

Investigating the farmers' perception towards the creation and development of diversification components in economic activities: the case of rural areas of Baghlan Jadid district of Baghlan province-Afghanistan

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Abstract: Developing economic activities in villages has been known as one of the important approaches to poverty reduction, entrepreneurship development, and sustainable development of the rural economy. The most important feature of the Afghanistan villages' economic structure is the lack of diversity in economic platforms as well as the lack of employment opportunities. In this regard, the present study was conducted to identify the components of the creation and development of diversification to rural economic activities and provide solutions in this context in the villages of the Baghlan Jadid district of Baghlan province. The statistical population for this research was all farmers of the Baghlan Jadid district. In this research, the sample size was determined using Cochran's formula of 363 people, which was done by multi-stage sampling method. The data collection tool was a questionnaire and the method was a face-to-face interview. Coefficient of Variation and Exploratory Factor Analysis was used to analyze and describe the data, in addition to descriptive statistics of centrality and dispersion. The results of the factor analysis showed that the components of "education-empowerment", "supporting component", "infrastructure-facilities component", "strategic-legal component" and "access to market component" are considered to be the most important components of creating and developing diversification in rural economic activities, respectively. Also, the findings of the study showed that the villages of this district have the potential capabilities, such as the presence of water resources such as springs and rivers for fish farming, the existence of beautiful landscapes and green spaces, the presence of the spirit of hospitality among the villagers and the belief of the villagers in the employment and income generation of non-agricultural activities. The findings of this innovative study, while facilitating the involvement of villagers in rural economic activities, can also be useful for policymakers and planners in this field.

Keywords: Diversification, Economic activities, village, Baghlan Jadid, Baghlan province, Afghanistan

Introduction

Nowadays, the growth of the agricultural sector is of special importance for poverty alleviation (Gassner *et al.*, 2019), but not paying attention to the diversification of economic activities will not bring success to rural poverty alleviation efforts (Dauly, 2019). Agriculture is considered to a great extent a pillar component in the economic structure of villages (Loizou *et al.*, 2019), this leads to certain problems such as less flexibility against climatic fluctuations, marketing and marketing limitations of the product (Chen & Gong, 2021; Malhi *et al.*, 2021). However, the development of economic activities in villages is known as one of the important approaches in the field of poverty reduction and job creation in rural areas and crises (Barrett *et al.*, 2001; Ayana *et al.*, 2021; Martin & Lorenzen, 2016). Thus, the diversification of economic activities is one of the most important strategies presented in the framework of sustainable rural development to reduce the negative effects of the instability of this structure in various environmental, economic and social dimensions in rural areas (Oyinbo & Olaleye, 2016; Ferraz *et al.*, 2021). Nowadays, the various dimensions of development in rural communities require diversifying employment and expanding activities that guarantee its dynamism and diversifying activities and strengthening incomes, can facilitate the process of rural development (Iraoya & Isinika, 2020; Shabanali Fami *et al.*, 2022). So, the diversification of economic activities as a basic strategy causes the creation of employment, optimal use of natural resources, increases of production and accumulation of savings (De Rosa *et al.*, 2019; Tafesse, 2023) and is considered as a tool to accelerate economic development at different levels (Momeni & Parnow, 2019). In reality, the concept of diversifying economic activities in villages has been regarded as a means to expedite economic development at various levels. This approach is regarded as one of the most critical strategies for the development and economic stability of rural settlements, and it has a substantial impact on the promotion of the welfare, security, and economy of the region (Khayri *et al.*, 2022).

In the field of diversification of economic activities, different researches have been published outside of Afghanistan, but none of the previous studies have investigated the perception of farmers regarding the components of creation and development of diversification in rural economic activities. As Memon *et al.* (2020) in a study entitled "Determinants of income diversification in flood-prone rural Pakistan" concluded that households with a relatively higher number of earning members and those headed by male or educated members are more likely to have a diversified income portfolio. Danso-Abbeam, *et al.* (2020) in a study titled "Rural non-farm income diversification: implications on smallholder farmers' welfare and agricultural technology adoption in Ghana", concluded that the non-farm income diversification increases the likelihood of Zai-technology adoption and contributes to significant household welfare gains. Escobal (2017) in a research entitled "The determinants of nonfarm income diversification in rural Peru" have come to the conclusion that access to public infrastructures such as roads and private sector infrastructures such as education and credits have been very important factors in the diversification of the rural economy. Kassie *et al.* (2017) by examining the determinant factors of livelihood diversification: evidence from Ethiopia, concluded that institutional factors have an important effect on the probability of households participating in non-agricultural activities. Gebreyesus (2016) investigated the determinants of livelihood diversification: the case study of Kembata Tambaro Zone, South Ethiopia, found that variables including age, education, number of non-farm activities, market distance, number of livestock and farm size are identified important and effective determinants in the diversification of economic activities. In a study titled Farm Households Livelihood Diversification and Poverty Alleviation in Giwa Local

