

Research Paper

Barriers to the Development of Ecotourism Resorts Tourism in Saravan Rural Heritage Museum, Iran

Z. Bakhtiari Moghaddam Ziabari ¹, H. Kamran Kasmaei ^{2*}

¹ Department of Architecture, Pardis Branch, Islamic Azad University, Pardis, Iran

² Assistant Professor, Department of Art & Architecture, Pardis Branch, Islamic Azad University, Pardis, Iran

Received: December 2019, Revised: May 2020, Accepted: June 2020

Abstract

Tourism in the third millennium has become one of the most thriving economic activities around the world, and many developmental planners and policymakers refer to tourism as the main pillar for sustainable development. Tourism is considered as one of the most complicated occupations in numerous countries worldwide and as a multi-aspect activity possessing various positive effects and utilizations. The philosophy behind ecotourism resorts in Iran is to rehabilitate the local society's culture, aiding the local businesses with minor investment to empower the local and rural community, and create sustainable development in Iran's tourism cycle. The purpose of the present study is to determine factors impeding the development of ecotourism resorts tourism in Saravan rural heritage museum in Iran. The data were derived from interviews with key informants. For this purpose, the research question is what are the most important challenges for the development of tourism in the Saravan rural heritage museum and what are its sustainable strategies? The research subjects were tourism experts and university lecturers. Having examined journalist reviews and executive expert reports, 16 factors were selected as the key challenges for the rural heritage museum. Next, the Dematel method was used in order to analyze data and rank the factors. The results derived from the Dematel analysis indicates that lack of integrated and effective management of rural heritage museum (1.43), waste recycling and herbal and animal habitat devastation management (0.78), local residents and tourist culture differences (0.65) are the main factors in creating challenges for the rural heritage museum. Eventually, using the journalists' reviews and the Delphi model, the most effective solutions have been designated and graded utilizing the Shannon entropy model. The results indicate that the most important solutions include effective integrative settling management and planning for local society cooperation, also conducting strategic programs for Saravan rural heritage museum.

Keywords: Ecotourism resorts, Tourism development, Challenges and strategies, Saravan rural heritage museum.

1. INTRODUCTION

The tourism industry known as one of the most important phenomena in the third millennium has had a significant influence on economic growth and dynamic cultural trade between countries, particularly, during the last 50 years [1]. Tourism is also playing an important role in achieving sustainable development goals [2]. Hence, the authorities of tourism destinations have made the effort to provide sustainable tourism considering limitations by seeking appropriate solutions [3]. In this regard, since the foundation and growth of Brandt land report labeled as our common future, many researchers, countries and

organizations have made the effort to put the goals and aims of sustainable development in action [4]. Tourism development as a series of economic activity has a significant influence on strengthening societies' economic foundations [5]. Tourism is a space creating process. Any form of tourism that showcases the local life, art, culture and heritage at rural locations, thereby benefiting the local community economically and socially, as well as enabling interaction between the tourists and the locals for a more enriching tourism experience can be termed as rural tourism development [6]. Today, tourism has become a dynamic economic approach with distinctive features and one of the largest and most profitable industries in the world [7-8]. Recently, researchers, have been studying various factors influencing satisfaction of tourists in tourist

*Corresponding author: hadiskamran@pardisiau.ac.ir

destinations and have stated that destination tourism product [9-10], Quality of Service [11], Security, previous experience, the image of the destination [9], attractions [12], transportation [13], residence, costs [14] and socio-demographic characteristics directly or indirectly affect tourist satisfaction. Despite this range of studies in the field of tourism, many challenges threaten the development of tourism. Many researchers have mentioned numerous challenges which affect the development of tourism, such as cooperation problems among stakeholders, and tourism product diversification. These are some of the influential factors for the developments of tourism in a given destination [15]. Many of the challenges and issues facing Indigenous communities are equally important to non-Indigenous communities, especially those that host cultural (such as ecotourism resorts tourism development) and ethnic tourism [16]. The problems and challenges of tourism will be an obstacle to its development. Therefore, efforts should be made to address these challenges and to establish principled planning for tourism [17]. The concept of "sustainable tourism" (UNEP has appeared in the last decade to tackle a variety of problems, such as ecological degradation, loss of cultural heritage and economic dependence, originating from tourism [18-19]. The tendency to visit museums are also stimulated by the curiosity of visitors to enhance understanding of the culture, ethnic, historical, natural and other world heritages [20].

The challenges that the ecotourism resorts have faced in the recent years, especially since 2009 includes problems with legal, investment and financial section. Also lack of having an evaluator, developer and consultant alongside initiation of these resorts which has led to disorder in this field. In other words, the resorts are still growing without considering the required criteria and accurate expertise, while there is no registered business available for most of them. When tourists visit they might face negative feedbacks due to lack of appropriate evaluation and assessment of their activities which may eventually bring dissatisfaction. Thus the main cause of such circumstances are lack of appropriate training, evaluation and consultation for the resort owners.

The main goal for creating and developing ecotourism resorts with local identity and structure is to achieve a sustainable rural development by organizing and offering services to tourists and Eco tourists. These ecotourism resorts are not limited to inhabitation; certain services are offered including the serving of local foods and drinks, creation and selling of local handicrafts, performing traditional plays and music, holding local events and tours and ecotourism activities. The physical location of the resort is also considered as a local Eco-museum since the architectural style, the organic materials used, interior design and local furniture, are part of the attraction. The

most important principal that is paid attention to in such resorts is the participation of the local society in the tourism activities [21]. Figure one shows the classification of rural tourism activities in line with ecotourism resorts tourism.

