International Journal of Architecture and Urban Development
Vol. 12, No.3, P 43-56. Summer 2022

E-ISSN 2345-2331
Applied Research Article
DOI: 10.30495/IJAUD.2021.62111.1543

Ecotourism Development Model to Economic Growth and Job Creation (Case Study: from Emamzadeh Hashem to Rudbar)

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Recieved 19.07.2021; Accepted 02.12.2021

ABSTRACT: The ultimate purpose of the present study is to provide a model for ecotourism development, economic growth, and job creation. The research methodology was descriptive-inferential, and the data collection method was a researcher-made questionnaire. The first part included considering the models of ecotourism development. After inferring and confirming the research hypothesis, the second part presented the economic development model and job creation in the free margin of the northern roads between Emamzadeh Hashem and Rudbar. For proving the research hypothesis, at first, the factors affecting the development of ecotourism were identified and identified, which included eight topics including national identity, job creation, productivity growth, service prosperity, environmental, physical, socio-cultural, and community attitudes and awareness to determine which variable will have the most significant impact on the development of ecotourism. Accordingly, 384 natives and tourists from tourism-recreational and ecotourism complexes in the study area were asked. SPSS software was used for inferential measurement of data, and PLS software was used to present the structural model of the research. The questionnaire and their analysis based on the correlation coefficient and structural model in the first part showed that employment is the most critical factor in tourism development. The analysis results in the first part include the presentation of 32 factors affecting the development of ecotourism. The findings in the second section also present the 11 factors of economic development and economic growth.

Keywords: *Ecotourism Development, Economic Growth, Job Creation, Production Increase, Services Prosperity.*

INTRODUCTION

Throughout history, tourism has been considered one of the largest and most diverse globally, and its rapid growth has led to several social, economic, and environmental changes. One of the most basic forms of tourism is ecotourism. Ecotourism consists of visiting fragile and damaged natural areas, pristine and relatively turbulent, which is conducted responsibly to conserve the environment and sustain the well-being of local people. (Sadat et al., 2018; Salehi et al., 2020). Ecotourism means responsible travel to natural areas, preserving the environment, and improving the well-being of local people. Its purpose may be to educate tourists, provide funding for environmental protection, directly benefit from local communities' economic development and political power, or strengthen and respect different cultures and human rights (Anabestani et al., 2018). This form of tourism is the most valuable of nature tourism that intends to wisely merit the most with the most negligible negative impact on the nature and culture of the region. Ecotourism is managed differently than other forms of tourism (Mirzadeh Koohshahi & Dehghani, 2016).

In terms of responsibility, ecotourism goals include items that mitigate the negative aspects of conventional tourism on the environment and strengthen the cultural integrity of local people. Therefore, besides assessing environmental and cultural factors, an integral part of ecotourism is promoting recycling, energy efficiency, water conservation, and economic opportunities for local communities (Rostam Pisheh et al., 2019). In line with that, the primary purpose of the present study is to provide basic principles to promote ecotourism and propose job opportunities and job creation. The study area is in the free margin of the northern roads between Emamzadeh

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Hashem and Rudbar. This research was conducted in two parts. At first, the factors affecting ecotourism's development were examined. This research is based on the hypothesis that an appropriate ecotourism model can significantly attract business investment for economic development. For this purpose, after determining the results, the second part of the research provides a model of economic development of ecotourism in the study area.

Literature Review

Due to the importance of the issue in both levels of nationally and internationally, various studies have been conducted. Farajirad and Seyed Nassiri (2010) Investigated on a descriptive analysis method to identify the elements with tourism and urban patterns determine sustainable development of urban tourism and study of actual and potential capabilities of cities in tourism development as well as processes of sustainable tourism development in cities. The present study has offered proposals for tourism and sustainable urban development. Hajinejad et al., (2013) identified the environmental potential of the tourism sample area of Hajij Village through using a set of internal factors (strengths and weaknesses) and the external factors (opportunities and threats) and codified the strategic tourism plan in this area. This assessment led to codifying the tourism development program of Hajij Village, which could help improve tourism status in the tourism sample area of Hajij. Ramezannezhad and Roknoddin Eftekhari (2019) in their article provided the formulation of strategies of rural coastal tourism development in the province of Guilan. For this purpose, an open questionnaire was given to the group of professionals and identified a list of common points of weaknesses, strengths, opportunities, and threats.

Rezaei et al., (2020) investigated and analyzed the loyalty of tourists in Shiraz. This study is applied in terms of purpose and based on the nature and method. The results showed that the level of loyalty of tourists in Shiraz, including combined loyalty with 19.10, behavioral loyalty with 6.70, and attitude loyalty with 12.40, is higher than average. Salehi et al., (2020) assessed the effect of social capital on environmental behaviors of tourists in Shourabil Lake of Ardebil. The results show that the tourists' social capital plays an essential role in environmental behaviors. In addition, they concluded that social capital especially trusts in tourists and generally in society, should be fortified to improve people`s behaviors toward the

