing facilities at the lodge to host webinars*" (B19). Others are creating new products or looking into re-working previous products. A few are introducing more trips to places other than Kruger National Park such as surrounding local small towns with interesting features or activities that they feel might be appealing to a domestic market which has already spent time in Kruger National Park and in search of alternative local experiences: "*We're thinking out of the box. We've created a Kaapsehoop*

Escarpment Tour. The domestic market seems to like things like the wild horses" (B13). Some enterprises are specifically catering to the Black South African leisure touirsm market, which they said is a relatively new and growing market for safari tourism, especially into Kruger National Park. One tour operator with a guest house stated "*I'm now offering cheap day trips - into the park and other tours such as hiking trips… Trying to orient towards community members - they can at least afford a cheap day trip*" (B9). Another said that, if there are a certain number of guests, they are starting their visits to the park later, as they have seen that the market is seeking that type of experience. "*We are noticing that there is no demand for early morning drives for the black market*" (B13). She then discussed how the experience they offer is quite different. "*They want to stop often, walk around, take selfies…They are very vocal when they are 'done' and ready to leave*" (B13).

Many enterprises indicated a key adaptation response was business downsizing. The majority of respondents cited downsizing related to staffing. Several had to cut major portions of their staff, while many others have staff operating on part-time salaries. A lodge respondent stated "*All staff is on 50% salary and that's after staff were cut by 50%*" (B6). Other than that, some businesses have had to sell vehicles and some are on the verge of closing down. One of the game reserves has closed one of their camps completely and currently only operates one of the three camps regularly. "*Currently only one camp, out of three, is operating regularly. One camp is completely closed and hasn't opened at all. The third camp is open as occupancy dictates*" (B10). Another said that they had to close down their restaurant because of a lack of demand, especially with the liquor bans. "*The restaurant was really struggling so we closed it*" (B3). Others noted that they have had to restrict the number of people which engage in certain activities. "*I have had to create limits on the number of passengers in the vehicles*" (B8). Many, however, said that they have not downsized or removed products. "*Not at all. That's why I don't want to go down in prices. I want to keep offering the same service*" (B4). Several respondents echoed this sentiment, stating that despite the drop in prices, they continue to maintain the quality of service. "*None of our standards dropped. We maintained standards with food, game drives, etc.*" (B20). Another respondent stated that they had downgraded their marketing. "*Not really marketing to international travel anymore*" (B9).

A further point brought up by one of the high-end game reserves is that they have had to cut their outreach community programmes: "*Local communities are very reliant on the lodges, not only for employment. All our community outreach programmes have been completely stripped*" (B20). Some respondents reflected on the increase in comradery and communication between local businesses as a result of the current pandemic and economic climate. Several respondents indicated the value of local enterprise cooperation and indicated aspects of increased communication between businesses has been useful, "*Yes, it's a close community, sharing information on what's app regarding safety and regulations*" (B7). This said, there did not seem to be many ways in which local businesses are not necessary working directly with one another nor repackaging products to encourage tourists to utilize a variety of services in the area. This is related to the context of these businesses, many of which are in direct competition with one another (i.e. different types of accommodation, different safari operators).

FUTURE BUSINESS PROSPECTS AND GOVERNMENT INTERVENTION

Questions about support interventions and government assistance elicited mixed responses especially in terms of the future of these businesses, what sort of support and interventions businesses would require in order to simply to survive and also in re-orienting towards the domestic market. There was a general consensus that the local tourism industry is being over-looked by government in terms of support a finding confirmed in other research (Rogerson and Rogerson, 2020b). The operators of a game reserve expressed the viewpoint that :"*Government needs to be open to discussion with the tourism industry. We feel we are not being listened to. The industry feels neglected*" (B20). This sentiment was echoed by many respondents who demonstrated a general lack of faith in government intervention overall, with one respondent stating that in response to tourism support, government is "*making a lot of noise but not actually doing anything*" (B9).

Some businesses provided broad answers on what would be helpful forms of support, the most prominent of which related to a need for direct financial assistance, a confirmation of results disclosed in national surveys of tourism enterprises (Department of Tourism et al., 2020a, 2020b, 2020c). In terms of intervention from local government, the majority of responses indicated the need for breaks on rates and taxes, where applicable, and an increase in local marketing. Many respondents, however, felt that local government has little authority or capacity to do much that would actually help tourism businesses, with one respondent blatantly stating "*Local government can't do much*" (B5). Similar sentiments were expressed by others: "*Tax breaks would be good. But I don't think that is going to happen*" (B20). Another respondent noted a series of issues with service delivery in the Bushbuckridge area: "*Sewage and roads, service delivery are in disarray in Bushbuckridge. We've been here for 11 years and have tried to get assistance but to no avail*" (B12). The biggest local concern, among nearly all respondents in the area, was with the quality of the roads. Although they were asked about infrastructure assistance in the context of national government support, there was a clear consensus among all businesses that the state of the roads in the area was problematic. This issue has been exacerbated by recent excessive rains, coupled with the impact from tropical storm Eloise, which hit the area in early 2021. However, once again, there was little faith in local government to rectify these issues. "*Roads need to be fixed. But I don't see that happening*" (B3). Others mentioned concerns over power outages which is a national problem in South Africa. "*Eskom! Keep the power on and at a lower rate*" (B5). Another said "*Infrastructure…Roads! Power! We are often running on a generator which increases expenses*" (B20).

Another support intervention identified as essential by several businesses related to government and marketing. A game reserve respondent "*Our biggest concern right now is the press coverage around the South African variant. We need a major PR campaign to show the world that the variant is not that bad, that South Africa is handling the virus relatively well and that our tourism products are very safe.*" (B10) This viewpoint was echoed by other enterprises in the Bushbuckridge area. The sentiment arose that SA Tourism - the national marketing agency - has not been proactive in their marketing strategies. "*South Africa is a good place to travel for COVID…[but] SA Tourism have done sweet b… all to show how compliant South Africa is and that the actual rates are much lower than the rest of the world*" (B13). Although they are grateful for the domestic market, the quantity and costs of these operations simply will not survive without the international market. "*We need better marketing of the success of South Africa's response to COVID. We need to tell the rest of the world…We need to demonstrate that a lot of*

the activities are "COVID friendly", we're reducing the number of passengers on game drives, etc." (B12). This was elaborated on by suggesting incentives for travel. "*South Africa needs to get its butt into gear with incentives for travel* " (B12).

In terms of support from national government beyond infrastructure and marketing, the primary request among these businesses was financial relief, in one way or another. To further this point, when asked about which support or intervention would be the most important in the short-term (the next 12 months) nearly all businesses stated that financial assistance or relief is, by far, the most important support needed in the short-term, in order for them simply to keep afloat. Without support, many tourism employees are having their salaries cut significantly or otherwise have been retrenched. A safari tour operator stated "*We have no money to pay our staff and they are literally starving.*" (B15). Others suggested alternative mechanisms for supporting businesses financially, for example that income tax breaks for tourism operators would be helpful. "*Reduction in tourism taxes, taxes for tourism businesses*" (B7). A few mentioned the concerns over payments, specifically for cars and other fixtures needed for their businesses. Another safari tour operator said *"Lots of people had to sell vehicles because they couldn't afford the payments."* (B 11). Another said "*Any financial relief - car installments. I'm currently running on negative*" (B9).

A general distrust of government and government support was evident among these enterprises, with one stating that "*There's a lot they can do. Give more thought to tourism in general but it has been neglected so far*" (B20). Businesses provided a number of different suggestions as to how the government might be able to assist in supporting tourism businesses financially. Many of these included direct financial assistance or government subsidized loans. All but one of the businesses interviewed were white-owned and all but three were SMMEs. Nearly all SMME owners (including the black-owned business) said that they struggled to get government relief (B9). Those who did receive some compensation said that it was minimal and not what was promised; many indicated that funding did not come close to covering operating costs, let alone enough money to support staff. One of the most controversial issues, particularly among white-owned SMMEs, was that they did not qualify for government funding because they are not majority black-owned and therefore disqualified for support funding as a consequence of government initiatives for 'transformation' and preferencing of Black Economic Empowerment (BEE) (see Abrahams, 2019; Rogerson and Rogerson, 2020b). As was observed by one safari lodge owner: "*It would've been helpful if the government helped financially - even loans. But BEE restricts us*" (B14). With the size of these businesses, the majority would struggle to get BEE accreditation. "*I'm foreign and white so I don't qualify for any help*" (B4). "*In a situation like this, everyone needs help*" (B11). Many of the concerns noted among those who had similar complaints, is that they employ large staff, the vast majority of whom are Black and from the local Bushbuckridge community: "*80% of our staff is Black and from the local community*" (B14).

