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MULTI-CRITERIA DECISION ANALYSIS FOR IDENTIFICATION AND RANKING THE FACTORS AFFECTING AGRICULTURAL ENTREPRENEURSHIP

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ABSTRACT

Agricultural entrepreneurship is one of the new solutions in development theories to achieve sustainable development. The agriculture sector is among the important sectors of the rural economy and prepares the ground for its development and growth. Agricultural development is the basis for investment, employment, and reduction of unemployment. Therefore, it is necessary to identify the effective factors on the development of agricultural entrepreneurship. The main objective of the current study was to identify and rank the factors that affect agricultural entrepreneurship development from the viewpoint of the farmers and experts. The current study was a descriptive-survey research in terms of the method and was an applied research in terms of the objective. The statistical population of the study included 60 exemplary farmers and agricultural experts among which 52 were chosen as the samples by the use of Cochran Formula. The data collection instrument was a questionnaire whose validity was confirmed by a group of experts. In order to determine the reliability of the questionnaire, Cronbach's alpha was used and the data were analyzed by the use of SPSS. The multiple-criteria decision-making method was also used for ranking the effective factors. Based on the results, the five factors as the environmental, social, economic, behavioral, and promotional factors have been effective in the development of the agricultural entrepreneurship. The economic factors have been the most effective factors in agricultural entrepreneurship, followed by behavioral, environmental, promotional, and social factors. Also, the following ranking of the general factors based on their effectiveness on the agricultural entrepreneurship has been provided.

Keywords: *Entrepreneurship, Agriculture, Analytic hierarchy, Rural*

INTRODUCTION

The entrepreneurship development is a complicated, long-term, and comprehensive process that plays an important role in economic development and growth, as today, it has become the most important economic instrument of the societies. Economic growth and development take place due to entrepreneurs and entrepreneurial activities (Zali and Razavi, 2008). Regarding the role and position of the villages in the economic development processes in the domestic, regional, and national scales, and the consequences of the underdevelopment of the rural regions such as the poverty, inequality, unemployment, and migration, the consideration for rural and agricultural development have become the center of attention (Azkia and Ghaffari, 2008). The agriculture, as the axis of development in the rural areas, has an increasing power (Heidari, 2012). Addressing agricultural entrepreneurship is vital since the villages are an important part of the country's social system. There are valuable agricultural factors and resources such as the human factors and natural and economic resources in the villages. The

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role and importance of agricultural products are especially significant in the obviation of the increasing needs of society (Bahrami, 2004). In order to establish a logical connection between agriculture and the national economy development, the help by the agricultural entrepreneurs who combine the entrepreneurship mind and available capacities in the agriculture and create a new economic activity is needed (Haabbershon, 2006).

In most of the countries, especial attention is paid to the entrepreneurship and many scholars believe that the entrepreneurs play an important role in the economic development and growth, especially in the developing countries (Rahmati et al., 2010). Entrepreneurship is one of the main factors of success in competitive markets, and entrepreneurial companies respond to environmental challenges better and faster than other companies (Jimenez, 2008). The subject of entrepreneurship has been considered as the main source of development in most of the countries (McCline, 2004). In most societies, the rural areas face poverty and deprivation due to issues such as the shortage of the infrastructure and facilities, and the low income. Therefore, one of the major objectives of development in most of the countries is the reduction in unemployment and the development of occupational activities in rural areas (Eftekhari and Sajasi, 2010). In order to achieve the rural development, the grounds for empowerment and capacity building of the villages are prepared and it can emerge in the form of entrepreneurship. The entrepreneurship can be called a 'dynamic' process which includes aspiration, evolution, transformation and creativity.

This process needs the people's power and motivation for the creation and implementation of new ideas, as well as practical solutions. The role of entrepreneurship in rural agricultural development is especially important due to the combination of the three main powers as resources, creativity, and the use of unique opportunities (Petrin, 1994).

The rural agricultural entrepreneurship is the innovative use of rural resources and opportunities to create new job opportunities (Yaghubi and Qasemi, 2009). The agricultural development in the form of rural development to apply optimal changes and evolutions for the expansion of the domain of activities and generalization of the affairs as well as the increase in functions would lead to such a development (Vangelis *et al.,* 2006). In Iran, the agriculture sector accounts for 15% of GDP and 22.7% of total employment in the country (General Population and Housing Census, 2011). The agriculture is among the fundamental sectors of the country's economy whose growth and development lead to the creation of jobs and the reduction of unemployment in the villages (Eftekhari et al., 2010). In this regard, it is necessary to identify and evaluate the areas of agricultural entrepreneurship in the villages.

