

The Impacts of Mud Volcano Tourism on Developing Rural Areas

Gholam Reza Miri, Masoumeh Hafez Reza Zaad
Hamidreza Shahraki

Faculty of Geographic, Azad University Zahedan, Iran

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Abstract

In fact, nowadays tourism is considered as one of the important tools for defining national and cultural identity, education, income and economical growth. Among the tourism fields the growth of ecotourism is very high that according to the forecasting from international tourism organization the 21th century will be the century of ecotourism. The objective of this research is reviewing the influences of mud volcano tourism on developing the rural areas. The method of conducting this research is descriptive by applying SWOT model. It means that mud volcano in Pirgol with having capabilities in tourism industry can be an example of tourism spots but it has some challenges and issues such as lack of investment and lack of infrastructures as the main barriers for its tourism.

Introduction:

Currently tourism, within the national, regional and local frameworks is one of the important tools in development and removing deprivation. Tourism is a crucial regional construction factors and it is the activity which leads to enhancement of social and economic conditions in regional level and also justly distribution of income and increase of employment. Iran because of having various tourism attractions especially historical attractions, is one of the top 10 worlds around the world and because of hospitality of Iranians is among the first places compared to other countries (Beig Mohammadi, 2009: 248).

Because of the fact that Iran is located on route of Silk Road, it is the bridge between East and West worlds so Iran is one of the important areas of civilization globally. On the other side attractions and natural, cultural and artistic landscapes as well as historical and religion places added more value to its importance (Rezvani, 2008). Iran because of having environmental and climate features and also natural capabilities and biological variations has the sufficient ability for attracting the tourists. This country because of natural and historical attractions has the fifth place globally and for the climate variation has the second place among the countries all over the world but it has the 80th place related to attracting the tourists globally. According

to the announced statistics from past years, from the total tourists who have visited Iran only 2.2% were eco-tourists.

Therefore it is obvious that ecotourism has a minimum share related to national economy of the country but still regardless of existence of issues like cultural tourism limitations and lack of proper social context, the ability of this country for advancing the hiking can be more than other parts of tourism. So by providing, recognizing, planning and investing sufficiently in this industry we can provide the required infrastructure for continues development and activation of this sector (Azizi and Ranjbari, 2012).

In countries like Iran which a main part of their financial resources is dependent on oil and also have the potential capabilities and different historical, cultural and social attractions, enhancing the tourism industry can be very helpful (Beig Mohammadi, 2009: 247). Tourism can be an economical activity as the substitute of the single-product economy which can accelerate the development pace through variation in national economy (Papoli Yazdi, 2007:82). One of the most interesting and unique geomorphologic processes in rugged structure of south east of the country is mud volcano which is highly important because of Geo tourism. Mud volcano is a natural phenomenon similar to volcano which is in the form of a conical hill and instead of lava coming out from its mouth; gas and mud come out (Ekati, 2012). Mud volcano in cosmology culture is defined as “ mud and hot water which is throwing out of the volcano’s mouth and generates temporary conical and sometimes natural gases combined with oily sediments are mixed with these materials as well” (Negaresh, 2006).

Sistan Baluchistan province as the widest province in Iran spread from Hamoon to Oman and has a lot of beautiful geomorphologic attractions which are unique and rare in Iran but in the competitive context of the world because of unknown reasons they are not recognized yet. The important point about the mud volcano in this area is that even though they have unique features which might be more attractive while compared to similar samples in other countries, but unfortunately they have not been introduced and recognized yet. Mud volcano in Pirgol is one of the unknown geomorphologic phenomena in this province which is considered as one of the natural attractions of Sistan Baluchistan as well.