In light of the current situation, and a discussion about potential support and interventions, respondents were asked what they felt were their prospects for the next 12 months without any support or interventions. Overall, the responses were not promising for the local tourism economy. One safari tour respondent said that they had already decided to close their business "*We are closing down. We are emigrating,*" (B11) while a lodge owner already had put the property on the market and another safari tour operator stated that they were on the verge of shutting down (B15). Out of the 20 businesses, only four (B5, B10, B12 and B19), confidently, feel that they will survive the year without support, albeit all said that it is dependent on no new restrictions being put in place and that despite survival, there would likely be major cuts, particularly in staff. These are predominantly large established businesses (in the cases of B10 and B19) or those who are inputting income from other sources (namely B12, the owner of which owns a chicken farm). "*Alternative income has sustained us*" (B12). The final respondent runs a wildlife interaction centre which was already primarily dependent on domestic tourists (B5). Of note is that the only other operator which has a majority domestic clientele is concerned about business because of the nature of the changes in tourism demand (i.e. a lack of events in the area) and difficulties in taking clients on cross-border trips. Some respondents stated they are not sure of future survival, with comments such as "*We're hanging in there*" (B7) or "*Just try to do it day by day*" (B2). The remaining respondents stated that without intervention or a significant uptick in visitors to the area (which several noted is dependent on at least some return of the international market) they would not survive.

"*Four more months, then we're closed.*" (B6)

"*Chances of survival are low. Trying to do anything to keep afloat.*" (B8)

"*Closing business…Very little hope in the future.*" (B11)

"*We won't have a business…I haven't had remuneration in 13 months. That is the state of where people are.*" (B13)

For the luxury lodges, in particular, the pool of possible clients is small: "*The South African market for luxury is already small and it will get smaller if things continue as they are going*" (B19). Another said "*From August to December, we were full every weekend. A bit during the week from government. It covered costs but we didn't make a profit. Nothing extra*" (B14). Some gave exact timelines for when they expect their business to close without support, most of which fell between the next four and 10 months, meaning they do not foresee survival to the next December/January holiday season. "*We are in recovery mode. At the end of the day, charging 33% of our normal rates will not let us continue. We were hoping to survive for the next 6-12 months. Now it's looking like it will take 2-3 years to get back to where we were*" (B20). Many enterprises were highly pessimistic offering statements such as "*If you can do something else, do it! Tourism isn't coming back in the near future*" (B11). This said, there was a strong sentiment from many respondents about the necessity for the survival of tourism in the area. Safari tourism and that linked to Kruger National Park is considered some of the most iconic in the country. As one respondent stated: "*Without support more and more places will close down. Game Reserves can't fail. They are part of the South African psyche*" (B10). It was argued that by emphasizing the importance of tourism in the South African economy: "*I know this is a pandemic, it's serious, but we need to save what we can. Use the money towards businesses that will save South Africa. Tourism is one of them*" (B10).

CONCLUSION

The crisis precipitated by COVID-19 is unprecedented in relation to past crises that have impacted tourism such as those from natural disasters or terrorism. The COVID-19 pandemic is observed to have global and deeper consequences with the potential for massive changes in the organization and architecture of tourism systems. For some observers "it is critical for

tourism as a complex adaptive system to continue to respond, adjust, and adapt with resiliency against COVID-19" (Kwok and Koh, 2021: 390). Accordingly, in the myriad of COVID-19 related research investigations one important focus must be upon investigating the responses of tourism businesses to the pandemic. How business owners are seeking to adapt or coping with the uncertainties around COVID-19 can contribute towards thinking around tourism recovery planning. The objective in this study was to examine enterprise adaptation in a nature tourism destination in South Africa that is A concentrated on the market of high-end international tourism. It is revealed that adaptation to the crisis has been challenging because of the financial impacts experienced by these enterprises in the wake of minimal government support. The enterprise adaptive responses have included staff reductions and wage cuts, adjustments towards the domestic market through price cutting, changes in marketing as well as adjusted tourism product offerings towards an emerging Black middle class domestic market. Of critical significance is the finding that these adaptive measures cannot replace the revenues formerly generated from the international tourism market. Seemingly, without a change in government policy and the offer of direct government financial support there is a danger that in the short term the tourism product base will be diminished as many lodges and other tourism businesses are in danger of permanent closure. Due to the significance of tourism for the local economy, and particularly for employment among many community members, the implications of closure of a significant proportion of businesses is devastating for the region. The results demonstrate some potential adaptation strategies but more work is needed to understand the long-term potential of these strategies to sustain businesses. The perspectives of domestic leisure tourists in South Africa would assist in gaining a better understanding of the potential for domestic tourism to maintain the local tourism economy as the pandemic persist. Although significant, this data is clearly limited in its scope and would benefit from additional research going forward both on the impacts of the pandemic on the local economy more broadly but also future research on the state of these businesses within the next year.

Acknowledgements

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ACCRUED FORECASTING ON TOURIST'S ARRIVAL
IN BANGLADESH FOR SUSTAINABLE DEVELOPMENT

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Abstract : Forecasting of potential tourists' appearance could assume a critical role in the tourism industry, arranging at all levels in both the private and public sectors. In this study our aim to build an econometric model to forecast worldwide visitor streams to Bangladesh. For this purpose, the present investigation focuses on univariate Seasonal Autoregressive Integrated Moving Average (SARIMA) modeling. Model choice criteria were Mean Absolute Percentage Error (MAPE), Mean Absolute Error (MAE), and Mean Squared Error (RMSE). As per descriptive statistics, the mean appearances were 207012 and will be 656522 (application) every year. Mean Absolute Deviation and Mean Squared Deviation likewise concurred with MAPE, MAE, and MSE. The result reveals that for sustainable development the SARIMA model is the reasonable model for forecasting universal visitor appearances in Bangladesh.

Key words: forecasting; tourist arrival; economic impacts; sustainable development; SARIMA model

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INTRODUCTION

In the 21st century, the tourism industry has gotten one of the significant and quickest developing areas on the planet (Hassani et al., 2017). It is an assortment of exercises, services, and industries, including the business of food and beverage, transportation, marketing, entertaining, and other accommodation services accommodated people or gatherings (Konarasinghe, 2016). The economic impacts of tourism development are noticeable both in the local and global aspects of the financial sphere. Residents' advantage by the tourism industry over expanded industrial action, upgrade of recreational offices, the revival of local cultures, the opening of eateries, and interests in environmental infrastructure. Besides this, tourist appearances can influence residents' prosperity through genuine experiences (Ivlevs, 2017). The development of the tourism industry business, for the most part, relies upon the growth in the appearances of both local and foreign tourists (Mishra et al., 2018). Their expenditure plays a vital role in the tourism industry and is treated as the foundation of the economic impacts (Smolčić Jurdana and Soldić Frleta, 2017). Revenue from the tourism industry that expands the national income, likewise, fills in as the source of tax revenue for worldwide governments (Tiwari et al., 2018). A range of recreational items motivates tourists, escape from daily life, experience new things, and expand new social relationships (Volchek et al., 2019). Numerous investigations found that individual safety and destination image are additionally the significant determinants of destination decision for guests (Hamadeh and Bassil, 2017). A recent study revealed that tourists are strongly motivated by cultural reasons as well as very interested in realistic features (de Simone et al., 2018). For productive tourism industry businesses, it is critical to react quickly to up and coming interest, in this manner, making constrained resources accessible for co-inventive assistance creation forms. Forecasting on tourism demand can stipulate vital information for successive planning and policymaking (Sun et al., 2019). Therefore, the arrival of tourists prediction is not only essential for business planning, growth strategies, and operations of travel and tourism companies but in measuring and expecting the region's overall economic activity (Bangwayo-Skeete and Skeete, 2015). Moreover, projections of tourist appearances help governments informing medium and long-haul procedures for local and regional tourism industry improvement, planning, and sustainability (Höpken et al., 2018). An acute requirement is needed for the travel industry for minimizing risk, to adjust, and gain by the new opportunity. Therefore, it ought to think about business and destination adaptation of the travel industry that needs to go far and wide emanation modeling and forecasting and mitigation strategies.

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Tourism is a vital industry for developing countries like Bangladesh since it promotes quite a lot to their GDP. Bangladesh is a very well industrialized country and popular as a tourist destination (Lim and Giouvris, 2017). In 2013 the number of arrivals was 277596, while in 2017 this number increased by 778143. Because of the expanding trend, it is significant to conjecture the number of visitor appearances with exactness since it will profit the immediate and circuitous exercises that are identified with the tourism industry. Along these lines, the legislature or related organizations and offices could utilize the projected figure to make an improvement situation, for example, preservation of natural resources and to produce appealing open doors for foreign investors. From the above discussion we can say that in policymaking, marketing, and operation levels, seasonality has a significant role (Liu et al., 2018). By realizing this, the Box-Jenkins technique was applied in this study to build the Seasonal ARIMA model and forecast monthly tourists' arrival in Bangladesh.

