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A Study of Demand and Supply of Agritourism Activities (Case Study: Rural Areas of Semirom County, Iran)

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Abstract

Purpose- To develop agritourism, based on the supply and demand framework, it is essential to understand the preferences of tourists as well as the tendency and capabilities of the local community to participate in the development of agritourism. The study aims to examine tourists' preferences, gardeners' preferences and capabilities for agritourism activities, and to compare tourists' preferences and gardeners' preferences and capabilities regarding agritourism activities.

Design/methodology/approach- The research method is a descriptive-analytical type carried out by a survey method. The study population consisted of 109 apple gardeners the 15 sample villages of Semirom County who were selected using a targeted sampling method, and 252 tourists who visited the sample villages. The data were collected using two researcher-designed questionnaires. To analyze the data, SPSS software along with inferential statistical methods, including One-sample t-test and Friedman were used .

Findings- The findings indicated that tourists' demand for agritourism activities is high and they are interested in all types of agritourism activities. Gardeners are willing to provide agritourism activities, but they have low capability to offer them to tourists. Also, the findings indicated no match between the demand and supply for agritourism activities; Tourists' main preferences were for Agri-recreation, Agri-experience and Agri-accommodation, and food services, while the tendency and capability of gardeners were more about agri-entertainment and Agri-education .

Practical implications- The findings will be useful for tourism planners to develop optimal strategies for developing agritourism with a better understanding of the behaviors and preferences of tourists as well as the willingness and ability of gardeners .

Original/value- Using the integrated supply and demand framework to analyze the gap between tourists' preferences and gardeners' capabilities for agritourism activities is the innovations of the research.

Keywords- Agritourism, Demand-supply framework, Tourists' preferences, Gardeners' preferences, Gardeners' capabilities, Semirom county.



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1. Introduction

Agritourism includes planned recreational and educational activities on any working farm or other agricultural operations (Ollenburg & Buckley, 2007). Today, the significant change in tourist demand for food and local experiences on farms has led to a rapid increase in agritourism worldwide (Matyakubov et al., 2022). Researchers with different views agree that agritourism can be an appropriate solution to meet the needs of tourists as well as rural populations and provide real opportunities for the development of rural societies (Ammirato et al., 2020).

Agritourism development has recently had a great appeal in academic circles. Most studies have mainly analyzed demand (tourists) and supply (farmers) separately. The majority of studies have focused on the supply side, especially the challenges of agritourism development (Yang, 2012; Rezvani et al., 2017), the effects of agritourism on rural areas (Tew & Barbieri, 2012; Bouzarjomehri et al., 2021; Slámová, 2021), the farmers' motivation and willingness to develop agritourism (McGehee & Kim, 2004; Barbieri, 2010), and the prerequisites for agritourism development (Anabestani & Mozafari, 2018; Campbell & Kubickva, 2020; Huber, et al., 2020). Some studies have focused on the demand side and investigated the tourists' preferences for agritourism (Ohe & Ciani, 2012; Gao et al., 2014; Varmazyari et al., 2017; Torabi et al., 2019; Moradi et al., 2020). Few studies have dealt with both, such as Brandano et al. (2018), based on the supply and demand approach, identified the factors affecting tourists' decision to select agritourism companies.

To develop agritourism, it is essential to analyze the attitude and expectations of two groups of main stakeholders, including tourists and the local community (farmers). The demand of tourists should be examined; so, it is necessary to provide appropriate solutions by understanding the intentions and behaviors of agritourists (Hurst & Niehm, 2012). In addition, due to the direct relationship between farmers and tourists, the participation of farmers is one of the most important factors in the success of agritourism development. According to Peira et al. (2021),

rural areas will become tourist destinations if local actors (farmers) participate in tourism development. Therefore, the analysis of the farmers' attitude to agritourism, as well as their facilities and capabilities to participate in agritourism development is very important. Indeed, the knowledge of tourists' demand for agritourism activities and the perception plus willingness of farmers to participate in the agritourism development and their capability to provide agritourism activities can lead to the adaptation of the preferences of destination suppliers (farmers) to the preferences of customers (tourists).

Accordingly, the study aims to analyze the supply and demand for agritourism activities. More specifically, evaluate tourists' preferences for agritourism activities, gardeners' preferences and capabilities to provide agritourism activities, and examine the match between tourists' preferences with gardeners' preferences and capabilities for agritourism activities. The study area covers the rural areas of Semirom county in Isfahan Province, which has a strong gardening and tourism potential due to the large size of apple orchards as well as diverse natural and cultural attractions. Through adopting proper planning, this area can become a center of agritourism in the region. Using the integrated supply and demand conceptual framework to evaluate tourists' preferences for agritourism activities and gardeners' preferences and capabilities to participate in agritourism development as well as analyzing the gap between these two main sides of agritourism development are the innovations of this research. The findings will help tourism planners gain a better understanding of both the needs and preferences of agritourists, along with the preferences and capability of gardeners to participate in agritourism development, and accordingly, provide the outlines of the agritourism development plan.

2. Research Theoretical Literature

Agritourism refers to visiting a farm or rural area, living in a farm, and participating in agriculture-related activities in a farm or other agricultural environment for the purpose of recreation, entertainment, and education (Yang, 2012; Arroyo et al., 2013). It allows visitors to learn about

agricultural businesses and activities (Mpiti & Harpe, 2016), and experience the rural plus agricultural lifestyle (Duffy et al., 2016). Thus, agritourism is not only considered as a tourism product in the rural environment, but also is a new method for better understanding the destination, acquiring new knowledge and awareness, and a better attitude towards the culture of the local people and the environment (Sathe, 2012: 17).

Today, agritourism is considered as a strategy for economic-social development, as well as regeneration and reconstruction of rural areas (Kim et al., 2019; Barbieri, 2013). Agritourism, as one of the new livelihood options, has the capacity to provide the necessary motivation in local communities to turn local resources into tourism products and services as well as help the local community's economy and sustainable rural development (Lordkipanidze et al., 2005). This kind of tourism is a strategy for empowering local community, which plays a role in providing appropriate capital for local people, generating supplemental or additional income for local residents (Tew & Barbieri, 2012; Dubois et al., 2017) and job opportunities, especially for women and youth (Kizos & Iosifides, 2007). It also affects the protection of cultural values and environmental sustainability (Campbell & Kubickova, 2020), along with the agricultural heritage (Torabi et al., 2019).

In recent years, the demand for agritourism has increased. A wide range of products and services can be developed in agritourism destinations, including visiting the natural and rural environment (Frisvoll, 2013), exciting activities (physical activity) (Yoon & Uysal, 2005), acquiring knowledge and education (Charters & Ali-Knight, 2002), relaxation and recreation (Dubois et al., 2017; Artuger & Kendir, 2013), farm life experience (Chen et al., 2010; Forbord et al., 2012), socializing (Galloway et al., 2008; Choo & Petrick, 2014), entertainment and cultural events (Daugstad & Kirchengast, 2013), purchasing agricultural products (Peng & Chris, 2018), and nostalgia (Christou et al., 2018). Various categories have been created regarding tourism services and products. Sznajder et al. (2009) has divided agrotourism services and products into nine categories, including agri-accommodation, agri-food services, agritourism primary, direct sales, agri-recreation, agri-sports, agritainment, agri-therapy, and cultural tourism

(Sznajder et al., 2009: 133). Kenebayeva (2014) classified agritourism products and services into four categories: agri-experience, including living in rural accommodation and observing as well as participating in agricultural activities; agritainment, including excursions, activities such as horse riding and cultural programs; agri-recreation, including relaxation and agri-therapy; and agri-sales, including sales of agricultural and homemade products plus souvenirs.

To develop agritourism, it is important to consider the needs and preferences of tourists. In this regard, according to Varmazyari et al. (2017), the prosperity and competitiveness of tourism businesses entail identifying and planning to provide the preferred activities and services of tourists. According to Ammirato et al. (2020), knowledge of the expectations and preferences of tourists is essential both for designing tourism strategies and promoting destinations to meet their expectations regarding innovative rural experiences.

According to the literature review, farmers, as local actors in the village economy (Peira et al., 2021), are among the main stakeholders in agritourism development. Farmers and the rural community are essential players in the process of diversifying activities, especially the multi-functionality of rural landscapes (Ferreira & Sánchez-Martín, 2022). Thus, it is necessary to know the perceptions, and preferences of the farmers to make appropriate decisions (Bidegain, 2020), as well as develop effective rural tourism strategies (Peira et al., 2021) and create activities to enhance communication with tourists (Christou et al., 2018).

Despite the increasing demand for agritourism, one of the barriers to agritourism development is the lack of willingness and capability of the local community to develop agritourism. In this regard, Matyakubov et al. (2022) stated that agritourism is still seen as a more complicated type of tourism by the local people since farmers and entrepreneurs do not have sufficient knowledge about what to do and how to develop agritourism in their farms. To participate in the development of agritourism, farmers should have the necessary abilities and skills, some of which include commercial factors and structural resources (Campbell & Kubickova, 2020), personal skills, sufficient education and knowledge (Chen et al., 2010; Gao et al., 2014), product promotion and

advertising (Kubickova & Campbell, 2020), skills in establishing tourism companies, working with other tourism businesses (Zapata et al., 2011), access to sufficient resources (suitable land, financial and human resources) (Atkisson et al., 2003), ability to provide adequate services to customers and access to skilled staff (Forbord et al., 2012; Byrd et al., 2016), and financial support (Galluzzo, 2021; Su, 2011; Barbieri, 2013).

The agritourism system is successful if it meets the needs of all stakeholders and reduces or removes all barriers (Yang, 2012). Therefore, it is necessary to investigate the perception of the stakeholders for the development of sustainable

tourism (Byrd, 2016). Esper et al. (2010) state that there is a need to integrate supply and demand to understand customers' preferences and services in the target market. Integrating demand and supply can provide a complete view to ensure that services are provided according to the customers' most important expectations (Brandano, 2018). This framework will offer real preferences to tourists and empower the local community to participate in tourism development and finally make the destination more competitive and attract more tourists in the future. Figure 1 presents the research proposed model.

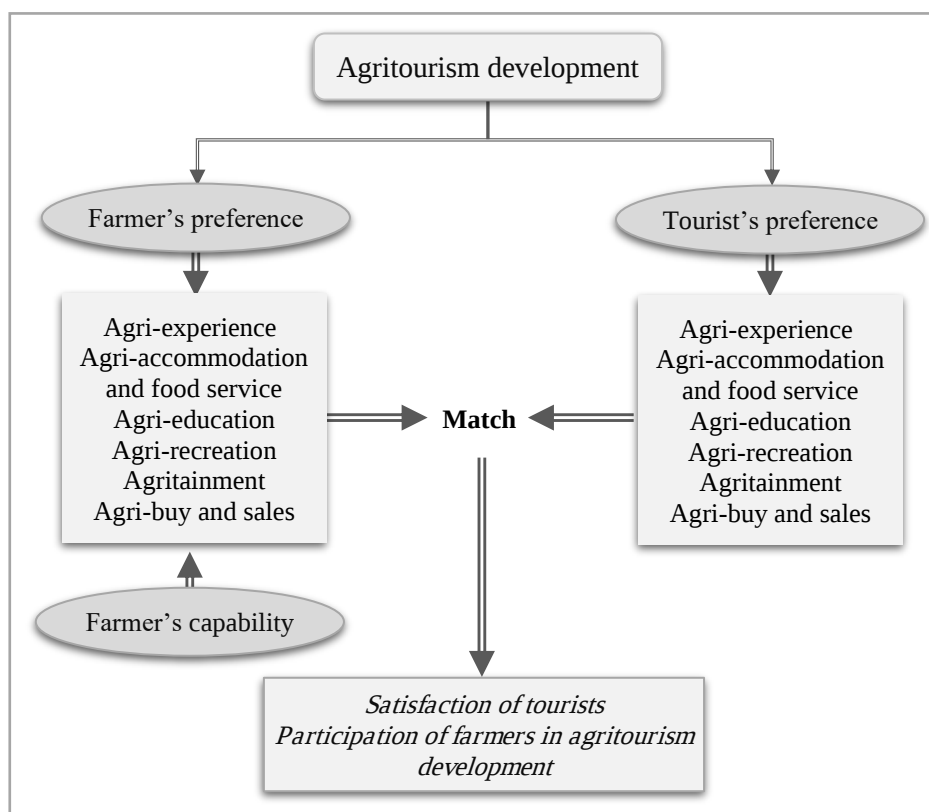


Figure 1. The research proposed model

Source: Research finding, 2021

3. Research Methodology

3.1 Geographical Scope of the Research

Semirom County is situated 165 kilometers from Isfahan city (Figure 2). Semirom County, with 21 thousand hectares of gardens, most of which produce apples, is the hub of gardens of Isfahan province. Further, this area contains a lot of natural attractions, including Zarin-Giyah (an area with a

variety of medical herbs), Naaz spring, Ab-Malakh and BiBi-Seydan waterfall, Dangezloo cave, and Khansar spa, and historical attractions, including the cultural-historical complex of Khan-Ali and Toghrache, and a traditional handicraft market (MCTH, 2021). Every year, many tourists from different parts of the country travel to this region for various purposes, such as visiting gardens and

villages, as well as natural and cultural attractions. It has also attracted the attention of tourism companies to create agritourism and rural tourism tours in the region. Although the rural areas of Semirom county

have many capabilities for agritourism development, not many practical studies have been conducted to plan agritourism in the region

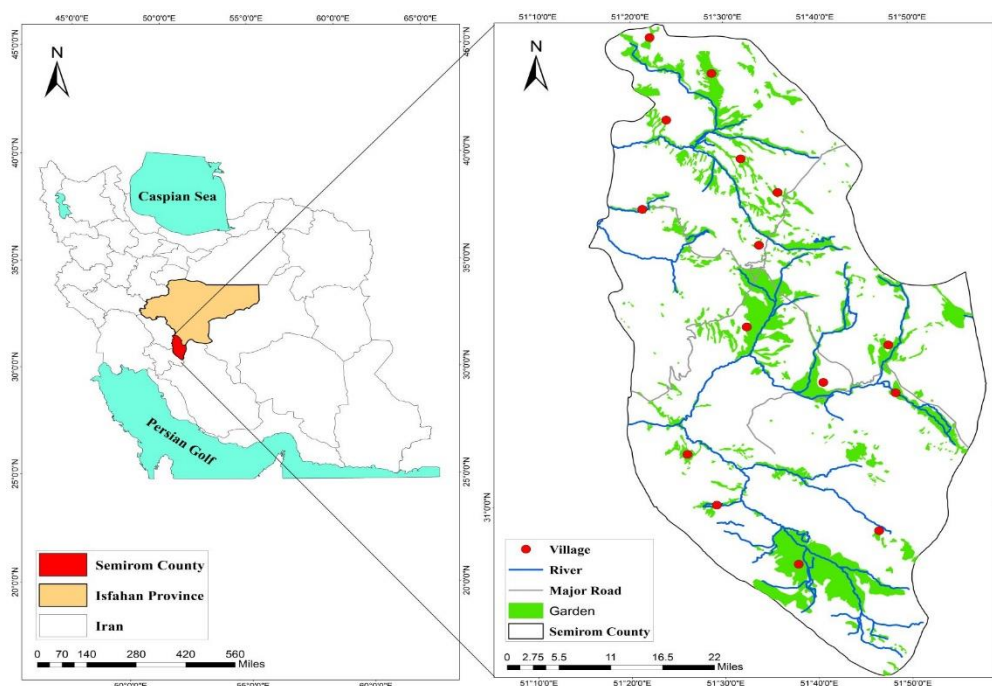


Figure 2. The study area and distribution of sample villages

Source: Drawn by the authors

3.2. Methodology

The research method is a descriptive-analytical type carried out by a survey method. From all villages in Semirom county, 15 villages with more gardens as well as more agritourism capabilities and attractions for tourism based on the opinion of the Cultural Heritage, Tourism and Handicrafts Department of the area were identified and selected as samples. The study population consisted of apple gardeners of the sample villages and tourists who visited the sample villages. Regarding the sample size of tourists, due to the lack of statistics on the number of tourists in the sample villages, it was not possible to determine the sample size. The sample consisted of 252 tourists who were available due to the lack of a suitable sampling frame. The data through the simple random sampling method were collected from respondents. Data were collected in spring 2021. A total of 270 questionnaires were distributed, of which 252 were valid questionnaires. Regarding apple gardeners, a targeted sampling method was used. At first, the main gardeners of the villages were identified, and only those who were willing to

develop agritourism were selected as a sample, a total of 109 apple gardeners participated.

The data were collected using two researcher-designed questionnaires. On review of the literature, measurement items were extracted and then classified into six categories, including “agri-experience”, “agri-accommodation and food services”, “agri-education”, “agri-recreation”, “agritainment”, and “agri-buy and sales”. To measure the validity of the questionnaire, the face validity method was used, and items of the questionnaire were reviewed by ten professors and researchers who specialized in agritourism and rural tourism. After applying experts' opinions, the final questionnaire was developed and used for data collection. Finally, two questionnaires, one for tourists and one for gardeners, were designed. The tourists' questionnaire was designed in two sections, including demographic data of the respondents (gender, age, education, occupation), and items related to tourists' preferences regarding agritourism products and services (28 items). The questionnaire of gardeners was developed in three parts. The first section asked about the demographic characteristics

of gardeners, including gender, age, education, and the number of available bedrooms. The second section included gardeners' tendency for agritourism products and services, which consisted of 22 items. The third section included gardeners' capabilities for agritourism offerings with 19 items. In both questionnaires, aside from demographic data of the respondents, all other parts of the questionnaire were measured in 5-point Likert scales of very low (1) to very high (5). Before the field data collection, a pilot test was conducted on 40 tourists and 25 gardeners randomly to ensure procedures worked properly for the survey. The reliability coefficient was calculated using Cronbach's alpha. The alpha coefficient for the data of three questionnaires of tourists' preferences (0.82), gardeners' tendency (0.91), and gardeners' capabilities (0.84) has been above the recommended threshold of 0.7. To analyze the data, SPSS 26 software along with descriptive

(percentage and mean) and inferential statistical methods, including Kolmogorov-Smirnov, One-sample t-test and Friedman were used.

4. Research Findings

4.1. Profile of respondents

The respondents' demographic profile is summarized in Table 1. The total number of tourists was 252, of whom 55.2% were men, and 44.8% were women. Most respondents were aged between 20 and 29. In terms of education, most respondents had BA degrees (54.4%), and regarding occupation, most respondents (63.9%) were self-employed. The number of gardeners was 109, and all of them were men. Most respondents were aged 50 and 59 years. Most participants had a diploma and lower education level (71.6%). Regarding available bedrooms, 55% of gardeners had no room available, and 33% had between 1 and 2 rooms (Table 1).

Table 1. Participants' Demographic profile (percentage)

Characteristics		Tourists	Gardeners
Gender	Male	55.2	100
	Female	44.8	0
Age	20-29	36.4	17.5
	30-39	36.2	16.5
	40-49	15.5	17.4
	50-59	9.1	40.4
	60+	2.8	8.3
Education	Diploma	16.6	71.6
	Bachelor	54.4	21.1
	Master & above	29	7.3
Occupation	Self-employed	63.9	-
	Government employee	13.5	-
	Retired	1.6	-
	Student	14.7	-
	Housewife	6.3	-
Available bedrooms	0	-	55.0
	1	-	14.7
	2	-	18.3
	3	-	4.6
	5	-	3.7
	10	-	2.8
	15+ Parasol	-	0.9

4.2. Assessing the demand and supply for agritourism activities

In any test, the normality and non-normality of the data should be checked first to select the appropriate statistical methods. The Kolmogorov-Smirnov test

was used for the normality of the data distribution. According to the significance level, which is higher than alpha 0.05, it can be said that the data distribution is normal, and parametric tests are used for data analysis (Table 2).

Table 2. The results of One-Sample Kolmogorov-Smirnov test for the normality of the data

Variable	tourists' references		gardeners' tendency		gardeners' capabilities	
	Test Statistic	Sig.	Test Statistic	Sig.	Test Statistic	Sig.
Agri-experience	1.053	.132	1.124	.145	1.205	.145
Agri-accommodation and food services	1.302	.094	1.146	.104	1.245	.118
Agri-education	1.154	.103	1.175	.078	1.324	.095
Agri-recreation	1.022	.160	1.090	.183	1.033	.183
Agritainment	1.088	.127	1.134	.097	1.150	.142
Agri-buy and sales	1.328	.086	1.106	.168	1.175	.126

To evaluate the demand and supply of agritourism activities, one-sample t-test was used. The results of measuring tourists' preferences for agritourism activities are summarized in [Table 3](#) and [Figure 3](#). As observed, the calculated mean of all six types of agritourism activities is greater than the test

value (3), and the mean difference is positive. The t-test statistic is significant at the alpha level of 0.05 (Sig=0.000) for all agritourism activities. Thus, at confidence level of 95%, it can be accepted that all types of agritourism activities of Semirom county are very important for tourists.

Table 3. The result of measuring tourists' preferences regarding agritourism (Test value = 3)

Variable	Mean	t	Sig.	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Agri-experience	3.67	17.096	.000	.67394	.5963	.7516
Agri-accommodation and food services	3.85	17.839	.000	.85317	.7590	.9474
Agri-education	3.16	2.036	.043	.16667	.0054	.3279
Agri-recreation	3.96	27.708	.000	.95578	.8878	1.0237
Agritainment	3.44	7.466	.000	.43585	.3209	.5508
Agri-buy and sales	3.23	3.846	.000	.23884	.1290	.3287

The results of measuring gardeners' tendency for offering agritourism activities indicate that gardeners tend to offer all six types of agritourism activities to tourists. The obtained mean for all six agritourism activities is greater than 3, and mean difference is positive for all activities. In addition, the t-test statistic at the alpha level of 0.05 is significant for all

types (Sig=0.000), except for the two types of 'agri-experience' and 'agri-accommodation and food services'. Thus, at confidence level of 95%, it can be concluded that Semirom's gardeners have tendency to provide four types of agritourism activities to tourists ([Table 4](#) and [Figure 3](#)).

Table 4. The result of measuring gardeners' tendency for agritourism (Test value = 3)

Variable	Mean	t	Sig.	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Agri-experience	3.15	3.726	.065	.14908	-.0094	.3076
Agri-accommodation and food services	3.06	.567	.572	.05872	-.1467	.2641
Agri-education	3.46	4.627	.000	.45566	.2605	.6508
Agri-recreation	3.34	3.595	.000	.33945	.1523	.5266
Agritainment	3.49	4.250	.000	.49083	.2619	.7197
Agri-buy and sales	3.29	3.796	.000	.29128	.1392	.4434

The results of measuring gardeners' capabilities for agritourism offerings are indicated in [Table 5](#) and [Figure 3](#). The results indicate that gardeners' capability is only desired to offer 'agri-education'

activities to tourists (M=3.20, Sig=.035). In terms of 'agri-entertainment' activities, the capability of gardeners is desired, according to the calculated mean (M=3.15), but the t-test statistic is not

significant (Sig=.074). For other types, the results show that gardeners' capability is lower than the test value (3). Also, the t-test statistic is

significant, indicating the difference from the optimal level.

Table 5. The result of measuring gardeners' capabilities regarding agritourism (Test value = 3)

Variable	Mean	t	Sig.	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Agri-experience	2.21	-9.011	.000	-.79083	-.9648	-.6169
Agri-accommodation and food services	2.50	-6.804	.000	-.50092	-.6469	-.3550
Agri-education	3.20	2.135	.035	.19725	.0141	.3804
Agri-recreation	2.46	-6.633	.000	-.54128	-.7030	-.3795
Agritainment	3.15	1.802	.074	.14679	.0147	.3083
Agri-buy and sales	2.53	-4.258	.000	-.47248	-.6924	-.2526

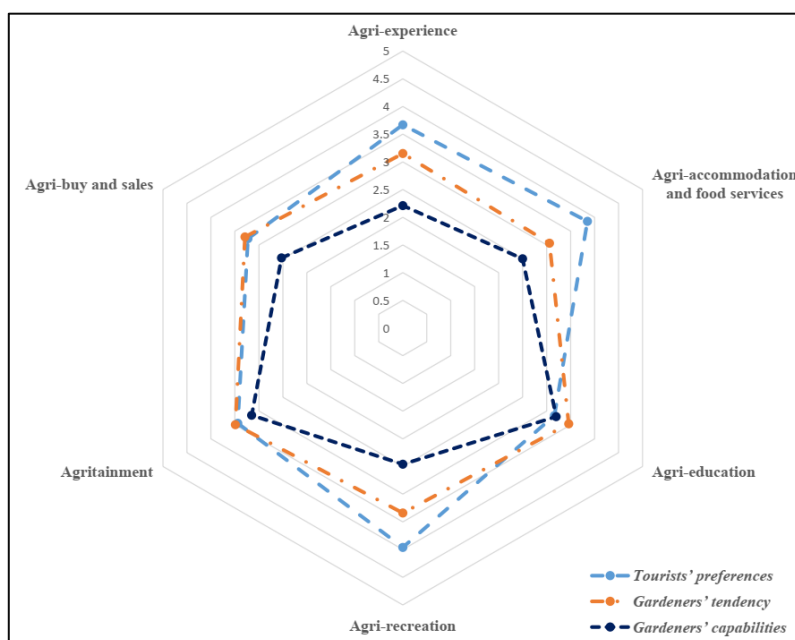


Figure 3. Demand and Supply for agritourism activities

4.3. Prioritizing tourists' preferences, gardeners' tendency, and capabilities

Then, Friedman's test was applied to determine the priority of tourists' references, gardeners' tendencies and capabilities regarding agritourism, and the results are shown in Table 6.

For tourists' preferences, given the Chi-square value and significant level (Sig=.000), tourists' preferences for agritourism activities are different. The tourists' main preference belongs to 'agri-recreation', 'agri-accommodation and food services' and 'agri-experience'. The lowest preference is related to 'agri-education'.

Considering gardeners' tendency, given the significant level (Sig=0.000 < 0.05), it can be stated that gardeners' tendency to provide agritourism activities is different. Based on the mean, gardeners' major tendency is for 'agritainment' and 'agri-education'. The lowest tendency is related to 'agri-accommodation and food services'.

For gardeners' capability, given the significant level (Sig=0.000), and the mean, it can be noted that gardeners' capability towards offering agritourism activities is different. The gardeners have the highest capability for 'agri-education' and 'agritainment' activities, and the lowest capability for 'agri-experience' and 'agri-recreation' activities.

Table 6. The results of Freidman test to determine the priority of tourists' references, gardeners' tendency and capabilities regarding agritourism

Variable	tourists' references		gardeners' tendency		gardeners' capabilities	
	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank
Agri-experience	3.74	3	3.17	5	2.28	6
Agri-accommodation and food services	4.20	2	2.63	6	3.13	4
Agri-education	2.75	6	3.89	2	4.67	1
Agri-recreation	4.36	1	3.67	3	3.00	5
Agritainment	3.25	4	4.18	1	4.64	2
Agri-buy and sales	2.87	5	3.45	4	3.28	3
Test Statistics	N = 252 Chi-Square =180.758 Df = 5 Asymp. Sig. = .000		N = 109 Chi-Square =49.875 Df = 5 Asymp. Sig. = .000		N = 109 Chi-Square =149.690 Df = 5 Asymp. Sig. = .000	

4.4. Tourists' preferences, gardeners' tendency and capabilities for agritourism products and services

Table 7 lists the results of Friedman test to determine the priority of tourists' preferences for agritourism services and products. According to the chi-square value and significant level (Sig=0.000), it can be concluded that tourists' preferences for agritourism products and services is different. Tourists' main priority is related to 'enjoying natural

and garden scenery (MR=21.05)', 'enjoying the peace and quiet of the garden (MR=20.44)', 'tasting traditional foods and beverages (MR=19.62)', 'using picnic sites (MR=18.43)', and 'familiarity with local cultural heritage (MR=16.79)'. The lowest priority is related to 'participation in recreational educational programs (MR=10.19)', 'participation in learning programs on product processing (MR=11.00)', and 'participation in gardening educational programs (MR=11.27)'.

Table 7. The results of tourists' preferences regarding agritourism products and services

Variables		Mean Rank	Rank
Agri-experience	Watching gardening activities	16.69	6
	Participating in gardening activities	14.35	13
	Spending time with the gardener and his family	13.48	16
	Familiarity and participation in daily rural activities	14.76	11
	Familiarity with local cultural heritage and traditions	16.79	5
	Visiting historical artifacts	15.58	8
Agri-accommodation and food service	Interested in accommodation in farmhouses and rural houses	15.37	9
	Camping in garden	13.35	18
	Tasting traditional food and beverages	19.62	3
Agri-education	Participating in gardening training programs	11.27	26
	Participating in learning programs on product processing	11.00	27
	Participating in recreational learning programs	10.19	28
Agri-recreation	Peace and quiet	20.44	2
	To enjoy natural and garden scenery	21.05	1
	Visiting gardens for recreational activities, and relaxation	14.22	14
	Recreational self-harvesting	13.75	15
	Picnic sites	18.43	4
	Walking or biking through the property on trails	16.32	7
	Therapeutic reasons	12.40	22
Agritainment	Attending traditional events	13.45	17
	Participating in sport event	15.09	10
	Attending local food festivals	14.57	12
	Attending harvest festivals	12.96	19

Variables		Mean Rank	Rank
Agri-buy and sales	Visiting local exhibitions	12.29	23
	Visiting farm museums	11.57	24
	Seeking organic and healthy products	11.49	25
	Buy souvenirs and handicrafts	12.87	20
	Picking fresh fruit	12.65	21
Test Statistics		Chi-Square = 950.607 Df = 27 Asymp. Sig. = .000	

Table 8 reports the results gardeners' tendency regarding agritourism products and services. According to the chi-square value and significant level (Sig=0.000), the preferences of gardeners towards agritourism products and services have been different in the study area. Gardeners' main tendency to providing agritourism products and services to tourists has been related to 'educate tourists about gardening activities (MR=15.02)', 'hold garden

products exhibitions (MR=14.23)', 'watch gardening activities (MR=12.80)', and 'enter the garden to visit the garden' attractions (MR=12.67)'. The minimum tendency is related to 'holding ecotourism and rural tourism tours (MR=9.37)', 'offering food services to tourists (MR=9.42)', 'offering traditional dishes (MR=9.51)', and 'entering the garden to pick apples and buy them (MR=9.64)'.

Table 8. The results of gardeners' tendency regarding agritourism products and services

Variables		Mean Rank	Rank
Agri-experience	Watching gardening activities	12.80	3
	Tourists' cooperation in garden activities	10.68	16
	Holding ecotourism, and rural tourism tours	9.37	22
	Companionship with visitors	12.61	5
Agri-accommodation and food service	Dedicating a part of the house to tourists	11.42	12
	Leasing farm buildings to tourists	9.67	18
	Providing camping	10.54	17
	Offering food services	9.42	21
	Offering traditional dishes	9.51	20
Agri-education	Educating tourists about apple growing and gardening activities	15.02	1
	Educating tourists on how to drive garden vehicles	11.29	14
	Educating tourists on how to exploit garden equipment	10.70	15
Agri-recreation	Entering the garden to visit the garden's attractions	12.67	4
	Diversifying farm activities by adding recreational activities	12.25	7
	Offering sport and entertainment facilities	11.61	11
	Determining tourist routes for tourists	12.09	8
Agritainment	Holding garden products exhibitions	14.23	2
	Holding apple cultivating and harvesting festivals	11.41	13
Agri-buy and sales	Selling garden products to tourists directly	12.54	6
	Selling garden products on-farm markets	11.88	9
	Entering the garden to pick apples and buy them	9.64	19
	Providing homemade products	11.66	10
Test Statistics		Chi-Square = 156.241 Df = 21 Asymp. Sig. = .000	

The results of measuring gardeners' capabilities indicate that gardeners' highest capability is for 'knowledge and skills in the terms of apple growing and gardening activities (MR=16.07)', 'possibility of providing apple-related products (MR=14.19)',

and 'local herbal remedies (MR=12.75)'. Regarding the variables of "access to sports and entertainment facilities (MR=6.36)", "access to human resources trained in tourism (MR=8.01)", "possibility of providing accommodation facilities to tourists in

gardens (MR =8.08)” and “access to trained human resources regarding tourism such as tour guides

(MR=8.16)” have undesired conditions (Table 9).

Table 9. The results of gardeners’ capabilities for agritourism offerings

Variables		Mean Rank	Rank
Agri-experience	Education on behaving with tourists	8.44	14
	Education in communication skills (with local community, tourism businesses)	8.16	16
	Availability of information sources about the area	9.29	11
	Knowing the tourist attractions of the area	8.39	15
	Access to trained human resources regarding tourism (trained tour guide)	8.01	18
Agri-accommodation and food service	Accessibility to accommodation	9.28	12
	Access to food and beverage services	11.34	4
	The possibility of providing accommodation facilities in the gardens	8.08	17
	The possibility of providing food services in the garden	10.12	8
	Access to trained human resources to cook traditional dishes	11.32	5
Agri-education	Skills in terms of apple growing and gardening activities	16.07	1
	Access to appropriate facilities and technology in gardening activities	8.47	13
Agri-recreation	Access to sport and entertainment facilities	6.36	19
	Availability of local herbal remedies and treatments	12.75	3
	Access to adequate financial supports	9.33	10
Agritainment	The possibility of providing apple-related products	14.19	2
	Access to place and local facilities for holding festivals	10.42	6
Agri-buy and sales	Access to facilities for selling garden products to tourists	10.37	7
	Access to local markets to sell products	9.61	9
Test Statistics		Chi-Square = 414.003	Df = 18
		Asymp. Sig. = .000	

5. Discussion and Conclusion

Studies on tourism development usually investigate the behavioral patterns and preferences of customers or the motivation, and willingness of the local population. Meanwhile, the match between supply and demand is necessary for developing appropriate strategies to satisfy tourists as well as the participation of the local people as one of the destination's main stakeholders in tourism development. This study investigated the demand of tourists for agritourism activities and the gardeners' tendency and capability to provide agritourism activities in the rural areas of Semirrom county. The findings indicate no match between demand (tourists' preferences) and supply (gardeners' preferences and capabilities) for agritourism activities in the study area (Table 10).

The results indicate that ‘agri-recreation’ is the tourists’ most important preference. The tourists’ main purpose visiting the gardens of the area is to enjoy agri-recreation attractions, including the natural scenery of the gardens, and the peace and quiet of the gardens. Thus, agri-recreation services and products are among of the factors affecting the

choice of destination by agritourists. This confirmed previous studies Dubois et al., 2017; Huber et al., 2020) who found the peaceful natural environment along with recreational activities are the tourists’ main preferences. In addition, the results show that ‘agri-accommodation and food services’ plus ‘agri-experience’, including tasting traditional foods and beverages, knowing the local cultural heritage and traditions of the area, and participating in gardening activities are important for tourists. This finding is consistent with Chen et al. (2010) and Forbord et al. (2012), who found tourists were willing to experience farm life. In any case, the results reveal that despite the difference between tourists' preferences, all agritourism activities are important for tourists and influential in their decision to select a destination. In other words, tourists tend to experience emotional and recreational activities including visiting farms, enjoying recreational and entertainment activities, purchasing souvenirs and products, and staying in farms accommodations. They are also interested in experiencing and understanding the agri-experience activities such as participating in gardening activities and learning handicrafts. These results support the study of

Torabi et al. (2019), concluding that there is no difference between tangible and intangible agricultural heritage from the tourists' viewpoint.

The findings show that the apple gardeners in the study area tend to develop agritourism and provide all agritourism activities to tourists. It can be stated that gardeners have perceived the positive effects of agritourism on their business, and they tend to work in the field of agritourism along with horticulture. In this regard, Bouzarjomehri et al. (2021) found understanding the impacts of tourism affects farmers' tendency to participate in the agritourism development. Nevertheless, the findings indicate that gardeners' tendency is not in accordance with tourists' preferences, and is more to provide activities of 'agritainment' and 'agri-education', while these activities are less demanded by tourists. The findings indicate that the apple gardeners do not enjoy the appropriate capability to participate in agritourism development. The gardeners' capability, except in the two types of 'agri-education' and 'agri-entertainment' has been evaluated below the optimal level in the other types. Also, gardeners do not have sufficient knowledge, expertise, and training to develop agritourism practices. Meanwhile, studies show education and awareness (Naidoo & Sharpley, 2016; Rezvani et al., 2017) is an essential factor in tourism development. Furthermore, gardeners have insufficient training and skills to interact with the local population, tourists, and tourism businesses. As studies have shown, communication with tourists and the local population (Alonso & Nyanjom, 2016), as well as interaction with tourism sector activists (Zapata et al., 2011) are essential factors for agritourism development. Additionally, limited access to facilities, trained human resources, and financial and advisory support are other challenges

facing gardeners to participate in the agritourism development.

The findings of the match between demand and supply separately for each type of agritourism activity indicate that there is the match between demand and supply only for 'agri-education' type; for types of 'agritainment' and 'agri-buy and sales', there is a relative match between demand and supply, and there is no match between supply and demand in the other three types.

The results of 'agri-experience' type show that tourists' tendency is very high. In the supply, the gardeners' tendency is average, and their capability to offer these activities is low. The gardeners are not aware of the capacities of tourism in the area, they have inadequate knowledge of tourists' preferences, they have limited access to trained human resources, and they have insufficient training in communication skills to communicate with tourists. The weaknesses have caused gardeners not to be willing to develop agri-experience activities, while these activities are the tourists' main preferences. For 'agri-accommodation and food services' type, the tourists' preference is very high, but the gardeners are not willing to provide activities of this group due to the low access to accommodation and catering facilities in farm and rural areas. For 'agri-recreation' type, the tourists' preference for some services and products is very high. Also, the gardeners' tendency to provide such products is high, such as entering tourists to enjoy the scenery, diversifying tourism activities, offering recreational facilities, and offering local herbal remedies. However, they have a low tendency for access to recreational facilities, and financial support for providing activities.

Table 10. Match between demand and supply regarding agritourism activities

Activity	Tourists' preferences	Gardeners		Match/Mismatch
		tendency	Capability	
Agri-experience	Very High	Average	Low	Mismatch
Agri-accommodation and food services	Very high	Average	Low	Mismatch
Agri-education	High	High	High	Match
Agri-recreation	Very high	High	Low	Mismatch
Agritainment	High	High	Average	Relatively match
Agri-buy and sales	High	High	Low	Relatively match

For 'agritainment', the gardeners tend to provide the services and products of this group, especially by

holding garden products exhibitions. Also, gardeners have adequate access to facilities, and human

resources for holding the exhibitions. For ‘agri-buy and sales’ type, gardeners’ access to the local market, and facilities for direct sales are desired. However, the gardeners are not willing to allow tourists to enter the garden and pick apples, which is due to the concern about the lack of training of tourists and the possibility of damage to the garden. Finally, for ‘agri-education’ type, a good match is between the tourists’ preferences and the gardeners’ tendencies. Also, the gardeners of the area also have the necessary knowledge, expertise, and facilities to provide services and products to tourists.