Government Area of Kaduna State, Nigeria, Oyinbo and Olaleye (2016) found that those who participated in a number of rural economic activities were less likely to be poor. The increase in the number of livelihood activities has increased the income of farmers and always increased their purchasing power and welfare. Winters-Paul *et al.*, (2009) in a study about Assets, activities and rural income generation: evidence from a multicounty analysis, reached the conclusion that by increasing employment in non-agricultural sectors in addition to benefiting from land income, the economic status of households also improves. However, the results of previous research confirm that economic diversity in rural areas can potentially increase the growth of the local economy, reduce rural poverty, and combat the unemployment crisis.

Afghanistan is a country in which villages are confronted with a variety of economic challenges. Approximately 71% of the country's population resides in rural areas (Shaiq, *et al.* 2021). Meanwhile, the dimensions of poverty in this country have been greater than ever before (Shaiq, *et al.* 2022). In recent years, farmers in the Baghlan Jadid district of Baghlan province, which is situated in the northeast of the country, have experienced low incomes due to drought waves and climate changes. Therefore, the majority of the populace's income is contingent upon agriculture, which has not been sufficient to enhance their means of livelihood. However, creating non-agricultural employment, in addition to strengthening the foundations of the rural economy, will also prevent the migration of rural people to the cities. So that by providing a structure to carry out various economic activities, will not only reduce the problems of the cities but will also bring the quality of rural life close to the quality of urban life and ultimately facilitate the process of rural development. In addition, although the Baghlan Jadid district has potential capabilities, attention should be paid to the development of other economic activities of rural communities, such as the creation of community-oriented tourism (Varmazyari *et al.*, 2023) and the development of small rural businesses (Talebpoor *et al.*, 2022) in order to create employment, and eliminate unemployment crisis and in general sustainable development of rural economy is an important and basic necessity (Shaiq and Fitrat, 2024). The investigations revealed that the components of creating and developing diversification in rural economic activities and similar research have not been studied previously in Afghanistan or other neighboring countries.

In addition, due to cultural, social, and geographical differences and as well as the conditions of Afghanistan this research has an important priority. However, knowing the components that create and develop diversification in rural economic activities and providing solutions in this field, while facilitating the entry of villagers into rural economic activities, help the officials of this area in the field of planning and policy-making and lead to the improvement of income sources and Farmers' livelihood will also be improved. This study aims to uncover the solutions to the following inquiries from the farmers' perspective: What are the key elements in establishing and fostering economic diversification in the rural areas of Baghlan Jadid? Which variables are most widely agreed upon as factors influencing the diversification of economic activities? Which rural ability is the most crucial among the others?

Research Methodology

In terms of worldview, the current research follows the paradigm of post-confirmationism, and in terms of approach, it is quantitative and uses a non-experimental (survey) strategy. The statistical population for this research was all the farmers of Baghlan Jadid district of Baghlan province of Afghanistan and 363 samples were selected as the sample population using Cochran's formula. Information was collected by a multi-stage sampling method. The main research tool was the questionnaire. To compile the

questionnaire, initially apart from examining the background and existing theories in the field of the research problem, a preliminary questionnaire was prepared (Motei Langroudi, et al., 2019; Tayebnia, & Khosrobigi and Reza, 2020; Shediak, et al., 2008; Khayri, Yāsouri & Shāhzeidi, 2022). Then, this questionnaire was reviewed by lecturers of the Department of Economics and Agricultural Extension of Baghlan University. After applying their comments, the final questionnaire was prepared as a closed questionnaire including (35) queries and demographic questions (age, gender, age, education). The measurement spectrum used for the data was nominal, ordinal (five-level Likert scale) and interval, depending on the data type. The method used to collect data was face-to-face interview. In addition to descriptive statistics such as mean, standard deviation and coefficient of variation, exploratory factor analysis was used for data analysis. In other words, because the conditions of Afghanistan and the studied region are different from other countries despite other issues regarding rural living, exploratory factor analysis was used despite the previous literature and the initial conceptual framework. The coefficient of variation was used to examine the consensus regarding the queries raised by the respondents and the rural capabilities of the study area. All statistical operations were performed using SPSS version 26 software.