So far, due to the lack of entrepreneurial attitudes in the development plans, the agriculture area's capacities and potentials have not been properly used and agriculture has been mainly considered in the form of subsistence. The current study aimed to respond to the question of which factors are effective in agricultural entrepreneurship in rural areas. By answering this question, these factors can be ranked in order to strengthen the grounds for agricultural entrepreneurship.

In the second chapter, the current study investigated domestic and foreign literature related to agricultural entrepreneurship. In the third chapter, the conceptual model of the study and methodology based on the Delphi method, single t-test, and the Analytic Hierarchy Process (AHP) has been provided. In the fourth chapter, the data analysis based on the objectives has

been presented. And finally, in the fifth chapter, the conclusion and suggestions have been included.

LITERATURE REVIEW

Sajasi Ghidari (2007) showed in his study that the entrepreneurship with the emphasis on spontaneous activities has managed to provide the grounds for sustainable rural development as a farmers' empowerment strategy. Moradnejadi et al. (2007) analyzed the effective environmental factors on the success of entrepreneurs in greenhouse production units in Iran. They concluded that the economic environment, psychological characteristics, environmental dynamism, access to resources, marketing skills, ecological environment and interest in agriculture are effective in the development of entrepreneurship in greenhouse production units. Rezvani and Najjarzadeh (2008) concluded in the investigation and analysis of the entrepreneurship areas that for strengthening entrepreneurship in the rural areas, the non-rural entrepreneurs must be encouraged based on the facilities and grounds related to entrepreneurship. Also, the preparation of the social and economic environment of the villages to attract the young and skillful manpower as well as the expansion of the agricultural activities, are effective in creating and strengthening rural entrepreneurship. The results of the research by Yaghubi and Ghasemi (2009) showed that the self-confidence, innovation, identification of the opportunities, and having knowledge and information are among the most important factors for entrepreneurs' success. The most important barriers to the entrepreneurship and employment have been red tape and corruption. Eftekhari et al. (2010) dealt with the agricultural entrepreneurship development strategies in the rural areas and showed that in case of focusing on agricultural capabilities and fostering innovation and entrepreneurship in the agricultural sector, the challenges of rural development can be surmounted through employment and income generation. Sharifzade et al. (2010) dealt with the identification and prioritization of the supportive needs of agricultural businesses development and concluded that the institutional supports and informational/educational services are needed. Among the institutional supports, payment of the bank facilities, facilitation of the administrative affairs, infrastructure development, clarification of laws and regulations, land transfer, subsidy payments, market regulation, and insurance coverage expansion have higher priorities. Among the informational/educational supports also, the bureaucratic affairs related to business start-up and management, current and future entrepreneurship opportunities, writing justification plans, and product placement and planning are more important. Heidari Sareban (2012) dealt with the investigation of the effective factors in boosting the farmers' entrepreneurship in the rural areas. Their analysis showed that the economic factors are greatly important.

Janz et al. (2001) concluded in their study that the experience makes the entrepreneurs know they can do the jobs better than their boss or employer which is the reason why they start their own businesses. Reagan (2002) considered the rural entrepreneurship to be the ground for the employment, income increase and wealth generation, improving the life quality, and helping the locals to participate in the economy.

Lordkipandze (2005) dealt with the investigation of the grounds for the promotion of entrepreneurship in Sweden. In addition, he investigated the strong and weak points of the businesses and opportunities as well as the obstacles of entrepreneurship and found out that

the weak entrepreneurial culture and environment, lack of skills, shortage of the financial resources, lack of information and deficiencies in entrepreneurial communication, shortage of tourism season, and lack of proper understanding of tourism industry were obstacles to entrepreneurship progress.