Overall, the findings showed no significant match between demand and supply. “Agri-recreation”, along with “agri-experience” and “agri-accommodation and food services” have been among the main priorities of tourists to visit the area, still, the gardeners’ tendency and capability have not been consistent with the tourists’ preferences. The gardeners’ tendency and capability has mostly been related to “agritainment” and “agri-education”. The findings suggest that for developing agritourism in the destination, the tourists’ needs and preferences to attract tourists and the destination’s competitiveness should be prioritized. Tourists will be attracted to the destination if they can enjoy the benefits of the peaceful rural and agricultural environment along with access to recreational facilities, tasting traditional foods, connect with the cultural aspects of rural areas, experience the rural lifestyle, and participate in farming activities. Also, gardeners should be trained on the required skills related to tourism and agritourism as well as acquire the necessary qualifications. They should also be given the necessary facilities, support and funds so that they can participate in the agritourism development and provide products and services preferred by tourists.

The findings of this study will be worthwhile to tourism planners, as well as tourism services providers to develop a better understanding of agritourists’ preferences, meet the agritourists’ needs, and ultimately gain satisfaction. Also, it will be helpful for planners to recognize the capacities of gardeners and the challenges they face in developing agritourism to formulate practical strategies. Importantly, it will empower the gardeners involved in agritourism enterprise, to make a profound contribution to the decision-making, planning, and successful implementation of agritourism programs. The present study had some limitations. Agritourism is attractive to a wide range of consumers (Fabio Gaetano & Mariangela, 2014), and each customer has different motivations (Hurst et al., 2009) and therefore different needs which affect their intention and behavior. Hence, demographic features including age, gender, education, income, and socio-cultural background may influence agritourists’ preferences; thus, it is important to examine whether agritourists’ needs are different, or they are consistent across different subgroups of society. Also, this study only investigated the gardeners’ tendency and capability. To develop agritourism, it is necessary to examine the capacities of the destination and active businesses in the tourism sector; thus, future research can examine this issue in depth.

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Authors’ contributions

The authors equally contributed to the preparation of this article.

Conflict of interest

The author declare no conflict of interest.

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مطالعه تقاضا و عرضه برای فعالیت‌های اگروتوریستی (مطالعه موردی: مناطق روستایی شهرستان سمیرم، ایران)

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چکیده مبسوط

۱- مقدمه

اگروتوریسم نوعی از فعالیت‌های مرتبط با گردشگری است که خدمات و محصولات کشاورزی را به گردشگران ارائه می‌دهد. برای توسعه اگروتوریسم، تحلیل نگرش و انتظارات دو گروه از ذینفعان اصلی، شامل گردشگران و کشاورزان ضروری است. تقاضای گردشگران باید بررسی شود؛ بنابراین لازم است با درک نیت و رفتار گردشگران کشاورزی، راه حل‌های مناسب ارائه شود. همچنین به دلیل ارتباط مستقیم کشاورزان و گردشگران، مشارکت کشاورزان یکی از عوامل موفقیت در توسعه اگروتوریسم است. هدف تحقیق، تحلیل عرضه و تقاضا برای فعالیت‌های اگروتوریستی است، و به طور خاص تر ارزیابی ترجیحات گردشگران برای فعالیت‌های اگروتوریستی، ارزیابی ترجیحات و توانمندی باغداران برای ارائه فعالیت‌های اگروتوریستی، و همچنین بررسی تفاوت بین ترجیحات گردشگران و ترجیحات و توانمندی باغداران برای فعالیت‌های اگروتوریستی می‌باشد. منطقه مورد مطالعه، مناطق روستایی شهرستان سمیرم در استان اصفهان است که به دلیل وسعت زیاد باغات سیب و همچنین جاذبه‌های طبیعی و فرهنگی متنوع، از پتانسیل اگروتوریستی قوی برخوردار است.

۲- مبانی نظری تحقیق

در سال‌های اخیر، تقاضا برای اگروتوریسم افزایش یافته و برای طیف وسیعی از گردشگران جذاب است. طیف گسترده‌ای از محصولات شامل تماشای محیط روستا، تفریح، تجربه زندگی در مزرعه، رویدادهای سرگرمی و فرهنگی، خرید محصولات کشاورزی

را می‌توان در مقاصد اگروتوریسم توسعه داد. برای توسعه اگروتوریسم، توجه به نیازها و ترجیحات گردشگران برای طراحی راهبردهای گردشگری و رقابت‌پذیری مقصد مهم است. با وجود افزایش تقاضا برای اگروتوریسم، یکی از موانع توسعه اگروتوریسم در مناطق روستایی، عدم تمایل و توانمندی جامعه محلی در توسعه اگروتوریسم است. کشاورزان، یکی از ذینفعان اصلی در توسعه اگروتوریسم است. لذا شناخت انگیزه و ترجیحات کشاورزان و گنجاندن نظرات آنها در فرآیند تصمیم‌گیری، و توسعه راهبردهای مطلوب ضروری است. سیستم اگروتوریسم در صورتی موفق است که هم نیازهای همه گروه‌های ذینفع را تأمین کند و هم موانع همه گروه‌ها را کاهش و یا برطرف نماید. در این راستا، ادغام عرضه و تقاضا برای درک ترجیحات مشتریانی که به طور واقعی در بازار وجود دارد، الزامی است. یکپارچه‌سازی تقاضا و عرضه می‌تواند نمای کامل‌تری از ترجیحات بخش تقاضا و شرایط بخش عرضه ارائه دهد تا اطمینان حاصل شود که خدمات مطابق با سودآورترین خواسته‌ها و انتظارات مشتریان ارائه می‌شوند.

۳- روش تحقیق

روش تحقیق توصیفی-تحلیلی است و به شیوه پیمایشی انجام شده است. پانزده روستا با قابلیت‌های اگروتوریستی شناسایی و به عنوان نمونه انتخاب شدند. جامعه نمونه ۱۰۹ نفر از باغداران سیب روستاهای نمونه بودند که با روش نمونه‌گیری هدفمند انتخاب شدند و همچنین ۲۵۲ گردشگرانی بودند که از روستاهای نمونه بازدید کردند.

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اگروتوریستی در سایر گروهها پایین تر از حد مطلوب بوده است و باغداران از آموزش و مهارت لازم برای توسعه شیوه های اگروتوریسم، تعامل با جامعه محلی، گردشگران و کسب و کارهای گردشگری برخوردار نیستند، و همین امر تمایل باغداران برای ارائه برخی از خدمات و محصولات مرجع گردشگران را کاهش داده است.

۵- بحث و نتیجه گیری

مطالعه به بررسی تقاضای گردشگران برای فعالیت های اگروتوریستی و تمایل و توانمندی باغداران برای عرضه فعالیت های اگروتوریستی در مناطق روستایی شهرستان سمیرم استان اصفهان پرداخته است، که نتایج نشان داد بین تقاضا و عرضه تطابقی وجود ندارد. برای توسعه اگروتوریسم در مقصد باید تمایلات گردشگران برای جذب گردشگر و رقابت پذیری مقصد در اولویت قرار گیرد. در واقع تا زمانی که گردشگران بتوانند از مزایای محیط آرام و مناظر روستایی و کشاورزی، همراه با دسترسی به امکانات تفریحی و ورزشی، چشیدن غذاهای سنتی، تجربه سبک زندگی روستایی، و مشارکت در فعالیت های باغداری بهره مند شوند، جذب مقصد خواهند شد. همچنین باغداران باید در مهارت های ضروری در خصوص اگروتوریسم آموزش ببینند و صلاحیت های لازم را کسب کنند، و از تسهیلات، حمایت و سرمایه لازم برخوردار شوند تا بتوانند در توسعه اگروتوریسم مشارکت داشته باشند و محصولات و خدمات مرجع گردشگران را عرضه نمایند.

کلیدواژه ها: اگروتوریسم، چارچوب تقاضا-عرضه، ترجیحات گردشگران، ترجیحات باغداران، توانمندی باغداران، شهرستان سمیرم.

تشکر و قدردانی

پژوهش حاضر حامی مالی نداشته و حاصل فعالیت علمی نویسندگان است.

برای جمع آوری اطلاعات از دو پرسشنامه محقق ساخته استفاده شد. با مرور ادبیات، آیتها استخراج شدند و به شش دسته «تجربه-اگروتوریستی»، «خدمات اقامتی و غذایی اگروتوریستی»، «آموزشی-اگروتوریستی»، «سرگرمی-اگروتوریستی»، «تفریح-اگروتوریستی» و «خرید و فروش-اگروتوریستی» طبقه بندی شدند. گویه های پرسشنامه با استفاده از مقیاس پنج درجه ای لیکرت از بسیار کم تا بسیار زیاد اندازه گیری شدند. برای تجزیه و تحلیل داده ها از نرم افزار SPSS و روش های آماری استفاده شد.

۴- یافته های تحقیق

یافته ها نشان می دهد تفریحات-اگروتوریستی مهم ترین تقاضای گردشگران بوده است. همچنین بهره مندی از «خدمات اقامتی و غذایی اگروتوریستی» و «تجربه-اگروتوریستی» نیز برای گردشگران مهم بوده است. بهر حال نتیجه نشان می دهد با وجود تفاوت بین ترجیحات گردشگران، همه انواع فعالیت های اگروتوریستی برای گردشگران مهم بوده است. به بیان دیگر گردشگران هم تمایل به فعالیت های احساسی و تفریحی شامل لذت بردن از فعالیت های تفریحی و سرگرمی را دارند، و هم علاقمند به تجربه و درک فعالیت های تجربی اگروتوریستی نظیر مشارکت در فعالیت های باغداری هستند. یافته ها نشان می دهد باغداران تمایل به توسعه اگروتوریسم و عرضه انواع فعالیت های اگروتوریستی به گردشگران را دارند، اما یافته ها نشان می دهد که تمایل باغداران در تطابق با ترجیحات گردشگران نبوده است، و تمایل باغداران بیشتر به عرضه انواع فعالیت های «سرگرمی-اگروتوریستی» و «آموزشی-اگروتوریستی» می باشد، در حالیکه این فعالیت ها کمتر مورد تقاضای گردشگران بوده است. همچنین نتایج نشان می دهد باغداران از توانمندی مطلوب برای مشارکت در توسعه اگروتوریسم برخوردار نیستند. توانمندی باغداران برای ارائه انواع فعالیت های اگروتوریستی به جز در دو گروه آموزشی-اگروتوریستی و سرگرمی-



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Assessment and Analyzing the Effects of the Corona Pandemic on the Livelihood Resilience of Rural Households (Case Study: Oraman District of Sarvabad County)

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Abstract

Purpose- The main goal of this article is to investigate the effects of the corona pandemic on the resilience of the livelihood of the villagers of the Oraman District of Sarvabad County. Moreover, the study aimed to measure the villagers' resilience and ability to adapt to crises and propose solutions to improve their livelihood resilience .

Design/methodology/approach- The research approach is a mixed method of quantitative and qualitative methods. Data collection was theoretical, using documentary and survey methods. The statistical population of the research include three groups of local people (300 people according to Cochran's method), development officials (18 people according to the targeted method), and experts of the region (12 people according to the targeted method) .

Findings- Data analysis using inferential statistics tests (chi-square, Friedman rank, Pearson correlation) showed that two components gained averages of 2.63 and 2.72 at a significance level of 0.01. Therefore, the livelihood resilience of the villagers in Oraman District is in a bad situation in both dimensions of confrontation and adaptation. Also, the results suggest a direct, positive and significant relationship between the reduction of both dimensions of livelihood resilience and the overall livelihood resilience of the villagers.

Practical implications- The leading solution to improve the livelihood resilience of the villagers in the region against crises is to change the managerial perspective of crisis management from a traditional and passive approach to a new proactive approach. To this end, in addition to training development managers, there is a need to train locals and form a crisis management unit headquarters with adequate performance, efficiency and up-to-date knowledge and awareness.

Originality/Value- Livelihood resilience is major in achieving livelihood sustainability to ensure the optimal quality of life and the living environment. One of the pressures on the livelihood system of the villagers in the last two years was the Corona pandemic. Therefore, identifying these effects and planning to solve them can help to reduce the vulnerability and thus increase the livelihood resilience of the villagers.

Keywords- Corona pandemic, Livelihood resilience, Oraman District, Sarvabad County.

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1.Introduction

Poverty is a durable worldwide challenge. According to the statistics published by the World Bank in 2015, more than 735 million people live in extreme poverty. Also, over 651 million people are expected to live in extreme poverty in the world by 2020, who are primarily in rural areas of developing countries. Therefore, fighting rural poverty is crucial. Poverty can affect all economic, social, managerial and environmental dimensions of sustainable development. Different types of poverty call for planning, especially extreme poverty, which otherwise leads to a poverty trap (Qarani, 2014). The primary solution to preventing poor households from returning to poverty and having a sustainable livelihood is to raise the resilience level of their livelihood. Suppose capacity building is addressed for households caught in the vicious trap of poverty. In that case, it is likely to use resources and activate their learning mechanism and the desire for innovation and transformation. As a result, the poverty trap will be disrupted. The capacity to use accessible resources is a prerequisite for livelihood. Learning capacity leads to skill creation and enhancement. Generally, how households deal with the external environment determines their level of self-efficacy. They can take advantage of external opportunities and manage risks to ensure livelihood sustainability and resilience (Li et al., 2019). Livelihood is not merely access to a job. The livelihood of villagers instead needs to be resilient against numerous economic, social and natural pressures (Ahmadi et al., 2019). The sustainable livelihood approach was proposed by researchers such as Chambers in the mid-1980s and early 1990s after various development paradigms failed to solve the main problems of rural development and mainly rural poverty (Alinovi et al., 2011). Providing a livelihood includes capabilities, assets accessibility and activities for a good life (Nawrotzki, 2012). The sustainability concept was first introduced at the Rio World Summit as a dominant aspect of development plans. In addition to that, poverty has become a concerning matter, so the new approach of sustainable livelihood has become a tool to remove the effects of poverty and sustainable rural development (Sojasi Qeidari,

2013). The core of the livelihood resilience approach is adaptive strategies adopted by households or individuals during shocks and stresses on their livelihoods. In their organizational priority, the United Nations Food and Agriculture Organization (FAO) introduced resilience to reduce vulnerability and cope with threats to villagers' livelihoods (Pain & Levine, 2013). Resilience is essential for two reasons. First, social and technical systems are unpredictable and vulnerable. Second, livelihood capitals in resilient societies are substantially more stable than in non-resilient places against pressures and shocks (Salmani et al., 2016-a). Meanwhile, the Covid-19 crisis was a unique and unexpected shock that affected almost the whole world (Mahmud & Riley, 2022). The World Bank has estimated that the Covid-19 crisis has pushed between 40 and 60 million people into extreme poverty, especially sub-Saharan Africa. In another report, it is estimated that between 420 and 580 million people will be pushed into the poverty trap (Janssens, 2021). Weaknesses of rural areas, especially in the service, infrastructure, social support and security, were revealed more than ever after the corona pandemic their mandatory quarantine period. The ensuing psychological problems are another negative effect which has been created s in rural communities (Jia et al., 2021).

Oraman District in Sarvabad County is one of the districts of Kurdistan Province that has experienced impediments during the corona pandemic. Corona has had many complications in this region due to tourism, being in the middle of Kurdistan and Kermanshah Province, and cross-border smuggling on the border with Iraq. As a result, the movement and connection of people in urban and rural areas have made the corona spread rapidly in the region and deteriorate the livelihood conditions of the people. Villagers' livelihoods were drastically changed due to the Corona. In particular, the rural labor force and tourism, which was a livelihood strategy, have stagnated. The current study aimed to discover what changes the villagers' livelihood had after the corona pandemic's emergence. The outcome of this study can offer practical solutions to get out of a crisis like Corona as one of the problems in the way of rural livelihood sustainability. Moreover, there is

a need to organize the villagers' livelihood with a resilient approach.

2. Research Theoretical Literature

2.1. Corona shock geometry

Corona pandemic was a sudden shock that turned into a complex health crisis in all dimensions of human life due to the lack of resilience. [Matni \(2020\)](#) suggested the concept of shock geometry, which refers to the type of directions that occurred following the economic crisis of 2008 in three different countries. This framework emphasizes the role of economic resilience or the extent of responding, coping and re-creating the economic system of different countries. The first type of shock geometry is (V) shape, where the performance of the economic system changes temporarily. However, a quick return to the initial

situation happens due to support and compensation programs (e.g., in Canada). In (U) shaped shock, although the reaction is done effectively and efficiently, returning to the previous conditions is not likely because of the crisis's depth and the effects' intensity. Moreover, in this type, the negative impact will dominate the economy for several years, and the pre-crisis situation is different from post-crisis (e.g., in the United States). The (U) shape shock shows the high vulnerability of the economic infrastructure. In this case, the impact caused by the economic crisis lasts on the economic structure, so returning to the previous path of economic growth and development never happens. In this situation, capital and labor have been damaged many times (e.g., in Greece).

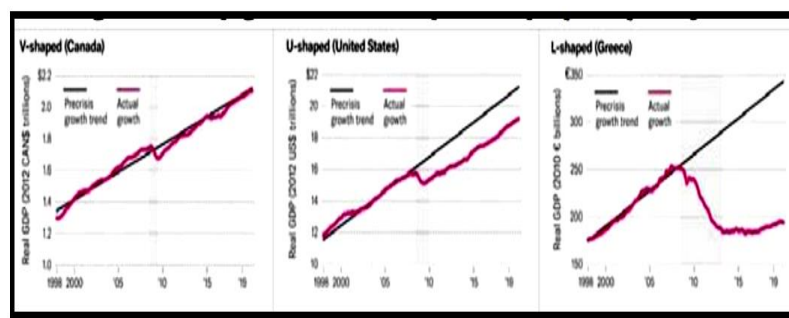


Figure 1. Types of shock geometry

Source: [Matni, 2020, 168](#).

[Mousavi Matlabi \(2020\)](#) believes that the spread of the coronavirus has caused both shocks on the demand and supply side in the economy, which

makes a closed cycle of failure and a repeating trap if the pandemic continues.

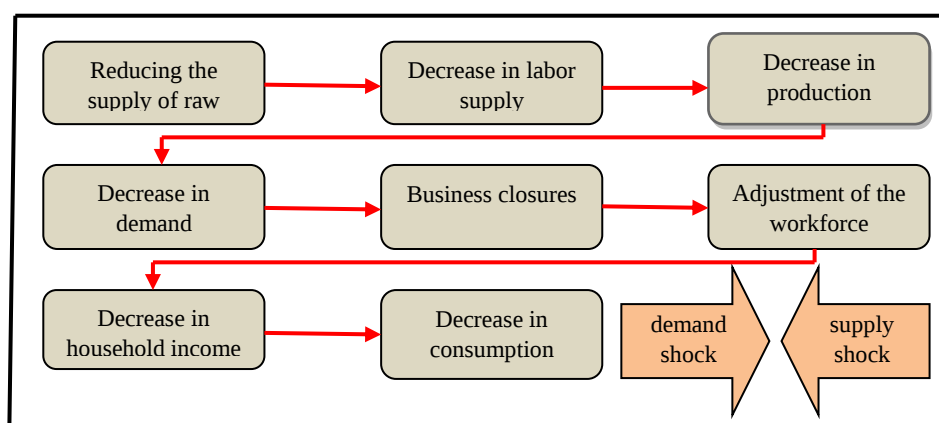


Figure 2. The closed supply and demand shock cycle due to Corona

Source: [Mousavi Matlabi, 2020: 193](#).

In 2020, the peak of the outbreak of Corona, global trade in goods decreased by 13 to 32 per cent, and the world's economic growth reached - 6.4 per cent compared to the previous year.

Nevertheless, according to Mousavi Matlabi, for vibrant and resilient economies, economic growth will soar again in 2021 with correct policy and planning to return to the markets again.

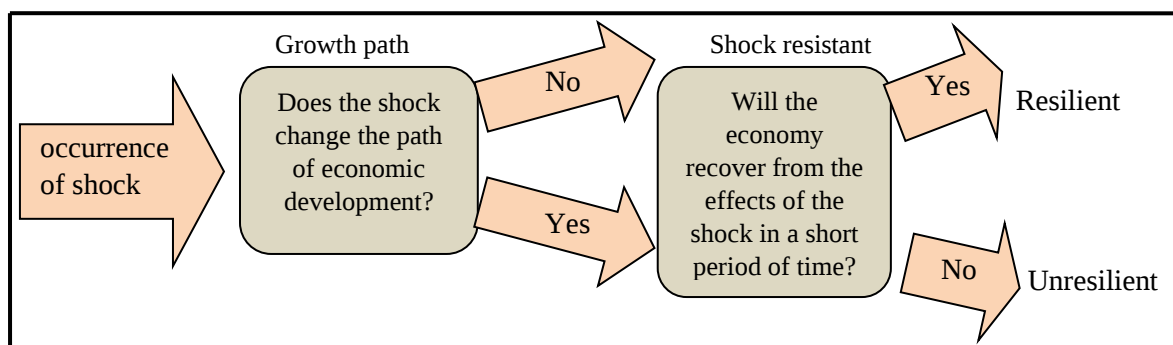


Figure 3. Explanation of resilience during shocks

Source: [Mirzaei et al., 2020: 237.](#)

2.2. Livelihood resilience

The core of the livelihood resilience approach is adaptive strategies adopted by households or individuals during shocks and stresses on their livelihoods. Livelihood flexibility is the strategies that individuals and communities take to cope with the effects of short-term, sudden and long-

term shocks ([Liu et al., 2020](#)). According to Tanner et al. (2014), a human-centred livelihood perspective leads to the empowerment and the capacity of human societies ([Campbell, 2021](#)). [Table 1](#) expresses the central cores of the concept of resilience.

Table 1: The cores of the concept of livelihood resilience

Subsystem		Economy	Meaning of each component
Resilient components	Characteristics of resilience	Stability	Sustainability includes the concept of reliability and refers to the ability to absorb and resist disturbances and crises.
		Extra capacity	It is to have additional capacity and support systems so the place is able to provide its defined service during incidents and disturbances.
		Strategic planning system	In response to crises, there should be flexibility and try to turn threats into opportunities
	Resilient performance	Reactivity	It means the ability to move quickly when faced with a crisis.
		Recovery	Having the ability to return to normal conditions after a crisis.

Source: [Mohammadi et al. 2018: 100](#)

There are two distinct perspectives on crisis management. The traditional point of view emphasizes the post-crisis stage, while it does not often plan for the pre-disaster stage. The new point of view is based on resilient societies, which use community-oriented approaches, empowerment of

different layers of society and attract participation in their preparation for disasters. In this approach, returning society to its previous state will be faster. At the same time, human and financial losses will be significantly reduced.

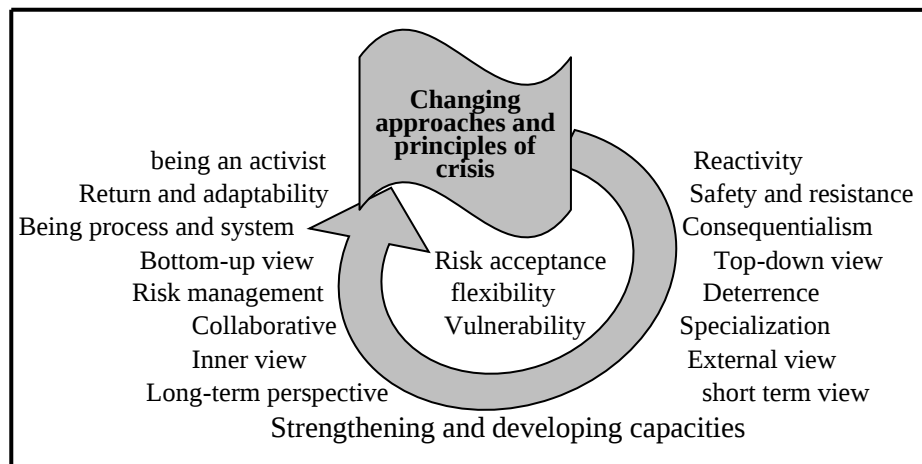


Figure 4. Evolution of approaches and principles emphasized in crisis management,
Sources: [Salmani et al., 2016-b](#); [Motahari & Rafiyan, 2016](#); [Hemingway & Gunawan, 2018](#).

Vulnerability refers to a sudden pressure more significant than the livelihood capacity; livelihood vulnerability is due to the lack of coping mechanism and limited capacity to adapt; hence little resilience. Vulnerability reduces the individual and group capacities of rural households to predict, confront, resist and recover from natural disasters ([Sadaka et al., 2013](#)). Flexibility, however, is the capacity of a system to absorb and adapt disturbance during an undergoing change. As a result, the system practically maintains the same function, structure, and identity as the previous state or reaches a new and desirable state of balance ([Borsekova et al., 2018](#)). Therefore, the sustainability of the livelihood of the villagers happens when they have the conditions of livelihood resilience after exposing to pressures, shocks and short and long-

term, unexpected or predictable natural and human events ([Figure 5](#)).

According to the conceptual model of the research, shown in [Figure 5](#), we can examine the livelihood resilience of the villagers in the study area after Corona pandemic. This examination can investigate the ability to cope based on short-term measures and the capacity to adapt based on long-term measures for livelihood reconstruction after the Corona crisis and the stage before this crisis or prevention. Moreover, time is a significant factor, especially in the coping system of the livelihood resilience of the villagers. Therefore, how to return to the routine of livelihood before the disease or adopt a new way of providing livelihood during Corona pandemic determines the livelihood resilience of the villagers.

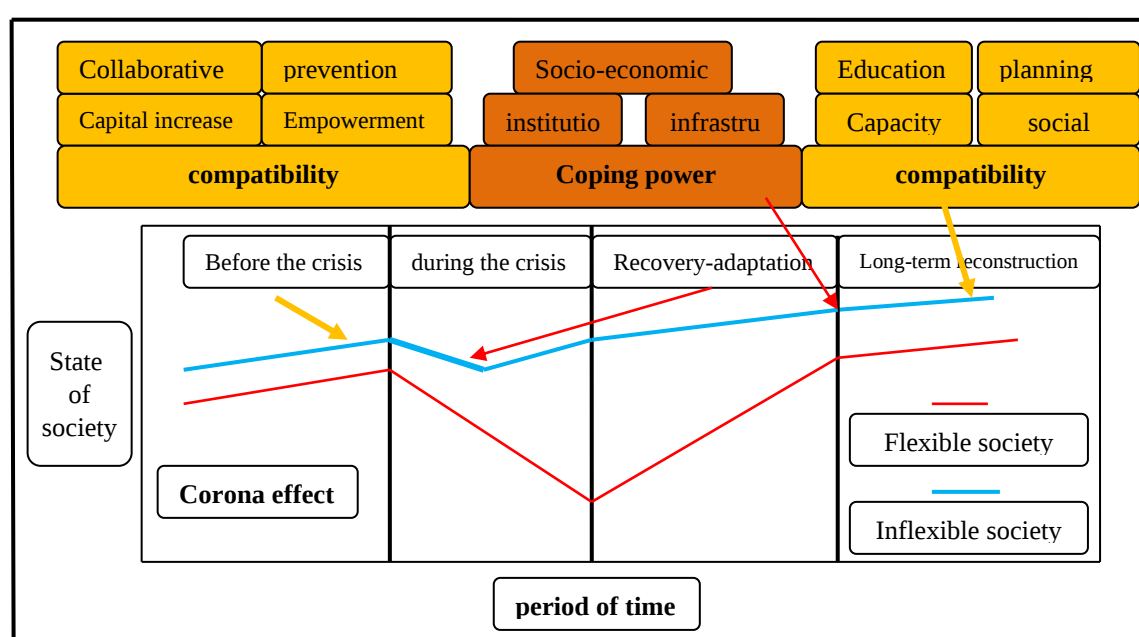


Figure 5. Research conceptual model

2.3. Research background

Imani Jajromi (2019), in a study about the social consequences of the corona pandemic in Iran, concluded that the coronavirus caused damage to social health because of the effects on social relations, the reduction of social activities and the closure of many businesses.

Tajeri Moghadam et al. (2020), in their research about the analysis of preventive measures to deal with the Corona in the rural areas of Dashtestan County, found that there is a significant relationship between the severity of the spread of the coronavirus and the severity of disease, mental norms, type of attitude, self-efficacy of villagers.

Mohammadi and Rastgunjad (2018) investigated changes in the livelihood resilience of rural households in two periods of living in the city and migrating to villages in the Dezli Rural District of Sarvabad County with descriptive and analytical methods. They found that returning to the village, the level of resilience of people increased during the period of returning to the villages. Eftekhari et al. (2014) analyzed the role of livelihood diversity in the resilience of rural areas under drought in Isfahan Province. They stated that adopting the livelihood diversity approach has led to more resilience of households in drought conditions.

In the villages exposed to severe drought, this variety of livelihood is more visible.

Janssens et al. (2021) investigated the impact of the corona outbreak on low-income households in rural areas of Kenya using a qualitative method. They asserted that income had reached a third of the amount before the coronavirus outbreak. Although villagers have yet to sell their assets, there were strategies such as receiving loans, delayed repayments, and avoiding lending money to other villagers. Generally, the most important strategy was to save more and consume less, which has led to a drop in social support for households.

Kansiime et al. (2021) analyzed the consequences of Covid-19 on household income and food security in Kenya and Uganda using a quantitative-qualitative method. They found that a common fraction of the respondents suffered an income shock due to the Covid-19 crisis. In addition, food security and diet quality, measured by the food insecurity experience and the number of nutritious meals, have decreased.

Liu et al. (2020) studied the effects of resettlement related to natural hazards on the livelihood resilience of rural households in China using a descriptive-analytical method. They concluded that the re-settlement of vulnerable households

has yet to be able to increase their resilience compared to the households that have withdrawn from the re-settlement project. Livelihood resilience has been measured in the form of three indicators: adaptation and coping capacity, self-organization and learning capacity.

3. Research Methodology

3.1 Geographical Scope of the Research

Sarvabad County covers an area of 1168.4 square kilometers, and it is located in the southwest of Kurdistan Province. This county is adjacent to Marivan County from the north, Iraq from the

northwest, Kermanshah Province from the west and south, and Sanandaj County from the east. According to the latest political divisions of the country, until the end of 2016, this region has Central and Oraman Districts, two cities named Sarvabad and Oraman Takht, and eight rural districts and 74 inhabited villages.

Oraman District, with 14 villages, has 3707 households and about 14269 people. This district is located 75 km southeast of Marivan County and 170 km southwest of Sanandaj, the capital of Kurdistan Province.

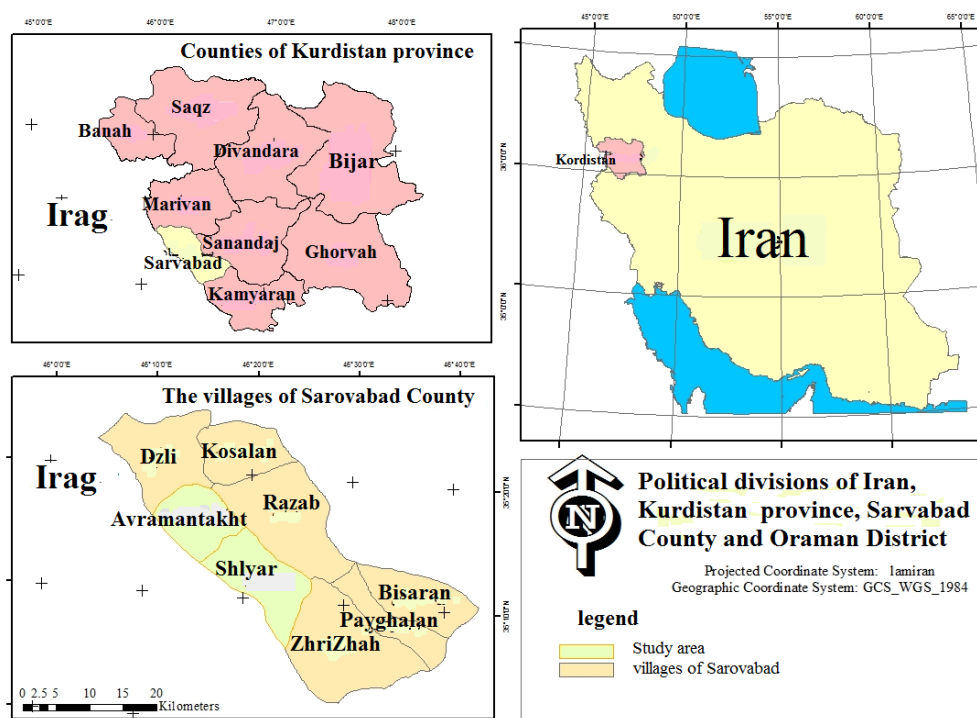


Figure 6. Geographical map of the research area

3.2. Methodology

This research is applied in terms of purpose. Also, it is a descriptive-analytical study in terms of method, and the survey method (based on the distribution of questionnaires, interviews and observations) was used for data collocation. The geographical territory of this study was rural areas of the central part of Oraman County, which was conducted in the second half of 1400 (S.H). In this study, the independent variable is the Covid-19 pandemic, and the dependent variable is the livelihood resilience of rural households in Oraman District of Sarvabad County. The

statistical communities of the research include three groups of local people, officials and scientific experts of the region. According to the general population and housing census of Sarvabad County in 2016, Oraman District has 3707 households in the form of 10 villages ([Iran Statistics Center, 2016](#)). Therefore, the population of the study was 5390 people, and the statistical sample size was determined to be 358 households. However, due to time and economic constraints, 300 households were determined as the sample size based on the corrected Cochran formula.

Moreover, because of difficulties in the accessibility of the villages, just five villages were selected as sample villages and classified based on their population. The villages are classified into three groups: high population (more than 501 people), medium population (301 to 500 people)

and low population (less than 300 people) and the number of questionnaires were designated based on the number of villages in each group. The selection of sample villages in each class was random. Finally, the questionnaires were randomly distributed among the villagers.

Table 2. Distribution of questionnaires in the district and selected villages

Population classes	Selected villages	The number of assigned questionnaires
Low population	Veysian - Ri Vari	35
Medium population	Nav- Bolbar	115
High population	Selin - Nevin	150
Total	5	300

The second group of respondents were selected through purposive sampling. There are 18 officials (chief executive administrative in county and district, village councils, agriculture department, health and treatment, cultural heritage, tourism and handicrafts, and rural cooperatives of the county). The third group consisted of academic experts, 12 people from the fields of geography and rural planning, tourism,

agriculture and development sociology. The validity of the measurement tool was examined by academic experts related to rural development. Twenty-five questionnaires were used as a pre-test. Cronbach's alpha coefficient calculated the reliability, and the value of this coefficient was 0.79, which is acceptable. Figure 7 illustrates the approaches used in this research, and Table 3 lists the research indicators.

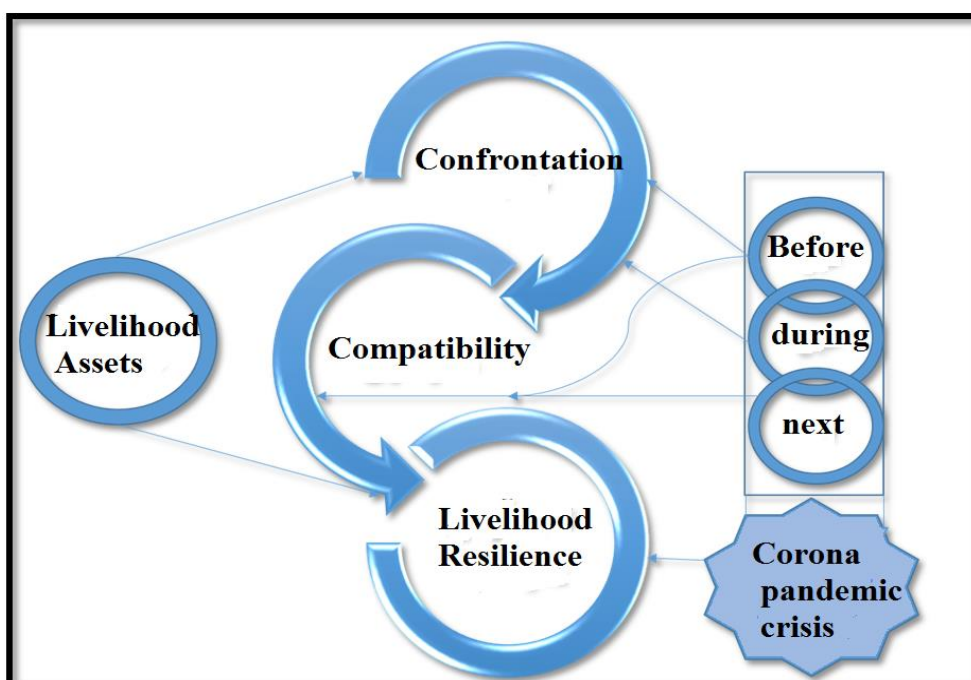


Figure 7. Approaches and principles for indicators of livelihood resilience of villagers after Corona based on the crisis management and sustainable livelihood framework

Table 3. Measuring the livelihood resilience of villagers after the Covid pandemic

Sources: Mohammadi & Manochehri, 2018, Taleshi & Akhlaghi, 2019, Motiee Langroodi et al., 2019; Jia et, 2021; Alinovi et al, 2011

Livelihood resilience of villagers against the spread of the Covid pandemic	Indexes	Variables
	The ability to confront and rebuild after the corona pandemic	Satisfaction with the effective actions of the officials for providing the necessary supplies, social and health effects of the Covid-19 pandemic, effective coordination of the targeted organizations, awareness and local self-organization, the cooperation of locals and officials, the existence of collective savings funds in the village to help the villagers, getting new jobs to unemployed villagers, insurance support for villagers, the ability of villagers to return to their pre-Corona jobs, the ability to rely on the jobs before the crisis (income security and stability), the unemployment rate, the income rate, the savings rate, the ability to receive and repay loans, appropriate amount of loans, the existence of a comprehensive management plan for emergency situations, the adequacy of essential health and welfare services (basic needs), support for vulnerable groups, providing training at the right time and place, the situation women's jobs related to tourism activities, conflicts and social and individual conflicts (reversed), financial assistance of villagers to each other, interruption in development projects of villages, nutritional status, ability to meet household expenses, satisfaction with the education of students, the amount of agricultural and livestock production, control of prices (no inflation).
Livelihood resilience of villagers against the spread of the Covid pandemic	The ability to adapt and rebuild after the crisis of the corona pandemic	Training of villagers by public institutions (economic and environmental training) to manage the crisis situation, the existence of a plan to deal with crises, the reaction and performance of organizations and people in times of crisis, understanding the importance of the support of non-governmental associations, social capital and solidarity, the existence of alternative job opportunities with economic diversity in the region, relationship between officials and locals, locals' trust in officials to crisis control, appropriate social security services in the village, collaborative process of developing and solving crises in the region, the existence of a pragmatic crisis management framework, desirability of communication, health, welfare and service infrastructures (justice in distribution and access), having assets outside the village, having a reconstruction program in the post-corona (especially tourism as the focus of rural development in the region), stabilization of the population and no movement, natural resources, guaranteed purchase of manufactured products and no intermediaries, use the lesson learned and make the best practice to face future crises, programs and measures for poverty alleviation and job creation, emphasizing on prevention and adaptation (not actions after the crisis) among people and officials.