Therefore, the reason for enhancing tourism in Pirgol area can be reviewed from two different dimensions: first, in this area the rate of unemployment is 30% which is very high and yet in agriculture and livestock has not been improved and the employment is becoming less each day. Second, although mud volcano in Pirgol is one of the geomorphologic forms in Iran and this province which has the potential of tourism but this phenomena was not accessible for students and people in order to be studied, so according to deprivation of this province and Karvandaar and Pirgol areas and also high rate of unemployment in this area, there is a necessity to employ all of the resources and abilities in order to remove deprivation and poverty and generate employment and income in this province. Hence, in this research it was tried to introduce this beautiful phenomena from geomorphologic perspective and also its application within economy of the rural areas such as Khash which is one of the most deprived areas in country.

Literature review:

In fact nowadays tourism industry is the important tools for defining national and cultural identity, education, income and economical growth (Moshiri et al, 2012). Among the tourism fields the growth of ecotourism is very high that according to the forecasting from

international tourism organization the 21th century will be the century of ecotourism (Soleimani, 2011: 3). Ecotourism is a responsible trip into natural areas and by considering the ecosystem which results in more income and improving the living conditions of people. Ecotourism after cultural and religious tourism is the third important tourism of the country and has the highest potentials for attracting tourists both national and international (Azizi and Ranjbari, 2012).

Any place which is visited because of its unique geographical conditions such as interesting geology, environmental and botany phenomena will be known as the ecotourism and tourism attractions. One of the interesting and unique geomorphologic processes in rugged structure of south east of the country is mud volcano which is highly important because of Geo tourism. Mud volcano is a natural phenomenon similar to volcano which is in the form of a conical hill and instead of lava; mud is coming out from its mouth (Ekati, 2012).

Tourism:

Tourism is the activities of those individuals who are travelling outside their lodging because of rest, work and other reasons and will stay there at least 24 hours and maximum less than 1 year (Papoli Yazdi, 2007:82).

Economical impacts of tourism:

Employment, obtaining financial income for the host country and improving the payment balance, increasing tax incomes from economical activities related to tourism, providing regional balance, wealth balance, evolution in economical activities and shifting income from urban into rural areas and finally preventing emigration of rural people are considered as the tourism main impacts (Ostad Hussein, 2001:15).

Socio-Cultural impacts of tourism:

The social impacts of tourism are the changes which will happen in the life of the people in host country and these changes mainly happen because of the direct contact of these people with tourists. The cultural impacts are the changes which will happen in art, costumes and architecture of people in host country (Vai Gee Chak, 2012: 327).

Rural Development:

Rural development includes a wide range of activities and human mobilization which enables people to stand by their own and remove the structural inabilities; this mentioned inability leads to the fact that people live in unfavorable conditions (Bahrami, 2004: 147). Belisle and Hoy (2002) in a study titled: "Observed impacts of tourism by the citizens": a case study in Santa Manta demonstrated that in rural areas of British Colombia, more than 80% of citizens, recognized tourism as the important factor for employment in this area.

Liu and Var (1987) related to evaluating the ideas of citizens about tourism in Hawaii have shown that host society were all totally agreed in economical and cultural profit as the results of tourism but they had doubt about linking environmental issues to tourism.

Ritchie (1988) in a study titled: "Codification of tourism policy" which was conducted in Alberta, Canada revealed that 87% of the citizens realized tourism as an important factor for employment and 10% of them did not consider the tourism staffs as the important supporters

of local economy. Tosun (2002) related to studying impacts of tourism from host population perspective, mentioned some of the negative economical impacts such as increasing prices of goods and services, increasing mendacious prices of goods and living costs.

Thompson (2007) investigated about this subject in a research titled: "Studying impacts of tourism on rural development" with an econometric approach. In this research, through a compatible approach with environment for evaluating the level of employment in key service industries, it was revealed that tourism industry has the significant relationship with employment in Nebraska province.

Joseph and Amanda (2010) studied about this subject in a study titled: "Reviewing impacts of tourism industry development on rural living" in Okavango, Botswana. The objective of this research is protection of environmental diversity and rural development. The results of these investigations and also in depth interview with people of this village have shown that tourism development in villages leads to improvement of living such as housing, employment, income and social facilities like water supply system, transport and education which provides the rural development at last.