Region of study

The studied area in this research was Baghlan Jadid (Baghlani Jadid) district of Baghlan province. Baghlan province is one of the important industrial and agricultural provinces of Afghanistan, which is located in the northeast of this country. The area of this province is 21112km². The population of Baghlan province is about 1,053,200 people based on the country's population estimate in 1401 (NSIA, 2022; Profile of Baghlan province, MEA, 2019).

Baghlan Jadid district is the second largest district of Baghlan province, which has a population of 206,440 according to the latest census data of the country's population estimate in 2022. Agriculture in Baghlan Jadid is traditional, and Baghlan Jadid has 33,638 hectares of irrigated agricultural land and 33,170 hectares of dry land. This district is bordered by Kunduz province from the north, Samangan province from the northwest, Pul-e Khumri district from the southwest, and Burka and Nahrin districts from the east (Figure 1). The main economic activities of villagers are farm activities, and non-agricultural activities such as public and professional services, transportation, architecture, tailoring, shop-keeping, small businesses, etc. are rarely seen among them (NSIA, 2022; Profile of Baghlan Province, 2018).

Baghlan province, which includes mountains whose high altitudes have caused flowing water and has been effective in the climate and agriculture of this province. Thus, wheat and rice are considered to be the most important strategic production products of Baghlan Province (Profile of Baghlan Province, 2019). It is worth mentioning that, although this province has had a good climate in the past, it is hot in summer and cold in autumn, but recently the climate changes have caused countless human and financial damages to some of the residents of this province. In other words, climate change has disturbed the water cycle of this province and has led to drought or floods in some parts of this province. Therefore, some rural women in this province have turned to needlework to improve their income sources (Shaiq & Fitrat, 2024).