4. Research Findings

Assessing the confrontation ability of the livelihood situation against the corona pandemic Table 4 shows a brief of answers given for the capacity, coping power and reconstruction of the villagers of Oraman District. The results confirmed that all measured variables are significant at an alpha level of less than 0.05, which implies that villagers had almost same ideas regarding the current situation (pandemic conditions).

In virtually all variables, the average value is lower than the medium (3), which implies the severity of the pandemic's negative impact on the villagers' livelihood capital.

The lowest calculated average, or the most unfavorable variable, belongs to the control of prices (no inflation). After the pandemic, the country experienced price growth due to economic chaos and inefficient economic management, which left the most damaging and

difficult effects on vulnerable rural groups. The rampant inflation, even before the pandemic, made it difficult for the villager to earn enough livelihood. As a result, livelihood had greatly reduced when the recession was combined with the pandemic.

Three critical economic indicators, namely the amount of income, the unemployment status and the amount of savings of the villagers, can be critical to creating the capacity to deal with crises in villagers' livelihood. The value of these three indicators is calculated at 2.63, 2.73 and 2.42, respectively, with a mode of 2, which suggests their status is adequate in the region's villages. In fact, the pandemic has dramatically impacted the reduction in access to financial capital to provide livelihood and support for the villagers. In addition, quarantine and continuous closures have deteriorated these indicators. In the studied area, job opportunities are very limited, and the young population mainly chooses to migrate to big cities for employment.

Two variables are crucial in employment and creating and improving coping strategies for rural households. First, the ability of villagers to return to their pre-Corona jobs is calculated at 3.34, which suggests the relative ability of rural workers to return to their former jobs. On the contrary, the ability to rely on the jobs before the crisis is calculated at 2.53, and the mode of the responses is 2, which shows the low resistance of existing businesses against the crises (corona outbreak). Therefore, in addition to the slightly adverse employment situation in villages, there needs to be a satisfying state in the quality and stability of employment. As a result, the return of the villagers to their previous jobs needs to improve their coping ability to keep their livelihoods against crises, especially in Corona. The dominant employment form in Oraman District is limited agriculture, which has low profitability and hidden unemployment. Moreover, their tourism activities are in a chaotic situation due to a lack of proper management. Therefore, the unemployment problem is fundamental and is not limited to the period of the pandemic.

Funding and giving away loans to create jobs is one of the strategies considered worldwide, especially for vulnerable groups in the pandemic. When done well quantitatively and qualitatively, the booster financial resources can improve the ability and coping capacity of livelihood in a satisfactory way. We analyzed the state of giving away financial resources through loans in the study area by two variables, the ability to receive and repay loans and the appropriate amount of loans. Accordingly, the means were 2.66 and 2.75, respectively, which indicates the unacceptable condition of the loans for the villagers, the way of payment and the ability of the villagers to receive them. Administrative bureaucracy makes the villagers dismiss taking loans and even if they get around to the final stages, asking for guarantees will prevent them from receiving a loan. Banks that only accept villager's guarantee documents easily. Also, because of the severe inflation and growth of prices, the current amount of loans needs to be more robust and appropriate.

A key measure in crisis management is to improve social resilience and the status of support

for vulnerable groups in the population. This variable was calculated at 2.53, which shows the lack of support for vulnerable groups in the studied rural areas. Failure to support the valueness group is detrimental to social resilience.

A variable which shows the employment and income outcome is the ability to meet household expenses. The response to this variable was 2.59, implying the corona outbreak's negative impact on the ability to meet household expenses. This situation is because of a mix of reasons, including the increase in unemployment (mainly tourism) and the decrease in income due to frequent closures, lack of proper support, and decreased income and job opportunities.

A coping and resilient solution is to provide insurance support for vulnerable villagers. The support after the pandemic for rural households in the region can be adequate because activities like tourism as a good source of income for rural households have shut down, and the consumption of agricultural products and their purchase has decreased. Therefore, it goes without saying that insurance and special protections for villagers were not taken into account, so there is a decrease in household income and losses for farmers.

The direct sale of products by villagers will increase profitability and motivation to work, hence the income and savings of the villagers. This solution can be effective for the coping capacity of villagers' livelihood. The value for this variable was calculated at 2.58, so the situation of direct sales of agricultural and produce products of the villagers in the region has decreased. The main reasons for avoiding direct selling were the closure of tourism activities, the need for more tourists, the decrease in consumption along with the increase in the price of manufactured products.

Another variable affected by tourism potential is the employment level of rural females after the pandemic. These women, who had gradually engaged with tourism slower than men, suffered greatly and lost their businesses (the average value for this variable is 2.20, and the mode of response is 1, a very unfavorable situation). As a result, the resilience of tourism businesses in the region is very low.

Table 4. Assessment of confrontation and rebuilding after the corona pandemic in the study area

Impact	χ^2	Significance level	Mode	Mean	Variables	Row
Negative	45.2	0.00	1	2.51	Satisfaction with the effective actions of the officials in providing the necessary supplies, social and health effects of the Covid-19 pandemic,	1
Negative	35.7	0.00	1	58.2	Effective coordination of the targeted organizations, awareness and local self-organization	2
Relatively positive	51.3	0.011	3	3.23	Cooperation of locals and officials	3
Negative	22.7	0.27	2	2.91	Existence of collective savings funds in the village to help the villagers	4
Negative	26.8	0.017	2	74.2	Getting new jobs by unemployed villagers	5
Negative	60.0	0.00	1	2.49	Insurance support for villagers	6
Relatively positive	57.1	0.047	3	3.34	The ability of villagers to return to their pre-Corona jobs	7
Negative	71.6	0.00	2	2.53	Ability to rely on the jobs before the crisis (income security and stability)	8
Negative	103.3	0.00	1	2.44	Understanding the importance of the support of non-governmental associations	9
Negative	73.8	0.04	1	74.2	Unemployment rate	10
Negative	77.2	0.00	2	2.63	Income rate	11
Negative	120.8	0.00	2	2.42	Savings rate	12
Negative	89.3	0.00	2	2.66	Ability to receive and repay loans	13
Negative	85.3	0.00	2	2.75	Appropriate amount of loans	14
Negative	72.5	0.00	1	2.53	Existence of a comprehensive management plan for	15
Negative	56.5	0.33	2	3.13	Adequacy of essential health and welfare services (basic needs)	16
Negative	136.0	0.00	1	2.35	Support for vulnerable groups	17
Negative	103.3	0.042	3	3.31	Providing training at the right time and place	18
Negative	54.4	0.024	1	2.58	Selling products directly by villagers	19
Negative	143.2	0.00	1	2.20	Affecting the jobs of females in tourism	20
Relatively positive	108.9	0.014	4	3.44	Social and individual conflicts (reversed)	21
Negative	58.9	0.002	2	2.88	Financial assistance of villagers to each other	22
Negative	62.3	0.001	2	2.85	Interruption in development projects of villages	23
Negative	57.6	0.00	2	2.79	Nutritional status	24
Negative	67.8	0.00	1	2.59	Ability to meet household expenses,	25
Negative	92.8	0.00	1	2.36	Amount of agricultural and livestock production	26
Negative	198.9	0.00	1	2.02	Control the prices (no inflation)	27
Relatively positive	104.9	0.017	3	3.12	Satisfaction with the education of students	28

Assessing the ability to adapt to the corona pandemic

Table 5 shows the analysis of the responses related to the ability to adapt after the Corona pandemic of the villagers of Oraman District. All calculated variables were significant at the level of 0.05.

The lowest averages were 2.21 and 2.25 for the variable "emphasizing on prevention and adaptation (not actions after the crisis) among people and officials" and "Training of villagers by public institutions (economic and environmental training) to manage the crisis situation." This situation implies that local development and social management have yet to be a compatible

perspective based on promoting capacities and preventive activities against all kinds of human and natural crises. In fact, the traditional perspective of crisis management is the dominant approach. In this approach, management happens after the crisis, and they take action to deal with the issue. Therefore, there was no necessary preparation to deal with the onset crisis (corona) in the study area. In crisis management today, capacity building through education is the key to sustainable solutions for increasing resilience and long-term individual and social adaptation. In the study area, there was no training for critical situations in general, specifically for the corona pandemic.

The responses to the variable of increasing the experience of dealing with crises showed a low average of 2.24 for the mode of the option (1). Also, for the variable of using the lesson learned and the best practice to face future crises, the mode of response was an option (2) with a low effect. The low impact of these variables shows that even in the ongoing pandemic, respondents believe that the experience has yet to be used for better planning in future.

One of the most important variables in the discussion of resilience in both confrontation and adaptation stages is the state of social capital and solidarity of local people. Like an invisible stimulus, social capital promotes the speed of activities, coordination and networking between different elements. Therefore, the appropriate level of social capital, especially in rural areas where there are structural, infrastructural and financial shortages, is a vital livelihood asset. The average value of this variable was calculated at 3.61 in the studied villages, which indicates a relatively good level of social capital and solidarity.

Diversity of livelihood resources based on job opportunities is an important policy that overcomes vulnerability and instability, leading to the sustainability of livelihood and long-term resilience. The variety of jobs and the existence of job opportunities can; Increase the level of rural households' access to financial capital, which itself strengthens the level of other livelihood capitals. However, the responses showed that the existence of diverse job opportunities in the region has a low average of 2.47. Job opportunities in the studied area are limited

because of the traditional structure of agriculture, limited access to agricultural land, intermediaries in selling horticultural products and lack of food processing, low skill level human resources, and the lack of sustainable development of tourism and seasonal tourism. Tourism in the region was almost in complete stagnation and closure, and there was no alternative activity at the village level for the active workforce.

The existence of dominant poverty in rural areas worsens their vulnerability to crises such as Corona pandemic. Implementing economic development and job creation programs has been a development policy in rural areas to alleviate poverty. Also, the access of the villagers to financial capital was greatly reduced after the pandemic due to stagnation. The average value of economic development programs at the regional level was calculated at 2.79, which indicates the inappropriate state of policymaking and adaptive measures in the livelihood capability of rural households.

Although a dam construction or investments in tourism have taken place, none of these projects has benefited the region's rural residents.

The required physical infrastructure is another livelihood capital in rural areas as the basis for creating justice and strengthening social capital and a prerequisite for rural economic activities. The necessity of access to communication infrastructure, health and services was doubled after the pandemic for isolated rural areas. The variable of the desirability of communication, health, welfare and service infrastructures (justice in distribution and access) in the studied rural areas was assessed as inappropriate, with an average of 2.78.

Two variables of the relationship between officials and locals and locals' trust in officials to crisis control had low averages of 2.33 and 2.50, respectively. These values show that the local people do not have a proper relationship with the officials and have lost trust in them.

The gap in trust becomes deeper because of accountability issues to reduce the pressure of the Corona crisis, especially in the livelihood of this region.

Another important source of livelihood in rural areas, which has a decisive impact on the livelihood resilience of villagers, is the state of the natural resources of the rural environment. This

variable was calculated at 3.89, which shows the appropriate natural capacity of the study area. Although agricultural lands in the Oraman region face shortages and deficiencies due to the extreme unevenness and the topography, other capabilities, such as access to running water sources and permanent rivers, unique nature the potential of horticulture and tourism to the villages, can be used in each of these capacities in order to strengthen the livelihood capital. However, this has not been deployed in the study area.

Participatory development as a global approach to rural and modern crisis management is suitable for this region. Solving crises with the people and by the people, and for the people can overcome marginalization. However, this variable has a low average of 2.63, indicating a centralized view of the development and management of the Corona crisis at the regional level. This perspective has caused neglect of locals' problems, and as a result, the damage to the livelihood is greatly increased in the studied area.

The variable of plans to deal with crises, in addition to the reaction of public organizations in crises, was calculated at 2.25 with the mode of the option (1), which is low and indicates inconsistency, lack of coordination and speed of reaction to the event in the region. During the outbreak of Corona, only health institutions were active in the region to some extent, and other organizations related to the state of livelihood and psychological and social issues were not so active in dealing with the crisis.

The last stage of crisis management is post-crisis reconstruction. The variable of having a reconstruction program in the post-corona (especially tourism as the focus of rural development in the region) had an average of 2.45. This value confirms the regional planners' lack of attention to rebuilding and developing the local community's capacity after the Corona crisis. Tourism, as the most important business in the region, has been seriously damaged by the spread of Corona. In the post-corona period, when the demand for travel to the region is increasing, the existence of supportive programs and the promotion of tourism capacities could quickly compensate for the damages in the region. However, these programs were absent in the studied area.

Maintaining the population in rural areas and the lack of migration is essential because allocating services and resources becomes optimal in places with a specific population threshold. Although there is no generality about it, it is expected that in the face of natural and human crises, more populated villages have more resistance and adaptability than less populated villages. Examining this situation at the regional level shows that the surveyed villages are faced with population migration (calculated average of 2.65), which continues due to the lack of access to job opportunities and the difficulty of livelihood at the village level

Table 5. Assessment of the ability to adapt and rebuild after the crisis of the corona pandemic

Situation	χ^2	Significance level	Mode	Mean	Variables	Row
Negative	1.6	0.00	1	2.20	Training of villagers by public institutions (economic and environmental training) to manage the crisis situation	1
Negative	1.4	0.00	1	2.25	Existence of plans to deal with crises, reactions and performance of organizations and people in crises	2
Negative	78.2	0.00	2	2.41	Increasing experience to deal with crises	3
Negative	1.4	0.00	1	2.23	Understanding the importance of the support of non-governmental associations	4
Relatively suitable	2.1	0.017	3	3.61	Social capital and solidarity,	5
Negative	68.3	0.00	2	2.47	Existence of alternative job opportunities with economic diversity in the region	6
Negative	79.6	0.00	1	2.50	Relationship between officials and locals	7
Negative	1.2	0.00	2	2.33	Locals' trust in officials to control crisis	8
Negative	91.5	0.00	2	2.56	Appropriate social security services in the village	9

Situation	χ^2	Significance level	Mode	Mean	Variables	Row
Negative	66.6	0.00	2	2.63	Collaborative process of developing and solving crises in the region	10
Negative	79.7	0.00	2	2.57	Existence of a pragmatic crisis management framework	11
Negative	74.3	0.011	2	2.78	Desirability of communication, health, welfare and service infrastructures (justice in distribution and access)	12
Negative	92.1	0.00	2	2.53	Having assets outside the village	13
Negative	1.06	0.00	2	2.45	Having a reconstruction program in the post-corona (especially tourism as the focus of rural development in the region)	14
Negative	62.3	0.01	2	2.65	Stabilization of the population and no movement	15
Suitable	3.60	0.09	4	3.89	Natural resources	16
Negative	1.4	0.00	2	2.37	Guaranteed purchase of manufactured products without intermediaries	17
Negative	1.1	0.005	2	2.79	Programs and measures for poverty alleviation and job creation	18
Negative	95.9	0.00	2	2.82	Using the lesson learned and the best practice to face future crises	19
Negative	3.1	0.00	2	27.2	Emphasizing prevention and adaptation (not actions after the crisis) among people and officials	20

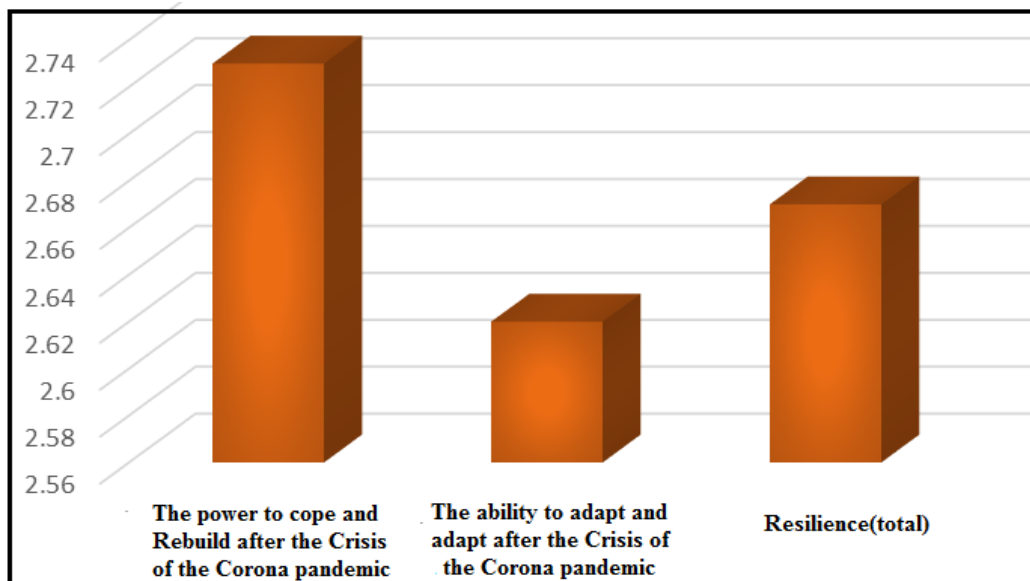
Table (6) shows the results of the t-test. Findings indicate that the average value for two measured dimensions of resilience, i.e., the ability to confront after the crisis and adapt after the crisis, are less than the optimal level (3), and calculated values are 2.73 and 2.62, respectively. In other words, the situation of confrontation activities and the adaptive capacity against the corona crisis were not at an inappropriate level. In general, the

average of 2.67 at a significance level of 0.01 shows the negative effect of the corona crisis on the livelihood resilience of the Oraman District of Sarvabad County villagers. In fact, it can be seen that the spread of the Coronavirus has severely damaged the livelihood of rural households due to the lack of access to assets, capacities and facilities.

Table 6. Summarized results related to the situation of coping and adaptation to the Corona pandemic at the regional level

Components	Expected Value	The difference from the optimal limit	T value	Significance	Degree of freedom	Mean	95% confidence level	
							Low	High
The ability to confront and rebuild after the corona pandemic	3	-0.262	-5.46	0.00	329	2.73	-0.357	-0.168
The ability to adapt and rebuild after the crisis of the corona pandemic	3	-0.379	-5.99	0.00	329	2.62	-0.516	-0.243
Resilience (sum)	3	-0.412	-6.94	0.01	329	2.67	-0.412	-0.230

Figure 8.



Summarized results for the situation of coping and adaptation to the Corona pandemic at the regional level

In the following, we used Pearson's correlation test to determine the adverse effect in the main dimensions of livelihood resilience of the villages in the region after the outbreak of Corona. The results, as illustrated in Table (7), suggest a direct, positive and significant relationship between the reduction of both dimensions of livelihood resilience and the overall livelihood resilience of the villagers. In other words, by reducing the value of each dimension, there has been a decrease in the desirability of another dimension, and the resilience of the villagers has also

decreased. The ability to confront and rebuild after the corona pandemic had the highest correlation with the state of livelihood resilience. The variables related to this dimension, which require immediate, necessary and short-term measure, has been mostly related to the decreased livelihood resilience of the villagers. In fact, the surprising and uncertain nature of the pandemic made short-term and immediate measures challenging and ambiguous, hence the short-term livelihood vulnerability of the villagers.

Table 7. Correlation of the main dimensions of resilience after the negative impact of the corona crisis in the region

		Livelihood resilience	The ability to adapt and rebuild after the crisis of the corona pandemic	The ability to confront and rebuild after the corona pandemic
Livelihood resilience	Pearson correlation	1	.520**	.653**
	Significance		.000	.000
	Total	330	330	330
The ability to adapt and rebuild after the crisis of the corona pandemic	Pearson correlation	.520**	1	.313**
	Significance	.000		.000
	Total	330	330	330
The ability to confront and rebuild after the corona pandemic	Pearson correlation	.653**	.313**	1
	Significance	.000	.000	
	Total	330	330	330

Significance at the level of 0.01

5. Discussion and Conclusion

This research aimed to answer the effect of the corona pandemic on the livelihood resilience of

the villagers in Oraman District of Sarvabad County.

In order to answer this research question, livelihood resilience was operationalized and measured in two components. First, short-term activities to confront the pandemic and prevent the impact of its adverse livelihood effects. Second, relying on actions and capacities that provide long-term adaptability to crises.

Two components gained averages of 2.63 and 2.72 at a significance level of 0.01. Therefore, the livelihood resilience of the villagers in Oraman District is in a bad situation in both dimensions of confrontation and adaptation. This situation implies neither the short-term confronting ability nor long-term adaptation ability for the region's villagers. In other words, after the pandemic, the provision of the livelihood of the villagers and the access to their livelihood assets has been severely reduced as the period was expanded and economic closures and social limitations were continued. This issue shows the low level of capacities of the local people. Capacity building is a central goal and program of international development organizations to improve the damaged areas. In addition, Increasing the capacities in rural areas at the individual, social and organizational levels makes a strong society which returns to the previous situation at the minor damage in the quality and quantity of livelihood in the shortest possible time. Taking long-term activities such as education, social security and empowering the local community, we can easily manage human and natural hazards and not turn into a crisis. This way, the villagers can secure their livelihood so they can easily absorb the risks and react adequately.

Also, the results showed that the variables in the adaptation dimension had the most significant impact on the poor livelihood resilience of the villagers against the Corona pandemic. The best solution for the resilience of rural areas is to

overcome the existing deficiencies and weaknesses in a fundamental and structural way. Indeed, we can only hope to reduce the effects of the pandemic in the short term. However, the more this situation continues, the sooner the livelihood system of the villagers falls apart. Therefore, the optimal management in the crisis of the corona to improve the livelihood of villagers and other similar crises is to move towards adaptive measures that empower the local community and increase their individual, social and organizational capacities. Unfortunately, the programs implemented in Oraman District to increase adaptabilities are limited. In this region, the crisis management system is highly ineffective and based on old and outdated approaches to crisis management.

The leading solution to improve the livelihood resilience of the villagers in the region against crises is to change the managerial perspective of crisis management from a traditional and passive approach to a new proactive approach. The suggested approach requires integrated management and is far from disorganization and disharmony of organizations in relation to locals and their participation. To this end, in addition to training development managers, there is a need to train locals and form a crisis management unit headquarters with effective performance, efficiency and up-to-date knowledge and awareness. Also, the empowerment of the rural poor of the region should continuously increase their capacities.

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Authors' contributions

The authors equally contributed to the preparation of this article.

Conflict of interest

The author declare no conflict of interest.

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سنجش و تحلیل اثرات پاندمی کرونا بر تاب‌آوری معیشتی خانوارهای روستایی (مطالعه موردی: روستاهای بخش اورامان شهرستان سروآباد)

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چکیده مبسوط

۱. مقدمه

بحران کوید ۱۹ یک شوک بزرگ و غیرمنتظره‌ای بود که تقریباً تمام دنیا را به طور همزمان، تحت تأثیر قرار داد. بنابراین یک نمونه منحصر به فرد از یک شوک کلی در سراسر جهان است. ضعف‌های متعدد در عرصه‌های روستایی به ویژه در عرصه‌های خدماتی و زیرساختی و حمایت و تامین اجتماعی با شیوه پاندمی کرونا و تسلط دوران قرنطینه بیش از پیش، آشکار شد.

بخش اورامان شهرستان سروآباد یکی از بخشهای استان کردستان است که در دوران همه گیری کرونا و تداوم آن تا وضعیت کنونی، شرایط متفاوتی را تجربه کرده‌است. با توجه به مقصد گردشگری بودن این منطقه در عرصه ملی و بین‌المللی، قرارگیری در مسیر ارتباطی استان کردستان و کرمانشاه، نزدیکی به مراکز تجمع کولبری استان و مرز با کشور عراق، ورود مستمر و مکرر بومیان منطقه از شهرستان‌های اطراف و حتی؛ شهرستان دیگر کشور به دلیل خروج نیروی کار روستاها به این مناطق و بازگشت آنها به روستاهای منطقه، اپیدمی کرونا به سرعت در منطقه گسترش یافت و به دنبال قرنطینه‌های سراسری، شرایط ویژه معیشتی در منطقه شکل گرفت. روستائانی که تامین معیشت آنها بواسطه همه‌گیری کرونا به شدت، دچار تحول شد؛ به ویژه اینکه خروج نیروی کار روستا و گردشگری به عنوان مهمترین، راهبردهای تامین سرمایه‌های معیشتی روستائیان، دچار رکود گردیدند. حال در پژوهش حاضر، مسئله اصلی، این است که وضعیت تامین معیشت روستائیان با بروز و تداوم پاندمی کرونا، دچار چه تغییراتی گردیده است؟

۲. مبانی نظری تحقیق

شیوع کرونا یک شوک ناگهانی بود که به دلیل فقدان تاب‌آوری لازم، به بحرانی همه‌گیر، پیچیده و در تمامی ابعاد زندگی انسانی، مبدل شد. با مطرح شدن هندسه شوک که اشاره به نوع جهت‌گیری و شرایط پیش آمده به دنبال بحران اقتصادی ۲۰۰۸ اقتصادی جهان

دارد، نقش تاب‌آوری اقتصادی را بسیار پررنگ می‌نماید چرا که آنچه تفاوت در ایجاد هندسه شوک را سبب می‌شود، وسعت پاسخدهی، مقابله و بازآفرینی نظام اقتصادی کشورهای مختلف می‌باشد هسته اصلی رویکرد تاب‌آوری معیشتی، استراتژی‌های سازگانه‌ای است که توسط خانوارها یا افراد در زمان شوک و استرس‌های وارده بر معیشت‌شان، اتخاذ می‌شود. انعطاف‌پذیری معیشتی، به این معنا است که استراتژی‌های معیشتی فردی و اجتماعی بکارگرفته شده توان مقابله با تأثیرات فشارهای و شوک‌های کوتاه مدت، ناگهانی و بلندمدت را برای افراد و اجتماعات آسان می‌نماید با بررسی هسته‌های اصلی تاب‌آوری، می‌توان دریافت که؛ قدرت مقابله که مبتنی بر اقدامات کوتاه مدت با وقوع بحران کرونا و حین آن می‌باشد و نیز، ظرفیت سازگاری که مبتنی بر اقدامات بلندمدت در راستای بازسازی معیشتی پس از بحران کرونا و حتی؛ در مرحله قبل از وقوع این بحران و مبتنی بر پیشگیری است؛ می‌توان به بررسی وضعیت تاب‌آوری معیشتی روستائیان با تداوم پاندمی کرونا پرداخت. در این میان، زمان؛ عامل مهمی به ویژه در بخش مقابله‌ای بررسی تاب‌آوری معیشتی روستائیان است؛ چرا که بایستی، در بهینه‌ترین حالت، اقدامات مناسب و متناسب جهت جلوگیری از نزول سطح معیشت روستائیان انجام گیرد. در این میان، چگونگی بازگشت به روال عادی معیشت قبل از بیماری و یا حتی، اتخاذ یک شیوه جدید تامین معیشت مبتنی بر تداوم پاندمی کرونا است که تعیین‌کننده، میزان تاب‌آوری معیشتی روستائیان می‌باشد.

۳. روش تحقیق

تحقیق از لحاظ هدف، کاربردی، به لحاظ روش، توصیفی - تحلیلی و از لحاظ گردآوری اطلاعات ترکیبی از روش اسنادی - پیمایشی است، قلمرو مکانی نواحی روستایی بخش مرکزی شهرستان اورامان و از لحاظ زمانی ۶ ماهه دوم سال ۱۴۰۰ را شامل می‌شود. متغیر مستقل در این پژوهش، پاندمی کووید ۱۹ و متغیر وابسته تاب‌آوری

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میانگین (۳)، کمتر بوده و به ترتیب با محاسبه میانگین‌های نامناسب برابر ۲.۷۳ و ۲.۶۲ می‌توان با اطمینان ۹۹ درصد اظهار کرد که وضعیت اقدامات مقابله‌ای و جبرانی و ظرفیت‌های سازگاران در برابر بحران ناشی از ویروس کرونا در منطقه مورد مطالعه در سطح رضایت بخشی نبوده‌است. در مجموع و حالت کلی هم، میانگین محاسبه شده برابر ۲.۶۷ در سطح معنی‌داری ۰.۰۱ نشان از اثرگذاری منفی بحران کرونا بر وضعیت تاب‌آوری معیشتی روستائیان بخش اورامان شهرستان سروآباد دارد. در واقع، می‌توان پی‌برد که معیشت خانوارهای روستایی بواسطه ضعف در دسترسی به دارایی‌ها، ظرفیت‌ها و امکانات مورد نیاز به شدت با شیوع و تدام کرونا آسیب دیده است

۵. بحث و نتیجه‌گیری

نتایج نشان داد که وضعیت تاب‌آوری معیشتی روستائیان در بخش اورامان در مقابل پاندمی کرونا، در هر دو بعد مقابله و سازگاری در وضعیت بسیار نامناسبی است. این وضعیت، نشان می‌دهد که نه توان مقابله کوتاه‌مدت و نه توان سازگاری بلندمدت معیشتی برای روستائیان منطقه وجود ندارد. به بیانی دیگر با شیوع کووید-۱۹، به دلیل آسیب‌پذیری بالای معیشتی روستائیان، تامین معیشت روستائیان و به ویژه دسترسی به دارایی‌های معیشتی‌شان به شدت، کاهش یافته و با تداوم تسلط این بیماری و آثار قرنطینه و تعطیلی‌های اقتصادی و محدودیت‌های اجتماعی آن، آسیب‌پذیری معیشتی روستائیان، افزایش یافته‌است. همچنین نتایج نشان داد که عدم مطلوبیت وضعیت متغیرهای بعد سازگاری، بیشترین تاثیر را در وضعیت نامناسب تاب‌آوری معیشتی روستائیان در برابر پاندمی کرونا داشته است. در این ارتباط، لازم به ذکر است که به واقع، به دلیل مشکلات متعدد نواحی روستایی و کمبودهای مختلف آنها در عرصه اقتصادی، اجتماعی و زیرساختی، تا زمانی که نتوان به صورت ریشه‌ای و ساختاری به کمبودها و ضعف‌های موجود، چیره شد و آن را از بین برد، نمی‌توان به افزایش قدرت تاب‌آوری معیشتی روستائیان، امیدوار بود.

کلیدواژه‌ها: پاندمی کرونا؛ تاب‌آوری معیشتی؛ بخش اورامان شهرستان سروآباد.

تشکر و قدردانی

پژوهش حاضر حامی مالی نداشته و حاصل فعالیت علمی نویسنده‌گان است.

معیشتی خانوارهای روستایی بخش اورامان شهرستان سروآباد در نظر گرفته شده است. جوامع آماری پژوهش را سه گروه، مردم محلی، مسئولین توسعه‌ای و متخصصان علمی منطقه، دربر می‌گیرند. در راستای تعیین حجم نمونه از این جوامع آماری در گروه مردم محلی، بر اساس جمعیت (۵۳۹۰ نفر) حجم نمونه آماری پژوهش برابر ۳۵۸ خانوار محاسبه گردید، اما در گروه دوم، یعنی در گروه مسئولین توسعه‌ای به روش هدفمند، تعداد ۱۸ نفر از مسئولین و در گروه سوم، مشتمل بر متخصصان علمی تعداد ۱۲ نفر از رشته‌های جغرافیا و برنامه‌ریزی روستایی، گردشگری، کشاورزی و جامعه‌شناسی توسعه، مشخص گردیدند

شهرستان سروآباد با مساحت ۱۱۶۸/۴ کیلومتر مربع در جنوب غربی استان کردستان قرار گرفته است. این شهرستان تا پایان سال ۱۴۰۰ دارای دو بخش مرکزی و اورامان و دو شهر به نام‌های سروآباد و اورامان تخت و هشت دهستان و ۷۴ آبادی دارای سکنه بوده است. بخش اورامان با ۱۴ روستا دارای ۳۷۰۷ خانوار و حدود ۱۴۲۶۹ نفر جمعیت، تابع شهرستان سروآباد است که در ۱۷۰ کیلومتر جنوب غربی مرکز استان کردستان (سندج) قرار دارد.

۴. یافته‌های تحقیق

بررسی پاسخ‌های ارائه شده در ارتباط با ظرفیت، قدرت مقابله و بازسازی روستائیان بخش اورامان، بعد از بحران‌ها به ویژه با شیوع پاندمی کرونا در تمامی متغیرهای مورد سنجش، سطح معنی‌داری کمتر از ۰.۰۵ محاسبه شده است و این امر، یکسانی اعتقاد روستائیان نسبت به وضعیت موجود (شرایط کرونایی) را نشان می‌دهد و بررسی پاسخ‌های ارائه شده در ارتباط با توانایی سازگاری و انطباق بعد از بحران شیوع پاندمی کرونا روستائیان بخش اورامان، نتایج استخراجی از پاسخ‌های ارائه شده در تمامی متغیرهای مورد سنجش، سطح معنی‌داری کمتر از ۰.۰۵ محاسبه شده و این امر، نشان از اعتقاد یکسان روستائیان به وضعیت ابراز شده دارد. جمع‌بندی پاسخ‌های ارائه شده در آزمون تی تک نمونه‌ای، حاکی از آن است که مقدار میانگین‌های محاسبه شده برای هر دو بعد تاب‌آوری مورد سنجش، یعنی؛ قدرت مقابله و بازسازی بعد از بحران شیوع پاندمی کرونا که بر اقدامات کوتاه مدت، مقطعی و فوری جهت جبران آسیب‌ها و بازگشت به روال عادی تاکید دارد و بعد توانایی سازگاری و انطباق بعد از بحران شیوع پاندمی کرونا که بر اقدامات بلندمدت و ارتقای ظرفیت‌ها در مواجهه با بحران‌های آتی دلالت دارد؛ در سطح معنی‌داری ۰.۰۱ از حد مطلوب، برابر

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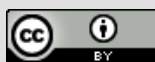
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Adopting the Indicators of Rural Governance in Realizing the Coordinated Management of Rural Development in Giulan Province

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Abstract

Purpose- The administration and policy-making have long been a principle to impact the sustainable development of rural areas. One of the most critical factors that ensure the achievement of an organization's goals is the structure design of the organization. The present research examines the influential factors in the organizational structure of rural development management in Guilan Province. The study analyzed the role of rural governance indicators and inter-organizational coordination in realizing the coordinated management of rural development. Ultimately, it proposed an executive strategy to realize the coordinated management of rural development planning in Guilan Province.

Design/methodology/approach- Based on Morgan's table, a sample size of 81 individuals with roles like specialist, expert, manager and employee of different organizations in Guilan Province, professors and graduate students of geography and rural planning were randomly and systematically selected. Data collection was done using a researcher-made questionnaire. The professors confirmed the validity of the questionnaire, and the reliability was determined with Cronbach's alpha, with a value of 0.82.

Finding- This research is an applied study in terms of the purpose; In terms of nature, it is descriptive-analytical and quantitative-qualitative in terms of methodology. The data obtained from 37 items were analyzed using SPSS statistical software to provide solutions based on seven leading indicators of rural governance and five indicators of inter-organizational coordination. The research findings show that the model based on rural governance indicators and inter-organizational coordination mainly consists of coordinating, obliging and responsive indicators to realize the coordinated management of rural development planning.

Practical implications- To this end, the establishment of a "coordinated management council for rural development planning of Guilan Province under the supervision of the governor" is proposed.

Keywords: Rural governance, Coordinated inter-organizational management, Rural development, Guilan Province.

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1. Introduction

Rural geography is a geographical field that investigates contemporary social and economic phenomena in rural areas. Over 30 years of history, rural geography has produced research theories and methods by a large group of researchers. Social space is a common topic in this field, focusing on social conflicts, relations between humans and nature, demographic changes, etc. Also, an important issue for rural geography is the definition of "rural areas". According to the literature, in various definitions, the rural area is a physical, social or economic space. Therefore, this confirms that there is no single definition of this space. However, in a more traditional and accepted definition, a rural area is a physical space with relatively low population density, scattered settlements and extensive land use (Bansky, 2002).

Rural areas play an essential role in national development because the sustainable development of the land depends on the stability of the rural system as a subsystem of the regional and national land systems. Moreover, the consequences of a failure in the development of rural spaces will not be restricted to rural areas; instead, it will include urban areas and a region (Jahan al-Dini et al., 2022).

In recent years, the emergence of new forms of governance in rural areas has led to new research topics in rural studies. One of the main factors of these changes is the increasing involvement of local citizens in economic, social and environmental strategies. Non-political local, national and international actors have also become an integral part of this transformation, and the new arrangements have created new spaces for different and new types of power (Molaei Hashjin & Haj Alizadeh, 2018)

In Iran, the government had to submit the bill to appoint the organizations for the "Government's obligation for balanced rural development" to the parliament within three months. While after more than a decade, it has not taken an executive form, and the villages still face many problems due to the lack of responsible organizations. Due to the current sectoral and centralized planning system, executive entities design and implement their plans without coordinating with other organizations. As a result, the programs neither prioritize the villagers' needs nor are there not field evaluations

for their performance and effectiveness. More delay in organizing the country's rural development affairs and forming a powerful organization imposes a massive cost on the country regarding financial irregularities and waste of public resources. (Islamic Parliament Research Center of Iran, 2016).

The country's administrative system structure makes organizations rely on one another and carry out many activities with cooperation. When this inter-organizational coordination does not occur or is delayed, the outcome will not be achieved, or the outcome will not be completed or satisfactory. Therefore, we cannot correctly analyze rural management on the micro-scale unless the macro scales of decision-making are investigated. There is also a middle level of changes and transformations of the organizational structure related to the rural society of Iran, which is connected to the macrostructure and surrounds the society.