Table 1: Summary research studies

Author(s)	Methodology	Summary
Faraji Rad & Ehsani (2011)	Qualitative and quantitative techniques	This paper aims at studying the outcome and experience of Indigenous clusters in the development of local networks, with emphasis on Garmeh and Shib Deraz villages in Iran. The result shows that Iran's political process and economic policies on ecotourism development need a brace up. Effective policies should be promulgated to provide the real needs of ecotourism based on sustainable development.
Mirzadeh Koohshahi & Dehghani (2016)	Analytical, descriptive, and survey	The results show that the city is in a good position in natural resources, surrounding attractions, and access. However, in terms of tourist amenities, the government and the private sector need to take action to address these shortcomings. According to the results of the TOPSIS method, coastal parks are in the first place, and GNU hot water tourist complex is in the second place, and the citizens are more interested in these areas; Therefore, these areas should be given priority in the development of infrastructure.
Sadat et al. (2018)	SWOT - Freeman matrix	This research was conducted to investigate the factors of strength, weakness, opportunities, and threats and provide appropriate strategies for the development of ecotourism in the region by a descriptive-analytical approach. His results showed that the region's strengths are more than the weaknesses, and threats are in the region are more than opportunities. Therefore, considering the park's situation, it is necessary to use competitive strategies.
Salehi et al. (2018)	Survey method	The study results show that: First, local people's attitudes towards ecotourism are highly positive. Second, the local community is aware of ecotourism's social, economic, and environmental effects. Third, based on Doss's theoretical model, there is a possibility to develop ecotourism in the JannantRoodbar district. However, there is a fragility problem for this destination. Fourth, the level of the community's support for ecotourism is very high.
Jalali et al., (2019)	SWOT and AHP	This study aims to evaluate the ecological and environmental capabilities of Hamoon Wetland for ecotourism activities. The study results assess the vulnerability threshold of Hamoon Wetland concerning weaknesses and high threats and finally provide strategic strategies to strengthen the strengths and opportunities of the ecosystem and reduce weaknesses and threats.
Refahi Dahr (2019)	SWOT	This research aims to identify the strengths and weaknesses of ecology, study the status of ecology resorts, and determine the ecological ecosystems in Malayer. This study suggested that Ecotourism policies must also be integrated into a systematic, integrated approach to macroeconomic, political, cultural, and social areas to protect the environment, which is a common legacy of today's and tomorrow's generations and fostering public participation in the field.
Mirzadeh Kouhshahi (2019)	Descriptive-analytical study	In this research, the local capacities of Bangelayan village in Bandar Abbas County of Iran were measured on the basis of two concepts of tourism product and community-based ecotourism to provide ecotourism for tourists.

environment and promote responsible environmental manners. Sabahi Garaghani and Marsusi (2021) studied the role of human barriers in the development of sustainable tourism in Kerman. This study aims to analyze the role of human barriers on the development of sustainable tourism in Kerman. The results indicated that the economic-financial index with 1.698 is the most influential factor among the indicators and the technology index with 2.622 is the most influential factor. Table 1 provides more summary studies, all of which have been conducted by researchers.

MATERIALS AND METHODS

The present study is conducted of an analytical descriptive based on several methods of data collection (Mixed-method). Theoretical information is in the form of a library, and document-based information regarding the area in question has been reviewed and collected by distributing questionnaires and interviewing local people within the study area. After compiling a questionnaire to examine the validity of the indicators prepared to measure the variables, content validity was utilized. For this purpose, the initial questionnaire was evaluated and reviewed by ten faculty members in the field of tourism studies, and in terms of form and content, they expressed their opinion on the questionnaire. Accordingly, some questions were omitted, and the rest were altered. Eventually, the final version of the questionnaire was prepared for the a priori test. At first, an exploratory analysis test for validity and reliability of the questionnaire was performed in 30 samples.

After determining the type of test parametrically, Cronbach's alpha for each component was obtained. Then a one-sample T-test was utilized to analyze the data. The results of this part presented in Table 2 showed a significant difference between the sample average and the hypothetical average of the community at a significant level of 0.01 of questions related to the ecotourism model. The results indicate that the impact of ecotourism on job creation is average to high. Because the average obtained in the questions was higher than the hypothetical average of number 3. Pearson correlation coefficient was used to measure the correlation coefficient between the components. In order to achieve the final model, the structural equation model was utilized. The purpose of reliability is to give the measuring methodology several times in a short period to a single group of people so that the results are close to each other.

In order to calculate the Cronbach's alpha coefficient, first, the variance of the scores of each subset of the questionnaire or subtest questions and the total variance was calculated. The closer the percentage is to 100%, the more reliable the questionnaire is. It should be noted that an alpha coefficient of less than 60% is usually considered weak, a range of 70%

Table 2: One-sample t-test around the pattern to promote ecotourism

	N	mean	Std. deviation	Std. error deviation	t	df	sig
To what extent has the creation of ecotourism resorts affected direct and indirect employment?	384	4.0443	.79201	.04428	100.064	383	.000
To what extent has ecotourism resorts affected the creation of new job opportunities?	384	3.9609	.86778	.06023	89.445	383	.000
To what extent has the creation of ecotourism resorts influenced the groundwork for gathering information in the field of culture, customs, folklore, and indigenous arts?	384	3.7995	1.18030	.04554	63.081	383	.000
To what extent has the creation of ecotourism resorts influenced the development of local cooperation?	384	3.6979	.89232	.04192	81.209	383	.000
To what extent has the creation of ecotourism resorts been effective in attracting financial resources?	384	4.4375	.82154	.04064	105.846	383	.000
To what extent has the creation of ecotourism resorts affected the diversification of products?	384	4.2891	.79639	.04536	105.536	383	.000
To what extent has the creation of ecotourism resorts increased the level of awareness and information of local people?	384	3.9063	.88890	.05374	86.114	383	.000
To what extent has the creation of eco-lodges affected the greater reputation of study area?	384	3.7760	1.05308	.05187	70.265	383	.000
To what extent has the creation of ecotourism resorts affected the Increase in land prices and the prosperity of real estate transactions?	384	4.0260	1.01650	.05357	77.614	383	.000
To what extent has the creation of eco-lodges affected identity?	384	4.1693	1.04968	.04511	77.834	383	.000
To what extent has the establishment of ecotourism resorts strengthened the beliefs and respect for the knowledge of the locals?	384	4.2083	.88405	.06025	93.282	383	.000
To what extent has the creation of ecotourism resorts been effective in improving the pattern of indigenous architecture?	384	3.7292	1.18060	.05349	61.898	383	.000

