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The Efficacy of Farm-Nonfarm Diversification on Rural Households' Quality of Life (Case Study: Golmakan Dehestan of Chenaran County)

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Abstract
Purpose- Considering that a diversified economy can lay the proper groundwork for improving quality of life, the present study investigates and analyzes the efficacy of diversification on rural households' quality of life.
Design/methodology/approach - The study is descriptive-analytical and its population consists of rural settlements in Golmakan Dehestan, Chenaran County. "Economic activities diversification" is the independent variable of the study which is quantified in two agricultural and non-agricultural aspects, using 14 indicators. "Rural households' quality of life" is the dependent variable which is quantified in three social, economic and physical-environmental aspects, using 48 indicators. Questionnaires were handed to 258 rural families in 15 villages and the average score of each indicator was considered as the score of each of the villages studied. The validity of the questionnaire was established through confirmatory factor analysis (65.72%) and its reliability was established by Cronbach's alpha (0.83).
Findings- The results of the step-wise regression show that diversity of non-agricultural activities has a meaningful influence on the variation of the dependent variable (rural households' quality of life), such that a change of one standard deviation in non-agricultural activities leads to a change of 0.6 of standard deviation in rural households' quality of life. Therefore, non-agricultural activities are influential in improving the economic conditions of families, and consequently raising quality of life among rural families.
Research limitations/implications- Among the limitations of the study, the dispersed area that the villages are located in, the long distance between some villages, and the unwillingness of rural households for filling out the questionnaire can be mentioned. According to the role of non-farm activities on improving quality of life, suggestion of the study is to improve non-farming economy in rural areas. This, naturally, requires more attention to national macro-policies along with localization and necessitates implementation of successful global models regarding diversification of non-farming economy in rural areas.
Originality/Value- A review of the studies regarding economic activities diversification in Iran and the world shows that, at the time of this writing, none has dealt with the influence of economic activities diversification on rural families' quality of life.
Keywords- Diversification of agricultural activities, Diversification of non-agricultural activities, Quality of life, Golmakan Dehestan, Rural settlements.
Paper type- Scientific & Research.

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1. Introduction

Although agriculture is important to food safety of many families, nowadays, it, alone, cannot ensure sustainable development of rural areas which is why economic diversification gains importance (Berjan, 2014). Studies show that limited sources of income in the agriculture sector and its sub-sectors are salient features of the economic structure of rural settlements in Iran that has created less flexibility regarding short-term weather changes, price fluctuations of final product at the time of harvest, limitations in marketing and delivering products, unemployment and hidden unemployment, reduced return on investment, destruction of core environmental resources, vulnerability of rural economy and instability of sources of income, weakening of rural economy and culture, weakening of rural households' indigenous knowledge, rural immigration, etc. (Javan, Alavizadeh, & Kermani, 2011). Such a structure enhances the risks to which rural families are exposed in the face of external factors; therefore, lack of job diversity and limited sources of income (agriculture and its sub-sectors), in the short-term, trigger the exodus of labor from villages and turn them into poor quality residential spaces, intensify the problems of such regions and, eventually, obstruct rural development. To solve these problems, the reliance of rural economies and, consequently, that of rural families on agriculture should be reduced and new job opportunities and sources of income should be introduced.

In the sustainable development model, one emphasized item is the diversification of financial activities. Accordingly, in conformity with the model of sustainable development, the "approach of diversification of economic activities" is proposed by the majority of development theoreticians. In line with this model, the World Bank, also, emphasizes the importance of non-farming, multi-dimensional economic activities. In this theory, for sustaining rural economy, "diversification of economic activities" is considered as one of the necessities which, if practiced, will facilitate the stability and sustainability of the economic structures. Therefore, in line with economic sustainability of rural areas, diversification of economic activities is a major priority and adopting this strategy can lay the ground for a sustainable livelihood and settlement in rural areas. What is meant by diversification of sources of livelihood is the effort made by individuals or families to seek new methods of earning a living and withstanding relevant shocks (Khatoon & Ruy, 2010). Considering that a diversified economy can lay the proper ground for improving quality of life, the present study investigates the efficacy of diversification of economic activities on rural households' quality of life. Studies show that two types of diversification can be achieved in rural areas:

Diversification of agricultural (farming) activities: It is related to diversified methods of cultivating agricultural products, animal husbandry, aquaculture, apiculture, greenhouse cultivation, etc., and is also referred to as diversification of the farming system.

Diversification of non-agricultural (non-farming) activities: It results from diversification of non-agricultural (service-based and industrial) activities and is also referred to as non-agricultural diversification.

Obviously, diversification of rural economy is a necessity of rural development since the income earned through agricultural activities is subject to external tensions such as drought, market fluctuation, etc. Golmakan, a Dehestan in Chenaran County, is the area under study in this research. In this Dehestan, the development of the agriculture sector has also supported non-agricultural sectors (house rentals, watering the lands of second-home owners, buying and selling fruits, etc.). Considering the relative farming-non farming diversity in the villages of this rural Dehestan, the present study investigates the efficacy of diversification on rural families' quality of life. Quality of life is a criterion through which satisfaction or dissatisfaction of individuals and groups with various aspects of life can be assessed (Qhalibaf, Roustai, Ramazanzade Lasboui, & Taheri, 2011). Concern about quality of life is a feature of the contemporary society. In most industrial and advanced societies, broaching a subject named quality of life is indicative of a new perspective about development-related issues. It is worth mentioning that quality of life, as a major principle, is consistently considered by development planners and managers (Pourtaheri, Eftekhari & Fattahi, 2011).

The findings of studies about quality of life can be helpful in evaluating policies and formulating suitable rural planning and management strategies and can facilitate realization and prioritization of community issues for rural managers and planners with the objective of improving rural households' quality of life. To this end, Santos and Martinez (2005) mentioned that studies on quality of life can be major points of reference for determining long-term policies and objectives (Cited in Azadi, Taghdisi, Jamshidi, & Jaimini, 2013). Considering the mentioned points, the main questions of the study is as follows: To what extent has diversification of economic activities (farming and non-farming) been influential in rural households' quality of life in Golmakan Rural Dehestan?

2. Research Theoretical Literature

2. 1. The Concept of Diversification and Its Aspects

Diversification is one of the major approaches to sustainable rural development (Luo & Zhu, 2006) which, within the framework of sustainable development, lays the groundwork for reducing the negative effects of unsustainability from social, economic and environmental aspects (Berjan, 2014). This approach, by emphasizing the creation of new jobs and job opportunities which in fact hinge on diversification of the economic base, provides a range of lasting strategies and ways of earning a livelihood which leads to lower vulnerability and higher quality of life among rural families, specially the poor (Yasuri & Javan, 2015). Presence of risk and seasonality of jobs are two primary reasons for "diversification". In fact, rural households engage in diverse income generating activities to reduce risk and to ensure a fixed source of income in each season. Accordingly, individuals, through establishing several sources of income, prepare themselves for potential crises in one of the sources of income, and as the saying goes "do not put all their eggs in one basket" (Ellis, 2005).

In rural areas, jobs, based on their nature and type of work, are divided into two agricultural and non-agricultural categories. Agricultural jobs include all activities that are related to farming, gardening, animal husbandry, hunting, fisheries and aquaculture, forestry and pasture lands**.** Statistical Center of Iran (1998) defines non-farming (non-agricultural) jobs as activities that are not directly derived from farming, gardening or animal husbandry. These sectors entail a heterogeneous collection of diverse groups which range from complex industrial units to traditional activities of a rural artisan (Pasban, 2007). In other words, rural non-farm economy refers to all the economic activities of a village which are outside the realm of farming. It is worth mentioning that non-agricultural jobs are related to farming, since they include processing and trading its products. In addition, these activities induce such instances as trade, commerce and industry as well (Israr et al., 2014).

Diversification of the activities of rural economy is only possible through emphasizing rural non-farm economy (RNFE) and agricultural activities in villages (Davis, 2006). Therefore, implementing such activities along with agriculture can lead to higher security in the social network of villages, livelihood of families and at the same time government and private investment (Ashley & Maxwell, 2001).

