

An analysis on prioritizing tourism capacities of rural regions of Izeh city using TOPSIS model, Iran

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Abstract: Rural tourism is a new tendency toward the industry of tourism. That has been brought forth since 50 s. nowadays, rural tourism as a strategy can undertake an effective role in developing and diversifying regional economy by proper scientific panning and identifying the potential and limitations of rural tourism. With this perspective, the obvious role of tourism in "Izeh" rural regions can be a movement toward regional balance. However, what is important in this social and economic movement procedure is the investment in places with touristic advantages. But it will not be achieved unless a proper selection is made among touristic regions so that the ground for progress of the whole area is prepared .in this procedure, use of techniques and models of prioritization is necessary. Present article, by laying the question, which one of studied rural regions is advantageous on ranking the potential priorities of tourism, tries to find a scientific answer, using analytical –descriptive method and TOPSIS model. The results show that among four sample villages of tourism (koolfarah, Shivand, Soosan and Noorabad villages), koolfarah with 0.895 coefficient possesses the highest rank and Noorabad with 0.427 coefficient possesses the last rank in investment.

Keywords: Tourism, Rural tourism, "Izeh" city, Prioritization, TOPSIS technique.

I. Introduction

Tourism is a franis term, originated from "tour" meaning "rotational movement", "the act of passing", "passing the environment", "to travel" and "walking". According to "pearlarous", tourism is to travel for enjoyment and tourism is to travel for enjoyment and tourist is a person who travels for enjoyment and satisfaction (Mahallati, 2001:2) for the first time in 1811, the term of tourism appeared sporting magazine that implied the travel in order to visit historic places and natural landscapes (Mahdavi, 2004:11), since 1970 s, studies on industry of tourism in their modern concept have gained a certain status among other academic sciences. Nowadays tourism is one of the most promising activities, that is considered as a transition to development (Zarabi, Islamiparikhani, 2011:2).21th century is the century of utilizing valuable trade oppurtunities in service sector, especially the tourism (Bahrami, 2000:2) nowadays, development of tourism in all domains whether at regional and national or at international levels is under consideration of public planers and private institutes. Many countries have realized that for improving their economic situation, they should take an initiative and try to find new ways. Awareness or the face that tourism is a remarkable resource of currency in come for economy has caused that tourism finds a wide concept in different economic, social and cultural dimensions and it is considered as an industry. Many countries know this dynamic industry as main resource of revenue, occupation, private sector growth and infrastructural development it is worthy to note that tourism is always considered as an important factor for economic development (Tayyebi, Babaki, Jabbari, 2007:2). Consequently, development of tourism should be investigated as a strategy from different economic, social, ecologic and foundational aspects. During recent 60 years tourism has grown continually and become one of economic sectors with a high growing rate in the world. During 1950 to 2005 international tourism increased by a rate of 6.5% from 25 million tourists to 806 million. Based in predications made by world tourism organization of united nations (NNWTO) the number of tourists of world will reaches 1.5 billion by 2020 (2006).

II. Theoretical bases

Tourism involves a set of activities tourists do in a period due to professional or personal reasons out of their working and living places (Smid, s and Zwart, 2002:23) WTO knows the tourism as a set of works a personal does in travel out of their residential place and it is not considered, more than a year, and its aim is enjoyment, entertainment, rest, sport and so kind activities. Industry of tourism is an integration of different activities which are carried out as a chain in order to serve the tourist. So tourism involves all phenomena and relations resulted from tourist's interaction with providers and sellers of touristic products, governments, and communities which are the hosts in the processes of attraction and welcoming the tourists (Mcintosh, 1995:9). In recent years due to different reasons of development (economic , social and ecologic) following the acceptance of this introducing, tourism has been considered as a tool for increasing the development of regions , economically and socially deprived (Pilar, Teresa, 2005:951), it has been increasing at international level regarding the number of tourists and revenue of currency (Pigozi B. and sambrook,2005:45). According to world tourism organizations statistical report, four occupational opportunities are created per a tourist who inters the region (WTO, 1999). The number of tourists is growing rapidly. Based on WTO reports, France with 75 million tourists and America with anemone about 74.5 billion \$ are standing at top position in Tourism. Among Mediterranean countries, turkey has been record bearer in recent four years (Goosling, 2004:45). Tourism is one of global streams which properly indicate integration of economic social and

cultural affairs (Holjeva, 2003:132). Tourism is a tendency to use the space in free time with different objectives and motives.