Sustainable Tourism Development in Bangladesh

Tourism that appreciates both residents and the traveler according to cultural heritage and the environment is defined as Sustainable tourism. By providing exciting and educational holiday it makes beneficiary the people of the host country (Chatziantoniou et al., 2016). Impacts that occurred economically, socio-culturally, and environmentally by Sustainable tourism are neither constant nor temporary (Dillimono, 2015). Perceptions of residents' on tourism are affected by the economic, social, cultural, and environmental factors and their willingness to participate in an exchange to support for or against tourism development (Witchayakawin et al., 2020). By creating opportunities Sustainable tourism will take place in a high level of tourism activity of its area for the social, economic, natural, and cultural environment (WTTC, 2019). Based on the above definitions, it is clear that the impact of sustainable tourism on the environment and local culture seems to be an industry. Moreover, it is helpful for residents to create future employment (Du and Ng, 2018). As a result, it is easy for residents to participate in decision-making, which affects their lives and create a positive impact to protect the natural and cultural heritage. The more present literature on forecasting tourism industry requests has propelled an assortment of new and imaginative quantitative modeling and determining approaches (Apergis et al., 2017). Nonetheless, other than long-haul trends, tourist appearances generally follow occasional stable trends (Wolfram et al., 2017). In Bangladesh, there are lots of ancient mosques, temples, pagoda, shrines, historical and archaeological sites all over the country. Various religious and cultural shows and the ethnic lifestyle of indigenous people of hill tracts are useful forms of cultural diversity that might act as a powerful component of developing sustainable tourism in Bangladesh (Ara Parveen, 2013).

MATERIALS AND METHODS
Data Collection

The Tourism demand is generally estimated by the tourism industry incomes or the number of guest appearances. Since monthly data on the tourism industry incomes are not accessible, so we collect tourist's arrival data from Bangladesh Tourism Board (BTB) and Bangladesh Civil Aviation Authority. We use total monthly visitor arrivals to Bangladesh between January 2015 and July 2019. For data analysis, we use the statistical software named Eviews 9. It is especially useful for econometric analysis.

The SARIMA Model

In the procedure of Autoregressive (AR) with order p, by a weighted normal of past observations, the present remark is created and returning p periods together with parameters $\phi_1, \phi_2, \ldots, \phi_p$ in the present time frame with a random disturbance. We mean this procedure as AR (p) and compose the equation (Rahmatullah and Imon, 2017) below,

$$y_{t=} c + \phi_1 y_{t-1} + \phi_2 y_{t-2} + \ldots + \phi_p y_{t-p} + \varepsilon_t$$

Again, with order q in the procedure of Moving Average (MA), every observation is created by a prejudiced mean of random disturbance returning to q periods with parameters $\theta_1, \theta_2, \cdots, \theta_q$. We indicate this procedure as MA (q) and compose the equation below,

$$y_t = \mu + \varepsilon_t + \theta_1 \varepsilon_{t-2} + \ldots + \theta_q \varepsilon_{t-q}$$

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

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

This technique is named the ARMA procedure of request (p, q) or quickly ARMA (p, q). Time series models accept that it is stationary. In any case, huge numbers of the econometric time series are non-stationary that is incorporated. If a time series is coordinated of order one, i.e., I(1), its first contrasts is I(0), it means stationary. Correspondingly, if a series is I(2), its subsequent contrast is I(0). As a rule, on the off chance that a time series is I(d), at that point after differencing it 'd' times we get I(0) series. Along these lines, the ARIMA (p,d,q) procedure can be composed as,

$$\Delta^d y_t = \varnothing_1 \Delta^d y_{t-1} + \cdots + \varnothing_p \Delta^d y_{t-p} + \varepsilon_t + \theta_1 \varepsilon_{t-1} + \cdots + \theta_q \varepsilon_{t-q}$$

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

$\varepsilon_{t-1}, \varepsilon_{t-2}, \ldots, \varepsilon_{t-q}$ = errors in previous 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.

And Δ^d indicates the d th difference of y_t.

On the off chance that the data shows a solid regular example, this demonstrates a relationship between observed values during a similar season in successive years. Considering that the nonseasonal part is (p, d, q) and (P, D, Q)s is the seasonal

portion, then we can mark Seasonal ARIMA (SARIMA) model as ARIMA (p, d, q) * (P, D, Q)s which could be composed as:

$$\phi_p(L)\phi^s_p(L^s)$$

Where $\phi_p(L), \theta_q$ are defined earlier, the seasonal period is denoted by s,

$$\Phi^s_p(L^s) = 1 - \phi^s_1 L^s - \phi^s_p L^{sP} \quad \text{and} \quad \theta^s_q(L^s) = 1 + \theta^s_q L^s + \dots + \theta^s_q L^{sQ}$$

the number of times is D and the seasonal difference operator $(1-L^s)$ is applied (Hossen et al., 2021). Building an ARIMA model comprises four orderly stages (identification, estimation, diagnostic check, and application or forecast).

RESULTS AND DISCUSSION
Model Identification
At first, we check the data series, whether it is stationary or not, and show if any seasonality exists. We usually apply different techniques in time series data such as Graphical analysis, Correlogram, and Unit root test to check the stationarity. The most applied method to test a unit root is the Dickey-Fuller (DF), in the parametric context. To check the stationarity, the DF and Augmented Dickey-Fuller (ADF) tests are widely used. However, it is not possible to apply the DF test if the error terms are autocorrelated and there is no trend in the time series. Besides this, we can use two other tests measuring stationarity named Kwiatkowski-Philips-Schmidt-Shin (KPSS) and Phillips-Perron (PP) test. Results from different tests are given in Table 1. By using the Autocorrelation Function (ACF) and Partial Autocorrelation Function we recognize the reasonable (ARIMA) model. The ACF tells us the number of significant autocorrelations in a model which is a valuable gauge of the quantity of Moving Average (MA). Then again, the number of Autoregressive (AR) coefficients can be found from PACF in an ARIMA model.

Table 1. Different test result for stationary (Source: Authors' work)

Unit Root test	Test results for Stationary				
	test statistic	Prob.*	1% level	5% level	10% level
Augmented Dickey-Fuller test	-5.235***	0.0001			
Elliott-Rothenberg-Stock DF-GLS test	-6.034		-2.601	-1.946	-1.614
Phillips-Perron test statistic	-8.439***	0.0000			
Kwiatkowski-Phillips-Schmidt-Shin test	0.063		0.739	0.463	0.347

Table 2. SARIMA model for tourists' arrival

		Model Fit statistics					
Item	Model	R-squared	RMSE	MAE	MAPE	Jarque-Bera	Prob.*
Tourists arrival	SARIMA (0,1,1)(0,1,1)$_{12}$	0.48	3178.26	2864.62	12.38	0.66	0.72

Modelling and Diagnostic Check
For the presence of seasonality, we build a model called Seasonal Autoregressive Integrated Moving Average (SARIMA) for monthly tourists' arrival in Bangladesh. By applying the model building process of Box-Jenkins (1976) and modified by Box, et al. (2019), we have proposed a SARIMA model. Here the first regular or seasonal differences were taken for model identification. After getting the best SARIMA model, then we check the model using some diagnostic checking such as residual diagnostics and stability tests. The model which shows the lowest mean square error, we choose that model for better forecasting. Our required model for forecasting is shown in Table 2.
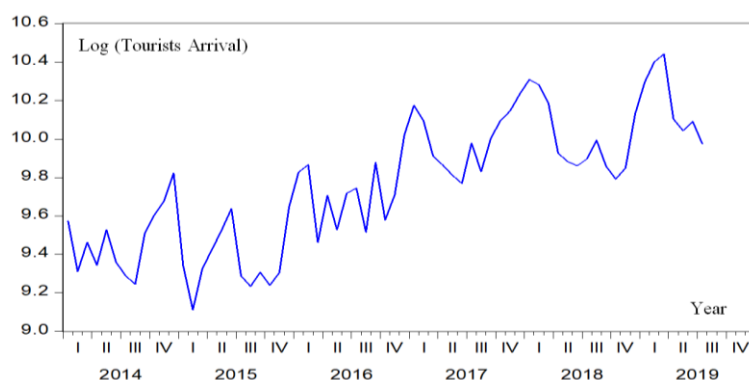

