

Effect of rural tourism on rural sustainable development in Pakdasht County via eigenvector techniques and SWOT model

Masoume Pazoki*

*Assistant Prof. of Geography & Rural Planning,
Payam-e-Noor University, Semnan, Iran*

Mokhtar Yourdkhani

*Assistant Prof. of Geography & Rural Planning,
Payam-e-Noor University, Semnan, Iran*

Abstract

Rural tourism scenario provides a wide range of possibilities and opportunities that saved the village from social issues, economic and environmental entails. Strategic opportunity of rural tourism development makes diversity of local economy and with job creation which is based on potential of village, causes an increasing level of prosperity, living standards, income and security and after that will cause maintainability of the village population, balancing ecological and cultural character of the village. Rural tourism in pakdasht is based on Cultivation of cut flowers and ornamental plants and eco-tourism and adventure tourism too which are combining the very remarkable purposes of pleasurable travel and even has been considered as a potentially link between layers of the Ecological and economic activity. In the first step we analyzed different types of rural tourism that products diversifications influence on development possibilities of studied rural areas. We analyzed the influence of different factors (environmental stability, spatial -local Favorable development of rural areas, economic stability) by Eigenvector Technique. The gained results show that the integration of transition process has occurred in the fourth transfer and the environmental stability parameter has the most importance with weight of 0.491387 and in the second step this article is an attempt to assess and review strategic approach to rural tourism based on model "SWOT", to explain the role of tourism in rural development. The findings of the study revealed the fact that With regard to the effects of rural tourism on sustainable rural development, Revisions and provision of appropriate policies are needed in order to Take advantage of the strengths and opportunities and reduce the weaknesses and threats via Aggressive Strategy.

Keywords: *ruural tourism, eigenvector techniques, Pakdasht County, SWOT model*

*Corresponding author: masomepazoki@yahoo.com

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Introduction

Sustainable development in rural areas is the application of ecological education in economic processes in order to Establishment Intergenerational justice, When sustainable development in rural areas is realized that the exact balance between the requirements of today and tomorrow needs to be established and it is possible via Link between layers of ecological and economic activities in the countryside Economic and ecological layers overlap with social and cultural layers.

If the sketching of economic, finance, trade, energy, agriculture and industry policies be in a manner that afford economic, social and ecological sustainable development then it can be caused a balance between development and environment. This is the kind of development have four dimensions: sustainability of natural resources, political stability, social stability and economic sustainability. Accordingly, we can say that sustainable development has four main directions: nature, economy, society and welfare (Atkisson & Hatcher, 2001: 5). Hence it can be argued that rural tourism can be brought prosperity and economy to rural population by job creation, exchange technology, income generation and environment stability that is maximizing of benefits, market expansion and minimizing of costs and the ultimate goal of environmental development is providing resources bearing capacity, resource conservation, resource recovery and waste reduction (Rodrigue, 2009: 2). Rural tourism can lead to stable of environment that is one of the four main directions of sustainable development. Since, the conservation and preservation of resources with Approach of sustainable welfare, Efficiency of the processes of change and Equality of present and future generations In order to favorable exploit of capital reserves can be considered as central and main core of sustainable development (EC, 2001: 5). In this study, the issue of how rural sustainable development can be affected by rural tourism. The main objective of this study is Identification of strategies and methods for rural sustainable development.