In the late 20th century and consecutive to the declaration of rural sustainable development, whispers from the term ecotourism have been heard. In recent years, the definition of ecotourism has been constantly changed [22]. The most complete of those definitions which the WCU has proposed in the Megan apple road book, ecotourism, principles, experiences and policies, is: a responsible trip from the environmental point of view which is meant to enjoy the proportionate rarely natural areas (and any type of cultural characteristics available in the area from past until now) and leads to spreading the environment preserving. During this trip, the tourists would leave the least negative effects on natural resources and the local people are shared in the profit made from social-economic activities. The selectors of such trips prefer to have trips in the middle of natural areas which encloses them to nature [23].

Rural areas are the place where rural intangible heritage is found rich and diverse, whereas vulnerable to fast social, cultural, political and economic transformations, in particular in developing and underdeveloped areas [24]. Rural tourism is an important means for the development of rural areas in the world [25], and has a positive impact on the economy of the rural sector [26]. Rural tourism is accepted throughout the world as a means for sustainable rural development [27], this type of tourism, occurs when tourists visit a particularly rural area to experience and explore the culture or rural landscapes and to participate in the lifestyle and customs of the people [28].

The valence of collections in rural museums is not just in using them for sight, research and propagation, but also in organizing communication with the public, as well as in the construction of meaning through collection and interpretation of collections [29]. Creating rural museums is part of a human endeavor to being. Along with the purpose to resuscitate the original form of the village and other sections that have been added. In addition to familiarizing people with their past and their ancestors, these museums provide a variety of programs for present and future audiences [30]. Also, contemporary rural museums perform not only the traditional tasks but are also the places where both the visitors and the local community members have chances for entertainment and attractive leisure time [31], these museums are believed to be a key factor in the cultural development of the region [32-33], and are an institution that cares and conserves a collection of art effects and other objects of scientific, artistic, cultural or historical importance.

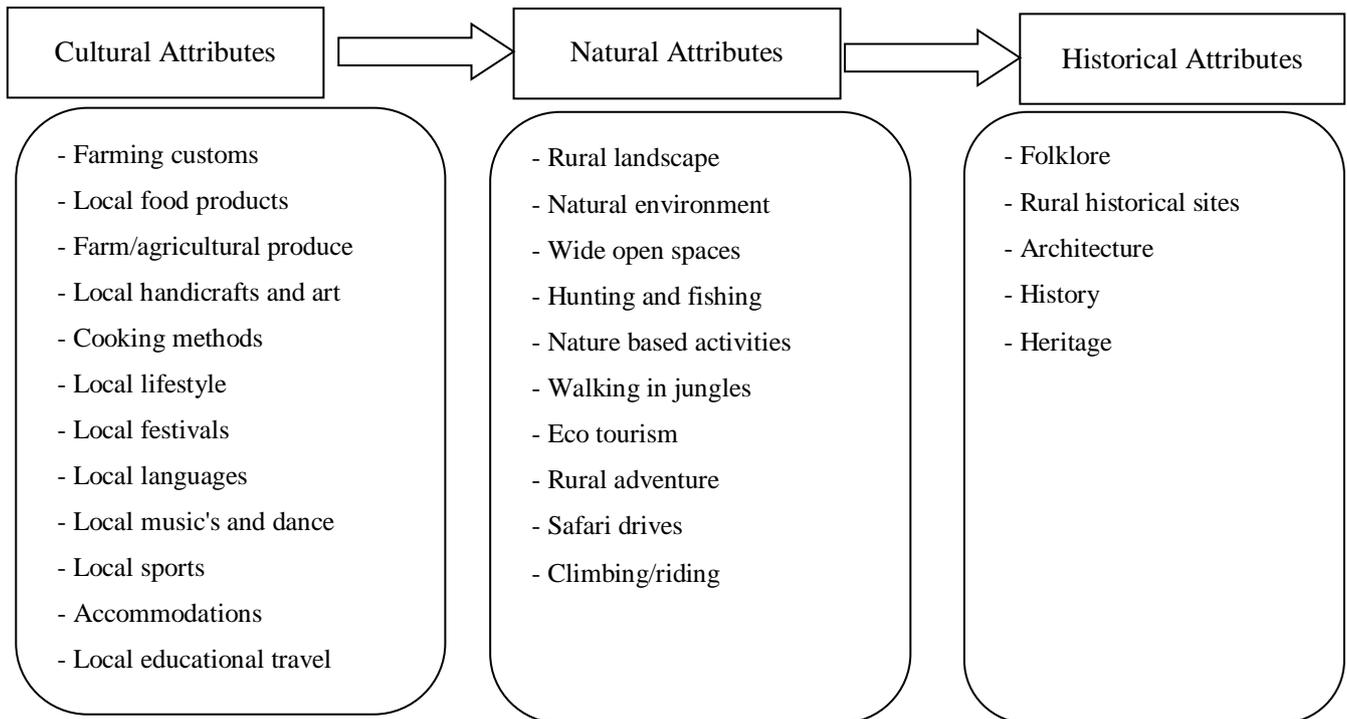


Fig 1. Classification of rural tourism activities in line with ecotourism resorts tourism (Source: Authors)