Generally, income diversification in rural areas is initially created at the farm level for the purpose of families' livelihood and later, with increased productivity and surplus development, grows in both agricultural and non-agricultural sectors (Tschirley & Benfica, as cited in Parhizkari, Mirzaee, Rahmani & Alini, 2015). Considering the importance of diversification of economic activities in the life of rural families, this phenomenon, as a very dynamic and changing subject, deserves more attention by policy makers. This issue is of critical importance in rural populations who are in search of a better life and face the limitations of traditional agricultural methods and are in desperate need of liquidity (Israr et al., 2014).

Within the framework of rural development, the World Bank, in a strategy titled "from vision to action", has emphasized the creation of non-farming jobs in rural environments. In this approach, the growth of the agriculture sector is a fundamental necessity for eradicating poverty in developing countries. However, without any growth in non-farming, income-generating production activities, efforts to eradicate rural poverty will not be met with success. In this approach, broadening the effective support of rural non-farm economy is considered to be an important part of the World Bank's rural development approach (Agricultural Panning, Economic, and Rural Development Research Institute, 2005).

Diversifying the economy of rural settlements in developing countries leads to an increase in non-agricultural job opportunities in rural areas and has a profound effect on the welfare of rural families (Mohammadi Yeganeh & Velai, 2014). Analysis shows that the majority of the World Bank's projects and activities were undertaken with the aim of diversifying non-farming activities, since if agricultural activities, owing to limited expansion and vulnerability of the natural environment, are exhausted to the extent that are not compatible with the principles of sustainable development, they will have limited power for diversification (Anabestani, Tayebnia, Shayan, & Rezvani, 2014).

The role of non-farming economy is so important that more than one third of the economy of rural regions in developing countries is provided by this sector (Lanjouw, 2007). In fact, in economies that are dependent on agriculture (developing countries) the ratio of earned income from non-agricultural activities ranges from 20 to 30 percent, while in urbanized economies this figure is from 60 to 70 percent (Valdez, et al., 2008). Although agriculture is important to food safety of many families, nowadays, it cannot ensure sustainable development of rural areas on its own; this is why economic diversification becomes important (Berjan, 2014).

By enforcing appropriate measures, governments can play an effective role in diversifying the economy. Measures adopted by various countries for diversifying rural economic activities differ. Green Belt Movement and tree planting in African countries, creation of Grameen Bank in Bangladesh and providing loans for the poor, and providing jobs and income for the majority of women in India are among the chosen methods for diversification of rural economic activities. Increasing the share of rural tourism services and presence of women in the job market are the strategies suggested by the European Union for diversifying rural economy (Anabestani et al.,i, 2014). Therefore, human, social, historic, and natural capitals, in tandem with governments' support through implementation of appropriate measures, can create diverse jobs and economies in various geographical regions (Shtaltovna, 2007) (Figure 1).

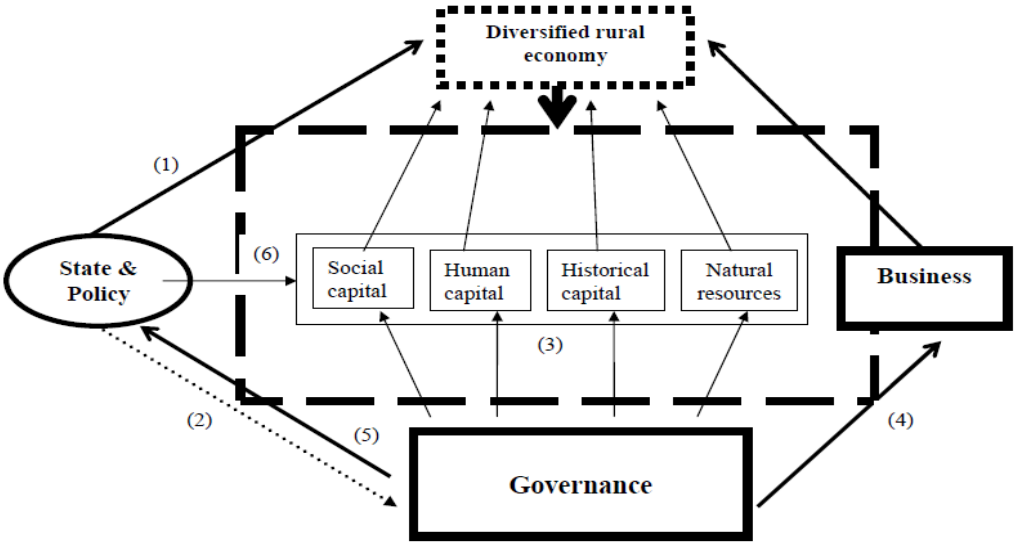

Figure 1. Conceptual framework regarding linkages between governance and rural economy
Source: Shtaltovna (2007, as cited in Berjan, 2014, p. 31)

It seems that job diversity, through minimizing the risk borne by families in various crises such as market fluctuations, drought, etc., and increasing sources of income, reduces rural households' vulnerability and improves their quality of life.

2. 2. The Concept of Quality of Life and its Aspects

Today, quality of life indicates a society's level of development. This concept entails the major factors that determine individual prosperity and the

living conditions of society (Harirchi, Mirzaie, Jahromi, & Makani, 2009).

Quality of life is a broad concept with various meanings for different individuals and groups; however, no acceptable global definition for this concepts has been offered yet because many researchers believe that quality of life is a multifaceted, relative concept which is influenced by time, place, and personal and social values (Khademhosseini, Mansourian, & Sattari, 2010).

Therefore, considering that a major, fundamental characteristic of quality of life pertains to its multidimensionality, neither a universally accepted conceptual framework for measuring quality of life, nor a single methodology for determining its domains and attributes exists; hence, its domains and each of their attributes together with the method of measuring it are selected based on the objectives of the study, researcher's subjective opinion, features of the area under study and the available data (Azadi, Taghdisi, Jamshidi, & Jamini, 2013).

Van Kamp, Leidelmeijer, Marsman, and De Hollander (2003) believe a comprehensive framework for studying quality of life in an integrated, holistic way based on physical, spatial, and social indicators is yet to be proposed (Van Kamp et al., 2003). Schifer et al. (2002) proposed a model for explaining the notion of quality of life. In this model, three social, environmental and economic domains are emphasized and have the advantage of explicating the distinction among various domains and creating an image of such notions as livability, quality of life, and sustainability in relation with one another (Van Kamp & Leidelmeijer, 2003).

Figure 2. Model of Factors Contributing to Quality of Life from the Perspective of Human Ecology.
(Source: Van Kamp et al. 2003: p. 11.)

According to the model developed by Van Kamp et al. (Figure 2) in this research, In the research, the following aspects are studied:

A) The social aspect of quality of life: The social aspect is one of the key factors shaping quality of life and exerts a considerable influence on people's, basically social, emotions. This aspect is measured on an intermediate level, with its indicators being a combination of subjective and objective indicators of quality of life.

B) The economic aspect of quality of life: This aspect is mainly concerned with financial ability, level of assets, purchasing and consumption power, enjoyment of facilities on an individual and collective level, along with Net Domestic Product and Gross Domestic Product, Gini coefficient, availability of jobs and job opportunities, etc. on a macro, national level.

C) The environmental or quality of living environment: Quality of life is totally dependent upon the conditions of the environment where people live, such as pollution, quality of housing, etc.

In the present study, what is meant by the quality of life is the external factors that influence various "economic, social and environmental" aspects of quality of life that are related to observable

phenomena and, inevitably, are obtained through secondary sources such as the ability to travel with family on a yearly basis, visiting relatives and family, quality of housing, etc. Considering that evaluation of quality of life cannot be accomplished solely by analyzing external factors, in some cases people's perception of their living conditions, such as desire to live in village, willingness to migrate to city, job satisfaction, willingness to marry in the village, satisfaction with life, willingness to parent children, etc. are also assessed.

2. 3. The Relationship between Economic activities diversification and Quality of Life

Improving rural households' quality of life without any regard for the development of rural economy is not feasible. Low level of income, limited job opportunities, unemployment and hidden unemployment, reliance on the production of few specific agricultural products, marketing and delivering limitation, etc. are among the obstacles, a large portion of which are created in the presence of an undiversified structure. As a basic strategy, diversification of economic activities leads to creation of jobs, stabilization of the population, effective exploitation of renewable natural resources, increase in sales and savings, higher levels of self-awareness, personality, national and individual identity (Alawizade, 2016) and eventually, improved quality of life. In addition, diversification of economic activities, through improving non-agricultural job opportunities, reduces the risks associated with agricultural activities and provides more options and, ultimately, distributes the returns of the social system in an equitable manner among its indispensable members (Karimzadeh, welai, Manafi Azar, 2016), and leads to an improved welfare and quality of life. Therefore, it is said that access to quality of life entails costs and requires some tools which can be summed up in diversification of rural families' economic activities (Noghani, Asgarpour Masouleh, Safa, & Kermani, 2008).

