

## **A Comprehensive Framework in Sustainability Assessment of Agricultural Exploitation Systems**

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### **Introduction**

Lack of a comprehensive framework is one of the most important challenges in sustainability assessment of Agricultural Exploitation Systems. This is the reason of tunnel vision in many researches in the field of sustainability. The history of Agricultural Exploitation Systems in Iran is back to thousands years ago, when ancient Iranian tried to domesticate wild animals and cereals in Iran. So, Agricultural Exploitation Systems are one of the fundamental issues in Iran's agriculture section and these systems are of great importance in agricultural development of the country and even in urban development. Studies show that since very beginning, governments focused their attention on this system because of its potentials and capabilities such as production, job creation, and generating income and this caused major changes and development. According to the performed studies, there are different frameworks for sustainability assessment of Agricultural Exploitation Systems. Most of these frameworks consider the sustainability issue not holistically and try to investigate the sustainability issue just in economic, social and environmental dimensions. In these frameworks, some dimensions of sustainability are highlighted, while highlighting some dimensions is in contradiction to holistic view in sustainability assessment. Therefore, this study aims to introduce those frameworks that are related to sustainability assessment of Agricultural Exploitation Systems and considers their inefficiencies and it also aims to introduce a comprehensive framework.

### **Methodology**

By using a critical method, this qualitative and quantitative study tries to introduce a comprehensive framework to assess sustainability of Agricultural Exploitation Systems; By using fuzzy analytic hierarchy process, this study gives weight to the existing criteria and sub-criterion in the recognized framework. To do so, two criteria were used for selecting the experts: First, recognized people have experiences in field studies in the case of Agricultural Exploitation Systems; they also have some documentary researches such as article, book and research projects. In this stage, different methods of sampling have been used including criterion-based sampling, snowball sampling and opportunistic sampling. Following that, participants were asked to perform pairwise comparisons in criteria and sub-criterion level; and to calculate fuzzy numbers in FAHP, Kong & Liu method has been used.

**Discussion and Conclusion**

Among four criteria that are effective in sustainability of Agricultural Exploitation Systems, management, capitals, vulnerability and tensions are the most important ones respectively. Based on experts' comments, management issue is the most important criteria among all other criteria. In fact, management is a determinant factor in providing or not providing sustainability in the system; So, this is one of the most important issues is sustainability assessment of Agricultural Exploitation Systems that needs more consideration. Fuzzy comparison matrix and deriving weights of these criteria showed that social capacity as a sub-criterion in deriving weights is the most importance criteria. Capital is the second effective criteria in assessment of agricultural farming sustainability and it is rarely mentioned in other presented frameworks. Fuzzy ranking of various capitals showed that human capital is weighted as the most important capital. This finding confirms that development tools are not located in mountains, plains an under the ground but they must be investigated inside the human brain. Performing fuzzy comparisons in the case of tension as a sub-criterion showed that productivity is the most important criteria in determining Agricultural Exploitation Systems. Other sub-criterion are stability, compatibility, flexibility and reliability respectively. Deriving weights of sub-criterion in the case of vulnerability showed that vulnerability in economic, social and environmental vulnerabilities are the most important criteria for sustainability assessment of Agricultural Exploitation Systems. According to the obtained results, it is recommended to use the proposed framework and the derived weights as the standards for sustainability assessment of Agricultural Exploitation Systems.

**Keywords:** Agricultural Exploitation Systems, Sustainability, Fuzzy Analytic Hierarchy Process.

**Spatial Analysis and Quantitative Assessment of Rural Housing Indicators in Iran****Saeid Maleki**

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**Received: 02.Dec.2014****Accepted: 07.May.2015****Introduction**

Housing has been one of the most essential needs of human life for a long time and it is one of the most important symbols of civilization and culture. Providing a shelter which is safe and secure is everyone's ambition and to reach to this aim, human beings have used many different methods and technologies to improve the quality and quantity of housing. Through time passage and change of structure and function and also through meeting new requirements, if physical texture which is a symbol of biological and cultural way of living could not accommodate with time and place conditions of that society, this problem causes lack of development and as a result, leads to physical chaos. These spatial developments in rural environment, problems and the resulted failures in settlement methods and following that effects of urban environments on spatial-physical texture of villages have caused many changes. Therefore, to reach to the optimal condition in spatial dimension, codification of a comprehensive plan in housing sector requires recognition and analysis in vast dimensions and awareness of quantity status of housing indicators in regional planning process. So, reaching to an optimal condition in housing, as a developmental indicator is essential. This study aims to study rural housing indicators throughout the country in different dimensions (infrastructural and facilities dimension, structural strength and health facilities) and tries to determine their spatial levels; after recognizing the differences between regions, this study provide solutions for improvement of effective factors to blur spatial inequalities.

**Methodology**

This study is a theoretical-practical study and uses a descriptive-analytical method. For data collection, documentary method has been used.

Data includes the results of general census of population and housing in 1390 according to each province separately. 41 variables are studied in this study and they are classified according to four general indicators. Following that, for giving weight to criteria, 20 experts commented and statistical analysis has been done by using factor analysis model and Fuzzy TOPSIS model. 41 variables are classified according to four main indicators including infrastructure and facilities, structural strength, facilities and health care facilities).

