



## Factors affecting the Sustainable Livelihood of Female Household Heads as the Clients of Microcredit Funds in Rural Areas (Case Study: Rural Areas of Ghaemshahr County, Iran)

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### Abstract

**Purpose-**As the rural unemployment rate has increased and rural dwellers suffer from the shortage of the basic requirements of life due to the lack of livelihood sustainability (SL), it is important to address the significant role of sustainable livelihood in rural areas, particularly regarding female household heads or women with unfit providers. Therefore, the present study aims to examine the factors determining the SL of the women in question who have the membership of rural microcredit funds in Ghaemshahr County.

**Design/Methodology/Approach-**The data were collected through a census with a sample of the female household heads and the women with unfit providers, who are the clients of 30 microcredit funds in the rural areas of Ghaemshahr County, Mazandaran Province (n=170). The data were collected through a researcher-made questionnaire with 11 categories, including the two main sections of SL evaluation and the significant factors affecting the SL. The validity of the research tool was determined by the expert panels, while the Cronbach's alpha test determined the level of reliability. To analyze the data, the researchers employed SPSS<sub>25</sub> and Smart PLS<sub>3</sub> to obtain descriptive and inferential statistics.

**Findings-**The results of the current study indicated that the personality, economic, support/service and cultural factors, respectively, with the path coefficients of 0.361 and 0.344, 0.291 and 0.266 had positive impacts on the SL of the subjects of the study. However, the first two factors had the confidence interval of 99%, while the support/service and cultural factors earned 95% confidence interval. Moreover, the results of the structural equation indicated that the factor of support/service had more impact on the women's level of SL than other factors.

**Research limitations-** One of the main limitations was the difficulty in identifying and accessing research population and the unbalanced distribution of microcredit funds in Ghaemshahr County.

**Practical Implications-** There are several strategies affecting the ever-growing SL of female household heads, including government-supported facilities, low-yield financial services with the aim of enhancing fast-growing job opportunities, encouraging creative ideas and activities as well as entrepreneurship in rural areas, certain specialties, professional marketing for rural products and guaranteeing their dealership.

**Originality/Value-** The results of the present study can help the associated organizations and developers to focus on the accessibility and achievements of the predetermined objectives of the funds and financial services addressing women's activities, women's financial services, especially the ones that create fast-growing job opportunities. Given the current financial problems, the present study aims to improve the women's SL.

**Keywords:** Female household heads, Microcredit funds, Sustainable livelihood, Ghaemshahr county.

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## 1. Introduction

Given the drastic changes in “rural development thinking” in the recent decades, sustainable livelihoods (SL) approaches in developing countries have potentially focused on rural poverty reduction (Ellis & Biggs, 2001). According to Sati & Vangchhia (2017), this new approach, which takes account of socioeconomic considerations in a cohesive policy-relevant structure, is defined as enhanced wellbeing, reduced vulnerability, improved food security and more sustainable use of natural resources base in rural areas. On the one hand, the majority of rural dwellers are farmers, agricultural laborers or land-owners. On the other hand, non-agricultural job opportunities in rural areas are limited to part-time and temporary jobs. Moreover, the households and their heads make a living by farming or owning petty businesses (Khatun & Roy, 2012). Undoubtedly, women play a crucial role in creating job opportunities and improving livelihood and the financial situation of rural people (Alikhani, 2015). Given their decisive role in the SL of rural families, it is significant to take a closer look at their own livelihood issues. Accordingly, it seems necessary to identify the factors and methods which can empower them to achieve their livelihood goals.

Women empowerment is a mainstream sustainable development concern, particularly in developing countries; in fact, it is one of the main factors which can guarantee women’s well-being and their success in achieving sustainability (Akhter & Cheng, 2020). Microcredit funds play a significant role in the realization of the afore-mentioned goals, and microcredit system is viewed as one of the strategies recently proposed to facilitate the investment process, enhance investment and financial bases in rural areas, and empower rural women to achieve SL (Namjouyan Shirazi, 2015). There are some studies confirming the significant role of microcredit funds in poverty reduction and women empowerment (Deininger & Liu, 2013). Although the vital role of women in achieving SL has been uncovered, the plethora of obstacles in the path of their contribution has not been removed (Lohani & Aburaida, 2017). Rural women, particularly the household heads or the ones with unfit providers, have a wide range of ignored or belittled skills, and they are more vulnerable than

other women in the society. On the other hand, the current economic problems and issues have brought to light the necessity of taking a closer look at their livelihoods. It is necessary that we consider the significance of livelihood in rural families and its related issues. If the factors shaping the livelihood of the women in this study are identified, one can gain a deeper and more realistic insight of their livelihood and then identify the key factors that contribute to the stability of development. Therefore, the present paper aims to analyze the factors shaping the SL of the female household heads or the women with unfit providers who have access to microcredit schemes in the rural areas of Qaemshahr, Mazandaran.

## 2. Research Theoretical Literature

### 2.1. Theoretical Considerations

Nowadays, sustainability is considered as the core of development planning, especially regarding the process of rural development. It is safe to say that the SL approach is one of the most recent ways of thinking about developing rural communities. It would imply that there is a relationship between development and livelihood, considering that both of them can fuel the instability that has an impact on the rich and the poor (Israr et al., 2017). In fact, this approach aims to identify the significant factors that contribute to the livelihood of rural households and the relationship between these factors. Moreover, the emphasis on the necessity of a comprehensive and integrated perspective towards poverty reduction and rural development soon drew the attention of development experts and researchers. In recent years, this approach has been regarded as the best way to investigate the principles of empowering the poor and reducing poverty (Helmer & Sing, 2001). It is one of the most recent analytical approaches towards rural development that help reduce the risks and the vulnerability of livelihood options (Li et al., 2020). To put it more clearly, livelihood approaches are among the initiatives set to eradicate poverty and financial needs and help prevent the vulnerability of households (Carr, 2013). Livelihood is loosely defined as considering the availability and management of assets (Tao & Wall, 2009). SL is a pattern with specific principles and frameworks supposed to guarantee the increase in income and prosperity for local people and the poverty eradication. There is a hope that this approach paves the way for local people and their future

generations to have sustainable job opportunities. There are many frameworks proposed to analyze the SL. One promising framework was first developed by the Department for International Development (DFID) (Shen, 2009). This people-centered framework stresses on the five key elements of the SL approach which are as follows (Allison & Ellis, 2001; Tavakoli et al., 2016; Wang et al., 2015):

1. Assets: Livelihood assets include natural, physical, human, social and financial capitals, which are the basic components of the poor locals' livelihood.
2. Developmental processes and structures: Structures operate as the hardware that encompasses both public and private sectors. Processes, on the other hand, include policies, principles, culture and institutions and play an important role in the formation of assets and outcomes in a livelihood system.
3. Vulnerability: It is one of fundamentals of livelihood, including shocks, critical trends and seasonality; it can have either positive or negative impacts upon livelihood alternatives and assets.
4. Outcomes: They include the achievements or outputs in the process of livelihood evaluation; they are the end product of combining livelihood strategies and assets.
5. Strategies: They consist of the activities that people undertake in order to meet their livelihood needs.