In another study, the basic needs of the farmers to develop entrepreneurship in the agricultural sector were investigated and the adequate financial and credit capital, economic conditions, access to available funds, access to consulting opportunities, access to support services and needed clients and people were identified as the effective factors in the development of entrepreneurship (CADE, 2006). Adelaja et al. (2007) concluded in their study that for designing the vision of the agriculture future, innovative people are needed for designing and implementing the vision at the national, regional, and local levels so that many job opportunities would be created for people and the land usage would become varied and life quality of people in the agricultural sector would be promoted. Ardagna & Lusardi's (2008) study indicated that the individual characteristics such as age, gender, and job status, along with other characteristics such as social relationships, skills, and risk-taking are important factors in entrepreneurship. Urbano et al. (2011) dealt with the investigation of the social and cultural factors effective in the development of entrepreneurship in Spain and concluded that the attitude towards entrepreneurship is one of the most important and effective factors in the emergence of entrepreneurial behavior.

RESEARCH METHODOLOGY

The current study aimed to analyze the effective factors in the development of entrepreneurship in the agricultural sector in rural areas. The current study was of descriptive-survey type in terms of nature and the method, since it described the current status and investigated the features and effective factors in agricultural entrepreneurship. In terms of the objective, it was of applied type since its results could be effective in the development of the agricultural entrepreneurship and higher employment in the area under study. The statistical population concluded the agriculture's experts and all the exemplary farmers in the Sarbaz County who were chosen due to having appropriate irrigation methods, the extent of farmland, high crop yields, and the quality of their crops. The number of the farmers and the experts was 60 among which, using Cochran's formula, 52 were chosen as the sample.

In order to collect the factors effective in agricultural entrepreneurship, firstly the factors were extracted by the use of the available books, articles, documents, and evidence as well as the interviews with the farmers and experts in the field of agriculture. Then, for finalizing the effective factors in agricultural entrepreneurship, the Delphi method was used and a list of the effective factors was extracted. Afterward, by the combination of the identified factors with those found in the previous studies and the criteria set by the Ministry of Agriculture Jihad for selecting the best farmer, a total of 5 categories of factors were identified in the development of agricultural entrepreneurship. Then, by compiling a questionnaire based on the results obtained in identifying effective factors, farmers' views on factors and variables affecting agricultural entrepreneurship development were collected. In order to evaluate the validity of the questionnaire, the opinions of the experts and specialists in the field of agriculture were used. Cronbach's alpha with the emphasis on the internal consistency of the data was used to measure the reliability of the questionnaire and this coefficient was calculated as 0.783, which

showed appropriate reliability. SPSS software was also used for data analysis. The one-sample t-test was used for data analysis and the multiple criteria decision-making method along with the analytic hierarchy method were used for ranking them.

It was sought to answer the following questions in the current study:

1- How do environmental factors affect agricultural entrepreneurship in rural areas?
2- How do social factors affect agricultural entrepreneurship in rural areas?
3- How do economic factors affect agricultural entrepreneurship in rural areas?
4- How do behavioral factors affect agricultural entrepreneurship in rural areas?
5- How do promotional factors affect agricultural entrepreneurship in rural areas?

The Conceptual Model of the Study

The conceptual model of the effective factors in agricultural entrepreneurship in rural areas has been provided in Figure (1). In this model, it has been tried to use the existing literature as well as the available models in the field of agricultural entrepreneurship. Based on the related literature and the opinions of the farmers and the experts, five kay factors that were effective in agricultural entrepreneurship were identified.