Continiue of Table 2: One-sample t-test around the pattern to promote ecotourism

	N	mean	Std. deviation	Std. error deviation	t	df	sig
To what extent has the creation of ecotourism resorts influenced the spread of a culture of healthy local food?	384	3.9766	1.04817	.05405	74.343	383	.000
To what extent has the creation of ecotourism resorts affected the expansion of service jobs along the northern roads of the country?	384	4.1172	1.05925	.06462	76.167	383	.000
To what extent has the creation of ecotourism resorts affected the expansion of the industry?	384	3.8880	1.26634	.06458	60.165	383	.000
To what extent has the creation of ecotourism resorts affected the income generation of residents?	384	3.9036	1.26557	.06120	60.444	383	.000
To what extent has the creation of ecotourism resorts affected the development of local markets?	384	4.0182	1.19930	.04654	65.656	383	.000
To what extent has the creation of ecotourism resorts affected the protection of the environment and nature?	384	4.2995	.91200	.05757	92.382	383	.000
To what extent is the creation of ecotourism resorts effective in increasing the vitality of tourists?	384	4.0651	1.12806	.03160	70.617	383	.000
To what extent has the creation of ecotourism resorts affected the financing of the infrastructure?	384	4.7656	.61933	.03356	150.787	383	.000
To what extent has the creation of ecotourism resorts been effective in boosting the confidence and belief in indigenous abilities?	384	4.6797	.65756	.03340	139.460	383	.000
To what extent has the creation of ecotourism resorts affected the expansion of job opportunities?	384	4.7161	.65449	.03314	141.205	383	.000
To what extent has the creation of ecotourism resorts affected the development of freeways?	384	4.6484	.64944	.03549	140.260	383	.000
To what extent has the creation of ecotourism resorts influenced the performance of various local ceremonies?	384	4.6823	.69545	.03453	131.934	383	.000
To what extent has the creation of ecotourism resorts influenced the use of materials in harmony with nature?	384	4.6953	.67664	.04816	135.980	383	.000
To what extent has the creation of ecotourism resorts influenced the attention to and maintenance of historic homes?	384	4.0703	.94372	.05009	84.518	383	.000
To what extent has the creation of ecotourism resorts influenced the use of simple local interior architecture?	384	4.0885	.98154	.04594	81.626	383	.000
To what extent has the creation of ecotourism resorts affected the financing of protected areas?	384	4.2630	.90030	.04764	92.789	383	.000
To what extent has the creation of ecotourism resorts increased security?	384	4.1927	.93348	.04793	88.015	383	.000
To what extent has the creation of ecotourism resorts been effective in preventing migration?	384	4.0156	.93929	.05076	83.776	383	.000
To what extent has the creation of ecotourism resorts influenced the spread of anomalies?	384	3.8646	.99471	.04476	76.133	383	.000
To what extent has the creation of ecotourism resorts affected the diversification of revenue sources?	384	4.3281	.87712	.04428	96.696	383	.000

is acceptable, and more than 80% is considered good, but the closer the confidence factor to one, the better. For this purpose, the sample included 30 pre-test questionnaires. These samples were distributed among people within the study area and then using the data obtained from these questionnaires and using SPSS software, the reliability of Cronbach's alpha method was calculated (Table 3).

Table 3 shows that the alpha coefficient of the research variables is higher than 0.7, indicating that this research's measurement tool has good reliability. Cronbach's alpha coefficient of the ecotourism model questionnaire to promote ecotourism in the free roads of the north of the country is 0.881. In the meantime, the exact study area is from Emamzadeh Hashem to Rudbar city with a length of 36 km has been considered. For generalizing the results and evaluating them more accurately, the depth of evaluation is considered. Emamzadeh Hashem is a village in Saravan Rural District, of Rasht city in Gilan province, situated in the geographical range of 49 ° 37'31.0 "east and 37 ° 01'20.6" north. The distance from Rasht to Emamzadeh Hashem is about 30 km. In addition, Rudbar is located in the geographical range

Table 3: Cronbach's alpha coefficient of research variables

Variable	Questions	Cronbach's alpha
Job creation	1-3	0.881
Increase production and income	4-8	0.770
Strengthen local identity	9-13	0.859
Strengthe=n national identity	14-17	0.680
Environment	18-20	0.798
Improving community attitudes	21-24	0.819
Architecture	25-30	0.885
Socio-economic	31-32	0.759
Total Alpha	0.811	

of 49 ° 24'57.9 "east, and 36 ° 48'34.4" north and is 66 km away from Rasht and has 74 square kilometers.

The current statistical population (N) is local travel between the study area and travelers who have purchased the most trips to the study area. 384 people were interviewed according to Morgan's table. Furthermore, to examine the current situation and study area, Roadside Restaurants and resorts of Gilan province in the study area have been evaluated. Eight registered tourism resorts in the Cultural Heritage and Tourism of Gilan have been determined. In the following, the characteristics of each were recorded to analyze the strengths and weaknesses of the current situation in these facilities. The analytical software for the questionnaire part was SPSS.

Moreover, to achieve the final model of the present study, the structural equation model is used. In this section, the authors have to say that the structural equation model approach has been used using the partial least squares method to analyze the data. The cause and effect relationship between the research variables has been measured using the structural model section by Smart PLS 2 software.

RESULTS AND DISCUSSION

Part One: Ecotourism Development: Inferential Statistics: One-Sample T-Test

In quantitative data, use the one-sample t-test to test the hypothesis that the mean of a sample () is the same as the mean of the population (N), which is assumed to have a normal distribution. Use this test when users want to know if the estimated mean () matches the community's mean. Hypotheses 0 and 1 are as follows. In this test, an index called t is used, which is as follows. The authors are always concerned with the number of samples they have. One of the characteristics of this index is its degree of freedom, which n-1 determines. The characteristic of the t-distribution is that when the number of samples exceeds 30, it corresponds to the normal distribution. In the present study, a one-sample t-test was used to examine each component and indicator (Tables 4 and 5).