According to the holistic approaches, SL encompasses five main resources, including social, financial, natural, physical and human capitals. In order to achieve rural SL, the significance of social capital needs to be considered because a considerable part of rural livelihood is controlled by social dependence, unity, security and cooperation. This has both direct or indirect impacts on rural livelihood because financial assets are useless in a village with no social capital. Therefore, one of the determinants of advanced rural SL is to provide locals with the social capital (Sojasi Qidari et al., 2016).

Moreover, financial capital refers to the financial resources available for people to earn their livelihood, including income, savings and investments (Veisi & Nikkhah, 2019). As a result, one of the most decisive aspects of rural SL is the availability of financial recourses, which influences the type, extent and nature of rural

livelihood. On the other hand, if there is no such capital, local people will lose their livelihood practices, and finally there is an increase in the level of vulnerability and poverty in these areas (Sojasi Qidari et al., 2016). Natural capital refers to the stock of water, land and ecosystems (Heidari Sarban & Abdpour, 2019). Due to the geographical locations of rural areas, they are much closer to the nature. Natural resources are considered to be the core asset of the rural population, and the majority of livelihood and financial activities are directly associated with the environment and the environmental resources (Sojasi Qidari et al., 2016). In addition, roads, tools, and supplied and manufactured goods are termed as the physical capitals (Veisi & Nikkhah, 2019), which also include current housing as well as infrastructural facilities and transportation networks. They can have a direct impact on the development of rural SL (Sojasi Qidari et al., 2016). Regarding the role of the human capital in development theories, many economists agree that the process of socioeconomic development is determined by the human resources of the country, not by its financial resources. The qualitative features of human capital, including training, proficiency, skill, creativity, knowledge and innovation, are generally set as a certain type of capital. In other words, human capital is defined as enhancing the productivity rate of the population in the society (Barimani et al., 2016).

The SL framework generally presents the analytical grounds for identifying the complexity of livelihood based on job and income. Because, on the one hand, a considerable number of locals leave their villages due to the lack of job opportunities in agriculture. On the other hand, the ones who stay in rural areas and the poor farmers start to destroy their environment in order to overcome poverty and meet their short-term needs (Lélé, 1991). However, any damage to the nature can increase poverty because livelihood is directly linked to environmental sustainability (Chambers, 1997).

One of the most influential initiatives aimed at accomplishing developmental goals in rural areas is to identify the livelihood status and the geographical factors associated with livelihood practices, because any unsuitable status can create various concerns in everyday life and hold back all developmental practices and ideas (Barimani et al., 2016). Therefore, it is important to highlight women's vital role and their livelihood challenges.

As sustainability is the key to success, the projects which aim to empower people and enhance their livelihood have more chance to endure than the ones which plan to provide the poor with donations directly. If the latter is the case, the livelihood of the poor depends on donations, and they will lose their income if donors stop sending help. The SL approach can guarantee sustainability because it tends to have a closer look at livelihood-related issues, supports people and community empowerment, and is built on the relationship between people and the state and non-state institutions that actively participate in the development-related practices (Sherbinin et al., 2008).

The phenomena of rural poverty and the current discrimination between rural and urban families have drawn international attention to rural development. Microcredit has proven to be an effective tool for poverty reduction. It achieves the afore-mentioned objective through accumulating small savings of rural people, particularly women, creating job opportunities for them, and increasing their income. As an international approach developed into compiled plans and global patterns, it has vastly achieved some accomplishments in reducing poverty and improving social wellbeing and livelihood status of all people, particularly the rural women with small income. A microcredit fund is a local socioeconomic structure that seeks to realize the developmental objectives in the context of socioeconomic empowerment (Rahmani et al., 2010). Since 1999, Iran's state-run agencies and its private sector, supported by international organizations, have developed rural microcredit programs. Determination and resistance have paved the way for the early growth of these microcredit funds in the rural areas of Iran to address local people's problems, such as livelihood and financial needs.

## 2. 2. Literature Review

There are a large number of local and foreign studies focusing on different aspects of SL and the main factors that affect people's livelihood. Given the vastness of the field, each of these studies has addressed a specific aspect of SL. Drawn on a field research in Ghana, Pickbourn (2018) has shown that the restriction of women's access to independent sources of income and internal migration, and the inadequacy of land resources have negative effects on the level of women's livelihood and empowerment. Su et al. (2018)

studied the relationship between livelihood risks and livelihood capitals in China. They employed an index system of livelihood risks, which comprised five aspects of health, environmental, financial and social information and connectivity risk, to assess livelihood capitals comprising five aspects (human, physical, natural, financial, and social capitals) (Su et al., 2018). The results proved that health and social risks negatively affect the livelihood capitals. Sajid et al. (2018) carried out a research on the socioeconomic constraints affecting rural SL and proved that the improvement of financial status and entrepreneurship would have a significant correlation with rural livelihoods; he also concluded that learning developmental and job-related skills would have an impact on the improvement of livelihood. On the other hand, microcredit services, provided by governmental and non-government organizations, play an important role in SL and rural development. Livelihood interventions to improve the rural well-being include activities such as developing irrigation systems, production performance, gardening, raising poultry and livestock that have a positive and significant correlation with rural livelihood. On the other hand, lack of infrastructure and loss of farmland, low income, illiteracy and the tendency to rely on credits would have negative impacts on rural livelihoods. The results of the study carried out by Ma et al. (2018) in China determined that variables such as the number of employed household members, areas under cultivation, education, health, experience, expertness, housing type, transportation, livestock, social interaction and self-confidence can affect rural livelihood. Adeniyi et al. (2016) focused on the determinants of rural women's livelihood in Ibarapa North Local Government Area, Nigeria. According to their study, these women stated that their main livelihood problems included limited access to financial and supportive services and their lack of knowledge about product storage and marketing. Moreover, they showed that three factors, including education, marital status and husband's income would have a significant correlation with the livelihood of these rural women. Bushra & Wajiha (2015) confirmed that women's field of study, economic participation and having access to bank services and financial opportunities would affect women's empowerment in Pakistan. Rahman & Akter (2014) also found out that some