Material and methods

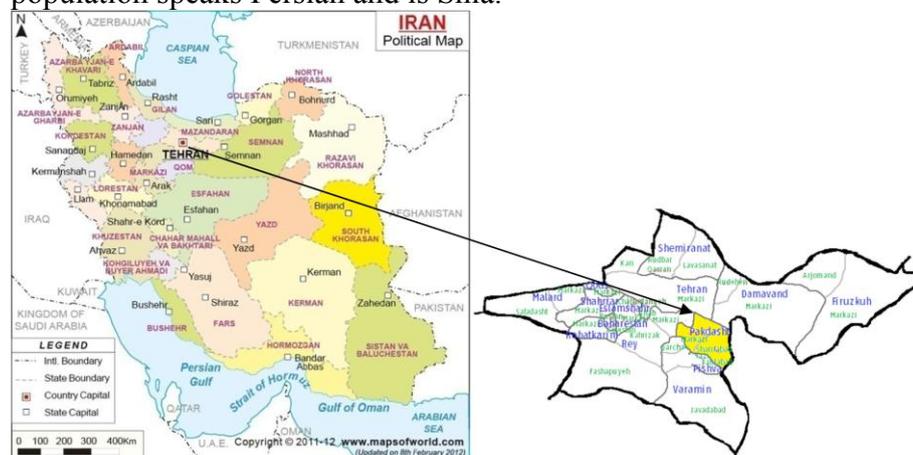
Villages of Pakdasht County Were examined from to assess and prioritize of rural tourism in Sustainable development of rural areas with an emphasis on environmental sustainability. In this study, rural

tourism was Checked out Based on Three parameters 1) environmental protection, 2 economic stability and 3) favorable development of spatial-physical of rural areas.

We analyzed different types of rural tourism that products diversifications influence on development possibilities of studied rural areas. We analyzed the influence of different factors (environmental stability, spatial -local Favorable development of rural areas, economic stability) by Eigenvector Technique and after that we reviewed strategic approach to rural tourism based on model "SWOT", in order to explain the role of tourism in rural development.

Pakdasht Geographical location

Pakdasht (Persian: also Romanized as Pākdasht; also known as, Palesht, Polasht, and Pol Dasht) is a city in and the capital of Pakdasht County, Tehran Province, Iran. Pakdasht is located 25 kilometres (16 mi) southeast of the capital Tehran that is allocated in An area of 610 square kilometers, about two thirds of the area to Tehran Province And is located in a height of 1013 meters above sea level and in Alluvial lands south of the Alborz Mountains. The majority of the population speaks Persian and is Shia.



Map 1: Geographic location of pakdasht county

Theoretical Basics

Sustainable development is a comprehensive approach to improving the quality of human life In order to achieve economic, environmental and social prosperity of human settlements (Torjman, 2000, 2). In this

sense, sustainable development is a process that will be facilitated access to increasing and continued production, Life sure, food security, justice, Social stability and public participation by Organize and regulates the relationship between man and environment, management and exploitation of resources and the environment. In the process of sustainable development, objectives of social, economic, environmental of society Combine together to wherever that may be imposed through policies, doing necessary procedures and conservational operations.

Eigenvector technique

A powerful method of determining weights of indices is Eigenvector technique that in this way has been used from the decomposition of a square matrix and Instant Reverse D to The eigenvector and for its Consistency index which harmonize mid

1) $D \cdot w = \lambda_{max} \cdot w$

2) $w_i = \frac{\sum a_{ij} \cdot w_j}{\lambda_{max}}$

Eigenvector technique through Can determine Degree of inconsistency in the Available information of matrix D via Consistency index:

3) $C.I = \frac{\lambda_{max} - n}{n - 1}$

To calculate the degree of inconsistency Be used a fortuitous index that As shown in the following table, The following numbers For different values of "n" have been calculated by Production of matrix D and The calculation of the mean "C. I"

(Table 1) The degree of incompatibility for different values of "n"

n	1	2	3	4	5	6	7	8	9	10
R. I	0	0	0.	0.	1.	1.	1.	1.	1.	1.
			58	9	12	24	32	41	45	45

With Assuming of R. I, permanency scale can be calculated by

4) $C.R = \frac{C.I}{R.I}$

And in this function if **C. R ≤ 0.1** be then matrix permanency will accept but if **C. R > 0.1**

Then Determiners must revise to their comparative judgments in order to further adjustment. (pur taheri, 2013: 93-95)

Findings

Protection of natural landscapes, water, soil, land form and recovery and expansion of the spaces and natural resources is one of the Environmental planning issues (Server, 2006: 29). And environmental planning and land use planning are bon ton to achieve optimum utilization (Bahram Soltani, 1990: 174).