2.4. Literature Review

From the 1990s onward, and with the introduction of livelihood frameworks, the subject of diversifying methods of earning a living in rural dehestans of developing countries entered the literature and gained significance. In late 1990s, numerous studies were conducted to confirm diversification strategies (Israr, Khan, Jan, & Ahmad, 2014) and to this date, on an international scale, many studies regarding economic activities diversification were undertaken. In most of these studies, diversification of economic activities and expansion of non-agricultural activities are suggested as effective solutions for eradicating poverty among rural families in developing countries. The findings of the majority of these studies indicate that expansion of non-agricultural activities would significantly help increase the level and stability of families' income and consequently reduce poverty and vulnerability in rural areas. Table 1 summarizes some of Iranian and international studies regarding economic activities diversification in rural areas which are related to the present research.

Table 1. A Review of Foreign and Domestic Literature Regarding Economic activities diversification in Rural areas

(Source: Excerpt from Available Resources, 2016)

Author/Year	Conclusion
Imai, Gaiha & Thapa (2015)	The present study examines whether rural non-farm employment has any poverty and/or vulnerability-reducing effect in Vietnam and India. Access to the rural non-farm employment significantly reduces vulnerability too in both countries, implying that diversification of household activities into non-farm sector would reduce such risks. However, because even unskilled or manual non-farm employment significantly reduces poverty and vulnerability in India and poverty in some years in Vietnam, this has considerable policy significance as the rural poor do not have easy access to skilled non-farm employment.
Hoang, Pham& Ulubaşoğlu (2014)	Diversifying into non-farm activities has been suggested as an effective way out of poverty for rural households in developing countries. Using the Vietnamese Household Living Standards Surveys of 2002, 2004, 2006, and 2008, and investigate the effect of non-farm sector involvement on poverty and expenditure growth. Our estimates show that an additional household member involved with non-farm activity reduces the probability of poverty by 7–12% and increases the household expenditure by 14% over a two-year period. Our findings also indicate that non-farm involvement reduces the hours worked on farm but not the household agricultural income.

Table 1.

Author/Year	Conclusion
Asmah, (2011).	Diversified households and less diversified households differed significantly in terms of variables related to household assets, markets and institutions. Both household welfare and rural non-farm diversification decisions are mostly driven by household assets including good health, education, and household age composition. Households who live in communities with access to fertilizers, public transports and local produce markets are more likely to engage in non-farm diversification and enjoy improved welfare. The importance of access to TV and radio as effective mass media tools in influencing household behavior is underscored in the analysis. Targeting interventions that enhance livelihood diversification would ultimately have a positive impact on household welfare.
Schneider & Niederle (2010)	Adopting an actor-oriented approach combined with a livelihoods perspective, this paper discusses the emergence of a new set of strategies among small-scale family farmers in southern Brazil. This region is one of the rural areas of Brazil most affected by the changes in the technological basis of production that have occurred since the 1970s. Such strategies involve innovations in the labour and production processes, and a common denominator among such strategies is the search for 'autonomy' in a context of increasing social vulnerability. In this context, farmers have built livelihood diversification strategies (internalisation of resources, pluriactivity, de-commodification, alternative markets), which indicate the emergence of new forms of resistance based on a wide and heterogeneous set of farming practices.
Babatunde & Qaim (2009)	. Here, we analyze the situation in rural Nigeria based on recent survey data. The majority of households is fairly diversified; 50% of total income is from off-farm sources. Strikingly, richer households tend to be more diversified Econometric analysis confirms that the marginal income effect is positive. Yet, due to market imperfections, resource poor households are constrained in diversifying their income.
Ghasemi and Javan (2014)	The findings show that only 8.8 percent of the studied rural settlements were sustainable in terms of the intended aspect, with 44.1 percent being categorized as semi-sustainable and 47.1 percent being categorized as unsustainable. The findings of one-way analysis of variance show that the average score for diversity of livelihood in sustainable, semi-sustainable and unsustainable villages are 38.6, 30.7 and 27.5 respectively. For a more detailed study of the relationship between sustainability and diversity Pearson Correlation was used. The relationship between sustainability and diversity was determined to be 0.77, which is a strong one. In fact, diversification of economic activities in rural areas can lead to the sustainability of rural settlements.
Kohnepooshi (2013)	Diversification of economic activities has a positive influence on life satisfaction of rural households, in the area under study. Moreover, environmental capabilities and border positioning, more than any other factor, play a role in diversification of the regions' rural economy. Institutional-managerial obstacles are major obstacles preventing diversification of economic activities in the villages of this region. Offensive strategies are presented as the best strategies for diversification of economic activities in border villages of this county.
Alawizadeh (2010)	The findings show that lack of diversification of economic activities in families of the studied are, owing to their reliance on a specific product (i.e. apple), has created unfavorable conditions for them; while families with diversified sources of income in agricultural and non-agricultural sectors had a relatively more satisfactory situation in terms of indicators such as education, income stability, quality of life, and vulnerability.
Heidarimokarrar (2010)	Mentions the role of small wells in such sectors as aquaculture, greenhouse farming, animal husbandry, etc. According to the findings of the study, in some areas of Zehak County where in summer small wells are filled with water, diversity of agricultural products and relatively high levels of income is observed and the residents of these regions are more optimistic about their job prospects. On the other hand, villages with less access to the water of small wells have confined their activities to cultivating wheat and barley. Farmers who use small wells, compared to others, have higher levels of economic and social participation and these small wells have provided secure water supplies for economic activities.

Studies show that diversification of economic, and specifically non-agricultural activities, is a favorable strategy for creating stable income and an immediate solution for reducing poverty and vulnerability in rural areas. Research shows that these strategies have reduced poverty in countries such as Vietnam, India, and Romania considerably. Based on the findings of national and international studies, considering that many young people in villages under the study were unemployed or their part-time jobs as labors, it seems that the expansion of agricultural-based non-agricultural activities such as apiculture and aquaculture (fish breeding) in appropriate areas can be an effective solution for creating jobs for the surplus agriculture workforce, for increasing satisfaction with life, and for improving quality of life. From 90s onward, the subject of quality of life gained considerable

significance in the theoretical and development literature and has been the basis of modern distinctions and categorizations of countries in recent years (Anbari, 2010). A review of literature revealed that at the time of this writing, no study, either in Iranian or foreign sources, regarding the influence of economic activities diversification on quality of life was found.

3. Research Methodology

3.1 Geographical Scope of the Research

The research population includes all the villages with more than 20 families in Golmakan Dehestan, Chenaran County. According to the results of the General Census of Population and Housing of 2011, Golmakan Dehestan has 31 populated villages, of which only 15 have a population more than 20 families or 100 people. Considering the low number of villages with more than 100 people, village was not the unit of sampling and all 15 the villages with more than 20 families were analyzed. For determining the number of families in the sample, Cochran's sample size formula was used. It is worth mentioning that the number of sample families in each village was determined through proportional sampling (table 2).

Table 2. Sample Villages and Sample Size in Each of Them
(Source: Statistics Center of Iran, 2011 and Author's Calculations.)