Management in the real sense does not exist in the country's rural management system at the lower levels because the management system needs arbitrary powers and tools, which delegate authority to higher levels and creates decentralization of the system. An overview of the previous studies suggests that rural development management's primary issue is solving structural, institutional and organizational problems.

More than 30 executive institutions, administrations and organizations are directly related to the villages and provide services to the villagers. A coordinating department between these organizations is still being determined. However, at least in underprivileged provinces far from the center, including Guilan Province, we know there is no coordination among organizations. Because each organization and executive provide their services separately, there is practically no coordination between them. Management, like other sciences, uses an ever-changing stock of knowledge. Therefore, strategic management is necessary for success in any organization. So which device should be the strategic planner of other executives of rural management?

The Department of Environment, Forestry, Rangeland and Watershed Organization, Ministry of Agriculture Jihad, Housing Foundation of Islamic Revolution, the Deputy of Rural

Development, Ministry of Cultural Heritage, Handicrafts and Tourism, Law Enforcement Force Office, Ministry of Interior are among organizations related to rural affairs. The number of organizations in the public sector can be a

strength. Nonetheless, a challenge has been created for rural management in the country due to parallel duties, confusion in the scope of authority, and the need for horizontal communication between different organizations. (figure 1).

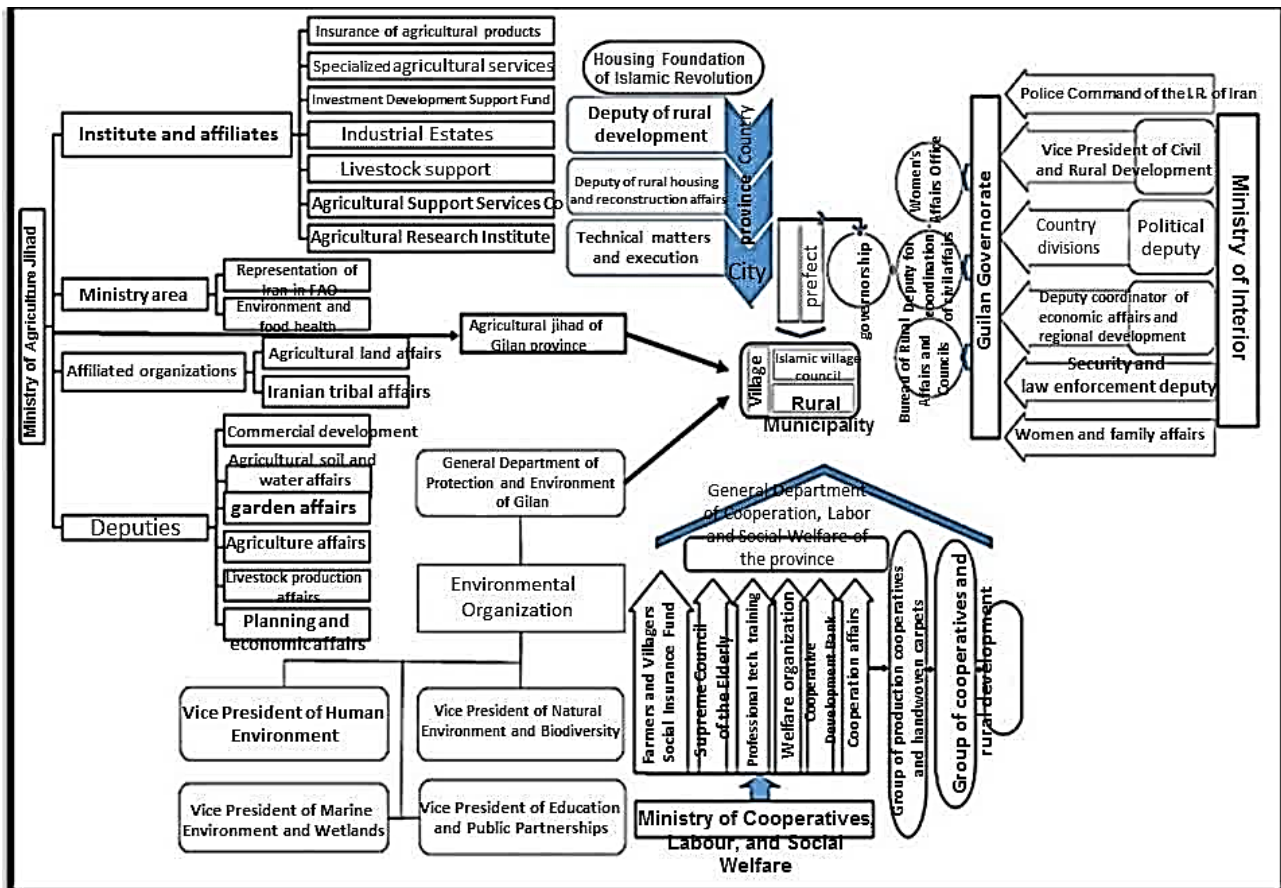


FIGURE 1. The executive and political process of rural affairs in five organizations related to rural management in Guilan Province

In this situation, there are many decision-makers and policymakers in the management of rural development. As a result, there is a sector and program-oriented view, which makes it impossible to expect significant progress in rural development. The formation of rural councils and institutions is due to the multiple tasks and lack of accurate, correct and timely implementation of rural projects.

Some of the challenges of the rural management of Guilan Province are as follows:

1. Absence of a common and coordinated point of view in the operationalization of up-scaled plans in the rural area.
2. Imbalance of development (social, economic, infrastructure) of rural and urban areas

3. Lack of integrated and coordinated management between the executive administrations and the existence of interference and parallel work.
4. The low level of knowledge of rural management in the village's executive structure and local management and the lack of training to improve the knowledge.
5. Absence of comprehensive, integrated, coordinated and centralized rural statistics and information system in Guilan Governorship.
6. Weakness of online information network, efficient and effective new technologies in rural areas such as agriculture, livestock, education, handicrafts and rural products, as well as publicizing successful plans and projects for Commercial and manufacturing.

7. Unbalanced distribution of financial resources and capital in rural areas.
8. Lack of attention to villages with a population of fewer than 20 households as the most vulnerable areas.
9. Lack of traditional architectural patterns appropriate to the climate of rural areas. Migration of land grabbers and non-native people from other provinces and the destruction of natural resources and landscape
10. Lack of plans and programs for the rural heritage of the province (sports, music, clothing, traditions, etc.).

The Deputy of the Islamic Parliament Research Center investigated some basic tasks in the macro strategy documents, the permanent laws and the Sixth Development Plan for rural development. In addition, this center reported the occurrence of delays, violations and fundamental omissions by the institutions (2021), which is another evidence of the problems and challenges in rural development management in Guilan Province. Some part of the report is as follows:

1. The complaints of the administrative organization from the implementation of the task of part "3" paragraph "b" of article (27) of the law of the sixth plan in the management of rural and nomadic areas.
2. The omission of the Planning and Budget Organization in clarifying the budgets related to rural and nomadic affairs, contrary to part "2" of paragraph "a" of the article (27) in the law of the sixth development plan.
3. The omission of the government (Ministry of Economic Affairs and Finance) to reduce the duration of issuing permits for village economic enterprises to a maximum of 15 days, despite the stipulation of Part "3" Clause "A" of Article (27) in the Law of the Sixth Development Plan.
4. The omission of the Minister of Agriculture from acting on Articles (1) and (2) of the Law on the Formation of the Ministry of Agriculture approved on 27/12/2000 SH.
5. Illegal act against the law by the vice president in appointing the trustees of village affairs in the form of a circular letter.
6. Violation of the Supreme Administrative Council in the implementation of Part "3", Clause (B) of Article (27) in the Law of the Sixth Plan on the Integration of Agricultural, Rural and Nomadic Affairs.

At the end of the investigation of the deputy of the Islamic Parliament Research Center, some points were asserted as follows: The examination of the performance of the government regarding the tasks related to rural and nomadic development in the macro strategies, permanent laws and the law of the sixth development plan, significantly articles (26) and (27), showed that for most of the tasks, no appropriate implementation acts had been taken. On the other hand, sometimes executive bodies have issued rules that are against the approved laws. Some of the most important tasks related to the law of the sixth development plan, which the government has not taken, will be noted in 2 separate sections under the headings of "omission" and "diversion and violations".

Regarding the reform of the organizational structure for rural development, management is pivotal in the country's management of the law. This research aimed to provide a suitable model based on rural governance indicators and inter-organizational coordination to realize the coordinated management of rural development planning in Guilan Province. The study results provide the basis for the progress and development of villages with scientific planning in creating coordination between rural service organizations, which is obtained by reorganising executive departments of Guilan Governorship.

2. Research Theoretical Literature

Comparing the conceptual, operational, traditional and experimental literature suggests that for strategic planning for coordination, merely theoretical research should be replaced with a combined plan. This plan can accelerate the actions and facilitate inter-organizational coordination and rural governance to achieve the goals of the rural development vision plan in Guilan Province. To this end, deploying efficient, result-oriented coordinator managers is a must. Poor coordination and parallel work have made it challenging to divide tasks between the managers, which leads to inconsistency and lack of responsibility. "integration of rural development management" has been long studied by researchers, and a brief of them is listed and explained in [Tables 1, 2 and 3](#). The idea of forming a "Ministry of Nomadic and Rural Affairs" is dominant among academic researchers. However, our study tries to investigate the issue of coordination between institutions and organizations in charge of rural affairs according to the existing conditions and management structures of the country and Guilan

Province. We use the combined concepts of rural governance and inter-organizational coordination.

Table 1. The strategic plan for the transformation of the administrative system according to the concepts of good rural governance

Source: Karegar Shorki, 2006: 190

Row	The title of the strategic plan	Concepts and main components	Rural good governance concepts
1	Making appropriate size for the government	Outsourcing the activities Partnership with the non-governmental sector Creating a database for information and statistics of the administrative system	Participation Consensus (group decision-making)
2	Transformation in organizational structure	Consolidation of the provincial units Transfer of duties and delegation of authority Organizational reforms	Participation
3	Transformation in management systems	Performance evaluation system Administrative system improvement against corruption Clear rules for appointing and changing managers	Responsiveness Responsibility
4	Transformation in recruitment systems	Contractual employment Occupational support promotion plan Recruiting and maintaining high-educated human resources Recruitment facility	The central role of the law
5	Training and improvement of human resources	New system of training employees and managers New employee evaluation system Recruitment test	Participation Community building
6	Process improvement for administrative technology development	Digital government Creating a website Information technology training Simplifying processes Establishment of quality management systems Standardization of services Organization of official spaces	Responsiveness Accountability
7	Protecting the dignity	Informing Documenting and modifying work practice Asking people's opinion Using Interactive voice response	Transparency Accountability

Table 2. Theoretical foundations of inter-organizational coordination

Source: Bigdelo & Rahnavard, 2017; Mulford, 1979; Jennings, 1994; Sidman & Gilmour, 1986; Jennings & Ewalt, 1998; Wood, 2010; Ahsan, 2010; Singh, 2011; Salmon et al., 2011; Ogulin et al., 2012.

Row	Source:	Factors affecting inter-organizational coordination
1	Mulford (1979)	1) Managers' positive attitude 2) Organizations having similar and common interests 3) Understanding that coordination is necessary 4) Managers' awareness of their organization's dependence on others 5) Geographical proximity of organizations
2	Jennings (1994)	1) technical issues 2) ineffective communication 3) different priorities of the organizations 4) regarding coordination to be not compelling on performance 5) lack of motivation 6) rudimentary support 7) lack of some boundaries
3	Sidman & Gilmour (1986)	1) common goals 2) following the ordinary legal system 3) agreeing on standards 4) consistent professional outlook 5) the possibility of helping others

Row	Source:	Factors affecting inter-organizational coordination
4	Jennings & Ewalt (1998)	1) separate mission 2) competition for resources 3) conflicting legal powers 4) different customers
5	Terawatanavong & Paladino (2003)	1) trust 2) commitment 3) customer orientation 4) entrepreneurship
6	Wood (2010)	1) Lack of information sharing 2) Lack of trust and unwillingness to work together 3) Power and ability imbalance 4) Competitive pressures 5) Lack of risk and reward sharing 6) Incompatible goals
7	Ahsan (2010)	1) Division of work 2) Informal communication 3) Resources 4) Organizational culture (shared trust and norms)
8	Singh (2011)	1) Commitment of senior management 2) Organizational elements 3) Mutual recognition 4) Information flow 5) Relationships and decision making 6) Attention and reaction
9	Salmon et al. (2011)	1) Organizational barriers 2) Information management 3) Communication 4) Situational awareness 5) Equipment 6) Cultural issues 7) Training
10	Moshtari & Gonsalves (2012)	1) direct: Commitment, trust, and special relationships between investors 2) Indirect: opportunistic behaviors, short-term tendencies, strategic communication and operations, ability to manage relationships
11	Ogulin, selen & Ashayeri (2012)	1) IT Capability 2) Rules and Regulations 3) Relationship Alignment 4) Operational Performance

In the field of rural development and development, especially rural management, there are various executive bodies with parallel and similar tasks. Nowadays, the existence of various administrative bodies to fulfil the duties of the relevant department in the villages is inevitable due to the

diversity of rural activities. It is expected that all affairs of villages should be done under an integrated form of rural management because rural development is a multi-departmental category (Molaei Hashjin, 2012-a).

Table 3. Theoretical frameworks regarding good rural governance and inter-organizational coordination

Row	Year	Author(s)	Title	Findings
1	2011	Zarei, Safamia, & Abbasi	Analysis of inter-organizational cooperation in organizations related to crisis management in Fars Province (pre-crisis phase)	Increase in agencies of governance, events management, organizational independence, reciprocity and trust, and inter-organizational cooperation to prepare for natural disasters.
2	2012	Roknadin Eftekhari et al.	Presentation of an Appropriate Rural Good Governance Model in Iran	Good rural governance in most of the studied villages could have been in better condition. Because of the lack of balance or coexistence between the actors "government, market and civil society", the villages' structural system emphasised a mechanical approach instead of a humanistic approach and elite planning instead of participatory planning.
3	2017	Bigdelo & Rahnavard	Measuring inter-organizational coordination and identifying factors affecting it in public organizations	The research was carried out to measure the degree of inter-organizational coordination and to identify the influencing factors in the public organizations of Karaj County. The influencing factors on inter-organizational coordination were categorized as follows: 1. Willingness to cooperate, 2. Regulation of inter-organizational relations, 3. Mutual understanding and mutual interests, 4. Alignment and interdependence, 5. Legal agreement. The linear regression analysis showed that among the mentioned factors, the willingness to cooperate factor and the inter-organizational relations adjustment factor have an effect on inter-organizational coordination.

Row	Year	Author(s)	Title	Findings
4	2017	Moarefi, & Mohammadi.	Explaining the appropriate structural model for the management of the Iranian rural development system	The country's management system is centralized, so participatory and local management has been less noticed. Since in the centralized system, resources are distributed from top to bottom, so only a few of the resources reach the villages. As a result, rural development has yet to be realized as it should be due to the lack of coordination between different organizations. As a result, rural areas have problems such as poverty, unemployment, the gap between the village and the city, and the migration of villages to the cities.
5	2019	Heidari Sareban	Evaluation of rural local management pattern based on good governance indexes, Case Study: Meshkin Shahr	Most of the indicators of good governance, such as social participation, accountability, efficiency and effectiveness, legality, justice and equality, consensus, and transparency in the rural areas of Meshkinshahr city, have had a good status.

Table 4. Indicators and characteristics of good governance from the point of view of international organizations and institutions and experts

Source: Azimi Amoli, et al. 2011

Row	International organizations/national institutions/experts	The indicators
1	ODA1 (Foreign development management)	Legitimacy and competence of the government, accountability, respect for human rights and compliance with the law
2	United Nations Conference on Human Settlements	Being responsive and inclusive, participatory, the rule of law, transparency
3	Chanadrasekara & Wijayaratna, (2004)	- Creating and strengthening democratic structures - Transparent, responsive, intelligent and cooperative development - Attention and response to people's requests - Establishing economic policies to facilitate the development - Respect for human rights and the rule of law
4	Kaufmann et al. (World Bank) 2000	Freedom of speech, political stability, effectiveness, quality of law and regulations, the rule of law, corruption control
5	U.N.D.P (2000)	Accountability, consensus, participation, central role of the law, justice and equality, accountability, transparency
6	Hutter & Shah (2000)	Citizen participation (CP) - political freedom, political stability, Government-oriented (GO) - judicial efficiency, administrative efficiency, low corruption Social development (SD) - human development, equitable distribution Economic management (EM) - return on earnings relative to the rate of GDP
7	United Nations Environment Program (2005)	Participation in Council elections, mayor elections, civil associations Effectiveness Income sources, consumer satisfaction Equity: Charter on citizens' rights, the percentage of women in the council Accountability: audit, declaration of assets and income, responding to citizens' complaints Security Prevention of crimes, conflict settlement
8	Mehta (2002)	Accountability, responsibility, innovation in management, partnership between private and public sectors, interaction of citizens with local government, decentralized management, networking, human resource development

To sum up, the model of good governance in the world has been utilized because of problems such

as centralized management, lack of trust in the government, lack of attention to civil society

¹ ODA=Overseas Development Administration.

associations and institutions in the management of society, shortage of power networks in society, reduction of government downsizing, no election for choosing roles, the lack of people's participation in the process of planning, decision-making and implementation, poverty and deprivations, especially in rural areas, the lack of attention to the capacity of local communities and local supervision, the widespread migration of rural people to cities, especially young workforce, top-down and bureaucratic planning method, lack of respect to individuals rights in the process of sustainable development, etc. Therefore, people's power should be formed in sustainable regional development to govern and realise in rural environments (Azimi Amoli et al. 2013).

3. Research Methodology

3.1 Geographical Scope of the Research

The location of this research is Guilan Province, one of the country's northern provinces, whose capital is Rasht. Caspian Sea and Azerbaijan from the north, Ardabil from the west, Zanzan and Qazvin Province from the south and Mazandaran Province from the east are adjacent to Guilan Province. The area of Guilan Province is 14,044 square kilometers, and according to the 2016 census, its population was 2,530,696. This province has 17 Counties. The population density in this province is the third highest in Iran, with 177 people per square kilometer.

Rasht has 46% of the total population of the province, and it is the most populated city in the north and the 11th in Iran. According to the population and housing census of 2015, the total rural population of Guilan Province is 927,660. 457,543 are women, 470,117 are men, and the number of literate people is about 679,309.

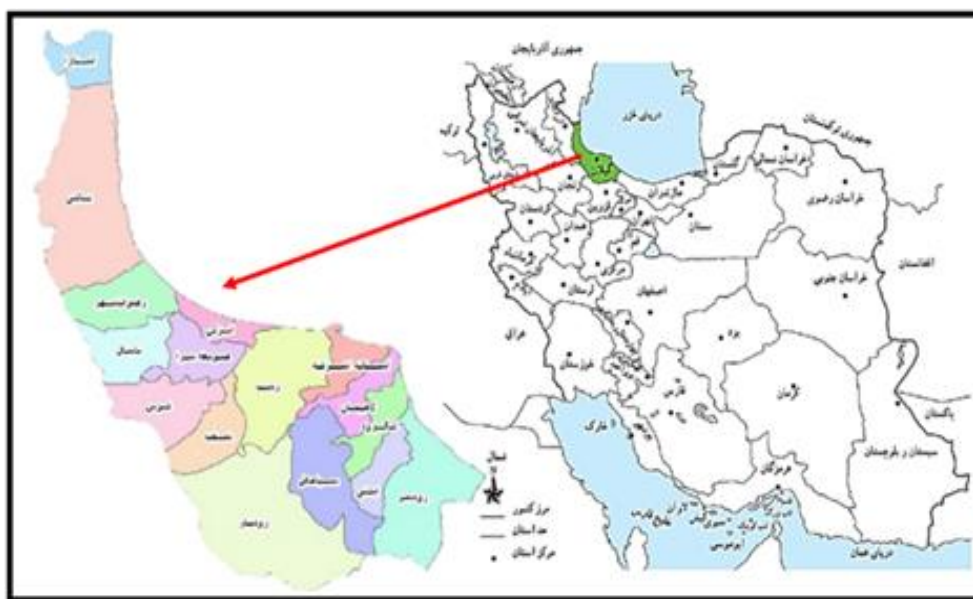


Figure 2. Location of the study area in the country

3.2. Methodology

According to the research topic, which requires the necessary knowledge, experience and knowledge in the rural and organizational management of rural Guilan Province, the statistical population under study was limited to 100 people. Based on Morgan's table, a sample size of 81 individuals with roles like specialist, expert, manager and employee of different organizations in Guilan Province, professors and graduate students of geography and rural planning were randomly and systematically selected. Data collection

was done using a researcher-made questionnaire based on a Likert scale. The measuring scales formed a 5-point ordinal scale (very high, high, medium, low, and very low), and the respondents could select their opinion about the statements. The professors confirmed the validity of the questionnaire, and the reliability was determined with Cronbach's alpha, with a value of 0.82. Also, the research is consistent with three philosophical schools: 1-classical, 2-neoclassical, and 3-structuralist. Also, it uses theories of empowerment, participatory development, capacity development, institutional

development, and modern rural theories. This research is an applied study in terms of the purpose; In terms of nature, it is descriptive-analytical and quantitative-qualitative in terms of methodology. The study was carried out in two forms a library research method and field surveys. The data were obtained from 30 items to examine the research hypothesis: "Executive solutions extracted from rural governance indicators are effective in managing the coordination of rural development planning in Guilan Province." The items are based on 8 indicators of rural governance (participation, lawfulness, group agreement and interactions, accountability, justice, accountability, efficiency, effectiveness and transparency) and 5 indicators of inter-organizational coordination (collaborative decision-making, integration of operations, control and monitoring, relationships and communication, formality).

4. Research Findings

In Guilan Province, the situation of rural management has been almost the same. In the

current situation, out of the total number of inhabited villages in the province, 1425 villages have rural municipalities, which includes 98.3% of the villages with more than 50 households. These villages cover about 86% of the rural population of Guilan province.

This province's interweaving of rural and urban settlements is very evident. This close relationship between villages and cities led to a new management model, so in terms of social structure and culture, villages are not much different from cities. There are four groups or classes of rural settlements in the coastal, plain, foothill and mountain settlements, but about 81% of the rural population of the province is in the coastal-plain zones. While the coastal-plain zone occupies about 35% of the area of the province, the foothills-mountainous zone occupies about 65% of the area province. Also, about 91% of the districts, 92% of the rural districts and 56% of the province's villages are located in the coastal-plain zone.

Table 5. The latest political division of Guilan Province (until March 2020)

Source: Extracted from the country divisions in the Ministry of Interior, 2021

Province	Number of counties	Number of cities	City with municipality	District	Rural district	All villages	Other settlements
Guilan	17	53	60	46	113	2910	630

Villages with supervisory management (Islamic councils) and executive management (full-time rural municipalities) are villages with more than 1500 people. 98.3 percent of villages with more than 50 households have supervisory management and part-time executive management. Therefore, there is a need to provide executive management to cover 1.7 percent of villages. Villages without supervisory and executive management are all villages with less than 20 households in the province. It contains about 30.6 percent of the inhabited villages of the province, with 824

villages. Meanwhile, about 66% of the villages in this group have between 5 and 20 households, and 34% of the rest have less than 5 households.

From 2004 to 2011, 1489 rural municipalities' establishment permits were issued, including 5.95% of all permits in the country, and Guilan Province ranks fourth after Khorasan Razavi, Mazandaran, and Fars provinces. The distribution of the issued permits shows that 58.97% of the rural districts of Guilan province were in 2004, and 41.3% of the rest were from 2005 to 2011 (Molaei Hashjin & Haj Alizadeh, 2018).

Table 6. Distribution of rural municipality in Guilan Province between 2004-2011

Source: Organization of municipalities and rural affairs, Deputy of Rural Municipalities Affairs, 2014

Description		1383	1384	1385	1386	1387	1388	1389	1390	Total
All the Country		14034	2010	2502	1716	1400	673	1218	1463	25016
Guilan Province	Number	878	26	134	100	141	65	1	144	1489
	Percent all the county	6.26	1.29	5.36	5.83	10.07	9.66	0.08	9.84	5.95
	Percent in the province	58.97	1.75	9.0	6.72	9.47	4.37	0.07	9.67	100

4.1. General characteristics of respondents

The survey results show that 59.3 percent of the respondents are men, and 40.7 percent are women. Regarding age, 35.80 percent are 41-50, and 27.16 percent are 20-30. The place of birth and residence of most of the respondents were in the city. Also, regarding education degrees, about 48% had a doctorate, 30% had a master's degree, and 21% had a bachelor's degree. In terms of the field of study,

about 16% were in geography, and rural planning, about 15% of the fields related to agricultural management, and the rest were in other fields related to rural affairs. The study tried using a combination of higher education levels, expertise and related jobs in the rural area. The respondents were from organizations, opinions, academic domains, and scientific centers in Guilan Province (Table 7).

Table 7. General characteristics of the respondents

Title		Freq uenc y	Frequency Percentage	Title		Freq uenc y	Frequency Percentage
Gender	Male	48	59.3	Field of Study	Natural resources	8	9.87
	Female	33	40.7		Agricultural management	12	14.81
Age	20-30	5	6.17		Biology	8	9.87
	31-40	22	27.16		Geography and rural planning	13	16.05
	41-50	29	35.80		Civil engineering	3	3.70
	51-60	25	30.86		Social Sciences	4	4.94
Education	Bachelor degree	17	21		Management	5	6.71
	Master's degree	25	30.90		Agricultural Extension Education	11	13.5
	Doctoral	39	48.10		Agronomy and plant breeding	3	3.70
Job Position	Manager	8	9.87		Change Management	5	6.71
	Supervisor	15	18.52		Information technology	3	3.70
	Consultant	5	6.17	Place of birth	City	59	72.8
	Staff manager	6	7.41		Village	22	27.2
	Technical officer	14	17.28	place of living	City	74	91.4
	Technical Assistant	5	6.17		Village	7	8.6
	Member of the village council	28	34.57				

The research hypothesis was related to two parts, including "Inter-organizational coordinated management" and "Rural governance". The rural governance component had variables of participation of items (1 to 8), the lawfulness (9 to 17), responsiveness (24 to 25), transparency (22-23), group agreement and interactions (18 to 19), efficiency and effectiveness (40-38), accountability (21-20). Furthermore, the inter-organizational coordination component had variables of collaborative decision-making (57 to 59), integration of operations (45,48,60,61,62), control and monitoring (46,47), relations and communications (44,52), formality (53,63).

The frequency of respondents regarding the situation of rural management in Guilan Province in the two components of rural governance and coordinated inter-

organizational management, there are two points which can be used to confirm the hypothesis:

The items of the "inter-organizational coordination" component were set based on the existing challenges and problems of rural development management, and the answers received from the respondents are aligned with the findings of existing studies. The respondents chose mainly option 4 for indicators of "collaborative decision-making, integration of operations, control and monitoring, relations and communication, and formality". The rural people of Guilan Province highlighted the need for inter-organizational coordination in the structural framework of the rural management system of Guilan Province.

Table 8. Items related to the indicators of the inter-organizational coordination component

		Description	1		2		3		4		5		Total	
			Very low		Low		Medium		High		Very high			
			Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Collaborative decision-making	57	To what extent is the inequality in the distribution of financial resources and investment facilities allocated by the government among villages a factor in the slow rural development process in Guilan Province?	4	4.94	5	6.17	19	23.46	28	34.57	25	30.86	81	100
	58	To what extent is the expansion of coordinated management for rural development planning an influential factor in the progress and development of rural Guilan?	7	8.64	2	2.47	23	28.40	33	40.74	16	19.75	81	100
	59	If coordinated management of rural development planning is realized based on rural governance indicators, to what extent will the construction and rural development of the province speed up?	9	11.11	8	9.88	17	20.99	35	43.21	12	14.81	81	100
Integration of operations	45	To what extent do the cooperation, participation, coordination and alignment of related civil and rural development agencies of Guilan Province affect realizing social, economic and spatial justice and sustainable rural development?	10	12.35	13	16.05	22	27.16	22	27.16	14	17.28	81	100
	48	Can an organization like the "Rural Affairs Office of the Governorship of Guilan", with its legal authority, play the role of coordinator in implementing rural policies and programs?	7	8.64	6	7.41	18	22.22	32	39.51	18	22.22	81	100
	60	After accepting the existing obstacles in managing rural development planning in Guilan Province, to what extent can effective steps be taken in realizing coordinated management and sustainable rural development of the province?	7	8.64	13	16.05	20	24.69	32	39.51	9	11.11	81	100
	61	By accepting the existing institutional parallel works in the management of rural development in Guilan Province, to what extent can effective steps be taken in realizing the coordinated management and sustainable rural development in Guilan Province?	7	8.64	12	14.81	16	19.75	32	39.51	14	17.28	81	100

		Description	1		2		3		4		5		Total	
			Very low		Low		Medium		High		Very high			
			Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
	62	After accepting the existing institutional inconsistencies in the management of rural development planning in Guilan Province, to what extent can effective steps be taken in realizing the coordinated management and sustainable rural development in Guilan Province?	5	6.17	11	13.58	23	28.40	29	35.80	13	16.05	81	100
Control and monitoring	46	The effect of employing young and specialist workforce in the rural development management, planning and executive structure of Guilan Province to achieve sustainable development goals.	11	13.58	25	30.86	35	43.21	8	9.88	2	2.47	81	100
	47	To what extent has the "Rural Affairs Office of the Governorship of Guilan" been effective in establishing coordination and follow-up approvals, implementing policies, fair budget allocation and facilities and functions of the rural sector of the province?	9	11.11	12	14.81	28	34.57	25	30.86	7	8.64	81	100
Relations and communications	44	To what extent is the participation, coordination and alignment of organizations and different civil and rural development departments of Guilan Province effective in achieving spatial justice and sustainable rural development?	11	13.58	20	24.69	16	19.75	21	25.93	13	16.05	81	100
	52	Evaluation of the speed of rural development and the lack of coordination between the executive missions and tasks and operational plans of the executive organization in Guilan Province.	4	4.94	4	4.94	16	19.75	40	49.38	17	20.99	81	100
Formality	53	Evaluation of the sector-ordinated approach and management in the duties and missions of the executive organizations of the rural area of Guilan Province.	3	3.70	7	8.64	13	16.05	35	43.21	23	28.40	81	100
	63	After accepting the existing obstacles, parallel work and inconsistencies in the management of rural planning in Guilan Province, to what extent can effective steps be taken to realize coordinated management and sustainable rural development of the province?	5	6.17	6	7.41	12	14.81	37	45.68	21	25.93	81	100

2. Items related to "rural governance" are based on the following indicators: participation, lawfulness, group agreement and interactions, accountability, justice, accountability, efficiency, effectiveness and transparency. They are derived from studies and field research on the challenges of rural management in Guilan Province. The respondents were dissatisfied with the current state of rural management with the good rural governance in Guilan Province. 38.28% of the respondents are dissatisfied with the performance of the officials

and managers of rural affairs in reporting performance to the people and creating transparency by choosing the "very little" option. In general, the responses on the inter-organizational coordination indicators ranged from moderate to high, whereas for rural governance indicators, most of the responses ranged from moderate to very low. Therefore, rural management in Guilan Province is facing challenges in implementing the "rural governance" indicators.

Table 9. Items related to the indicators of the rural governance component

		Description	1		2		3		4		5		Total	
			Very low		Low		Medium		High		Very high			
			Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Participation	1	How do you evaluate the participation of the rural community in rural development (participation)?	13	16.05	15	18.52	32	39.51	14	17.28	7	8.64	81	100
	8	How do you evaluate the cooperation of the institutions in charge of rural affairs of the province in realizing the principles of sustainable rural development in all environmental-ecological, social-cultural, economic, institutional-managerial and physical-spatial dimensions (participation)?	20	24.69	29	35.80	28	34.57	4	4.94	-	-	81	100
Lawfulness	9	How do you evaluate the institutions, organizations and departments' awareness of laws, regulations, rights and rural affairs (lawfulness)?	18	22.22	28	34.56	26	32.09	9	11.11	-	-	81	100
	17	Evaluation of the performance of the rural affairs headquarters of the province toward the fair distribution of facilities and services and realizing the justice of the rural area of Guilan (lawfulness).	17	20.99	35	43.21	24	29.63	5	6.17	-	-	81	100
Responsiveness	24	To what extent are the rural institutions and organizations of the province accountable for their performance?	32	39.51	24	29.63	19	23.46	5	6.17	1	1.23	81	100
	25	How "responsible" are the organizations related to the management of planning, construction and rural development of the province in the correct implementation of their policies and functions?	26	32.10	34	41.98	20	24.69	1	1.23	-	-	81	100
Transparency	22	Evaluation of officials and managers in charge of rural affairs reporting the performance to the people with "transparency".	31	38.27	22	27.16	25	30.86	3	3.70	-	-	81	100

		Description	1		2		3		4		5		Total	
			Very low		Low		Medium		High		Very high			
			Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
	23	How "transparent" are the organizations related to the planning and construction management and rural development of the province in implementing their policies and functions?	28	34.57	33	40.74	16	19.75	4	4.94	-	-	81	100
Group agreement and interaction	18	Evaluation of the coordination of rural executive organizations in actions, services, and legal affairs approved in rural areas (group agreement and interactions).	15	18.52	33	40.74	27	33.33	6	7.41	-	-	81	100
	19	Evaluation of the alignment of officials and executives of rural development and reconstruction in fair allocation of funds and facilities and paying attention to rural needs (group agreement and interactions).	20	24.69	37	45.68	24	29.63	-	-	-	-	81	100
Effectiveness and efficiency	38	Evaluation of the actions of the executive bodies in the rural area regarding capacity building, empowerment, responsibility, education, self-sufficiency, self-management and self-reliance of villages.	11	13.58	24	29.63	16	19.75	23	28.40	7	8.64	81	100
	40	To what extent do you evaluate the experience, skills, expertise and education of the officials and executives in the various departments of rural development affairs related to the rural geography of the province (efficiency and effectiveness)?	15	18.52	16	19.75	19	23.46	22	27.16	9	11.11	81	100
Accountability	20	The level of "responsibility" of officials and executives of various rural development agencies of the province.	25	30.86	29	35.80	22	27.16	4	4.94	1	1.23	81	100
	21	The level of attention, commitment, compassion and responsibility of the provincial bodies related to rural construction and development.	22	27.16	24	29.63	31	38.27	4	4.94	-	-	81	100
	32	Evaluation of the actions of the executive bodies of the province in the rural area regarding the empowerment of villages.	17	20.99	39	48.15	21	25.93	4	4.94	-	-	81	100
	36	Evaluation of the actions of the executive bodies of the province in the rural area regarding the self-governance of the villages.	20	24.69	32	39.51	25	30.86	4	4.94	-	-	81	100

4.2. Effective executive bodies in the rural management of Guilan Province

The organization of Forests, Range and Watershed Management is under the supervision of the Ministry of Agriculture with the mission of preserving and maintaining the lands and natural environment. Other organizations which work to help villagers are the department of Environment responsible for the protection and maintenance of

natural resources, the Ministry of Interior, with the deputy of rural construction and development responsible for political issues of the village, the Housing Foundation of Islamic Revolution with the deputy of rural development which implements rural guide and rural housing renovation projects, and the Ministry of Cooperatives, Labour, and Social Welfare with the deputy of rural development and cooperatives. Unfortunately, in

the last few decades, Rural Guide projects in Guilan Province are primarily carried out from an urban-oriented physical point of view without engaging with local culture. Consulting Engineers are carrying out projects instead of The Housing Foundation, so urban patterns dominate rural areas. According to the research results, one of the primary measures in rural development management is to overcome structural, institutional and organizational problems. Perhaps a current problem of rural development is the mindset which sees the village as a service consumer rather than an economic enterprise. As a result, rural services were expanded, and rural production and the economy were neglected. For a long time, bank loans with enormous interests were granted to the villagers to solve their daily problems, that kept the poor rural community in debt for many years. This budget should have been spent on investing in the creation of small rural economic enterprises, job creation and production.

The Board of Ministers, in August 2016, approved a proposal from the Program and Budget Organization in Article (7) to support the development and creation of sustainable employment in rural and nomadic areas using the resources of the National Fund. If the organizations provide information to the researchers, evaluation research of the implementation of this law in Guilan Province can have significant results. According to available statistics, the agricultural sector constitutes a significant part of the rural

economy but not the whole economy. Another part of the economy is outside the agricultural sector, which requires the diversification of economic activities in the village. However, all the sectors are related to each other, and it takes energy to coordinate them. By integrating all activities related to rural development, investments can be concentrated in the economic sector, and income creation will greatly help rural development. Successful countries in rural management have integrated rural management, agriculture and natural resources in the form of a ministry or organization. Rural issues in Guilan Province, with great geographical dispersion, can not be addressed by a sector or program-oriented view. After forty decades of rural planning, we still have to face rural poverty and deprivation. Organizations such as the Agriculture Ministry, the Housing Foundation, the Department of Environment, the Deputy of Rural Development and nearly 40 different institutions, organizations are involved in rural development activities, which are not even effective or accountable. Therefore, actions should be taken for coordinated management of rural areas of Guilan Province.

According to the findings, the chi-square test was statistically significant in all the items, so with 95 percent certainty can claim that the indicators of inter-organizational coordination and rural governance are effective in achieving coordinated rural management in Guilan Province.