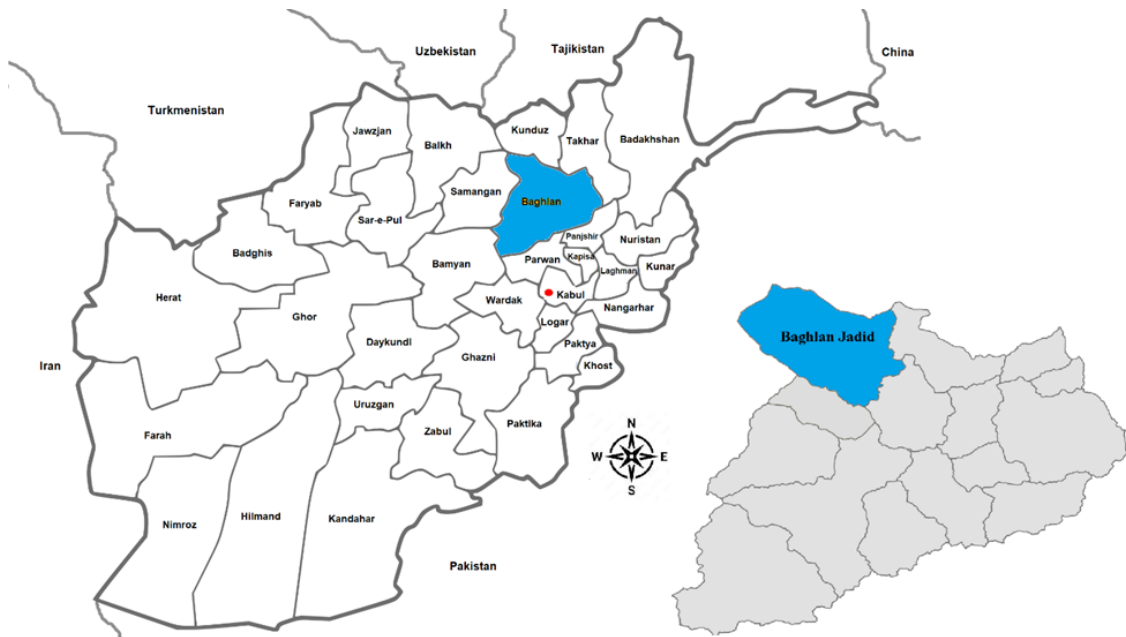


Figure 1 - Geographical location of Baghlan Jadid district in Baghlan province

Results

Description of the statistical population under study

The research findings showed that 309 respondents (85.1%) were male and 54 respondents (14.9%) were female. The respondents had an average age of 39.74 years, with the highest proportion (47.7%) falling within the 21-35 age range. The studied subjects were classified into four groups in terms of education level, and only 43.3% of them were graduates of high school and university (Bachelor's level). Also, the research findings indicated that only 50.1% of the respondents had extension and technical training “Table 2”.

Table 1 - Personal information of the respondents

	Personal information	Frequency (Abundance)	Percentage
Gender	Male	309	85.1
	Female	54	14.9
	Total	363	100
Age	21-35 Age	173	47.7
	36-50 Age	121	33.3
	More than 50 Age	69	19
	Total	363	100
		Minimum=21	Maximum=76
		Standard deviation=12.044	
Education	Illiterate	85	23.4
	As far as reading and writing	121	33.3
	High School Graduate	82	22.6
	Bachelor	75	20.7
	Total	363	100
Having extensional and technical training in the last 5 years	Yes	182	50.1
	No	181	49.9
	Total	363	100

Prioritizing rural capabilities

To identify the most important rural capabilities for employment and income sources of villagers, 18 potential rural capabilities were identified in a semi-structured interview (before completing the questionnaire) and after completing the questionnaire, farmers were asked in the form of a Likert scale. As it can be seen in “table 2”, the presence of water resources for fish farming, the presence of beautiful landscapes and green spaces, and the presence of the spirit of hospitality among the villagers have the highest consensus respectively amongst the capabilities and have been more important. However, the least consensus was given to the possibilities of growing all kinds of commercial wood and organizing native-local festivals.

Table 2 - Prioritization of rural capabilities

Queries	Mean	Standard deviation	CV	Rank
Availability of water resources for fish farming	4.21	0.710	0.169	1
The presence of beautiful views and green space	4.14	0.723	0.175	2
The existence of the spirit of hospitality among the villagers	4.01	0.841	0.210	3
Villagers' belief in employment and income generation of non-agricultural activities	3.72	0.789	0.212	4
Cultivation and production of ornamental and medicinal plants	3.16	0.762	0.241	5
The existence of integration and high social cohesion	2.93	0.715	0.244	6
Cheap labor in rural areas	3.63	0.935	0.257	7
Creation of livestock and dairy products	3.59	0.937	0.261	8
Existence of motivation and high spirit of participation	3.13	0.865	0.276	9
The possibility of forming cooperatives and their investment in diversification	3.17	0.921	0.291	10
Establishing local markets to provide local and domestic products	3.33	1.008	0.303	11
The existence of suitable infrastructure facilities in the villages such as electricity, road...	2.73	0.878	0.321	12
Creation and formation of local and temporary markets	2.79	0.903	0.323	13
The existence of various agricultural products about tourism	3.03	1.004	0.331	14
The possibility of creating industries related to wood	2.62	0.907	0.347	15
The existence of primary and raw materials needed for agricultural and handicraft industries	3.22	1.123	0.349	16
The possibility of producing all kinds of commercial wood	3.26	1.224	0.375	17
Organizing native-local festivals	2.28	1.033	0.454	18

Prioritizing effective factors for the creation and development of diversification in rural economic activities

As stated in the research method section, the coefficient of variation was used to prioritize the factors affecting the creation and development of diversification in rural economic activities in the studied area. Based on the data of “table 3”, the most important or the most prioritized factors affecting the creation and development of diversification in economic activities in the studied area are: Providing the conditions for the creation of agricultural and livestock transformation jobs, financial support of the government by providing appropriate facilities and existence social security.