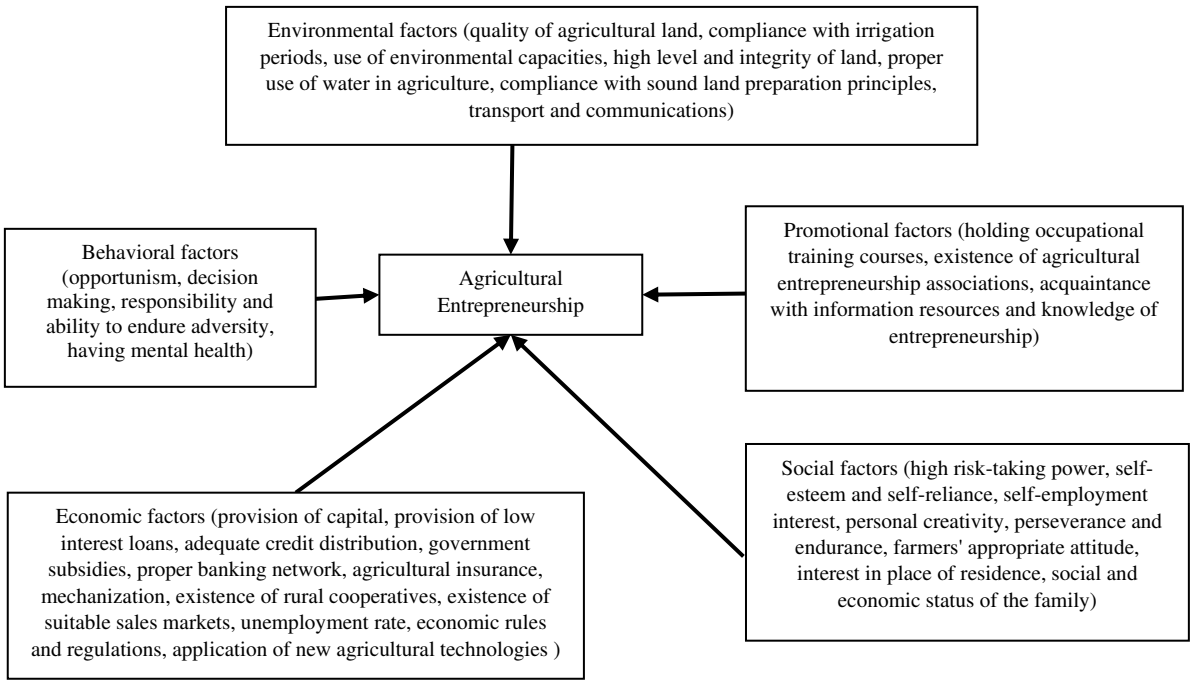

Figure 1: The conceptual model of the study

The effective environmental factors include factors such as the quality of agricultural land, compliance with irrigation periods, Use of environmental capacities, high level and integrity of the land, proper use of water in agriculture, compliance with sound land preparation principles, transport and communications. The effective social factors include the high risk-taking power, self-confidence and self-reliance, self-employment interest, personal creativity, perseverance and endurance, farmers' appropriate attitude, interest in place of residence,

social and economic status of the family. The effective economic factors include the provision of capital, provision of low-interest loans, adequate credit distribution, government subsidies, proper banking network, agricultural insurance, mechanization, The existence of rural cooperatives, the existence of suitable sales markets, unemployment rate, economic rules and regulations, application of new agricultural technologies. The effective behavioral factors include the opportunism, decision making, responsibility and ability to endure adversity, having mental health. And finally, the effective promotional factors include holding occupational training courses, the existence of agricultural entrepreneurship associations, acquaintance with information resources, and knowledge of entrepreneurship.

The Analytic Hierarchy Process

The Analytic Hierarchy Process (AHP) is one of the multiple-criteria decision-making techniques which was first introduced by Saaty. This technique can be used when the decision-making is done with several competitors and decision-making criteria. The criteria for decision-making can be quantitative or qualitative. This decision-making technique is founded on the basis of pair comparisons. The decision-making process is started with the provision of the decision hierarchy tree. This decision tree shows the factors to be compared as well as the competitors are evaluated in the decision-making. Then the pair comparisons between the criteria are done. These comparisons determine the weight of each of the criteria compared to the competitors. Finally, it combines the matrices obtained from the pair comparisons in a way that the optimum decision is achieved (Azar, 1995).

Using the analytic hierarchy process requires the following four steps:

First Step: Modelling

In this step, the problem and objective of decision-making are formed in a hierarchy of the decision elements that are interrelated. The decision elements include the decision-making criteria as well as the decision options. The analytic hierarchy process requires breaking a problem with several criteria for a hierarchy of levels. The top level is indicative of the decision-making process. The second level is indicative of the indices (which might be broken into sub-indices or more detailed indices in the next level). The last level provides decision options.

Second Step: Preferential Judgement (Pairwise Comparisons)

In this step, the comparisons between the different options of the decision based on each criterion and judgment about the importance of the decision criterion are done through pairwise comparisons. After designing the hierarchy of the decision problem, the decision-maker must create a set of matrixes that numerically measure the importance or priority of each decision option compared to each other and other options regarding the criteria. This is done through pair comparisons between the decision elements (pairwise comparison) and through the allocation of the numerical scores which are indicative of the priority or importance between the two decision elements.