### **Discussion and Conclusion**

In the process of determining spatial level, recognizing and analyzing the facilities, obstacles, it is important to determine the development level of the regions regarding the level of satiation and deprivation. Basically, to reach development, determining spatial level is considered as a fundamental change and its realization is related to coordination between different dimensions. Because the studied issue is very important, this study considers the related indicators using Fuzzy TOPSIS model and factor analysis method; according to the studies and calculations it is proven that rural residents in Iran's provinces have a type of inequality. In other words, spatial distribution is not equal in all residents; because in rural regions of the following provinces are at the highest level of satiation: Mazandaran (0.460), Isfahan (0.464), Alborz (0.455) and Tehran (0.449); rural regions of the following provinces are at lower level of satiation regarding the rural housing indicators: Sistan and Baluchestan (0.265), South Khorasan (0.267), Hormozgan (0.267) and Kerman (0.270). Therefore, codification of a comprehensive plan for housing, especially rural housing, requires complete recognition and deep analysis in vast dimensions about housing and factors that affect it. It should be said that although these indicators are key elements in determining the quality and quantity of housing and each indicator has a special position in housing planning system, but existence of each indicator is not the necessary condition for improving the quantity level of housing. So in discussing about housing quality, sufficient conditions require that all indicators be together. Generally, the status of housing indicators in some provinces create various social and cultural problems in micro and macro level of the society, so precaution and support are the best strategies in this matter. So, for directing future development in these villages toward a sustainable development and putting the existing problems away, it is necessary to implement effective and practical planning to improve housing status in these residents; and less developed regions should be considered more than more developed ones.

**Keywords:** Spatial Analysis, Rural Housing, Iran.

## **Spatial Function of Small Cities in Relation to Surrounding Villages Case: Sarbisheh County**

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### **Introduction**

The role of cities in rural development is determined by rural-urban relations, so rural-urban relations affect both urban changes and rural changes. The relation between city centers and the surrounding rural areas includes people, commodities, money and information as well as social, economic and cultural interactions. New paradigms for development, consider networks and progresses; because networks and progresses between rural and urban areas are important. New paradigms for development, consider networks and progresses; because networks and progresses between rural and urban areas are important. These types of cities (as a center for rural development) play an important role in development process of the villages and they provide services for creating marketplace, supplying agricultural agents, and urban services such as educational facilities, healthcare facilities, etc. in their rural district. Therefore, it is necessary to consider the role of small cities, their position and their function in rural development. The city of Sarbisheh is located on south-east part of Birjand County and in Birjand-Zahedan international highway; it is bordered by Birjand County to the north-west, to Nehbandan County to the south and to Afghanistan to the east. This city is considered as one of the deprived cities of South-Khorasan province which has many problems and limitations. Regarding the suggested problem, this study tries to answer some question precisely: "Is it possible for Sarbisheh as a small city to attract population in the major centers of population?" and "to what extent was the city of Sarbisheh as an intermediary between other cities, effective in providing services to its rural district?"

### **Methodology**

Regarding its aim, this is a practical study and considering its nature and methodology, it is a descriptive analytic one. Data collection was performed through documentary and field study (questionnaires). Statistical population for this study includes villages of Sarbisheh too. Since this study aims to discuss about the role of Sarbisheh in rural development, for determining sample size out of the studied statistical population, multi-stage sampling has been used in household level randomly; by using Cochran's Formula, 350 households in 50 villages were studied. Villages were selected randomly from three districts: central districts included Doroh rural district and MoemenAbad; Mood district included Mood rural district and Naharjan; and Doroh district included Ghinab and Lano.

For data collection in the studied areas, questionnaires have been used. Validity of the questions was evaluated by university professors and experts; after calculating Cronbach's Alfa measure which was 0.843 for 22 questions in economic field, 0.702 percent for 10 questions in social field, 0.810 percent for 11 questions in cultural field and 0.841 percent for 7 questions in healthcare field, stability of the questionnaire was determined too. For data analysis, descriptive and inferential statistic criteria in SPSS environment were applied.

### **Discussion and Conclusion**

Today, most researchers emphasize on the role of small cities in national, regional and local development, improvement of rural-urban relations, and decreasing migration of villagers to big cities in their findings. Since, the dominance of urban society on the surrounding rural districts is regarded as an obstacle to rural development, studying the role of small cities in the surrounding rural districts is of great importance. Basically, findings indicate that it is necessary to improve and equip small cities as the last loop of connection for connecting urban system to rural system, inhibit migration, sustain the population, decrease the gap in exploiting services and providing service poles to rural districts. Basically, findings indicate that it is necessary to improve and equip small cities as the last loop of connection to connect urban system to rural system, inhibit migration, sustain the population, decrease the gap in exploiting services and provide service poles to rural districts. Small cities are considered as centers that play an important role in rural development regarding their location in the path of villagers to big cities, and they can remove many problems that rural districts face with them. Based on this issue, the role of Sarbisheh in rural development as a small center of the city is considered. Lack of necessary power in Sarbisheh for providing optimal services to the surrounding rural areas could not inhibit villagers' migration to other cities especially to the metropolitan area, Birjand. So, in the case of population sustainability or more accurately, in migration inhibition and modification of its factors, this city could not play a significant role. Finally, considering that Sarbisheh is incapable of absorbing population in major centers of population and it cannot be a suitable intermediary between other cities in providing services to its rural district, these solutions are presented for improving the status quo:

- Improving the services and road facilities for Sarbisheh; because this city is located in the road network of Chabahar-Mashhad, it can be considered as an important potential for job creation
- Expanding health care services especially for attracting the
- Keywords: Rural Development, Small Cities, Migration, Sarbisheh County
- Attendance of medical specialists in Sarbisheh.
- Establishing related university courses which are suitable to needs of rural society and which are practical ones.