Table 3 - Prioritization of queries affecting the development of businesses in the village

Queries	Mean	Standard deviation	CV	Rank
Providing the conditions for the creation of agricultural and livestock transformation jobs	3.70	1.074	0.290	1
Financial support of the government by providing appropriate facilities	3.88	1.139	0.294	2
The existence of social security	3.63	1.072	0.295	3
Absence of destruction and erosion of natural resources (land, water)	3.41	1.041	0.305	4
Villagers' access to small loans	3.75	1.146	0.306	5
Eliminate middlemen when selling	3.42	1.065	0.311	6
Access to domestic markets of goods and services of rural production and absence of monopoly	3.44	1.077	0.313	7
Creating tax incentives for the development of entrepreneurship in the village	3.42	1.113	0.325	8
Existence of practicability and prevention of crop pests and diseases	3.44	1.116	0.325	9
Access to foreign markets for the export of goods and services	2.90	1.054	0.364	10
Provision of necessary facilities for small and medium companies (export activities and purchase of modern equipment)	3.54	1.296	0.366	11
Government support from entrepreneurship development projects	3.14	1.153	0.367	12
Guaranteed purchase of agricultural, horticultural and livestock products	3.15	1.182	0.375	13
Government support in providing agricultural sector savings	3.19	1.217	0.381	14
Providing suitable facilities by the government to farmers	3.16	1.242	0.393	15
Increasing people's awareness and knowledge of side jobs	2.71	1.103	0.407	16
Conducting professional and specialized courses for villagers regarding rural businesses	3.19	1.311	0.411	17
Supporting of access to economic infrastructure such as roads, bridges, water networks, warehouses...	2.59	1.066	0.411	18
Formation of agricultural cooperatives	2.69	1.107	0.412	19
Availability of suitable natural resources (land, water)	3.03	1.249	0.412	20
Ease of obtaining start permits and their costs	2.90	1.210	0.418	21
Justice and equality in access to financial resources for entrepreneurs	2.45	1.033	0.421	22
Creation and development of transformation industries	2.95	1.242	0.421	23
Supporting of the private sector investment in rural businesses by the government	3.02	1.307	0.432	24
The existence of large urban centers for villagers in the market vicinity and access	2.49	1.075	0.432	25
Having adequate savings and financial resources	2.80	1.249	0.447	26
Government support in stabilizing prices	2.64	1.209	0.458	27
Adopting appropriate strategies by the government regarding job creation	2.45	1.120	0.458	28
Extending and instructing new agricultural methods by extensionists	2.82	1.296	0.460	29
Encouraging investors from outside the village to start businesses in the villages	2.80	1.331	0.475	30
Absence of national and international barriers and restrictions in business development	2.38	1.153	0.485	31
Access to expert manpower	2.68	1.349	0.503	32
Development of communication and information technology infrastructures (telephone and internet)	2.36	1.297	0.551	33
Extensional training for entrepreneurship and self-employment at the rural community level	2.01	1.244	0.620	34
Creating tax incentives for the development of entrepreneurship in the village	2.79	1.940	0.695	35

Results of inferential statistics

Factor analysis of farmers' perceptions about the components of creation and development of diversification in rural economic activities

As mentioned in the previous sections, although the individual analysis of the variables also shows the general attitude of a phenomenon in society, the identified variables are not the most effective variables from this point of view. Because in reality, the variables are not independent of each other, they have a mutual effect. Therefore, independent effects may strengthen or weaken each other. For this reason, in order to better understand the development components of the diversification in rural economic activities, exploratory factor analysis was used. So, 35 relevant queries were analyzed with exploratory factor analysis technique of principal components and varimax rotation. Also, to determine the adequacy of the sample size, the coefficient of KMO and Bartlett's statistic was used, the appropriate value of KMO (0.889) on the suitability of the data for factor analysis and the significance of Bartlett's statistic with a value of 10626.343 at the 99% level on the internal correlation of queries to extract factors and the formation of the factors was validated "Table 4".