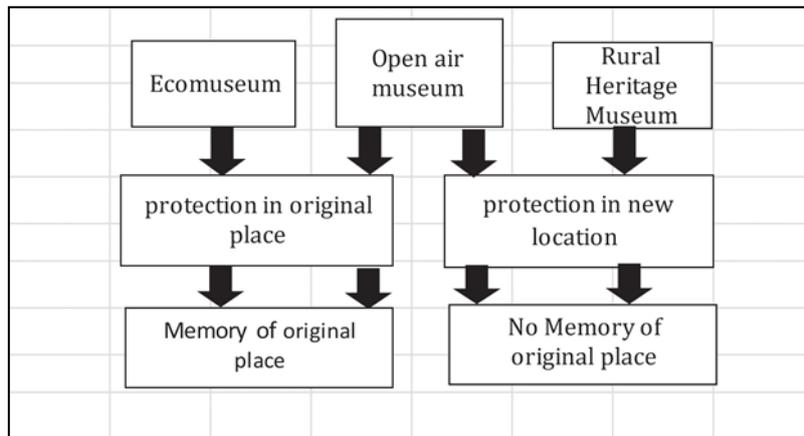


Fig 2. Comparison of the open-air museum, rural heritage museum and Eco-museum [30]

2. LOCATION OF THE STUDY

The Guilan rural heritage museum is located in an area equal to 260 acres in the Saravan forest park. It is 18 kilometer south of Rashton Tehran-Rasht road. This museum is the first eco-museum which has been created to introduce the history and culture and local lifestyle. Within this museum, the lives, works, housing, handicrafts and various spaces which is used by families living there has been reconstructed and is on display. The phase consisting of preliminary studies started in 2002. In May 2005, the first design workshop (for the cultural and architectural area of the Sepid rood's eastern plains) was held. So far, six residential complexes, including 14 structures related to Guilan's central plain cultural and architectural area has been reconstructed. Other complexes would start operating gradually. The second site of the museum includes a motel complex designed to feature Guilan's rural architecture.

The site has separate locations for traditional plays and games, breeding medicinal herbs and local trees, daily market, handicrafts workshop, tea gardens and rice fields, international rural architecture, children's playground, traditional cafés and restaurants, leisure camps and architecture and anthropology institute.

3. RESEARCH METHODOLOGY

Regarding the research goals this study is based on the integration of documentary and field study methods. Professional and expert reviews provide the basis of the data analysis and are the main source of data in this study. Thus, a qualitative method was applied. Qualitative methods are generally employed when there is need to identify variables that will later be tested quantitatively or when it is determined that quantitative measures cannot

adequately describe or interpret a situation. There are a range of qualitative data collection methods including unstructured, semi-structured to structured techniques. Owing to the exploratory nature of the present study, the grounded theory approach was employed. Moreover, DEMATEL, Delphi method and Shannon's entropy were combined and used in order to grade the executive exploratory approaches.

3.1. Delphi method

The Delphi methods is used in futuristic studies and includes a spectrum of quantitative to qualitative methods or a combination of both. One of the most popular and applicable methods in this field is the Delphi method. Delphi technique involves group of individuals or experts and is particularly beneficial for decision-making. The Delphi technique is a structured process designed to collect data during consecutive rounds and eventually leads to group consensus. One of the methods used for achieving group knowledge is the Delphi [34], which involves a process with anticipated structure and aids decision making through survey, data collection and group consensus stages [35]. While most of the surveys are making the effort to answer the question 'what is?' the Delphi would answer 'what it could be/what it should be?' [36]. This method was conducted for the first time by Darkley and Helmerd in 1950 for the Rand institute [37]. The needed reviews are collected in order to evaluate the beliefs and judgments of individuals and professional groups, without the necessity of people's presence in a particular place. This is done using multi-staged questionnaire and finding correlation among viewpoints. At the end of the data collection, valuing, and viewpoint collection analysis process, the basis would be set as a program or aid decision making. This advantage of this method is that it can create solutions for complex problems based on the correlation between independent, separate parts.

3.2. Dematel technique

This technique is one of the multi-criteria decision making methods based on couple comparison. The Dematel technique was adopted in order to extract the effective factors within the journalists' judgment system and determines the intensity of the relations' influence as a numerical score. This method is used for relation clarification, aids to create a cause and effect structure instead of a direct structure among factors.

3.3. Structuring factors using the dematel method

Problem solving is one of its uses among other applications of this technique. Divided factors based on cause and effect would help decision maker acknowledge the relation between variables. As a result, giving recognition to factors and the role they have in the counteractive influential flow. The Dematel method is

used for determining cause and effect relations in many other fields as well.

3.4. Using the Delphi method to identify challenges and executive approaches

The Delphi method was chosen by the researchers since it could provide an appropriate response to the research questions as mentioned before, the Delphi method is a qualitative methods which is used to achieve common consensus in a group. In practice, the Delphi method includes a series of questionnaires with a controlled response. Generally, the Delphi procedure comprises the following procedures:

At first, the research question is defined for the participants based on necessary features in the Delphi committee. Then the candidates are identified in this committee and are invited. This stage is concluded by determining the committee members.

The second stage of Delphi method is the Idea creation phase based on the research topic. At this stage, the committee members offer their ideas about the related factors to the research topic. The researcher extracts and analysis the data. In this stage, the members' opinion may need further inquiries and be used as predetermined factors.

The Delphi committee is formed by individuals who have the expertise and knowledge relevant to the research topic. The number of the members is usually in the range of 10 to 20. The Delphi committee of the present study consists of 15 individuals who are selected as by the non-probability sampling method and a combination of oriented or judgmental and chained methods.