Tourism is a generality, involving a stream of capital, human and culture and interaction of them that leaves different effects in geographical spaces. Creation of wealth and occupation for local residents in delivering space for tourists use (Briedenhann, 2004:7). Emphasis on economic terms in geographic spaces for development and welfare of local residents substrates the tourism. To make the tourism a global issue necessitates macroeconomic policies at global level (Sugiyatro, 2003:683-684). The term of rural tourism has progressed since 1950s. And since 1960s and 1970s, economy of rural tourism for agricultures and local communities has been more considered. Until now, with presenting different strategies, the planners and experts have taken wide measures in attracting tourists and development touristic activities (Bahrami, 2010:3). World tourism organization as international foundation for tourism has realized the importance of rural tourism and held many seminars in Europe on analyzing the present and future condition recently. Rural tourism in fact includes various types such as green tourism, agricultural tourism, advantural tourism sport tourism and cultural tourism. This different typology causes difficulty in presenting a certain introduction of rural tourism (Rosa, Pabi, Andlibia, 2007:951). However, by accepting the introduction issued by WTO, it can be said that rural tourism beside activities like agriculture has had a proper effect and provided the villagers with important secondary income (Wilson et al, 2001:132). Generally, rural tourism is important from two aspects, first one as a wide global activity and the second as an emphasis on development of local and regional policy (Ahmadi, 2001:2260).

In 1986 European Union committee introduced rural tourism as follows: rural tourism does not include only agricultural tourism but it includes all touristic activities in rural regions (Mahdavi, 2004:18). Based on definition of Dot, rural tourism is everything that attracts the tourists toward surrounding areas of mother city (Knowd, 2001:90)

Rural tourism is referred to all services and activities which are performed by agricultures, people and government for tourist's entertainment and relaxation and also tourist's attraction to rural areas.

It can involve agricultural tourism, farm tourism natural and cultural tourism (Mahdavi, 2004:18).

With respect to what was said, it can be stated that rural tourism is a new term in rural development literature that like development, has various dimensions and effects. Therefore, development of rural tourism is appropriate to a share it reforming the villages socially and economically (Munshizadeh and Nasiri, 2001:36). With respect to mentioned definitions, it can be said that rural tourism, by providing new opportunities for many villages, not only gives new life to villages but also develops these areas and survives these residential (Eftekhari, Mahdavi, 2005:8).

In the last decade of 20th century, many economic- social planners in European countries defined the tourism as a confidential method with rightful perspective for development of villages especially the most deprived of them (Efteghari, 2002:32).

Studies in France, Austria, Swiss, England, inland, Toyland and Japan show that rural tourism grows rapidly in rural economy and it is complement to agricultural activities. The nature of tourism industry is creation of job and revenue, diversification of economy, social participation and use of local resources. Since a good deal of problems, depravedness and development is related to the lake of this industry, rural tourism, by solving those problems and constraints can lead to rural development (Papoliyazdi and Safaie, 2006:32). So development of tourism in rural areas can have an important role in diversification of economy of rural communities and can provide the ground for sustainable development on one hand it is a tool for motivating the growth of national economy through coping on envelopment perceptions and improving local people life standard.

On other hand, non-planned development causes social-environmental damages in rural residential. Therefore, with respect to environmental conditions, either a certain kind or combination of strategies should be utilized for development of rural regions.

III. Methodology

Success and sustainability of tourism depends on proper selection of touristic regions, considering capabilities and potential through preparing effective indexes in prioritization. According, present article tries to prioritize rural touristic region, using TOPSIS method, in order to select correctly touristic sample regions, improvised investment and realization of the aims of rural development of studied region. This research is a field study with descriptive-analytical method. To prioritize touristic capacities of rural regions of "Izeh", multi-variable mathematical planning and TOPSIS model were used. Multi-variable planning includes a wide range of mathematical techniques, different methods of which are used based on the aims of study. It involves two main groups of multi-aims planning and multi-variable planning. With respect to different indices related to prioritization of touristic capacities of rural regions, TOPSIS method was used in this research which is a sub-set of MADM.