Significance of the study:

Tourism in current century is an industry without smoke that has a lot of capabilities and popularity. The remarkable growth during the past 50 years demonstrates the economical and social importance of this phenomena and its enhancement especially in less developed countries is an influential factor against poverty which results in increase of income for different social levels, less unemployment, economical growth and finally improving the living of people and their social facilities (Kazemi, 2008: 6). Tourism is recognized as an efficient catalyst for social and economical reconstruction and development in rural areas in such a way that during the recent years in Europe it was the center of attention in order to remove social and economical issues in border rural areas or the villages which are facing with decrease in agricultural activities (Sharply, 2002, 233).

The objective of this research is investigating the impacts of mud volcano tourism on developing rural areas so the location of this study will be Pirgol's mud volcano. Reviewing the literature shows that tourism and rural development are the subjects which have been studied before but until now there was no research related to studying the impacts of Pirgol tourism for mud volcano and its impacts on developing rural areas and its findings can help the weakness in its theories and the managers can use them as well.

By the way, because of the fact that usually the methods of tourism industry are very complicated and different in various locations, therefore the impacts would be different as well in visited areas. Hence, recognizing the influences and outcomes in tourism areas which have been studied and also investigating the impacts of tourism and forecasting these influences for management and planning will be inevitable in order to increase the benefits of tourism development and decreasing possible damages or negative influences in host societies and finally achieving balance and stable development of tourism areas.

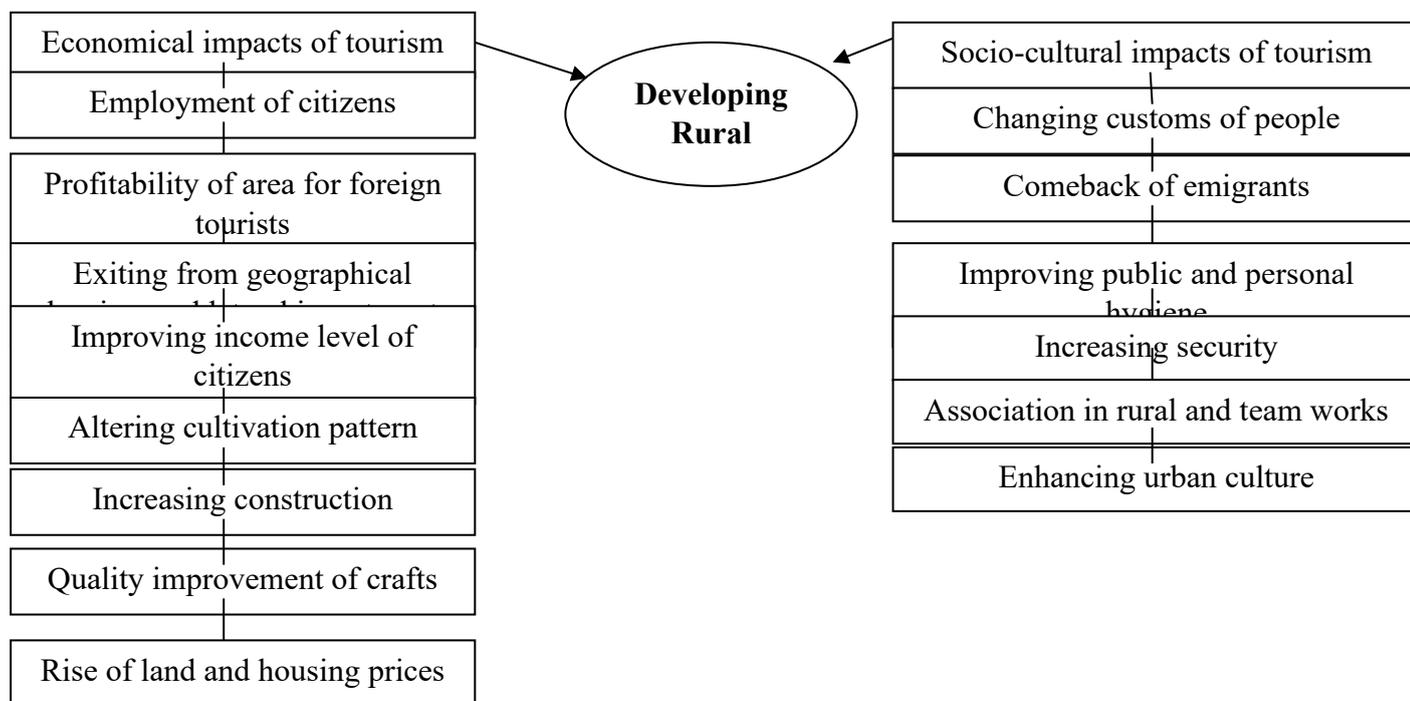
Research Hypotheses:

- 1: Pirgol mud volcano has the capability and potential for transforming into tourism spot.
- 2: The economical impacts of Pirgol mud volcano leads to development of rural areas.

3: The socio-cultural impacts of Pirgol mud volcano leads to development of rural areas.

According to the mentioned points above the following research framework was designed (Figure 2-2).

Figure 2-2: The Conceptual Research Framework



Research Methodology:

The objective of this research is studying the impacts of mud volcano tourism on developing rural areas (Case study of Pirgol mud volcano). The methodology of this research is descriptive by applying SWOT model.

The population of this study is the tourism officials, Azad University and Khash Payam-E-Noor lecturers, communities bosses and the people who are living in that area. At first according to conducted investigations on external and internal environment of Pirgol mud volcano, a list of strength, weakness, opportunities and threat points has been identified and then based on people’s ideas as well as tourists and officials and weighting each of these issues and analyzing and calculating them, the priorities were recognized. Finally for minimizing or removing weakness and threat points as well as enhancing strength and opportunity points related to expanding economical, cultural and social impacts of tourism of this spot (Pirgol mud volcano) on development of rural areas, proper strategies have been presented.

100 individuals have been chosen by random sampling method. 40 of them are the tourism officials, 10 individuals are the Azad University and Khash Payam-E-Noor lecturers, 20 of them are community bosses and 30 individuals are the citizens of this area. Through distribution of questionnaire the data collection has been done.

Table 1-1: SWOT matrix and strategy development

	Weakness W	Strength S	Matrix SWOT
Strategies ← WO		Strategies ← SO	Opportunities O
Strategies WT		Strategies ← ST	Threads T

تعیین استراتژی های کوتاه مدت و بلند مدت

Measurement Tool

The measurement tool for this study is the questionnaire of the economical, cultural and social impacts of mud volcano tourism on rural areas (Case study Pirgol mud volcano). The questionnaire of the economical, cultural and social impacts of mud volcano tourism on rural areas (Case study Pirgol mud volcano), was verified through literature review and analyzing attractions, facilities , tourism services and conditions under monitoring of supervisors and consultants. The durability of the questionnaire was obtained via Cronbach’s Alpha method. For analyzing the collected data, two statistical approaches have been used:

A: Descriptive analysis

A descriptive analysis was applied in order to describing the data which includes Frequency Table, Mean and standard deviation.

B: Regression analysis

In this research for analyzing the hypotheses, Univariate T-Test and SPSS as well as Excel have been applied and providing the required maps have been accomplished by Arc GIS software.

Data analysis:

According to the obtained results from studying about this area and also outcomes of group discussions and SWOT analyses such as: being the only non-coastal mud volcano of Iran, natural landscapes and geology, proper diversity of herbal and animal species, security base of Sepah in mud volcano area, positioned among three towns (Khash, Iranshahr and Zahedan), using mud volcano as a proper geology workshop for scientific studies, it can be concluded that Pirgol’s mud volcano has the potential of becoming a tourism spot. Therefore the H1 hypotheses will be accepted.

H2: The economical impacts of Pirgol mud volcano leads to development of rural areas.