Figure 1. Pattern of data after taking the logarithm (Table-4)
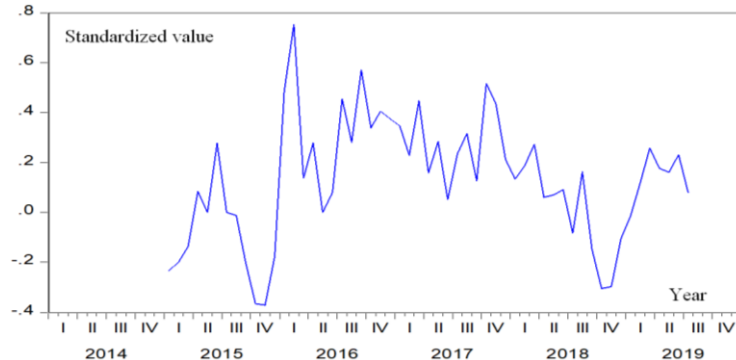
Figure 3. Seasonal difference of the data (Table-5)

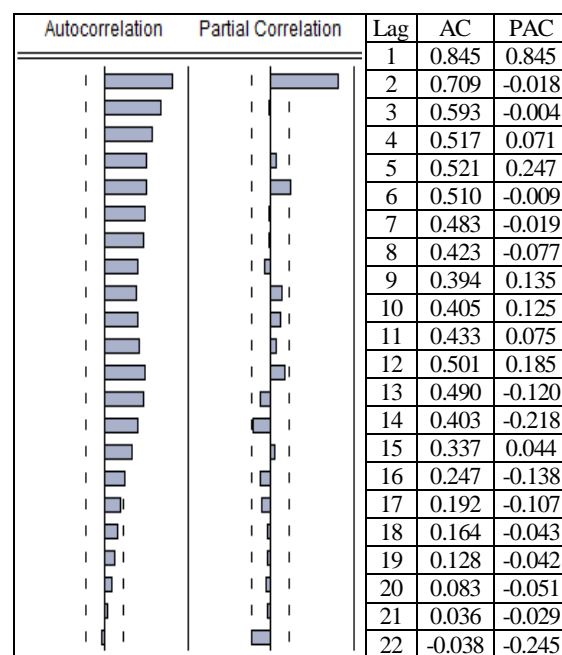| Lag	AC	PAC
1	0.845	0.845
2	0.709	-0.018
3	0.593	-0.004
4	0.517	0.071
5	0.521	0.247
6	0.510	-0.009
7	0.483	-0.019
8	0.423	-0.077
9	0.394	0.135
10	0.405	0.125
11	0.433	0.075
12	0.501	0.185
13	0.490	-0.120
14	0.403	-0.218
15	0.337	0.044
16	0.247	-0.138
17	0.192	-0.107
18	0.164	-0.043
19	0.128	-0.042
20	0.083	-0.051
21	0.036	-0.029
22	-0.038	-0.245

Figure 2. Tourists' arrival is shown with ACF and PACF plots (Table-4)

Time series plot of tourists' arrival is shown with ACF and PACF plots

For identifiable model proof, seasonal contrast was taken. In a time series, the arrangement of changes starting with one season then onto the next is named the seasonal contrast. In this study monthly data were collected that contain 12 periods in a season, the regular distinction is $y_t - y_{t-12}$ of at period t, which is symbolized as $\nabla_{12} y_t$, where $\nabla_{12} y_t = y_t - y_{t-12}$.

The seasonal differenced series from the above Figure 3, show that the series seems to be stationary. Now at different lags our attempt to evaluate Seasonal Autocorrelation (SAC) and Seasonal Partial Autocorrelation (SPAC), $\nabla_{12} y_t$

Correlogram Q-statistics for residual diagnostics checking

From Figure 4 and 5, it is visible that with exponential decay AR and MA move in opposite directions. Both autocorrelation and partial autocorrelation function show a quick decrease and all the spikes are in standard error bounce after taking the first difference. So, we can conclude that in the time series data the series becomes stationary, and it is an ARIMA model with the presence of seasonality. In the residual, there is no autocorrelation indicated by Autocorrelation and Q-test for different lags. Therefore, the obtained model is stipulated fully.
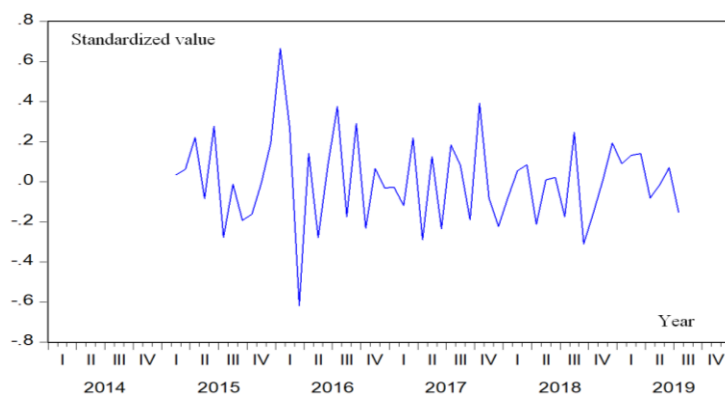

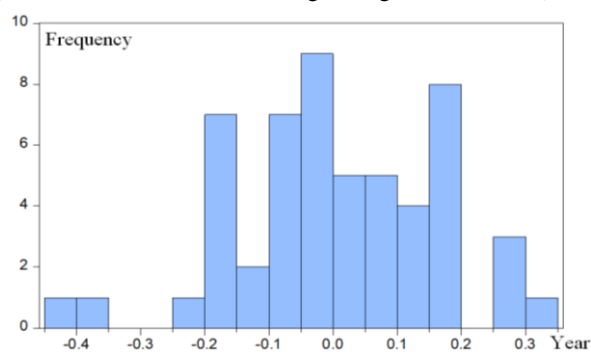Figure 4. Pattern of data after taking the regular difference (Table-6)

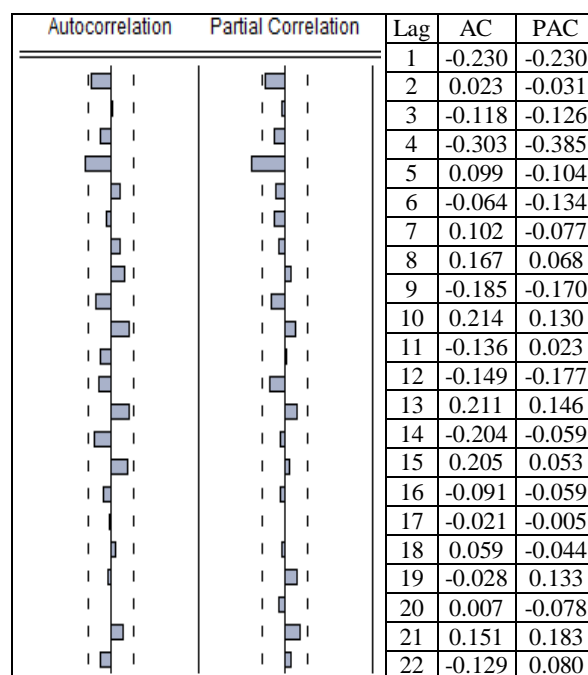Figure 6. Histogram and Normality curve

Lag	AC	PAC
1	-0.230	-0.230
2	0.023	-0.031
3	-0.118	-0.126
4	-0.303	-0.385
5	0.099	-0.104
6	-0.064	-0.134
7	0.102	-0.077
8	0.167	0.068
9	-0.185	-0.170
10	0.214	0.130
11	-0.136	0.023
12	-0.149	-0.177
13	0.211	0.146
14	-0.204	-0.059
15	0.205	0.053
16	-0.091	-0.059
17	-0.021	-0.005
18	0.059	-0.044
19	-0.028	0.133
20	0.007	-0.078
21	0.151	0.183
22	-0.129	0.080

Figure 5. Correlogram for SARIMA $(0,1,1)(0,1,1)_{12}$ model (Table-5)

Histogram and Normality test

By the Histogram and Normality test, we can decide that residuals are normally distributed or not. For this, our next step is to check the normality of residuals according to the above two techniques. The Jarque-Bera normality test (Table 2) and Figure 6 of histogram and normality curve tell us that the residual is normally distributed. Which indicates that the obtained model is fully stipulated.

