Identifying and prioritizing new business opportunities in the electronic tourism industry of Chabahar City

H. Aramesh1, *, M. Zivdar1, M. Riki1, Z.S. Saljooghi2

1Department of Management, School of Management and Economic, University of Sistan and Baluchestan, Zahedan, Iran
2Department of Management, Islamic Azad University, Kerman Branch, Kerman, Iran

ABSTRACT

Information technology as a more intermediary, utilizes the science of the day to provide the necessary data for the specialists, organizations, and ultimately all types of groups in the shortest possible time and in the best possible way. Many countries believe that entrepreneurship has played an indispensable role in improving productivity and economic growth. Since the benefits of tourism industry in the regional process through the creation of foreign exchange earnings lead to economic growth and in the local procedures through the creation of jobs the consistent distribution of income will improve lives of the people, developing countries see the prosperity of tourism as a way for the economic development in all aspects. The purpose of this study is to identify and prioritize new business opportunities in the electronic tourism industry of Chabahar city. In the present article which conducted in 2018 thirty people were selected from active tourism industry in the area for research sample. Expert choice software was used to analyze the data. Smart advertising opportunities with a coefficient of 0.221, smart commerce with a coefficient of 0.191, smart residency with a coefficient of 0.172, smart navigation with a coefficient of 0.131, intelligent transportation with a coefficient of 0.113, smart routing with a coefficient of 0.092, Smart data with a coefficient of 0.049, and smart training with coefficient 0.029 were recognized as new businesses in the industry of Chabahar.

INTRODUCTION

Economists consider tourism industry as the third most dynamic and growing economic phenomenon after oil and automobile industries (Nazari, 2001). Tourism as an Economic Tool (Chen, 2015) has a significant impact on strengthening the foundations of the societies (Kazemi, 2008). According to the World Travel and Tourism Council in 2016, “10.2 percent of the GDP, 9.6 percent of the employment, 4.4 percent of the investments, and 3.3 percent of the total world exports comes from the tourism industry (WTO, 2018). With respect to cultural, historical, and natural attractions, Iran is ranked among the top 10 countries of the world (Mohseni and Heshmati 2011). In today’s world, the tourism industry has gained a special place in trading sector and has a major role in the economy of the countries. Besides, e-commerce has become a necessity. Thus, the proper development of
e-tourism can boost the economies of the countries (Sayed Naghavi and Jamal Abad, 2013). The impact of information and communication technology in tourism is embodied in the form of electronic tourism and has changed the ways in which available tourism services have been applied. The inclusive and highly innovative technologies provide a variety of ways for the consumers of touristic services (Ukpabi and Karjaluoto, 2017). Tourists will require information about their prospective destinations both before they leave home and once they arrive. This information should give details of the local people and their way of life, language, currency, climate, amenities, transportation, accommodation and attractions. The supply of such information is critical to the success of any tourist destination (Camilleri, 2018). Many companies involved in travel and tourism have begun to apply e-commercial services through the internet and cyberspace or smart devices that provide a wide variety of services (Chung and Koo, 2015). Electronic tourism is the application of new technology to provide services needed by tourists; services which are far better accessible, much cheaper, and possess higher quality. In fact, in addition to the new services provided by information technology, electronic tourism is the electronic offering of all the services traditionally used by the tourists (Behrooz et al., 2010). The concept of electronic tourism refers to all business sectors in tourism and it addresses issues such as electronic business, electronic research and development, electronic content production, and electronic services (Salavati and Hashim, 2011), including: web sites, standards and protocols that deal with the production and retrieval of information in various structures such as text, photos and images, catalogs and brochures, promotional messages, hotel reservations, and e-ticket purchases (Li and Buhalis, 2006). Chabahar is the country’s warmest port in the winter and the coldest southern port in the summer. This port has various tourist attractions from rocky and sandy beaches, Mangrove Forest, Martian mountain (Fig. 1), Lipar Pink lake (Fig. 2), the unique attractions of the Oman sea coast, fishing and boat-rides, Tis historical fortress (Fig. 3) also called Portuguese Fortress, Marsh crocodile, along with a marvelous phenomenon of mud volcanoes (Fig. 4), etc. (Ehsani, 2015).