socioeconomic factors developed by rural households and the situation of rural infrastructures considerably would determine the livelihood strategies employed by these households. [Ifeanyi-obi & Matthews-Njoku \(2014\)](#) as well as [Jan et al. \(2012\)](#) conducted their studies in Nigeria and Pakistan, respectively. They analyzed the effects of some variables, such as gender, marital status, age, years of education, household size, working members of the family, the number of tropical livestock units, working experience and household per capita income, on the livelihood of rural dwellers. According to their results, the most significant socioeconomic factors affecting rural livelihoods include age, years of education and monthly income. [Adepoju & Obayelu \(2013\)](#) carried out a study on the livelihood diversification and welfare of rural households in Nigeria and showed that household size, total household income and primary education of the household heads were the dominant factors influencing livelihood strategies. Moreover, the income earned through farm activities is positively affected by the income from non-farm activities together with the one from a combination of farm and non-farm activities. Their study suggested that non-farm employment can be regarded a suitable strategy for supplementing farmer's income and upholding equitable rural growth. [Biggs & Watmough \(2012\)](#) conducted a community-level assessment of factors affecting livelihood in Nawalparasi District, Nepal. They found out that some of these factors include water-related resources, education, health, roads, climate changes and the natural environment. [Sultana & Hasan \(2010\)](#) found out that there was a significant difference between the female members of microcredit services and the ones who were not members of such services in terms of three indicators of empowerment, namely personal income, savings and asset ownership. [Shyamalie & Saini \(2010\)](#) analyzed the livelihood security of rural women in India and Sri Lanka. According to their results, the most influential factors affecting livelihood of these women include the diversity of women's diet, income, savings, coping strategies, access to health services and drinking water, literacy level, transportation, roads, social participation. [Uniyal et al. \(2008\)](#) concluded that the educational and awareness-raising programs exploring organic farming and alternative activities could result in the empowerment of rural women and their livelihood.

The Iranian researcher, [Soroushnia \(2016\)](#), assessed SL with regard to the environmental, social and economic factors. Moreover, in their study on Karun Country's rural livelihood, [Forouzani et al. \(2016\)](#) revealed that the social capital is regarded as the most significant type of asset owned by rural dwellers while the least significant type is the physical capital. [Tavakoli et al. \(2016\)](#) identified inflexible environmental conditions, agricultural activities and cross-border exchanges as the main factors affecting rural livelihoods. Moreover, the results of their study showed that there was a significant relationship between the livelihood patterns of rural households and the geographical elements, such as slope of land, availability of education and proximity to the borders. Border markets in the county have opened up opportunities for direct and indirect employment (e.g. delivering, storage, etc.); however, the latter is much more common than the former. [Barimani et al. \(2016\)](#) identified the effects of spatial factors, such as location, connectivity, accessibility and remoteness, on rural livelihoods, which, according to them, are not related to the number and size of households and their literacy. Moreover, there is a direct and significant relationship between rural livelihoods and some of the economic factors, including the average income, the employment rate and the average assets. There are two geographical factors, i.e. financial and special factors that affect rural livelihoods. While the financial factors affect them the most, the impact of the special factors is the least and not remarkable.

According to the related studies, women play an important in developing SL. Now the question is what factors affect the SL of rural women. The present study has aimed to analyze the main factors affecting the SL of the female household heads or the ones with unfit providers who receive microcredit services in the rural areas of Ghaemshahr, Iran.

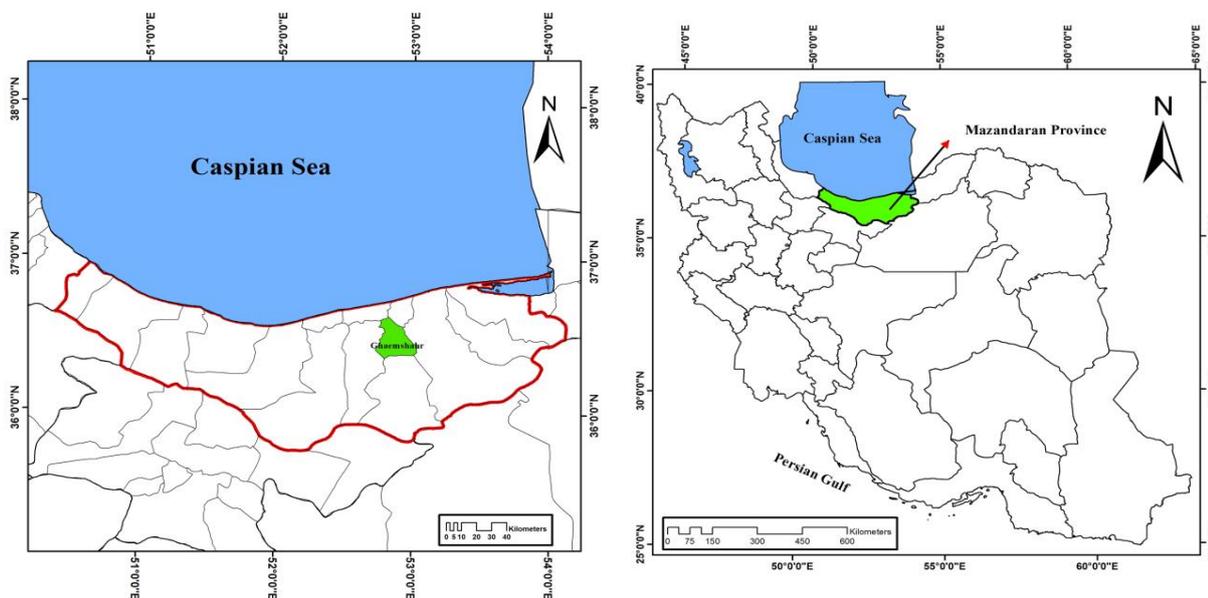
### 3. Research Methodology

#### 3.1. Geographical Scope of the Research

The present study focuses on 30 microcredit funds in the rural areas of Ghaemshahr County, Iran. North of the county lies in Juybar where Savadkuh County is to its south, Sari is to its east, and Babol is the city located to the west. It consists of two cities, two districts, 6 rural districts, 156 populated villages and three unpopulated villages (see [Figure](#)

1). There are 96 microcredit funds for rural women in Mazandaran Province. They provide financial services to 80 villages with approximately 3762 members. According to the latest statistical data in

2018, 30 of these microcredit funds are located in 23 rural areas of Ghaemshahr County with 1078 members.



**Figure 1. A view of study area**

(Source: Authors, 2019)

### 3.2. Methodology

The present work is a descriptive survey. The research population includes the female household heads and the women with unfit providers who have participated in 30 microcredit

funds for the rural women in Ghaemshahr County (N=170). Given the small research population, census was employed in the process of data collection (see Table 1). In the end, 140 questionnaires were collected and analyzed.