**Keywords:** Rural Development, Small Cities, Migration, Sarbisheh County.

## **The Role of Participation in Rural development in Khoshk-e bijar District, Rasht County**

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### **Introduction**

Nowadays, most experts in rural development field agree that reaching to sustainable development is not impossible without all people's Participation and undoubtedly, the process of development will be facilitated, with more speed and less expenditure. Meanwhile, the historical experience of our country emphasizes on utilizing top-down strategies for development, it shows its failure on the process of rural development. Therefore, based on this experience and increasing overall knowledge and scientific knowledge, it is necessary for the society to pay attention to rural development which is dominated by people's Participation and this Participation should be the priority for plans and measures.

Spontaneous and endogenous development indicated that in all stages and in different circumstances, development is based on Participation of local people for mobilization of resources and institutionalizing local Participation with emphasis on empowerment and capacity building. People's Participation causes them not to feel alienated with plans and new elements; this makes them to be engaged throughout the planning process and after that in implementation and maintenance of the plans; they feel that the plan and the product belong to them and they cooperate greatly to maintain it and make it dynamic. People's Participation in local planning may lead to decentralization and it can reduce the limitations of top-down planning.

So, these plans and all the expenditures in these villages should result in development, if villagers wants and needs are recognized and they are engaged in villages' affairs; because, on one hand, villagers Participation leads to empowerment of institutions and social organizations in the village so that they facilitate development process, and on the other hand, it leads to usage of capabilities and talents of villages for national development, the sustainability of population and decrease of regional inequalities. Khoshke-bijar district is located in north-east part of Rasht County; in recent years, many construction plans and projects were prepared and implemented in these villages such as preparing and implementing guide plans, equipping and modernization of agricultural lands, gas delivery plans, purified water delivery system, and so on. According to this, the present study aims to answer this fundamental question that how much influence does people's Participation have on the development of villages in Khoshke-bijar district?

### **Methodology**

Regarding its objective, this is a practical study and a descriptive-analytical one according to its methodology. For studying and recognizing the status quo, descriptive method, and for statistical analyzing in the case of rural services and population, analytical method has been used. Therefore, theoretical and conceptual framework of the study and geographical and demographic features of the study were collected by documentary method and determining the ways that people engage in different areas had been done through field study. Statistical population includes villages of

Khoshke-bijar district in Rasht County that have been selected in four categories: small villages, medium size villages, big villages and parts that are a combination of village and town. Study sample is determined 400 villagers, according to Morgan Standard Table that is distributed and completed by using random-quota sampling method in the studied area. Questionnaires' validity is determined by experts' comments and those who have expertise in rural planning and its reliability is determined by Cronbach's Coefficient Alfa (0.81). For data analysis in this study some tests have been used including Wilcoxon Test, Spearman Correlation Test, and Kruskal Wallis Test.

### **Discussion and conclusion**

Participation objective is generally defined as voluntarily participation of people in development plans in all stages- including goal setting, decision making, implementation, maintenance and evaluation. People's Participation can be recognized as a process through that poor and disadvantaged people can be organized and by this organizing they could try development efforts. If all villagers could be directed toward field creation and optimal organization, this field and organization turn to be an instrument for expressing their wants, through that they could achieve their rational wants.

Villagers' Participation in Khoshe-bijar district will be on its maximum level, and can have impact on rural development, if all cited obstacles are removed. It is obvious that removing the existing economic problems in Khoshke-bijar district is not possible without focusing on social, cultural and political problems and when villages lack a desirable level of culture and social attitude, it will be impossible to expect them understand new methods of economic development and take the risk of them. Finally, it can be said that in Khoshke-bijar villages, despite of many different problems and obstacles in the way of Participation and using that for rural development, villagers' desire to engage in affairs and their presence in many development plans can be helpful and it clarifies the necessity of planning for this important matter.

The results show that the desire for intellectual, and physical Participation among villagers is in a desirable level. By increasing the economic power of the villagers in Khoshke-bijar district which is possible through their own Participation, we can expect that the level of Participation in plans and projects for rural development increase too. There is no doubt that Participation motivation among villagers depends on using cultural actions and giving awareness to them that are the top priorities. Because the level of Participation and cooperation among villages are at a high level in many villages of the developed countries in the world and they strongly believe in team work activities, the level of Participation is in a desirable level and villages are more developed too, due to widespread acculturation and internalization among rural people. It is obvious that when people of the studied area are aware of the advantages and effective results of cooperative works and they know more about the results of Participation for sustainable profits and interests, their motivation for Participation will increase.

**Keywords:** Village, Participation, Rural Development, Khoshk-e bijar District, Rasht County.

**An analysis of the effects of religious tourism in rural areas  
Case: Oji Abad village, Amol County**

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### **Introduction**

Tourism industry cannot be only considered as a way of recreation and escaping from daily routines. Of course, by use of strategic planning and principles of sustainable development in tourism, we can develop the economy of countries. So far, tourism industry has been gradually developed in all parts of human society. Moreover, its connection with society and different aspects of human culture aroused the emergence of different trends. Tourism industry is one of these trends. Tourism is one of the oldest and most booming industries all over the world. Since tourism expenditure plays a decisive role in tourism economy, religious tourism can cause significant changes in the economic conditions of local communities. It is notable that tourism industry has the two core elements of supply and demand. Following this approach in tourism industry indicates its remarkable effect in the economy tourist destinations and, consequently, local communities. So, it can reveal the importance of studies on types of tourism including religious tourism to assess its economic impacts on the development of rural communities.