3.5. Determining the cause and effect relation among the known challenges using the dematel Method

At this stage, the mutual interdependencies of the mentioned factors are determined using the Dematel method and the hierarchy of the factors are identified on the basis of the couple comparisons and journalists' judgment. Thus, the levels of direct influence and interactions of qualitative challenges will eventually lead to choose cause and effects in the challenges. In this study, decision making in uncertainty conditions would lead to proposing Dematel technique in a new situation. In a manner that according to the data interval nature, the Dematel method is proposed to facilitate the decision making in the uncertainty situation using language variables.

Dematel method steps

First step: Forming the expert group in order to gather group knowledge regarding solutions.

Second step: Determining the evaluation criteria and also designing the lingual scales: During this part, the factors and criteria were identified using experts' opinions.

The lingual scales being used in this method and the similar amounts are provided in Table 1. The phase numbers used in this study is of triangular phase type.

Table 1. Lingual terms and their associated phase numbers

Lingual terms	Definite equivalent	Triangular phase numbers
No effect	0	(0.25,0,0)
Very low effect	1	(0.5,0.25,0)
Low effect	2	(0.75,0.5,0.25)
High effect	3	(1,0.75,0.5)
Very high effect	4	(1,1,0.75)

Third step: Accumulating experts' opinion to create a phase matrix of primary direct relation.

In order to measure the relation among criteria, a square matrix is created for them and the experts are requested to compare them as couples, based on the rate of their influence. In this questionnaire, the experts will express their opinions according to Table 2. Assuming the number of n criteria and p experts, where each of them is similar to the opinions of each expert, together with the triangular phase numbers as its elements.

Fourth step: Normalizing the direct relation phase matrix.

Hence, the conversion of linear scale as the normalizing formula has been used in order to convert the criteria scales to comparable criteria.

$$\bar{a}_{ij} = \sum_{j=1}^n \bar{z}_{ij} = \left(\sum_{j=1}^n l_{ij}, \sum_{j=1}^n m_{ij}, \sum_{j=1}^n r_{ij} \right) \text{ and } r = \max_{1 \leq i \leq n} \left(\sum_{j=1}^n r_{ij} \right)$$

$$\bar{X} = \begin{bmatrix} \bar{X}_{11} & \bar{X}_{12} & \dots & \bar{X}_{1n} \\ \bar{X}_{21} & \bar{X}_{22} & \dots & \bar{X}_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ \bar{X}_{m1} & \bar{X}_{m2} & \dots & \bar{X}_{mn} \end{bmatrix} \text{ and } \bar{X}_{ij} = \frac{\bar{z}_{ij}}{r} = \left(\frac{l_{ij}}{r}, \frac{m_{ij}}{r}, \frac{r_{ij}}{r} \right)$$

Fifth step: calculating the general relation phase matrix. In this step, firstly the opposite normal matrix has been calculated and then it is subtracted from matrix I, finally multiplied by the normal matrix in the outcome matrix.

$$[l'_{ij}] = X_l \times (I - X_l)^{-1}$$

$$[m'_{ij}] = X_m \times (I - X_m)^{-1}$$

$$[r'_{ij}] = X_r \times (I - X_r)^{-1}$$

Sixth step: Creating and analyzing the cause diagram.

For this purpose, we calculated the collection of each row's elements (Di) and the collection of each column's elements (Ri). Then the amounts of D+R and D-R is simply calculated. These two amounts have to be non-phased as the absolute Dematel method to produce the cause diagram. This process requires CDCS method.

After inactivating the numbers, a Cartesian coordinate machine is drawn. In this machine, the longitudinal axis is showing D+R and the transverse axis is showing D-R.

Therefore, the longitudinal axis in the coordinate machine is the rate of influence and the desired factor in the system. In other words, the more this axis exists for each factor, the more that factor interacts with other factors in the system.

The transverse axis of the coordinate machine shows the influence power of each factor. Generally, if the amount for this factor is positive, it would be considered as a cause variable and if it is negative, it would be considered as an effect variable.

Weighing solutions was done with Shannon's entropy method Entropy is an important concept in social, physical and information theory sciences. When the data from a decision-making matrix is completely determined, entropy method could be used for evaluating the weigh. The idea behind this method is that the more distribution lies in amount of a criterion, the more important the criteria is. Entropy in the information theory is an uncertainty criterion which is described by the probability distribution P_i .

Measuring this uncertainty (E_i) is described by Shannon as follows:

$$E_i = S(P_1, P_2, \dots, P_n) = -k \sum_{i=1}^n [P_i - Ln p_i]$$

Equation 1: K is a stable amount and is used in order for the E_i to be between zero and one. E is calculated from the probability distribution P_i , based on statistical mechanism. E 's amount in case of equality of P_i with each other meaning would be the maximum possible which is calculated as follows:

$$-k \sum_{i=1}^n [P_i - Ln P_i] = -k \left\{ \frac{1}{n} Ln \frac{1}{n} + \frac{1}{n} Ln \frac{1}{n} + \dots + \frac{1}{n} Ln \frac{1}{n} \right\} = -k \left\{ Ln \frac{1}{n} \left(\frac{n}{n} \right) \right\} = -k \times Ln \frac{1}{n}$$

Equation2:

K is calculated as a stable amount as follows

$$k = \frac{1}{Ln(m)}$$

Equation 3: The decision-making matrix contains information and the entropy could be used as its criterion for evaluation. Assume that the decision-making matrix is as follows:

Table 2. Opinions of decision makers about criteria

Criterion	Individuals			
	C1	C2	...	CN
N1	a ₁₁	a ₁₂	...	a _{1n}
N2	a ₂₁	a ₂₂	...	a _{2n}
...		
N _M	a _{m1}	a _{m2}	...	a _{mn}
W _J	W ₁	W ₂	...	W _n

A_{ij}: is the (i) individual's opinion about the j criterion. Using this matrix, P_{ij} is calculated as follows:

$$P_{ij} = \frac{a_{ij}}{\sum_{i=1}^m a_{ij}}; \quad \forall_{i,j}$$

Equation 4: And the j entropy of (Ej) is calculated as follows:

$$E_j = -k \sum_{i=1}^m [P_{ij} \ln P_{ij}]; \quad \forall_j$$

Equation 5: The uncertainty or the deviation degree from the data collected for the j criterion asserts how much the related criterion has effective information for the decision maker. The amount of dj is calculated as follows:

$$d_j = 1 - E_j; \quad \forall_j$$

Equation 6: Then the weight amount of wj is calculated as follows:

$$w_j = \frac{d_j}{\sum_{j=1}^n d_j}; \quad \forall_j$$

Equation 7: If the decision maker has designated the certain weighting of λj for the j criterion, then the modified weight w'j is calculated as follows:

$$w'_j = \frac{\lambda_j w_j}{\sum_{j=1}^n \lambda_j w_j}; \quad \forall_j$$

Equation 8: In this project, the determined weighting is not designated beforehand therefore, the calculation of the moderated weights is cancelled.

4. RESEARCH FINDINGS

These are the agreed challenges, and the cause and effect relation of the challenges of the Rural heritage museum. Using the Delphi results and according to the consensus of the participating panel of experts, the most important difficulties of the rural heritage museum was identified. The experts arrived at a common consensus which represents 16 future difficulties of the rural heritage museum. The data is presented in the table below. Each difficulty is introduced with an associated symbol and having used the experts' opinion and DEMATEL phase model, the cause and effect relation of the rural heritage museum challenges is determined. Here, the couple comparison table of the challenges from the view point of the journalists is presented, briefly.

In the next stage, the importance of (D̃i+R̃i) and the relation between (D̃i-R̃i) criteria was determined. If D̃i-R̃i>0 the related criterion would be effective; and if D̃i-R̃i<0 the related criterion is effectible. Table 7 shows D̃i+R̃i and D̃i-R̃i. In other words, if the result is positive that factor belongs to the cause group and if the result is negative the factor belongs to effect group (Song & Cao, 2017).

Table 3. Consensus challenges from the experts' point of view

Number	Symbol	Title
1	C1	Lack of leisure and welfare equipment
2	C2	Inappropriate distribution of tourism through the year
3	C3	Lack of employed human resources' education
4	C4	Difficulties in assigning facilitations and loans
5	C5	Local investors' incognizant
6	C6	Increase in social crimes with entrance of tourists
7	C7	Laws and regulations
8	C8	Lack of hospitality supervision
9	C9	Lack of attention to ecotourism laws and principles
10	C10	Cultural difference among locals and tourists
11	C11	Lack of attention to sustainable tourism criteria in ecotourism resorts
12	C12	Incorrect policy and decision making in ecotourism field
13	C13	Lack of appropriate infrastructure
14	C14	Utilization of local investors
15	C15	Waste recycling management and devastation of environment
16	C16	Lack of integrated and efficient management of heritage museum

Table 4. Importance and effectivity of challenges (phase numbers)

Criteria	D̃i+R̃i	D̃i-R̃i
Criteria1	0.14, 2.89, 3.11	(2.26, 0.15, 2.56)
Criteria2	0.22, 2, 7	(1.77, -1.01, 1.34)
Criteria3	3, 6.89, 7.11	(2.92, -0.21, 2.18)
Criteria4	3, 6.89, 7.11	(4.44, 0.26, 2.02)
Criteria5	0.14, 0.13, 0.20	(2.10, 0.01, 2.11)
Criteria6	0.14, 0.20, 0.22	(2.38, 0.24, 2.09)
Criteria7	0.22, 0.23, 1	(1.89, -1.08, 1.32)
Criteria8	0.14, 0.22, 3	(2.36, 0.93, 2.68)
Criteria9	0.90, 1.12, 3	(4.93, -0.66, 1.42)
Criteria10	0.14, 1, 2	(2.31, 0.31, 2.68)
Criteria11	2, 3, 7	(2.03, -0.31, 1.93)
Criteria12	0.14, 2.89, 2.11	(1.98, -0.08, 2.80)
Criteria13	0.22, 2, 7	(3.21, -0.42, 2.27)
Criteria14	3, 6.89, 7.11	(1.82, 0.13, 2.20)
Criteria15	3, 6.89, 7.11	(2.89, 0.63, 2.22)
Criteria16	0.14, 0.13, 0.20	(2.27, 1.17, 3.93)

Table 5 the de-phased numbers of table 4.