Table 4 - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.889
	Approx. Chi-Square	10626.343
Bartlett's Test of Sphericity	Df	703
	Sig.	.000

According to "table 5", the first factor under the name "educational-empowerment component" with an eigenvalue of 7.959 and variance explanation of 20.945% was identified as the most important factor. This factor, which mainly emphasizes the educational-empowerment component, with variables such as the creation and development of conversion industries, the existence of suitable natural resources (land, water), having adequate savings and financial resources, conducting professional and specialized courses for villagers regarding rural businesses, existence of practicability and prevention of crop pests and diseases, Extending and instructing new agricultural methods by extensionists, extensional trainings for entrepreneurship and self-employment at the level of rural communities, absence of destruction and erosion of natural resources (land, water), Supporting of access to economic infrastructure such as roads, bridges, water networks, warehouses, Existence of large urban centers for villagers in market vicinity and access, providing the necessary facilities for small and medium-sized companies (export activities and purchasing modern equipment), justice and equality in access to financial resources for entrepreneurs, encouraging capitalists outside the village to start business in villages, increasing the level of awareness and knowledge of people about side jobs have the highest correlation.

The second factor with the variables of government support in providing inputs to the agricultural sector, supporting the private sector investment in rural businesses by the government, providing appropriate facilities by the government to farmers, government support for entrepreneurship development plans, government financial support by providing suitable facilities, guaranteed purchase of agricultural, horticultural and livestock products, creation of conditions for the creation of jobs in agriculture and animal husbandry, support of the government in stabilizing prices, creation of tax

incentives for the development of entrepreneurship in the village, access of villagers to small loans, elimination of middlemen when selling, with an Eigenvalue of 6.603 and an Explained Variance of 17.377% were extracted and according to the queries included in it, it was named as "supporting component".

Table 5 - Extracted factors along with eigenvalues, factor loadings and percentage of explained variance

No.	Factor name	Queries	Factor Loading	Eigen-values	Percentage of Explained Variance
1	Educational-Empowerment Component	Creation and development of transformation industries	0.833	7.959	20.945
2		Availability of suitable natural resources (land, water)	0.829		
3		Having adequate savings and financial resources	0.802		
4		Holding professional and specialized courses for villagers regarding rural businesses	0.788		
5		Existence of practicability and prevention of crop pests and diseases	0.726		
6		Extending and instructing new agricultural methods by extensionists	0.724		
7		Extensional training for entrepreneurship and self-employment at the level of rural communities	0.708		
8		Absence of destruction and erosion of natural resources (land, water)	0.690		
9		Supporting of access to economic infrastructure such as roads, bridges, water networks, warehouses	0.662		
10		Existence of large urban centers for villagers in market vicinity and access	0.648		
11		Providing necessary facilities for small and medium companies (export activities and purchase of modern equipment)	0.632		
12		Justice and equality in access to financial resources for entrepreneurs	0.579		
13		Encouraging investors from outside the village to start businesses in the villages	0.559		
14		Increasing people's awareness and knowledge of side jobs	0.507		
15		Supporting component	Government support in providing agricultural sector inputs		
16	Supporting of the private sector investment in rural businesses by government		0.842		
17	Providing suitable facilities by the government to farmers		0.798		
18	Government support for entrepreneurship development projects		0.797		
19	Financial support of the government by providing appropriate facilities		0.786		
20	Guaranteed purchase of agricultural, horticultural and livestock products		0.650		
21	Providing the conditions for the creation of agricultural and livestock transformation jobs		0.646		
22	Government support in stabilizing prices		0.632		
23	Creating tax incentives for the development of entrepreneurship in the villages		0.597		

24		Villagers' access to small loans	0.561		
25		Eliminate middlemen when selling	0.539		
26	Infrastructure	The existence of social security	0.782	5.115	13.461
27	- Facilities	Access to expert manpower	0.746		
28	Component	Development of communication and information technology infrastructure (telephone and internet)	0.546		
29		Ease of obtaining start permits and their costs	0.542		
30	Strategic - legal	Absence of national and international barriers and restrictions in business development	0.650	2.999	7.892
31	Component	Adoption of appropriate strategies by the government regarding job creation	0.639		
32		The existence of large urban centers for villagers in the market vicinity and access	0.589		
33		Formation of agricultural cooperatives	0.544		
34	Access to Market	Access to domestic markets for goods and services of rural production and absence of monopoly	0.626	1.838	4.837
35	Component	Access to foreign markets for exporting goods and services	0.524		

The third factor titled "infrastructural-facility component" with an eigenvalue of 5.115 explained 13.461% of the total variance. This factor has a high correlation with the existence of social security, access to expert manpower, development of communication and information technology infrastructure (telephone and internet) and ease of obtaining start permits and its costs.