**Table 1. The Sample Selected from the Research Population**

(Source: Authors, 2019)

No.	Name of the Microcredit Fund	Number of Members	Number of Female Household Heads
1	Dehkade-ye-Sabz	48	7
2	Dehkade 1 Malek Kola	40	3
3	Dehkade 2 Malek Kola	45	7
4	Ahangar Kola Bishesar 1	39	13
5	Ahangar Kola Bishesar 2	37	5
6	Bur Kheil-e-Aratch	35	7
7	Najar Kola	49	8
8	Baq Dasht 1	31	5
9	Baq Dasht 2	37	5
10	Diz abad	34	9
11	Abjer	32	9
12	Now kola	30	6
13	Now kola	26	5

No.	Name of the Microcredit Fund	Number of Members	Number of Female Household Heads
14	Saru kola	30	3
15	Zelet	35	4
16	Talar Posht-e-Sofla	50	4
17	Rostam Kola	30	4
18	Shahrud Kola	45	4
19	Shahrud Kola	42	5
20	Eskandar Kola	30	5
21	Taluk	30	6
22	Asiabsar	49	6
23	Vaskas	30	6
24	Haji Kola Golzam	35	9
25	Bala Rostam	54	4
26	Golafshan	25	3
27	Khorma kola	30	5
28	Vaskas 2	24	4
29	Hardorud	30	5
30	Rekabdar Kola	24	4

### 3.3. Research Variables and Indicators

The tool used in data collection was a researcher-made questionnaire, which was designed based on the precise analysis of the related literature. In order to evaluate the SL index, 20 questions were developed and a five-point Likert scale was used for each item (5 = strongly agree, 4 = agree, 3 = neither agree nor disagree, 2 = disagree, 1 = strongly disagree). In order to identify the main factors affecting rural women's SL, 105 items were developed. The items involved nine indicators, including economic (8 items), social (25 items),

personality dimension (12 items), physical or infrastructural dimension (12 items), environmental or touristic dimension (3 items), educational dimension (8 items), support/service dimension (16 items), gender-related dimension (6 items), and cultural indicators (6 items). A five-point Likert scale was used for each item (5 = strongly agree, 4 = agree, 3 = neither agree nor disagree, 2 = disagree, 1 = strongly disagree). The validity of the research tool was determined by the expert panels, while the Cronbach's alpha test confirmed its reliability (see Table 3).

**Table 2. Research Indicators and Variables**

(Source: Authors, 2019)

Type of Variable	Indicator	Items
Dependent	Sustainable Livelihood	Providing resources for all household members based on the occupation, adequacy of income for making a living and addressing basic needs, observing the diversification of agricultural products, cooperating with financial institutes and banks, access to healthy nutrition, enhancing welfare, health of the household members, access to healthcare centers, qualification of household members to create or have job opportunities, long-term job stability, the stability in providing financially for the family, creating investment and job opportunities, access to water resources, provision of welfare services, farmland income, marketing and selling products, housing, access to communication facilities.
		long-term job stability, the possibility of getting loans from microcredit funds, access to financial and credit facilities, job opportunities in rural areas, the number of livestock units, the farmland size, total household income, total saving
Independent	Economic	Relationship with other members of the fund, farmer promoters, experts and other entities, confidentiality with the other members and entities, interest in cooperative activities, family relations, the level of social divisions, social security in rural areas, ethnic conflicts, cooperation in rural projects, charities, educational programs, communication with those outside rural areas, social integrity between members of the fund, participation in rural gatherings.
	Social	

Type of Variable	Indicator	Items
	Personality	Motivation for development, tendency to stay in rural areas, job-related abilities, self-confidence, innovation and creativity, personal interests, responsibility, risk-taking, motivation for production.
	Physical	Access to the market, transportation facilities, mechanization of farmlands, access to welfare services, internet, information technology and sources of energy, type of housing, place of living, types of accessibility and easy access to other villages and cities
	Natural	Access to wooded areas and meadows, attractiveness of rural areas, diversity of plants
	Educational	Familiarity with microcredit activities, access to learning services, employing modern agricultural methods and technologies, Trainings for using social media, participation in job-creating workshops, Trainings for professional, developmental and occupational skills, the number of participations in training programs.
	Support/Services	Benefit from the family support, Provision of government support, cooperating with banks and financial institutions, creating job opportunities for locals, following the requests on time, government's efforts to develop rural activities, cooperation of family members in creating new job opportunities, supporting microcredit funds for rural women who want to start their own businesses, easy access to agricultural institutions.
	Gender-related	Women's role and share in rural and agricultural activities, the status of women as active economic workforce, appropriate attitude towards women as household heads, social and cultural beliefs about women, their access to certain social services and welfare facilities.
	Cultural	Believing in the status and role of production in rural areas, urbanization of lifestyle, cultural exchanges with other cities and villages, ethnic diversity in rural areas, access to the media (radio and TV) and journalistic texts (newspapers and magazines).
	Occupational	Type of membership, membership experience, primary job, having a second job, farming experience
	Personal	Age, education, the number of educated household members, the number of dependents, the number of working household members.

**Table 3. The Cronbach Alpha Coefficient of the Indicators**  
(Source: Research findings, 2019)

Indicators	Dimension	Number of items	Value of Cronbach Alpha Coefficient
<b>SL</b>	-	20	0.948
<b>Factors affecting SL</b>	Economic	8	0.768
	Social	25	0.957
	Personality	12	0.930
	Physical	12	0.912
	Natural	3	0.841
	Educational	8	0.919
	Support/Services	15	0.822
	Gender-related	6	0.742
	Cultural	6	0.947
	Occupational	5	0.859
	Personal	5	0.947

After the data was collected and organized, the researchers employed SPSS<sub>25</sub> to obtain the descriptive and inferential statistics and a structural equation model was then constructed using Smart PLS<sub>3</sub>.

As the method of structural equation modeling offers some tools for analyzing the correlations between different variables, it allows researchers to

report the data analyses with regard to the possible uncertainties, and they can employ this method to examine the complex relations between observed and latent variables (i.e. dependent and independent variables) and the ones between latent variables. There are several reasons that encourage researchers to use PLS software, including lack of sensitivity to normality of the data and less

dependence to measuring scales. Given the primacy of this software over other methods, such as regression analysis and the first generation of structural equation models, the advantages mentioned above, such as adequate predictability, and considering the specific features of the present study, including the complexity of the model (i.e. the large number of constructs and manifest indicators), lack of limited access to qualitative and quantitative variables and the use of non-normal data, the PLS method was used in the present study. The researcher evaluated the technical features (validity and reliability) of the research tool (the questionnaire) in order to confirm the authenticity of the results. The analysis of the face and content validity of the research tool with the aim of examining the topic similarity of the items and the quality of their content was carried out through analyzing the questionnaires by experts. In order to test the validity of the measurement model, they employed the convergent and discriminant validity. To test the convergent validity, the coefficient of construct indicators with each specific construct was assessed. The convergent validity consists of average variance extracted (AVE) for each construct (with the minimum value of 0.5) (Lin & Lee, 2017). In order to analyze the discriminant validity, the researchers used the Fornell-Larcker criterion, which determines the correlation between each construct with its indicators. Therefore, acceptable discriminant validity implies that each construct has more interactions with its indicators than other constructs (Davari & Rezazadeh, 2013). Moreover, Fornell & Larcker (1981) argue that discriminant validity is acceptable when the AVE value for each construct is more than the variance shared between the construct and other constructs, i.e. the square of correlation coefficient value of the constructs. In other words, the AVE value of each latent variable must be more than the maximum square coefficient of the variable and other latent variables. In order to determine the reliability of the study, factor loading indicators and composite reliability (CR) were used. If the factor loading value is 0.5 or

more, the variance between the construct and its indicators is more than the variance of uncertainties and the reliability is confirmed. If the factor loading value is less than 0.5, the questions (indicators) need to be deleted or removed from the model. Regarding the CR, the constructs with the reliability value above 0.6 have a satisfactory level of reliability, and the closer the values are to each other, the more reliable the results are (as cited in Alikhani & Rostami, 2016). Research structural pattern test in PLS method is feasible by examining the path coefficients (Beta) and  $R^2$  values (Chin, 1988). According to this method, the path variances are used to determine the share of each predictor variable (Amani et al., 2012).