Table 5. Importance and effectivity of challenges (absolute numbers)

Criteria	$(\tilde{D}_i + \tilde{R}_i)^{def}$	$(\tilde{D}_i - \tilde{R}_i)^{def}$
Criteria1	3.78	-0.08
Criteria2	3.35	-1.06
Criteria3	3.05	-0.34
Criteria4	4.51	0.37
Criteria5	5.24	-1.13
Criteria6	3.69	0.26
Criteria7	3.42	0.04
Criteria8	3.26	0.18
Criteria9	3.33	-0.81
Criteria10	3.19	0.65
Criteria11	4.04	-0.63
Criteria12	3.83	0.15
Criteria13	3.47	-0.55
Criteria14	2.09	0.27
Criteria15	4.34	0.78
Criteria16	3.41	1.43

Table 6. prioritizing challenges based on cause and effect relations

Criteria	$(\tilde{D}_i + \tilde{R}_i)^{def}$	$(\tilde{D}_i - \tilde{R}_i)^{def}$
Criteria1	3.78	-0.08
Criteria2	3.35	-1.06
Criteria3	3.05	-0.34
Criteria4	4.51	0.37
Criteria5	5.24	-1.13
Criteria6	3.69	0.26
Criteria7	3.42	0.04
Criteria8	3.26	0.18
Criteria9	3.33	-0.81
Criteria10	3.19	0.65
Criteria11	4.04	-0.63
Criteria12	3.83	0.15
Criteria13	3.47	-0.55
Criteria14	2.09	0.27
Criteria15	4.34	0.78
Criteria16	3.41	1.43

The causal relations among factors utilizing the DEMATEL phase method among the 16 known challenges have been put in the causal challenges group and are among the absolutely effective challenges which are as follows: unintegrated and efficient management of heritage museum (1.43), waste recycling management and natural inhabitant destruction (0.78), cultural difference among tourists and local inhabitants (0.65), hardship in assigning facilitations and bank loans (0.37), utilization of

nonlocal investors (0.27), increase in social crimes and criminal acts with entrance of tourists (0.26), lack of hospitality supervision (0.18), incorrect decisions and policy makings in the ecotourism field (0.15), and regulations (0.04).

The final results indicate that the following factors are considered in the effect group and are absolutely from the effectible challenges: lack of leisure and welfare equipment (-0.08), lack of employed human resources' education (-0.34), lack of appropriate infrastructures (-0.55), lack of attention to sustainable tourism criteria in ecotourism resorts (-0.63), lack of ecotourism regulation consideration (-0.81), inappropriate distribution of tourists in different seasons (-1.06), and local investors' lack of knowledge (-1.13).

The results from the table and diagram shows that the lack of integrated and efficient management of heritage museum (C16) has the highest figure. This indicates that this challenge is the most significant challenge. It could be said that it is a fundamental issue which underlies the challenges.

As the value of D-R of influential challenges rises, its inclusion domain would increase and appropriate management would mean better, more control over other challenges. This means that the concluded grading is an appropriate guide for tourism planning and tourism heritage museum challenges which designates the effective challenges with higher scores.

4.1. Strategies with Entropy

Eventually, using the Delphi results and on the basis of the consensus of the panel of experts who participated in the study the most important strategies regarding the difficulties the rural heritage museum would face were identified. Each strategy is introduced with a symbol and is then weighed using experts' opinions and Shannon's entropy weighing model. The experts have reached consensus on 10 strategies in order to solve rural heritage museum issues which are represented in the table below.

Table 8 show the final weighting of strategies using Shannon's entropy. As the final results show, the strategies S4, S9 and S10 have the most importance from the experts' viewpoint. The six main strategies based on professional's viewpoint are, efficient and integrated planning and management establishment and planning with local people's participation, conducting strategic plan of the rural heritage museum, conducting general tourism plan with tourism development approaches, creating limitations for expanding anomalies and the necessity of project evaluation before execution by experts. e. The purpose of these programs and strategies can also influence other ecotourism resorts throughout the country in terms of rural employment, return of immigrants to the desert rural areas, preserving the environment, revival of the local customs and traditions and finally, preserving the tangible and intangible legacy of the country.

Table 7. Consensus strategies from experts' viewpoints

Row	Strategies	Symbol
1	Limitations for polluting companies	S1
2	Conducting and designing construction patter according to local identity and features	S2
3	Organizing and improving tourism service providing	S3
4	Efficient and integrated management establishment and planning	S4
5	Necessity of project evaluation prior execution by experts	S5
6	Planning with local people's participation	S6
7	Conducting survey plans with environment perseverance approach	S7
8	Creating limitations for anomaly expansion	S8
9	Conducting a general tourism plan with tourism development approaches	S9
10	Conducting strategic plan for the rural heritage museum	S10

Table 8. Final weightings of consensus strategies from the experts' viewpoints

Row	Strategies	Entropy amount	Unreliability amount	Strategy weight	Grade
1	Efficient and integrated management establishment and planning	0.887	0.023	0.149	1
2	Planning with local people's participation	0.89	0.02	0.155	3
3	Conducting strategic plan for the rural heritage museum	0.981	0.01	0.114	4
4	Conducting a general tourism plan with tourism development approaches	0.981	0.01	0.099	5
5	Creating limitations for anomaly expansion	0.897	0.009	0.096	7
6	Necessity of project evaluation prior execution by experts	0.897	0.002	0.045	10
7	Conducting survey plans with environment perseverance approach	0.897	0.004	0.042	11
8	Limitations for polluting companies	0.898	0.003	0.033	13
9	Conducting and designing construction patter according to local identity and features	0.899	0.002	0.025	14
10	Organizing and improving tourism service providing	0.989	0.002	0.009	15