All developments of land use must be reached within the constraints of the physical and natural environment, if we want to prevent of further damage to the environment. (Beer and Higgins, 2006: 8)

Analysis of necessary activities to achieve sustainable development shows an Emphasis on capital resources and processes. Capital resources are three types:

- Social - cultural resources
- Economic resources
- Natural resources

All three of these sources are important, but nowadays it has been found that natural resources can have more essential role than the human resources (socio - cultural) and economic resources.

If natural resources to be used the excessive exploitation, other resources would faced severely the risk of reduction (Ferdowsi and Ghoddosi, 2005:120) and the Sustainable economic survival depends on sustainable agriculture(sarrafi, 1998: 145) and this will doubled the importance of sustainable agriculture and Due to environmental issues in agriculture.

The present study has been done to investigate the role of Type of economic activity on sustainable development in rural areas with emphasis on the rural environment hereupon first the present situation in villages of Pakdasht county was evaluated of all relevant aspects to the research and Questionnaires Were given to Agricultural experts, environmentalists and geographers proficient in rural planning And since Analysis and interpretation of gathered data is from basic process of each evaluation (Saidi, 2002: 37)

Therefore Questionnaires were analyzed the results are based on eigenvector technique is as follows:

A:

$$\begin{bmatrix} 1 & 2.5 & 1.5 \\ 0.4 & 1 & 0.6 \\ 0.6 & 1.6 & 1 \end{bmatrix} = \begin{bmatrix} 5 \\ 2 \\ 3.2 \end{bmatrix} = 10.2 \rightarrow \\ |0.490196 \quad 0.196078 \quad 0.313725|$$

B:

$$\begin{vmatrix} 1 & 2.5 & 1.5 \\ 0.4 & 1 & 0.6 \\ 0.6 & 1.6 & 1 \end{vmatrix} \times \begin{vmatrix} 1 & 2.5 & 1.5 \\ 0.4 & 1 & 0.6 \\ 0.6 & 1.6 & 1 \end{vmatrix} = \begin{vmatrix} 2.9 & 7.4 & 4.5 \\ 1.16 & 2.96 & 1.8 \\ 1.84 & 4.7 & 2.86 \end{vmatrix} =$$

$$\begin{vmatrix} 14.8 \\ 5.92 \\ 9.4 \end{vmatrix} \times 2 = \begin{vmatrix} 29.6 \\ 11.84 \\ 18.8 \end{vmatrix} = 60.24$$

$$[0.491368 \quad 0.196547 \quad 0.312085]$$

C:

$$\begin{vmatrix} 2.9 & 7.4 & 4.5 \\ 1.16 & 2.96 & 1.8 \\ 1.84 & 4.7 & 2.86 \end{vmatrix} \times \begin{vmatrix} 1 & 2.5 & 1.5 \\ 0.4 & 1 & 0.6 \\ 0.6 & 1.6 & 1 \end{vmatrix} =$$

$$= \begin{vmatrix} 8.56 & 21.85 & 13.29 \\ 3.424 & 8.74 & 5.316 \\ 5.436 & 13.876 & 8.44 \end{vmatrix} = \begin{vmatrix} 43.7 \\ 17.48 \\ 27.752 \end{vmatrix} \times 3 =$$

$$= \begin{vmatrix} 131.1 \\ 52.44 \\ 83.256 \end{vmatrix} = 266.796$$

$$[0.491387 \quad 0.196555 \quad 0.312059]$$

D:

$$\begin{vmatrix} 8.56 & 21.85 & 13.29 \\ 3.424 & 8.74 & 5.316 \\ 5.436 & 13.876 & 8.44 \end{vmatrix} \times \begin{vmatrix} 1 & 2.5 & 1.5 \\ 0.4 & 1 & 0.6 \\ 0.6 & 1.6 & 1 \end{vmatrix} =$$

$$\begin{vmatrix} 25.274 & 64.514 & 39.24 \\ 10.1096 & 25.8056 & 15.696 \\ 16.0504 & 40.97 & 24.9196 \end{vmatrix} = \begin{vmatrix} 129.028 \\ 51.6112 \\ 81.94 \end{vmatrix} \times 4 = \begin{vmatrix} 516.112 \\ 206.4448 \\ 327.76 \end{vmatrix} =$$

$$1050.317$$

$$[0.491387 \quad 0.196555 \quad 0.312059]$$

The above calculations, the integration process of transition has occurred in the fourth transfer because ($W_3 = W_4$) as a result W_4 can be considered as the final Eigenvector determines and determines of Weights of the research parameters the following:

- Weight of parameter of the favorable development of spatial-physical of rural areas is equal to 0. 312059
- Weight of parameter of the production of stability wealth and income is equal to 0. 196555
- Weight of parameter of the environmental protection is equal to 0. 491387

Thereupon parameter of the environmental protection has the greatest weight and importance and then after that parameter of the favorable development of spatial-physical of rural areas and parameter of the production of stability wealth and income are.

To ensure a degree of consistency, the matrix D coefficient stability was calculated:

$$5) \lambda_{\max} = \frac{\sum a_{ij} \cdot w_j}{w_1} = \frac{1(0.491387) + 2.5(0.196555) + 1.5(0.312059)}{0.491387} = 2.95$$

$$6) C.I = \frac{\lambda_{\max} - n}{n - 1} = \frac{2.95 - 3}{2} = -0.025$$

$$7) C.R = \frac{C.I}{R.I} = \frac{-0.025}{0.58} = -0.043$$

Because C. R is smaller than 1 (one) then matrix D has High compatibility.

Analysis of rural tourism based on the SWOT model analysis (Internal and external factors)

Table 2: Evaluate the strengths, weaknesses, opportunities and threats to the development of rural tourism in the Pakdasht based on the SWOT model

Threats	opportunities	weaknesses	strengths	
1- increasing social infringements 2- land use change 3-Social and cultural fields of break crowd	1- to provide services and facilities 2- infrastructure development According to the officials wants 3-The convergence of urban areas in urban design	1- lack of adequate services and Accommodation Facilities 2- lack of experts and specialists in the area 3- High migration rate and There subcultures 4-Low social participation 5-A gradual increase of social ills	1-Has many cultural attractions and historical monuments including: kabood gonbad inn, historic bridge of Jitoo, Historic sites of yourd boolagh, Mansion Nasereah. 2-Social stratification and the existence of different ethnicities	social
1-an increase in land prices and consequently increased costs for facilities and service facilities for tourists 2-Overflow of poor and marginal economic activities 3-No compiled economic program for the activities of economic units	1- increasing government attention to tourism 2- Review of the structure of business activities 3-Advantages of urban facilities and services	1- Lack of proper planning by the government to invest in the development of rural tourism 2- lack of incentives for private sector investment 3-The establishment of workshops that are incompatible with environmental standards	1-Take advantage of the economic potential of Tehran 2-There are agricultural activities and industrial sites 3- There is a good market to sell agricultural products	economic
1- environmental contamination 2-Destruction of vegetation 3-___Jajrood river pollution caused by sewage 4-Establishment of urban incompatible application	1-Take advantage of the resources and facilities in Tehran 2-___Resort and recreational potential	1-Inappropriateness of sports facilities, recreational and residential 2 -change and rising construction 3- change of land use and land prices 4- The destruction of the Qanat and Pollution of underground water via use of fertilizers	1- Beautiful landscapes of greenhouses of cut flowers and ornamental plants 2- Proximity to the mountains like ghareghaj for adventure tourism and mountaineering 3- elegant natural scenery on the way 4- There is a vast land with a slope of less than 5%	ecologic