#### 4. Research Findings

According to the results, the average age of the participants was 44/70. The oldest subject was 68 and the youngest one was 25. The results showed that 19.3% of the participants had initial reading literacy (primary school), and 7.9 of them were the postgraduates. Furthermore, 67.9% of them were either illiterate or high school graduates or dropouts. This implies that the largest number of household members was 5, and the average number of educated members in each ranged from 1 to 4. On the other hand, the most experienced subjects worked for five years, while the least experienced ones used the microcredit funds. In terms of their income, more than half of the households would earn between 500,000 Ts and 5,500,000 Ts.

To prove the authenticity of the results, the technical features of the research tool (reliability and validity) were evaluated before the correlations were assessed and analyzed. In order to determine the reliability of the study, the researchers made use of factor loading indicators and CR, while they employed the convergent and discriminant validity to test the validity of the measurement model. With regard to the reliability, the factor loading of each item was gained. If the loading factor value was 0.5 or more, the reliability level was satisfactory. The results from Table 4 show that the variables less than 0.5 are removed in the following steps.

**Table 4. Factor Loading Values of the Observed Variables**  
(Source: Research findings, 2019)

<b>Factor</b>	<b>Item</b>	<b>Factor Loading</b>
<b>Economic</b>	Long-term job stability	0.718
	The possibility of getting loans from microcredit funds	0.730
	Access to financial and credit facilities	0.776
	Job opportunities in rural areas	0.786
	Number of livestock units	-0.181
	Farmland size	0.162
	Total household income,	0.140
	Total saving (in cash)	0.182
<b>Social</b>	Relationship with other members of the fund	0.691
	Relationship and rapport with others	0.721
	Relationship with farmer promoters and experts	0.829
	Cooperation with other members of the fund	0.783
	Reliability and confidentiality among members	0.734
	Relying on the organizations and institutions	0.708
	Satisfaction level with the fund's services	0.641
	Interest in cooperative activities in rural areas	0.731
	Interest in sharing experiences with rural dwellers	0.765
	Cooperation with rural dwellers	0.757
	Family connections in rural areas	0.735
	Low rate of social divisions in rural areas	0.598
	Low crime rate	0.556
	Low rate of ethnic conflicts	0.469
	Participating humanitarian activities in rural areas	0.695
	Participating in rural planning and decision-making processes	0.644
	Participating in rural charities	0.757
	Participating in educational activities in rural areas	0.736
	Connection with the people outside the village	0.713
	Willingness to help others financially	0.758
	Level of participation in cooperative activities with other rural dwellers	0.741
	Participation in the activities of the fund	0.713
	Cooperation with the aim of sharing knowledge, skills and experiences	0.767
Social integrity	0.661	
Membership in rural institutions	-0.139	
<b>Personality</b>	Motivation for development.	0.711
	Tendency to stay in rural areas	0.719
	Job-related abilities	0.831
	Ability to make rapport with others	0.838
	Level of self-confidence	0.822
	Level of innovation and creativity	0.769
	Level of personal motivation and interest	0.755
	Level of courage in decision-making and taking responsibilities	0.746
	Level of risk-taking	0.583
	Sense of responsibility in women	0.736
	Motivation for production	0.725
	Tendency to cooperate with other funds	0.734
<b>Physical/Infra structure</b>	Access to the market	0.836
	Access to transportation facilities	0.881
	Mechanization of farmlands	0.785
	Access to welfare services,	0.745
	Access to internet and information technology	0.684

Factor	Item	Factor Loading
	Availability of agricultural machinery	0.828
	Recreation facilities in rural areas	0.741
	Access to energy sources	0.783
	Access to urban areas	-0.007
	Place of living	0.212
	Type of house	0.315
	Roads and easy access to other cities and villages	0.363
<b>Natural/Tourism</b>	Access to hills and wooded areas	0.859
	Beauty and attractiveness of the rural areas	0.871
	Diversity of plants (trees, shrubs, bushes and greens)	0.883
<b>Educational</b>	Familiarity with microcredit activities	0.762
	Access to learning services	0.818
	Employing modern agricultural methods and technologies	0.832
	Trainings for using social media	0.860
	Level of education regarding financial activities	0.842
	Participation in job-creating workshops (skill-oriented and practical)	0.818
	Trainings for professional, developmental and occupational skills	0.801
	The number of participations in training programs.	-0.006
<b>Support/Service</b>	Benefit from the family support	0.492
	Provision of government support	0.774
	Cooperating with banks and financial institutions	0.727
	Creating job opportunities for locals	0.727
	Benefit from state and private organizations	0.799
	Raising awareness on potentials of the funds	0.759
	Responsibility of the organizational experts	0.777
	Following the requests on time	0.820
	Government's efforts to develop rural activities	0.797
	Correlation between rural authorities and dwellers	0.705
	Cooperation of family members in creating new job opportunities	0.588
	Support of microcredit funds for rural women who want to start their own businesses	0.713
	The process of decision-making and considering dwellers' demands in making political decisions	0.816
	Balanced access to services and facilities (observing justice and equal rights in sharing benefits)	0.781
Easy access to agricultural institutions	0.724	
<b>Gender-related</b>	Women's role and share in rural and agricultural activities	0.782
	Status of women as active economic workforce	0.811
	Appropriate attitude towards women as household heads	0.867
	Social beliefs on women's status in their family	0.771
	Social and cultural beliefs about women	0.387
	Women's access to certain social services and welfare facilities.	0.564
<b>Cultural</b>	Believing in the status and role of production in rural areas	0.623
	Urbanization of lifestyle	0.311
	Cultural and traditional activities	0.836
	Cultural exchanges with other cities and villages	0.774
	Ethnic diversity in rural areas	0.671
	Access to the media (radio and TV) and journalistic texts (newspapers and magazines).	0.578
<b>Personal</b>	Age	0.170
	Education	0.190
	Number of educated household members	0.949
	Number of dependents	0.947
	Number of working household member	0.191