Tourism industry is one of the most effective approaches which is influencing in the reconstruction and development of rural areas and has been considered by planners and managers since previous decades. Oji Abad is a village in Amol County, Mazandaran Province. The presence of Astane Hazrat Abolfazl (AS) in the center of the village and its being close to sacred edifice, has made a booming religious complex there. Considering its potential capacities, the basic question is that what are some impacts of the presence of pilgrims, especially religious tourism, on the development of Oji Abad? And in which aspect these effects are more notable?

### **Methodology**

This is an applied study of descriptive-analytical type. Required data for the research have been already collected from documentary and field studies (by surveys and questionnaires completed by rural residents). Questionnaires have been completed in person. The information have been coded and then analyzed in SPSS software. The statistical society of the research consists of Oji Abad rural households which, according to the documentaries from rural municipality, had had a number of 350 households and 1400 inhabitants. Simple random sampling method was used and based on Cochran formula

the required sample size was determined to be 152 households which have directly answered the questions. To evaluate the impact of religious tourism on each sub-criteria of the related factors (economic, social, cultural and environmental) the value of each respective sub-criteria was firstly determined using Delphi technique and quantity table of "Thomas L. hour". Then, using Likert scale, the value of each sub-criteria was added to its rating and its relative value was calculated in the total questionnaires. In the next step, NOVA test and regression analysis were used to analyze the impact of religious tourism on the four dimensions of Rural Development and to investigate hypotheses of the research.

### **Discussion and conclusion**

Religious tourism is one of the most important and booming industries of tourism with significant impacts on different aspects of societies, especially its economy. Results from One-way ANOVA indicate that it does not equally influence the four economic, social, cultural and environmental aspects and it strongly affects economic, cultural, and social factors, respectively. Results from regression analysis confirm the same things. It can be said that religious tourism in the intended rural area largely affect the economic aspect of the local society and that the religious booming and presence of pilgrims in the village cause formation of temporary businesses, improvement of transport, service, and residential sectors. Agencies, road transportation, Supermarkets, bakeries and other businesses have achieved the greatest benefits of the boom of religious tourism in the village.

Of course, it must be said that its economic impact has not been spread enough and just affected the living conditions of a limited number of households. So, all the potential capacities of religious tourism have not been used in the villages and it needs precise management and planning. The entrance of religious tourists and pilgrims from different cultures and cultural interactions of people and local communities caused remarkable cultural changes of the host community. So, cultural aspect is located in the second place of effectiveness. But, this matter cannot be considered as the only reason of cultural changes in local societies. In addition, vast and strong activities of public media, especially in recent years, is the main reason of rural cultural interaction and changes. Social factor is ranking in the third grade for Oji Abad which means that the host community and most of other communities of tourists and pilgrims are socially homogenous with no significant differences. Finally, based on statistics from the research tests, the boom of religious tourism has had a significant impact on some parts of the rural environment, especially those parts which are directly connected with the religious system, and has led to the distribution of wastes, overpopulation and overcrowding of the village. On the other hand, it has had no effect on virgin areas, water resources and its landscapes which have been far from the center of the religious system.

**Key words:** Religious Places, Cultural Tourism, Religious Tourism, Rural Economic Development.

**Barriers to social and economic empowerment of rural households  
Case: patients protected by the Imam Khomeini Relief Committee in Sistan Region**

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### **Introduction**

Although poverty is a global problem, it is more drastic in villages and is considered as the most prominent problem of rural areas. Therefore, poverty alleviation, providing basic needs, and empowering the poor play important roles in rural development. In this way, rural development can be even introduced as an approach to poverty alleviation in rural areas. Regarding the fact that Iranian Rural society is noticeably confronted with unemployment (overt and covert), it can be said that empowering of villagers is a good strategy to resist against poverty and unemployment. So, different welfare organizations and institutions have been launched in Iran following supportive strategies for fighting against poverty and income inequalities as well as empowering of rural societies.

Imam Khomeini Relief Committee is one of these institutions that has been established by the purpose of recognizing material and spiritual deprivation of people and deprived classes in order to alleviate poverty by providing financial, health care, and educational services, together with self-sufficiency programs for the poor and needy. Even though the mentioned institution has already offered valuable services in Sistan to support the process of antipoverty, the drastic reduction in Helmand water and loss of livelihood activities have caused a majority of rural households in the region completely lose their sources of income. Then, the number of poor people and those under the protection of supportive-relief organizations has been increased.

Considering the increasing and alarming trends in the number of households protected by the Relief Committee, it is inevitable to recognize barriers and constraints facing economic and social empowerment of rural households under the protection of this institution in order to identify effective factors through which we can make better decisions toward the empowering of this group of society. This research intends to recognize barriers and constraints facing the economic and social empowerment of rural households under the protection of relief committee in Sistan villages as well as investigating their range of effectiveness and the most important ones.

### **Methodology**

The present research is a descriptive- analytical one. The Statistical Society of this research consists of rural households protected by the Relief Committee in Sistan region. Household sample size has been detected through the specification of villages of more than 50 households under the protection of Relief Committee. Based on the number of villages under the protection and using sharp and correcting formula, a number of 40 villages have been introduced as sample villages. In the next step, sample villages have been randomly chosen among the villages of more than 50 households under the protection of Relief Committee. The number of households under the protection was reported 3071, among which a number of 341 households were calculated as

household sample size using Cochran formula. For calculating research indicators, in addition to documentary and library studies appropriate to the conditions prevailing in the rural areas of Sistan region, a set of indicators associated with constraints and barriers to economic and social empowerment of rural households protected by the Relief Committee has been determined (tables 2 & 3). Household questionnaires have been completed by the heads of households or their spouses. The village questionnaires have also been completed by three members of the village council, the local experts or elders living there. SPSS and ArcGIS software have been used to analyze the data from the questionnaires of families and villages, as well as analysis of field observations forms. In this regard, in order to calculate the impact of restrictions and barriers facing economic and social empowerment of households, based on analytical hierarchy process (AHP), several steps have been done including formation of evaluation matrix, determination of the weight of the relevant indicators (in Expert Choice) and standardization of data. To sum up data weighted combination method has been used.