1-lack of private sector investment in infrastructure and service facilities, recreational and residential	1-Understanding the rural area as a development pole	1- Lack of training indigenous people 2- A multiplicity of organizations responsible for municipal affairs 3- Inadequacy of financial resources	1- There are programs and projects of development	Institution al
2- The inadequacy of the role of the Council and public institutions				

Table 3: Analysis of rural tourism strategies

Environmental-physical strategies	Economic strategies
1-Emphasis on rural tourism development via the capacity region	1-Private sector investment in the field of rural tourism
2- identification of the rural tourism attractions and offering prospectus and brochures in order to guide tourists	2- diversification of facilities and tourist services
3- Developing a comprehensive plan for rural tourism	3- Using the expertise and experience to create an association, cooperative Folks (Ruknaldin, 2005) and non-governmental organizations to promote rural tourism
4-Provide programs to protect the natural, economic, social and cultural conditions of villages	4- improving internal and external marketing
	5-making Accommodation and catering facilities in the villages
Institutional Strategies	Social strategies
1- The use of information and communication technology to increase outreach to tourists	1- The establishment of e-government
2- participation in national and international festivals and conferences	2- diversification of promotional activities and the development of marketing programs
3- Strengthening the mass media, especially media related to rural tourism	3- prepare and encourage people to participate in infrastructure development
4- establish coordination between relevant institutions	4- Appropriations for resource development, infrastructure and facilities(jahanian, 2010)
	5- Review the exploits of popular participation in tourism projects
	6- The establishment of legal and ethical rules in the field of tourism

Conclusions and suggestions

Field research that was conducted on this topic shows that rural tourism can effect on Sustainable development in rural areas. Agricultural activities that have been done with modern methods and less soil and water resources will contaminate like Cultivation of cut-flowers and ornamental plants in the villages of Pakdasht County. Planning and management of rural tourism in the context of understanding of nature of capitalism can improve quality of life for local residents and causes them to increase the perception of space in the economic efficiency (Saghaei, 2002). Rural tourism has led to an increase in the mobility of rural production, making jobs and services in the village. Multiplication factor of income in tourism revenues increased by a factor of wealth and employment through tourism that

will create new jobs (Puria, 1995). therefore the presence of rural tourism in the villages have been brought economic recovery and improving their living conditions by injecting money and capital in the villages and will lead to improving Economy of villagers.

In addition, new industry provides new job opportunities and Supplemental income and makes them even more sales of agricultural products and handicrafts, follows all these factors collectively contribute to improving the economic situation of rural livelihoods. Finally, we can conclude that by adopting appropriate strategies and policies through rural tourism and investment in the region of localization can be achieved the balance and sustainable development at the countryside in township.

According to research that has been done and the results has been obtained, following proposals to develop rural tourism will be provided:

- 1) Management is an important issue in the development and Management is considered as a Coordinator in combination of production factors (Yasuri, 2006: 51) accordingly Management of activities which are related to land is one of the major strategies in this field in order To achieve optimal distribution of economic activity and with regard to environmental sustainability;
- 2) Financial support and technology transfer be done to financing entrepreneurship and innovation projects Modernize the organization and training of technical manpower, attracting new technologies;
- 3) Establish cooperative of production and distribution because the only way to create, maintain and sustain a stable population is teamwork (Misra, 2003:424).
- 4) Private sector Enable to investments in affiliates of rural tourism;
- 5) Plan to study environmental effects;
- 6) Legislation of regulations to reduce the negative environmental impacts;
- 7) Focus on the training of incentive (Education and making Culture);
- 8) Provision of access interconnected network between areas which have natural and historical and cultural potentials;
- 9) Pay special attention to the management of both micro and macro levels.

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