Factor	Item	Factor Loading
Professional	Type of membership in a microcredit fund	0.794
	Membership experience	0.442
	Primary job	-0.083
	Having a second job	0.399
	Farming experience	-0.046
SL	How hopeful are you about a pay raise in the following years?	0.697
	How much does your job help you provide for your family?	0.720
	How much does your current income help you provide for your family?	0.758
	How often do you follow the product diversification plan?	0.714
	To what extent do the customer services of banks and financial institutes help you improve your livelihood?	0.698
	How much access do you have to healthy foods?	0.627
	How much does your current income enable you to provide basic needs?	0.703
	During the last few years, how often have you felt that there is a positive change in your life?	0.721
	How healthy are your household members?	0.652
	How far are healthcare centers from your place of living?	0.668
	How skillful are you and your family members in entrepreneurship activities?	0.622
	How stable has your job been so far?	0.775
	To what extent have you been able to maintain your living throughout these years?	0.832
	To what extent can you start a new business by means of your savings?	0.694
	How much access do you have to water resources?	0.724
How valuable are your livelihood? facilities	0.764	
To what extend can you live on farmlands?	0.726	

To determine the reliability of the research tool, the researchers employed two criteria of CR. As shown in Table 5, the CR value which is above 0.7, indicates a satisfactory level of reliability (Hulland, 1999). Moreover, the analysis of convergent

validity was carried out based on the criterion of AVE (Aliabadi et al., 2018). It shows the average variance shared by each dimension of the construct and the items related to it. The satisfactory AVE value is above 0.4 (Khayatan & Mobaraki, 2014).

**Table 5. Reliability and Validity of the Research factors**  
(Source: Research findings, 2019)

Factor	CR Value	AVE Value
Economic	0.851	0.588
Social	0.960	0.515
Personality	0.939	0.563
Physical	0.929	0.621
Natural	0.904	0.759
Educational	0.935	0.672
Support/service	0.948	0.568
Gender-related	0.878	0.595
Cultural	0.830	0.501
Personal	0.974	0.950
Professional	1.00	1.00
SL	0.953	0.503

As mentioned above, discriminant validity is a complementary concept of validity, showing that the indicators are only reflective of their focal

constructs. The researcher used Fornell-Larcker criterion in order to test the afore-mentioned type of validity. As represented in Table 6, the square

root AVE values of the latent variables placed in the main diagonal of the matrix are larger than the coefficient values of the elements in the bottom right corner of the main diagonal. In the present

study we can thus claim that the constructs (latent variables) interact with their indicators rather than with other constructs. To state it more clearly, the discriminant reliability of the model is acceptable.

**Table 6. Coefficient Correlation of Latent Variables and the Square Root of AVE**

(Source: Research findings, 2019)

Factors	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Economic (1)	0.767											
Social (2)	0.219	0.684										
Personality (3)	0.109	0.661	0.750									
Physical (4)	0.315	0.504	0.265	0.788								
Natural (5)	0.066	0.442	0.382	0.647	0.871							
Educational (6)	0.229	0.684	0.564	0.673	0.579	0.820						
Support/Service (7)	0.421	0.636	0.320	0.596	0.534	0.636	0.754					
Gender-related (8)	0.340	0.484	0.154	0.564	0.454	0.394	0.508	0.771				
Cultural (9)	0.453	0.614	0.358	0.554	0.449	0.470	0.606	0.685	0.707			
Personal (10)	-0.135	-0.118	0.030	-0.160	-0.341	-0.128	-0.300	-0.219	-0.201	0.975		
Professional (11)	0.086	0.209	0.159	0.262	0.323	0.189	0.160	0.272	0.260	0.368	1.00	
SL (12)	0.570	0.436	0.314	0.490	0.360	0.406	0.605	0.552	0.656	0.251	0.213	0.709

After the model-fit analysis in PLS was carried out, the researcher started testing the research hypotheses, which were based on the analysis of the factors affecting the rural SL. The structural pattern and the interpretation of the results were incorporated by examining the significance of the path coefficients and the standardized coefficient (Beta). The significant path coefficient in a model showed whether the impacts of the factors were significant or not. The standardized coefficient value also indicates the share of each factor in explaining the SL variance.

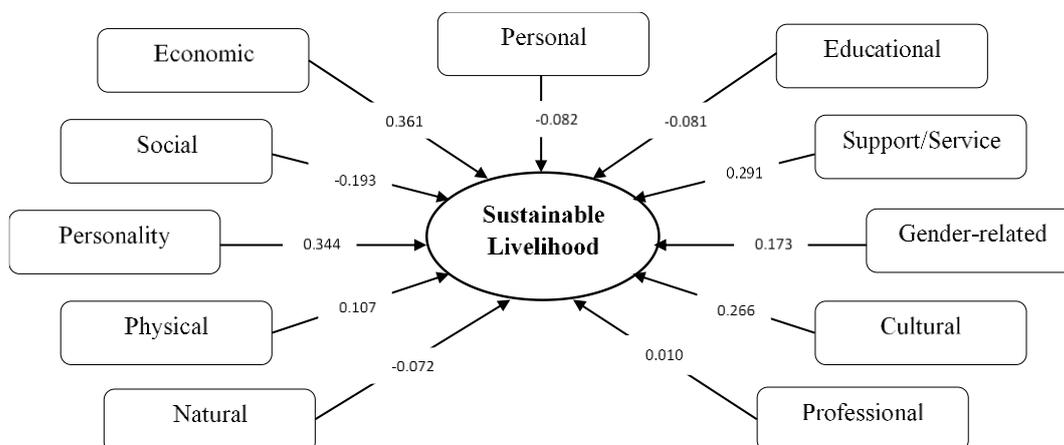
The results represented in Table 7 determine that personality and economic factors with the coefficient values of 0.361 and 0.344, respectively,

have positive impacts on these women's SL (99% confidence interval). Moreover, it was determined that support/service and cultural factors with the coefficient values of 0.291 and 0.266, respectively, have positive and significant impacts on these women's SL (95% confidence interval). According to the results, social, physical, natural, educational, gender-related, personal and professional factors did not have significant impacts on these women's SL (see Figure 2). The results determined that the final model of the factors would have impacts on the SL of the female household heads and the women with unfit providers who are members of rural microcredit funds based on the significant factors presented in Figure 3.