Row	Village Name	Village Type*	Distance to Mashhad to km	Distance to Chenaran	The Household	The Population	Sample	Sample modification
1	Kalateh payeh	Su	70	45	221	752	26	26
2	Abghad	Su	52	17	155	445	18	19
3	Frizi	Mo	70	27	272	741	32	32
4	Dowlatabad	Mo	50	33	206	625	24	24
5	Ahmadabad	Pl	45	25	161	573	19	19
6	Kahoo	Su	35	35	187	569	22	22
7	Beh Abad	Pl	30	15	200	716	23	23
8	Gavtarna	Su	37	17	127	459	15	15
9	Hashem Abad	Su	40	30	58	216	7	10
10	Jamab	Su	50	7	78	249	9	10
11	Khij	Pl	50	15	151	535	18	18
12	Kheirabad	Pl	45	20	49	166	6	10
13	Islam Abad	Pl	40	5	59	226	7	10
14	Chenar	Mo	55	30	70	205	8	10
15	Nozad	Mo	47	20	35	112	4	10
Total		47.7		22.7	2029	6589	236	258

Su: Sub montane, Mo: Mountainous, Pl: Plain

3.2. Methodology

Considering the nature of this research, a descriptive-analytical methodology was adopted. The population is based on rural settlements of Golmakan Rural Dehestan and the unit of analysis is village. Data were analyzed using stepwise regression. In this study, "quality of life" is the dependent variable which is quantified in three, social with 20 indicator aspects (in the components of welfare, hygiene and health, social security, education, leisure time, social interaction, and social solidarity), economic with 16 indicator aspects (in the components of purchasing power, economic prosperity, assets and wealth, income and employment) and environmental-physical with 12 indicator aspects (in the components of environmental quality, availability of services and housing). Overall, in this study, quality of life was studied using 13 components and 48 indicators, as described in table 3. It should be mentioned that both variables were weighted through point allocation.

Table 3. Major Dimensions and Indicators Used to Measure the Dependent Variable of the research
(Source: Research findings, 2016)

Dimension	Component	Indicator	Direction	Weight
Economic	Purchasing power	The Ability to Fund Children's Education	Direct	0.05
		The Ability to Provide Family Clothing	Direct	0.06
		Supplying Family Food (Rice, Oil, Sugar, etc)	Direct	
	Economic Welfare	Ability to Provide Non-Essential Goods (Jewelry, Furniture, Luxury Goods, etc.)	Direct	0.08
		The Ability to Replace Worn-Out Appliances	Direct	0.06
		Sufficiency of Savings to Face Sudden Happening (Marriage of Children, Illness, etc.)	Direct	0.08
		The Average of Family Expenses	Indirect	0.07
		Financial Ability to Travel Annually with Family	Direct	0.04
Economic	Assets and Wealth	The Ability to Buy House in Mashhad and etc.	Direct	0.09
		The Ability to Buy Car	Direct	0.07
		Financial Support Progeny to Continue College Education	Direct	0.05
	Income and Employment	The Existence of Job Opportunities for Young People in Rural Area	Direct	0.1
		Satisfaction Level of Wages	Direct	0.07
		Job Satisfaction	Direct	0.07
		The Proportion of Income to the Amount of Labor.	Direct	0.07
		Satisfaction of Income	Direct	0.08
social	Well-Being	Feeling of Progress in Life	Direct	0.07
		Feeling Happiness and Cheerful	Direct	0.06
		Feeling of Living in Conditions of Anxiety and Worry and Tension	Indirect	0.05
	Sanitation and Health	Weekly Consumption of Protein (Red meat, White meat, etc.)	Direct	0.06
		Weekly Consumption of Vegetables and Fruits in the Diet	Direct	0.04
		Access to Health Services	Direct	0.03
		The Feeling of Physical Health	Direct	0.09
	Public Safety	Effective Presence of Police Force	Direct	0.04
		The Rate of Crime in the Village (Harassment, Theft, etc.)	Indirect	0.03
		Overall Satisfaction of the Security Quality in the Village	Direct	0.05
		Concerned about Wife and Children's Walking at Night	Indirect	0.05
	Education and the desire to continue education	Access to Educational Facilities (Primary School, etc.)	Direct	0.05
		Satisfaction with the Quality of Educational Facilities (Teacher, School, etc.)	Direct	0.03
		Interested in Continuing Education among Family Youth	Direct	0.04
	Social Interaction	Willingness to Participate in the Election	Direct	0.02
		The Desire to Participate in National Occasions (22 Bahman, Quds Day and etc)	Direct	0.02
		The Visit Relatives	Direct	0.04
	Social Solidarity	Family Relationship and Traveling with Neighbors	Direct	0.03
		Resolving Disagreements Consultative in Place	Direct	0.03
		Participation in Various Religious Affairs (Congregational Prayer, Religious Missions, etc.)	Direct	0.02
Dimension Physical-Environmental	Environmental Quality	Satisfaction with the Health of the Living Environment	Direct	0.11
		Collection and Disposal of Waste	Direct	0.11
		The Quality of Drinking Water	Direct	0.08
		Noise Pollution	Indirect	0.03
		The Desire to Migrate	Indirect	0.09

Table 3.

Dimension	Component	Indicator	Direction	Weight
	Access to Services	Access to Commercial Facilities (Retail and etc.)	Direct	0.06
		Access to Public Transport (Bus and Etc.)	Direct	0.07
		Internet Access at Home	Direct	0.04
		Access to Cultural, Artistic and Sports Facilities	Direct	0.02
	Housing	The Quality of Materials Used in Housing	Direct	0.15
		Equipments and Facilities for Housing (Cooler, Refrigerator, Washing Machine, Etc.)	Direct	0.14
		Compliance with Laws and Standards of Housing Construction in Terms of Rigidity	Direct	0.16

through farming, gardening and animal husbandry, and diversification of non-agricultural activities is mainly based on families' employment in industrial and services sectors.

Livelihood diversification is the independent variable which is analyzed in two "agricultural" and "non-agricultural" sectors, as shown in table 4. Agricultural activities are mainly diversified

Table 4. Indicators for Independent Research Variables.
(Source: Research findings, 2016)

Concept	Variable	Indicator	Weight
Livelihoods diversity	Diversification in Economic Activities of the Agricultural Sector	Diversity in Agricultural Income Sources in the Cultivation Sector (Sales of Crops)	0.13
		Diversity in Agricultural Income Sources in the Garden Sector (Sales of Garden Products)	0.15
		Diversity in Agricultural Income Sources in the Livestock Sector (Cattle-Sheep-Goat)	0.14
		Diversity in Income from Processed Agricultural Products	0.03
		Diversity in Income from Livestock Processed Products (Whey, Yogurt, Cheese, Oil, etc.)	0.04
		Diversity in Cultivating Crops	0.08
		Diversity in the Cultivation of Garden Products	0.09
		Diversity in the Light and Heavy Livestock	0.09
		Diversity in Poultry	0.02
		Diversity in Agricultural Production Units (Number of Hives, Mushroom Breeding, Greenhouses, Cattle Keeping Place, Fishery, Silkworm, etc.)	0.18
		Diversity in the Sale of Active Agricultural Products (Hive Number, Mushroom Breeding, Greenhouse, Dairy, Fishery, Silkworm, etc.)	0.05
	Diversification in Non-Agricultural Sector Economic Activities	Diversity in Income Sources of The Service Sector (Retail, Supply and Sale of Inputs And Agricultural Products, the Purchase and Sale of Building Materials, Activities in the Provision of Non-Residential Services (Driver, Caretaker and Related Services), Guarding Facilities and Second Homes, Land Purchase and Sale and Housing, Subsidies, Pensions, Personal Property Rent, Driver, Farm Worker, Work in Animal Husbandry, Irrigation of Land Owners Second Homes, and etc.)	0.5
		Diversity in the Revenue Sources of the Industrial Sector (Building, Stonework, Tiling, Electricity and Building Plumbing, Carpet Weaving, Welding, Carpentry, Boxing, Woodcarving, Bread Baking, Stoneware, etc.)	0.5

In this study, the validity of quality of life questionnaire was established through confirmatory factor analysis. Confirmatory factor analysis is one of the techniques used for determining the underlying concepts of indicators (Ghiyasvand, 2013). Kaiser-Meyer-Olkin (KMO >= 0.7) and Bartlett (Sig <= 0.5) test statistics are indicative of the adequacy of the data for factor analysis with respect to economic, social, and physical-environmental aspects and also that of the

quality of life questionnaire. For factor extraction, maximum likelihood method and for determining the number of factors Eigenvalue was used. Overall, using orthogonal rotation, 25 social indicators accounted for 61.01 percent of variance, 14 economic indicators accounted for 65.23 percent of variance and 9 physical-environmental indicators accounted for 64.4 percent of variance. All in all, 48 indicators of quality of life accounted for 65.72 percent of variance in this variable. Therefore, we can conclude that economic, social and physical-environmental aspects of quality of life, and in general the concept of quality of life, have construct validity. The reliability of the questionnaire was established using Cronbach's alpha, as depicted in table 5. The value of alpha for the economic factor is 0.727, for the social factor is 0.728 and for the physical-environmental factor is 0.569. Overall, the value of Cronbach's alpha for all 48 indicators equals 0.83, which is indicative of the internal consistency of variables for assessing the intended components and it establishes the questionnaire's reliability.