### **Discussion and conclusion**

Considering the empowerment as a processes by which people find even more control over their working affairs and they can properly steer the direction of their lives with more power and control over resources, trust, capacity building and active participation, it is of particular interest to scholars. Results from the study indicate that barriers and restrictions facing the empowerment of households protected by the Relief Committee carry strongly different effects. According to ANOVA, the intensity have been explained in the form of fourteen main obstacles or restrictions. In this division, the highest rate was reported for the impact of water resource constraints on economic activity by a factor of 502/0.

Based on the findings, organizational problems and personality and individual traits of the head of the household are accounted as the second and third obstacles raised in empowering households under the study. According to the overall conclusions based on the total descriptive and analytical results, it is understood that due to the limitations originated from water entering the Helmand River from Afghanistan, those households living in Sistan villages are faced with numerous problems. In addition, lack of access to water resources has been very influential on reducing employment and income, increasing and intensifying poverty and social instability in rural households, either directly or indirectly. Therefore, during the years 1375 to 1390 (the same time as the intensification of water limitations arising from Helmand of Afghanistan and the beginning of droughts or Sistan water scarcity), an increase of more than four times in the number of people protected by Imam Khomeini Relief Committee is obvious. Comparing to other institutions, it is the responsibility of the Imam Khomeini Relief Committee (RA) to alleviate poverty and empower deprived people. Considering "empowerment" as a tool for performing antipoverty programs, it is recommended to pay especial attention to the followings to help us continue the empowering process even stronger than before.

- Due to the fact that the most important factor affecting the progress of economic empowerment of rural households protected by the committee is considered to be the elimination of the constraints originated from Sistan villages being dependent on Afghanistan to supply the water needed, so the ongoing efforts of government seems essential to do something in the framework of international law to get the water rights of Sistan region and Hamoon international wetland from Hirmand river.
- Sistan northern and eastern borders with Afghanistan have created a perfect opportunity to develop the rural economy of the region. On the other hand, establishing border markets in North, East and South-East of Sistan, and providing the possibility of cross-border exchanges will be a good opportunity to reduce rural limits.

**Keywords:** Empowerment, Rural Development, Relief Committee, Sistan.

**Analysis of social capital of rural micro-credit fund  
Case: Bstaq village in Sarayan County**

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### **Introduction**

Sustainable development is actually a process towards sustainability. It can be conceptually classified within other concepts such as social reorganization, transition to a better future, conserving the quality of the environment, people empowerment, creating new capacities, and respecting indigenous knowledge and information. All these concepts are considered to be the main axis of sustainable development by contributing to the elimination of the need of new generation, regarding the need of future generations.

Hence, sustainable rural development is a multidimensional process that can come off through the bottom-up approach and ongoing, shared use of local supply and resources. "Social capital" is one of the most important social components and a basic aspect of local sustainable development. Social and economic capitals can strongly affect the trends of community-based management of villages. By amplifying the capitals and their optimization, their effect on rural development will be promoted.

In this research, regarding the fact that social capital plays a key role in the realization of rural development, we have used social network analysis method before and after the implementation of a community-based project of rural management to investigate different aspects of bonding and bridging social capital of rural micro-credit fund in Bstaq village of Sarayan county, South Khorasan. In this village, mobilizing financial resources has been already done by the establishment of micro-credit funds. It is obvious that the physical sustainability of economic structure of the Fund requires the sustainability of social capital in local network of its beneficiaries. Therefore, social capital needs to get evaluated over time among members of rural micro-credit fund.

### **Methodology**

Social analysis and assessment of relations between members of rural micro-credit fund of Bastag, in the form of various subgroups, were done using the approach of social network analysis. Efficiency and impact of RFLDL project has been already evaluated for all the indicators and studied cases in two times, one before the implementation of the project in 1390 and one after that in 1394. We have first identified members of micro-credit fund in Bastag using survey research and the study of documents in RFLDL project. Then, a network analysis questionnaire was developed and completed doing direct observations and interviews with different individuals. Rural micro-credit fund of Bastag consists of 13 groups. These include Aba-Abdellah, Azahra, Imam Reza, Amir-al-

momenin, Sar-Allah, Javad-al-Aeme, Abolfazl, Sahbalzman, Kosar, Musa ibn Ja'far al-Mahdi, vali-e-asr, and Yas-e-nabi groups. The number of people who completed the questionnaires are 190 people among the group members and 13 heads of the funds. The head of the groups are determined by members in a local election. Data analysis has been done by analyzing and investigating the bonding relations between the group members or bridging communications between leaders in the form of rural micro-credit funds. Network analysis used in this research is a method of full network in which all network members are examined. Finally, collected data were analyzed in UCINET 6.507 software and then the intended indicators were analyzed as well.