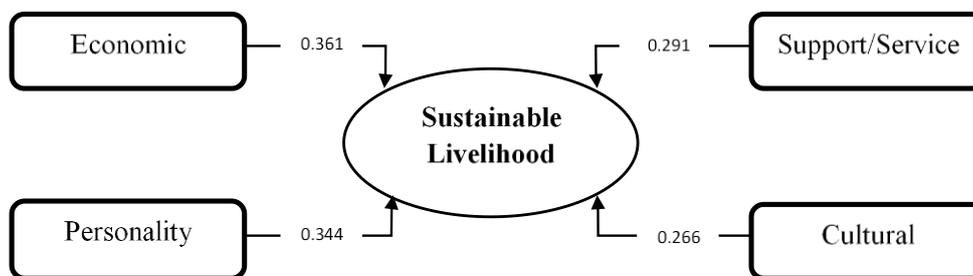
**Table 7. T Values and the Significance Levels of Research Factors**

(Source: Research findings, 2019)

Factor	Dependent Variable	Path Coefficient	T Values	Significance Level
Economic	SL	0.361	3.326	0.001
Social		-0.193	1.766	0.076
Personality		0.344	2.706	0.007
Physical		0.107	1.009	0.313
Natural		-0.072	0.882	0.378
Educational		-0.081	0.808	0.420
Support/service		0.291	2.197	0.028
Gender-related		0.173	1.858	0.064
Cultural		0.266	2.143	0.033
Personal		-0.082	1.104	0.270
Professional		0.010	0.133	0.894



**Figure 2. Structural Equation Modeling to Analyze the Impact of Research Factors on Women’s Livelihoods.**  
(Source: Research findings, 2019)



**Figure 3. The Final Model: Factors Affecting the Sustainable Livelihood of Female Household Heads**  
(Source: Research findings, 2019)

The quality of the structural model was analyzed by Stone-Geisser’s Q2 criterion. In fact, the three values of 0.02, 0.15 and 0.35, respectively, indicate the weak, moderate and strong predictive power of the model with regard to the endogenous constructs. In other words, the factors in question evaluate the model’s power to predict the observed variables based on the value of their corresponding latent variable. The results of the quality assessment of the measurement model illustrated in Table 8 indicate that these factor evaluate the predictive power of the

observed variables based on the value of their corresponding latent variables. According to the results, the value of SSO indicates the sum of squares of observations for each hidden block, and SSE is the sum of squared estimate of errors for each block of latent variables. Moreover, SSE/SSO is the cross-validated communality (CV-Com). A positive check index of the CV-Com of the latent variables indicates a suitable and acceptable quality of the measurement model. The obtained values confirmed the quality of the model.

**Table 8. CV-Com of the Latent Variables in the Structural Model of Sustainable Livelihood of Female Household Heads**

(Source: Research findings, 2019)

Factor	SSO	SSE	Q <sup>2</sup> (1-SSE/SSO)
Economic	560	406/546	0.274
Social	3220	2105/212	0.346
Personality	1680	1038/276	0.382
Physical	1120	675/671	0.397
Natural	420	266/121	0.366
Educational	980	549/865	0.439
Support/service	1960	1228/652	0.373

Factor	SSO	SSE	Q <sup>2</sup> (1-SSE/SSO)
Gender-related	700	453/890	0.352
Cultural	700	531/280	0.241
Personal	280	107/628	0.616
Professional	140	-	1.000

## 5. Discussion and Conclusion

Rural areas play an important role in the majority of the developing countries and enhance their economic growth by creating and offering job opportunities and providing food and raw materials for others; however, the dwellers of these areas face many obstacles in providing for their families (Adeniyi et al., 2016). One of the effective strategies that help people cope with the current crisis in the employment market and the rural development issues is to use the maximum capacity of the rural dwellers, particularly women, to create new jobs and income opportunities in the form of developing funds and financial institutes. Therefore, there are several challenges and factors that can influence their SL, which cannot be overlooked (Tologbonse et al., 2013). Given the potentials of women in rural economics and the level of household SL, their petty businesses can face many obstacles and challenges, which sometimes turns their businesses into failure. That is why microcredit services for women in rural area have aimed to empower them by providing them with financial support, easy access to financial resources and entrepreneurship. The present study has aimed to examine the factors that determine the SL of the afore-mentioned women who have the membership of rural microcredit funds in Ghaemshahr County.

The analysis of the linear relationship between latent and observed variables, which was based on structural equation modeling, indicated that the economic factor has a significant and positive impact on the SL of the women in rural areas (99% confidence interval). To state it more clearly, creating any new job needs individual or organization that can provide them with low-yield facilities. Therefore, it is safe to say that the more investment there is, the higher the SL will be. The present results correspond to the results obtained by Sajid et al. (2018). It also revealed that the factor of personality has a significant positive impact on SL of these women. Ma et al. (2018) confirmed the above result and believe that some personality factors can influence the SL of rural dwellers and their empowerment. In other words, high versatility

(Sarafi & Shamsai, 2014), creativity, self-confidence and motivation, risk-taking and responsibilities can pave the way for locals to create new job opportunities and sources of income so that any rise in economic empowerment of women can increase the level of SL (Ahmadpour et al., 2014; Ma et al., 2018; Nourozi & Hayati, 2015).

Furthermore, it was determined that support/service and cultural factors have positive and significant impacts on women's SL (95% confidence interval). With regard to the evaluation of the findings, Sajid et al. (2018) considered the significance of supportive interventions with the aim of making improvements in the SL of rural dwellers. Kabir et al (2012) considered the shortage of institutional support as one of the main constraints of SL. Therefore, ethnic and local interactions with other locals and the possible access to several networks outside rural areas can pave the way to implement livelihood ideas and initiatives.

According to the results regarding the main factors of SL in rural areas, a number of suggestions were put forth in order to enhance the SL of the investigated group of women. These suggestions are as follows:

- The results determine the significant and positive effect of the economic factor on the SL of the investigated group of women. Therefore, low-yield facilities and financial services can create job opportunities for them, and its persistence can develop job stability in the area which leads to rural development.
- The results determine the positive and significant effect of personality factor on SL of the female household heads who have participated in rural microcredit funds. Given the abilities and skills of an individual and their creativity, it is suggested that the government starts supporting these women so that they are confident, motivated and willing to stay in rural areas.
- According to the results, the factor of support/service has a positive and significant effect on the SL of the female household heads who have participated in rural microcredit funds. Therefore, as long as the triangle of support (i.e., man, family and government) is incomplete, it is

unlikely to attain livelihood sustainability. The suggestion here is that the government enforces tax exemption in entrepreneurship, offers facilities, guarantees to purchase rural product, eases marketing, especially e-marketing and facilitating interaction with foreign customers. On the other hand, one's family can divide tasks and develop a sense of responsibility. They can support the individual to seize the opportunities and benefit from his own abilities.

- d) The results determine the positive and significant effect of cultural factor on the SL of the female household heads who have participated in rural microcredit funds. There are some suggestions,

such as producing suitable TV programs and developing magazines issued quarterly or monthly in order to introduce top entrepreneurs and different aspects of entrepreneurship. Moreover, ethnic, cultural and traditional diversities in rural areas can turn into great tourist attractions that enhance locals' empowerment and their livelihood.