H0: The economical impacts of Pirgol mud volcano does not lead to development of rural areas. H0: β=0

H1: The economical impacts of Pirgol mud volcano leads to development of rural areas. For analyzing this hypothesis the Univariate T-Test has been used.

According to the outcomes of T-Test, mean of respondent’s score related to influence of economical impacts of tourism on development of rural areas including: employment of people in nearby villages to mud volcano 4.09, introducing the area to foreign tourists and generating profit from them 3.91, possibility of introducing the area and exiting from geographical barriers and lateral investment (Mineral water factory, Date packing) in nearby villages 4.05, improving income level 3.84, modifying the cultivation model 4.02, developing construction 4.56, improving quality and quantity of crafts 3.40 and also increasing the land

and housing price 3.61, was obtained that is more than hypothesis mean (3) that this difference is 99% significant ($p < 0.01$).

Therefore based on statistical perspective it can be concluded that tourism in a high level impacts the economical indicators such as employment of people in nearby villages to mud volcano, introducing the area to foreign tourists and generating profit from them, possibility of introducing the area and exiting from geographical barriers and lateral investment (Mineral water factory, Date packing) in nearby villages, improving income level, modifying the cultivation model, developing construction, improving quality and quantity of crafts and also increasing the land and housing price which leads to development in rural areas. Hence H1 hypothesis is accepted by this research.

H3: The socio-cultural impacts of Pirgol mud volcano leads to development of rural areas.

H0: The socio-cultural impacts of Pirgol mud volcano does not lead to development of rural areas. $H_0: \beta = 0$

H1: The socio-cultural impacts of Pirgol mud volcano leads to development of rural areas. $H_1: \beta \neq 0$

For analyzing this hypothesis the Univariate T-Test has been used.

According to the outcomes of T-Test, mean of respondent's score related to socio-cultural indicator including: altering the customs of people 3.64, comeback of villages around mud volcano 3.67, improving personal and public hygiene 3.91, security enhancement 3.56, rural team work collaboration 3.35, preventing emigration 3.72 and developing the urban culture and keeping distance from rural culture 3.42 was obtained that is higher than hypothesis mean (3) and this difference is 99% significant ($p < 0.01$). The findings of test are presented in Table 13-4.

Therefore based on statistical perspective it can be concluded that tourism in a high level impacts the socio-cultural indicators such as altering the customs of people, comeback of villages around mud volcano, improving personal and public hygiene, security enhancement, rural team work collaboration, preventing emigration and developing the urban culture and keeping distance from rural culture which leads to development in rural areas. Hence H1 hypothesis is accepted by this research.

Matrix of required strategies and approaches for developing tourism in Pirgol mud volcano:

Threats (T)	Opportunities (O)	SWOT Analyses
1T -Imbalance of the environment	1-O Using local media	External
2T -Imbalance of ecology	2-O Scientific tours for students	Internal
3T -Noise and environmental pollutions	3-O Positioning among three towns	
4T -Disruption of economy	4-O Educational and Recreational tours	
5T -Being at risk of species	5-O Economical development and advancement of villages	
6T -Disappearing of natural and original environments	6-O Introducing the area for tourists	
7T -Disappearing of natural features	7-O Possibility of introducing the area	