1.1. Geographical location Izeh city

Izeh, whit on area about 3863 km² on eastern north of Khuzestan province is located between latitudes of 49°-45', 50° eastern and latitudes of 31°,45'-32° northern, mean altitude of plain is 830 m° Izeh has the coldest climate in in the province. It possesses different touristic potential, including 48 national recorded places, most of which are located in rural regions.



Figure I: the region of study (“Izeh”)

1.2. TOPSIS model

TOPSIS as a multi-variable decision making method is a simple but effective in prioritization. This method, for the first time in 1981 was set forth by chin and Howang, referring to Howang and yons book (Seraphim opriciuic, 2006: 665). TOPSIS technique belongs to compensative models (These models are important in exchange between indices) and adaptive sub- group - it is a preferred option which is the closest option to ideal solution. TOPSIS algorithm is a powerful compensative multi-indices decision making for prioritizing the options through simulation to ideal answer. In This method selected option should have the closest distance to ideal answer and the most remote distance to the most ineffective answer (SHayan, 2000:3).

The most important advantage of this method is that subjective and objective criteria and indices can be used simultaneously (Jhon, 1988:2).however, it is suggested that TOPSIS method should be used when the number of indices and available information is limited (Naumann, 1998:8). In utilizing this method, the following steps are implemented (Asgharpoor, 2008: 270-213).

IV. Discussions

Step1) formation of data matrix or decision matrix based on alternative n and index k.

$$A_{ij} = \begin{matrix} x_1 \\ x_2 \\ \vdots \\ x_n \end{matrix} \begin{pmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \vdots & \vdots & \vdots & \vdots \\ a_{m1} & a_{m2} & \dots & a_{mn} \end{pmatrix}$$

W	40%	25%	15%	20%
The region of Tourism	historical cultural	geopolitics forms	number of natural	welfare facilities
soosan	60	6	4	50
village- shivand	70	5	3	60
village- noorabad	75	3	2	70
village- koolfarah	55	4	2	60

step2) in step 2, decision or data matrixes are normalized, and then standard matrix is formed. The formula for normalization is as follows:

$$r_{ij} = \frac{a_{ij}}{\sqrt{\sum_{k=1}^n a_{kj}^2}}$$

0.4052	0.5962	0.6469	0.4581
0.5267	0.4472	0.5391	0.5345
0.5673	0.2981	0.3234	0.5727
0.4862	0.5962	0.4313	0.4199

step3) Based on expertise approaches, theoretic facts and other methods as well as the importance of each criterion, the weight of each index is gained.

$$V_{ij} = \begin{pmatrix} w_1 r_{11} & w_2 r_{12} & \dots & w_n r_{1n} \\ w_1 r_{21} & w_2 r_{22} & \dots & w_n r_{2n} \\ \vdots & \vdots & \vdots & \vdots \\ w_1 r_{m1} & w_2 r_{m2} & \dots & w_n r_{mn} \end{pmatrix}$$

$w_1 = 20\% \quad w_2 = 15\% \quad w_3 = 25\% \quad w_4 = 40\%$

0.4052	0.5962	0.6469	0.
0.5267	0.4472	0.5391	0.
0.5673	0.2981	0.3234	0.
0.4862	0.5962	0.4313	0.

step4) determination of distance of I alternative from ideal alternative, saying determining the highest performance of each index, which is shown by (A^+) , and it is given by:

$$A^* = \left\{ (\max_i v_{ij} | j \in J), (\min_i v_{ij} | j \in J') \right\} \rightarrow A^* = \{v_1^*, v_2^*, \dots, v_n^*\}$$

$A + \{./1134 \quad -./0894 \quad -./1617 \quad -./2290\}$

Step5) determination of the lowest performance .by the following equation:

$$A^- = \left\{ (\min_i v_{ij} | j \in J), (\max_i v_{ij} | j \in J') \right\} \rightarrow A^- = \{v_1^-, v_2^-, \dots, v_n^-\}$$