### **Discussion and conclusion**

The most significant ideas contributing to the establishment of micro-credit fund is to achieve development goals to decrease poverty, mobilize financial resources of rural communities and organize local societies in aligned groups. In this research, we have examined trust-partnership bonds and evaluated various indicators of density, reciprocity links, transition and average geodesic distance using social network analysis method to assess bonding and bridging social capital between members or heads of the groups or between leaders of micro-credit funds of Bastag located in Sarayan and studied in RFLDL project.

Results show that the average density of trust-partnership bonds between members of rural micro-credit funds is high. In the next step of doing RFLDL project, the same indicator increased compared to before. In this village, two groups named Kosar and Azahra have been reported with moderate downwards density of trust-partnership bonds. In other groups this indicator is at its moderate upwards level. In Bastag, mutual trust is high and mutual partnership is up to the middle. The sustainability of communication networks and the institutionalization of various links in the village is assessed as moderate upward. This indicator is also high between the head groups of the village. After project reviews by accomplishing participating activities for rural sustainable development show more density between members of micro-credit fund comparing to before. However, reciprocity was noticeably high between the head of the groups.

The velocity of Trust and Participation is high between the members of the Fund in the village of Bastag. The amount has even increased more after the implementation of the project. The velocity of trust and partnership between the heads of micro-credit fund has respectively increased from 1 to 1.18 and 1.08 to 1.25. Furthermore, people linked together in the shortest possible time and at highest speed. Thanks to the great social union and solidarity among people, mobilization of social and financial resources will be possible at a higher speed. Considering the results of social capital assessment before and after the project, it can be said that RFLDL project acted successfully in building trust and creating good chances to strengthen the spirit of partnership and cooperation between members of the fund in Bastag.

**Key words:** Social Capital, Social Network Analysis, Rural Micro Credit Funds, RFLDL International Projects.

**The role of border markets in socio-economic development of rural areas  
Case: Khaw and Mirabad rural areas, Marivan County**

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### **Introduction**

Today economists introduce the trade as an engine for development incentive. So, the establishment of border markets is a good strategy to eliminate the created gap of central and border areas. Consequently, what has recently attracted the attention of many development planners is to get rid of current economic and social crises of frontiersmen. These markets compensate for the current weakness of economy within borders. They also prevent border villages from getting deserted. Also, by distribution of development benefits to surrounding areas, border markets create chances for socio-economic development. Addressing this issue from a scientific perspective shows that countries involved in the problems of insecurity in their border region have found that insecurities are due to underdevelopment conditions and their functional consequences. In other words, poverty and hardship in these regions can cause an environment of insecurity and enemies' abuse. Conditions like this can be easily seen in rural areas border of Iran. What is strongly recommended to help security providing in rural areas border is using all the potentials for development of these regions; including promotion of trade through the establishment and expansion of border markets.

The area of study in Khav and MirAbad Villages are located in the west of Marivan, one of the ten counties of Kurdistan in zero point borders with Iraq. In this area, the two factors of distance from the center and low efficiency of agricultural production led to the prevalence of poverty, unemployment, and migration, and the increased tendency to informal activities (contraband), as well. Meanwhile, geographical conditions of the area and consistency of cultural and social conditions with people across the border has provided an appropriate situation for the establishment of border market. Due to the great potentials of cross-border trade together with Bashmaq official customs, border markets of villagers were founded in 1389 to decrease informal activities, improve livelihoods, and decrease the rate of rural-urban migrations. For years, we have focused on the process of economic and social development and anti-deprivation of rural areas of Khav and MirAbad as the gist of the article. Now, in this research, we are going to explain its function and performance. In addition, this research aims to identify the strengths and weaknesses of the process in order to adopt new strategies of problem solving.

Hence, research questions are as follows: 1) has the establishment of new border markets caused economic and social development of surrounding villages? 2) Is there any significant connection between people's satisfaction of current status of the intended

markets and their personal intentions such as age, educational level and income dependence on the activities done in the market?

### **Methodology**

This is an applied research done by descriptive-analytical method. The theoretical part was done using documentary and library studies, while using survey studies in the practical part. Using library method, we have provided some library notes, reports, articles and statistics of related organizations. For field studies of the research we have also used questionnaires, interviews, and observations. Considering the aim of the study, the statistical society of the research consists of two groups of official authorities (chosen from rural related organizations) and rural households settled in 31 residential villages of Khav and MirAbad who have been allowed to operate in the market. Initially applying Cochran formula and then its correcting version we could determine the sample size of rural households of this area, which has a population of 11407 people, 2736 households, and 31 villages according to 1390 census. Finally, a number of 175 households were adopted as sample society so, the number of questionnaires needed was determined.

Then, we have classified villages according to their distance to the border. Maximum distance to Iraq border is 21 KM. Villages of this area are classified in 3 groups of (distant, adjacent, and medium distance areas). From the first class which was consisted of 60% of the villages, 3 villages were chosen. From the other two groups which were consisted of 20% of the villages, we have chosen just one sample from each one. The total 5 villages which include 15% of all, have introduced as samples. Sample villages of each group have been randomly chosen using draw method in respective categories of each village. We have then applied matched sampling to identify the contribution of each village of questionnaires. Questionnaires were randomly distributed among head of the rural households. According to previous studies and regional conditions of the area, the questionnaires have provided in Economic and social dimensions, consisting 5 components of employment, income, living expenses, services and facilities, and social issues and 24 variable to measure the effectiveness of the market in economic and social development of rural areas.

Validity of the questionnaires has been determined by authorities who have been already selected to complete them and experts of similar studies history in the studied area. Its reliability has also been confirmed regarding to the amount of 0.81 as Cronbach's alpha coefficients calculated in SPSS software. Analyzing the information obtained was done by the use of Wilcoxon test and Spearman and Kendall correlation coefficient.