Table 10. Chi-square test and average of ranks based on indicators of rural governance and inter-organizational coordination

Indicator	Item	T-test statistic	Sig.	H ₀	H _a	Mean rank
Participation	1	21.654	0.000	0	Confirmation	1.69
	8	19.790	0.000	0	Confirmation	1.31
Lawfulness	9	10.500	0.000	0	Confirmation	1.47
	17	23.444	0.000	0	Confirmation	1.53
Responsiveness	24	41.654	0.000	0	Confirmation	1.52
	25	29.272	0.000	0	Confirmation	1.48
Transparency	22	21.667	0.000	0	Confirmation	1.59
	23	24.926	0.000	0	Confirmation	1.41
Group agreement	18	21.667	0.000	0	Confirmation	1.59
	19	15.852	0.000	0	Confirmation	1.51
Effectiveness and	38	13.506	0.000	0	Confirmation	1.48
	40	15.852	0.000	0	Confirmation	1.52
Accountability	20	40.420	0.000	0	Confirmation	1.93
	21	19.593	0.000	0	Confirmation	2.07
	32	30.951	0.000	0	Confirmation	2.01
	36	20.975	0.000	0	Confirmation	
Collaborative decision-making	57	30.790	0.000	0	Confirmation	1.96
	58	37.951	0.000	0	Confirmation	2.22
	59	30.296	0.000	0	Confirmation	1.83
Integration of operations	45	17.457	0.000	0	Confirmation	2.78
	48	27.457	0.000	0	Confirmation	3.23
	60	25.358	0.000	0	Confirmation	2.86
	61	22.025	0.000	0	Confirmation	3.06
	62	23.012	0.000	0	Confirmation	3.06
Control and monitoring	46	44.864	0.000	0	Confirmation	1.33
	47	22.889	0.000	0	Confirmation	1.67
Relations and	44	14.617	0.000	0	Confirmation	1.35
	52	53.383	0.000	0	Confirmation	1.65
Formality	53	43.383	0.000	0	Confirmation	1.49
	63	41.284	0.000	0	Confirmation	1.51

5. Discussion and conclusion

Molaei Hashjin (2012-b), in a paper entitled "the proposed model of rural management in Guilan Province, used theories, experiences, and resources of separated geographical rural areas of Guilan Province to propose a rural management model from the village to the province-level. The model suggests an integrated executive management for small and small villages and neighboring villages and a designated general manager at the village level. Also, Bigdelo & Rahnavard (2017) stated that the principle of coordination is the essence of management. Each of the tasks of management is connected to coordination. In performing continuous tasks, creating coordination at individual, group, intra, and extra organizational levels is a strategic necessity.

Furthermore, public policies need the involvement of various organizations. Therefore, without coordination, the fulfillment of common goals will

face serious impediments. The researchers came to the conclusion that inconsistency is a common phenomenon among the executive bodies at various national, provincial and local levels in Iran, which calls for understanding the underlying factors.

The review of global experiences and wildly successful programs in the coordinated management of rural development in Russia, Turkey, India, the European Union, Malaysia, and Australia, indicates that all programs and active participation of villagers were based on the needs and priorities of society rural, and balance and coordination in the three main governance institutions namely, Government, private sector and civil society. In addition, there are also systematic rural organizational networks, centralization of decision-making and coordination and inter-organizational interaction, joint goal-setting, empowering and capacity-building of

villagers, increasing efficiency and productivity, optimal allocation of resources, transparency and responsiveness of managers and officials.

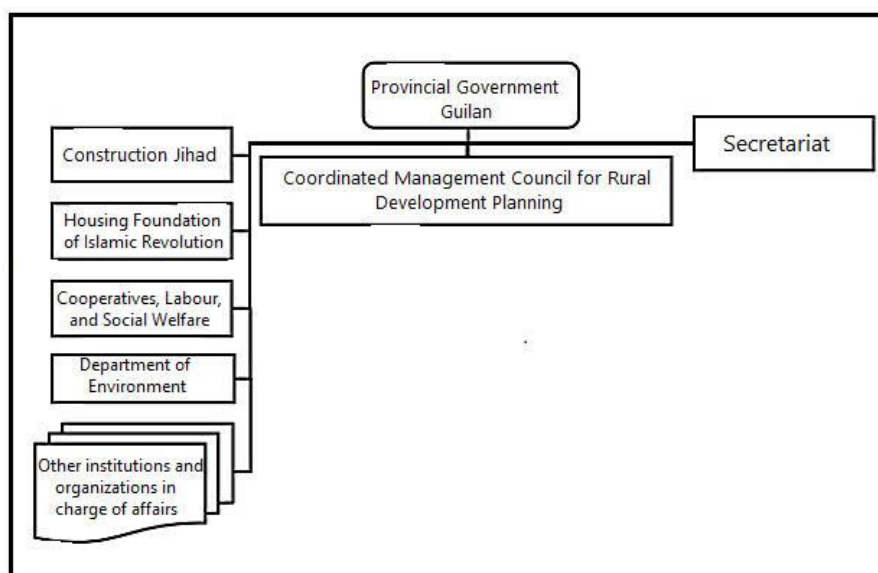


Figure 3. Suggested model

By combining the theories of modern rural management and the experience of local management, it is possible to create a coordinated system of rural management. This management system can adopt a convergent approach and create coordination between service providers and executive organizations in the process of rural development while providing more effective and effective steps toward precise scientific planning in the rural development process of Guilan Province. During the research, it was seen that efforts are being taken to improve the current rural situation. However, due to the lack of inter-organizational coordination and sector-oriented viewpoint, these efforts have not had much impact on rural development.

The inter-organizational coordination management internalized the initiatives, collectivism and unity in rural affairs at all management levels. Also, for achieving optimal and effective results in using rural governance indicators and achieving the goals of sustainable rural development, coordination management components need to be utilized in all the existing legal and organizational capacities. This study suggests that in planning, organizing,

and administrating, we should have five COs: consensus, convergence, co-action, consonance and cooperation. These findings call for revising laws and regulations for rural management and more participation. In addition, the establishment of a council in the form of a "coordinated management council for rural development planning of Guilan Province under the supervision of the governor" is proposed. As a result, the governorship and the governor, as decision makers, executives and political actors of the province, can play their pivotal role in implementing the goals of sustainable rural development.

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Authors' contributions

The authors equally contributed to the preparation of this article.

Conflict of interest

The author declare no conflict of interest.

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راه کارهای مبتنی بر شاخص‌های حکمروایی روستایی در تحقق مدیریت هماهنگ توسعه روستایی در استان گیلان

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چکیده مبسوط

۱. مقدمه

جغرافیای روستایی یک رشته جغرافیایی مستدل است که به بررسی پدیده‌های اجتماعی و اقتصادی معاصر در فضای روستایی می‌پردازد. جغرافیای روستایی با بیش از ۳۰ سال سابقه، نظریه‌ها و روش‌های تحقیق را تولید کرده و گروه بزرگی از محققان را گرد هم آورده است. در حال حاضر بیشترین توجه به فرآیندهای در حال انجام در فضای اجتماعی (با تمرکز مطالعات بر روی تعارضات اجتماعی، روابط بین انسان و طبیعت، تغییرات جمعیتی و غیره) است. یک موضوع مهم برای جغرافیای روستایی، تبیین مفهوم «نواحی روستایی» است. مطالعه ادبیات در اینجا به وجود تعاریف متعدد و متنوعی اشاره می‌کند که بر اساس آن‌ها منطقه روستایی به گونه‌ای مختلف به عنوان یک فضای فیزیکی، اجتماعی یا اقتصادی در نظر گرفته می‌شود، به موجب آن یک منطقه روستایی فضای فیزیکی با تراکم جمعیت نسبتاً کم، سکونتگاه پراکنده و کاربری وسیع زمین است.

حوزه‌های روستایی به عنوان قاعده نظام و فعالیت ملی نقش اساسی در توسعه ملی ایفا می‌کنند؛ زیرا توسعه پایدار سرزمین در گرو پایداری نظام روستایی به عنوان زیرنظام تشکیل دهنده نظام سرزمین است و پایداری فضاهای روستایی در ابعاد مختلف می‌تواند نقش مؤثری در توسعه منطقه‌ای و ملی داشته باشد و اگر در جریان پیشرفت و توسعه فضاهای روستایی وقفه‌ای ایجاد شود، آثار و پیامدهای آن نه تنها حوزه‌های روستایی؛ بلکه مناطق شهری و درنهایت، کلیات سرزمین را در بر خواهد گرفت. ایران نیز دولت می‌بایست ظرف سه ماه، لایحه تعیین متولی "الزام دولت به توسعه متوازن روستایی" قانون سیاست‌گذاری، برنامه‌ریزی و نظارت بر توسعه متوازن روستایی را به مجلس ارائه می‌کند. درحالی که بعد از گذشت بیش از یک دهه شکل اجرایی به خود نگرفته است و کماکان روستاهای کشور به دلیل فقدان متولی پاسخگو، دچار مشکلات عدیده‌ای هستند. به دلیل نظام برنامه‌ریزی بخشی و متمرکز کنونی

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که در آن معمولاً هریک از دستگاه‌های اجرایی بدون هماهنگی با یکدیگر و بدون توجه به نیازهای واقعی و اولویت‌دار روستاییان اقدام به طراحی و اجرای طرح‌های خود می‌نمایند و ارزیابی میدانی از عملکرد و اثربخشی طرح‌های آن‌ها در روستاها وجود ندارد، هر لحظه تأخیر در سازمان‌دهی امور توسعه روستایی کشور و تشکیل یک سازمان مقتدر و جهادی، هزینه کلانی را از ناحیه بی‌انضباطی مالی و اتلاف منابع عمومی به کشور تحمیل می‌کند.

۲. مبانی نظری تحقیق:

یکی از اصول تأثیرگذار بر توسعه پایدار نواحی روستایی شیوه اداره و نحوه سیاست‌گذاری است. از مهم‌ترین عوامل تضمین‌کننده تحقق اهداف یک سازمان، طراحی تشکیلات و ساختار مناسب آن سازمان است. ساختار نظام اداری کشور به گونه‌ای است که به دلیل وابستگی سازمان‌ها به یکدیگر، انجام بسیاری از فعالیت‌ها مستلزم همکاری بین دو یا چند سازمان می‌باشد. فعالیت‌های دولت پیش از پیش به یکدیگر وابسته شده‌اند و هماهنگی بین سازمان‌ها برای انجام بسیاری از فعالیت‌ها ضروری می‌باشد و چنانچه به هر دلیل این هماهنگی بین سازمانی صورت نگیرد و یا با تأخیر مواجه شود و یا یک‌طرفه قادر به انجام مأموریت و وظیفه خود نباشد به طور کلی نتیجه‌ای حاصل نشده و یا نتیجه حاصل شده کامل نبوده و رضایت‌بخش نمی‌باشد. بدون شناخت سطوح کلان تصمیم‌گیری در کشور قادر به تحلیل درست از شرایط روستایی و وضعیت خرد مدیریت روستا نیستیم زیرا ساختار خرد جامعه روستایی کشور و اعمال قدرت در این جامعه تحت تأثیر سطوح میانی یعنی تغییر و تحولات ساختار سازمانی مرتبط با جامعه روستایی ایران بوده است، این سطوح میانی نیز متأثر از ساختار کلان بوده و جامعه را احاطه کرده است. پژوهش حاضر ضمن بررسی عوامل مؤثر و بازدارنده در ساختار سازمانی مدیریت توسعه روستایی استان گیلان، نقش شاخص‌های حکمروایی روستایی و هماهنگی میان سازمانی را در تحقق مدیریت هماهنگ برنامه‌ریزی توسعه روستایی

اساس قانون برنامه توسعه حاصل گردد، کم رنگ و یا تأثیر آن چنانی در چشم انداز توسعه روستایی نداشته است.

۵. بحث و نتیجه گیری:

درک مفهومی مدیریت هماهنگی میان سازمانی، بروز ابتکارها، جمع گرایی و وحدت رویه را در امور روستا و در همه سطوح مدیریتی نهادینه کرده و همچنین برای دستیابی بهینه، تأثیرگذار و نتیجه بخش در اجرای شاخص های حکمروایی روستایی و دستیابی به اهداف توسعه پایدار روستایی و استفاده از مؤلفه های مدیریت هماهنگی، تمامی ظرفیت های قانونی و سازمانی موجود را بکار گیری نموده و به صورت هدفمند و هوشمندانه در جهت روان سازی اقدامات جاری مربوط به حوزه روستا ریل گذاری می نماید. بر این اساس الگوی مطلوب مدیریت روستایی نیز با توجه به مطالعات نظریات و دیدگاه های مطرح شده در این پژوهش، باید دارای (پنج هم) هم اندیشی، هم گرایی، هم افزایی، هم آهنگی و هم کاری در برنامه ریزی، سازمان دهی، اداره، رهبری و کنترل باشد. این یافته ها لزوم توجه به بازنگری در قوانین و مقررات مدیریت روستایی کشور و توجه بیشتر به توسعه اجتماعی مشارکت محور را الزامی می کند. بنابراین پس از انجام مطالعات و تجزیه و تحلیل داده ها و بر اساس نظرهای کارشناسی پرسش شوندگان در حال حاضر بهترین پیشنهاد تشکیل "شورای مدیریت هماهنگ برنامه ریزی توسعه روستایی استان گیلان زیر نظر استاندار" می باشد. استانداری و شخص استاندار به عنوان جایگاه حاکمیتی و تصمیم گیرنده، اجرایی و سیاسی استان می تواند با ایجاد این شورا و نظارت مستقیم بر تصمیمات و عملکردهای عناصر اجرایی مدیریت توسعه روستایی بهترین نقش خود را برای پیاده سازی اهداف توسعه پایدار روستایی به اجرا گذارد.

کلیدواژه ها: حکمروایی روستایی، مدیریت هماهنگ میان سازمانی، توسعه روستایی، استان گیلان.

تشکر و قدردانی

پژوهش حاضر برگرفته از رساله دکترای نویسنده اول (احمد مین باشی)، گروه جغرافیا و برنامه ریزی روستایی، دانشکده ادبیات و علوم انسانی، دانشگاه آزاد اسلامی واحد رشت است.

تحلیل و در نتیجه راه کار اجرایی در جهت تحقق مدیریت هماهنگ برنامه ریزی توسعه روستایی در استان گیلان پیشنهاد نموده است.

۳. روش شناسی تحقیق:

مقاله حاضر از نظر هدف کاربردی، ماهیت توصیفی - تحلیلی و از نظر روش شناسی کمی و کیفی است و اطلاعات به دست آمده از ۳۷ گویه با استفاده از نرم افزار آماری SPSS برای اثبات نظریه و ارائه راه کارهای مبتنی بر ۷ شاخص اصلی حکمروایی روستایی و ۵ شاخص هماهنگی میان سازمانی تجزیه و تحلیل گردید. نمونه ای به حجم ۸۱ نفر از متخصصین، مدیران، کارشناسان بخش های مختلف امور روستایی استان گیلان، با استفاده از جدول مورگان و به روش تصادفی و نظام مند انتخاب و داده های مرتبط با متغیرهای پژوهش با استفاده از پرسشنامه گردآوری شد. روایی پرسش نامه بر اساس مبانی نظری و مطالعه مقالات و در نهایت پس از نظرات اصلاحی اساتید محترم تأیید و برای پایایی بهتر با استفاده از آلفای کرونباخ با عدد ۰/۸۲ مورد تأیید قرار گرفت.

۴. یافته های تحقیق:

نتایج تحقیق نشان می دهد که راه کارهای مبتنی بر شاخص های حکمروایی روستایی و هماهنگی میان سازمانی که به طور عمده از شاخص های هماهنگ ساز، تعهدآور و پاسخگو محور تشکیل شده است، می تواند در تحقق مدیریت هماهنگ برنامه ریزی توسعه روستایی مؤثر واقع شوند. با مطالعه و تلفیق نظریه های مدیریت نوین روستایی با مدیریت تجربی و بومی می توان با ایجاد یک نظام هماهنگ مدیریت روستایی به معنای اتخاذ یک رویکرد همگرایانه در مدیریت برنامه ریزی روستا و ایجاد هماهنگی بین سازمان های خدمات رسان و مجری در فرآیند توسعه روستایی ضمن فراهم نمودن زمینه های پیشرفت و توسعه، گام های اثربخش و تأثیرگذارتری با برنامه ریزی دقیق علمی در فرآیند توسعه روستایی استان گیلان برداشت. در مطالعات میدانی و مصاحبه های صورت گرفته نیز نتایج حاکی از آن است که تلاش ها جهت بهبود وضعیت فعلی روستایی از سوی اغلب کارگزاران روستایی انجام می پذیرد اما به دلیل عدم هماهنگی میان سازمانی و نگاه بخشی و رفع تکلیف سازمانی نتایجی که می باید بر

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The Community-based Tourism Model of Mountain Villages with the Grounded Theory Approach (Case Study: Kojur District, Nowshahr County)

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Abstract

Purpose- The purpose of the current research is to present a community-based tourism model in the mountain villages of Nowshahr County in Mazandaran province.

Methodology- This research was conducted in two stages. In the qualitative part, a semi-structured and in-depth interview was conducted with 20 tourism activists, handicrafts and university experts with a theoretical and targeted method, and the analysis of the interviews was conducted with a Grounded Theory method. The classical grounded theory was done with the help of MAXQDA software. In the quantitative part Lawshe index have been used and in order to test the paradigm model, the final questionnaire was distributed among 384 people of Kojur mountain villages in a cluster and available method. In the last stage, by using Smart PLS software the structural model was examined .

Findings- The community-based tourism model of mountain villages obtained in this research includes six components. Causal factors include two "Mental" and "Behavioral" components, contextual factors include three "Group", "Family" and "Individual" components, intervening factors include four "Infrastructural" and "Political-Law" components, "Economic" and "Socio-Cultural", strategies including four "Developmental", "Marketing and Product", "Financial" and "Educational" components and finally the consequences including three "Social-Cultural", "Environmental" and "Economic" components. Also, the main phenomenon in this model was "passion for action."

Practical implications- Considering the problems of tourism in the mountainous villages of Kojur region, it is possible to develop community-based tourism by reducing the obstacles identified and strengthening the contexts by adopting development strategies, marketing and product, finance and education and created positive consequences.

Original/value- By knowing and gaining insight into the formation process of community-based tourism in Kojur mountain villages and its effective factors and consequences, it is possible to develop better and more effective this type of tourism in the region.

Keywords- Community-based tourism, Grounded theory, Mountain village, Nowshahr County.



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1. Introduction

Many approaches to tourism development in recent years have focused on the participation and empowerment of local communities, the protection of the environment and culture of the host community, and the sustainable development of the community because the support and participation of the community is essential for the success of tourism development (Witchayakawin et al., 2020). In the meantime, community-based tourism was proposed, which implies a high level of participation of local communities under the banner of sustainability in the process of tourism development and planning. This type of tourism emerged in the 1970s as a reaction to the negative consequences of mass tourism and became popular in the last three decades (Behzadfar et al., 2017 and Zargham and Bazarafshan, 2015). Many researchers consider community-based tourism as a suitable solution for the socio-economic development of developing countries, in countries that have a resource-oriented economy and a large part of the government's income is provided only through natural resources, community-based tourism can be an opportunity. Provide for rural development by strengthening vulnerable personal businesses. This type of tourism leads to the growth of tourist knowledge by observing, experiencing and learning the lifestyle of local residents (Bayat and Khazaei, 2015). Sebal believes that rural areas in developing countries are often faced with a lack of facilities and industries and the poor people of the society live there. Therefore, community-based tourism can play a role as a tool to save the local community from poverty (Zargham and Bazarafshan, 2015). Community-based tourism in mountainous areas improves the socio-economic status of the local community. Secondly, this type of tourism has focused more on improving welfare and living standards, which are generally low in mountainous areas. So, this type of tourism in mountainous areas can better meet the common needs for cultural identity. Fourth, community-based tourism in mountainous areas can provide a structure for more effective planning, implementation and monitoring of tourism activities and determine the most appropriate scale of economic activity (Godde et al., 1998). The growing trend of mass and spontaneous tourism development along with the lack of efficient planning and management at the local and regional levels in the rural areas of Nowshahr has resulted in numerous

positive and negative economic effects and consequences (Badri et al., 2008). According to the research of Aliqolizadeh Firouzjaei et al. (2006), the main type of tourism in Nowshahr is nature tourism, which takes place in two main forms: transient or non-residential tourism (lacking accommodation facilities) and second homes. Also, tourism in this area due to spontaneous and mass growth with negative economic and environmental effects such as increase in the price of goods and services, false increase in the price of land, increase in the cost of living, inability of young people to buy land and housing, income disparity and class gap between rural households. It has resulted in the decrease of agricultural workers and the seasonality of income and employment (Aliqolizadeh Firouzjaei et al., 2006). Although some researches have been done about community-based tourism inside and outside of Iran (Behzadfar et al., 2017; Hessam, and Baghiani, 2017; Najarzadeh and Torabi, 2016; Zargham and Bazarafshan, 2015; Pham Hong et al., 2021; Nugroho and Numata, 2020; Bittar Rodrigues and Prideaux, 2018; Abukhalifeh and Wondirad, 2019) but few researches have produced practical knowledge about the development of community-based tourism and solving tourism problems in mountain villages (Khartishvili et al., 2020, Dadvarkhani and Ghanian, 2017) and No research has investigated community-based tourism in the context of mountain villages in the north of Iran and Nowshahr district. Therefore, this research examines the issue of community-based tourism and presents a model of it in the context of the mountain villages of Nowshahr.

2. Research theoretical literature

Tourism gives the host community and visitors this unique opportunity to share their different cultures and perspectives. Despite tourism's potential, there is a disturbing fact that local communities have received few benefits from tourism over the past 50 years since the global emergence of the tourism industry. Instead, they have suffered a wide range of negative impacts that have damaged their natural resources and changed their society and culture in many ways. In fact, local communities have benefited very little from tourism. Sustainable tourism, although it has been the main area of efforts for the development of some countries, but it has been criticized due to some shortcomings that can prevent the full participation of local people and the desired results. Therefore, a more comprehensive and holistic approach to development, which needed to be initiated, planned and

implemented by local people and for local people, was needed. "Community-based tourism" became popular in the mid-1990s, changing the bottom-up approach to development in an effort to truly and fully involve the community at all levels of development. Similar to other models of tourism development, there is a great distance between the academic definition of this concept and the way it is used by professionals (Tasci et al., 2013). In literature, Peter Murphy is considered as one of the pioneers of community-based tourism. His important work in 1985 has had a significant impact on the development of community-based tourism research. In his book, Murphy (1985) considered tourism as a "community industry" and called for the participation of local communities in decision-making and planning processes. (Ishihara, 2020). Rather than focusing specifically on nature or charity, community-based tourism benefits the community and its environment as a whole. From the traveler's point of view, community-based tourism offers an opportunity to immerse in local culture and participate in a completely unique tourism experience (Kwangseh, 2014). It can be said that the use of local community resources with their supervision and control over the development process is one of the main foundations of tourism planning based on the community-based approach. Tourism planning based on this approach is a bottom-up plan because it emphasizes the development in the community rather than the development of the community. Under this approach, local residents are considered as the focal point of tourism planning, not Tourists and government officials. Despite these issues, there are many issues in the formulation and implementation of tourism programs based on a community-oriented approach, for example, the level of residents' awareness and familiarity with the planning and participation processes, residents' apathy, the time-consuming and difficult planning processes. The residents' trust pointed to representatives and elected people (Ziaei and Torab Ahmadi, 2012; 190). In general, community-based tourism is tourism that is planned, developed, owned and managed by the community for the community, guided by collective decision-making, accountability, access, ownership and benefits. It is conceived as a win-win exchange between the host and the guests. Guests enjoy discovering the natural and cultural heritage and wisdom of the destination people, while the host gains more awareness and pride because their natural

and cultural heritage and wisdom is a source of economic and social well-being (Ishihara, 2020). In any case, in destinations where tourism development takes place and tourists come into contact with local people and the environment, attention is paid to the effects of tourism. Undoubtedly, the destination is the place where the greatest need to identify, measure and manage such effects, whether positive or negative, is felt (Sharpley and Telfer, 2014; 289). Despite all the benefits of community-based tourism, in most developing countries, few powers are given to the local community and attention is paid to their abilities to manage their resources in order to maximize the benefits of tourism, because the tourism strategy in these countries is a government-oriented activity and serves to achieve their specific social and economic agendas (Zargham Borojeni & Bazarafshan, 2015). According to Kwangseh (2014), some of the reasons for the lack of community development despite tourism activities are that few local communities are involved in tourism activities. This means that most local communities are excluded when making decisions, planning, investing, promoting or developing the tourism industry. The review of relevant literature showed that few studies have been done in connection with community-based tourism, especially in the field of mountain villages inside the country. Emami (2021) did research titled presenting the local model of community-based rural tourism development (case study of Giulan province). The results of the research show that the index of community-based tourism in the cities of this province is classified into two groups. Also, in the field of factors affecting the development of community-based rural tourism, economic, environmental, social and management indicators have been influential. Ranjbar (2021) conducted research on the impact of agricultural experience tourism on the sustainable development of the village in Kashan. The findings of his research showed that agricultural tourism can help a lot as an alternative strategy in the field of sustainable rural development and agriculture, among other suggestions and options. But tourism in general and agricultural tourism in particular, in order to be able to respond to the ever-increasing demand and different needs of tourists, must use creativity and innovation to diversify its services and products, and this is the basis for the development of businesses, especially It provides small businesses and entrepreneurship development. Jahanbin's research (2021) showed that the activation

of the community-based tourism industry (the quality of two-way communication between residents and government officials, government incentive programs to develop people's participation in tourism, providing investment resources, updating tourism information and facilitating the enjoyment of new technologies with little negative impact on the environment) is more important than other factors. Behzadfar et al. (2017) found in quantitative research in Nayband village that the development of community-based tourism has a positive and significant effect on the prosperity of residents' businesses. Zargham Borojeni & Bazarafshan (2015) in the study of rural community-based tourism in the village of Asiyab Sar Behshahr found that the local community should receive the necessary training in relation to tourism management and development, and then the necessary facilities for tourism management should be provided to them so that they can develop at their own will. Manage tourism in the village. Mokhtari (2012) by examining the challenges of implementing community-based tourism in Iran found that these challenges include the lack of formal and informal tourism training in local communities, the lack of coordination and cooperation between institutions related to tourism management in Iran, the lack of trust between society and the government, low The level of knowledge of local people in the field of tourism and the lack of financial resources in local communities for the development of tourism projects. In foreign research, Pham Hong, Ngo, and Pham (2021) conducted a study entitled Community-based tourism: opportunities and challenges in rural Vietnam. They found that there are various tourism potentials in this village to attract tourists. In addition, the support of the government and international organizations along with the hospitality of the local people has strengthened the development of community-based tourism. However, the lack of human resources, production space and raw resources as well as the competition of industrial products has hindered the development of community-based tourism in this village. Priatmoko et al. (2021) found in their research that in order to achieve sustainable rural community-based tourism, factors such as the approval and enthusiasm of official leaders (village elders), the way of life and environment of the local community, informal leaders, and the management team should be paid attention to. Yunikawati et al. (2021) found in research in Indonesia that the increase in job opportunities has led to a lot of

employment. Nugroho & Numata (2020) found that the impact of residents' social and demographic characteristics and their support for tourism development is completely influenced by perceived benefit and cost. The research findings of Khartishvili et al. (2020) showed that various factors affect the sustainable development of community-based tourism activities, especially in mountainous areas, which include the integration of local development activities and tourism, the formulation of specific guidelines for tourism projects Community-oriented is the diversification of products based on the local community. Vitchayakavin et al. (2020) investigated the development factors of community-based tourism in Thailand. Their findings showed that the important factors of community participation are: ownership, support and external support policy, marketing, creating value and supply chain, empowering people, leadership and participation. Also, Kayat (2014) in his model introduced competitive management, resource conservation, creating benefits for the local community, involvement and commitment of the local community, cooperation and networking, empowerment, and leadership as the way to achieve sustainable rural community-based tourism. As the background of the research shows, in the field of internal research, most of the researches paid attention to the attitude of local people towards the development of community-based tourism and its effects, but external researches, in addition to the effects of community-based tourism, also provide models in this field to the dimensions and components of tourism. They have also paid attention to society. Also, no coherent and complete research has been done in the field of mountain villages. Therefore, in this research, we seek to present a model of community-based tourism in the area of mountain villages, so that the beneficiaries of this area can use it to implement the development of community-based tourism.

3. Research Methodology

3.1. Geographical Scope of the Research

The study area of this research is Kojur section of Nowshahr County in Mazandaran province. Kojur is bounded by the Caspian Sea from the north, Chalus River from the west, Nur city from the east. This rural and mountainous part has more than 70 small and big villages in total. Due to the vastness of pastures, Kojur region is relatively scattered and most of the villages are far from each other. Kojur region is one of the important regions of Mazandaran province in

the field of handicrafts. Kojur has a mountainous climate. Most of the time, the weather does not have a seasonal order, and for this reason, it cannot be clearly placed in one of the seasonal groups. The winters of this region are very cold and accompanied by snowfall, and the summers are mild. The amount of rainfall in this area is very high and this has caused the diversity of vegetation. Vegetation has forced the people of the region to engage in agriculture, farming and horticulture. According to the last census of 2015, the population of Kojur was equal to 3,120 people and 1,052 households, and it was upgraded to a city in 2015. The type of tourism in Kojur region is mostly residential tourism and second homes, and the most important motivation for tourists is nature tourism and using the suitable climate of Kojur region. Kojur has various tourist attractions. Its natural attractions include Farakhin lake in Veysar village, Divcheshme, Kandolus waterfall and natural hot water in Dalir village. Its religious attractions include Taher and Motahar tombs in Hezarkhal village and Fazl and Fazel tombs in Kandolus. Its cultural attractions include the museum of anthropology and medicinal plants of Kandolus village and special ritual and traditional ceremonies. On the other hand, all Kojur villages have their own special capabilities, for example, Nichkuh village has special felt products, Kushkak village is famous in the field of music and all kinds of musical instruments and Chetan village has adventure tourism capabilities.

3.2. Methodology

The methodology used in this research was qualitative analysis and applied and developmental research and mixed method (qualitative and quantitative) in terms of data collection. In the qualitative part, the data method of the Systematic Grounded Theory of [Corbin and Strauss \(1990\)](#) was used. The statistical population of the research in the qualitative part included 20 entrepreneurs and activists in the field of tourism, handicrafts, relevant local officials and academic experts. The statistical population in a small part includes the residents of the mountainous villages of Kojur in Nowshahr. The sampling method for selecting participants in the interview was purposeful and theoretical, the interviews were semi-structured and in-depth (7 women and 13 men) and each interview lasted an average of 30 to 90 minutes. No new data was added to the interviews that could expand the characteristics of the categories and it was considered theoretical saturation, which reached saturation in the 20th interview. In the quantitative part,

due to the fact that the number of residents in the villages is not known precisely due to the rural conditions of the region, the maximum sample size was determined to be 384. Also, random clustering and available sampling method was used in quantitative part to gather the data. MAXQDA2020 software was used to analyze the interviews of the qualitative part in three stages of open, central and axial coding, and finally, the paradigm model of community-based tourism was drawn in six categories of causal factors, contextual factors, intervening factors, main phenomena, strategies and consequences. In the analysis of the quantitative part, first by using Content Validity Ratio (CVR) to summarize the items from the qualitative part using the opinion of 11 academic experts, and then by distributing the questionnaires, in order to analyze them using the factor analysis method with the help of Smart.PLS software. The validity and reliability of the research was carried out with the evaluation method of Lincoln and Goba (1994) based on the criteria of accreditation, transferability, trustworthiness and verifiability as follows: the participants expressed their opinion in relation to the research report, the analysis process and the obtained categories. And according to their comments, the results were revised and modified. The use of rich and primary data and collecting a wide range of views and interviewing people from different levels confirm the transferability in this research. Also, documenting all stages of research, recording interviews, details related to how to collect data, categories obtained from data and researcher's notes, exchange of opinions with peers in the research process and coding confirm its reliability. The researcher tried to improve the verifiability index of the research by minimizing the interventions in the descriptions. In the quantitative section, we evaluated the validity and reliability of the measurement models and the structural model, which is shown in the findings section.

4. Research Findings

4.1. Qualitative section

As mentioned, in-depth interviews were conducted with 20 people in the qualitative section. The demographic characteristics of this samples showed that 6 of them were in the field of handicrafts, 8 in the field of tourism, 3 had an active ecotourism residence, 1 of them was a rural expert and 2 of them were academic faculty members, and 7 of them were women. Also, 13 people were men and most of them (12 people) were married. According to the results of [Table 1](#), by analyzing the interviews, 749 initial open

codes were obtained, which were converted into 16 categories of the first level by combining the obtained

open codes at the next level.

Table 1. Concepts and categories derived from the data

Second level category	First level category	Identified open codes
Causal Condition	Mental	Belief, flourishing talent, entrepreneurial thinking, interest, creative visualization, vision and insight
	Behavioral	Persistence, having a goal, self-reliance, working seriously, motivation to create employment, concern for maintaining traditions, ability, lifestyle, identifying opportunities
Contextual Condition	Group	Teamwork, support of friends
	Family	Family background, family support, family encouragement, influence of family environment, learning in family, family character
	Individual	Concerns (concern for the present, future, marriage, environment, local development), giving importance to tourists, willingness to act legally, lack of government employment, education (need to have skills, lack of skills, superficial education, lack of education, importance of education), limitation of illness, different previous experiences (childhood experience, second job), role model (importance of role model)
Intervening condition	Infrastructure	Infrastructural problems, attention to infrastructure
	Political and laws	Lack of support (lack of conformity of related departments, lack of support of officials and departments, lack of support of local officials), support (support of other organizations, support of stakeholders, support of monetary financial organizations, need for support of beneficiaries), government policies (notification of executive plans), the necessity of supervision, the necessity of having support (providing a work platform, the necessity of full cooperation, facilitating the creation of a business, facilitating the legal sector, real support), the performance and protection of cultural heritage (negative view of the heritage administration), not expecting from the officials, the necessity of the program tiny
	Sociocultural	The situation (people's reaction (local people's unwillingness to work, lack of acceptance of the new generation), bad conditions of the society, dissatisfaction with the current situation, lack of suitability of the current situation), local society (desire of the local community, attention to local culture, acceptance of local culture by tourists), the time-consuming nature of changes, lack of support from universities, the influence of the media, lack of information about government support, lack of information from people and officials, the impact of the environment, the necessity of cultivation
	Economical	Economic prerequisite (investment, need for support, importance of financial support, gaining the trust of tourists, the need to generate income for the local community, paying attention to the potential, the existence of product demand, the importance of product demand, economic concern, the importance of the target market, business growth potential, The necessity of tangible results, people's acceptance of traditional products, having a special customer) economic limitation (tourism as a second job, lack of suitable working space, sales problem) (production limitation, raw material procurement limitation, tourism seasonality, customer's lack of purchasing power, pricing limitation), lack of initial money, lack of expert staff)
Strategies	developmental	Production development, cooperation with specialists, obtaining permission, cooperation with organizations, action for work, job change, cooperation with heritage office, work development
	Marketing and product	Sales marketing training, holding a festival, sales methods (product creativity, slow product release, relational marketing), the importance of attending in the exhibition

Second level category	First level category	Identified open codes
	Financial	Obtaining facilities, self-investment, no financial request
	Education	Experiential education and learning, reading books, trial and error, action for education, internet education
Consequences	Sociocultural	Negative (cultural invasion, job dissatisfaction) Positive (Having an impact, supporting the local community, improving the quality of life, changing attitudes, cultural exchange, not migrating to the city, strengthening the sense of empathy, accepting tourists, strengthening the preservation of their heritage, discovering people's talents)
	Environmental	Negative (environmental pollution, spatial destruction, waste production) Positive (not having a negative impact, paying attention to the environment)
	Economical	Negative (negative economic impact, negative publicity) Positive (the cheapness of the product, creating value, having customers, producing a cultural product, an original product, economic impact (positive economic impact, job creation), increasing income, developing the business chain, positive advertising, the presence of investors)

In the following, the categories of the first level were taken to the second level and were drawn in the form of six components of the Grounded Theory paradigm model of the category foundation and the paradigm

model (Figure 1). The main phenomenon in this model is “passion for action” because all parts of the model represent this category.

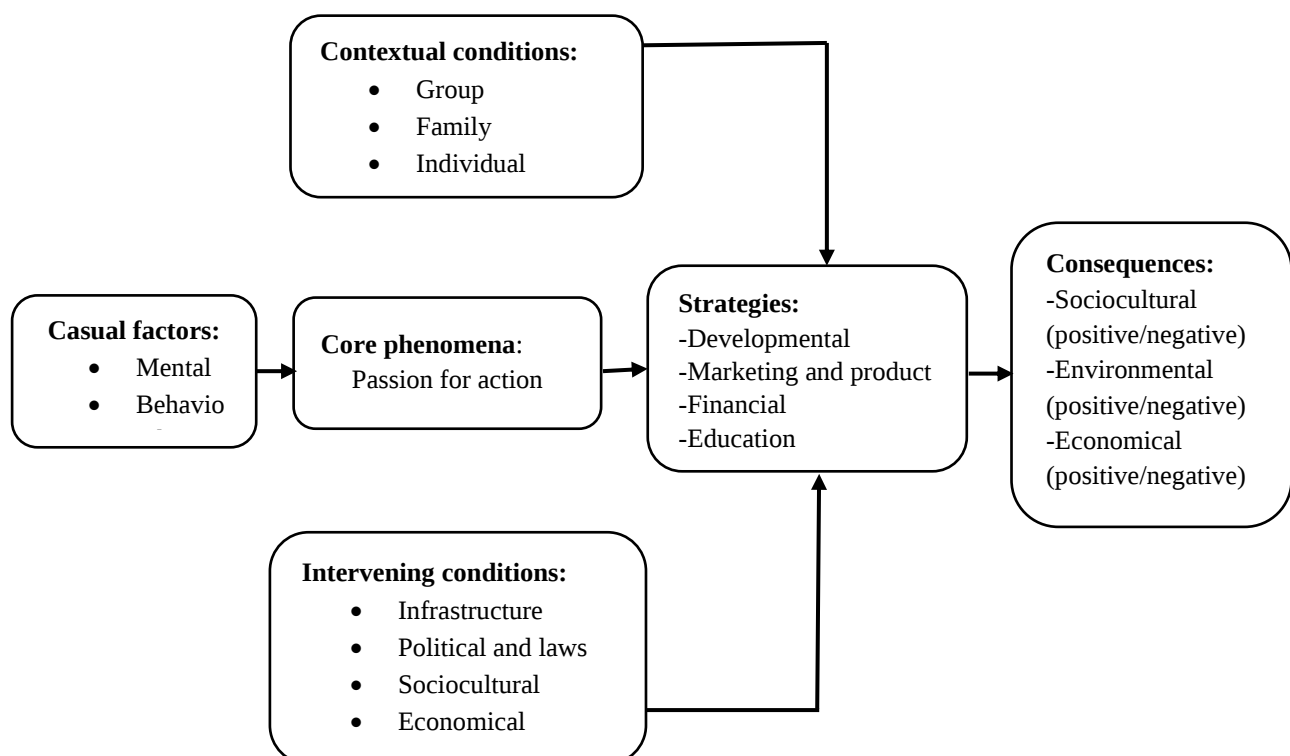


Figure 1. Paradigmatic model of results of open and axial coding of passion for community-based tourism action in mountain villages

Source: Developed by the researcher from the research findings, 2023

4.2. Quantitative section

In this section, in order to test the paradigm model of the research, the data obtained from the opinions of the samples (384 questionnaires obtained) were analyzed in order to investigate the factors affecting the development of community-based tourism and the related structural model in the mountain villages, which is on two levels: descriptive and inferential. The questionnaire designed for the quantitative part is the result of the qualitative part that was refined by the Content Validity Ratio (CVR) and the final questionnaire was designed for distribution. The demographic analysis of this section indicated that in terms of gender, 65.6% of people were male, in terms of age, 63.3% were between 30 and 50 years old, in terms of marriage, 58.1% of people were married, and in terms of education, 64.6% of people had a

diploma. In the following, we will validate the five measurement models of the paradigm model of research, that is, the measurement models of causal, contextual, intervening factors, strategies, and consequences.