Third Step: Relative Weights` Calculations

In this step, the determination of the decision options` weights compared to each other is done by the use of the information from the pairwise comparisons matrixes. The summation of the numbers in each column of the pairwise comparisons matrix is calculated, then each element of the column is divided by the sum of its numbers. The new matrix which is obtained by such a process is called the normalized comparisons matrix. The mean of the numbers in each row of the normalized matrix is calculated. This mean value shows the relative weight of the decision elements with the matrix rows.

Fourth step: Integrating the Relative Weights to Rank Decision Options

In this stage, the relative weight of each option must be multiplied by the higher elements` weights to obtain the final weight of the option. By doing this process for each option, the value of the final weight would be obtained.

The judgments for all calculations related to the analytic hierarchy process which is based on the initial judgment of the decision-maker in the form of pairwise comparisons matrix are integrated to eliminate any kind of error and inconsistency in comparison and determination of the importance of options and indices. The inconsistency rate is a means which determines the consistency and shows to what extent the priorities obtained from the comparisons can be relied on. If the inconsistency rate be lower than 0.10, the consistency of the comparison would be acceptable and if not, the comparisons must be revised. In order to calculate the inconsistency rate, firstly the weight of sum vector is calculated. To do so, the pairwise comparisons` matrix must be multiplied by the relative weighty vector to obtain the weight sum vector. In the next step, the consistency vector is calculated by the division of the weight sum vector's elements to the relative priority vector. Then, the mean of consistency vector elements (λmax) is obtained. Determination of the consistency index, which is indicative of the number of the available options in the problem, is the next step. And finally, calculation of the consistency ratio is done by the division of the consistency index by the random index (Mehregan, 2004)

Table 1: Random index

N	1	2	3	4	5	6	7	8	9	10
RI	0	0	0.58	0.9	1.12	1.24	1.32	1.41	1.45	1.51

DATA ANALYSIS

Based on the provided methodology in the third chapter, the investigation of the identified factors in agricultural entrepreneurship is firstly addressed. In order to use the statistical tests and understand whether parametric or non-parametric tests must be used, first, the normality of the variable must be investigated. In case the variables be normal, the use of parametric tests would be recommended and if not, the non-parametric tests would be taken into consideration. Regarding the normality of the data, the one-sample t-test was used for data analysis.

The Effects of the Environmental Factors in Agricultural Entrepreneurship:

In this section, the effects of the environmental factors in the agricultural entrepreneurship in rural areas have been addressed. The following hypotheses have been proposed:
H0: Environmental factors do not have a significant effect on agricultural entrepreneurship.
H1: Environmental factors have a significant effect on agricultural entrepreneurship.

Table 2: The results of one-sample t-test for the environmental factors

Statistics	Value
One sample t-test	40.769
Degree of freedom	5
Significance level	0.001

Based on the results of the one-sample t-test, as seen in the Table (2), the obtained significance level was 0.001, which was lower than the standard significance level of 0.05; therefore, the H0 was rejected and the H1 was approved. As a result, it can be said with a 95% confidence level that the environmental factors had a significant effect on agricultural entrepreneurship.

The Effects of the Social Factors in Agricultural Entrepreneurship:

In this section, the effects of the social factors in the agricultural entrepreneurship in rural areas have been addressed. The following hypotheses have been proposed:
H0: Social factors do not have a significant effect on agricultural entrepreneurship.
H1: Social factors have a significant effect on agricultural entrepreneurship.

Table 3: The results of one-sample t-test for the social factors

Statistics	Value
One sample t-test	34.874
Degree of freedom	8
Significance level	0.04

Based on the results of the one-sample t-test, as seen in the Table (3), the obtained significance level was 0.04, which was lower than the standard significance level of 0.05; therefore, the H0 was rejected and the H1 was approved. As a result, it can be said with a 95% confidence level that the environmental factors had a significant effect on agricultural entrepreneurship.

The Effects of the Economic Factors in Agricultural Entrepreneurship:

In this section, the effects of the economic factors in the agricultural entrepreneurship in rural areas have been addressed. The following hypotheses have been proposed:
H0: Economic factors do not have a significant effect on agricultural entrepreneurship.
H1: Economic factors have a significant effect on agricultural entrepreneurship.