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## عوامل مؤثر بر معیشت پایدار زنان سرپرست خانوار روستایی عضو صندوق‌های اعتبارات خرد (مطالعه موردی مناطق روستایی شهرستان قائمشهر)

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### چکیده مبسوط

#### ۱. مقدمه

افزایش نرخ بیکاری در بین جوامع روستایی و عدم توانایی برآورده ساختن نیازهای اولیه زندگی، جایگاه معیشت پایدار در زندگی خانوار روستایی را آشکار می‌سازد. در این راستا، علی‌رغم نقش بی‌بدیل زنان در زمینه بهبود وضعیت اقتصادی و معیشت پایدار خانوار، مشارکت آن‌ها با محدودیت‌های زیادی مواجه است. وجود شرایط و مشکلات ویژه اقتصادی کنونی، اهمیت توجه و تمرکز بر مسئله معیشت را برای این قشر از زنان بویژه زنان بی‌سرپرست و بدسرپرست روستایی، ضروری می‌نماید. در این راستا از طریق شناخت عوامل تأثیرگذار بر معیشت آنان می‌توان به درک عمیق‌تر و واقع‌گرایانه‌تری از وضعیت معیشتی آنان و عوامل بهبود دهنده آن دست یافت. لذا تحقیق حاضر با هدف بررسی عوامل مؤثر بر پایداری معیشت زنان روستایی سرپرست و یا بدسرپرست خانوار عضو صندوق‌های اعتبارات خرد روستایی در شهرستان قائمشهر استان مازندران صورت گرفته است.

#### ۲. مبانی نظری تحقیق

رویکرد معیشت پایدار از جدیدترین رویکردها، در زمینه توسعه جوامع روستایی می‌باشد. این بدان معناست که توسعه و معیشت با یکدیگر در هم پیوسته‌اند زیرا هر دو وضعیت معیشت فقیر و ثروتمند را برای زندگی در معرض خطر قرار می‌دهند. این رهیافت بر تفکری جامع و منسجم درباره کاهش فقر و توسعه روستایی تأکید نموده و بعنوان بهترین روش برای پرداختن به مسائل فقرا و توانمندسازی آنها بوده است. این رهیافت یکی از رویکردهای تحلیلی جدید در

زمینه توسعه روستایی است که به محدود شدن خطرات کاهش آسیب‌پذیری در امر معیشت کمک می‌کند. بر اساس رویکردهای جامع نگر، معیشت پایدار، دارای پنج سرمایه اصلی شامل سرمایه اجتماعی، مالی، طبیعی، فیزیکی و انسانی است. رویکردهای معیشتی، از جمله اقداماتی است که سعی دارد مشکل فقر و نیازهای مادی مردم را برطرف نماید و همچنین می‌تواند نقشی کلیدی در جلوگیری از آسیب‌پذیری خانوارها بردارد. از مهم‌ترین و تأثیرگذارترین بسترهای پیشبرد اهداف توسعه در نواحی روستایی، شناخت وضعیت معیشتی و عوامل مؤثر بر معیشت است؛ زیرا وضعیت نامطلوب معیشتی ممکن است با خلق انواع متعدد دغدغه‌ها در زندگی روزمره، به اشکال مختلف مانع ظهور انگیزه‌ها و اقدامات توسعه‌ای گردد.

#### ۳. روش شناسی

تحقیق حاضر از نوع توصیفی پیمایشی بوده است. جامعه آماری تحقیق را ۱۷۰ نفر از زنان سرپرست و یا بدسرپرست خانوار در ۳۰ صندوق اعتباری خرد زنان روستایی در شهرستان قائمشهر استان مازندران تشکیل داده بود که مورد سرشماری قرار گرفتند. جمع‌آوری اطلاعات با استفاده از پرسشنامه محقق ساخته‌ای بود که از دو بخش اصلی ارزیابی معیشت پایدار و عوامل تأثیرگذار بر آن در ۱۱ بعد تشکیل شده است. روایی ابزار سنجش با استفاده از نظرات اساتید دانشگاه و کارشناسان خبره و پایایی آن از طریق محاسبه ضریب آلفای کرونباخ مورد ارزیابی قرار گرفت. به منظور تجزیه و تحلیل داده‌ها در دو بخش آمار توصیفی و استنباطی از دو نرم‌افزار SPSS<sup>23</sup> و Smart PLS<sup>3</sup> استفاده گردید.

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#### ۴. یافته های تحقیق

با توجه به نتایج به دست آمده از تحقیق، دو مؤلفه اقتصادی و شخصیتی با ضرایب مسیر ۰/۳۶۱ و ۰/۳۴۴ در سطح ۹۹ درصد اطمینان و مؤلفه های حمایتی - خدماتی و فرهنگی با ضرایب مسیر ۰/۲۹۱ و ۰/۲۶۶ در سطح ۹۵ درصد اطمینان تأثیر مثبت و معنا داری بر روی معیشت پایدار زنان عضو صندوق های اعتباری خرد روستایی داشته است. بر اساس نتایج حاصله، مؤلفه اقتصادی نسبت به سایر مؤلفه ها، بیشترین تأثیر را در میزان معیشت پایدار زنان داشته است.

#### ۵. نتیجه گیری

بر اساس یافته های تحقیق، مؤلفه اقتصادی بیشترین تأثیر را بر معیشت پایدار زنان سرپرست خانوار عضو صندوق های اعتباری خرد روستایی داشته است. در این راستا می توان با ایجاد زمینه ارائه تسهیلات و اعتبارات مالی کم بهره، فرصت های شغلی مناسبی برای این قشر از جامعه به وجود آورد، چرا که روند رو به رشد این امر ثبات شغلی را در منطقه ایجاد خواهد کرد و توسعه روستایی را به دنبال خواهد داشت. از طرف دیگر، با توجه به اهمیت و تأثیر مولفه

شخصیتی (مانند توانایی ها و مهارت های فردی، قابلیت ارائه ایده و نوآوری توسط افراد و ...) ضروری است تا دولت حمایت های لازم در زمینه آموزش های مورد نیاز این قشر اقدامات لازم انجام دهد تا از این طریق، ضمن بالا بردن اعتماد و انگیزه کسب و کار در آن ها، تمایل به ماندگاری در روستاها افزایش یابد. علاوه بر این، در راستای اقدامات حمایتی و خدماتی، دولت می تواند علاوه بر ارائه تسهیلات، برنامه های حمایتی دیگری چون، حذف مالیات از کسب و کار، تضمین خرید محصولات تولیدی توسط زنان روستایی و ایجاد فضای مناسب بازاریابی را مد نظر قرار داده و حمایت لازم را در جهت ایجاد درآمد مناسب و بستر سازی معیشت پایدار برای این اقشار فراهم کند.

**کلیدواژه ها:** زنان سرپرست خانوار، صندوق اعتبارات خرد، معیشت پایدار، شعرستان قائمشهر.

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