The fourth factor is the absence of national and international obstacles and restrictions in the development of trade, the adoption of appropriate strategies by the government regarding employment creation, the existence of large urban centers for villagers in market vicinity and access, and the Formation of agricultural cooperatives with an eigenvalue of 2.999 and the explained variance of 7.892% was named as "strategic-legal component".

The fifth factor is also extracted with the items, access to domestic markets for goods and services of rural production and absence of monopoly, access to foreign markets for export of goods and services with an eigenvalue of 1.838 and explained variance of 4.837% was named as "Access to Market Component". Therefore, the model of the conceptual model of the components of creation and development of diversification in economic activities in rural areas is drawn as below "Figure 2".

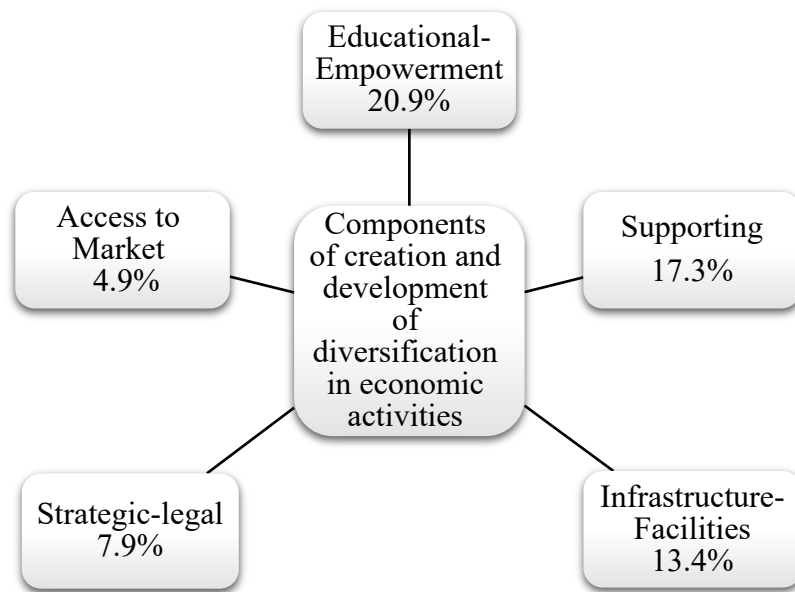


Figure 2 - Conceptual model of the components of creation and development of diversification in economic activities in rural areas

Discussion and Conclusion

Rural areas play an important role in local, national and international development, but the lack of development in different dimensions in rural areas leads to consequences such as increasing poverty, migration, rapid population growth, unemployment and urbanization. Although agriculture is the most important economic sector in rural areas, due to the recent droughts and climate changes in the country (Shaiq, Aiuby & Hayat, 2024), the agricultural sector is facing challenges such as weather variation, so the diversity of economic activities in rural areas of Afghanistan is an important approach in reducing poverty and creating employment. Creating non-agricultural employment opportunities not only strengthens the foundations of the rural economy but also prevents rural migration. Previous studies regarding farmers' perception of the components of diversification in rural economic activities in Afghanistan had not been conducted, so the present study was carried out in order to identify the main components of creating and developing of economic activities in an exploratory manner in the villages of Baghlan Jadid district of Baghlan province.

In examining the individual characteristics of the sample, it was found that 85.1% were men and 14.9% were women. Their average age was 39.74 years and only 23.4% of them were completely illiterate. Therefore, due to their young age and relatively adequate education, by providing extensional and technical training for people in order to acquire skills in non-agricultural economic activities the field of empowerment is provided, and it is as a requirement should be considered and the authorities should make the necessary efforts in this regard.

The results related to the prioritization of rural capabilities showed that the existence of water resources for fish farming, the existence of beautiful landscapes and green spaces, and the existence of hospitality among the villagers had the highest consensus. The existence of beautiful landscapes, natural water resources and green spaces in villages can increase the attractiveness of tourism. This capability allows farmers and rural businesses to increase their income and provide sustainable employment for rural

youth and women. This issue has also been emphasized in the research of Hashemi and Kazemi (2024). The existence of water resources such as rivers can provide the basis for fish farming. Fish farming in villages can be a steady source of income for people. Also, the spirit of hospitality allows the hosts to develop businesses related to welfare and hospitality services such as hotels, restaurants, stores and local businesses.