Table 5. Cronbach's Alpha and Confirmatory Factor Analysis on Reliability and Validity of Quality of Life and Its Dimensions

(Source: Research findings, 2016)

Variable	Number of Indices	Initial Eigenvalues* Cumulative %	Cronbach's Aalpha
Quality of Life in Economic Dimension	14	65.23	0.727
Quality of Life in the Social Dimension	25	61.012	0.728
Quality of Life in the Physical-Environmental Dimension	9	64.4	0.569
Quality of Life	48	65.72	0.83

*- Extraction Method: Maximum Likelihood

4. Research Findings

4. 1. Descriptive Findings

Of the total 258 respondents, 95.7 percent were male (247 people) and 4.3 percent (11 people) were female. In terms of marital status, 98.8 percent of respondents, that is 255 people, were married and 1.2 percent, that is 3 people, were single. Respondents had an average age of 48 years. Respondents' educational distribution is also depicted. Based on cumulative frequency, 72.5 percent of respondents had an elementary-school education or lower and only 2.6 percent, that is 4 people, had an academic education. In terms of employment, 49.6 percent of respondents were employed in the agriculture sector (including farming, gardening, animal husbandry, and apiculture and its sub-sectors), 4.3 percent were employed in the industrial sector, 36.8 percent were employed in the services sector (manual labor, self-employed such as running a shop, selling building materials, collecting milk, etc.), and 8.5 percent were unemployed (including retirees, and those supported by Imam Khomeini Relief Foundation, etc.). And 0.8 percent did not mention their jobs (Table 6).

Table 6. Individual Characteristics of Respondents in the Studied Villages.
(Source: Research findings, 2016)

Percent	Number	Categories	Variable	Percent	Number	Categories	Variable
49.6	128	Agriculture	Job	4.3	11	Female	Gender
4.3	11	Industry		95.7	247	Male	
36.8	95	Services		1.2	3	Single	Marital status
8.5	22	Inactive		98.8	255	Married	
19.8	51	Illiterate	Education	10.1	26	20-30	Age
13.2	34	Read writing		24.8	64	30-40	
39.5	102	Elementary level		19.8	51	40-50	
18.6	48	Secondary school		16.3	42	50-60	
7.4	19	High school level		15.2	39	60-70	
1.2	3	College degree Degree/		11.2	29	70-80	
0.4	1	Post Under Graduated Degree		2.4	6	≤80	

Scores for quality of life and livelihood diversity in the studied rural families are shown in table 7. According to the table, the highest quality of life score belongs to Hashem Abad Village (10.16), followed by the villages of Islam Abad (9.89) and Kahu (9.31), respectively. The lowest quality of life score belongs to the villages of Nozad (7.18) and Jam Ab (7.56), respectively. Field studies revealed that in these villages farming is done on a very limited scale and is mostly in the form of dry farming. According to the findings, diversification of activities in the studied villages is not identical and Nozad has the highest average score for diversity (agricultural and non-agricultural) with 3.05, followed by Kahu with an average of 3.01, and Jam Ab has the lowest average score for diversity with a score of 1.12. The low average score for diversification in Jam Ab Village is due to the fact that no gardening activity in this village exists and the only crop is barley. Among the studied villages, Nozad with an average score of 3.05 and Kahu with an average score of 3.02 in terms of both agricultural and non-agricultural diversity are classified as diversified villages. In Kahu, along with gardening, most families engage in such activities as animal husbandry (producing and selling the resultant products), processing products like dried berries, traditional sheep fattening, watering the lands of second-home owners, driving (taxi driving, cargo transportation), manual laboring (working in construction sites and farms), leasing houses and lands in the city of Mashhad or in the village, and also shop keeping. There are three poultry houses in Nozad where some families, in addition to their gardening activities, are employed; moreover, some engage in buying and selling processed products (like various types of dried berries), some work as cargo drivers or tractor drivers on farms, or engage in sheep fattening.

Table 7. Raw Data Matrix of Quality of Life and Economic activities diversification by Dimension in Selected Villages
(Source: Research findings, 2016)

Village name	Quality of Life by Dimension				Livelihoods Diversity		
	Economic	Social	Environmental-Physical	Total	Agriculture	Non-agricultural	Total
Ahmadabad	2.38	3.04	3.66	9.07	0.53	1.11	1.63
Nozad	2.04	2.74	2.4	7.18	1.79	1.26	3.05
Kalateh payeh	2.47	2.94	3.51	8.92	1.22	1.12	2.34
Frizi	2.07	3.29	2.75	8.11	1.07	0.96	2.03
Kahoo	2.37	3.06	3.88	9.31	1.68	1.34	3.02
Kheirabad	2.06	2.86	3.26	8.18	0.13	1.22	1.35
Islam Abad	2.39	3.55	3.96	9.89	0.92	1.56	2.48
Hashem Abad	2.57	3.41	4.18	10.16	1.25	1.64	2.89
Dolat abad	2.22	3.31	2.94	8.47	0.73	1.1	1.83
Abghad	2.14	3.33	3.68	9.14	0.62	1.07	1.69
Gavtarna	2.11	2.83	3.85	8.79	0.23	1.23	1.45
Khij	1.98	3.12	3.48	8.58	0.33	1.39	1.72
Chenar	2.01	3.2	3.17	8.39	1.39	1.02	2.41
Beh Abad	2.1	2.72	3.71	8.54	0.19	1.37	1.55
Jamab	1.67	2.72	3.18	7.56	0.1	1.02	1.12

Non-agriculture sectors include jobs in industry and services; the services sector is mainly comprised of construction workers, farm workers, drivers and those who water lands. In the studied villages, there were 369 drivers (truck, pickup truck, or taxi), 222 people had the job of watering lands of second-home owners, 187 people were house lessors and 30 were land lessors. In the villages of Khij, Abqad, and Jam Ab, due to the presence of iron ore mines, 45 people work as mine workers. One hundred and thirty-seven people are employed in poultry houses and dairy farms, and 129 people are employed in firms and Chenaran Industrial Town as workers. One humdred and nine people are shopkeepers (grocery store, fast food, barber, etc.), and 53 people are working as shoemakers, carpenters, bakers, etc. In addition, due to the relative boom of gardening activities, 46 people engage in buying and selling fruits during the harvest season. Eleven people are sellers of building materials and there are 7 realtors (buying and selling land, garden, villa). Similarly, two eating houses (restaurants) are operating in the villages of Dowlatabad and Gavterna. Apiculture, which is practiced by 780 people, is present in most studied villages. Forty people engage in mushroom farming in Kahu, Hashmeabad and Dowlatabad Villages and 40 people work in 8 greenhouses in Kheirabad, Gavterna and Behabd Villages. Likewise, nearly 160 families engage in sheep fattening, 170 people work in 22 farm dairies, 13 people work in 6 aquaculture centers in five villages, and 38 people work in 6 poultry houses in 4 villages. Also, there is an ostrich farm in Kahu where 5 people are employed. Four people engage in packing medical herbs and dried fruits in Dowlatabad. Present industrial units include welding, carpentry, box making, bakery, stone cutting, embroidery workshop, and garment and shoe production workshops where 217 people of the studied villages are employed.

We can see that activities of the non-agricultural sector are highly diverse in the villages under study and income of a large percent of rural families is provided by the non-agriculture sector (in tandem with agricultural activities).