**STATEMENT OF THE PROBLEM**

The 66 percent rate of Internet users’ interest in electronic tourism is a documented reason to address a topic that is an undeniable necessity of the third millennium and requires essential behavioral changes to improve and deliver better services (Seyed Hashemi et al., 2013). Today, the vast majority of search for travel and booking or payment data are made on internet. At the time of travel, the internet, smartphones, and other technologies offer easy access to travelers and tourists with varied and useful data. The term “electronic tourism” along with the technologies that it brings, has become a common term for describing such synchronization and
coordinated use of various technologies for travel (Huang et al., 2017). According to the latest World Economic Forum (WEF), “In 2017, Iran is ranked the 117th out of 130 countries in terms of travel and tourism policies” (TCC, 2017). Sistan and Baluchistan province, with its privileged tourist destinations such as the Chabahar Sea, Taftan Volcano Mountains, Chah Nime and its ancient history and unique cultural heritage, have a great potential for attracting the tourists. This makes a significant impact on the region’s economy. However, evidence suggests that the e-tourism industry is not booming in the province. The existing programs have not been able to attract the tourists (Aramesh et al., 2018). The same is the case with Chabahar. In comparison with other parts of the country, in terms of developing and utilizing tourism capabilities, Chabahar has not been able to play its due role in e-tourism. In recent decades, tourism industry has become the world's largest industry and one of the pillars of sustainable development. Many countries have considered the dynamic tourism industry as a valuable asset, so that they can use its positive effects to earn money, and increase employment and growth. Tourism is an industry that has many potential to create new businesses and can help boost employment and entrepreneurship. The tourism industry has a variety of forms, which has now grown into a new form of tourism called electronic tourism. Electronic tourism is pursuing social, economic, and environmental development, contributing to the growth of entrepreneurship. In the economic sphere, it leads to the growth of employment centers and tourism-related industries, optimal use of resources, remarkable growth of
Electronic tourism industry of Chabahar City

Fig. 4. Mud volcano

e-commerce, reduction of costs, distribution of income and profitability. And, in social terms it result in unemployment reduction, emergence of further relationship among different nations and cultures, and strengthening national and local identity, and finally, sustainable development (Rostami et al., 2015). The tourism industry plays an essential role in many regional and national economies, as well as, in the global economy. It is a dynamic sector with a high potential for new jobs, and for companies to acquire a significant contribution in development (Borsekova et al., 2017). Innovation and entrepreneurship provide a great value for the progress and quality of the international tourism industry. For less developed economies, tourism innovation is an opportunity to distinguish the product of tourism and make it competitive, and with the increase in social and economic capital among people, prevent the transfer of foreign currency from the destination (Carlisle et al., 2013). Now, the questions are, what are the new business opportunities in the electronic tourism industry in Chabahar city, and what is the priority of these opportunities for Chabahar? In an article entitled “smart tourism in 1 click,” the authors develop comprehensive tourist software for a tourist city in Mexico. In this paper, they describe the features and capabilities of this software (Lui et al., 2018). Another article (Debra., 2015), entitled “An Appropriate Model for Investigating the Factors Affecting the Integrity of Sustainability in Tourism Companies”, suggests that all parties involved in tourism should be involved in the development of sustainable tourism, and sustainable tourism practices can be seen as a noble way of innovation in the tourism industry. In a different article (Cenamor et al., 2017), over the planning of tourist routes using social networks, a new proposition system proposed which can be used for the most popular tourist destinations (Huang et al., 2017). In an article entitled, “Smart Tourism Technologies in Travel Planning: Role of Identification and Exploitation”, it is argued that the features of smart technologies would enhance both identification and exploitation application (Wang et al., 2016). The result of a research entitled “How does IT affect design centricity approaches: Evidence from Spain’s Smart Tourism Ecosystem”, has shown that many information technology resources will increase the capabilities needed to create smart tourism ecosystems (Arenas et al., 2018). The results of the research entitled “Intelligent System Applications in Electronic Tourism”, showed that since the Internet has become the choice of many tourists for travel information, online travel agencies and their offers have become more important throughout the world, as well as, in Turkey. Turkish travel websites usually provide basic information that can be provided with a variety of search forms, but users will need more suggestion tools and travel planners that include inside decision support system. For this reason, the paper proposes a new approach to introducing strategies for Turkish travel agents, but this suggestion tool can be a general model for all travel agencies around the world. An intelligent system, which works as a propositional tool, is
created using a case argumentation algorithm for travel planning (Gülcin and Buse, 2011). In an article entitled, “Intelligent Tourism Recommender Systems: A Survey,” a thorough study of the field of tourism, taking into account different types of interfaces, the variety of recommended algorithms, capabilities provided by these systems and the use of artificial intelligence techniques (Joan et al., 2018). In a study titled, “From Digitization to the Age of Acceleration: On Information Technology and Tourism”, a summary of the development of research in the field of information technology and tourism over the past twenty years is provided. This paper argues that knowledge created over the past two decades can be identified as two separate periods, that is, the digitization (1997-2006) and the acceleration period (2007-2016), which reflects a general understanding of society and economy transformation by technology. Knowledge development in each of these courses is examined in terms of technological conditions, dominant paradigms, main research questions and influential research approaches. Specifically, our view changes of information technology in tourism research is from a “marketing-driven tool” to “knowledge-based tools” due to new technological conditions such as smartphones, drone, wearable sensors, new connections and large data. Finally, this article discusses the potential problems of futures studies and challenges the perspectives on the relationship between information technology and tourism (Zheng, 2018). This study has been carried out in the electronic tourism industry of Chabahar city in 2018.