4.2.1. Validation of measurement models

Before performing the factor analysis, it is necessary to test the distribution of the data for normality by using Kolmogorov-Smirnov test in order to determine which test and with which software the analysis can be performed. The result of the Kolmogorov-Smirnov test for all components indicated the non-normality of the data distribution. Therefore, Smart.PLS software and convergent and divergent validity and reliability were used for factor analysis and fitting of measurement models.

Table 2. Validity and reliability indicators of research measurement models

Factors	AVE	CR	R ²	Cronbach's Alpha
Mental factors	0.725	0.887	0.841	0.810
Behavioral factors	0.638	0.913	0.839	0.839
Causal factors	0.839	0.912	-	0.80
Group factors	0.782	0.877	0.679	0.721
Family factors	0.628	0.871	0.787	0.80
Individual factors	0.613	0.926	0.726	0.90
Contextual factors	0.732	0.891	-	0.816
Infrastructure factors	0.652	0.789	0.549	0.768
Legal political factors	0.586	0.951	0.803	0.945
Economic factors	0.606	0.944	0.799	0.934
Sociocultural factors	0.646	0.916	0.652	0.889
Intervening factors	0.699	0.902	-	0.854
Developmental factors	0.593	0.879	0.792	0.828
Marketing and product factors	0.678	0.863	0.658	0.762
Financial factors	0.714	0.833	0.417	0.602
Educational factors	0.753	0.901	0.611	0.836
Strategies	0.619	0.865	-	0.789
Sociocultural factors	0.626	0.921	0.834	0.900
Environmental factors	0.660	0.886	0.708	0.828
Economic consequences factors	0.570	0.922	0.802	0.905
Consequences factors	0.779	0.913	-	0.858

As the Table 2 shows, the fit indices of all model components have an average variance extracted (AVE) higher than 0.5. Also, the composite reliability indices (CR) and Cronbach's Alpha of all variables are higher than 0.7, which indicate the reliability of the measurement models.

4.2.2. Validation of the structural model

Based on the model analysis algorithm in Partial least squares (PLS), the indices used to validate the structural model include Z significance coefficients, R² criterion, Q² criterion, and finally the fit of the

overall GOF model, which we will discuss below. The structural model of the research is shown in two modes of estimation of standard coefficients and in the mode of significance in Figures 2 and 3. The fitting of the structural model using the Z coefficient or T-Value is such that the coefficients must be greater than 1.96 in order to confirm their significance at the 95% level.

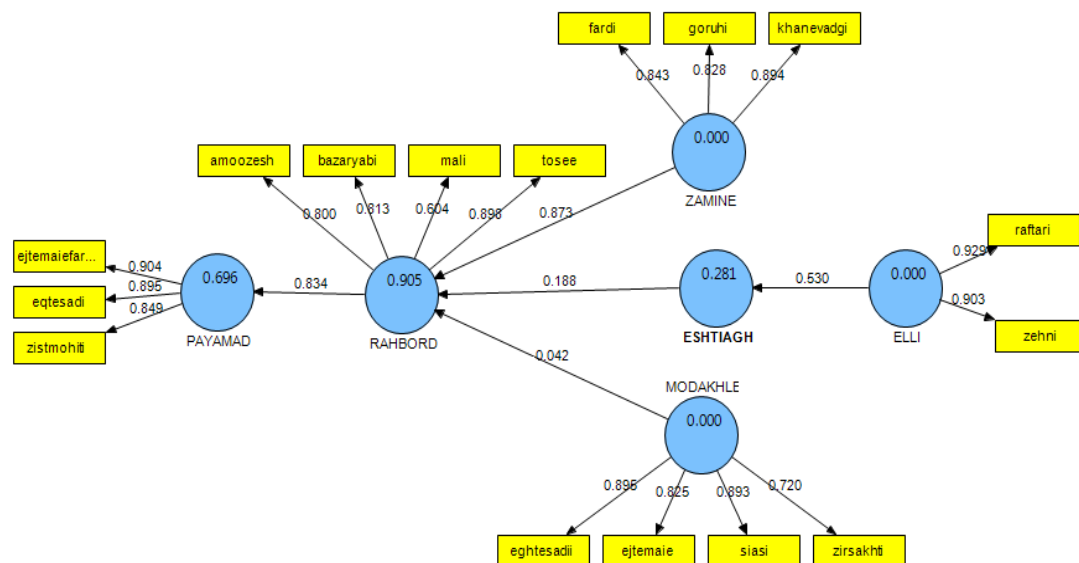


Figure 2. The structural model of community-based tourism in the estimation mode of standard coefficients

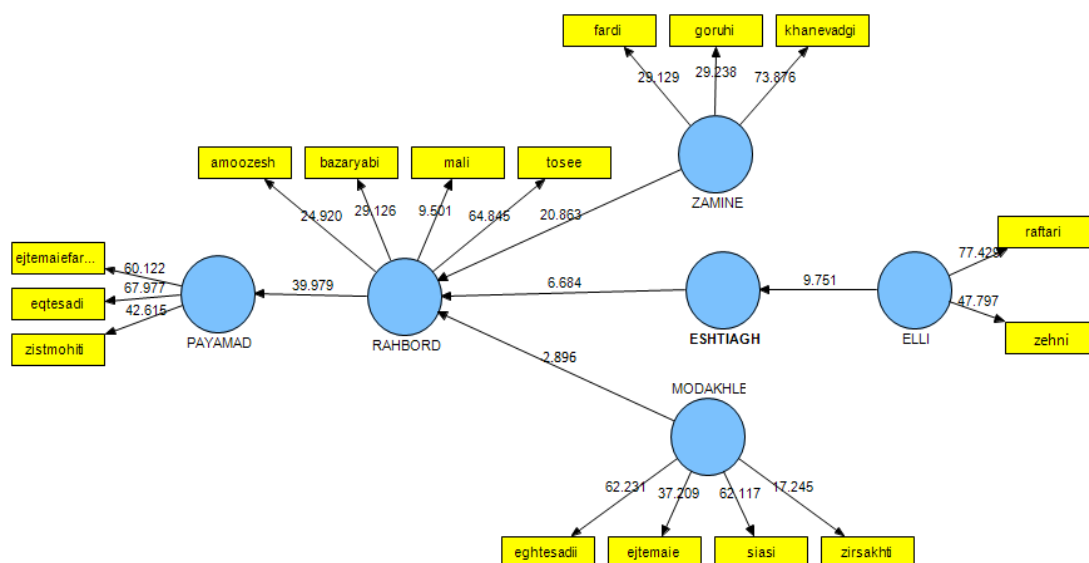


Figure 3. The structural model of community-based tourism in significance mode (t-value)

As the results of Figure 2 and 3 show, the path coefficients of the relationships between the six factors (causal, core phenomena, contextual, intervening, strategies and consequences) are more than 1.96, which indicates the significance of these relationships and the appropriateness of the structural model.

4.2.3. R^2 criterion for the structural model

This criterion is related to dependent variables of the structural model, the higher this value is, the better the fit of the model. Three values of 0.19, 0.33 and 0.67

are considered as the criteria for weak, medium and strong values (Davari and Rezazadeh, 2012). As shown in Figure 2, the values of 0.281, 0.905 and 0.696 were obtained for the dependent variables of passion for action, strategies and consequences, which confirms the appropriateness of the fit of the structural model.

4.2.4. Criterion Q2 for structural model

The second criterion for assessing the fit of the structural model is the Q2 criterion, which determines the predictive power of the model, if the value of Q2

in the case of a dependent obtains three values: 0.02, 0.15, and 0.35, respectively, indicating It has weak,

medium and strong predictive power of related independent variable (Davari and Rezazadeh, 2012).

Table 3. Fit of structural model endogenous variables with Q2 criterion

Factors	SSO	SSE	1-SSE/SSO
Passion for action	384.000000	276.675442	0.279491
consequences	1152.000000	521.788047	0.547059
Strategies	1536.000000	694.422808	0.547902

As the above table shows, the value of Q2 related to the related structures - passion for action, consequences and strategies, shows the predictive power and strong fit of the structural model, that is, the model has the ability to predict the indicators related to the endogenous structures of the model.

4.2.5. General model fit (GOF)

In structural equation modeling with the help of PLS software, the GOF index is used to fit the entire model. According to Tenenhaus et al. (2004), the GOF index or the goodness of fit index in the PLS model is a practical solution for

checking the overall fit of the model and works like the fit indices in covariance-based methods, and it can be used to check the validity or quality of the PLS model. This index also works like the fit indices of the Lisrel model and is between zero to one, and three values of 0.01, 0.25 and 0.36 have been introduced as weak, medium and strong values for GOF, respectively. Also, close values are an indicator of good quality of the model. The overall criterion of fit (GOF) can be calculated using the following formula:

$$GOF = \sqrt{\text{average (Comunalities)}} \times R^2$$

Table 4. Checking the GOF fit index

Factors	Communality	R ²
Causal factors	0.838	-
Passion for action	1	0.281
Intervening factors	0.699	-
Consequences factors	0.779	0.696
Strategies factors	0.618	0.905
Contextual factors	0.731	-
Average	0.777	0.627
GOF fit index	0.697	

According to the three values of 0.01; 0.25 and 0.36 as weak, medium and strong values for GOF, obtaining a value of 0.697 for GOF shows the overall strong fit of the model in the present study.

5. Discussion and conclusion

The purpose of the current research was to present a community-based tourism model in the mountain villages of Kojur in Nowshahr city. The results of twenty in-depth interviews with tourism activists in Kojur region led to the identification of 16 core categories. The main phenomenon in the process of community-based tourism was "passion for action" and other categories are in some way towards this main category. According to the paradigm model of community-based tourism, the reason for the desire to act in the direction of community-based tourism are mental and behavioral factors that various

background and intervening factors play a role in this process. The desire for action leads to the adoption of strategies such as development, marketing and product, financial and education strategies, which ultimately lead to socio-cultural, environmental and economic consequences, which can be positive or negative. The results of the data coding showed that "mental" and "behavioral" factors play a role in the emergence of enthusiasm for action in the community-based tourism model. The causal categories obtained, including the change of outlook and beliefs and entrepreneurial thinking in this research, are aligned with the community-based tourism research of Dadvarkhani and Ghanian (2017), Karmian (2019), Jahanbin (2019), Lee and John (2019) and Kayat (2014). The most important influencing factor is the local community's perspective on tourism development. Changing

beliefs and increasing interest in this area can play an important role. At the behavioral level, having a goal, persevering, working seriously and identifying opportunities are among the factors influencing the desire to act in the direction of community-based tourism. The results of data coding showed that "group", "family", and "individual" factors provide context for adopting community-based tourism strategies. The support of friends and teamwork with them in the field of group factors, family background, support and learning in the family as family factors, environmental concern, personal training and various previous experiences of people as individual factors affecting action in the direction of community-based tourism. The contextual categories obtained in this research, such as the importance and necessity of education and the role of the family, are in line with the researches of [Ranjbar \(2021\)](#), [Mokhtari \(2012\)](#), [Yunikawati et al. \(2021\)](#), [Zargham Borojeni and Bazarafshan \(2015\)](#) and [Najarzadeh and Torabi \(2016\)](#). The results of data coding showed that "infrastructural", "political-legal", "economic" and "socio-cultural" factors are intervening factors for adopting community-based tourism strategies. The findings of this research show that there are many intervening factors in the field of community-based tourism in mountain villages that have greatly influenced the adoption of strategies. Infrastructural problems, legal and political problems, economic limitations, the demand of the local community, lack of support from government officials, unrealistic support, barriers to creating new businesses and lack of suitable expert personnel are among the intervening factors in the direction of action for community-based tourism in mountainous villages. This result is in agreement with the research results of [Hossain and Uchinlayen \(2018\)](#), [Ranjbar \(2021\)](#), [Lo and Janta \(2020\)](#), [Yunikawati et al \(2021\)](#), [Dangi and Jamal \(2016\)](#), [Zargham Borojeni and Bazarafshan \(2015\)](#) and [Jahanbin \(2021\)](#). The results also showed that "developmental", "marketing and product", "financial" and "educational" strategies are action against "passion for action" in the field of community-based tourism. In fact, people under the influence of conditions and contexts, as well as causal factors, engage in tactics, and these actions and reactions form main phenomenon. Among the strategies that people follow at this stage include business development, obtaining licenses, cooperation with organizations, attending exhibitions, relational marketing, obtaining financial facilities,

investment, and education and learning. Cooperation with stakeholders and networking and training are among the categories that are mentioned in the researches of [Mokhtari \(2012\)](#), [Kayat \(2014\)](#), [Ranjbar \(2021\)](#), [Najarzadeh and Torabi \(2016\)](#) and [Zargham Borojeni and Bazarafshan \(2015\)](#) which are in line with the present research. The results of data coding indicate that the adopted strategies will have "socio-cultural", "environmental" and "economic" consequences, which can be positive or negative. Improvement of the quality of life, cultural exchange, lack of migration to cities, attention to the environment, increase in income, development of business chain, positive advertising and the presence of investors are among the positive consequences. But cultural invasion, environmental pollution, destruction of place, negative economic impact, negative advertising and job dissatisfaction of local people are some of the negative consequences in this field. Considering the consequences of community-based tourism development in the research of [Badri et al \(2008\)](#), [Charipouri \(2017\)](#), [Lee and John \(2019\)](#) and [Yunikawati et al \(2021\)](#) is in line with current research. The results also show that "passion for action" is the main phenomenon of the community-based tourism model of Kojur mountain villages. This urge to act can be seen from the causal factors to the consequences. A passion for action is a common element among all contributors. Many reasons make people want to take action and strategies. For example, having the background and basic facilities to start is the thing that encourages people to take action. In general, most of the interviewees admitted that they have the potential and desire to grow and develop and work, but they are not supported in reality. Many intervening factors have prevented them from working. [Priatmoko et al \(2021\)](#) also found in their research that the approval and enthusiasm of official leaders, the way of life and environment of the local community and the management team were necessary to achieve sustainable rural community-based tourism, which is in line with the results of the present research. Considering the causal factors found to be effective on the desire to take action in the field of community-based tourism, it is suggested to the managers and practitioners of tourism in the mental field, by holding appropriate training classes in the field of tourism businesses, to first correct the insight and perspective of the local community and strengthen the interest and belief for action in them. In terms of behavior, it

is suggested to the practitioners to strengthen the capabilities and motivations of the local indigenous community by holding related skill-oriented training courses. Considering the contextual factors as the effective context for community-based tourism strategies, it is suggested to the practitioners, considering the high potential of families in support for activists, by holding skill-based and informative training courses, to equip families in rural areas with skills and development. According to the identified intervening factors, it is suggested to those involved in this field, first of all, in terms of infrastructure, they should develop and solve the infrastructure problems of mountain villages for the presence and sustainability of tourists. Secondly, it is suggested to the authorities to remove the legal obstacles of tourism activists with appropriate measures and provide the necessary support to the activists and interested parties with the help of monetary and financial institutions. According to the adopted strategies, it is suggested to the relevant managers and officials to facilitate the process of obtaining licenses for the activists of this field, to support in the field of marketing and sales of tourism products and to hold festivals of the supply of capabilities, as well as by financial facilities facilitate community-based businesses. Considering the socio-cultural, environmental and economic consequences of

community-based tourism development obtained in this research, it is suggested to inform the local indigenous community about the negative effects of tourism development by holding appropriate trainings. It is also suggested that those involved, considering the importance of community-based tourism development and its positive effects, facilitate the development of this type of tourism with long-term planning and develop it as much as possible in mountain villages. One of the limitations of the current research is that due to the low level of education and training of some participants, it was difficult to conduct interviews and receive the desired information, therefore, in this regard, it is suggested that the interview questions be designed in a simple and comprehensive manner to get more in-depth information. Hard access to the mountain villages of Kojur region was one of the other limitations, and in this regard, it is suggested to follow up the research work in the warm seasons of the year.

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Authors' contributions

The authors equally contributed to the preparation of this article.

Conflict of interest

The author declare no conflict of interest.

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گردشگری جامعه محور در روستاهای کوهستانی با رویکرد نظریه زمینه‌ای (مطالعه موردی: بخش کجور شهرستان نوشهر)

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چکیده مبسوط

۱. مقدمه

بسیاری از رویکردهای توسعه گردشگری در سال‌های اخیر بر مشارکت و توانمندسازی جوامع محلی، حفاظت از محیط و فرهنگ جامعه میزبان و توسعه پایدار جامعه تمرکز کرده‌اند زیرا حمایت و مشارکت جامعه برای موفقیت توسعه گردشگری امری ضروری است. در این میان گردشگری جامعه محور مطرح شد که متضمن سطح بالای مشارکت جوامع محلی تحت لوای پایداری در فرآیند توسعه و برنامه ریزی گردشگری است. روستاهای شمال کشور از به دلیل دارا بودن جاذبه‌های طبیعی و کوهستانی منحصر به فرد و همچنین فرهنگ بومی محلی غنی توانسته‌اند زمینه جذب گردشگران را فراهم نمایند. توسعه گردشگری انبوه و ناپایدار اثرات منفی و مشکلات زیادی را برای این روستاها علی‌رغم پتانسیل‌های بسیار بالای میراث فرهنگی و طبیعی برای آنها ایجاد کرده است. همچنین گردشگری در این ناحیه به دلیل رشد خودجوش و انبوه با اثرات اقتصادی و محیطی منفی چون افزایش قیمت محصولات، افزایش بی‌رویه قیمت زمین، افزایش هزینه زندگی، ناتوانی جوانان در خرید زمین و مسکن، اختلاف درآمدی و شکاف طبقاتی میان خانوارهای روستایی، کاهش شاغلان بخش کشاورزی و فصلی شدن درآمد و شغل را به دنبال داشته است. هرچند پژوهش‌هایی درباره گردشگری جامعه محور در داخل و خارج کشور انجام شده است اما پژوهش‌های اندکی دانشی کاربردی درباره توسعه گردشگری جامعه محور و حل مشکلات گردشگری در روستاهای کوهستانی تولید کرده‌اند و هیچ پژوهشی به بررسی گردشگری جامعه محور در بافت روستاهای کوهستانی شمال کشور و حوزه شهرستان نوشهر نپرداخته است.

۲. ادبیات نظری تحقیق

علیرغم پتانسیل‌های گردشگری حقیقتی نگران‌کننده وجود دارد که در طی ۵۰ سال گذشته از زمان ظهور جهانی صنعت گردشگری، جوامع محلی مزایای کمی از گردشگری دریافت کرده‌اند. در حقیقت، جوامع محلی از گردشگری بسیار کم بهره‌برده‌اند. گردشگری پایدار اگرچه زمینه اصلی تلاش برای توسعه برخی از کشورها بوده ولی به دلیل برخی کاستی‌ها که می‌تواند مانع مشارکت کامل مردم محلی و نتایج مورد نظر شود، مورد انتقاد قرار گرفت. بنابراین، یک رویکرد جامع تر و کل نگر برای توسعه، که نیاز به آغاز، برنامه ریزی و اجرا توسط افراد محلی و برای مردم محلی داشت، مورد نیاز بود. "گردشگری جامعه محور" در اواسط دهه ۱۹۹۰ محبوب شد و در تلاش برای مشارکت واقعی و همه جانبه جامعه در همه سطوح توسعه، رویکرد توسعه را از پایین به بالا تغییر داد. بطور کلی گردشگری جامعه محور گردشگری است که توسط جامعه برای جامعه برنامه ریزی، توسعه، مالکیت و مدیریت می‌شود، که توسط تصمیم‌گیری جمعی، مسئولیت‌پذیری، دسترسی، مالکیت و مزایا هدایت می‌شود. این به عنوان یک مبادله برد-برد بین میزبان و مهمانان تصور می‌شود. میهمانان از کشف میراث طبیعی و فرهنگی و خرد مردم مقصد لذت و رضایت می‌برند در حالی که میزبان آگاهی و غرور بیشتری را به دست می‌آورند زیرا میراث طبیعی و فرهنگی و خرد آنها منبع رفاه اقتصادی و اجتماعی است.

۳. روش تحقیق

پژوهش حاضر از نظر هدف از نوع بنیادی و از نظر روش گردآوری داده‌ها از آمیخته (کیفی کمی) می‌باشد. در بخش کیفی از روش داده بنیاد سیستماتیک اشتروس (۱۹۹۰) استفاده شد.

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"اقتصادی" می باشد. همچنین پدیده اصلی در این مدل "اشتقاق برای اقدام" انتخاب شد. تحلیل بخش کمی نیز حاکی از تایید مدل پارادایمی و روابط بین اجزاء بوده است.

۵. بحث و نتیجه گیری

هدف پژوهش حاضر ارائه مدل گردشگری جامعه محور روستاهای کوهستانی شهرستان نوشهر بوده است. با توجه به مشکلات گردشگری روستاهای کوهستانی منطقه کجور نوشهر، می توان با توجه به فرآیند توسعه گردشگری جامعه محور با کاهش موانع متعدد شناسایی شده و تقویت بسترها و با اتخاذ استراتژی های توسعه ای، بازاریابی و محصول، مالی و آموزش به توسعه گردشگری جامعه محور در روستاهای کوهستانی کمک نمود و پیامدهای مثبتی را ایجاد کرد. بر اساس مدل پارادایمی گردشگری جامعه محور، علت اشتقاق برای اقدام در جهت گردشگری جامعه محور عوامل "ذهنی" و "رفتاری" می باشند که در این فرآیند عوامل زمینه ای و مداخله گر مختلفی نقش ایفا می کنند. "اشتقاق برای اقدام" منجر به اتخاذ راهبردهایی چون راهبردهای "توسعه ای"، "بازاریابی و محصول"، "مالی" و "آموزش" می شود که در نهایت اتخاذ این راهبردها به پیامدهای اجتماعی- فرهنگی، زیست محیطی و اقتصادی می انجامد که می تواند مثبت و یا منفی باشد.

کلیدواژه ها: گردشگری جامعه محور، روش داده بنیاد، روستای کوهستانی، شهرستان نوشهر.

تشکر و قدردانی

پژوهش حاضر از محل اعتبار پژوهشگاه مازندران تامین مالی شده است.

جامعه آماری تحقیق در بخش کیفی شامل ۲۰ نفر از کارآفرینان و فعالین حوزه گردشگری، صنایع دستی، مسئولان مرتبط محلی و خبرگان دانشگاهی بوده است. جامعه آماری در بخش کمی شامل ساکنین روستاهای کوهستانی کجور نوشهر بوده است. روش نمونه گیری برای انتخاب مشارکت کنندگان در مصاحبه به صورت هدفمند و نظری بود، مصاحبه ها به صورت نیمه ساختاریافته و عمیق (۷ زن و ۱۳ مرد) انجام شد و زمانیکه به یافته های مصاحبه هیچ داده تازه ای اضافه نشد که بتوان ویژگی های مقوله ها را توسط و بسط دهد اشباع نظری تلقی شد که در مصاحبه بیستم به اشباع رسید. در بخش کمی، با توجه به مشخص نبودن دقیق تعداد ساکنین روستاها به دلیل شرایط ییلاقی و قشلاقی بودن منطقه، لذا حداکثر حجم نمونه ۳۸۴ نفر تعیین شد. روش نمونه گیری بخش کمی از نوع خوشه ای تصادفی و دردسترس بوده است. جهت تجزیه و تحلیل مصاحبه های بخش کیفی از نرم افزار MAXQDA2020 و تحلیل پرسشنامه های بخش کیفی از روش معادلات ساختاری با کمک نرم افزار Smart PLS استفاده شد.

۴. یافته های تحقیق

مدل گردشگری جامعه محور روستاهای کوهستانی بدست آمده در این تحقیق شامل شش جزء می باشد. عوامل علی شامل دو مولفه ای "ذهنی" و "رفتاری"، عوامل زمینه ای شامل سه مولفه ای "گروهی"، "خانوادگی" و "فردی"، عوامل مداخله گر شامل چهار مولفه ای "زیرساختی"، "سیاسی- قوانین"، "اقتصادی" و "مداخله گر اجتماعی- فرهنگی"، عوامل راهبردی شامل چهار مولفه ای "توسعه ای"، "بازاریابی و محصول"، "مالی" و "آموزش" و در نهایت پیامدها شامل سه مولفه ای "پیامد اجتماعی- فرهنگی"، "زیست محیطی" و



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Analyzing Physical Traits of Rural Housing in order to Achieve Its Architectural Pattern (Case Study: Hezaveh Village, Markazi Province)

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Abstract

Purpose- The purpose of this article is the provision a context for the continuity and conveyance of hidden values in human habitations in a form of patterns for future plans.

Design/Methodology/Approach- Hezaveh village, located in Markazi Province, is one of the habitats that has always been noted due to its location and physical traits. Hence, three residential samples were studied and analyzed. The research has been formed with an inductive approach based on field observations and documentary studies. The selection method of samples was based on diversity indicators in structural and functional patterns. They were extracted among the observed samples based on statistical data according to the number of families, type of livelihood, etc.

Findings- The findings of the research demonstrate the way physical traits of habitats are considered in accordance with the natural environment, humans, and housing formation. Thus, housing can be understood as a fundamental type and pure form of a physical environment that represent those patterns. Because of the cold climate of the village, most houses have inner yards and are introverted. The ratio of the outer skin to the whole volume of buildings is low. Yards are relatively small and walls are thick. Moreover, the investigations revealed that there are somehow similar spaces in them.

Practical implications- In its simplest use, the findings of the research might be deemed as a pattern or criterion for the design of rural housing which reflects the architectural properties of that region.

Originality/Value- The analysis and inference methodology of a pattern for rural housing could be regarded as an innovation in this research.

Keywords: Physical traits, Rural housing, Architectural pattern, Hezaveh, Markazi Province.

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1. Introduction

The natural geography of Iran illustrates several environmental realities and their role in the formation, human communities' settlement, and the development of their activities and livelihood. Therefore, the location, establishment, formation, and physical expansion of Iranian cities and villages are depended on their environmental and geographical conditions. According to the performed studies, about 67 percent of rural areas are located in mountains or foothills, 13 percent in flat plains, and the rest in the desert area and seaside based on natural topography. This type of establishment demonstrates the impact of geographical factors on the distribution of rural habitations (Sartipipour, 2009). On the other hand, various natural, cultural, economic, political, religious, military, communicational, and other similar factors locally-spatially bestow a unique identity on a rural habitat. A change in each of those factors can transform the role of each location. Hence, the formation of rural space can generally be influenced by natural and human factors that have a close interactive relation together (Saeidi, 1998).

In the literature on habitation, there is an emphasis on the role of housing in identity acquisition (Pourdehimi & Nourtaghani, 2013). In the meantime, human settlement has always been in harmony and accordance with such social life, economic transformations, and expansion of technological facilities during the history of his life. The resulting changes might be observed in the image of their habitations and architecture during different periods of history. Rural architecture has not been an exception and always had a close connection with cultural and social values and technical and environmental facilities. Moreover, adherence to values, mores, and traditions has always ruled over rural architecture. The vernacular architecture is also the product of such communities which not only look after and develop traditions but also assist to maintain the ruling values of society and their cultural continuity (Rapoport, 1982). The physical solidity of human habitations is created as a consequence of social order where the structure of the neighborhood, sub-neighborhood, and residential unit comply with the structural traits of society. Human is free to choose from the facilities that culture provides and can participate in a special and creative culture to a certain extent. This means that each individual is born within a semantic system that

is understood through its symbolic manifestations by humans (Norberg-Schulz, 1975). The studies investigating the spatial distribution of living quality are very few in rural areas (Jamini & Jamshidi, 2014). Located in Markazi province, Hezaveh village is one of the areas that has kept its precious rural architecture and fabric. Besides, the village is prominent because of other aspects. Thus, the present research has studied the topic with the goal of investigating the physical traits of housing and habitation in Hezaveh village by analyzing three selected samples of housing with an inductive approach based on documentary studies with descriptive and analytical methods. Accordingly, the following questions are propounded regarding the subject:

- How is the habituating pattern in Hezaveh village?
- How are the physical and climatic traits of housing in Hezaveh village?

2. Research Theoretical Literature

2.1. Research Background

The history of performing typology studies of rural housing in Iran dates back to the early 1980s when 65 percent of the country's population were villagers. At first, Building and Housing Research Center carried out the studies and the results were presented and publishes in books titled *Rural Housing in Khouzestan Province* in 1982, *Rural Housing Typology of Kohkilooyeh and Boyer-Ahamad Province* in 1984, *Rural Housing Typology of Chahar-Mahal and Bakhtiari Province* in 1984, *Rural Housing Typology of Khouzestan Province* in 1986, and *Rural Housing Typology of Ilam Province* in 1988.

Afterward, the task of rural housing typology was undertaken by Islamic Revolution Housing Foundation in the late 1980s and early 1990s. One of the first works was the rural housing typology of Khorasan province. Its findings were published in a book titled "The Rural Housing Pattern, a Research on Rural Architecture of Khorasan Province" by the Islamic Revolution Housing Foundation in 1992. During the 1990s, Islamic Revolution Housing Foundation prepared typology plans for rural housing for the provinces of Khorasan, Fars, Yazd, Lorestan, Semnan, Isfahan, East Azerbaijan, and Ardebil. The studies related to the provinces of Fars and Yazd were devolved to this research group. In the first decade of the new millennium, the preparation of the typology plans of rural housing for the provinces of Kerman, Kordestan, Hormozgan, and Booshehr was also devolved to this research group and the job was

implemented and handed over between 2003 and 2006.

Since 2005, when the special plan for rural housing improvement was put into action, Islamic Revolution Housing Foundation and its provincial branches commenced the design of some types of rural housing in many provinces by employing local consultants so that results could be a guideline for design offices of rural housing in country's provinces. In some provinces, this was conducted by the main (controlling) consultant of the province which contained achievements of previous typology plans (Mansoori Pelasi, 2021).

The related performed researches with this village are mostly about rural housing of Markazi province comprising selected villages including Hezaveh. For instance, Sartipipour's research titled "The Architecture of Popular Vernacular Architecture in the Villages of Markazi Province" in 2013 and also the book titled "Rural Housing Typology of Markazi Province" in 2014. Hitherto, the physical traits of housing in Hezaveh village have not specifically been heeded and analyzed completely. In fact, the significance of the research is in accordance with the explanation of the physical traits of houses in this village which could lead to the recognition of design principles and the basis of habitation design. Moreover, it might assist designers to prevent spending so much time and cost in the future.

2.2. Physical Structure of Rural Habitations

A rural environment contains three main physical elements, meaning land for agricultural products, natural surrounding environment as the context for physical expansion, and human or regional habitations dependent on architecture (Poortaheri et al., 2011). In the meantime, habitation or the presence of a human on earth and a proper environment for that have had various architectural responses in traditional and modern thoughts (Taheri, 2013). Housing has diverse conceptual aspects in that it is a shelter and physical place in its special concept that is considered a primary and basic requirement of households (Sojasi Ghidari et al., 2015). Besides habitation, rural housing is the manifestation of biological-livelihood methods (Mohammadiyeganeh et al., 2017). Not only the house works as a shelter in rural areas but also it functions as a place for keeping livestock and produced crops and a place for financial activities (Ghanbari, Ramezanzadeh Lasboyee & Masoom Poorsmakooosh, 2010). In fact, the formation of habitations is taken from different cultural-social (Gür, 2000), economic, and environmental (Usta, Onur, & Efe Ziyrek, 2012)

indicators and so, it demonstrates primitive cultural relations (Günce & Ertürk, 2008). Therefore, its recognition has a significant role in awareness of the present and future generations from their architecture, culture, and the way their principles are used in subsequent designs. The establishment of a rural house is based on some necessities raised from the ruling essence of the natural environment and humans.

Hence, the roots of this establishment can be assumed both in capabilities and in forces of the place and also in human behaviors which are often dependent on the formation context. Climatic conditions, natural environment properties, space's function, dominant traditions, formation of building in the environment, and cultural and social principles all influence the body of the rural house (Ibid, p. 3), (Alalhesabi & Raheb, 2008). In a physical definition, a house is a spatial amalgam of function, strength, and beauty in order to respond to the living requirements of dwellers. Besides covering this definition, a rural house has an organic structure based on the life of villagers. Thus, not only it meets biological needs but also it is considered the focal point of production and subsistence activities. Therefore, it bears a complex of diverse and numerous biological and livelihood functions (Balaban & San, 1988), (Sartipipour, 2013). As the physical realization of the house, physical dimensions are the most objective and material subjects in evaluation, analysis, and planning related to housing (Management & Planning Organization, 2004). Regarding the physical nature of intervening in rural housing, the physical aspect of housing possesses special importance compared to its other aspect. That is why it usually receives more heed in housing studies, analyses, and design. As the objective appearance, the physical aspect of housing is influenced by a complex of factors intervening in rural housing (Zargar & Hatami Khanghani, 2015). On the other hand, one of the most prominent symbols in recognition of habitation conditions is the attention to physical indexes and indicators of housing (Rabieifar et al., 2014) which is observed as a significant aspect in evaluation, analysis, and planning of housing (Sartipipour, 2012).

Depending on climatic and geographical diversity, rural habitations have different types (Jamini, et al. 2014). The creation of form, plan and orientation in vernacular houses are affected by natural factors (Almusaed, 2011). Each component of the habitation is obtained due to a necessity in connection to several cultural, social, economic, natural, historic, etc. factors in diverse forms (Askari Ranbari et al., 2016).

3. Research Methodology

3.1. Geographical Boundary of Research

According to [figure 1](#), Hezaveh village is located in the rural district of “Amiriyeh”, one of the environs of the central district of “Arak County”, which is in 25 kilometers distance from the center of this county and longitude and latitude of 49.32 and 34.11 degrees respectively and sea level of 1800 meters. According to the census in 2016, its population is 1184 people. Its natural position is mountainous and located in the foothills. It is very cold in winter and moderates in

summer with an average temperature of 14 degrees Celsius. Most winds blow from west and east. The most amount of rain during the period of 1986 to 2011 is in November which is about 87.9 millimeters ([Mohammadnejad Hessari, 2015](#)). The most important water resource of the village is groundwater which exists in two forms underground aqueduct (Qanat) and a spring. The main jobs of inhabitants are gardening, agriculture, and animal husbandry and as sidelines, they are involved in service and industrial activities.

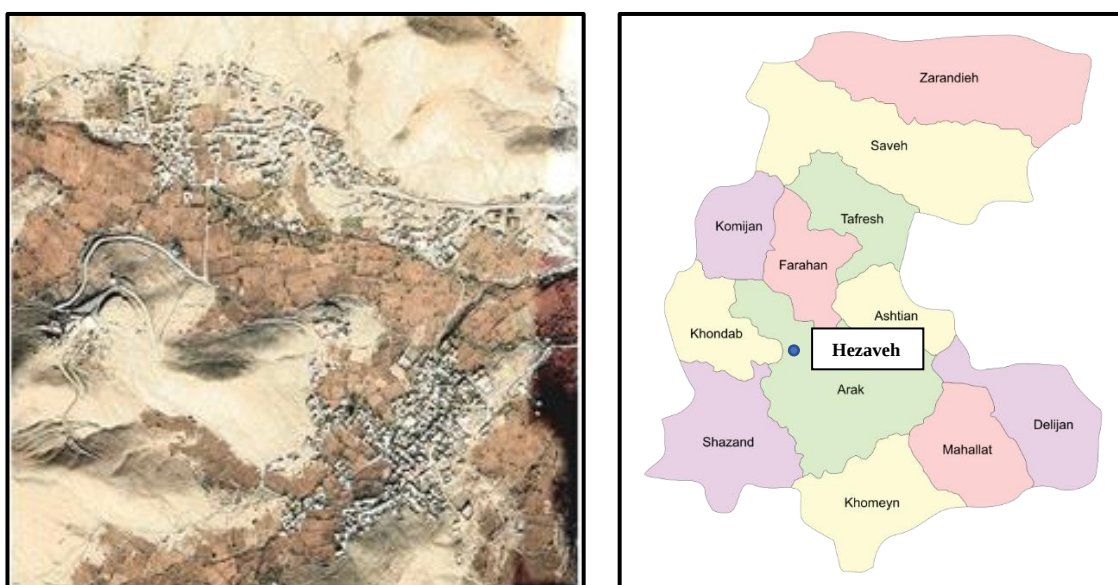


Figure 1. Location & Aerial Image from Hezaveh Village;

Source: Authors, 2021

One of the most significant properties of the village is its antiquity adjacent to many other works such as the tomb of Imamzadeh Sultan Seyyed Ahmad (related to the Safavid period) and Amir Kabir house (Qajar era). The village's appellation is taken from the term “HezarAbeh” (thousand water) meaning there were plenty of headwaters in the village. Moreover, some believe the name comes from “Zav” which means valley and some are in consonance with the geography of the village ([Mohammadnejad Hessari, 2015](#)). The whole residential land use is about 243,211 square meters and it is about 32.03 percent of the whole area of land used in the village. Considering the village population in 2011, the residential per capita is 167.85 square meters (Ibid: 127). Due to the dominance of temperate to cold weather during the year, most habitations have been constructed flat

and facing south in order to take advantage of sunlight like what is illustrated in [figure 2](#). Walls are made out of adobe, stratum, and mud and their thickness are relatively high. The structure of houses is in a way that the main spaces are connected to each other through a linking space so that the energy waste reduces. Houses are mostly double-decker in which the lower level is dedicated to livestock and the upstairs is for the living of inhabitants.