The results of the prioritization of the queries that are effective in the development of rural businesses show that providing the conditions for the creation of agricultural and livestock transformation jobs, the financial support of the government by providing appropriate facilities and the existence of social security are more important items. By providing the conditions for the creation of agricultural and livestock transformation jobs, it is possible to increase the value-added rural products and, consequently, the income of farmers. In general, the creation of agricultural and livestock transformation jobs can help the development of rural businesses and improve the economic conditions of villages. Also, the financial support of the government through the providing appropriate facilities and the existence of social security can improve the economic and social conditions of the villagers and promote the sustainable development of the villages. Social security as a necessary condition for investment in villages has been known an important factor in attracting capital. Investors are usually more willing to invest in areas where there is high social security and fewer risks. This in turn can encourage investment in rural businesses and improve their development.

Likewise, the factors obtained from the exploratory factor analysis showed five main factors: "Education-Empowerment Component", "Supporting Component", "Infrastructural-Facilitation Component", "Strategic-Legal Component" and "Access to Market Component". The most important component of the creation and development of diversification in rural economic activities from the point of view of the heads of rural households is the "Education-Empowerment Component". In this regard, government and non-government agents in rural development should consider appropriate mechanisms to strengthen the skills of farmers and poor people through conducting professional and specialized courses regarding economic businesses. Because the empowerment would empower the villagers to overcome their feelings of helplessness and insolvency, and also leads to the mobilization of the internal motivation of the villagers and accelerate the entry of the villagers into non-agricultural activities. So that in order to move in terms of capable human resources, it is necessary to start with the intellectual changes and attitudes of the villagers regarding their entry into other economic activities in order to strengthen their income sources. Moreover, by the development of extensional, technical and professional trainings, while preventing the migration of villagers to cities and improving their knowledge, the level of participation of villagers in group work can also be improved. Studies such as (Heydari Sareban, 2012; Ghorbani *et al.*, 2019; Mirvahedi, *et al.*, 2021) have shown that empowerment helps to reduce poverty and deprivation in rural areas, because by empowering the villagers, the entrepreneurship context, creating employment, as a result, income generation, capital accumulation and more investment are provided. The "supporting component" is the second component that increases through the supporting of the private sector investment in rural businesses by government and the financial support of government through the providing appropriate facilities, causes increasing the experience and ability of investors and entrepreneurs in this area. Furthermore, creating tax incentives for the development of entrepreneurship in the villages can act as an effective tool to encourage and support rural entrepreneurs in creating and developing businesses in these areas. These incentives can include tax rebates for investment and exemption from income tax. The government can provide tax rebates for investors who invest in different sectors of the rural economy, or the government can exempt rural businesses from paying taxes to provide motivation

for entrepreneurs in these areas to grow and develop their businesses. Therefore, it is suggested to create development and investment funds to provide financial facilities for rural entrepreneurs and create tax incentives and improve rules and regulations related to rural businesses to provide the basis for setting up and developing businesses in villages.

Infrastructural-facility component is the third effective component regarding the development of diversification in rural economic activities. In fact, the development of communication and information technology infrastructure, especially telephone and Internet, can play a very important role in the development of entrepreneurship and self-employment in villages. Internet and telephone give villagers access to information about markets, customers, experiences of successful entrepreneurs, etc., and this information can help them in market analysis, business planning and upgrading their skills. Therefore, it is suggested that the government, in addition to ensuring security and providing telephone and internet services, the process of obtaining permits to start rural businesses should be facilitated for the villagers.

The fourth component, named as "strategic-legal component", is another important component in the development and diversification of rural economic activities. In this sector, the government may have an effective role by forming agricultural cooperatives and removing national and international obstacles and restrictions in business development. Therefore, it is recommended that the government may encourage and support agricultural cooperatives, and to facilitate the export of agricultural and local products, should take measures such as providing facilities and financial support, transportation facilities, advertising and marketing in foreign markets. These measures may help the growth and development of businesses in villages.

The last component named "Access to Market component" can be useful as a basic and effective condition for rural economic activities, because without access to domestic and international markets, economic activities are disrupted and businesses cannot be developed. Improving access to domestic and international markets is very important for the development of rural businesses. These measures can help the economic growth and create job opportunities in the villages, and as a result lead to sustainable development and increase the quality of life of rural people.

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