Examination of the results presented in Tables 4 and 5 indicates a significant difference between the sample mean and the hypothetical average of the N at the significance level of 0.01 (t = 120.15) regarding the effect of ecotourism on job

Table 4: Descriptive statistics on the impact of ecotourism on job creation

Index	N	Mean	Std. deviation	Std. error deviation
Job creation	384	4.0827	.66586	.03398

Table 5: One-sample t-test the status of the impact of ecotourism on job creation

Test Value = 3						
Index	T	df	sig	Std. error mean	95% Confidence Interval of the Difference	
					Lower	Upper
Job creation	120.151	383	.000	4.08268	4.0159	4.1495

creation. The results indicate that the effect of ecotourism on job creation is moderate to high because the average obtained 4.08 is higher than the hypothetical average number of 3. Results presented in Figure 1, No. 1 indicate a significant difference between the sample average and the hypothetical average of the N at the significance level of 0.01 (t = 89.98) regarding the effect of ecotourism on increased production and income. The results indicate that the effect of ecotourism on the increased production and income is average to high because the average obtained is 3.91 higher than the hypothetical average of a number of 3. No. 2 indicates that regarding the effect of ecotourism on strengthening national identity, there is a significant difference between the sample average and the hypothetical average of the N at a significance level of 0.01 (t = 105.60). The results show that the effect of ecotourism on strengthening national identity is average to high because the average obtained is 3.91 higher than the hypothetical average of the number of 3. No. 3 indicates a significant difference between the sample mean and the hypothetical average of the N at the significance level of 0.01 regarding the effect of ecotourism on strengthening local identity (t = 104.45). The results indicate that ecotourism's effect on strengthening local identity is average to high because the average obtained is 3.98 higher than the hypothetical average of 3. Number 4 indicates the effect of ecotourism on the socio-cultural factor of the N, and there is a significant difference between the sample average and the hypothetical average of the socio-cultural at a significance level of 0.01 (t = 59.46). The results indicate that the effect of ecotourism on the socio-cultural factor is average to high because the average obtained is 3.57 more than the hypothetical average of the number of 3.

Number 5 indicates that regarding the effect of ecotourism on the architecture, there is a significant difference between the sample average and the hypothetical average of the N at a significance level of 0.01 (t = 60.36). The results indicate that the effect of ecotourism on the architecture is average to high because the average obtained is 3.65 higher than the hypothetical average of the number of 3. No. 6 indicates a significant difference between the sample average and the hypothetical average of the N at the significance level of 0.01 regarding the effect of ecotourism on the job creation factor of the N (t = 120.15). The results show that the effect of ecotourism on the job creation factor is average to high because the average obtained 4.08 is higher than the hypothetical average of the number of 3. No. 7 indicates a significant difference between the sample average and the hypothetical average of the N at the significance level of 0.01 regarding the effect of ecotourism on the job creation factor of the N (t = 59.31). The results indicate that the effect of ecotourism on the environmental factor is moderate to high because the average obtained is 3.77, higher than the hypothetical average of number (3) (No. 8).

Pearson's Correlation Coefficient

In statistics, the Pearson correlation coefficient measures the degree of linear correlation between two random variables. The value of this coefficient varies between -1 to 1, with "1" meaning complete positive correlation, "0" meaning no correlation, and "1-" meaning complete negative correlation. This coefficient, which has many usages in statistics, was developed by Karl Pearson based on the original idea of Francis Galton. The present study used the Pearson test for the relationships between research variables (Table 6). The results of the Pearson correlation test in Table 5 show a positive and significant relationship between the various components of the ecotourism pattern, and this relationship is statistically confirmed because the significance level values are less than 0.05.

Structural Equation Modeling

In order to achieve the final model of the present study, the structural equation model is used. In this part, for structural data analysis, the structural equation model approach has been used using the partial least squares method. The cause and effect relationship between the research variables has been measured using a structural model part through Smart PLS 2 software. The structural equation model methodology was used to analyze and test the research hypotheses. There are various methods for implementing the structural equation model, and one of the newest approaches in the structural equation model is the partial least squares method. A two-stage approach in structural equation modeling has been used. In the first stage, a measurement model was implemented to determine how accurately the markers of each structure measure that structure. In the second stage, the effect of structures on each other was analyzed.

Structural equation modeling by partial least squares method, unlike the covariance method, does not have indices according to the collected data. This depends on the nature of the PLS axis prediction. Therefore, the indices that have been developed with this approach are related to examining the adequacy of the model in predicting dependent variables. As the indices developed with this approach, they relate to examining the adequacy of the model in predicting dependent variables such as redundancy indices or GOF indices. These indicators show to what extent they can predict their underlying structure for the model of measuring reagents and to what extent and with what quality they can predict the model's endogenous variables for the model of measuring reagents. All researchers have followed a single framework for fitting the variance-based structural equation modeling test with the same partial least squares method: 1) evaluating the measurement model (external model); 2) Structural model test (internal model) and 3 * PLS general model test. PLS route model evaluation consists of two steps. In the first stage, the evaluation of the

Table 6: Correlation matrix between ecotourism development variables of the present study

	Improving community attitudes	Socio-cultural	architec-ture	environ-ment	Strength-en local identity	Increase production and income	Job cre-ation	Strengthen na-tional identity
Strengthen national identity	.569**	.272**	.295**	.217**	.502**	.504**	.699**	1
	.000	.000	.000	.000	.000	.000	.000	
	384	384	384	384	384	384	384	384
Job creation	.796**	.183**	.224**	.131*	.393**	.406**	1	.699**
	.000	.000	.000	.010	.000	.000		.000
	384	384	384	384	384	384	384	384
Increase production and income	.331**	.193**	.208**	.270**	.574**	1	.406**	.504**
	.000	.000	.000	.000	.000		.000	.000
	384	384	384	384	384	384	384	384
Strengthen local identity	.285**	.444**	.407**	.535**	1	.574**	.393**	.502**
	.000	.000	.000	.000		.000	.000	.000
	384	384	384	384	384	384	384	384
environment	.030	.440**	.319**	1	.535**	.270**	.131*	.217**
	.555	.000	.000		.000	.000	.010	.000
	384	384	384	384	384	384	384	384
architecture	.117*	.594**	1	.319**	.407**	.208**	.224**	.295**
	.021	.000		.000	.000	.000	.000	.000
	384	384	384	384	384	384	384	384
Socio-cultural	.095	1	.594**	.440**	.444**	.193**	.183**	.272**
	.062		.000	.000	.000	.000	.000	.000
	384	384	384	384	384	384	384	384
Improving community attitudes	1	.095	.117*	.030	.285**	.331**	.796**	.569**
		.062	.021	.555	.000	.000	.000	.000
	384	384	384	384	384	384	384	384