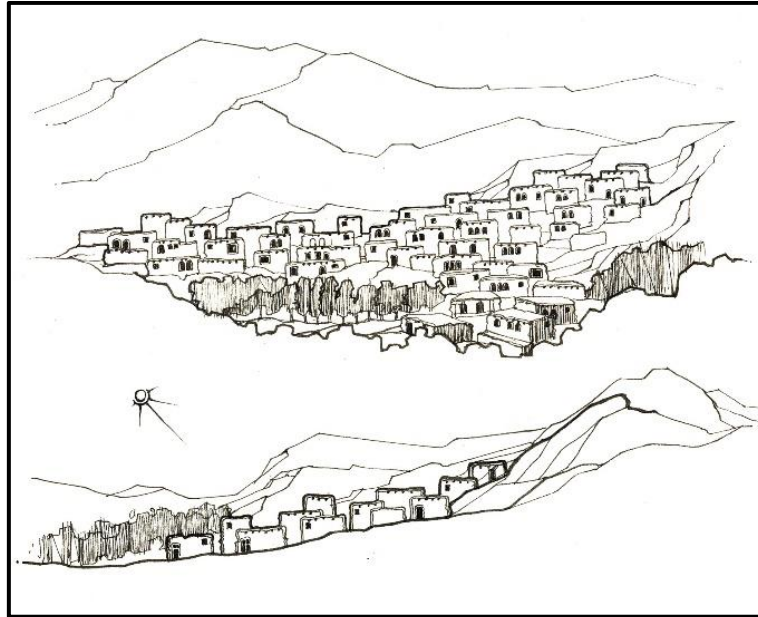


Figure 2. Hezaveh Village;

Source: Authors, 2021

Hezaveh village possesses a complicated fabric including adobe, stone, and brick houses that are sat stair-like on the slope of the hillside. Influenced by geographical factors and the existence of water, the architectural construction of the village is shaped into two main sections and concentrated in six neighborhoods. By including Imamzadeh, seven ethnic and cultural neighborhoods could be presumed.

The fabric of the village consists of six completely separated sections which are combined with the surrounding gardens. Houses are places adjacent to each other in an aggregated order. The passageways inside the village fabric are narrow and tortuous. However, the routes that connect the neighborhoods are relatively wide.

Physically, the existing buildings in the village are divided into three general following categories:

- Buildings entirely with vernacular structure and taken from environmental materials;
- Buildings with a mixture of local and non-local materials; and
- Buildings with non-local materials.

3.2. Methodology

The type of design, construction technology and method of rural housing, dimensions, proportions, scale, and adaptation to interior and exterior conditions of the residential unit all demonstrate the level of influence and reinforcement of human relations with environmental facilities, conditions, and necessities that have been experimentally realized in the spatial structure of rural housing as principles, criteria, and quantities during the time

(Sartipipour, 2005). In the meantime, not only do the production method and livelihood of dwellers affect the number and quality of spaces' function inside the house but also they are heeded as prominent and fundamental factors due to their direct impact on the financial level of individuals, selection of materials type, house size, and building's decorations. Moreover, the whole floor area and more importantly, the net area of rural houses which are separated into rooms and other functional spaces, reveals the social and economic properties of rural habitations and the social base of the household that lives there.

About the reason why Hezaveh village in Markazi province was chosen, it is important to cite that Markazi province has an appropriate situation regarding the topic in Iran. Because it has various ethnicities and diverse climatic conditions. Among others, Hezaveh village with its old history and hidden values is a very proper village for the subject of the research. The reflection of natural and human environmental impacts on the body of Hezaveh residential architecture is conspicuous. In the present research, the methodology is based on an inductive approach, field survey, and documentary studies and then, the subject was described and analyzed. The research process consists of three main phases in this study:

- Introducing Hezaveh village and brief recognition of the physical environment;
- Selecting housing cases and field surveys; and
- Housing analysis from different aspects including structural diversity, spatial relations, using the type of premises, density, etc.

The first part of this process has a descriptive essence which is written based on documentary studies and library information. In the next step, the selection of cases was based on the reflection of

two types of variables resulting from the patterns of natural and human environments in the body of houses. These two variables are illustrated as indicators in different housing types:

Table 1. Influential Variables on the Selection of Cases;

Source: Findings of the Research, 2021

Patterns Caused by the Human Environment Reflected in the Housing		Patterns Caused by the Natural Environment Reflected in the Housing	
Variables	Wide & Varied Spatial Composition	Variables	Semi-compressed Plan in the Enclosed Yard
	Relatively Old Architecture		Openings with Relatively Large Dimensions
	Special Living & Production Spaces		The Main Orientation is Toward the Southeast

Since the research has a typological and context-based nature, all information about the studied cases is the result of field studies and all drawings of cases have been prepared by the authors. In the third section, all reasoning was a logical and inductive analysis accompanied by a conclusion. Finally, the result somehow represents the ruling pattern in the housing architecture of this village in a form of a table.

In the present research, the sample size is three traditional houses which were chosen among the traditional houses of the village that include more than 50 percent of the whole houses of the village. It should be mentioned that the research is not capable of considering more than this number. The variables related to the resulting patterns from the natural environment which are reflected in the body of houses are semi-compact plans in an enclosed yard, openings with relatively wide dimensions mostly orienting towards the southeast. The variables related to the resulting patterns from a human environment which are reflected in the body of houses consist of vast and diverse spatial combinations, relatively old architecture, and special livelihood and production spaces. They are obtained through observation in the body of buildings, surveys of cases, and analysis.

The analytical items in each case are going to be as follows:

- Analysis of housing climatic properties; including climatic space, construction materials, and building adjustment method;

- Analysis of housing physical properties; including building structure, dimensions and proportions, energy supply sources; and
- Analysis of housing premises and space; including structural orientation, zoning analysis, and spatial and functional analysis.

Consequently, physical traits of rural housing in Hezaveh village have been studied in the forms of three standpoints:

- The logic of locating and expanding on the ground (context), orientation, vastness, and climatic indicators;
- Dimensions and proportions, surface, density, mass, and space; and
- Sub-spaces, building structure, construction technology, and zoning.

4. Research Findings

Since it is not possible and essential to survey and present all rural houses and residential units in this research, taking a proper method for choosing the cases which it covers the dominant types of rural housing has a crucial impact on the quality of results and their validity. The initial survey of several houses in different neighborhoods of this village revealed three different physical types which are presented in three cases in [figure 3](#). Moreover, regarding the analysis of housing physical structure in the form of three selected cases, public, semi-public, and private zones and human and livestock spaces have been separately specified in each case by drawing plans and elevations:

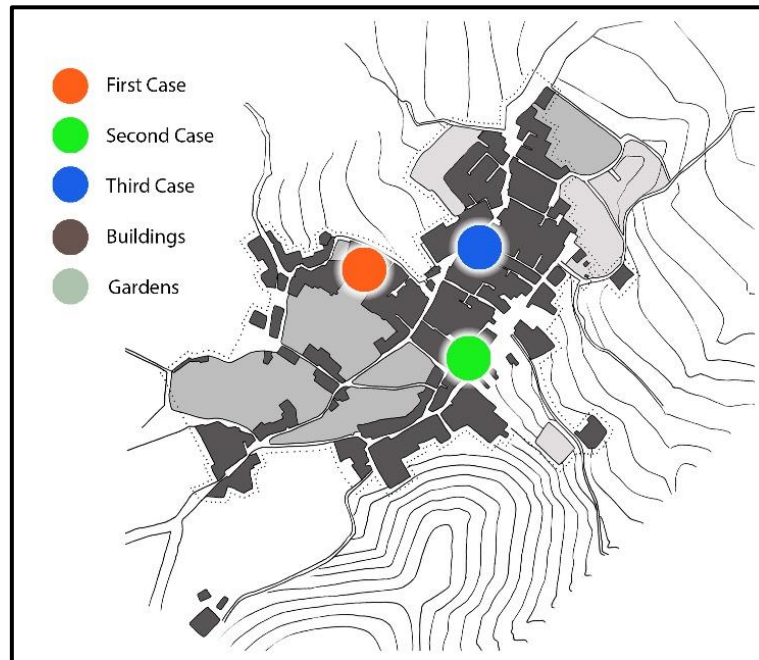


Figure 3. Locations of Three Cases in Hezaveh Village

Source: Authors, 2021

First Case: The first case of residential units in Hezaveh village is a house with an average combination of a household. The main jobs of dwellers are animal husbandry and gardening and parallel to them, they are also involved in other livelihood activities such as “cooking syrup”. The dwellers of this unit have a moderate level of social class and literacy. Relying on their livelihood traditions, their proper financial condition has led

to some extensions and modifications in the situation of the house. The major properties of this residential unit are its orientation toward the southeast, arrangement of spaces around a courtyard, functional diversity of spaces, and utilization of local patterns in construction. At the moment, five people in form of two households are living in this house.

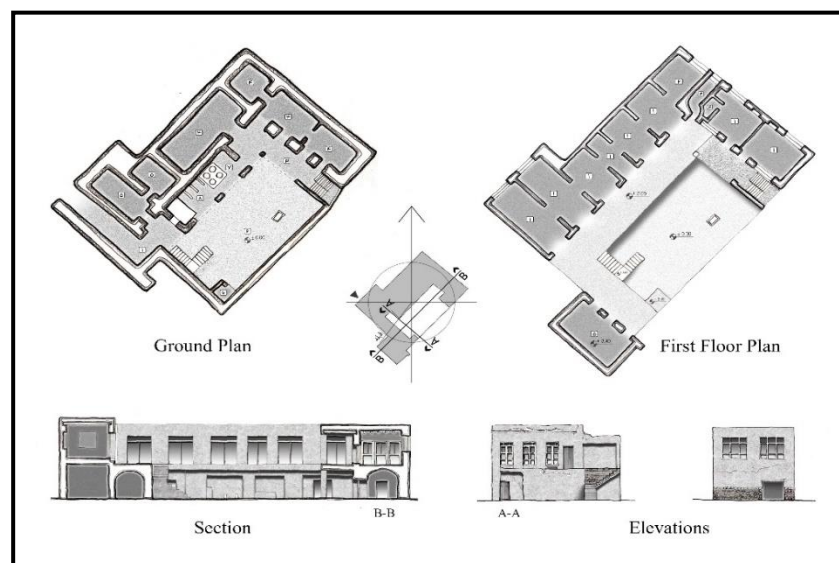


Figure 4. Ground & 1st Floor Plans besides Elevations & Section of 1st Case

Source: Authors, 2021

Table 2. Analysis of Housing Climatic Properties of 1st case

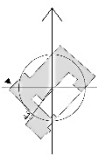
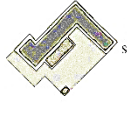
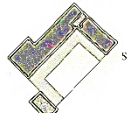
Climatic Space	Yard	The south yard is approximately 8*16 square meters
	Porch	2.5 meters deep facing southeast, first floor 3 meters deep, facing south, first floor
	Underground	Does Not Have
Climate Materials	Crust	Clay, Stone
	Roof	Beams, boards, Branches, Mats & Clay with Straw Insulation
	The Floor	Stone with Mortar
Building Adjustment Method	Heating	Heated Seat (Korsi), Heater, Oil Lamp
	Cooling	Openings, Fan

Table 3. Analysis of Housing Physical Traits of 1st Case

The Structure of the Building				Dimensions & Proportions	
Cover	Roof	Thatch		Surface of Earth	438 square meters
	The Floor	Soil, Cement, Stone			
Materials	Types	Carrier	Clay, Brick, Stone, Wood	The Surface of the Infrastructure	320.5 square meters
		Mortar	Clay Mud, Plaster & Soil, Cement Sand	Occupancy Percentage	73.2 percent
		Coated	Thatch, Plaster & Soil, White Plaster, Cement	Number of Floors	Two Floors without a Basement
	Ceiling	Timber, Board, Mat, Waj, Clay		Wall Thickness	0.3, 0.5 & 1 m
	Foundation	Stone & Mud Mortar			
	Wall	Brick, Clay, Stone		Openings	Northwest, Northeast, Southeast, Southwest
Construction Technology	Bearing Wall with Wooden Cover, Brick Roof			Porch	2.5 meters deep, facing southeast, first floor 3 meters deep facing southwest, first floor
Structural Elements	Foundation	Masonry Foundation		Energy Supply Sources	
	Crust	Bearing Wall		Fuel	Oil, Firewood, Gas
	Ceiling	Flat Wooden Cover, Brick & Clay Roof			
The Level of & the Building the Yard	The Same Level & Above			Water Resources	Plumbing, Domestic Well
The Level of the Yard & the Passage	At the Same Level				
Equipment	8 Room, Kitchen, Barn, Warehouse, Corridor, Toilet, Bathroom, Oven, Juice-bark, Grapes Yard				

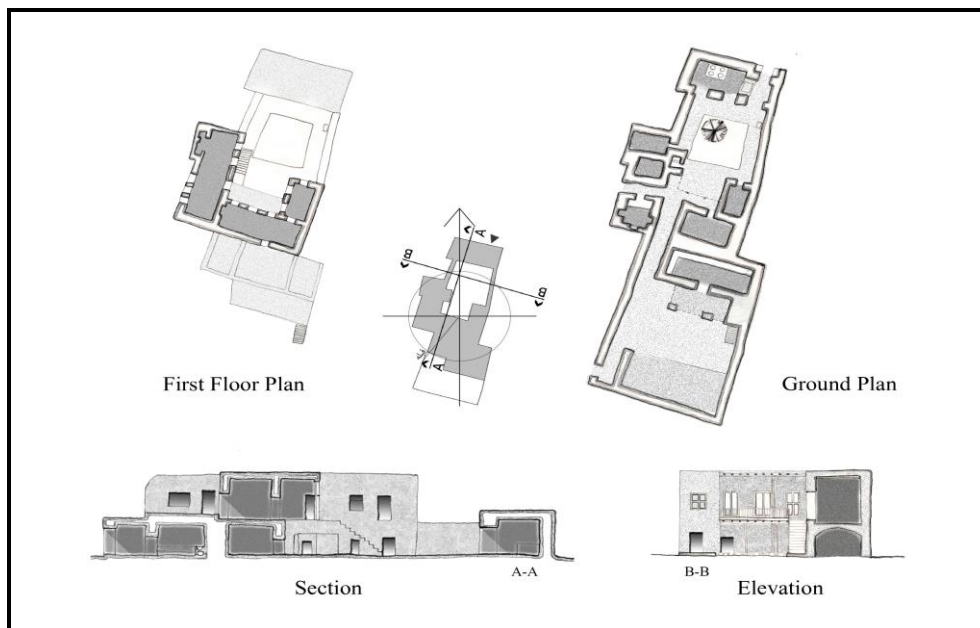
Table 4. Analysis of Housing Premises & Spaces of 1st Case

Source: Authors, 2021

Orientation	Map Type	Field Analysis	Spatial Analysis
	Ground Plan	 - Public Space - Semi-Public Space - Private Space	 - Animal Space - Human Open Space - Human Space - Animal Open Space
	First Floor Plan	 - Public Space - Semi-Public Space - Private Space	 - Animal Space - Human Open Space - Human Space - Animal Open Space
	Elevation- Section		

Second Case: It is a house with a small combination of a household. The main jobs of dwellers are animal husbandry and gardening and parallel to them, they are also involved in other livelihood activities such as “cooking syrup”. The dwellers of this unit have a low level of financial and social class and literacy. However, proper livelihood conditions in the past based on specific earning traditions and the building’s special and

old architecture assume a hidden originality inside it. The major properties of this residential unit are orientation toward Qibla, arrangement of spaces around a central courtyard, functional diversity of spaces, and utilization of local patterns in construction. Although its previous dwellers have abandoned this unit, two people are living in this house as a family right now.

**Figure 5. Ground & 1st Floor Plans Besides Elevation & Section of 2nd Case**

Source: Authors, 2021

Table 5. Analysis of Housing Climatic Properties of 2nd Case

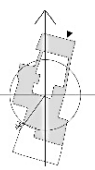
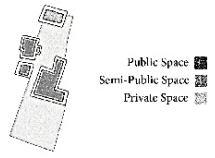
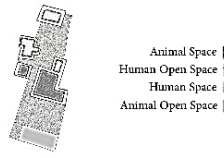
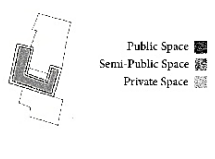
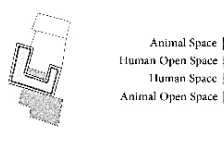
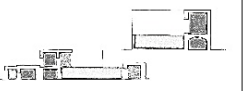
Climatic Space	Yard	The central courtyard is approximately 14 * 8.5 square meters
	Porch	2 meters deep, facing the north of the first floor
	Underground	Does Not Have
Climate Materials	Crust	Clay, Stone
	Roof	Beams, boards, Branches, Mats & Clay with Thatch Insulation
	The Floor	Stone with Mortar
Building Adjustment Method	Heating	Heated Seat (Korsi), Oil Lamp
	Cooling	Openings, Fan

Table 6. Analysis of Housing Physical Traits of 2nd Case

The Structure of the Building				Dimensions & Proportions	
Cover	Roof	Thatch		Surface of Earth	553.5 square meters
	The Floor	Soil, Cement, Stone			
Materials	Types	Carrier	Clay, Stone, Wood	The Surface of the Infrastructure	314 square meters
		Mortar	Soil Mud, Plaster & Sand		
		Coated	Thatch, Plaster & Soil	Occupancy Percentage	56.7 percent
	Ceiling	Timber, Mat, Waj, Clay		Number of Floors	Two Floors without a Basement
	Foundation	Stone & Mud Mortar			
	Wall	Clay, Stone			
				Wall Thickness	0.6 & 0.85 m
			Openings	North, East	
Construction Technology	Bearing Wall with Wooden Cover, Brick Roof			Porch	2 meters deep, facing north, first floor
Structural Elements	Foundation	Masonry Foundation		Energy Supply Sources	
	Crust	Bearing Wall		Fuel	Oil, Firewood, Gas
	Ceiling	Flat Wooden Cover, Brick Roof			
The Level of the Building & the Yard	The Same Level & Above			Water Resources	Plumbing,
The Level of the Yard & the Passage	The Yard is Lower				
				Heating/Cooling	Seat heating, Heater, Oil Lamp/Fan
Equipment	3 Room, Kitchen, Barn, Warehouse, Hallway, Toilet, Oven, Juice-bark				

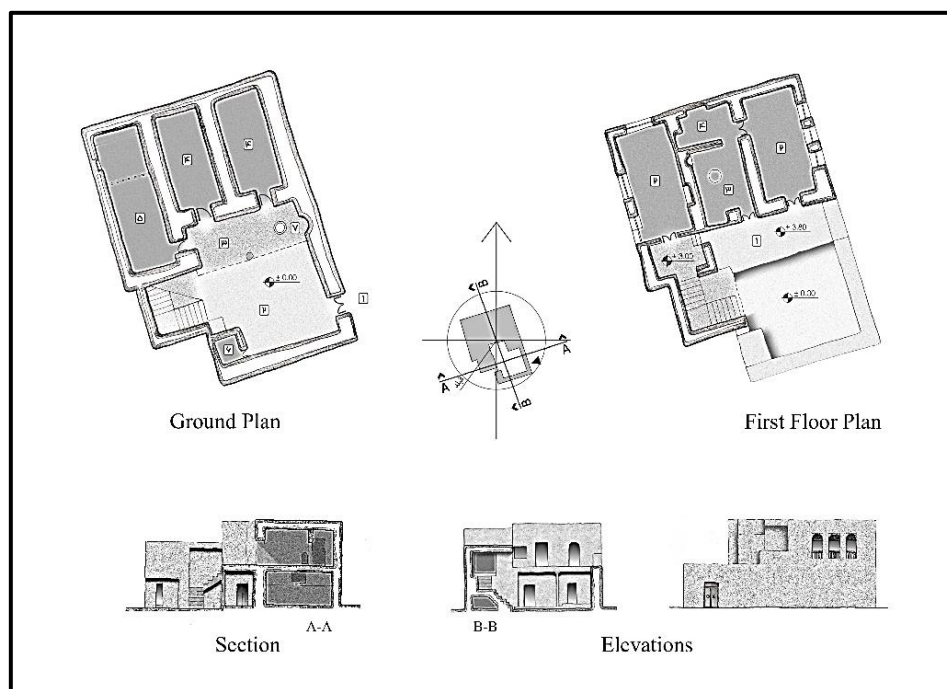
Table 7. Analysis of Housing Premises & Spaces of 2nd Case

Source: Authors, 2021

Orientation	Map Type	Field Analysis	Spatial Analysis
	Ground Plan		
	First Floor Plan		
	Elevation- Section		

Third Case: It is a house with a small combination of a household. The main job of dwellers is animal husbandry and parallel to it, they are also involved in other livelihood activities such as laboring. The dwellers of this unit have a low level of financial and social class and literacy. The major properties

of this residential unit are its orientation toward the southeast, dense arrangement of spaces, functional diversity of spaces, and utilization of local patterns in construction. Three people are living in this house as a family right now.

**Figure 6. Ground & 1st Floor Plans Besides Elevation & Section of 3rd Case**

Source: Authors, 2021

Table8. Analysis of Housing Climatic Properties of 3rd Case

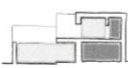
Climatic Space	Yard	The southern yard is approximately 7 * 6.5 square meters
	Porch	2.8 meters deep facing southeast, first floor
	Underground	Does Not Have
Climate Materials	Crust	Clay, Stone
	Roof	Beams, boards, Branches, Mats & Clay with Thatch Insulation
	The Floor	Stone with Mortar
Building Adjustment Method	Heating	Heated Seat (Korsi), Oil Lamp
	Cooling	Openings

Table 9. Analysis of Housing Physical Traits of 3rd Case

The Structure of the Building				Dimensions & Proportions	
Cover	Roof	Thatch		Surface of Earth	187 square meters
	The Floor	Soil, Cement, Stone			
Materials	Types	Carrier	Clay, Stone, Wood	The Surface of the Infrastructure	141.5 square meters
		Mortar	Soil Mud, Plaster & Sand	Occupancy Percentage	75.7 percent
		Coated	Thatch, Plaster & Soil, White Plaster	Number of Floors	Two Floors without a Basement
	Ceiling	Timber, Mat, Waj, Clay		Wall Thickness	0.5, 0.75 & 1 m
	Foundation	Stone & Mud Mortar			
	Wall	Clay, Stone		Openings	Northeast, Southeast
Construction Technology	Bearing Wall with Wooden Cover, Brick Roof			Porch	2.8 meters deep, facing southeast, first floor
Structural Elements	Foundation	Masonry Foundation		Energy Supply Sources	
	Crust	Bearing Wall		Fuel	Oil, Firewood
	Ceiling	Flat Wooden Cover, Brick Roof			
The Level of the & the Building Yard	The Same Level & Above			Water Resources	Plumbing,
The Level of the Yard & the Passage	The Yard is Lower				
Equipment	2 Room, Kitchen, Stable, Storage, Toilet, Oven				

Table 10. Analysis of Housing Premises & Spaces of 3rd Case

Source: Authors, 2021

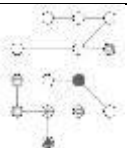
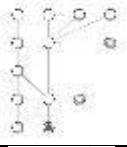
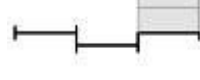
Orientation	Map Type	Field Analysis	Spatial Analysis
	Ground Plan	 - Public Space - Semi-Public Space - Private Space	 - Animal Space - Human Open Space - Human Space - Animal Open Space
	First Floor Plan	 - Public Space - Semi-Public Space - Private Space	 - Animal Space - Human Open Space - Human Space - Animal Open Space
	Elevation- Section		

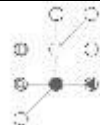
5. Discussion & Conclusion

According to the performed studies, environmental, cultural, and economic factors are the factors that shape the body of architecture. The environmental factor is apparently more influential among them. On one hand, these factors create a kind of architecture and on the other hand, provide a context for continuity and conveyance of values in order to be used in future plans in the form of

patterns. In the meantime, housing is a sample that can represent these patterns as a fundamental type and simple form of a physical body. As a sample of existing habitation in Hezaveh village, the investigation of three cases of housing in the village can be representative of housing physical traits. The pattern of spatial relations, context, the number of floors, and the covering of houses in these three cases are specified in [table 11](#).

Table 11. Housing General Pattern of Three Cases in Hezaveh Village

Cases	The Age & Quality of the Building	Number of Floors	The Pattern of Spatial Relations	Levels	Number of Floors	Roof Cover
The First Case	More than 100 Years Old, Restored	Ground Level				
		First Level				
The Second Case		Ground Level				

Cases	The Age & Quality of the Building	Number of Floors	The Pattern of Spatial Relations	Levels	Number of Floors	Roof Cover
The third Case		First Level				
		Ground Level				
		First Level				

In response to the questions of the research besides what is mentioned in table 11, due to the location of this village in a cold climate, it can be expressed that houses often have a central courtyard and are introverted, the ratio of the outer skin of the building to the whole volume of the building is low, courtyards are relatively small, walls are thick, the general form of houses is mass-like, spaces are located in two adjacent sides and a courtyard between them or in different floors, and buildings mostly have two floors. Moreover, the studies reveal the relatively common spaces in them in which major spaces of a house are a complex of living spaces including room, kitchen, water closet, bathroom, porch, and livelihood spaces such as storage, oven, barn, syrup cooking room, and grape room. It should be cited that the

conclusion has not been with this method in previous similar studies. But, it was mostly the design of a new type in the end and no pattern-making has been the result. In the end, it is suggested that future studies investigate or compare villages with different environmental and human conditions.

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Authors' contributions

The authors equally contributed to the preparation of this article.

Conflict of interest

The author declare no conflict of interest.

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تحلیل ویژگی‌های کالبدی مسکن روستایی جهت دستیابی به الگوی معماری آن (مورد مطالعه: روستای هزاوه، استان مرکزی)

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چکیده مبسوط

۱. مقدمه

جغرافیای طبیعی ایران، گویای بسیاری از واقعیت‌های محیطی و نقش آن در شکل‌گیری، استقرار جوامع انسانی و تکوین فعالیت و معیشت آن‌هاست. از این رو، مکان‌یابی، استقرار، شکل‌گیری و توسعه کالبدی شهرها و روستاهای ایران در درجه اول تابع شرایط محیطی و جغرافیایی آن‌هاست.

روستای هزاوه در استان مرکزی، از جمله مناطقی است که معماری و بافت ارزشمند روستایی خود را حفظ کرده؛ به علاوه این روستا از جهات مختلف دیگر نیز حائز اهمیت است. از این رو پژوهش حاضر با هدف بررسی ویژگی‌های کالبدی مسکن و سکونت‌گاه در روستای هزاوه با تحلیل سه نمونه‌ی منتخب از مسکن و با رویکردی استقرایی، بر پایه‌ی مطالعات اسنادی همراه با روش‌های توصیف و تحلیل به موضوع پرداخته و بدین ترتیب پرسش‌های زیر در ارتباط با آن مطرح گردیده است:

- الگوی سکونت در روستای هزاوه به چه صورت است؟

- ویژگی‌های کالبدی و اقلیمی مسکن در روستای هزاوه چیست؟

۲. ادبیات نظری تحقیق

محیط روستایی در برگیرنده‌ی سه عنصر اصلی کالبدی یعنی زمین برای تولیدات کشاورزی، محیط محاط‌شده‌ی طبیعی به منزله‌ی بستر توسعه‌ی کالبدی و سکونت‌گاه‌های انسانی یا ناحیه‌ی وابسته به معماری است. مسکن روستایی علاوه بر سکونت، تجلیگاه شیوه‌های زیستی- معیشتی است.

برپایی خانه‌ی روستایی بر پایه‌ی اقتضائاتی برآمده از سرشت محیط طبیعی و انسانی حاکم بر آن است.

لذا ریشه‌های این برپایی را باید در قابلیت‌ها و نیروهای مکان از یک طرف و رفتارهای انسانی از طرف دیگر دانست که اغلب وابسته به بستری است که در آن شکل می‌گیرد، شرایط اقلیمی، ویژگی‌های محیط طبیعی، کارکرد فضاها، سنت‌های غالب، شکل‌گیری بنا در محیط، اصول فرهنگی و اجتماعی بر کالبد خانه روستایی تأثیرگذار است. ابعاد کالبدی به عنوان تبلور فیزیکی مسکن، عینی‌ترین و مادی‌ترین موضوع در ارزیابی، تحلیل و برنامه‌ریزی‌های مرتبط با مسکن است. با توجه به ماهیت کالبدی مداخلات در مسکن روستایی، وجه کالبدی مسکن در مقایسه با وجوه دیگر از اهمیت خاصی برخوردار بوده و به طور معمول در مطالعات، تحلیل‌ها و طراحی مسکن بیشتر مورد توجه قرار می‌گیرد. وجه کالبدی مسکن به عنوان نمود عینی متأثر از مجموعه عوامل دخیل در مسکن روستایی است. شکل‌گیری فرم، پلان و جهت‌گیری در خانه‌های بومی تحت تأثیر عوامل طبیعی می‌باشد. هر یک از اجزای مسکن بنا به یک ضرورت و در رابطه با عوامل متعدد فرهنگی، اجتماعی، اقتصادی، طبیعی، تاریخی و غیره به اشکال گوناگون حاصل شده است.

۳. روش تحقیق

در پژوهش پیش‌رو، روش تحقیق بر پایه رویکردی استقرایی و مبتنی بر برداشت‌های میدانی و مطالعات اسنادی استوار بوده و به توصیف و تحلیل موضوع پرداخته است.

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بنیادین و شکل نابی از یک محیط کالبدی دانست که نمایانگر این الگوها خواهد بود. به دلیل اقلیم سرد منطقه، خانه‌ها غالباً درونگرا و دیوارها قطور هستند. در ضمن بررسی‌ها نشان‌دهنده‌ی فضاهای نسبتاً مشترکی در آن‌هاست.

۵. بحث و نتیجه‌گیری

مطابق با مطالعات انجام‌شده، عوامل محیطی، فرهنگی و اقتصادی عواملی هستند که کالبد معماری را شکل می‌دهند و در میان آن‌ها، عامل محیطی به شکل بارزی مؤثر است. در این روستا به دلیل قرارگیری در اقلیم سرد، خانه‌ها اغلب دارای حیاط مرکزی و درونگرا هستند، نسبت پوسته‌ی خارجی بنا به کل حجم بنا کم، حیاط‌ها نسبتاً کوچک و دیوارها قطور هستند، شکل کلی خانه‌ها به صورت توده و فضا در دو ضلع مجاور هم به همراه حیاط بین آن‌ها، یا در طبقاتی مجزا و اغلب از دو طبقه تشکیل شده‌اند. ضمناً مجموعه‌ای از فضاهای زیستی شامل اتاق، مطبخ، توالی، حمام، ایوان و فضاهای معیشتی شامل انبار، تنور، طویله، شیرپزخانه و انگورخانه از جمله عمده فضاهای خانه هستند.

کلیدواژه‌ها: ویژگی‌های کالبدی، مسکن روستایی، الگوی معماری، هزازه، استان مرکزی.

تشکر و قدردانی

پژوهش حاضر حامی مالی نداشته و حاصل فعالیت علمی نویسندگان است.

فرآیند تحقیق در پژوهش حاضر شامل سه مرحله اصلی است: (الف) معرفی روستای هزاره و شناخت اجمالی محیط کالبدی روستا؛ (ب) انتخاب نمونه‌های مسکن و برداشت میدانی؛ (پ) تحلیل مسکن از ابعاد مختلف شامل تنوع ساختاری، روابط فضایی، نوع بهره‌برداری از عرصه و اعیان، تراکم و غیره. بخش نخست این فرآیند، ماهیتی توصیفی دارد که براساس مطالعات اسنادی و برپایه اطلاعات کتابخانه‌ای به رشته تحریر در آمده است. در گام بعدی انتخاب نمونه‌ها بر اساس بازتاب دو دسته متغیر ناشی از الگوهای محیط طبیعی و محیط انسانی در کالبد مسکن می‌باشند که بصورت شاخص در گونه‌های مختلف مسکن مشاهده شده‌اند. در بخش سوم نیز عمده استدلال‌ها بصورت تحلیل منطقی و استقرایی با یک جمع‌بندی همراه بوده است که در نهایت، نوعی الگوی حاکم بر معماری مسکن این روستا را در قالب یک جدول نمایش می‌دهد.

۴. یافته‌های تحقیق

بررسی نمونه‌های متعدد مسکن در این روستا در محلات مختلف آن، سه نوع کالبد متفاوت را در آن متمایز ساخت. همچنین با توجه به تحلیل ساختار کالبدی مسکن در قالب سه نمونه منتخب، عرصه‌های عمومی، نیمه‌عمومی و خصوصی و فضاهای انسانی و دامی در هر یک از نمونه‌ها در قالب پلان و نما به تفکیک مشخص شده است. یافته‌های پژوهش نمایانگر چگونگی توجه به ویژگی‌های کالبدی سکونت‌گاه، متناسب با عوامل محیط طبیعی و انسانی و شکل‌گیری مسکن بر مبنای آنها است. لذا می‌توان مسکن را نوع



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Analysis of the Rural Digital Literacy Policy in Iran

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Abstract

Purpose- Nowadays, providing education in information technology and communication to the rural workforce is crucial for improving social capital and promoting sustainable development. However, inadequate policies have created a digital divide between rural and urban areas. Upgrading digital literacy is now a key goal for policymakers and planners. This research aims to analyze the digital literacy policy system in rural areas in Iran.

Design/methodology/approach- The research involves an analytical method, where existing documents are reviewed. Essential information was gathered by analyzing various digital documents, including the Cyberspace Strategic Document, Digital Transformation Strategic Document, Communications and Information Technology Strategic Document in the Sixth Development Plan, Digital Transformation Roadmap of Iran, and the Performance Report of the Ministry of Communications and Information Technology.

Findings- After examining the five strategic digital literacy programs of the country, it was found that the Cyberspace Strategic Document (2018-2025) did not sufficiently address rural digital skills, particularly in the agriculture sector, despite considering actions in the field of industry, business, services, human resources, culture, and lifestyle. However, other documents, such as the Digital Transformation Strategic Document, the Communications and Information Technology Strategic Document in the Sixth Development Plan, and the Performance Report of the Ministry of Communications and Information Technology (2019), emphasized various digital literacy components, including raising awareness of innovative methods for crop production, dealing with natural disasters affecting crops, employment based on capabilities, better access to electronic markets, facilitating the transfer of scientific findings to farmers, access to new electronic services (postal, educational, agricultural, banking, health), and empowering the rural workforce. However, some digital literacy components, such as facilitating crop cultivation planning for the next year, establishing major product purchase centers, and predicting weather changes, have yet to be fully considered in the country's digital programs.

Practical solutions- In order to fill the existing digital divide between rural and urban areas, experts have proposed various practical solutions, including providing various digital infrastructures and tools in rural areas, increasing the population coverage of broadband internet services in rural areas, equipping agricultural service centers with digital technology facilities to transfer information to rural farmers, upgrading the literacy level of rural workers, especially rural farmers.

Originality and value- Most of the studies on rural digital literacy have focused on evaluating resilience through digital literacy, and the analysis of the country's policy on rural digital literacy has received less attention from researchers. This research is innovative in this regard.

Keywords: Digital literacy, Digital Policy-making, Rural Policy-making, Sustainable Development.

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1. Introduction

Nowadays, the digital era has opened its umbrella over various aspects of human life and created its effects on economy, politics, culture, and social relations.

Accordingly, digital technologies and various communication devices are developing (Nazemi et al., 2021). We are living in an era where information and communication technologies are the primary tools of production (Azizi et al., 2009), and educating the workforce with literacy in such technologies is an undeniable necessity for improving social and capital positions in local communities (Abbasi-Kesbi et al., 2020). On the other hand, knowledge of modern information technologies is necessary for everyday life activities to avoid major challenges. The performance of digital information technologies is based on the quality of policy frameworks that are considered in the decision-making process at macro and micro levels in this field (Hassannejad Kashani & Nasrollahi Kasmani, 2017); therefore, governments around the world are striving to develop programs to improve digital literacy skills (Common Sense Media, 2009).

Accordingly, with the global trend in Iran since 2006, Information Technology and Digital Media Development Center was established as the government's digital media supervisor (Bahonar & Darzabi, 2014). In addition, the government has taken action to improve digital literacy and narrow the digital divide and has prepared significant plans such as the Strategic ICT Plan and Digital Transformation Strategic Document. However, despite the vital role of rural settlements in ensuring food security and sustainable development of the region and the country, rural digital transformation and improvement of digital skills have received less attention in national policy documents. Rural residents in Iran face limitations to physical access to computers, the internet, and other digital communication technologies, which hinder their ability to appropriately use digital equipment and tools in business and everyday life. This has resulted in a digital divide between urban and rural areas (Azizi et al., 2009).

Additionally, the existence of a rural-urban digital divide and low levels of digital skills in rural households have resulted in the backwardness of rural areas in the country's development progress. Consequently, numerous social, economic, and

environmental challenges have arisen, particularly the low resiliency of rural communities in dealing with natural disasters, income decline, poverty, excessive rural-urban migration, and the destruction of the natural life cycle in rural settlements. Considering that sustainable development and food security are still among the most critical global challenges, the development of agriculture in rural areas has faced extensive challenges. On the other hand, the complexity of human variables and the unexpected impact of environmental and global economic factors on agricultural activities will confront policymakers with increasing future challenges. Therefore, the need for deploying digital communication technologies that have proven effective in rural areas becomes apparent. Accelerating the process of knowledge and information exchange through digital information technology will be crucial in addressing rural communities' social challenges in accessing digital technology and will play a critical role in achieving sustainable rural development (Kostadinova, 2021).

As a result, strengthening digital literacy in rural areas through proper policy-making prepares rural residents to understand the world better, socially, rationally, and economically progress, and interact with digital technologies. Furthermore, strengthening digital skills and literacy nurtures the talents of rural residents, particularly youth (Hadjiristic, 2017). On the other hand, introducing digital technologies into agriculture opens up better access to online services, accurate agricultural information, and food security, improving rural communities' livelihoods (Kremer & Hounbo, 2021). By creating added value and reducing costs, these technologies will lead to the quantitative and qualitative improvement of production, self-reliance, enhancement of well-being, the empowerment of rural communities, and a reduction in increasing rural-urban migration. (Navabakhsh & Motlaq, 2009).

Therefore, having digital literacy among rural communities can facilitate the process of marketing products in the digital space and create flexibility when facing various economic, social-cultural, and natural risks (Mósesdóttir, 2010; Hadziristic, 2017). However, the low level of digital literacy in rural society exposes them to a wide range of risks, including cultural decay and disillusionment with rural culture. Thus, through managing digital risks in rural communities, hazards arising from digital technologies are

identified and minimized on time. So, paying more attention to rural communities' digital literacy in policy-making and drafting government documents is better. Additionally, it is essential to take advantage of digital skills as a tool for empowerment, improving quality of life, reducing poverty, and increasing rural well-being by providing appropriate solutions in digital skills (Roknoddin Eftekhari, 2020). In this regard, the present study aims to analyze the digital literacy policy system in rural areas in Iran. The research question is how much attention is given to rural digital literacy in Iran's policy-making system?