Table 4: The results of one-sample t-test for the economic factors

Statistics	Value
One sample t-test	44.576
Degree of freedom	10
Significance level	0.000

Based on the results of the one-sample t-test, as seen in the Table (4), the obtained significance level was 0.000, which was lower than the standard significance level of 0.05; therefore, the H0 was rejected and the H1 was approved. As a result, it can be said with a 95% confidence level that the economic factors had a significant effect on agricultural entrepreneurship.

The Effects of the Behavioral Factors in Agricultural Entrepreneurship:

In this section, the effects of the behavioral factors in the agricultural entrepreneurship in rural areas have been addressed. The following hypotheses have been proposed:
H0: Behavioral factors do not have a significant effect on agricultural entrepreneurship.
H1: Behavioral factors have a significant effect on agricultural entrepreneurship.

Table 5: The results of one-sample t-test for the behavioral factors

Statistics	Value
One sample t-test	108.25
Degree of freedom	3
Significance level	0.09

Based on the results of the one-sample t-test, as seen in the Table (5), the obtained significance level was 0.09, which was higher than the standard significance level of 0.05; therefore, the H0 was approved and the H1 was rejected. As a result, it can be said with a 95% confidence level that from the viewpoint of the respondents, the behavioral factors did not have a significant effect on agricultural entrepreneurship.

The Effects of the Promotional Factors in Agricultural Entrepreneurship:

In this section, the effects of the promotional factors in agricultural entrepreneurship in rural areas have been addressed. The following hypotheses have been proposed:
H0: Promotional factors do not have a significant effect on agricultural entrepreneurship.
H1: Promotional factors have a significant effect on agricultural entrepreneurship.

Table 6: The results of one-sample t-test for the promotional factors

Statistics	Value
One sample t-test	67
Degree of freedom	2
Significance level	0.000

Based on the results of the one-sample t-test, as seen in the Table (4), the obtained significance level was 0.000, which was lower than the standard significance level of 0.05; therefore, the H0 was rejected and the H1 was approved. As a result, it can be said with a 95% confidence level that the promotional factors had a significant effect on agricultural entrepreneurship.
Therefore, it can be said from the results obtained from the one-sample t-test that according to the exemplary farmers and the agriculture experts, the economic, environmental, social, promotional, and finally, the behavioral factors were effective in agricultural entrepreneurship, respectively.

Ranking the Effective Factors in Entrepreneurship by the Use of Multi-Criteria Decision Making

After identifying the effective factors in agricultural entrepreneurship and investigating as well as confirming their effectiveness in agricultural entrepreneurship, they need to be ranked for determination of their importance and effectiveness level. Based on the method provided in chapter 3-2, the analytic hierarchy process was used for determination of the degree of importance and ranking the factors in terms of effectiveness intensity on the entrepreneurship. Based on the stages mentioned in 3-2, firstly, the provision of the hierarchy tree of the effective factors in agricultural entrepreneurship (Figure 2) was considered. In this tree, all the factors were investigated based on the effective criteria in entrepreneurship.