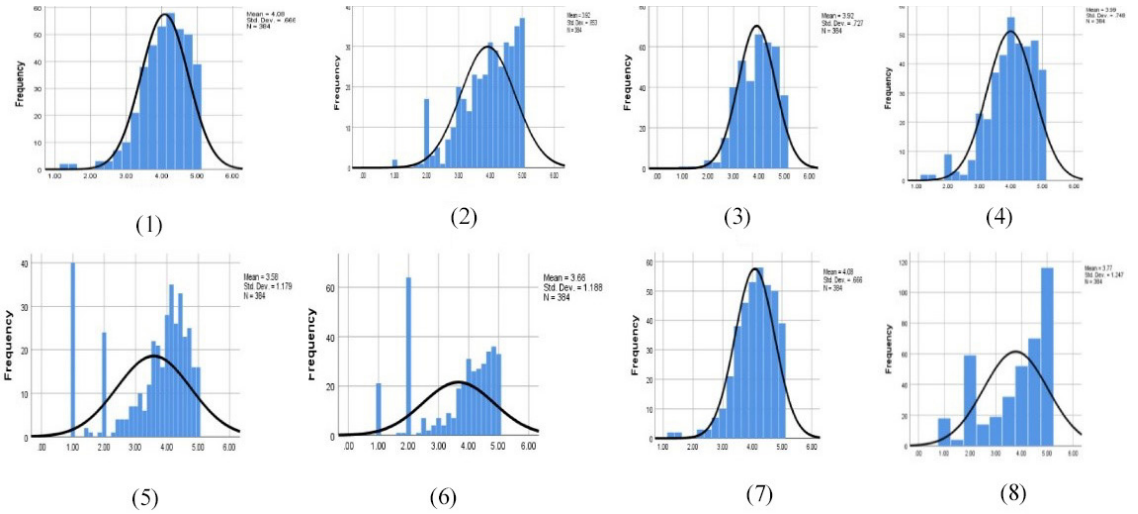

Fig. 1: Histogram diagram related to the component of job creation (1), increased production and income (2), national identity (3), improving community attitudes (4), socio-cultural (5), architecture (6), strengthen national identity (7) and environmental (8).

measurement model (external) is presented, in which the reliability and validity of this model are determined. Test reliability depends on the accuracy of the measurement and its stability. Reliability has two different meanings: reliability, stability, and reliability of scores over time, meaning that if a test is performed multiple times on a respondent, its score is the same in all cases. The second meaning of reliability; Refers to the similarity of items, which means how test-driven the test questions are. The histogram of the research depicts in Figure1.

Measurement Model Test

A measurement model is a model in which the relationships between observable and hidden variables are assessed. As its name implies, the role of observable variables in this type of model is significant: 1) the Size model reliability test, and 2) the validity test of the measurement model. Evaluation of model reliability test is essential because, in reflective measurement models, a set of observable variables reflect a unique hidden variable that must be a condition of homogeneity and one-dimensionality. For this purpose, the software evaluated three indicators or criteria to evaluate the reliability of the measurement model. The measurement model test was examined: 1) the reliability of each of the observable variables) the reliability of the reagents, 2) Cronbach's alpha, and 3) the composite reliability (Fig. 2). Factor load is a numerical value that determines the intensity of the relationship between a hidden variable and the corresponding explicit variable during the path analysis process. The higher the factor load of an index concerning a given structure, the more that index explains that structure. In addition, if the factor load is a negative indicator, it indicates its negative impact in explaining the relevant structure. In other words, the question about that indicator is inverted. Figure 3 di¬agram shows the factor loads, and all factor loads are more significant than 0.30, so the model's validity is confirmed in terms of factor loads.

Test Criteria of Pls General Model

The GOF criterion or index is used to check the validity or quality of the model in PLS analysis. This GOF index is a number between 0 and 1, which the closer it is to one, the higher the validity and quality of the model. This index considers both measurement and structural models and is utilized to measure the model's overall performance. Three values of 0.15, 0.2, and 0.35 are determined as low, medium, and strong predictive power. According to the value obtained from the above formula, a robust model fit was determined (Fig. 4).

Figure 4 shows the results obtained from the eight variables of tourism development in the present study, among which the