Table 8. Number of Households with Non-Agricultural Income Sources in Each of the Studied Villages.
(Source: Research findings, 2016)

Village Name	Income from the processing of agricultural products and livestock			Income from Agricultural Production Units								Income from The Service-Workers Sector				
	livestock Processed	Raw Animal Products	Processed Garden And Agricultural	Beekeeping	Mushroom Planting	Greenhouse	Sheep Fattening	Cow keeping	Fisheries	Aviculture	Breeding ostrich	Construction worker	Ore worker . Mineral worker	Worker of the Company or Industrial town	Poultry workers, cattle and ...	Agricultural Worker
Kalateh Payeh	2	102	50	60	0	0	0	0	3	0	0	0	0	0	0	50
Abghad	50	60	0	5	0	0	40	0	2	0	0	0	15	0	0	20
Frizi	40	3	40	700	0	0	40	0	4	0	0	20	0	5	0	40
Dolat Abad	10	10	0	3	0	0	10	0	3	0	0	100	0	0	0	100
Ahmad Abad	100	111	60	3	0	0	0	13	1	0	0	0	0	10	27	60
Kahoo	10	13	0	4	40	0	50	20	0	0	5	120	0	0	10	250
Beh Abad	0	5	0	0	0	5	5	5	0	0	0	120	0	10	5	35
Gavtarna	0	0	0	0	0	25	0	40	0	30	0	0	0	0	75	40
Hashem Abad	10	20	0	0	0	0	0	10	0	0	0	0	0	1	10	60
Jamab	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0
Khij	5	35	0	0	0	0	15	0	0	2	0	0	30	2	0	40
Kheirabad	10	13	0	0	0	10	0	20	0	0	0	40	0	0	4	0
Islam Abad	0	0	0	0	0	0	0	2	0	1	0	0	0	1	6	10
Chenar	20	60	70	5	0	0	0	0	0	0	0	0	0	0	0	30
Nozad	0	2	15	0	0	0	7	0	0	5	0	0	0	0	4	0
Total	258	434	235	780	40	40	167	110	13	38	5	400	45	129	177	735

Table 9. Number of Households with Non-Agricultural Income Sources in Each of the Studied Villages.
(Source: Research findings, 2016)

Village name	Income from Various Activities of the Industry Sector											Income from Other Services Activities.							
						Building													
	Welding	Carpentry	making boxes	Handicrafts	Bakery	Builder	Tiling	Electrician	Embroidery Workshop	Production of shoes	Clothes industrial	Rent a house / land	Driver	Irrigation Lands of Second Homeowners	Shoe, plumbing and etc.	Materials Selling	Buying and Selling Fruit	Shopkeeper	Estate deals
Kalateh Payeh	0	0	1	3	4	4	3	1	0	0	0	70	100	70	15	0	10	5	0
Abghad	0	0	0	0	3	5	0	0	0	0	0	3	5	5	0	0	1	5	0
Frizi	0	0	0	3	3	3	8	3	0	0	0	50	100	10	1	0	10	7	0
Dolat Abad	0	0	0	1	4	12	4	3	0	1	6	0	5	50	0	0	11	9	3
AhmadAbad	0	0	0	0	8	10	3	3	0	0	0	30	6	20	0	2	5	5	0
Kahoo	3	1	0	7	5	10	5	3	0	0	0	28	100	50	7	1	5	10	5
Beh Abad	5	2	1	0	0	10	5	5	0	0	0	15	12	5	30	4	0	50	0
Gavtarna	2	0	0	2	4	0	0	0	0	0	0	13	3	10	1	2	1	13	1
Hashem Abad	0	0	0	0	2	10	0	0	0	0	0	5	15	0	0	1	0	5	3
Jamab	0	0	0	0	0	20	3	0	0	0	0	0	8	0	0	0	0	1	0
Khij	0	0	0	0	4	4	1	0	5	0	0	0	4	0	0	1	0	3	0
KheirAbad	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	2	0
Islam Abad	0	0	0	0	0	3	0	0	0	0	0	2	1	0	0	0	0	1	0
Chenar	0	0	0	4	0	3	0	0	0	0	0	1	10	0	0	0	1	1	0
Nozad	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0
Total	10	3	2	14	37	93	22	10	5	1	6	217	369	222	54	11	46	117	12

4. 2. Inferential Findings

In the present research, economic activities diversification in agriculture and non-agriculture sectors is the independent variable and rural households' quality of life is the dependent variable. Sample villages are the unit of analysis. To investigate the effect of independent variable on the dependent variable, stepwise regression was used. Before the test, skewness and kurtosis in dependent and independent variables were measured to determine their normality. Coefficients of skewness and kurtosis in both variables ($|Ku|$ & $|SK| \leq 1.5$) are indicative of very little skewness, confirming that in terms of symmetry both are rather similar to normal distribution and are not very different from it. As shown in table 9, since both the dependent and independent variables are normally distributed, stepwise regression can be used.

Table 10. Checking the Normality of the Independent Variable (Diversity) and Dependent (Quality of Life)
(Source: Research findings, 2016)

Normal Distribution Indexes	Diversification in the Economic Activities of the Agricultural Sector	Diversification in Non-Agricultural Economic Activities	Total Diversification	Quality of Life
Skewness	0.315	0.718	0.407	0.027
Std. Error of Skewness	0.58	0.58	0.58	0.58
Kurtosis	1.184-	0.185-	1.077-	0.179
Std. Error of Kurtosis	1.121	1.121	1.121	1.121

In stepwise regression, independent variables are added (or subtracted) one after another (Farbod, Olaadi, & Abbasi, 2014) and the variable with highest degree of correlation with the dependent variable is chosen in the model (Habibpour & Safavi, 2012). In the present study, the two variables of diversity of agricultural and non-agricultural economic activities were added to the model; only the variable of diversity of non-agricultural economic activities remained in the model and economic activities diversification in the agriculture sector was removed. It should be mentioned that according to table10, value of multiple correlation coefficient was equal to 0.6 which depicts a direct, rather strong correlation between independent and dependent variables.

Table 11. Correlation Value, Adjusted Coefficient and Standard Error Estimation in Regression Test.
Source: Research findings, 2016

R	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
0.60	0.31	0.655	2.11

The *F* value equaled 7.294 and its level of significance equaled 0.018, which is less that 0.05 and therefore is statistically significant; hence, the independent variable can explain the variation in the dependant variable; as a result, the regression model is statistically significant.
The statistical adequacy of the model is shown in the following table. The constant statistic is the y-intercept which shows the value of dependent variable without any interference from the independent variable. The relative importance of each independent variable in the model is shown by its corresponding *t* statistics. A *t* statistics with an absolute value bigger than 2.33 and a significance with a value smaller than 0.05 or 0.01 means that the intended variable has a significant role in explaining the variations of the dependent variable. As can be seen in table 11, the *t* statistics equals 2.701 and has a significance smaller than 0.05 which shows that the diversification of non-agricultural activities has a significant role in explaining the variations of the dependent variable (rural households' quality of life) and one standard deviation change in non-agricultural activities results in a 0.6 standard deviation change in the variable of quality of life. In addition, a large beta (0.6) is indicative of its relative importance and its role in predicting the dependent variable. The regression equation with the standard beta coefficient is as follows:

(Quality of Life in Rural Areas) y= (5.795) + (0.6) (Diversity in Non-Agricultural Activities)

Table 12. Non-Standardized Regression Coefficient, T and Significance Level of Regression
(Source: Research findings, 2016)

Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.
(Constant)	5.795	0.6	5.347	0.000
Diversification in Non-Agricultural Economic Activities	2.357		2.701	0.018

a. Dependent Variable: Quality of Life

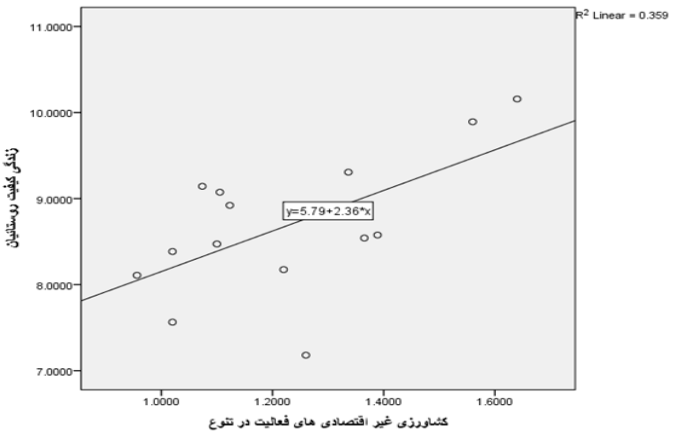

Figure 3. The Effect of Diversity in Non-Agricultural Economic Activity
(Source: Research findings, 2016)

As can be seen in figure 3, there is a linear, direct relationship between diversification of non-agricultural economic activities and quality of life. Obviously, expansion of non-agricultural activities in rural areas, in addition to creating jobs for a work force who due to the changes of the economic structure and reduction of agriculture labor has found himself unemployed, provides a powerful incentive for preventing rural labor from migrating to cities; in addition, the development of such professions can expedite the economic growth and improve income distribution. What's more, these jobs, in the long-term, diversify the income opportunities of rural families and reduce their income vulnerability to economic and environmental fluctuations. Overall, diversifying fields of occupation can be seen as a kind of indirect insurance for the income security of rural households who had low levels of productivity or sustained losses due to unexpected natural disasters. Therefore, non-agricultural jobs deter the increasing poverty which is created by the reduction of national per capita production and increased unemployment in rural areas. Studies show that creation of non-agricultural jobs in rural areas is dependent upon the growth and development of the agriculture sector; since the need for non-agricultural products and services depends on the financial ability of rural households. Considering that most rural families engage in agricultural activities or other related jobs, boosting the production of agricultural products and eventually increasing rural households' income is an effective step toward creating non-agricultural jobs (Naseri, Baskha, Hasanzadeh, & Masaeli. 2009). Non-agriculture sectors in rural areas of developing countries facilitate economic growth and job creation, reduce poverty, and eventually enhance rural households' quality of life.