Outline checking with actual, fitted, and residual plot

Actual fitted and residual plots are shown below:

Figure 7. Actual fitted and residual plot for SARIMA $(0,1,1)(0,1,1)_{12}$ model (Table-6)
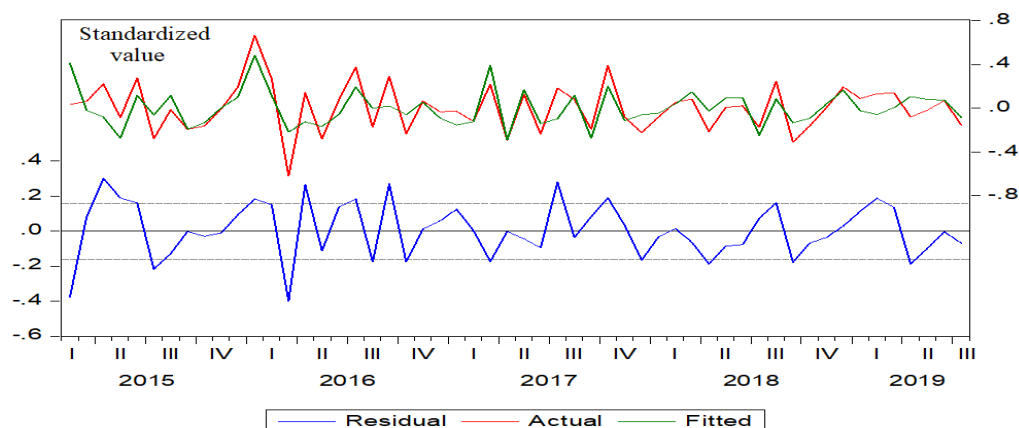
Outline checking for the SARIMA $(0,1,1)(0,1,1)_{12}$ model was checked by a standardized residual plot. A standardized residual plot is shown below:
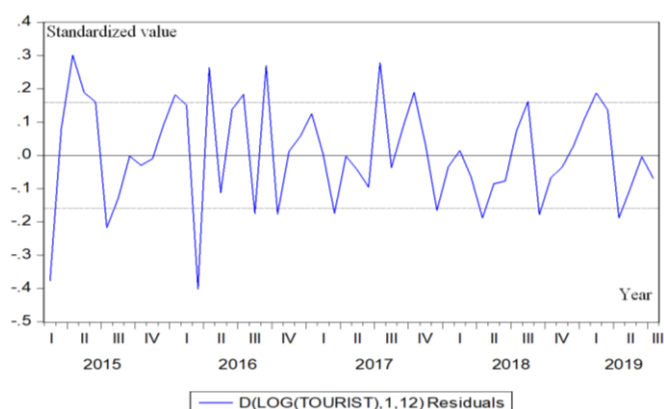
Figure 8. Standardized residual plot for
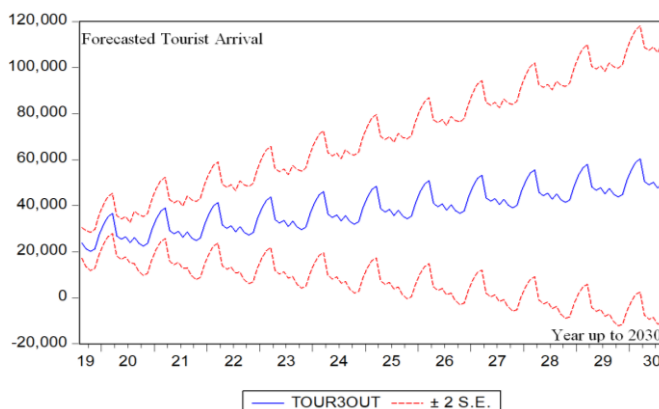SARIMA $(0,1,1)(0,1,1)_{12}$ model (Table-6)

Figure 9. Out sample forecast of tourists' arrival
using the SARIMA $(0,1,1)$ $(0,1,1)_{12}$ model (Table-7)

Forecasting of Tourists arrival

Time series investigation and prediction have become a significant apparatus in various applications in the tourism industry and different tourisms related regions to get marvels, as remote and nearby visitors' appearance, tourist's expenditure, and income from the tourism industry-related areas. We mainly study the time series data to show the forecasting behavior and we aim to fit an appropriate time series model to forecast the fitted model of the tourists' arrival in Bangladesh. Seasonality is present in the time series data; we take the seasonal difference after getting the series stationary. By observing autocorrelation and partial autocorrelation function, we try to fit an appropriate SARIMA model. For monthly tourists' arrival, our fitted SARIMA model is $(0, 1, 1)(0, 1, 1)_{12}$ and then we estimate the parameters of the model. By using Residual diagnostics and stability tests we justify the validity of the model after getting the appropriate model. To check the normality in residuals, we apply a normal probability plot and Jarque-Bera test. After that by using the fitted model, we forecast up to 2030.

The ramifications of this outcome are that the SARIMA model is fitted to catch the examples of outside visitor appearances and to forecast the equivalent in Bangladesh with a high accuracy level. The presentation of the SARIMA model might be better because of the consistency and diligence in seasonality in the tourism l industry, i.e., the foreign tourist appearances in Bangladesh are most significant in each February and least in each October. Subsequently, the findings of this exploration work can be utilized to figure better development approaches, particularly by the Government for the tourism industry in the nation.
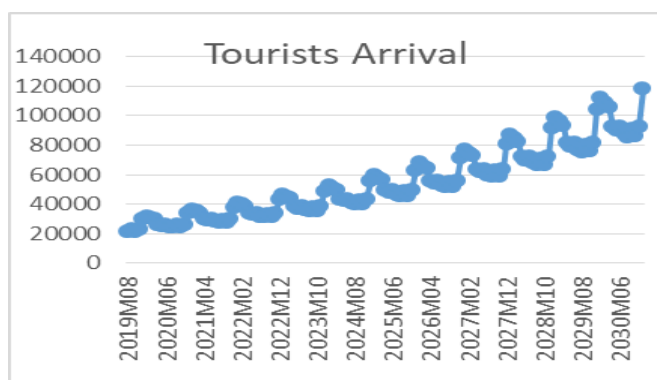

Figure 10. Forecast patterns of tourists'
arrival up to the year 2030 (Table-7)

Figure 11. patterns of Income from tourists'
arrival in Bangladesh (Bangladesh Parjatan Corporation)

Table-3. Number of tourists arriving from January'
2015 to July'2019 (Source: Bangladesh Tourism
Board (BTB) and Bangladesh Civil Aviation Authority)

Year/Month	2014	2015	2016	2017	2018	2019
January	14387	11387	18548	26256	30025	29610
February	11050	9050	19254	24214	29225	32887
March	12868	11223	12868	20142	26478	34288
April	11423	12428	16423	19247	20458	24429
May	13730	13730	13730	18256	19586	23018
June	11604	15322	16607	17485	19163	24158
July	10811	10811	17059	21569	19856	21497
August	10349	10225	13550	18596	21896	
September	13511	11012	19511	22142	19126	
October	14835	10287	14451	24254	17879	
November	15940	10991	16496	25501	18940	
December	18440	15451	22498	27829	25075	

Table-4. Log Transformation of tourists arriving from January
'2015 to July'2019 (Modified: 2014M01 2019M12 // T=log(tourist)

Year/Month	2014	2015	2016	2017	2018	2019
January	9.574080	9.340228	9.828117	10.17565	10.30979	10.29587
February	9.310186	9.110520	9.865474	10.09469	10.28278	10.40083
March	9.462499	9.325721	9.462499	9.910562	10.18407	10.44255
April	9.343384	9.427707	9.706438	9.865110	9.926129	10.10353
May	9.527338	9.527338	9.527338	9.812249	9.882570	10.04403
June	9.359105	9.637045	9.717580	9.769099	9.860737	10.09237
July	9.288319	9.288319	9.744433	9.979012	9.896262	9.975669
August	9.244645	9.232591	9.514142	9.830702	9.994059	
September	9.511259	9.306741	9.878734	10.00523	9.858804	
October	9.604745	9.238636	9.578519	10.09634	9.791382	
November	9.676587	9.304832	9.710873	10.14647	9.849031	
December	9.822277	9.645429	10.02118	10.23383	10.12963	

Income from tourists

In terms of profit, Bangladesh Parjatan Corporation (BPC) is showing its performance well. This Profit is calculated by extracting total expenditure from total income from tourism in a year. Its loss was about -2291443.07 US Dollars, in 2008-2009. Where 42510340.48 and 44799113.46 US Dollars were the total income and total spending respectively. However, after that, it is showing a notable profit to the national economy. Its gain was 276542.84 US Dollars in 2009-2010 but in 2012-2013 it was 7232536.06 US Dollars which was constantly increased. These amounts have risen to 92421222.01 US Dollars in the year 2017. This can be shown in figure 11.