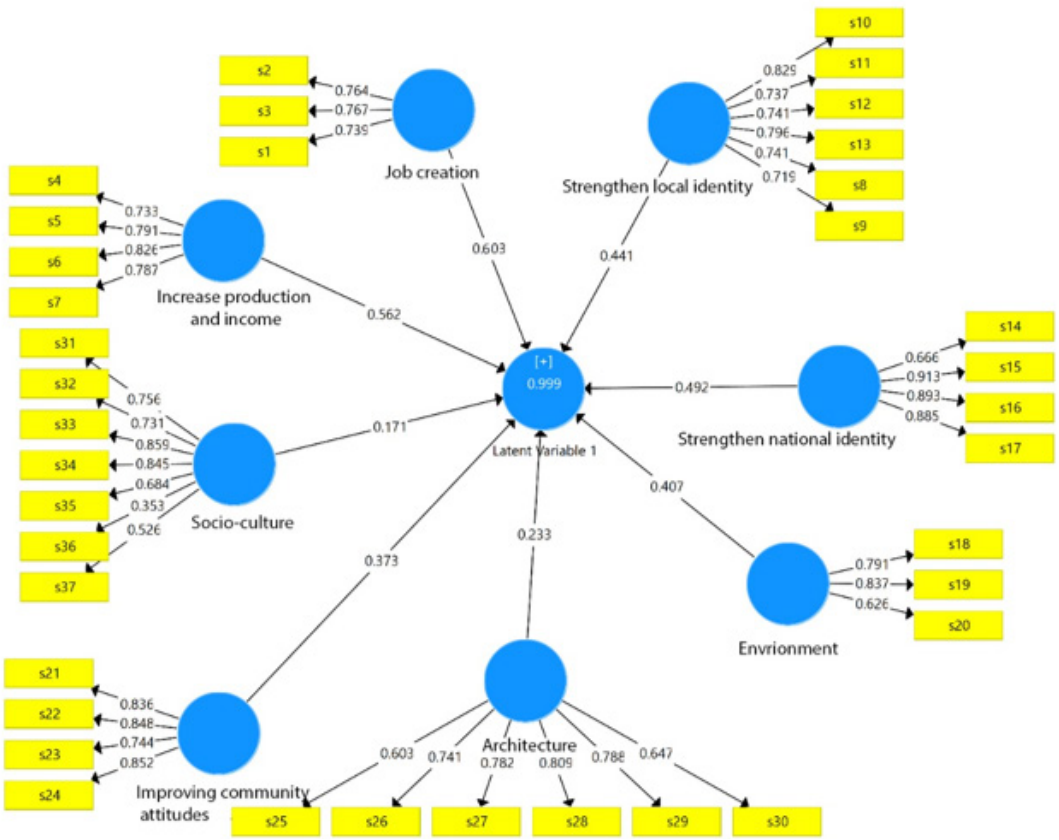

Fig. 2: Results of structural equations based on standardized coefficients

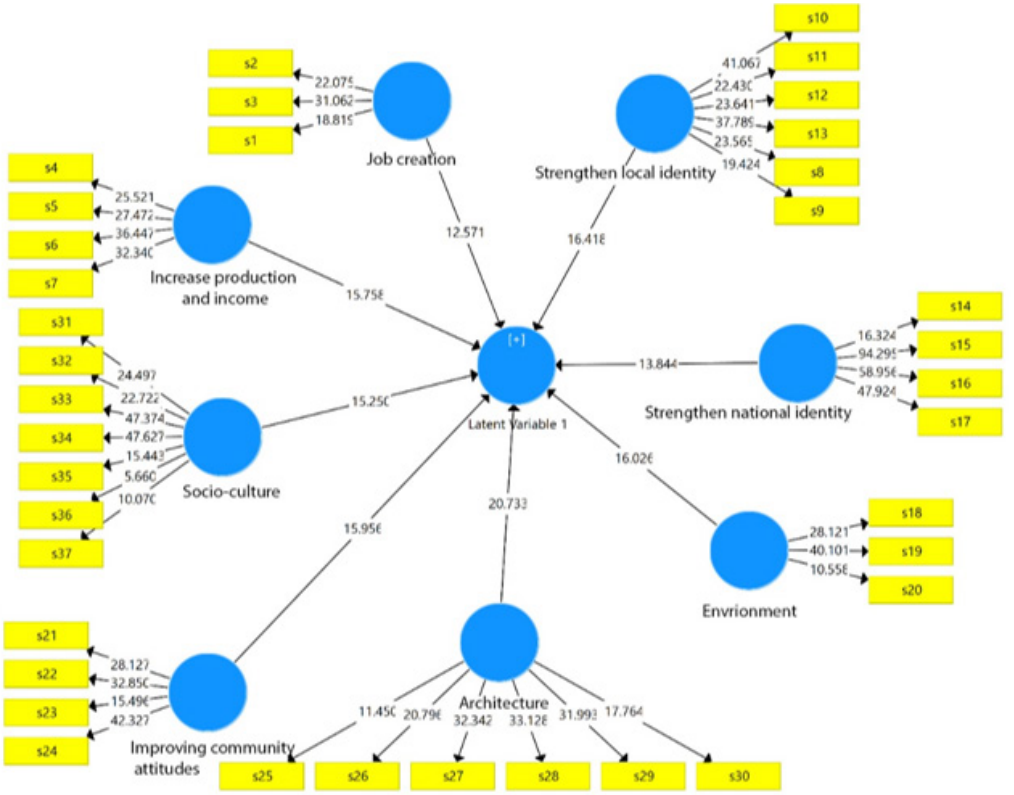

Fig. 3: Results of structural equations based on significance coefficients

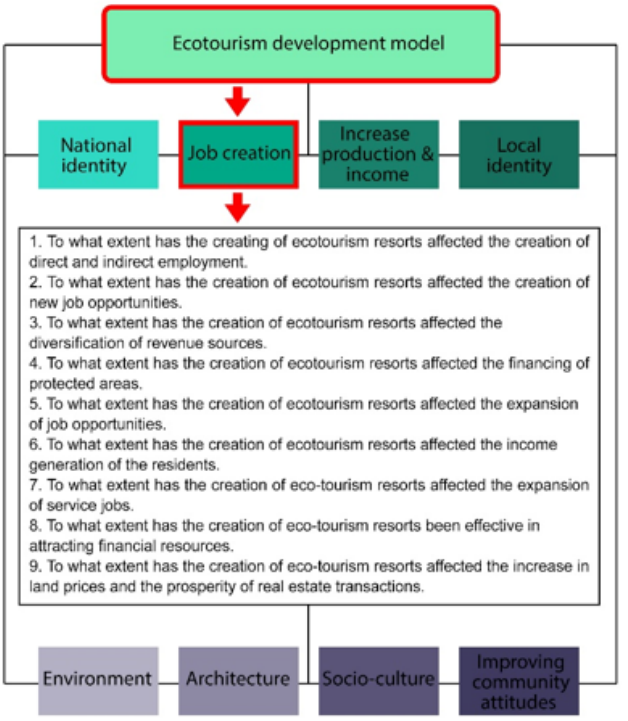

Fig. 4: Model of ecotourism development with emphasis on questions related to job creation (*ED: ecotourism development)

employment factor has a greater emphasis on the development of ecotourism.

Part 2: Economic Development Model

One Sample T-Test

A single-sample t-test is used when a sample and the average intend to compare with a standard norm or even an expected number. In this test, it is assumed that a sample of volume N and mean M is selected from a community to determine whether this sample can be considered a random sample of the community or not? This test is used to compare the mean of the population with the hypothetical mean. In other words, through this test, the status of the mean of the statistical population will be decided. The following is a list of these hypotheses:

1. The data are quantitative.
2. The distribution of the statistical population is normal.
3. The variance of the statistical population is constant but unknown.