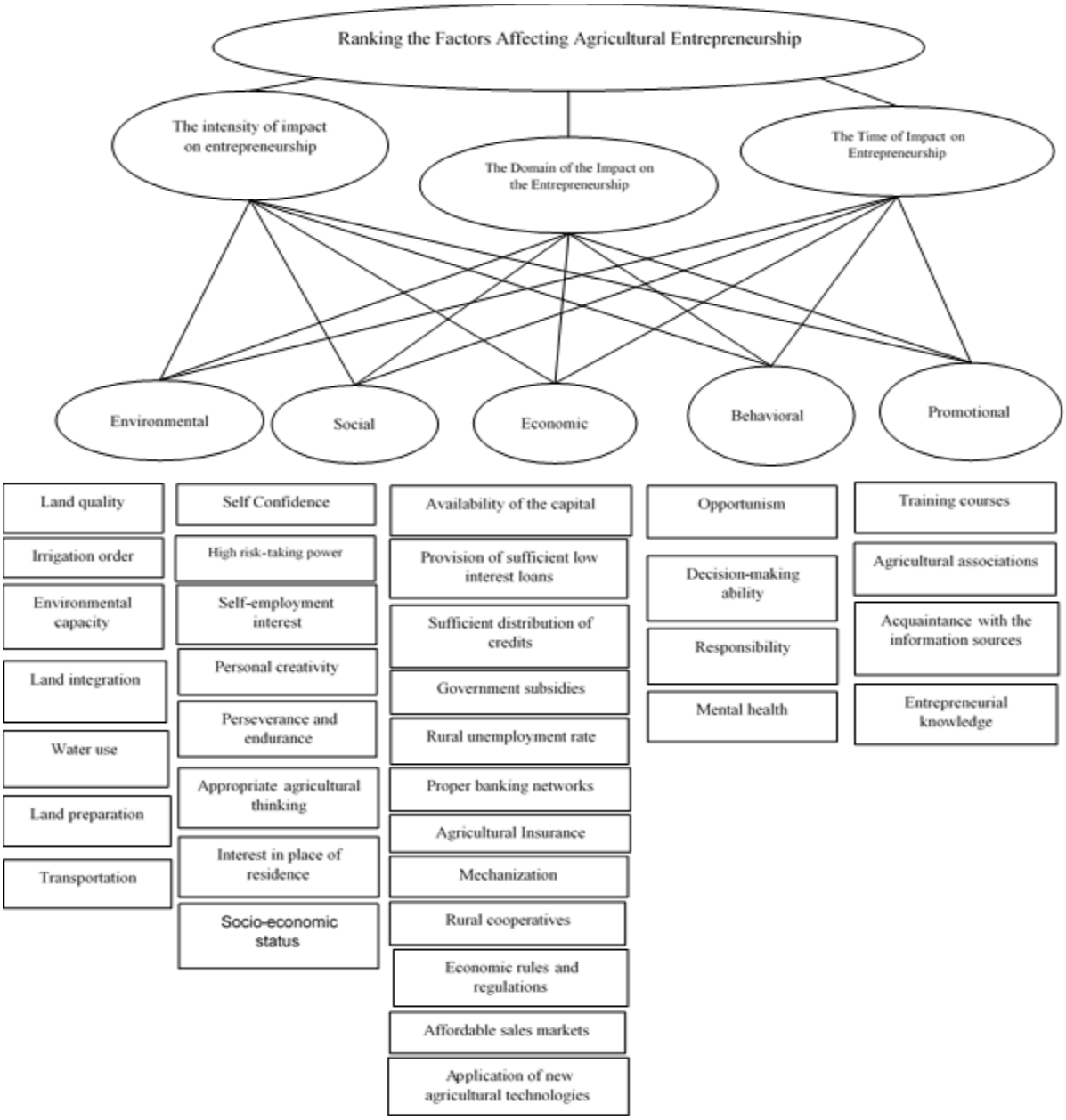

Figure 2: The hierarchical structure of the effective factors in agricultural entrepreneurship

After this stage, in the first step, the problem and objective of the decision-making were modeled in the form of a hierarchy of the decision elements. In the second step, the preferential judgment (pairwise comparison) between the different options of the decision was done based on each criterion. In the third step, the decision options were weighted based on the criteria, by the use of a decision-making matrix. And in the fourth step, the relative weights were provided for ranking the decision options.

Before the determination of the importance of each of the sub-factors and their impact intensity on the entrepreneurship in the 5 groups, the degree of the general factors impact must be also determined. The effectiveness of the general factors effective in entrepreneurship based on the analytic hierarchy process has been provided in the Table (7).

Table 7: The general ranking of the effective factors in the agricultural entrepreneurship

Factors	Weight
Environmental	0.199
Social	0.142
Economic	0.290
Behavioral	0.201
Promotional	0.169

As seen in the Table (7), among the effective factors in the agricultural entrepreneurship, the economic factors were the most effective, followed by the behavioral, environmental, promotional, and social factors, respectively.

After the determination of the rank of the general factors, regarding the presence of several sub-factors, it is necessary to rank them. Investigation of the weights and the impact intensity of the environmental factors has been presented in Figure (8).

Table 8: Ranking of the effective environmental factors in the agricultural entrepreneurship

Components	Weight
The quality of agricultural land	0.215
Observance of the order of irrigation periods	0.131
Using environmental capacities	0.114
High area and integrity of the land	0.123
Proper use of water in agriculture	0.138
Observance of the correct principles of land preparation	0.142
Proper transport and physical communications	0.138

As seen in the Table (8), among the environmental factors, the quality of the agricultural lands was the most effective in the agricultural entrepreneurship, followed by the observance of the correct principles of land preparation, proper use of water in agriculture, observance of the order of irrigation periods, high area and integrity of land, and transportation and physical communication, respectively.