Table- 5. Seasonal difference of tourists arriving from January '2015 to July'2019 (Modified: 2014M01 2019M12 // sl=(l-l(-12))

Year/Month	2014	2015	2016	2017	2018	2019
January	NA	-0.233853	0.487890	0.347533	0.134136	-0.013918
February	NA	-0.199666	0.754954	0.229212	0.188094	0.118053
March	NA	-0.136778	0.136778	0.448064	0.273507	0.258481
April	NA	0.084323	0.278731	0.158672	0.061019	0.177397
May	NA	0.000000	0.000000	0.284911	0.070321	0.161461
June	NA	0.277940	0.080535	0.051519	0.091638	0.231634
July	NA	0.000000	0.456114	0.234579	-0.082751	0.079407
August	NA	-0.012054	0.281551	0.316560	0.163357	
September	NA	-0.204519	0.571993	0.126498	-0.146428	
October	NA	-0.366108	0.339883	0.517818	-0.304955	
November	NA	-0.371755	0.406041	0.435600	-0.297442	
December	NA	-0.176848	0.375753	0.212652	-0.104207	

Table-6. Residuals of tourists arriving from January'2015 to July'2019 (Modified: 2014M01 2019M12 // rsl=(sl-sl(-1))

Year/Month	2014	2015	2016	2017	2018	2019
January	NA	0.034187	0.267064	-0.118320	0.053958	0.131971
February	NA	0.062887	-0.618176	0.218851	0.085413	0.140428
March	NA	0.221101	0.141952	-0.289391	-0.212488	-0.081084
April	NA	-0.084323	-0.278731	0.126238	0.009302	-0.015935
May	NA	0.277940	0.080535	-0.233391	0.021317	0.070173
June	NA	-0.277940	0.375579	0.183060	-0.174389	-0.152227
July	NA	-0.012054	-0.174563	0.081981	0.246108	0.131971
August	NA	-0.192464	0.290442	-0.190062	-0.309785	
September	NA	-0.161590	-0.232110	0.391320	-0.158527	
October	NA	-0.005647	0.066159	-0.082218	0.007513	
November	NA	0.194906	-0.030288	-0.222948	0.193234	
December	NA	0.664738	-0.028220	-0.078516	0.090289	

Table-7. Forecast of tourists' arrival from August'2019 to the year December"2030

Year/Month	2019	2020	2021	2022	2023	2024
January		31911	36194	41051	46561	52809
February		30957	35112	39824	45169	51231
March		30084	34122	38701	43895	49786
April		26225	29744	33736	38264	43399
May		25624	29064	32964	37388	42406
June		26300	29830	33833	38374	43524
July		24828	28160	31939	36226	41087
August	21395	24266	27523	31216	35406	40158
September	22820	25883	29356	33296	37765	42833
October	21593	24492	27778	31507	35735	40531
November	23164	26273	29799	33798	38334	43479
December	29629	33606	38116	43231	49033	55614
Year/Month	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
January	59897	67935	77053	87394	99123	112426
February	58106	65904	74749	84781	96159	109065
March	56468	64046	72642	82391	93448	105989
April	49224	55830	63323	71821	81460	92393
May	48097	54552	61873	70177	79596	90278
June	49365	55990	63505	72027	81694	92658
July	46602	52856	59950	67995	77121	87471
August	45547	51660	58593	66456	75375	85491
September	48582	55102	62497	70884	80397	91187
October	45971	52140	59138	67074	76076	86286
November	49314	55932	63439	71953	81609	92562
December	63077	71543	81145	92035	104386	118396

CONCLUSION

Tourist appearance forecast gets troublesome in Bangladesh because of its non-straight pattern. Be that as it may, forecast of Tourist appearance is fundamental for the tourism- industry-related businesses trying to define efficient and effective systems for keeping up and boosting the tourism industry segment. Thinking about the essentialness, in this study SARIMA demonstrating procedure was applied. The R-squared worth (0.48) was found. This shows that the SARIMA models created to forecast Tourist appearance in the present investigation are sensibly exact. Thus, the obtained SARIMA model can be utilized as a handy apparatus for across the country Tourist arrival forecasting. All in all, these findings are significant for the strategy hover taking a shot at the sustainable development of the tourism industry in Bangladesh.

The result of a rising trend in foreign tourist appearances flags the government just as private partners to stay arranged to respect an expanding number of global sightseers in years ahead. The finding of seasonality in Bangladesh tourism the travel industry demonstrates February as the pinnacle month and October as the lean month of every year. This signals the general population just as the private area to stay arranged for confronting a deficiency in limit during pinnacle and abundance limit during lean. To get rid of the issues of seasonality in foreign tourist arrivals, it is fundamental to distinguish, expand, create and advance the tourism industry items, for example, eco-tourism, adventure tourism, rural tourism, sports tourism, and cruise tourism in the nation. These items can guarantee round the year tourists to visits just as rehash visits. Inferable from the expanded flow of visitors from a couple of nations, the system of such reliance could be clarified by the assessment of improved deceivability, feelings, and observations (from a worldwide point of view) about Bangladesh as a tourist destination.

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HALAL FOR ALL: GEO SPATIAL TOURISM OF HALAL
FOOD STALLS IN MUSLIM MINORITY TOURIST DESTINATIONS

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Abstract: Denpasar, Bali is one of the popular tourist destinations in Indonesia, following its variety of unique cultures, local wisdom, and the majority of its society embraced Hinduism. However, the appeal shows the high increase of food stalls with halal labeling. Thus, this article aims to provide an overview of the growing and the development of halal food stalls within non-Muslim society along with its spatial distribution. The segmented growth of halal and non-halal food stalls continues to grow following Denpasar's image as a tourist destination and becomes essential although not the primary element of tourism development. A field survey method with a ground check approach was conducted to obtain spatial data. Observation and interviews of halal and non-halal culinary entrepreneurs are carried out afterward. This research found the development of halal food stalls in the city of Denpasar grow significantly even though the dynamics of society also emerge. The existence of halal stalls supports tourism in terms of providing facilities and services. This supports the image of a tourist destination.

Key words: halal food stall, geo spatial, tourism, Hinduism, minority

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INTRODUCTION

The tourism industry is one of the state's economy booster especially for developing countries like Indonesia. The Tourism Ministry stated that Indonesia's tourism industry contributed to 5.25% of the state's Gross Domestic Product (GDP). It took four years for tourism to increase its contribution by 1 percent to 4.25% in 2015. This sector's contributions are yet to be optimized, seeing Indonesia's enormous potential in tourism. Thus the government keeps focusing on optimizing tourism sectors including declaring halal destinations and New Bali's ten tourism destinations. From those ten destinations, five of them were claimed as national strategic tourism area with a super-priority status following Toba Lake in North Sumatra, Borobudur Pagoda in Central Java, Mandalika in West Nusa Tenggara, Bunaken in North Sulawesi, and Bangka Belitung. It is hoped that those five destinations can be domestic and international tourists' magnet just as how Bali is.

Based on the statistic from The Central Bureau of Statistic in 2018, Bali is places top in international tourists visit Indonesia with 6.3 million tourists of 38.7% compared to other places in Indonesia in 2019, followed by Jakarta and Riau Islands. Not so different, domestic tourists to Bali also increased every year with 9.8 million in 2018. A large number of tourists indicated that Bali is still the most favorite tourist destination that offered culture exotism, religion, and a rich legacy. Those elements are found in Balinese daily activities and are controlled by Hinduism (Mastika and Nimran, 2020). The paradox is located in the reality that the majority of Bali (Hindu) citizens are counter-productive by several of Muslim's cultural values and halal status (Wilson and Liu, 2010). Behavior norms and Islamic teaching are often imagined as contradicting West societies' norms or other Non-Muslim societies (Henderson, 2006). This is understandable as the strength of culture and religions greatly affected perception and individuals' behavior toward themselves and others (Delener, 1994; Essoo and Dibb, 2004; Zamani-Farahani and Musa, 2012).Thus, it's no wonder that many Bali citizens are against the planning of Bali as one of the halal tourist destinations in

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Indonesia. There are many reasons for those rejections. On one side, those who agree with halal tourism can understand the high potential of halal tourism that is not yet optimized following Muslims awareness of the significance of halal tourism (Battour et al., 2021; Battour and Ismail, 2016; Junaidi, 2020; Kamran and Omran, 2018; Markham, 2014; Rahim and Shahwan, 2013). CresentRating.com reported that Muslim tourists contribute to 12.3% of the total world tourists spending (Rosnan et al., 2015). On the other hand, halal tourism high potential in Indonesia is hegemonic that threatened the existence especially of Hindu as a minority in Indonesia but is embraced majorly by Bali citizens (Makhasi and Rahimmadhi, 2020). The hegemony of halal tourism that continues to be echoed also presents political identity from the non-Muslim majority areas in Indonesia to reject or counter-hegemony over halal tourism that wants or will be developed in its territory. This momentum comes following the 2019 Presidential and Vice Presidential elections which certainly raises the tension of political identity in each region. The objection of halal tourism also occurs as Bali has a deeply rooted image as cultural tourism based on local wisdom with its Tri Hita Karana philosophy. Etymologically, the philosophy has the meaning of three sources of happiness that can be achieved if there is a harmonious relationship with the three elements of the universe, namely God, the natural environment, and humans (Pitana, 2010).