### **Discussion and conclusion**

In addition to accelerate non-oil export, border markets can lead to growth and prosperity of economic development in the region. Another benefit that border markets provide to the people of the area is creating job chances. In addition to direct employment of a large number of people in the area around the markets, they can provide good chances of indirect employment to control rural-urban migration and the possibility of participation in great economic competitions. Therefore, the study aims at investigating the effects of border markets on economic and social development of the rural sector of Khaw and

Mirabad in Marivan County. Analysis indicates that authorities and local people have similar perspectives. Because sig. in both groups (people 0.251 and authorities 0.134) is more than the  $\alpha = 0.05$ . People and authorities believe that the new market has not acted successfully in rural development. According to their idea, although the new market has led to decrease in contraband and good chances of second job for most villagers, the new job chances and their income is not satisfying enough to continue the process in a positive way. New created jobs include simple, unskilled labors of low income and difficult situations. Results confirm connections between personal indicators such as: age, level of education, the dependence of income on market and with satisfaction with the current status. For example in education indicator, we see a negative correlation efficient which means that people of higher education are less satisfied with current status.

There is a positive correlation between age indicator and current status of the market, i.e. the older people are, the more satisfied they will be with the current status. Younger people are more dissatisfied which indicates that young people and economic actors are dissatisfied with the situation. Because the age structure of the intended area is young most respondents are at the age of economic activity. During the interview with village respondents of this range of age, two factors of low income and unsuitable working conditions in the market have been introduced as the main reasons of dissatisfaction. In order to draw satisfaction from economic actors we should try to strongly activate the market by creating new job chances with greater income. Because of the intensive positive correlation (0.642) of the dependence of income on market and with satisfaction with the current status, it can be said that money making in the market should go in a direction that villagers get more dependent on it that can consequently result in an increase of satisfaction and continuity of villagers' activities in the market.

**Keywords:** Border Areas, Border Markets, Rural Development, Khaw And Mirabad Section.

**Assessing eco environmental effects of mining extractive industries on the sustainability of rural areas**  
**Case: villages surrounding Zanjan cement factory**

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### **Introduction**

Rural industrialization has been greatly discussed by researchers in recent studies of rural planning and development. It is due to its positive effects of economic, social and infrastructural factors. Moreover, researches are looking for ways to analyzed approaches to reduce harmful environmental impacts of industrial projects, as destructive life factors of geographical territory, in rural areas. For example, according to Misra and Chyvta (1990); rural industrialization and the prevalence of non-agricultural activities can seriously affect the increase of social welfare and providing essential goods and services for rural households. Experiences by several countries prove the fact that every structural change that happens because of industrialization, not only has an important economic role in rural areas, but also led to self-repulsive economy, as well. In addition to studying positive economic, social and physical aspects, it is needed to do some preparatory studies on negative eco-environmental effects of rural industrialization for proper siting of such industries to reduce its harmful eco-environmental and human effects and improve spatial planning.

In this study, we have used a new approach to investigate rural industrialization and the establishment of large mining – extractive industries in rural areas. Today, thanks to villages forming a wide range of local-spatial area of the country, they have rich mineral resources in their geographical territory which their extraction may cause economic-infrastructure effects as well as other negative eco-environmental effects such as the changing use of agricultural land, soil and water pollution, vegetation loss, and landscape change over time. Two main questions of the research are 1) In terms of sustainability, how is the economic, social and environmental status of surrounding villages of Zanjan cement plant? 2) How is the current situation of eco-environmental effects of mining- extractive industry of Zanjan cement factory on surrounding rural areas, according to ICOLD, and Prometea techniques.

### **Methodology**

This study is an analytical explanation using library and field study. Field data have been collected by questionnaires after the identification of variables. Then, the required data have been collected in the intended study area. Samples have been managed in two different social levels: 36 people from local experts (Council and village head assistants) using census method for ICOLD matrices, and 295 individuals from the head of the households selected among local people of villages to assess eco-environmental effects of using Prometea multivariate technique

in villages by the use of Cochran formula of  $\alpha = 0.05$ . The already designed questionnaires have been modified in ICOLD matrices covering several factors of physio-chemical, biological, socio-economic, and cultural infrastructure environments that include 41 sub criteria, totally. Collected data have been finally analyzed by ICOLD environmental assessment method and Promote multivariate techniques.

### **Discussion and conclusion**

One of the new challenges facing rural planning when it is getting applied, is the presence of two viewpoints: environmentalism, and rural industrialization. Villages are accumulation points of environmental resources that, according to the theory of Sustainable Development, it is essential to protect them. In addition, we aim at diversifying economic sector by supporting rural industrial projects. Integration of the two approaches needs the evaluation of environmental effects of industrial activities to help moderate the intensity of environmental effects of industrial projects in rural areas. In this research, we are intended to study industrial mining extractive project of Zanjan cement factory, located and operated in a rural district, to analyze its eco-environmental effects on rural areas. Results from ICOLD demonstrates that its eco-environmental effects vary by distance, i.e., the nearer the villages are, the more they will be threatened by these effects, or vice versa.