MATERIALS AND METHODS

Chabahar Port City (Fig. 5) is located at the southeastern of Iran alongside the warm waters of the Oman Sea and has a 300 km water border on the Oman Sea and the Indian Ocean. The port city of Chabahar, with an area of about 9.10 square kilometers, is located on a gulf of the same name, with a height of 2 meters above sea level, the north of the port reach the cities of Iranshahr and Nikshahr,
from the south to the Oman sea and from the east to Pakistan, and from the west to the city of Konarak. Due to its location near the Oman Sea, the port of Chabahar is considered a coastal strip and has a warm and humid climate. The distinctive feature of the Chabahar port compared to other Iranian ports is that it is the only oceanic port of the country that runs on the international free waters. The climate of the port and its surroundings is always springy and temperate, which is why Chabahar is also called the “four spring” city. The Oman Sea is the country’s largest water source in this region and it has a lot of attractions in addition to the capacities that are in the region’s economic prosperity. Also, along the Oman Sea and in the southern part of the Chabahar port, great rocks created in the progress of the sea, creating a beautiful view. This beautiful port in terms of weather conditions is like Miami harbor in Florida, which is mild in all seasons. Chabahar is the warmest region of the country in the winter and the coolest southern port of Iran in the summer. Its average temperature is 23 degree and temperature changes vary from 10 degree to 34 degree. The industrial and commercial zone of Chabahar has been built in an area of 230 hectares and has very beautiful commercial complexes, manufacturing workshops, banks or financial buildings, and more. This study is a descriptive survey research. The hierarchical decision-making technique is a decision-making method in which considers choosing an option from existing options or prioritizing alternatives. AHP hierarchy analysis method is used more in management science. This method was originally developed by Thomas L. Saaty for the first time in 1970. This method is used when the decision-making practice is faced with several alternatives. The basic point of this decision-making method is paired comparison. The statistical population of this research is 30 people from tourism activists in Chabahar city. Due to the limited statistical population, the census method has been used. SPSS software was used to analyze the data obtained from the questionnaire from the viewpoint of demographic variables (gender, age, education, work experience). In order to rank and weigh the identified businesses, we used expert choice software. This study seeks to identify and rank new businesses in electronic tourism in Chabahar city. This end had two steps. In the first step identified new business opportunities in the electronic tourism industry of Chabahar. In the second step, the identified factors are ranked by questionnaires based on the research questions.