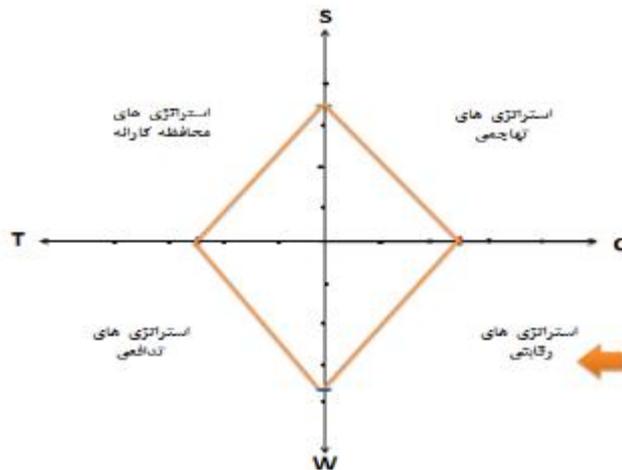
<p>8T -Establishing a lot of constructions and buildings 9T -Decline of drinking water resources 10T -Disappearing of native culture</p>	<p>8-O Establishing mud therapeutic organizations 9-O Establishing resorts 10-O Setting up crafts festivals</p>	
<p>Conservative Strategy (ST) 1- Diversification of activities, facilities and tourism services for applying a wide range of people and also satisfying the tourists 2-Diversity of advertising programs for presenting tourism attractions and mud volcano spot and having more tourists 3-Determining the optimum level of population in recreation centre and spots of Pirgol mud volcano</p>	<p>Offensive Strategy (OS) 1-Focus on natural tourism and ecosystem 2-Efficiently and sufficiently using motivation enhancement among urban people for effective employment of natural attractions of Pirgol mud volcano 3-Recognizing and enhancing attractions and facilities for competition with other competitive spots 4-Using experts for establishing cooperative organizations 5-Coordination among linked organizations and departments for integration of tourism functionalities and employing attractions systematically 6-High focus of tourism activities on using natural attractions beside mud volcano for generating income and employment</p>	<p>Strengths (S) S1 – The only non-coastal mud volcano in Iran S2- Natural landscapes and geology S3-Diversity of herbal and animal species S4-Using mud volcano as... S5-Lodgment of Balouch nomads with specific culture S6- Favorable conditions of using... S7- Security base of tribes S8- Religious beliefs of people S9- Being close to Chabahar transit route</p>
<p>Defensive Strategy (WT) 1-Holding seminars and meetings for developing investment in tourism industry by city council and other related officials and organizations and inviting investors 2-Encouraging people to participate in</p>	<p>Competitive Strategy (WO) 1- Reviewing the programming method and governmental support from tourism spots such as Pirgol mud volcano 2-Reviewing the facility and tourism service</p>	<p>Weakness (W) W1- Unavailability of proper access method W2- Unavailability of initial facilities W3- Unavailability of proper advertisement for presenting... W4- Unavailability of a certain trustee for...</p>

<p>development of villages related to infrastructures, facilities and tourism equipments or governmental supports 3-Trainign and informing people about treating tourists and training tourists about local culture, customs and traditions 4-Codification of certain rules for optimum usage of attractions, products and tourism services of village for tourists in order to prevent disruption of these attractions</p>	<p>distribution methods and other services in region 3-Reviewng the way of usage from people association in this mud volcano and assigning the tasks to local people</p>	<p>W5- Unavailability of a proper resort for... W6- Unavailability of mud therapeutic organizations W7- Not having a comprehensive understanding about mud volcano W8- Existence of mental insecurity among... W9- Lack of investment of sectors... W10- Parallel of executive systems</p>
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According to diagram

Moreover, according to the diagram 5-4 from the view point of four participated groups, the strategies of Pirgol mud volcano area are close to competitive strategies.

Matrix of assesing the status and strategic actions from the perspective of four participated groups. (Diagram 5-4)



Source: Calculations of collected data from questionnaire

Research hypotheses findings:

H1: Pirgol mud volcano has the potential capability and potential for transforming into tourism spot.

According to the results obtained from observations and investigations in this area and also the results of group discussions and SWOT analysis including: being the only non-coastal mud volcano of Iran, natural landscapes and geology, proper diversity of herbal and animal species, security base of Sepah in mud volcano area, positioned among three town (Khash, Iranshahr

and Zahedan), using mud volcano as a proper geology workshop for scientific studies, it can be concluded that Pirgol mud volcano has the potential of becoming a tourism spot. Therefore the H1 hypotheses will be accepted.

H2: The economical impacts of Pirgol mud volcano leads to development of rural areas.