5. DISCUSSION And CONCLUSION

Environmental tourism is one option among the variety of choices available which is a combination of resources and services. The resources sustain the primary attraction which the destination has for tourists while the services are offered to make the visits possible or extend it, since tourism is one of the pioneering and growing sectors in the international economies. Therefore, services have an important role in economic activities. Urbanization, automation and problems and difficulties which arise from them have led people to opt for natural, local spaces which is adapted to its authentic culture and geography. Most villages especially the ones with various landscapes witness the presence of tourists in the weekends and holidays. The tours tend to spend their time in these peaceful atmospheres which is closer to human nature away from the cacophony of the urban life. The presence of tourists in these types of villages is a unique opportunity to raise the resorts' service level and to facilitate development, also build a more stable economy via tourism; of course, management is a key issue here since the aim is to prevent harm to the environment and to maintain sustainable growth simultaneously. In the present study, the challenges

and strategies related to Guilan rural heritage museum have been evaluated and judged, the results are as follows; the lack of unintegrated and efficient management of heritage museum (1.43), waste recycling management and natural inhabitant destruction (0.78), the cultural difference among tourists and local inhabitants (0.65), hardship in assigning facilitations and bank loans (0.37), utilization of nonlocal investors (0.27), increase in social crimes and criminal acts with the entrance of tourists (0.26), lack of hospitality supervision (0.18), incorrect decisions and policy makings in the ecotourism field (0.15), and regulations (0.04) are considered in the causal group and are definitely among the significant challenges. The final results indicate that the following factors are considered in the effect group and are part of the absolutely effectible challenges: lack of leisure and welfare equipment (-0.08), lack of employed human resources' education (-0.34), lack of appropriate infrastructures (-0.55), lack of attention to sustainable tourism criteria in ecotourism resorts (-0.63), lack of ecotourism regulation consideration (-0.81), inappropriate distribution of tourists in different seasons (-1.06), and local investors' lack of knowledge (-1.13). The strategies are as follows: Efficient and integrated planning and management

establishment and planning with local people's participation, conducting strategic plan of the rural heritage museum, conducting general tourism plan with tourism development approaches, creating limitations for expanding anomalies and the necessity of project evaluation before execution by experts. The mentioned strategies are the six main strategies according experts' and professionals' viewpoints. The findings of this study are in line with the findings of Pedram et al, 2018 and Pawlikowska-Piechotka et al, 2015, Jung, 2010 [38], in the importance of rural museums in the development of rural areas.

REFERENCES

- [1] Ashrafzade MR, Madadi H, Khademi N, Bonyadi S. Evaluation of the Effects of Tyranny on Coastal Tourism Projects (Case Study: Persian Gulf International Tourism City), *Environmental Research*, (In Persian), 2010, No. 1, Vol. 1. pp 83-92.
- [2] Lin M, Li FY, Zhou H. A Research on the Combination of Oblique Photography and Mobile Applications Based on the Sustainable Development of Tourism, *Sustainability*, 2020, No. 12. 3501. pp. 1-19.
- [3] Hasanpour M, Ahmadi Z, Eliasi H. Determination of Tourism Reception Capacity in Desert Areas of Iran Case Study of Shahdad Maranjab - Rig and Mesr Seaport – Farahzad, *Journal of Tourism Studies*, (In Persian), 2010, No. 14. pp 177-197.
- [4] Ko, James T.G., *Assessing Progress of Tourism Sustainability*, *Annals of Tourism Research*, Vol. 28, No. 3. pp. 817–820.
- [5] Kazemi M. Analysis of Zahedan Citizens' Perceptions in Chabahar Tourism Development, *Journal of Geography and Development*, (In Persian), 2008, No. 6, Vol. 12. pp 81-99.
- [6] Mohan S, Selvaraj SN, Muruganandam S. A STUDY ON ROLE OF RURAL TOURISM FOR SUSTAINABLE DEVELOPMENT IN RURAL AREAS WITH REFERENCE TO COIMBATORE DISTRICT, 2020, No. 7, Vol. 31. pp 149-158.
- [7] UNWTO (2013) Why tourism? from <https://www.unwto.org/doi/pdf/10.18111/9789284416110>
- [8] Hudson S, Yazd R.M. The impact of brand class, brand awareness and price on two important consumer behavior factors; customer value and behavioral intentions, *African Journal of Business Management*, 2015, No. 17, Vol. 4. pp 3775-3784.
- [9] Truong T, King B. An evaluation of satisfaction levels among Chinese tourists in Vietnam. *International Journal of Tourism Research*, 2009, No. 11. pp 521-535.
- [10] Vetitnev, A. Factors affecting domestic tourists' destination satisfaction: the case of Russia resorts. *World applied sciences journal*, 2013, No. 22, pp1162-1173.
- [11] Butnaru G, Miller A. Conceptual approaches on quality and theory of tourism services. *Procedia Economics and Finance*, 2012, No. 3, pp 375-380.
- [12] Nowacki M. Quality of visitor attractions, satisfaction, benefits and behavioral intentions of visitors: verification of a model. *International Journal of Tourism Research*, 2017, No. 11. pp 297-309.
- [13] Schofield P, Thompson K. Visitor motivation, satisfaction and behavioural intention: the 2005 Naadam Festival, Ulaanbaatar. *International Journal of Tourism Research*, 2016, No. 9. Pp 329-344.
- [14] Craggs R, Schofield P. The Quays in SALFORD: an analysis of visitor perceptions, satisfaction and behavioral intention. *International Journal of Tourism Research*, 2011, No. 13. pp 583-599.
- [15] Aregu, B. T. Historical Survey of Tourism Industry in Ethiopia and its Potential for Economic Development: The Case of Lake Tana Region. *International Journal of Business and Management*, 2016, No. 4, Vol. 2. pp 421–428.
- [16] Carr C, Ruhanen L, Whitford, M. Indigenous peoples and tourism: the challenges and opportunities for sustainable tourism, *Journal of Sustainable Tourism*, 2016, No. 24, Vol. 8-9. pp 1067-1079.
- [17] Grapentin S, Ayikoru M. Destination Assessment and Certification: Challenges and Opportunities, *Sustainability*, 2018, No. 11. 3691. pp. 1-24.
- [18] UNEP, Division of Technology, Making tourism more sustainable: A guide for policy makers. World Tourism Organization Publications, 2005.
- [19] UNWTO, 2018. Sustainable Tourism for Development Guidebook. <http://cf.cdn.unwto.org/sites/all/files/docpdf/devcoengfinal.pdf> accessed 07/05/2018
- [20] Tesfaye, A. An Appraisal on the Church Museums of Addis Ababa as Tourist Attractions, *Applied and Computational Mathematics*, 2019, Vol. 8, No. 1. pp. 17-24.
- [21] Hawkins, D. E., (2004). A protected areas ecotourism competitive cluster approach to catalyse biodiversity conservation and economic growth in Bulgaria, *Journal of Sustainable Tourism*, Vol 12, No 3, Pp 219-244.
- [22] Buckley R. 2009, *Ecotourism: Principles and practices*, CABI, Tourism Text, 1st Ed, 368, <https://books.google.com/books?id=qRzHnJgEiBEC>.
- [23] Epler Wood M. *Ecotourism: Principles, Practices & Policies for Sustainability*, 2002, United nation publication.
- [24] Su J, Amer M, Liu X. Rural Heritage - Landscapes and Beyond, Panel 5 Rural Intangible Cultural Heritage. 2019. / *PATRIMOINE RURAL: Paysages et au-delà*. 25.
- [25] Mthethwa N, Taylor S, Tefera O. The involvement, perceptions and challenges of the community in rural tourism development: A case of the Isithumba Village in eThekweni. *Journal of Hospitality, Tourism and Leisure*, 2020, No. 2, Vol. 9. pp 1-17.
- [26] Chambers R. *Rural development: Putting the last first*, 2019, New York, Routledge.
- [27] Scheyvens R, Biddulph R. Inclusive tourism development. *Tourism Geographies*, 2018, No. 20, Vol. 4. pp 589-609.
- [28] Ezeuduji I.O. Change management for sub-Saharan Africa's rural tourism development. *Current Issues in Tourism*, 2017, No. 20, Vol. 9. pp 946-959.