Therefore, it is no secret that creation of jobs, distribution of income, diversification of the rural economy, etc. are among the necessities of rural development in Iran. Considering that the income generated by agricultural activities is susceptible to external tensions such as drought, market fluctuations, etc., diversification of non-agricultural activities can be considered as an influential factor in improving the economic status of families and, hence, improving rural families' quality of life (Figure 4).

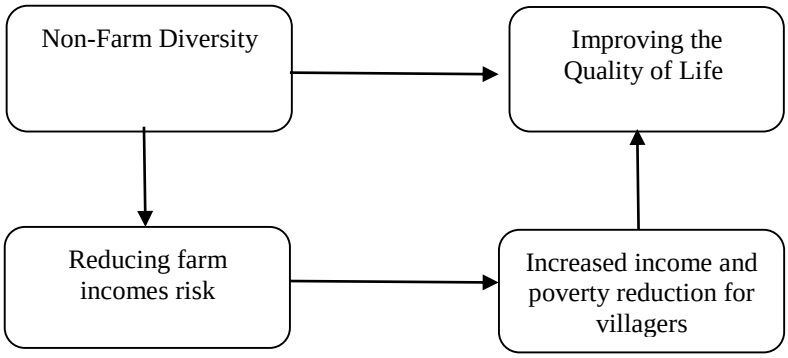

Figure 4. The Effect of Diversity of (Non-Agricultural Activities) on the Quality Life of rural households.
(Source: Research findings, 2016)

The importance of non-agricultural sector stems from the fact that even if agriculture is in recession, a non-farm economy can compensate some of the damages (Lanjouw, 2007). Studies in various countries (e.g., USA, Korea, India, Uganda, Egypt) show that non-agriculture and non-farm sectors in the majority of these countries share the following common features:

1. Throughout villages, these activities are closely linked with the agriculture sector.
2. The growth of the agriculture sector is dependent upon the nature of non-agricultural activities and undertaking such activities.
3. An increase in diversity of non-agricultural activities tends to reduce the seasonal feature of employment which is indicative of a willingness for more stability in these sectors.
4. It seems that employment in non-agricultural sectors has a positive relationship with higher levels of income in rural families, higher potential for diversifying non-agricultural sources of income, and improved productivity of agricultural activities.
5. Engagement in such activities is positively related with the level of education, structure-changing abilities, quality and services of governmental organizations, creation of job opportunities by government policies in international, regional and local levels and access to finance and credit services.
6. The key point is that, in villages, non-agricultural activities are usually market based and boost the business (with an increasing business, rural households' income and earnings increase, resolving the issue of insufficient funds for creating or developing rural employment programs) (Barati, Sadeghi, & Khatunabadi, 2016). It should be mentioned that these features are observed in the villages of Golmakan Dehestan, to some extent.

5. Discussion and Conclusion

Basically, diversification of activities is a fundamental necessity and all assets should not be used in one specific activity, particularly at the presence of numerous livelihood challenges such as limited resources like land, livestock and methods of exploiting resources without damaging them; one of the important ways for improving present and future strategies is transition from one type of capital and income to other forms or diversifying them (Karimi, Karami, & Dehkordi, 2015). By diversifying methods of earning a livelihood, the sustainability of both natural resources and livelihood of the families that use natural resources are ensured; since livelihood diversity can provide a solution for overcoming unfavorable living conditions and poverty in such regions (Karim, Karami, & Dehkordi, 2015).

On the other hand, improving rural households' quality of life without any regard for the development of rural economy is inconceivable. Low income levels, limited job opportunities, hidden and visible unemployment, reliance on a few agricultural products, limitations in marketing and delivering products, etc. are among the obstacles that are largely created owing to an undiversified structure. Non-agricultural activities can help rural households and be effective in improving their quality life. This can be done by prioritizing rural households' needs, activating them and investing in infrastructure and social services provision, creating justice and equity in accordance with local capacities, and behaviors totally different with all past injustices. As the results of studies at the global level and the results of the current study have shown, the diversity of non-agricultural activities is influential in improving rural families' quality of life, such that one standard deviation change in non-agricultural activities leads to a 0.6 standard deviation change in rural families' quality of life. Analysis shows that diversified non-agricultural activities can influence quality of life in various ways; first, they reduce the demand for agricultural land and the pressure on lands in poor regions; therefore, to disrupt the broken cycle of poverty, excessive exploitation of land and ecological deterioration can play an effective role. Second, the income

generated by these sectors can significantly increase the overall income of rural families and, accordingly, improve the capacity for investment in various other activities. Moreover, these sorts of income reduce rural households' income instability. Third, these earnings usually provide a source of saving and play a significant role in food security. Rural families who diversify their income through engagement in non-agricultural activities are, usually, more capable of overcoming adverse shocks (Azkia & Imani, 2008). Various measures can be adopted for effectively improving rural economy in non-agricultural sectors. For instance, non-agricultural activities such as processing and other industries, along with services and trading sectors, which are characteristics of a modern agriculture sector, can be developed using agricultural policies. Appropriate policies should not only improve non-agricultural economy, but also, through adoption of effective measures, they encourage rural households to engage in non-agricultural activities; similarly, institutions and governments should employ all their tools and capacities in various fields, especially for reducing the knowledge gap between cities and villages. Overall, considering the studies conducted regarding diversification of activities and sustainability of livelihood and settlement in rural areas, the main strategies emphasized by the World Bank are as follow:

- Running educational programs;
- Investing in development of infrastructure;
- Policy making and funding;
- Soft support in the field of knowledge;
- Improving access to economic and social infrastructure;
- Improving the accessibility of information and communication technologies in rural regions;
- Enhancing marketing infrastructure;
- Providing credit and using other financial tools to stimulate non-agricultural investments (Alawizadeh, 2010).

Therefore, it is suggested that mangers in charge of rural affairs, using these strategies, diversify economic activities and, specifically, help prosper non-agricultural activities as a supplementary source of income for families.

The findings of the present research are in line and aligned with the findings of the following national and international studies: Imai, Gaiha, and Thapa (2015) and also Gibson and Olivia (2010) found that the non-agricultural sector of rural regions in developing countries is conducive to economic growth, creating jobs, diversifying livelihood and reducing poverty. Hoang, Pham, and Ulubaşoğlu (2014) concluded that diversification of non-agricultural activities is an effective tool for lifting rural families out of poverty in developing countries.

The findings of the study are relatively in line with the following Iranian studies: Nourbakhsh Razmi (2014) in his M.A. thesis found that jobs created by non-agricultural activities had a significant and positive effect on economic, social, and environmental aspects of quality of life, respectively. Kohnepooshi (2013) in his Ph.D. dissertation concluded that diversification of economic activities positively affects life satisfaction of rural households in the area under study. Similarly, Alawizadeh (2010) in his Ph.D. dissertation found that families with diversified sources of income in agricultural and non-agricultural sectors had a relatively more favorable situation in terms of such indicators as education, income stability, quality of life, and vulnerability.