The findings of this study demonstrates that tourism in a high level impacts the economical indicators such as employment of people in nearby villages to mud volcano, introducing the area to foreign tourists and generating profit from them, possibility of introducing the area and exiting from geographical barriers and lateral investment (Mineral water factory, Date packing) in nearby villages, improving income level, modifying the cultivation model, developing construction, improving quality and quantity of crafts and also increasing the land and housing price which leads to development in rural areas which is compatible with findings of (Morad Nezhad, 2004).

It was revealed that it can have different influences on development including: diversity of jobs and employment in tourism in such a way that all of the simple and armature workers and also all of the experts can be employed in this industry (Sharif Zadeh and Moradi Nezhad, 2003). One of the most important functions of rural tourism is creating new job opportunities in rural areas which lead to decreasing unemployment, emigration of rural people into metropolis and minimizing the living in boarders. According to (Mahdavi et al, 2008) tourism impacted economy, employment and generating income as well as increasing the price of land and its trade. (Aligholi Firouz Jaiee et al, 2008) concluded that from citizen's perspective, tourism had some positive impacts such as providing job opportunities and income as well as negative impacts including increase of products and services prices, mendacious increase of prices and trade of land. (Aligholi Firouz Jaiee et al, 2008) stated that tourism had some positive impacts such as providing job opportunities and income as well as negative impacts including increase of products and services prices, mendacious increase of land price, and increase of noise pollution and disruption of natural resources.

(Ghaffari and Torki Harchegani, 2010) mentioned that there is a significant relationship between increasing the number of tourists, tourism improvement and improving social and economical indicators. (Belisle and Hoy, 2002) noted that in rural areas of British Colombia, more than 80% of citizens, recognized tourism as the important factor for employment in this area. Liu and Var (1987) demonstrated that host society was all totally agreed in economical and cultural profit as the results of tourism. Ritchie (1988) revealed that 87% of the citizens realized tourism as an important factor for employment and 10% of them did not consider the tourism staffs as the important supporters of local economy. Tosun (2002) mentioned some of the negative economical impacts such as increasing prices of goods and services, increasing mendacious prices of goods and living costs.

Thompson (2007) revealed that tourism industry has the significant relationship with employment in Nebraska province. Joseph and Amanda (2010) have shown that tourism development in villages leads to improvement of living such as housing, employment, income and social facilities like water supply system, transport and education which provides the rural development at last.

H3: The socio-cultural impacts of Pirgol mud volcano leads to development of rural areas.

According to the results of this study tourism in a high level impacts the socio-cultural indicators such as altering the customs of people, comeback of people in villages around mud volcano, improving personal and public hygiene, security enhancement, rural team work collaboration, preventing emigration and developing the urban culture and keeping distance from rural culture which leads to development in rural areas.

(Sharif Zadeh and Moradi Nezhad, 2003) demonstrated that one of the most important functions of rural tourism is creating new job opportunities in rural areas which lead to decreasing unemployment, emigration of rural people into metropolis and minimizing the living in boarders. According to (Mahdavi et al, 2008) tourism had more positive impacts in social context such as increasing the level of education, personal and public hygiene, increasing interaction with neighbor areas and decreasing emigration. (Torki Harchegani, 2010) demonstrated that there is a significant relationship between increasing the number of tourists, tourism improvement and improving social and economical indicators. Liu and Var (1987) demonstrated that host society was all totally agreed in economical and cultural profit as the results of tourism. Joseph and Amanda (2010) have shown that tourism development in villages leads to improvement of living such as housing, employment, income and social facilities like water supply system, transport and education which provides the rural development at last.

Conclusion:

Currently tourism, within the national, regional and local frameworks is one of the important tools in development and removing deprivation. Tourism is a crucial regional construction factors and it is the activity which leads to enhancement of social and economic conditions in regional level and also justly distribution of income and increase of employment. Iran because of having various tourism attractions especially historical attractions is one of the top 10 worlds around the world and because of hospitality of Iranians is among the first places compared to other countries.