$A - \{./0810 \quad -./0447 \quad -./0808 \quad -./1679\}$

Step6) determination of distance criterion for maximum and minimum alternative: calculation formula is as follows:

$$S_i = \sqrt{\sum (v_{ij} - v_{jt})^2}$$

V. Ideal alternative

$$./0924 S_i^+ = ./0830 = ./0390 S_i^3 = ./0561 S_i^2 = S_i^1$$

$$./0936 S_i^2 = ./0781 S_i^3 = ./0691 S_i^4 = ./714 = S_i^1$$

Step7) In this step, the equal coefficient is gained from dividing the minimum alternative in to (minimum alternative+ maximum alternative). In other words, relative closeness A: in ratio to A^* is calculated. Its equation is as follows:

$$C_i^* = \frac{S_i^-}{S_i^- + S_i^*}$$

Soosan village = $\frac{./0936}{./0936 + ./0561} = \frac{./0936}{0/1497} = 0/625$
0/666shivand village = $\frac{./0781}{./0781 + ./0390} = \frac{./0781}{0/1117} =$
Noorabad village = $\frac{./0691}{./0691 + ./0924} = \frac{./0691}{0/1615} = 0/427$
Koolfarah village = $\frac{./714}{./714 + ./0830} = \frac{./714}{0/797} = 0/895$

Estimated indices of four touristic places in Izeh, using TOPSIS model show that koolfarah village with 0.427 score is ranked top which is followed by Noorabad with 0.666 and shivand with 0.895 in attracting tourists based on TOPSIS model.

Hist of Touristic	Priority
koolfarah Village	1

shivand Village	2
nooraload Village	3
negarandegan Village	4

VI. Conclusion

The industry of tourism, as ultra-sector industry involves different activities. It has an interaction with all economic, social and cultural sectors directly or indirectly. Consequently, one of the fundamental factors in creating evolution and alteration in the county's tourism sector is comprehensive study of positive and negative effects and consequents and regional insight into its development.

It means that tourism should be planned in the mould of systematic procedure for development and flourish merlot. Rural tourism in development rural local communities in "Izehh" results in independence and empowerment of region economy, flourishing of handicrafts, increase of life quality, and solution of joblessness problem. Analysis of tourism effects and consequents in rural regions of "Izehh" shows that positive aspects related to tourism have shown their effects and have been followed by desirable consequents including the role of huckster's business in increasing villagers in come, flour is hment of gardening, improvement of cultural , reduction of villagers migration to cities , flourish meant of handicrafts market like shoe weaving , consider elation to traditions and customs in holding nations and religious festivals . At mean time, the limitations before the development of this industry are: lake of province authorities attention to revenue creating role of this in destroy, in sufficient bud yet in developmental part, weakness of in frasrctures of residential services and communicational routs nut work and so on.

One of the methods of multi- criterion decision making is mentioned in this article multi-criterion decision-making method addresses the issues that transit from various and even conflicting criteria. In fact, decision – making is selection process of being single optional among existing options. By in trod using the weights, implementation of TOPSIS a logarithm is dealt with, while the logarithm prioritizes dif ferment regions with respect to cts' work base. The results of study show that TOPSISa logarithm is a powerful decision – making techniqeal for prioritizing of options through simulating to ideal answer.

It is obvious that regarding developmental in dices (economic, social and ecological) and temporal cap acuity measurement, investment in a touristic region results in desirable consequents and provides the ground for total development, but it is not possible an less scientific methods are used in prioritization so that a proper selection among touristic sequins is made . As previously mentioned that concrete identification of regions potentials and capacities and their prioritization are necessary for proper selection of sample regions in order to correct incest and to realize rural development. Accordingly, four villages with touristic attraction in "Izeh" were selected and prioritization method of TOPSIS was carried out. Based on arising question and precise planning of touristic development in this region, four induces of cultural social attractions, geotouristic forms, number of natural landscapes and well-fare utilities were used as main criterion of measuring prioritization of rural touristic capacities, in "Izeh". Based on TOPSIS method, prioritization of mentioned villages is defined as follows. Koofarah village was identified as first priority while Noorabad village was known as last priority. By utilizing TOPSIS method in villages with touristic attractions, it was known that koofarah village has the highest chance in attracting tourist and investment. It is necessary that authorities should pay attention to investment and creation of proper infrastructures with respect to insufficient budget assigned to this field, and by sufficient and timely investment, should provide the ground for attracting tourists. the results of research show that "Izeh" com host a lot of national and international tourists , due to existence of touristic attractions and cultural values, by investing in which sustainable development is possible, under in flounce of tourist attractions in "Izeh" city.

In other words, if needed infra- structures for using these attractions are provided, occupation and income achievement for residents will be possible.

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