Although rejections are expressed greatly by the Bali province government and civil society, halal tourism in a form of halal places to eat is easy to locate especially in Denpasar city as the capital city of Bali province. The question arises of where and how can a halal labeled place to eat in Denpasar city, Bali province can be massively present and survive amid Denpasar citizens whom the majority are Hindu or as many as 64% of other religions (Statistik, 2010). The extent to which the spatial distribution of halal culinary in Denpasar, especially South Denpasar district can fulfill the desires of Denpasar citizens. Many current pieces of research on halal tourism focus on destination marketing and successful halal tourism model development (Al-Ansi and Han, 2019; Battour et al., 2010; Carboni et al., 2014; Kamran and Omran, 2018; Khan and Callanan, 2017; Najib et al., 2020; Pamukcu and Sariisik, 2020; Ryan, 2016). There are still limited publications that discuss the development of halal tourism in the attributes of halal places to eat in the middle of non-Muslim communities along with its spatial distribution. It is hoped that this spatial distribution can provide input especially for Bali tourist destinations marketers also to explore and find out the origins of these dining places based on Micro, Smal, and Medium Enterprises (MSMEs) in Denpasar.

METHOD

This research used a qualitative methodology to explore halal's MSMEs restaurant in non-Muslim majority locations. The research is located in Denpasar city. As the capital city of Bali province, Denpasar can represent Bali's condition though not generalizing other cities/regencies in Bali. From four districts in Denpasar city, South Denpasar was chosen as the specific location for research. Data collection was conducted through a field survey with a ground check approach to collect spatial data on dining places in South Denpasar. After spatial data are collected, the data are categorized into two main categories which are consumable for all and consumable only for non-Muslims. These categories are only for MSMEs actors of halal dining places. Post categorizing and spatial data processing, observation, and interviews are conducted with 16 halal culinary entrepreneurs. This technique was used to explore the depth of how those halal culinary entrepreneurs can arrive and work in Denpasar to develop their businesses as inseparable aspects of Bali's tourism.

LITERATURE REVIEW
Islamic tourism, Halal Tourism and Halal Food

The concept of halal tourism and the concept of Islamic / Sharia tourism often encounter ambiguity in meaning and are often confused (Hamza, 2012; Neveu, 2010). The two concepts are often used interchangeably as if they both have the similar and often the same meaning (Battour et al., 2014; Henderson, 2009; Jafari and Scott, 2014; Stephenson, 2014; Zamani-Farahani and Henderson, 2010). The fundamental difference between the concept of Islamic tourism and halal tourism lies in the objective perspective (Aziz et al., 2015). Islamic tourism focuses more on activities that have specific goals and motivations spiritually and socially based on Islamic Sharia. Meanwhile, Sharia (which comes from Arabic) is a guide as well as the way of life of Muslims in carrying out activities. Addressing halal, it is not only food products but also related to non-food products such as cosmetics, pharmaceuticals (medicines), leather crafts, fragrances, including services such as banking, entertainment, tourism, and logistics (Rahim and Shahwan, 2013). The wide aspects of halal are creating a wide interpretation of the word halal that is often constructed differently (De Nastiti and Perguna, 2020.). The term halal tourism refers to the practices that are permitted or approved by Islamic law which focuses on supporting economic opportunities from the supply chain in the tourism sector as an effort to meet Muslim needs by providing attributes that are by Islamic Sharia (El-Gohary, 2016). Hence, sharia Islam is very attached to halal tourism. There are many attribute categories in halal tourism ranging from products, services, facilities to environment (Vargas-Sánchez and Moral-Moral, 2019). One of the halal products is in the form of halal food and beverages. According to the Indonesian Ulema Council, halal food and beverages are products that meet the following criteria. First, it does not contain pork and ingredients derived from pork. Second, it does not contain materials that are prohibited by the Islamic sharia, including human organs, feces, blood, and carnivores animals. Third, all halal animals that are slaughtered by complying to the Islamic sharia, and finally all food and drinks that are not intoxicating.

RESULT AND DISCUSSION
Spatial Distribution of Halal, Non-Halal Stalls and Their Social Settings

Bali is for Tourism, not Tourism for Bali. *"Bali untuk Pariwisata bukan Pariwisata untuk Bali"* (Governor of Bali, Ida Bagus Oka, October 1991). Bali has long been considered a tourism window that has a strategic role in the wheels of tourism in Indonesia. Its name is even better known than Indonesia (Picard, 2006). Bali is praised for its rich traditions and local wisdom and has made its culture as a product of tourism. There are many factors of why tourists come to Bali, one of them is

the strength of destination branding which is considered as capable of motivating and encouraging tourists. This branding was established from the combination of various factors such as price, scenery, weather, friendliness of the people, and including its infrastructure (Coban, 2012; Jamaludin et al., 2012). This destination branding has an impact on increasing tourist visits in all cities/regencies across Bali province. Historically, regencies in Bali originated from kingdoms. Those kingdoms have a character, cultural norms, systems, and governance, including Denpasar city. This city was originated from the Mengwi kingdom and the Badung kingdom in Bali. After being selected as the capital city of Bali province in 1958, Denpasar has continued to develop rapidly from time to time, not only from its infrastructure (physically) but also its citizens' socio-cultural level. Denpasar as the center of education, economy, governance, and business gave a significant effect on population density (Figure 1).
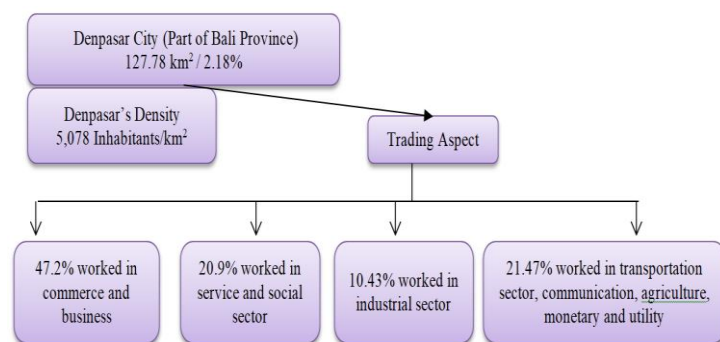

Figure 1. Percentage of Trading Aspect in Denpasar
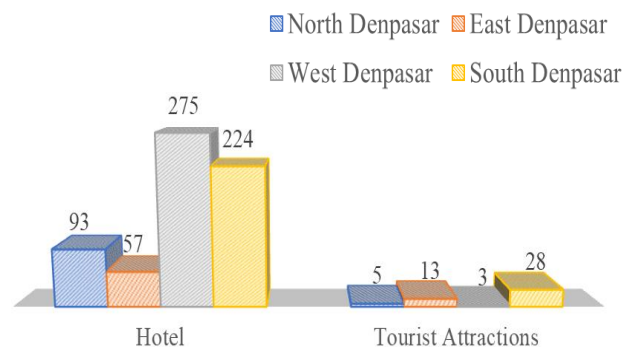(Source: Central Bureau of Statistics, 2016)

Figure 2. Number of Hotels and Tourist Attractions (Source: Compiled from internet - traveloka.com and google earth imagery)

In 2020, there are 49 tourist attractions supported by 650 hotels (Figure 2). The growth is inseparable from the increase in the number of tourists coming to Bali, especially Denpasar, whether for vacation, business trips, business, family gathering, or enjoying the natural scenery. Of the four districts in Denpasar city, South Denpasar district have the most tourist attraction whether it be natural or artificial compared to other districts. The central governance (Bali Province Governor office) is also located in South Denpasar. This district is also adjacent to Badung regency that has many tourist attractions and hotels compared to its neighboring area. The number of tourist attractions is related to the number of halal dining places in South Denpasar. Even though it is dominated by Hinduism, halal dining places are easily found. For more information (Table 1). This can be seen clearly from the use of the label "halal" or "100% halal" in these places. Some use the word "Muslim" as a sign that the owner is a Muslim, and some even use the name of both cities/regencies in Indonesia where the majority of areas are Muslim such as Banyuwangi, Lamongan, Padang, Madiun, Malang, Solo, Bandung including Jakarta. These small-scale actors rely on the assumption that Indonesia is a predominantly Muslim country so their food is automatically halal by simply being labeled "halal" or having the words "Muslim" written on it or using the name of a predominantly Muslim area. "Halal", "Muslim" and the name of the region become their identity which allowed the consumers to find halal food and beverages halal substituting of having a halal certificate.