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بررسی اثرگذاری تنوع زراعی و غیرزراعی بر کیفیت زندگی روستائیان (مطالعهٔ موردی: دهستان گلمکان شهرستان چناران)

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چکیده مبسوط

۱. مقدمه

ویژگی بارز ساختار اقتصادی سکونتگاه‌های روستایی کشور عدم وتنوع در زمینه های شغلی و اتکاء منابع درآمدی به کشاورزی و زیربخش‌های آن می‌باشد، این امر موجب تبدیل سکونتگاه‌های روستایی به فضاهای سکونتی کم‌توان و در نهایت انسداد توسعه رو ستایی گردیده ا ست. رفع این مع ضل در گرو کاهش اتکاء اقت صاد رو ستا و به تبع آن خانوارهای رو ستایی به بخش ک شاورزی و ایجاد فر صت‌های شغلی و منابع درآمدی متنوع غیرزراعی ا ست. در الگوی توسعه پایدار، یکی از گزینه‌های مورد تاکید رعایت اصل تنوع در فعالیت‌های اقت صادی ا ست. بانک جهانی نیز در قالب الگوی فوق، بر اهمیت فعالیت‌های اقتصاد غیرزراعی و چندبخشی تأکید کرده است. از آنجا که نگرانی از کیفیت زندگی به عنوان یک اصل اساسی، پیوسته مورد نظر برنامه‌ریزان و مدیران امر توسعه است، سؤال اصلی تحقیق بدین صورت مطرح می‌گردد: تنوع فعالیت‌های اقتصادی (زراعی و غیرزراعی) تا چه حد بر کیفیت زندگی روستاییان در دهستان گلمکان مؤثر بوده است؟

۲. مبانی نظری تحقیق

مو ضوع کیفیت زندگی از آغاز دهه ۱۹۹۰ به بعد، در ادبیات نظری و توسعه، اهم یت فوق‌العاده‌ای یافته است و مبنای ت مایز و دسته‌بندی‌های نوین کشورها در سال‌های اخیر شده است این اصطلاح دربرگیرنده مهمترین عواملی است که شرایط زندگی در جامعه و رفاه شخصی افراد را تعیین می‌کنند. کیفیت زندگی مفهوم گسترده‌ای است که دارای معانی گوناگونی برای افراد و گروه‌های مختلف می باشد. برخی آن را به عنوان قابلیت زیست پذیری یک ناحیه، برخی دیگر به عنوان سنجه‌ی برای میزان جذابیت و برخی به عنوان رفاه عمومی، بهزیستی اجتماعی، شادکامی، رضایت‌مندی و ... تفسیر کرده اند. با این وجود، هنوز تعریف قابل قبول جهانی برای این مفهوم صورت نگرفته است. زیرا بسیاری از محققان بر این باورند که کیفیت زندگی مفهومی چندوجهی، نسبی، متأثر از زمان، مکان، ارز شهای فردی و اجتماعی ا ست. به نظر می ر سد تنوع م شاغل با کاهش ریسک خانوار در بحران‌های مختلف من جمله نو سانات بازار، خ شک سالی و امثالهم و به مدد تعدد منابع درآمدی آ سیب‌پذیری را کاهش داده و موجب بهبود کیفیت زندگی روستائیان میشود. بررسی های انجام شده نشان می دهد دو نوع تنوع در اقتصاد نواحی روستایی قا بل حصول است: ۱- تنوع در فعالیت های ک شاورزی(زراعی): که تنوع در الگوی ک شت مح صولات، فعالیت‌های دامداری، نظام های پرورش آبزیان، پرورش زنبور ع سل، ک شت های گلخانه‌ای و امثالهم می پردازد و ۲- تنوع در فعالیت‌های غیرکشاورزی(غیرزراعی): که در نتیجه تنوع در فعالیت‌های غیرزراعی (صنعت و خدمات) حاصل می‌گردد. پیاده‌سازی این رهیافت می‌تواند منجر به ایجاد امنیت در شبکه اجتماعی روستا، معیشت خانوار و سرمایه‌گذاری‌های دولتی و خصوصی گردد.

۳. روش تحقیق

روش انجام تحقیق با توجه به ماهیت کار، توصیفی- تحلیلی است. جامعه آماری منطبق بر سکونتگاه‌های رو ستایی دهستان گلمکان و

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واحد تحلیل روستا است. تجزیه و تحلیل داده ها به کمک رگرسیون گام به گام انجام گردید. در این مطالعه «کیفیت زندگی» متغیر وابسته است که در سه بعد اجتماعی، اقتصادی و محیطی-کالبدی به کمک ۴۸ شاخص کمی گردید. متغیر مستقل تنوع معیشتی است که در دو بخش «کشاورزی» و «غیرکشاورزی» مورد بررسی قرار گرفت. جامعه آماری مورد بررسی ۱۵ روستای بالای ۲۰ خانوار دهستان گلمکان در شهرستان چناران است. به کمک فرمول کوکران ۲۳۶ خانوار به عنوان نمونه در این روستاها به صورت تصادفی مورد بررسی قرار گرفت. روایی سازه کیفیت زندگی به وسیله «تحلیل عاملی تأییدی» مورد بررسی قرار گرفت. با توجه به اینکه کیفیت زندگی با ۴۸ شاخص دارای میزان درصد واریانس تبیین شده برابر با ۶۵,۷۲ درصد است، مفهوم کیفیت زندگی از اعتبار سازه ای برخوردار می‌باشد. همچنین مقدار آلفای کرونباخ ۰,۸۳ به دست آمد. که نشان می‌دهد ابزار تحقیق از قابلیت اعتماد و یا پایایی لازم برخوردارمی باشد.

۴. یافته‌های تحقیق

به منظور بررسی میزان اثرگذاری متغیر مستقل بر وابسته از رگرسیون گام به گام (Stepwise) استفاده شد. در این مطالعه دو متغیر تنوع فعالیت‌های اقتصادی کشاورزی و غیرکشاورزی وارد مدل شد و تنها متغیر تنوع در فعالیت‌های اقتصادی غیرکشاورزی در مدل باقی ماند و تنوع در فعالیت‌های اقتصادی بخش کشاورزی از مدل خارج شد. نتایج رگرسیون نشان می‌دهد که تنوع فعالیت های اقتصادی غیرکشاورزی تأثیر معنی داری در تغییرات متغیر وابسته (کیفیت زندگی روستاییان) داشته است و تغییری به اندازه ی یک واحد انحراف معیار در فعالیت های غیرکشاورزی موجب ۰,۶ انحراف معیار تغییر در کیفیت زندگی می شود. معادله رگرسیون با ضریب بتای استاندارد به شکل زیر می‌باشد:

(تنوع فعالیت های غیرکشاورزی) (۰,۶) + (۵,۷۹۵) = (کیفیت زندگی در نواحی روستایی)

در واقع بین تنوع فعالیت‌های اقتصادی غیرکشاورزی و کیفیت زندگی رابطه خطی و مستقیم وجود دارد. بدیهی‌است توسعه فعالیت‌های غیرکشاورزی در مناطق روستایی می تواند موجب تسریع رشد اقتصادی و بهبود توزیع درآمد گردد. همچنین این مشاغل در بلندمدت، فرصت‌های درآمدی خانوارهای روستایی را متنوع ساخته و آسیب پذیری درآمد آنها را در برابر نوسانات اقتصادی و محیطی کاهش می دهد.

۵. بحث و نتیجه گیری

بهبود کیفیت زندگی روستائیان بدون توجه به توسعه اقتصاد روستا محقق نخواهد شد. نتایج تحقیق حاکی از این امر است که تنوع در فعالیت های اقتصادی غیرکشاورزی در کیفیت زندگی خانوارهای روستاهای مورد بررسی به میزان ۰,۶ انحراف معیار موثر بوده است. اهمیت بخش غیرکشاورزی بدان جهت است که حتی اگر کشاورزی دچار رکود شود، اقتصاد روستایی غیرزراعی ممکن است بعضی از خسارات را مرتفع سازد. بررسی ها نشان می دهد در برخی کشورها فعالیت‌های غیرکشاورزی بالغ بر ۵۰ درصد از اشتغال روستایی و هم چنین سهم مشابهی از درآمد خانوارهای روستایی را به خود اختصاص داده است. با توجه به نتایج تحقیق پیشنهاد می شود نسبت به گسترش فرصت های شغلی جدید در بخش صنعت و خدمات اقدام گردد.

کلیدواژه‌ها: تنوع کشاورزی، تنوع غیرکشاورزی، کیفیت زندگی، دهستان گلمکان، سکونتگاه‌های روستایی.

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