Results from promote technic confirm the same. Since, villages in disturbed areas within the distance of less than 5 kilometers from the factory or less than 1 kilometer from the communication route to raw stone mining site, show the highest level of eco-environmental instability. These villages include; Majid Abad (rated at 81%), Zarand (rated as 73%) and Mazidabad (rated at 67%), respectively. These villages are close to the factory and to the passage of vehicles carrying raw stone. Much of the physical area of the factory is located in agricultural land of two villages of Majid Abad and Mazidabad. Moreover, wind direction of the area mostly causes much of the pollution from factory dust distributes in other agricultural areas of MajidAbad. Another village which its eco-environment has been recently affected is Zarand, located in a foothill area near to the raw stone mining site. Dust from loading raw stones, noise pollution caused by the breakage of the rock, animals and wildlife breaking out of the area, and destruction of crops and plants are among the major environmental damage in this area. Thus, we suggest to reduce environmental pollution from factories in rural areas by reviewing some ways of factory activities such as transportation of raw materials, methods used for the extraction of raw stones, development of appropriate transport infrastructures, installation of air pollution controlling systems, increase in the plantation of more green spaces within the margins of the factory, good management of wastewater and their disposal system.

**Key words:** Environmental Assessment, Extractive- Mining Industry, Zanjan Rural Areas.

## **Analyzing socio-economic performance of rural municipality of Fahlian, Mamasani County, from the perspective of villagers**

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### **Introduction**

In Iran, management system of rural areas was kind of non-governmental before the Constitutional Revolution. In such a system, Khans and masters; the village chief and elders were responsible for the village and its affairs. In 1354, by the progress of land reform programs and the elimination of feudal serf system from social communication system, the village chief was removed from the Rural Management System and rural councils were replaced by. After Islamic Revolution, important measures done in the field of construction, especially, rural management. Some examples of such measures are; the amendment of Islamic Councils, the foundation of the House of companion, and the construction of rural development office. Rural Islamic councils play important roles in the process of people's participation in promoting rural developments. Rural councils and municipalities, as cooperative and public institutions, are considered to be communication bonding between people and institutions with administration staff of the government. So, they carry a key role in the process of rural development.

Thus, people's satisfaction with the performance of rural municipalities plays a decisive role in the success of such institutions and achieving their goals. The more satisfied villages are with the performance of rural municipalities, the more confident they will do their citizen responsibilities in the process of implementation and monitoring of civil public programs. In this research, the socio-economic performance of Fahlian rural municipality, of the central part of Mamasani County, has been analyzed based on surveys of villagers through questionnaires. The present research aims at appraising villagers' satisfaction with the performance of Fahlian rural municipality applying Kano model to make three categories of the villagers' basic needs come true. The intended needs are; economic, functional and emotional ones. We are going to use the results from the research to obtain an accurate picture of the satisfaction of rural population with the performance of rural municipalities to help us improve rural services and enhance villagers' satisfaction.

### **Methodology**

This study is a combination of analytical survey method based on questionnaires, in which the most important areas associated with villagers' satisfaction of the village municipality in Fahlian is being tested. Considering the goals of the research, it is an applied one. The statistical society of the research includes all the rural residents in Fahlian. In order to determine the sample size, we have first used Cochran-Sharp methods. Using this formula, the sample size was calculated 140 people from the entire 2177 inhabitants of the village. Then, questionnaires were completed using simple random sampling method.

Cronbach's alpha coefficient was calculated 0.809 for the whole questionnaire. Totally, the validity and reliability of the statements and questionnaire have been in a good level. They have also reported to be reliable for research fields and obtaining the views of the sample. For preparing questionnaires like those in the Kano model, two questions are needed to design for each feature. The questionnaires are classified in two categories. The first category questionnaires are functional and the second ones are non-functional ones. To design this section a five-point Likert-

type scale was used. Although there are different models for evaluating the quality of services, it is hard to compromise on the ways to identify factors affecting this. Some of these models involve hysteresis, Kano, Seroquel, QFC, and etc. In this study, Kano model was used as a measuring tool of people satisfaction.

### **Discussion and conclusion**

In Iran, contemporary rural management was affected by major changes. Each of these changes have had a significant impact on the fate and success of Iran Rural Development. Creation of rural municipalities in villages is the last link in the chain. Of course, it does not include all the villages, yet. Objectives and responsibilities outlined in the by-law of rural municipalities, whose most prominent characteristic is their mediating role among local communities and state institutions, seems to be greater than their power and human, financial and material capacities available to them. According to the data collected from Surveys of Fahlian residents to know if they are satisfied with socio-economic performance of their rural municipality using Kano model, it was realized that based on villagers perspectives asphalt and table investment streets are among their most prominent needs while Fahlian rural municipality was doing its best for waste collection and disposal. Also, they were largely making efforts to pave the way for the formation of cooperatives of production and consumption.

Thus, the maximum level of villagers' satisfaction and their dissatisfaction with the performance of the rural municipality was reported to be 0.413 and -0.747, respectively. Results from the questionnaires and their analysis using Kano model indicate that villagers' emotional needs have been better provided than their other needs. The coefficient for their emotional needs was 0.611 which is more than the coefficient obtained for the two other needs of basic and functional ones by the coefficient of 0.425 and 0.523, respectively. Consequently, the village staff and authorities, especially those in rural municipality, must largely focus on providing villagers with their basic and functional needs. In this way, they are needed to improve and mobilize transporting system as well as the improvement of communicating systems like telephone and internet to help them attract more tourists and investors.

For functional needs, they have partly acted successfully in making security measures for the attraction of tourists and investors. Studies demonstrate that rural municipalities will be able to eliminate a great part of villagers' dissatisfaction and make them satisfied if they apply the results from this study in making decisions for rural development and improvement.

**Key words:** Rural Development, Villagers' Satisfaction, Rural Municipality, Kano Model, Fahlian Rural District, Mamasani County.