Table 1. Dining places category in Denpasar
(Source: Research primary data)

	Consumable for All	Only for non Muslim
South Denpasar	201	55
North Denpasar	91	18
East Denpasar	158	23
West Denpasar	166	27
Total	**616**	**123**

Rejection of halal tourism is inevitable. People argue that the discourse of halal tourism will eliminate the identity of tourism. Whenever it is forced, it will create a setback for Bali tourism. Although halal tourism seems to be able to contribute to economic growth, at the same time, it can also be considered as a barrier to tourism development and can lead to the absence of hefty numbers of tourists (Zamani-Farahani and Henderson, 2010). The public suspicion to the halal label as it's identical to Islam which is believed to legalize violence is still prominent within Denpasar society. The suspicion and even a deep trauma of Islam and its attributes arose following the Bali Bombing events, first in 2002 and second in 2005. The incidents claimed many lives and are unforgettable for the Balinese people. This resulting in the reactive and careful responses of Denpasar citizens towards symbols that attributed Islam. However, those who agree with halal tourism with all its attributes believed that halal tourism is an emerging opportunity that has a clear and specific segmentation (Mohsin et al., 2016). Halal tourism is seen as a "new gold" which illustrates the great potential to be developed by looking at the rapidly growing Muslim population around the world (Chandra, 2014). Halal diction has become a paradox, especially within the minority Muslim community area. On one hand, the word halal, taken from Islamic terminology presenting a polemic because it is an adjective of "tourism". Halal tourism is considered to have led to a new definition containing the symbolization of the religion of Islam, which is considered to legalize violence and create disintegration. On the other hand, the diction of halal when it is put as an adjective for "food" or "warung" (stall) is considered as something common, ordinary, and not horrific. This is indicated by the number of dining places and stalls labeled with halal significantly scatter in Denpasar, including in the South Denpasar district (Table 1). The massiveness of halal restaurant is unstoppable and even exceeds the number of non-halal food or food that is only for non-Muslims. Halal dining places are identified by the availability of halal menus according to Islamic sharia, labeling "halal" or "Muslim" which is displayed on the name of the restaurant, or even attributes (symbols) that indicate that the halal food seller is Muslim such as wearing the Hijab for women, writings of " Allah "and" Muhammad "on the walls, or calligraphy that is inscribed with the holy Koran. The halal logo affixed to the restaurant is not a halal logo through official procedures or issued by the official institution, known as the Indonesian

Ulema Council. But the halal logo is a sign that the food in the restaurant comes from animals that are allowed to be eaten in Islam, such as chickens, cows, goats, and so on. When the restaurant is halal, it can be categorized as "consumable for all". Meanwhile, a restaurant that provides a pork menu either as a main or additional menu is categorized as "only for non-Muslims".

The existence of these dining places supports Denpasar's tourism in terms of providing facilities and services. This sort of facility is very much needed, especially for Muslim travelers to provide them with convenience in finding halal dining places. For some Muslims, practicing Islamic sharia by eating halal food is mandatory and it is the Muslim lifestyle (Rarick et al., 2012). Halal is no longer a label attached to products but it has evolved into a lifestyle. The halal lifestyle trend continues to advance including in tourism. Muslim tourists will try their best in finding halal dining places when visiting Denpasar as it is part of their lifestyle. When one of the components ranging from tourism attractions, accommodation, transportation, infrastructure, facilities provision, and support services does not provide its best services to visitors with varied backgrounds, it will affect the regional destinations image (Govers et al., 2007; Xu, 2010). Bali's destination branding as "The Island of God" is continued to be developed and expressed as an attempt to create societies' trust towards Bali, after the Bali Bombing incidents (Couteau, 2014). A positive destination image will generate word of mouth by tourists on the positive side as well (Snaith and Haley, 1999). The growth of the Muslim and Halal labeling in dining places in Denpasar cannot be separated from the influence of religion and community beliefs (Harahsheh, 2019). This is due to Muslims as a minority in Denpasar, they are unable to arbitrarily choosing a place to eat. They avoid foods that violated Islamic sharia such as pork, dog meat, intoxicating drinks, and others. This halal lifestyle created economic opportunities to open halal dining places. The massiveness of halal dining places also indicates that halal products and services are not only exclusive to the Muslim market (El-Gohary, 2016), but rather creating new opportunities economically and socially, as well as cultural exchanges, and new marketing between Muslim and non-Muslim communities in supporting tourism and tourist destination branding(Wilson et al., 2013). This opportunity is advantageous to many migrants in building "halal" or "Muslim" label businesses, especially in Denpasar.

The market responses are quite positive toward the existence of halal dining places for both Muslims and non-Muslims (Figure 3). Food stalls are not exclusive to Muslims, although are given halal appendages that identified Muslims. Balinese people often eat in halal dining places. They presumed that halal dining places and restaurants provide choices to the public also are considered to have a distinctive taste compared to non-halal food (made from pork). Halal food products are considered attractive to non-Muslim consumers due to satisfaction, sanitation, and health concerns (Stephenson, 2014). On the other hand, for Muslims, the existence of halal food stall is considered as an oasis within majority domination. The main challenge in this economic opportunity is finding equilibrium with the majority without contradicting the teachings of minority Muslims in Bali.

Figure 3. Distribution of Culinary Stalls in South Denpasar

Halal Culinary: Support or Hinder Tourism

The availability of halal food and beverages, including halal dining places, is common in Denpasar's tourist destinations. Tourists are given the option to choose types of food both halal and non-halal. In reality, the number of halal culinary delights in Denpasar continued to increase. South Denpasar is the highest district based on the number of MSMEs halal culinary. This

is understandable as the district has the largest number of tourist attractions compared to the three other districts in Denpasar city. The Bali province central government is also located in South Denpasar District, making the district analogous to sugar which will always be surrounded by ants. Although the district is the largest with halal culinary delights, however, it is relatively far from tourist attractions and central government buildings. The existence of these stalls is mostly circulated in the supporting area of South Denpasar. High land prices, limited business capital, hotel domination, and office buildings are the reasons culinary entrepreneurs opt to open their business in the supporting area. Interestingly, the distribution of these halal culinary stalls is relatively circulated and filled almost all types of roads, from the artery, collector, to local roads.

Geographically, the South Denpasar district is located in the south of the Indian Ocean. In the context of Javanese culture, the South is considered to be mystical, sacred, which is related to magic. Even in some areas in Java Island, the southern part cities/regencies are often neglected than the northern cities/regencies. This neglect and sacredness are often manifested through ritual and cultural expression, which differs from the Northern area. Southern and Northern peoples have a different character. As the South is close to the ocean, the relation with the sacred living is thicker than those of the North. The agricultural communities (North) can work with relatively controlled resources, making their activities much composed. Dependency on something of a metaphysical nature is much lower, is the contrasting reality that occurred in Southern society. They are very dependent on nature and transcendental. The central government and cities in Java Island mostly are located in the North. The fact is that what applies in Java Islands are not in line with Bali Island, especially Denpasar. The southern area of Denpasar literally a more progressive area seeing from its numbers of hotels, halal culinary, and tourist attractions. Although its geographic location is close to the beach, not many of its people are fishermen. The focus of South Denpasar development is on the tourism sector. One of the many tourism sectors is the dining place. Dining places and restaurants are one of the facilities and services that must be available in tourist destinations. The available dining places can be put into consumable for Muslim or consumable only for non-Muslim or consumable for all. Each has different customer segmentation and both support the tourist destination branding effort. In Denpasar, you can easily find non-halal food with visible labels such as 100% haram, Babi guling (roasted pork); plecing pork satay; and others. Even in Denpasar, there is a very popular place that sells this type of non-halal food with a busy number of visitors. Other than its famous natural tourist destinations and local wisdom, some tourists made the consumption of boiled pork a mandatory destination when visiting Denpasar. On the other hand, Indonesia, which is predominantly Muslim, requires tourist destinations like Denpasar to provide Muslim-friendly dining places. The increasing number of halal culinary delights is proof that Denpasar is a Muslim friendly destination followed by the increasing number of Muslim tourists to Denpasar and Bali. Various dining options also support the selection of holiday destinations. The more diverse the culinary options, the more it will be a tourist destination option (Chaney and Ryan, 2012; Horng and Tsai, 2010). This option is even used as branding in developing a different and attractive identity (Lin, 2009). In Denpasar, diverse food options and segmented is not the main purpose for tourists when visiting Denpasar and Bali. As far as the research results are qualitative in nature, the key elements that make tourists visit Denpasar and Bali are due to its culture, local wisdom, as well as the beauty of its natural scenery. However, without being supported by the availability of halal or non-halal food, efforts to make the branding as friendly in all elements of tourist destinations are difficult to achieve. This confirms previous research that the availability of segmented food does not have a significant effect on overall tourist satisfaction (Mannaa, 2020).

CONCLUSION

The development of halal tourism continued developing in Indonesia and has become a trend of the global Islamic economic industry. One of the increasing trends is the increasing number of Micro, Small, and Medium Enterprises (MSMEs) attempting to obtain halal labels both officially and non-officially. The upsurge also occurred in Denpasar, Bali Island. Although the society dynamics arose massively from the increase in the number of halal food stalls are due to the traumatic feeling caused by the Bali bombing incidents as well as to promote identity politics, but its existence supports tourism in Denpasar in terms of providing facilities and services. These facilities and services are important to support the image of tourist destinations, especially in the South Denpasar area.

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