This parameter must be calculated or estimated by sample observations.

Friedman Test

The Friedman test is a non-parametric test used to compare three or more dependent groups measured at least at the rank level. This test can also be applied to continuous data (distance or relative), but their ranking is also considered when ranking this data. Friedman test is the non-parametric equivalent of dependent F test in repeated measures analysis of variance. In this case, to perform the analysis of variance of duplicate data, there is no need for assumptions such as normal distribution, parity of variance, and scale continuity. Therefore, if one or all of the above hypotheses are rejected, the Friedman test is used. The economic development model was evaluated in this study. How to evaluate and collect data was a researcher-made questionnaire. Respondents were randomly selected from 384 villages identified in the third section; That is, it includes the villages of Ghazian, Liafo, Sheikh Ali Toseh, Mirza Golband, and Radar Pashteh. The study of the significant relationship between the three components depicts in Figure 5. The following are descriptive statistics.

Tables 7 and 8 indicate that the impact of ecotourism in job creation there is a significant difference between the sample

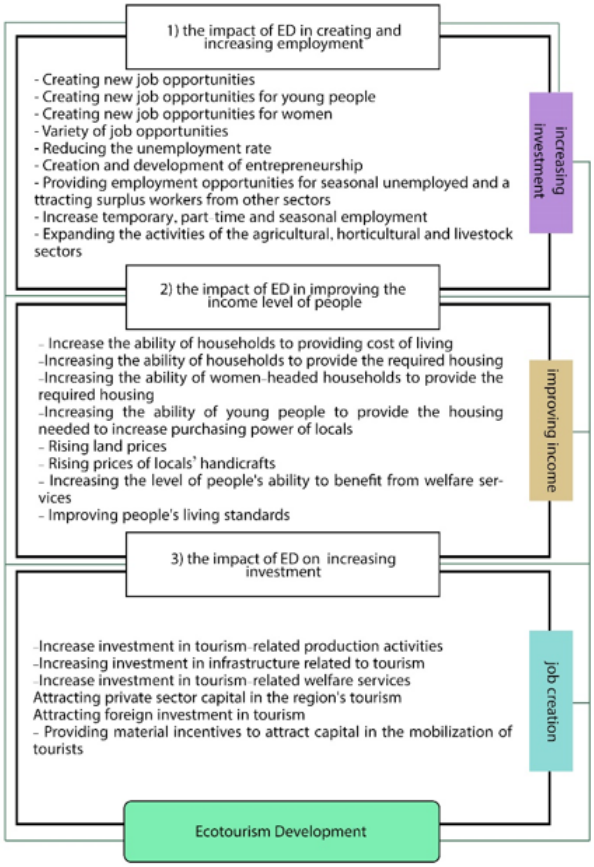

Fig. 5: Explaining the pattern of economic development in the region ecotourism: increasing investment, improving income and job creation (ED: ecotourism development)

Table 7: Descriptive statistics on the impact of ecotourism on job creation

Index	N	Mean	Std. deviation	Std. error deviation
The impact of ecotourism on job creation	384	3.4997	.44669	.02279

Table 8: One sample t-test: the impact of ecotourism on job creation

Test Value = 3						
Index	T	df	sig	Std. error mean	95% Confidence Interval of the Difference	
					Lower	Upper
The impact of ecotourism on job creation	153.530	383	.000	3.49971	3.4549	3.5445

average and the hypothetical average of the community (N) at a significance level of 0.01 (t = 153.30). Besides, the results show that ecotourism's impact on job creation is moderate to high because the average obtained is 3.49 higher than the hypothetical average number of 3 (Fig. 6).

Figure 6, No. 1, indicates a significant difference between the average of the sample and the hypothetical average of the N at the significance level of 0.01 regarding the effect of ecotourism in improving the income level of people (t = 163.59). The results show that the effect of ecotourism in raising the income level of people is moderate to high because the average obtained is 3.41, higher than the hypothetical average of number (3). The results of No. 2 indicate a significant difference between the sample average and the hypothetical average of the community at the significance level of 0.01 (t = 131.69) regarding the effect of ecotourism in increasing investment with tourists. The results indicate that the impact of ecotourism on tourism-related production activities is moderate to high because the average obtained is 3.52 more than the hypothetical average number (3). Results 3 and the Pearson correlation coefficient

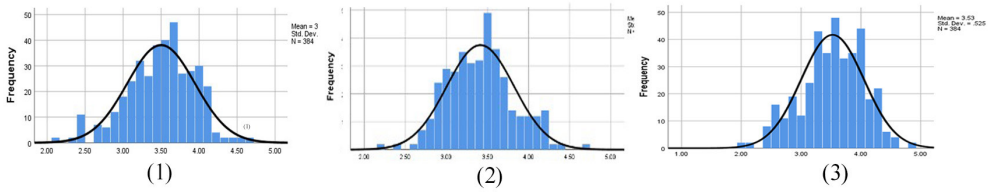

Fig. 6: 1) Descriptive diagram of the impact of ecotourism on job creation; 2) improving income; and 3) increasing investment

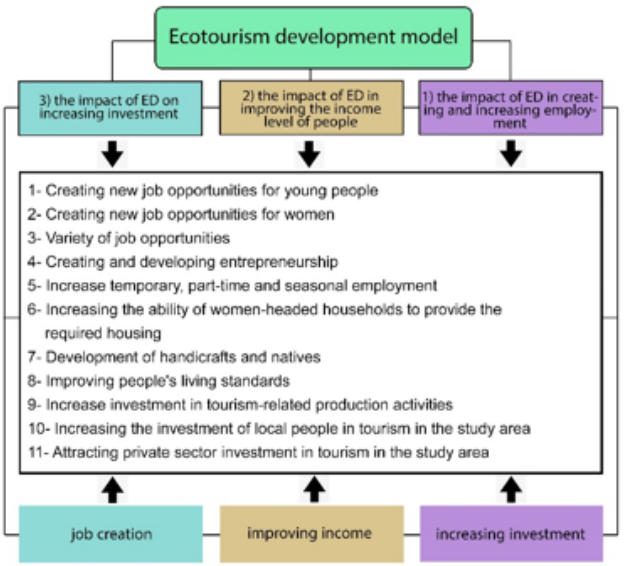

Fig 7: Ecotourism development model of job creation

test in Table 8 show that a positive and significant relationship between the components of job creation and income and investment increase. This relationship is also statistically confirmed because the level of significance obtained is less than it is 0.05.