**Drawing a tree of decision hierarchy**

The tree of the decision hierarchy represents the decision strategy in graphical form (Fig. 6). The first level of this tree is the goal of the decision. The first level represents the main purpose of the decision; the other level represents the basic indicators, the lowest level, representing the decision options. The lower levels show the effective criteria for decision making and the final level is decision choices. A hierarchical analysis process requires grouping a problem into several levels.
**Paired comparisons**

In this step, a paired matrix is formed based on each criterion. Comparisons are made in each of the matrices that are designed using a certain scale that is from equal importance to the great importance. After hierarchical modeling of the decision problem, the decision maker must compare the element (index or options) of each level in relation to its element at a higher level and in a pair to pair way and calculate their weight. This should be done using a set of matrices that quantitatively compare and measure relative priority of indices. Calculated weight is called relative weight. Experience has shown that using scale 1 to 9 makes the decision making more efficient for comparison. The next step in the hierarchical analysis process is to make the necessary calculations to obtain the priority of each of deciding criteria by using the matrix comparison data. The normalization concept and mean used to obtain priorities. The sum of the numbers of each column is counted from the comparisons, and then the number of each column is divided into the sum of that column, and finally, obtained the normal comparison matrix. The average of each row from the normalized matrix shows the relative weight of the decision criteria. To prioritize each sub-criterion of criteria, the relative weight of each sub-criterion is multiplied by the corresponding criterion to obtain the final weight of the sub-criterion.

**RESULTS AND DISCUSSION**

Iran is a fascinating destination for foreign tourists. But its true potential is more marked by electronic tourism. Here are some of the most influential issues in electronic tourism. Tourism from the economic point of view creates employment and reduces unemployment and increases incomes. In advanced countries, tourism is a major force in the development and economic recovery of developing countries. Recent changes in the behavior of tourists and the growing importance of information and communication technology means that there is more attention to electronic tourism. In this study, new business opportunities in the e-tourism industry were examined in eight categories of opportunity, smart advertising, smart commerce, smart residency, smart navigation, intelligent transportation, intelligent routing, smart data and smart training along with 22 sub-criteria. And, these opportunities and sub-criteria were ranked.

**Data analysis**

Fig. 7 indicates the importance of each opportunity to the goal. In other words, it indicates the average relative weight of each criterion and it shows importance of new business opportunity in the electronic tourism industry. The most important opportunity is smart advertising with a coefficient of 0.221, followed by smart commerce with the coefficient of 0.191 in the second place, smart residency with a coefficient of 0.172 in the third place, smart touring with a coefficient of 0.131 in the fourth rank, intelligent transportation with a coefficient of 0.113 in the fifth rank, smart routing with a 0.092 rating in the sixth rank, Smart data with a score of 0.049 ranked seventh and smart training...
with a coefficient of 0.029 ranked eighth. The matrix inconsistency rate is equivalent to 0.02, which is acceptable.

Prioritizing sub criteria for each of the new business opportunities of the electronic tourism industry

After prioritizing new business opportunities in electronic tourism in Chabahar City, it is time to make comparative comparisons of the following criteria in their respective opportunities.

Weights of the sub-criteria of smart advertising opportunity

Initially, the average relative weight of each of the sub criteria was estimated relative to the first opportunity, that is, smart advertising. The virtual tour option with the 0.669 coefficient has the highest relative weight and advertising in public places with a coefficient of 0.173 and advertising in social networks with a coefficient of 0.125 have the lowest relative weight compared to this criterion. The matrix inconsistency rate is equal to 0.02, which is an acceptable coefficient.

Weights of the sub criteria of smart trading opportunity

The mobile payment option with a weight of 0.526 has the highest relative weight and online supply of handicrafts with the coefficient of 0.277 and the ticket booking system with a 0.197 coefficient have least relative weight compared to this criterion. The matrix inconsistency rate is equal to 0.02, which is an acceptable coefficient.

Weights of sub criteria for smart residency

Online reservations of other places options with 0.536 coefficients have the highest relative weights and online booking of hotels with a 0.459 has minimum relative weight ratio compared to this criterion. The matrix inconsistency rate is equal to 0.03, which is an acceptable coefficient.