Table (9) shows the impact intensity of the effective social factors in agricultural entrepreneurship.

Table 9: Ranking of the effective social factors in the agricultural entrepreneurship

Components	Weight
High risk-taking	0.139
Self-confidence and self-reliance	0.110
Interest in self-employment	0.131
Use of personal creativity	0.101
Perseverance and endurance	0.169
Appropriate attitude of farmers	0.104
Interest in the place of residence	0.127
Socio-economic status of the family	0.118

Based on the results in Table (9), among the social factors, the perseverance and endurance was the most effective factor in the agricultural entrepreneurship, followed by high risk-taking power, self-employment interest, interest in the place of residence, socio-economic status of the family, self-confidence and self-reliance, farmers' attitude, and personal creativity. Table (10) shows the effective economic factors in agricultural entrepreneurship.

Table 10: Ranking of the effective economic factors in the agricultural entrepreneurship

Components	Weight
Availability of the capital and financial support	0.117
Provision of sufficient low-interest loans	0.102
Sufficient distribution of the credits in the area	0.081
Governmental subsides	0.080
Presence of a proper banking network	0.071
Agricultural products insurance	0.088
Machination and mechanization	0.074
Presence of rural cooperatives	0.066
Presence of proper sales markets	0.111
Rural unemployment rate	0.060
Economic rules and regulations	0.081
Use of new agricultural technology	0.069

As seen in Table (10), among the effective economic factors in agricultural entrepreneurship, the availability of the capital and financial support was the most effective, followed by the presence of suitable sales markets, the provision of low-interest loans, agricultural products insurance, the sufficient distribution of credit at the regional level, the rules and regulations, governmental subsidies, machination and mechanization, the existence of appropriate banking networks, the application of new agricultural technologies, the existence of rural cooperatives, and rural unemployment rates, respectively.

Table (11) shows the impact intensity of the effective behavioral sub-factors in agricultural entrepreneurship.

Table 11: Ranking of the effective behavioral factors in the agricultural entrepreneurship

Components	Weight
Opportunism	0.239
Having the power of decision-making	0.198
Responsibility-taking and ability to endure adversity	0.395
Mental health	0.168

As seen in the Table (11), among the effective behavioral factors in the agricultural entrepreneurship, the responsibility-taking and ability to endure adversity were the most effective, followed by the opportunism, having the power of decision-making, and mental health, respectively.

Table (12) shows the impact intensity of the effective promotional sub-factors in agricultural entrepreneurship.

Table 12: Ranking of the effective promotional factors in the agricultural entrepreneurship

Components	Weight
Holding training courses	0.263
The existence of agricultural entrepreneurship associations in rural areas	0.337
Acquaintance with the information channels and sources	0.273
Having the knowledge of entrepreneurship	0.126

As seen in the Table (12), among the effective promotional factors in the agricultural entrepreneurship, the existence of agricultural entrepreneurship associations in rural areas was the most effective factor, followed by the acquaintance with the information channels and sources, holding training courses, and having the knowledge of entrepreneurship, respectively.

DISCUSSION AND CONCLUSIONS

One of the appropriate policies that can play a role in the realization of the sustainable rural and agricultural development is the matter of employment and improvement of the villagers' income. The prerequisite for such a task is the creativity in creating new job opportunities in the rural and agricultural areas. The formation of the entrepreneurial environment requires the identification of the effective factors, needed supports, and continuous pathology to fill the gaps. The current study was conducted with a systematic approach to investigate the effective factors in the development of agricultural entrepreneurship. The effective factors in agricultural entrepreneurship were categorized into five categories as environmental, social, economic, promotional, and behavioral. These categories included 35 variables that were tested. The research findings showed that from the viewpoint of the exemplary farmers and the agriculture experts, the economic factors were the most effective in the agricultural entrepreneurship, followed by the behavioral, environmental, promotional, and social factors, respectively.

Regarding the prioritization of the effective factors in agricultural entrepreneurship, it is suggested to prepare a platform that helps the farmers with obtaining 'financial and credit facilities for agricultural entrepreneurship, facilitation of the network synergy and increasing their competitiveness (free market space)'. This study was conducted in Sarbaz County. In order to add to the credibility of the results, the statistical population can be expanded to a province.

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