Descriptive Statistics

The method of this part of the research, which is descriptive-analytical, was analyzed using SPSS software. Descriptive statistics on the impact of ecotourism on creating and increasing employment, raising people's income levels, and increasing investment are given in Tables 9 to 11. The one-sample t-test shows that ecotourism has a positive and significant effect on the questions and components of creating and increasing employment, income, and investment, and this relationship has been statistically confirmed. Because all significant values obtained are less than 0.05. In the following, the economic development and job creation model for the development of ecotourism obtained in this study is introduced (Figure 7).

Table 9: Component 1: the impact of ecotourism in job creation (Roshanali & Riahi, 2017)

	sig	df	t	Std. error deviation	Std. deviation	Mean	N
Creating new job opportunities	.000	383	61.648	.05627	1.10260	3.4688	384
Creating new job opportunities for young people	.000	383	76.308	.05075	.99443	3.8724	384
Creating new job opportunities for women	.000	383	72.776	.04727	.92629	3.4401	384
Variety of job opportunities	.000	383	72.995	.04934	.96686	3.6016	384
Reducing the unemployment rate	.000	383	72.374	.04966	.97304	3.5938	384
Creation and development of entrepreneurship	.000	383	72.939	.04945	.96900	3.6068	384
Providing employment opportunities for seasonal unemployed and attracting surplus workers from other sectors	.000	383	62.182	.05139	1.00696	3.1953	384
Increase temporary, part-time and seasonal employment	.000	383	73.314	.04877	.95569	3.5755	384
Expanding the activities of the agricultural, horticultural, and livestock sectors	.000	383	52.703	.05964	1.16870	3.1432	384

Table 10: Component 2: the development of ecotourism in improving the income level of the people

	sig	df	t	Std. error deviation	Std. deviation	Mean	N
Increase the ability of households to provide the cost of living	.000	383	46.300	.06513	1.27632	3.0156	384
Increasing the ability of households to provide the required housing	.000	383	68.159	.04883	.95684	3.3281	384
Increasing the ability of women-headed households to provide the required housing	.000	383	88.322	.04249	.83259	3.7526	384
Increasing the ability of young people to provide the housing needed to increase the purchasing power of locals	.000	383	64.952	.04887	.95774	3.1745	384
Rising land prices	.000	383	54.502	.05977	1.17132	3.2578	384
Rising prices of locals' handicrafts	.000	383	74.150	.04882	.95662	3.6198	384
Increasing the level of people's ability to benefit from welfare services	.000	383	69.977	.05087	.99689	3.5599	384
Improving people's living standards	.000	383	69.210	.05095	.99835	3.5260	384

Table 11: Component 3: The Impact of Ecotourism on Increase investment ((روشنعلی و ریاحی، 1396))

	sig	df	t	Std. error deviation	Std. deviation	Mean	N
Increase investment in tourism-related production activities	.000	383	75.274	.04978	.97555	3.7474	384
Increasing investment in infrastructure related to tourism	.000	383	56.420	.06296	1.23373	3.5521	384
Increase investment in tourism-related welfare services	.000	383	61.337	.05490	1.07576	3.3672	384
Increase investment in tourism-related welfare services	.000	383	74.176	.04676	.91638	3.4688	384
Attracting private sector capital in the region's tourism	.000	383	84.626	.04468	.87558	3.7813	384
Attracting foreign investment in tourism	.000	383	63.132	.05478	1.07346	3.4583	384
Providing material incentives to attract capital in the mobilization of tourists	.000	383	52.164	.06345	1.24339	3.3099	384

CONCLUSION

This study aims to provide a model for ecotourism development to the economic development of rural areas in the free margin of roads in the north of the country from Ememzadeh Hashem to Rudbar. Accordingly, this research was conducted in two stages. For proving the research hypothesis, the factors affecting the development of ecotourism were first identified and identified, which included eight topics including national identity, job creation, productivity growth, service prosperity, environmental, physical, socio-cultural, and community attitudes and awareness to determine which variable will have the most significant impact on the development of ecotourism. The results of the questionnaire and their analysis based on correlation coefficient and structural model showed that the factor of job creation would be the most crucial variable in tourism development.

After identifying this factor, the second research phase was conducted to determine what factors could increase economic development and job creation based on attention to ecotourism factors. At this stage, three components include: 1) the impact of ecotourism on creating and increasing employment; 2) The development of ecotourism in improving the level of income of the people and 3) the impact of ecotourism in increasing investment, each of which also had its subset, was considered.

The results show the 11 economic development and economic growth factors, which include creating job opportunities for young people, creating job opportunities for women, diversifying job opportunities, creating and developing entrepreneurship, increasing temporary, part-time, and seasonal employment, and increasing women's empowerment. The head of the household is in providing the required housing, developing handicrafts and indigenous peoples, improving the living standards of the people, increasing the level of investment in tourism-related production activities, increasing indigenous peoples' investment in regional tourism, and attracting private sector investment in regional tourism. It is hoped that the results of this study can be used as a policy for economic improvement and development in rural areas.

AKNOWLEDGEMENT

This article is taken from the first author's doctoral (PhD) dissertation entitled "Analysis of design patterns and enhance tourism-recreational spaces site selection to promote ecotourism and economic development on the fringe of the free road of the north of the country (Study area: Imamzadeh Hashem to Rudbar villages)" which has been defended at the Islamic Azad University, Khalkhal Branch.

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