The objective of this research is studying the impacts of mud volcano tourism on developing rural areas (Case study of Pirgol mud volcano). 100 individuals have been chosen by random sampling method as the sample of study. 40 of them are the tourism officials, 10 individuals are the Azad University and Khash Payam-E-Noor lecturers, 20 of them are community bosses and 30 individuals are the citizens of this area. Through distribution of questionnaire the data collection has been done.

According to the obtained results from SWOT analyses Pirgol mud volcano has the potential of becoming a tourism spot. Some of these potentials are as: being the only non-coastal mud volcano of Iran, natural landscapes and geology, proper diversity of herbal and animal species, security base of Sepah in mud volcano area, positioned among three towns (Khash, Iranshahr and Zahedan), using mud volcano as a proper geology workshop for scientific studies. According to the outcomes of T-Test it can be concluded that tourism in a high level impacts the economical indicators such as employment of people in nearby villages to mud volcano, introducing the area to foreign tourists and generating profit from them, possibility of introducing the area and exiting from geographical barriers and lateral investment (Mineral water factory, Date packing) in nearby villages, improving income level, establishing resorts,

developing construction, improving quality and quantity of crafts and also increasing the land and housing price as well as impacting the socio-cultural indicators including: altering the customs of people, comeback of people in villages around mud volcano, improving personal and public hygiene, security enhancement, rural team work collaboration, preventing emigration and developing the urban culture and keeping distance from rural culture.

Recommendations:

Because of the fact that economical, social and cultural impacts of tourism related to mud volcano leads to developing the rural areas for developing the tourism in Pirgol mud volcano the below points are suggested:

- Emphasize on natural tourism and ecotourism development.
- Efficient and effective utilization of increasing motivation among urban citizens in order to efficient application of natural attractions in Pirgol mud volcano.
- Identification and enhancing facilities and attractions in order to compete with other rival spots.
- Using expert workforce for developing cooperative associations and none governmental organizations (NGO).
- Creating collaboration among systems and linked sectors for integration of tourism functions and utilizing the attractions systematically.
- Focus on main tourism activities for utilizing natural attractions which are not used in this area in order to provide job opportunities and more income.
- Reviewing the planning and governmental supports from tourism spots such as Pirgol mud volcano and attempt for introducing them.
- Reviewing the method of distributing facilities and tourism services across the region.
- Reviewing the way of utilizing people's partnership in this mud volcano for developing and equipment of mud volcano and assigning the tasks to local people.
- Diversity of activities, facilities and tourism services for utilizing a wide range of people as well as satisfying the tourists by particular hospitality of region.
- Diversity of advertising campaigns for introducing attractions and tourism resources of this mud volcano and attracting tourists.
- Determining the optimum level of population density in recreation centers and places in Pirgol mud volcano.
- Holding seminars and meetings for developing investment in ecotourism industry by city council and other related officials and organizations and inviting investors for initial investment.
- Encouraging people to participate in development of villages related to infrastructures, facilities and tourism equipments or governmental supports.
- Training and informing people about treating tourists and training tourists about local culture, customs and traditions.
- Codification of certain rules for optimum usage of attractions, products and tourism services of village for tourists in order to prevent disruption of these attractions.
- Introducing crafts from neighbor villages of mud volcano to the tourists.

2-3-5 Suggestions for future study:

It is suggested that the future researchers consider and study the following points:

- Study and identification of tourism attractions and natural facilities of the town as the rival spots for mud volcano.
- Study the role of people's participation in developing tourism of Pirgol mud volcano.
- Study of creating a tourism site in town with centralizing the Taftan volcano as a natural phenomenon and other natural and cultural attractions of this town.

Research limitations:

According to the title of this research and also stated questions as well as sample of the study we can mention the following limitations of this research:

- Conducting research simultaneously with employment, so students who are educating separated from work in compressed courses have more freedom compared to the students who are simultaneously working and studying.
- Lack of controlling all of the influential variables.

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