- [29] Ying L. Museum Collection Re-defined: A Case Study of TOGO Rural Art Museum, Taiwan. *Muzeológia a kultúrne dedičstvo*, 2019, No. 1, pp 75-82.
- [30] Pedram B, Emami M.A, Khakban M. Role of the Open-Air Museum in the Conservation of the Rural Architectural Heritage. *CONSERVATION SCIENCE IN CULTURAL HERITAGE*, 2018, Vol. 18, pp 101-120.
- [31] Pawlikowska-Piechotka A, Łukasik N, Ostrowska-Tryzno A, Sawicka K. The rural open air museums: visitors, community and place. *European Countryside*, 2015, No. 4, pp 195-214.
- [32] Dallen J. T, Stephen W. B. *Heritage Tourism*. 2003, London: Prentice Hall.
- [33] Munsters W, Freund de Klumbis D. Culture as a component of a hospitality product, *International Cultural Tourism*, 2006, London: Elsevier.
- [34] Imani Jajromi H. Introduction to the Delphi Method and its Application in Decision Making. *Urban Management Quarterly*, (In Persian), 2000, No. 1. pp. 9-35.
- [35] Kennedy HP. Enhancing Delphi research: methods and results. *J Adv Nurs* 2004, No. 45, Vol. 5. pp 504-511.
- [36] Powell C. The Delphi technique: myths and realities. *J Adv Nurs*, 2003, No. 41, Vol. 4. pp 376-382.
- [37] Fathi Vajarehghah K. *Training Needs Assessment, Patterns and Techniques*, 2002, Aiiig, Tehran.
- [38] Jung A. New initiatives in The Netherlands Open Air Museum: How an early open air museum keeps up with the times. *Acta Ethnographica Hungarica*, 2010, No. 2, Vol. 55. Pp 333-356.

AUTHOR (S) BIOSKETCHES

Z. Bakhtiari Moghaddam Ziabari., *Department of Architecture, Pardis Branch, Islamic Azad University, Pardis, Iran*

Email: samar9.bakhtiary@gmail.com

H. Kamran Kasmaei., *Assistant Professor, Department of Art & Architecture, Pardis Branch, Islamic Azad University, Pardis, Iran*

Email: hadiskamran@pardisiau.ac.ir

COPYRIGHTS

Copyright for this article is retained by the author(s), with publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>).

HOW TO CITE THIS ARTICLE

Bakhtiari Moghaddam Ziabari, Z., Kamran Kasmaei. H, (2020). Barriers to the Development of Ecotourism Resorts Tourism in Saravan Rural Heritage Museum, Iran. *Int. J. Architect. Eng. Urban Plan*, 30(1): 87-96, <https://doi.org/10.22068/ijaup.30.1.87>.

URL: <http://ijaup.iust.ac.ir>