Weights of sub-criteria for smart touring opportunities

Option of special offers for the tour with a coefficient of 0.638 has the highest relative weight and active tour reservation with a coefficient of 0.251 and dedicated tour design with a coefficient of 0.105 has the lowest relative weight compared to this criterion. The matrix incompatibility rate coefficient is 0.01, which is an acceptable coefficient.

Weights of sub criteria for intelligent transportation opportunity

The tourism taxi option with 0.723 has the highest relative weight and online taxi with a coefficient

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Weights</th>
<th>Sub criteria</th>
<th>Relative weight</th>
<th>Final weight</th>
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<td>0.221</td>
<td>Virtual tour</td>
<td>0.699</td>
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<td>Advertising on social networks</td>
<td>0.125</td>
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<td>Smart commerce</td>
<td>0.191</td>
<td>Online supply of handicraft</td>
<td>0.277</td>
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<tr>
<td></td>
<td></td>
<td>Mobile payments</td>
<td>0.526</td>
<td>0.101</td>
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<td></td>
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<td>Ticket booking system</td>
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<tr>
<td>Smart residency</td>
<td>0.172</td>
<td>online reservation of other places</td>
<td>0.536</td>
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<td></td>
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<td>Dedicated tour design</td>
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<td>Intelligent</td>
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<td>Tourism taxi</td>
<td>0.723</td>
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<td>Satellite navigation</td>
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<td>Providing tourism attraction information</td>
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<td>Familiarity of tourists with attractions</td>
<td>0.102</td>
<td>0.003</td>
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</table>
Weights of the sub-criteria of smart routing opportunity
The online routing with 0.655 has the highest relative weight and the electronic map with 0.231 and satellite navigation with 0.101 have the lowest relative weight compared to this criterion. The matrix inconsistency coefficient equals to 0.02, which is a suitable coefficient.

Weights of the sub criteria of smart data opportunity
The option to provide tourism attraction information with a 0.550 coefficient has the highest relative weight and the tourist information registration system with a 0.450 has minimum relative weight ratio compare to this criterion. The matrix inconsistency rate is equal to 0.02, which is an acceptable coefficient.

Weights of the sub-criteria of smart training opportunity
The tourism-related advantage training of 0.532 coefficient has the highest relative weight and tourism related skills training with a coefficient of 0.366, and familiarity of tourists with attractions with a 0.102 coefficient have the lowest relative weight compared to this criterion. The matrix inconsistency coefficient equals 0.03, which is an acceptable coefficient. In the end, there is calculation of the final weight of each sub-criterion. Table 1 shows the final weight of each sub-criterion obtained from the multiplication of the relative weight of each sub criterion in the weight of the main criterion.

CONCLUSION
The research findings show that smart advertising is the first in the new business opportunities in electronic tourism. Advertising and marketing efforts for tourism development aimed at encouraging and persuading tourists to choose the destination of tourism, attracting tourists to similar and rivals destinations, and maintaining the current markets to the extent that it is necessary to attract new tourists. Therefore, achieving these goals requires more attention and continuous efforts of the government and the officials and activists of the tourism industry and owners of businesses connected with tourism. Accelerated advancement of information and communication technologies, in line with the rapid expansion of their growth and their impact on tourism that emerge as electronic tourism is helping to reduce costs and eliminate barriers to the use of information and communication technologies and it lead to economic growth. The use of information and communication technologies in the tourism industry will enable tourists to pay their payments throughout their tourism period in any time via the internet. After smart advertising and smart commerce opportunities, smart residency is in third place. Research in this field demonstrates the value of quality of service that can provide satisfaction, followed by loyalty of customers and attract new customers. The hotel industry and, in general, the issue of staying in tourist destinations is one of the main bases for the attraction and expansion of tourist and tourism, because the tourism industry includes a wide range of activities in different sectors, such as restaurants, transportation, residence and entertainment. The hotel industry, however, is known as an inclusive industry that provides a significant part of the tourism product. Smart residency and smart touring, intelligent transportation, smart routing, smart intelligence and smart training were ranked in the next order, respectively.

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CONFLICT OF INTREST
The author declare that there is no conflict of interest regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancy has been completely observed by the author.

REFERENCES