2. Research Theoretical Literature

Digital literacy is an essential skill for the 21st century and cannot be ignored. Literature in the field of digital literacy is rich in terms of definitions and classification. However, there is no unanimity among experts regarding the definition of digital literacy due to its interdisciplinary nature (Hadjiristic, 2017). Generally, digital literacy refers to the ability to use computers effectively, including the ability to use software, search engines, and email (Royal Society, 2012). Digital literacy aims to enable individuals to learn and use digital tools to solve problems (Media Smarts, 2015). According to the International Panel on Literacy and Technology, digital literacy means using technologies, tools, or communication networks to access, manage, integrate, evaluate, and produce information to employ in a knowledge-based society. This concept includes a range from continuous use of everyday life skills to the advantages of digital and information technology innovation skills. These skills include 1. the ability to access information, which means awareness and understanding of how to collect and retrieve information; 2. the ability to manage information, which pertains to the use of available organizational structures and classification; 3. the ability to integrate information; 4. the ability to evaluate information, which involves judging the quality, relevance, usefulness, or effectiveness of information; 5. the ability to produce information by adapting, applying, designing, inventing, and writing information; and 6. the ability to access internet facilities, which require high cognitive skills to produce information for farmers (Long, 1992). Therefore, in contemporary digital age academic literature, there is significant emphasis on the role of digital skills in creating various

social, cultural, economic, political, and environmental changes in local communities (Ghaffari & Bakhshizadeh, 2019; Adabi Firoozjah et al., 2018). So, the role of digital information technologies in the development of rural communities cannot be denied, and any society with greater access to digital technologies will also benefit from greater power (Ghaffari & Bakhshizadeh, 2019).

The analysis of rural digital literacy has been conducted by numerous researchers inside and outside the country during recent decades. Among these studies, one can refer to the research of Kass-Hanna et al. (2022) titled "Building Financial Resilience through Financial and Digital Literacy in South Asia and Sub-Saharan Africa." The findings of this study demonstrated that financial and digital literacy are critical factors in creating financial inclusion and resilience, and a specific heterogeneity has been identified in terms of digital and financial literacy among poor rural households and women. In another study conducted by Kurnia et al. (2022) titled "Enhancing Digital Literacy in Supply Chain Management: A Case Study of an Indonesian Port Corporation," the results showed that there is a gap between the expected level of digital literacy of port management and the digital literacy levels of employees. Marsdenia (2022) also investigated the Digital Literacy of Rural Communities to Achieve Economic Resilience. The results showed that community digital literacy has maintained commercial institutions during the COVID-19 pandemic, and moderate levels of human resources digital literacy have been vital to success. Wang et al. (2022) also conducted another study on Digital literacy and subjective happiness of low-income groups in rural China. The results of this study showed that digital literacy leads to practical happiness effects. Upadhyaya et al. (2019) also investigated Digital Inclusion: Strategies to Bridge Digital Divide in Farming Community. The results showed that various agricultural communities' solutions differ based on their access, skills, and utilization of information and communication technologies. A "one-size-fits-all" approach is unsuitable for developing countries increasing their technological literacy. Roberts et al. (2017) analyzed rural resilience in a digital society in another study. The findings revealed that rural individuals are unable to fully take advantage of the opportunities provided by digital technology.

Rural individuals are more susceptible to vulnerability if digital infrastructure and programs are not equally available to everyone.

Additionally, in Iran, a study by [Arasteh et al. \(2021\)](#) outlines a policy-making model for a digital university. The study identifies five policy-making dimensions: educational, structural, technological, and cultural-economical. In another study, [Tabatabaeian et al. \(2020\)](#) identified the challenges of policy-making for developing the digital content industry. The results showed that the major challenges in the growth of the content industry in Iran are access to science and technology by businesses, inadequate infrastructure, and inadequate governmental support. [Abbasi Kasabi et al. \(2020\)](#) developed a native model of the digital divide in rural areas of Qom province. The research findings revealed that understanding the culture of rural regions and social connections have the highest weight. In contrast, businesses with identification in rural economic development and smartening businesses have the lowest weight. [Pakzad and Khaje Naeini \(2017\)](#) evaluated media policies in the Islamic Republic of Iran Broadcasting (IRIB). The results showed that media horizon policies have weaknesses in the stage of policy design in terms of realism and flexibility, and the implementation of policies also faces challenges in education and employee participation. Finally, [Taghavi-Fard et al. \(2016\)](#) analyzed the coherence cycle of policy-making in Iran's information and communication technology governance system. The findings showed that most institutions studied, including The Information Technology and Communication Development Center, The National Virtual Space Center, The Technical and Vocational Training Organization, and The Management and Planning Organization of the Country lack policy coherence in their duties. [Bahonar and Chaboki Darzabi \(2014\)](#) also analyzed media literacy policies in three cultural and communication institutions in Iran. Their findings revealed that media literacy policies are limited to digital media at the Ministry of Culture and Islamic Guidance, and other media, including print and electronic media, have not been given adequate attention.

The review of the studies conducted in the field of digital literacy in rural areas indicates that there has been less focus on analyzing the digital literacy policy system in rural areas as an important issue in research. Most of the studies have mainly focused on topics such as evaluating

the digital divide in rural areas and other policy dimensions, including media policy, digital universities, and the digital content industry in general, and the research that has specifically focused on rural areas was related to resilience through digital literacy. Therefore, the analysis of digital literacy policies, especially in rural areas, has received less attention from researchers. For this reason, the present study aims to fill the research gap, to analyze digital policy-making (digital documents and programs) with a particular emphasis on the country's rural areas, and is innovative in this regard. The focus is on developing digital skills in rural areas to provide the basis for improving rural areas' welfare and sustainable development.

3. Research Methodology

The purpose of the current study was to analyze the policymaking system of rural digital literacy in Iran through document-based analysis using an inductive approach. Five documents related to digital technologies in Iran were purposefully selected as the statistical population based on their formulation and approval in legal references and implementation in the information and communication technology system. The unit of analysis was the propositions extracted from information technology and digital communications documents. The content analysis method was utilized using [Berg's \(2001\)](#) approach consisting of five basic steps: selecting and analyzing imperative digital literacy propositions in rural areas, interpreting the extracted propositions, coding and interpreting selected propositions based on concept, reviewing and confirming the selected propositions by digital literacy experts through a survey, and categorizing concepts based on a central issue with overlapping concepts in the axial coding stage. A general framework of rural digital literacy, including twelve components, was deduced based on exploratory research literature and expert opinions in this field. The study used questionnaires, checklists, and researcher-made forms to collect data.

4. Research Findings

In all countries around the world, numerous organizations are responsible for the field of information and communication technology. Similarly, In Iran, several organizations govern this area , [Taghavi-Fard et al. \(2016\)](#). Based on [table 1](#), which shows the titles of digital

documents produced in the country over the past decade, categorized by year, related organization, and purpose, two organizations, namely the Supreme Council of Cyberspace and the Ministry of Communications and Information Technology, have played prominent roles in the digital policymaking process of the country. These two agencies have prepared various documents intending to develop infrastructure and skills in the country's digital technology field. According to research results, the [Cyberspace Strategic Document \(2018\)](#), the [Digital Transformation Strategic Document \(2020\)](#), and the [Digital Transformation Roadmap of Iran \(2021\)](#) have been developed with the approach of promoting digital progress at the national level and neglecting rural areas. Only the document of the Ministry of [Communications and Information Technology's performance plan \(2019\)](#) and the [Communications and Information Technology Strategic Document in the Sixth Development Plan \(2019\)](#) have referenced digital technology development in rural areas. In general, the issue of promoting digital literacy in rural areas has been ignored by policymakers in the country.

4.1. Qualitative content analysis of Iran's digital documents

As mentioned, related content was evaluated during the five-stage process of selecting digital documents and programs. In the first step, documents that comprehensively expressed the overall objectives of the digital transformation roadmap and had been approved by the policy-making bodies of the country were selected. In the next step, the text of each document was reviewed separately, and the essential components of these texts were extracted. Coding was done in the third step. The initial concepts were extracted based on the essential components or propositions in this step. Then, irrelevant and unnecessary concepts were removed. Twelve concepts were then considered open coding. Finally, the axial coding was performed based on the document review. Some of the textual propositions representing the open coding are presented in [Table 2](#). Based on the digital documents of the country's analysis, in the last step, which is axial coding, the four main axes of training specialist human resources, developing digital cultural skills, digital economy policies, and developing digital software and hardware infrastructures were identified as essential factors, which cover a wide range and have been presented.

In recent decades, attention to promoting digital literacy in rural areas has become very important in policy texts. A review of digital transformation policies in Iran has shown that attention to digital technologies and literacy in using electronic tools in villages is considered an essential subject in the country's digital documents. Indeed, the utilization of terminologies like electronic and digital proficiency in policy documents highlights the significant focus of these documents on cultivating new skills in digital literacy. In essence, various policies exist in the field of digital information technologies within the country. Nonetheless, considering the advancements in the creation and circulation of information, nations with an evolved technological outlook have reconsidered their digital literacy policies. The amendment of regulations that conform to contemporary advancements is perceived as imperative.

As shown in [Table 3](#), after the surveys carried out on the digital literacy components in five national strategic plans, it was identified that in the [Cyberspace Strategic Document \(2018-2025\)](#), despite considering various measures in different dimensions such as industry, business, services, human resources, culture, and lifestyle, there was no reference to the digital skills of rural communities, especially in the agricultural and rural sector in the proposed strategies and objectives of the program. Furthermore, although the [Digital Transformation Roadmap of Iran](#) emphasized the necessity of developing general digital literacy at the national level, the emphasis was mainly on urban settlements. No attention was paid to any of the rural digital literacy components and the necessity of improving digital literacy levels among rural households. Regarding other reviewed documents, such as the [Digital Transformation Strategic Document](#), [Communications and Information Technology Strategic Document in the Sixth Development Plan \(2016-2020\)](#), and the [Performance Report of the Ministry of Communications and Information Technology \(2019\)](#), some of the digital literacy components were individually addressed such as employment based on skills, better access to new electronic markets, promotion and transfer of scientific results to farmers, and access to modern electronic services such as postal, educational, agricultural, banking, health, news, and information services and the empowerment of rural workers. However, no attention was paid to other skills and digital literacy

components of rural areas in the text of national programs.

Table 1. the features of digital literacy programs and policy documents in Iran

Document title	Year of preparation and approval	Related organization	Purposes	Features
Cyberspace Strategic Document	2018	Supreme Council of Cyberspace	Balanced development of infrastructure, facilities for advancement of science, technology and innovation of cyberspace, reduction of social harms, access to the best new media in the Islamic world, coverage of 90% of people in the use of basic services of cyberspace, support for domestic production, achievement of the shortest Response time and incident management, promoting domestic content	1. Comprised of 9 strategic fields, including science and technology, culture and lifestyle, human resources, governance and management, security, international relations, technical infrastructure, industry, business and services. 2. With a macro approach at the national level and, subsequently, in urban areas 3. Neglecting rural areas.
Communications and Information Technology Strategic Document in the Sixth Development Plan (2016-2020)	2019	Information Technology Organization of Iran	The development of new job opportunities in ICT, the development of local content infrastructure in cyberspace, the development of a smart government, increasing the security of the production and exchange space	1. Preparing the general objectives and strategies, quantitative goals of communication networks and information technology based on the overall goals of the Sixth Development Plan, quantitative goals, executive policies, resources needed to achieve quantitative goals, criteria for achieving goals and policies, proposing program priorities for sectors and sub-sectors, and operationalizing development programs in the annual budget. 2. Attention to enhancing the level of digital literacy of citizens 3. Attention to the development of digital services for rural and less developed areas 4. Attention to increasing the broadband services coverage for rural areas' population.
Digital Transformation Strategic Document	2020	Ministry of Communications and Information Technology	Creating a proper understanding of digital technologies in the policy-making and executive elements of the country, identifying existing challenges and opportunities, and specifying the fields of application of technologies in various economic sectors.	1. The national-level overview 2. It encompasses four main phases: Identifying Digital Transformation Technologies and Assessing the Current Digital Transformation Status of the Country, Evaluating and Selecting Digital Transformation Technologies, Determining the Direction and Strategies of Digital Transformation, and Presenting the National-Level and Macro Roadmap for Digital Transformation. 3. Neglecting Rural Areas
Digital Transformation Roadmap of Iran	2021	Ministry of Communications and Information Technology	Reducing the unemployment rate, reducing the Gini coefficient, reducing the number of unhealthy days per day, improving the water crisis index, improving psycho-	1. The pillars of Iran's digital direction include Vision, goals, capacities, strategies, policies, and projects. These pillars have been presented in the form of three layers: Iran's digital capacities (including six legal structures), Iran's digital applications

Document title	Year of preparation and approval	Related organization	Purposes	Features
			social security, and improving the ranking of the social capital index.	(including three structures), and the effects of Iran's digitalization (ten key national issues in three dimensions: social, economic, and environmental). 2. Attention to the effects of digital transformation at the national level. 3. Attention to the widespread use of digital services for urban dwellers and neglect of rural areas.
Performance Report of the Ministry of Communications and Information Technology	2019	Ministry of Communications and Information Technology	The diversity of the virtual economy, the realization of e-government, providing more accessible, cheaper, and faster services to citizens	1. Macro view at the national and global level 2. Attention to deprived and underdeveloped regions, including rural areas, with the aim of expanding internet coverage in rural areas, connecting villages to the national information network, expanding rural businesses (ecotourism and handicrafts), and benefiting from e-government services.

Table 2. the coding stage identified from rural digital literacy documents

Components/textual statements of digital literacy in rural areas	Open coding	Axial coding
Awareness of climate change predictions and weather fluctuations.	Environmental knowledge	Training of specialized human resources
Facilitation of agricultural production planning.	Development of management skills	
Empowerment of human resources in the field of rural digital transformation.	Efficient use of human resources	
Development of cultural infrastructure to increase digital literacy and effective use of information technology among rural farmers.	Digital culture	Cultural Development of Digital Skills
Awareness of up-to-date information on government plans and objectives.	Economic transparency	
Electronic agriculture education and electronic commerce of rural products and government support for investment in rural areas.	Economic value creation	Digital Economy policies
Awareness of the latest market prices and innovative methods of producing products using various digital media.	Economic innovation promotion	
Expansion of entrepreneurship activities and the creation of digital rural businesses.	Business opportunities	
Expansion of innovative electronic services (e-government, e-health, e-education, e-banking).	Development of electronic infrastructures	Development of Digital Software and Hardware Infrastructure
Development of native digital tools (native software, etc.).	Digital localization	
Adequate access to information infrastructure and communication facilities.	Information development	

Table 3. the components of rural digital literacy in the government documents and policies

Document Title and the components of rural digital literacy	Cyberspace Strategic Document	Digital Transformation Strategic Document	Communications and Information Technology Strategic Document in the Sixth Development Plan	Digital Transformation Roadmap of Iran	Performance Report of the Ministry of Communications and Information Technology
Awareness of climate predictions and weather fluctuations.	-	-	-	-	-
Development of native digital tools, such as native software	-	-	-	-	-
Knowledge of innovative methods of production and economic risks	-	-	-	-	-
Development of entrepreneurial activities and creation of rural digital businesses	-	-	-	-	
Expansion of "agriculture and e-commerce" for rural productions	-	-	-	-	
Development of cultural infrastructure to increase the level of digital knowledge and effective use of information technology among rural farmers	-	-	-	-	-
Expansion of novel electronic services (e-government, e-health, e-education, e-banking)	-	-		-	
Adequate access to information infrastructure and communication facilities	-	-		-	-
Awareness of up-to-date information regarding government plans and objectives	-			-	-
Human resource empowerment in the field of rural digital transformation	-	-	-	-	-
Awareness of latest market prices and major product centers	-	-	-	-	-
Facilitating agricultural production planning	-	-	-	-	-

Therefore, rural digital literacy has received low attention in the country's policy-making system, and there is still a gap in this area. Most of the focus in this area has been on urban settlements and generally on national-level targeting, and only in the text of some policies and programs related to the country's information and communication technology and digital, limited reference has been made to rural digital literacy components, and it is far from being in the desirable situation. Therefore, until the digital policy-making system of the country and the programs prepared in this area adopt a position for literacy and skill training in the use of digital technologies in rural areas, the development and movement of these settlements cannot be expected to

be in harmony with the path of global technology transformation.

According to the findings of this study, in order to reduce the digital divide between rural and urban areas and reduce the resulting risks in rural areas, it is recommended that the country's digital development policies in the future pay more attention to the training of specialized human resources, cultural development of digital skills, digital economic policies, software and hardware development in rural areas. At the same time, through risk management measures, the adverse consequences of using such technologies should be minimized so that through fostering digital rural citizens, the ground for promoting the self-esteem and personality upliftment of rural residents is prepared, and ultimately,

sustainable rural development platforms are provided. Since paying attention to underdeveloped and deprived areas, especially rural communities, is one of the most significant factors in promoting social justice and achieving a resilient economy, some great strides have been taken in recent decades in Iran to provide services to villages. Alongside providing internet coverage to rural areas, special attention has been paid to their access to the national information network. This is aimed at facilitating their daily routines, benefiting from e-government services. Furthermore, it is intended to create opportunities for expanding rural businesses such as handicraft markets and eco-tourism.

5. Discussion and Conclusion

Low literacy and digital skills can lead to a digital divide, create poverty among rural communities, and hinder agricultural activities. The potential for digital literacy in future rural development strategies provides information relevant to developing rural communities and empowers communities in choosing and seeking their information. Additionally, it reduces rural isolation and promotes positive development in rural society. Rural residents gain helpful information, including the latest market prices. Ultimately, access to information is considered a catalyst for empowerment. Therefore, how digital technologies are used is important and should be included in future rural development strategies. Furthermore, digital literacy is essential for diversifying livelihoods by recognizing the non-agricultural rural economy's importance and promoting sustainable rural development (Chapman & Slaymaker, 2002).

In this regard, the present study was conducted to analyze the policy system of digital literacy for rural residents in Iran. Through examining the digital transformation documents in the country, it was revealed that two institutions, the Supreme Council of Cyberspace and the Ministry of Communications and Information Technology, play a prominent role in the country's digital policy-making process and have produced various programs in this field. In general, by examining the qualitative content of the country's digital transformation documents, it was found that the [Cyberspace Strategic Document \(2018\)](#), [Digital Transformation Strategic Document \(2020\)](#), and the [Digital Transformation Roadmap of Iran \(2021\)](#) were developed with a focus on digital progress nationwide, with little consideration for rural areas. Only in the text of the [Communications and Information Technology Strategic Document in the Sixth Development Plan \(2019\)](#) and the Ministry of

[Communications and Information Technology's Performance Document \(2019\)](#) are references made to the development of digital information and communication technologies and services in rural areas. Overall, the country's policymakers largely overlooked the issue of improving digital literacy in rural areas.

In fact, despite considering measures in various dimensions such as industry, business, services, human resources, culture, and lifestyle in Cyberspace Strategic Document, no reference is made to providing digital skills training for rural communities, especially those in the agriculture and rural sectors, in the strategies and objectives presented in the program. Although the Digital Transformation Roadmap of Iran emphasizes the need for digital literacy development at the national level, it mostly focuses on urban areas. Hence, the document mentioned does not focus on improving rural residents' digital literacy. Regarding other reviewed documents, such as the Digital Transformation Strategic Document, Communications and Information Technology Strategic Document in the Sixth Development Plan, and the Performance Report of the Ministry of Communications and Information Technology, each has separately emphasized some digital literacy components, such as employment based on abilities, better access to markets and increasing e-marketing power, facilitating the transfer of scientific information to farmers, accessing e-services, and empowering the rural workforce. However, no attention has been paid to other components of digital literacy for rural communities in the content of the country's digital transformation documents.

Therefore, although measures have been taken in recent decades to create electronic infrastructure and educate digital technologies in the country, urban areas have benefited more from them, and rural areas have been neglected. As a result, a type of gap and imbalance has emerged between urban and rural areas in the country.

Finally, by evaluating the country's digital policy documents, four key axes, including education of the skilled workforce, cultural development of digital skills, digital economy policies, and development of digital software and hardware infrastructure, were identified as important factors in the creation and development of digital literacy in rural areas. In this regard, the findings obtained in the research of [Basaki et al. \(2016\)](#) showed that since the level of education among rural farmers in developing countries is low, the government should increase their capacity by using information and communication technologies.

Furthermore, another research indicated that Iran's transition to a digital economy requires components such as defining growth and development strategies, developing partial applications of the digital economy, and understanding the opportunities ahead of the digital economy (Moradi & Hedayati, 2018). Additionally, Tabatabaeian and colleagues' (2021) research findings showed that lack of government support and necessary infrastructure are the most significant challenges for improving the content industry in Iran and require planning more than other areas. Finally, the research results of Eskandar et al. (2020) showed that increasing farmers' digital literacy and skills can be achieved through promoting cultural services and supportive policies.

Therefore, rural residents have a significant digital literacy gap in the country's policy system and documents. Since promotion, education, and research play a crucial role in agricultural development, any development in the agricultural sector requires a transformation in technology production and transfer. Otherwise, there will be no significant change in the agricultural sector. Therefore, technology managers in

the country should pay more attention to increasing the effective use of digital technologies and expanding knowledge facilities for human resources in rural areas. They should also conduct risk management programs for rural digital technologies. Such matters are among the critical factors in achieving sustainable development in the country's rural system, as they provide opportunities for employment, income growth, improved product quality, and agricultural product marketing processes, as well as reducing rural-urban migration.

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Authors' contributions

The authors equally contributed to the preparation of this article.

Conflict of interest

The author declare no conflict of interest.

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تحلیل سیاست‌گذاری سواد دیجیتال روستایی در کشور ایران

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چکیده مبسوط

۱. مقدمه

امروزه، بدون آگاهی از کاربرد فناوری‌های نوین اطلاعاتی بسیاری از فعالیت‌های روزمره زندگی با چالش اساسی مواجه خواهد شد. بنابراین، دولت‌ها در سراسر جهان می‌کوشند تا در راستای ارتقای سواد دیجیتال، سیاست‌ها و برنامه‌هایی را تدوین کنند. در ایران نیز دولت به منظور ارتقاء سواد دیجیتال، اقدام به سیاست‌گذاری و تهیه برنامه‌های کلان دیجیتال نموده است. با این حال، با توجه به نقش کلیدی سکونتگاه‌های روستایی در تأمین امنیت غذایی پایدار سرزمین تاکنون کمتر در اسناد سیاستی کشور به ارتقاء سواد دیجیتال پرداخته شده است. در این میان، روستاییان در ایران با محدودیت دسترسی فیزیکی به رایانه و اینترنت مواجه‌اند و قادر به استفاده مناسب از ابزارهای دیجیتال در زندگی روزمره خود نمی‌باشند. این امر منجر به پیدایش شکاف دیجیتال شهری-روستایی در مقیاس سرزمینی شده است. از سوی دیگر، سطح پایین مهارت‌های دیجیتال در خانوارهای روستایی به واپس‌ماندگی مناطق روستایی از تحولات توسعه‌ای دامن زده است. نتیجه این امر، بروز چالش‌هایی نظیر طعمه وارد آمدن به مشاغل روستاییان در هنگام وقوع بلایای طبیعی، کاهش درآمد، مهاجرت بی‌رویه روستایی-شهری و مواردی از این قبیل است. با توجه به اینکه در آستانه هزاره سوم هنوز توسعه پایدار و امنیت غذایی از مهم‌ترین چالش‌های جهانی محسوب می‌شوند، این امر توسعه کشاورزی در مناطق روستایی را که بستر انجام فعالیت‌های کشاورزی محسوب می‌شوند، با چالش‌های گسترده روبه‌رو کرده است. لذا، می‌بایست توجه بیشتری به توسعه مهارت‌های فناوری دیجیتال در سکونتگاه‌های روستایی مبذول شود. بنابراین، تحقیق حاضر با هدف تحلیل نظام سیاست‌گذاری سواد دیجیتال روستایی کشور ایران انجام شده است.

۲. مبانی نظری تحقیق

با وجود آنکه ادبیات موجود پیرامون سواد دیجیتال از نظر تعاریف و طبقه‌بندی غنی است، اما به دلیل میان‌رشته‌ای این موضوع، در میان اندیشمندان در زمینه ارائه تعریف واحد از مفهوم سواد دیجیتال اجماع نظر وجود ندارد. به طور کلی، سواد دیجیتال به معنای مهارت استفاده از کامپیوتر به صورت مناسب دانسته شده است که شامل توان استفاده از نرم افزارها، استفاده از مرورگر وب و موتورهای جستجوگر اینترنت و ایمیل می‌گردد. در این راستا، هدف سواد دیجیتال را می‌توان، توانمند ساختن افرادی که قادر به یادگیری و استفاده از ابزارهای دیجیتال برای حل مشکلات هستند دانست. بنا بر تعریف پنل بین‌المللی سوادآموزی و فناوری اطلاعات و ارتباطات، سواد دیجیتالی به عنوان استفاده از فناوری‌های دیجیتال و ابزارها یا شبکه‌های ارتباطی به منظور دسترسی، مدیریت، یکپارچه‌سازی، ارزیابی و تولید اطلاعات به منظور به-کارگیری در یک جامعه دانشی است که شامل نوعی توانایی مداوم از مهارت‌های زندگی روزمره تا مزایای تحول‌آفرین مهارت‌های دیجیتال و فناوری اطلاعات از جمله: توانایی دسترسی، مدیریت، یکپارچه-سازی، ارزیابی، تولید اطلاعات و دسترسی به اینترنت می‌شود. از این رو، در ادبیات آکادمیک عصر دیجیتال امروزی، بر نقش مهارت‌های دیجیتال و فناوری‌های اطلاعات و ارتباطات در توسعه جوامع و ایجاد تغییرات متعدد اجتماعی-فرهنگی، اقتصادی، سیاسی و محیطی تأکید بسیاری شده است.

۳. روش‌شناسی تحقیق

تحقیق حاضر با هدف تحلیل نظام سیاست‌گذاری سواد دیجیتال روستایی در ایران انجام شده است. لذا، به لحاظ روش، اسنادی-تحلیلی است و با استفاده از رویکرد استقرایی به تحلیل متون دیجیتال کشور به کمک روش مطرح شده توسط برگ (۲۰۰۱)

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۵. بحث و نتیجه‌گیری

با بررسی اسناد تحول دیجیتال کشور مشخص شد که دو نهاد "شورای عالی فضای مجازی" و "وزارت ارتباطات و فناوری اطلاعات" از نقش برجسته‌ای در فرآیند سیاست‌گذاری دیجیتال کشور برخوردارند و در این زمینه برنامه‌های متفاوتی را تهیه نموده‌اند. به طور کلی، با بررسی محتوای کیفی اسناد تحول دیجیتال کشور مشخص شد که ۳ سند راهبردی فضای مجازی (۱۳۹۷)، سند راهبردی تحول دیجیتال (۱۳۹۹) و نقشه راه تحول دیجیتال ایران (۱۴۰۰) با رویکرد توسعه پیشرفت دیجیتال در سطح ملی و نادیده‌انگاری به مناطق روستایی تدوین شده‌اند و تنها در متن سند راهبردی ارتباطات و فناوری اطلاعات در برنامه ششم توسعه (۱۳۹۹) و سند عملکرد وزارت ارتباطات و فناوری اطلاعات (۱۳۹۸) به توسعه خدمات و فناوری‌های اطلاعات و ارتباطات دیجیتال در مناطق روستایی اشاره شده است و در کل، موضوع ارتقای سواد دیجیتال در مناطق روستایی تا حد زیادی از دید سیاست‌گذاران کشور پنهان مانده است. لذا، در متون و برنامه‌های نظام سیاست‌گذاری کشور خلأ بزرگی در زمینه سواد دیجیتال روستاییان وجود دارد. در واقع، از آنجا که ترویج، آموزش و تحقیق، امروزه نقش بسیار مهمی در توسعه کشاورزی ایفا می‌نمایند، هر گونه تحول در بخش کشاورزی نیازمند تحول در فرآیند تولید و انتقال تکنولوژی است. لذا، می‌بایست متولیان فناوری ارتباطات کشور توجه بیشتری بر ترویج استفاده از فناوری‌های دیجیتال در نواحی روستایی مبذول نمایند.

کلیدواژه‌ها: سواد دیجیتال، سیاست‌گذاری دیجیتال، سیاست‌گذاری روستایی، توسعه پایدار.

تشکر و قدردانی

پژوهش حاضر حامی مالی نداشته و حاصل فعالیت علمی نویسندگان است.

پرداخته شد. جامعه آماری پژوهش حاضر شامل پنج سند مرتبط با فناوری‌های دیجیتال اطلاعات و ارتباطات است که به صورت هدفمند انتخاب گردید.

۴. یافته‌های تحقیق

بر اساس تحلیل اسناد دیجیتال کشور با استفاده از روش برگ، چهار محور اساسی شامل "تربیت نیروی انسانی متخصص"، "توسعه فرهنگی مهارت‌های دیجیتال"، "سیاست‌های اقتصاد دیجیتالی"، "توسعه زیرساخت‌های نرم‌افزاری و سخت‌افزاری دیجیتال" ضمن پوشش دادن طیف فراگیری از عوامل، مهم شناخته و ارائه شده‌اند. همچنین، با بررسی مؤلفه‌های سواد دیجیتال در پنج برنامه راهبردی کشور مشخص شد که در برنامه راهبردی فضای مجازی کشور (۱۳۹۷-۱۴۰۴) با وجود در نظرگیری اقداماتی در ابعاد مختلف از جمله صنعت، حوزه کسب و کار، خدمات، منابع انسانی، سبک زندگی، به مهارت‌های دیجیتال روستایی خصوصاً مشاغل بخش کشاورزی اشاره نشده است. در زمینه نقشه راه تحول دیجیتال کشور، با وجود اینکه بر لزوم توسعه سواد عمومی دیجیتال در سطح کشور تأکید شده، اما عمده توجه آن بر سکونتگاه‌های شهری بوده است و در آن توجهی بر هیچ یک از مؤلفه‌های سواد دیجیتال روستایی نشده است. در سایر سندهای مورد بررسی از جمله سند راهبردی تحول دیجیتال، سند راهبردی ارتباطات و فناوری اطلاعات در برنامه ششم توسعه (۱۳۹۵-۱۳۹۹) و سند گزارش عملکرد وزارت ارتباطات و فناوری اطلاعات (۱۳۹۸)، به طور جداگانه به برخی مؤلفه‌های سواد دیجیتال مانند اشتغال‌زایی بر اساس توانمندی‌ها، دسترسی بهتر به بازارهای فروش و افزایش قدرت بازاریابی الکترونیک محصولات، تسهیل روند انتقال نتایج علمی به کشاورزان، دسترسی به خدمات الکترونیک نوین پستی، آموزشی، کشاورزی، بانکی، سلامت، اطلاع از اخبار بهنگام روستایی و توانمندسازی نیروی کار روستایی تأکید شده و به سایر مؤلفه‌های مهارت و سواد دیجیتالی روستایی در متن برنامه‌های کشور توجهی نشده است.

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فهرست مندرجات

صفحه	عنوان
(۱-۱۸)	■ مطالعه تقاضا و عرضه برای فعالیت‌های اگروتوریستی (مطالعه موردی: مناطق روستایی شهرستان سمیرم، ایران) نرگس وزین - فاطمه زمانی علویچه
(۱۹-۳۸)	■ سنجش و تحلیل اثرات پاندمی کرونا بر تاب‌آوری معیشتی خانوارهای روستایی (مطالعه موردی: روستاهای بخش اورامان شهرستان سروآباد) سعدی محمدی - ایوب مرادی
(۳۹-۵۹)	■ راه کارهای مبتنی بر شاخص‌های حکمروایی روستایی در تحقق مدیریت هماهنگ توسعه روستایی در استان گیلان احمد مین‌باشی - نصرالله مولایی هاشجین - آتوسا بیگدلی
(۶۱-۷۶)	■ گردشگری جامعه محور در روستاهای کوهستانی با رویکرد نظریه زمینه‌ای (مطالعه موردی: بخش کجور شهرستان نوشهر) مرتضی خزائی پول - مهدی رمضان‌زاده لسیوئی
(۷۷-۹۳)	■ تحلیل ویژگی‌های کالبدی مسکن روستایی جهت دستیابی به الگوی معماری آن (مورد مطالعه: روستای هزاوه، استان مرکزی) رضا سامه - رضا جعفری‌ها
(۹۵-۱۰۹)	■ تحلیل سیاست‌گذاری سواد دیجیتال روستایی در کشور ایران نشاط امیدوار - مرتضی توکلی

داوران این شماره به ترتیب حروف الفبا

دکتر مازیار آصفی (استاد معماری و شهرسازی دانشگاه هنر اسلامی تبریز)

دکتر فرحناز اکبراقلی (استادیار جغرافیا و برنامه‌ریزی روستایی دانشگاه پیام نور)

دکتر سعیدرضا اکبریان رونیزی (دانشیار جغرافیا و برنامه‌ریزی روستایی دانشگاه شیراز)

دکتر حمیده بیگی (استادیار جغرافیا و برنامه‌ریزی شهری دانشگاه گیلان)

دکتر ندا ترابی فارسانی (دانشیار مدیریت گردشگری دانشگاه هنر اصفهان)

دکتر مهدی حسام (استادیار جغرافیا و برنامه‌ریزی روستایی دانشگاه گیلان)

دکتر علی اکبر عنابستانی (استاد جغرافیا و برنامه‌ریزی روستایی و GIS دانشگاه شهید بهشتی)

دکتر زهرا عنابستانی (استادیار جغرافیا و برنامه‌ریزی شهری دانشگاه آزاد اسلامی مشهد)

دکتر بهروز قرنی آرانی (استادیار جغرافیا و برنامه‌ریزی روستایی دانشگاه پیام نور)

دکتر صدیقه کیانی سلمی (استادیار جغرافیا و برنامه‌ریزی روستایی دانشگاه کاشان)

دکتر علی گلی (دانشیار جغرافیا و برنامه‌ریزی روستایی دانشگاه شیراز)

دکتر ولی‌الله نظری (استادیار جغرافیا و برنامه‌ریزی روستایی دانشگاه فرهنگیان)

- ۳.۹. انواع نقل قول‌ها (مستقیم و غیر مستقیم)، نقل به مضمون و مطالب به دست آمده از منابع و مآخذ، با حروف نازک و استفاده از نشانه‌گذاری‌های مرسوم، مشخص شود و نام صاحبان آثار، تاریخ و شماره صفحات منابع و مآخذ، بلافاصله در میان پرانتز نوشته شود.
۱۰. مقالات برگرفته از رساله و پایان‌نامه دانشجویان با نام استاد راهنما، مشاوران و دانشجو به صورت توأمان و با مسؤولیت استاد راهنما منتشر می‌شود.
۱۱. چنانچه مخارج تحقیق یا تهیه مقاله توسط مؤسسه‌ای تأمین مالی شده باشد، باید در بخش تشکر و قدردانی مشخص گردد.
۱۲. شیوه ارزیابی مقالات: مقالات ارسالی که شرایط پذیرش را احراز کنند، برای داوران خبره در آن موضوع ارسال می‌شوند. داوران محترم، جدای از ارزشیابی کیفی مقالات، راهبردهای سازنده‌ای پیشنهاد می‌کنند. پیشنهادهای داوران محترم به طور کامل، اما بدون نام و نشان داور، برای نویسنده مقاله ارسال خواهد شد.
۱۳. مجله حق رد یا قبول و نیز ویراستاری مقالات را برای خود محفوظ می‌دارد و مقالات مسترد نمی‌گردد. اصل مقالات رد یا انصراف داده شده پس از سه ماه از مجموعه آرشیو مجله خارج خواهد شد و مجله پژوهش و برنامه‌ریزی روستایی هیچ مسؤولیتی در این ارتباط نخواهد داشت.
۱۴. مسؤولیت ارائه صحیح مطالب مقاله بر عهده نویسنده‌گان مقاله است. از این‌رو، نسخ‌های از مقاله آماده چاپ برای انجام آخرین تصحیحات احتمالی به نشانی الکترونیکی نویسنده ارسال خواهد شد. چنانچه ظرف مدت یک هفته پاسخی از سوی نویسنده‌گان واصل نگردید به معنای موافقت آنها با اصلاحات انجام شده تلقی و نسبت به چاپ آن اقدام می‌شود.
۱۵. دریافت مقاله صرفاً از طریق سامانه مجله (<http://jrnp.um.ac.ir>) خواهد بود و مجله از پذیرش مقالات دستی یا پستی معذور خواهد بود.
۱۶. نویسندگان گرامی، مقالاتی که مطابق فرمت مجله تهیه نشده باشند به نویسنده بازگردانده شده و در فرآیند ارزیابی قرار نخواهد گرفت.
۱۷. فایل‌های ضروری برای ارسال از طریق سامانه عبارتند از:
- الف) فایل مشخصات نویسندگان: در محیط word شامل اسامی و مشخصات نویسندگان به فارسی و انگلیسی.
- ب) فایل اصلی مقاله بدون مشخصات: در محیط word شامل متن اصلی مقاله بدون اسامی و مشخصات نویسندگان.
- ج) فایل چکیده مبسوط (مکمل) مقاله: شامل چکیده مبسوط فارسی در قالب یک فایل در محیط Word.
۱۸. شرایط جزئی تر و دقیق تر نیز در فایل راهنمای نگارش و ارسال مقاله توسط نویسندگان ارائه شده است.
۱۹. مقاله پس از ارزیابی علمی به زبان انگلیسی برگردانده شده و نویسنده(گان) موظف به ترجمه آن در مراکز ویراستاری معتبر خواهند بود و تا قبل از انجام ترجمه، امکان ارسال گواهی پذیرش مقدور نمی‌باشد. لذا پیشنهاد می‌شود فارسی زبانان مقاله خود را به زبان فارسی تهیه و ارسال نموده و پس از طی فرآیند ارزیابی علمی و پذیرش نسبت به ترجمه آن اقدام شود.
- آدرس پستی: مشهد- میدان آزادی- پردیس دانشگاه فردوسی مشهد- دانشکده ادبیات و علوم انسانی- دفتر مجله پژوهش و برنامه‌ریزی روستایی.
- کد پستی: ۹۱۷۷۹۴۸۸۸۳ تلفن و نمابر: ۰۵۱-۳۸۷۹۶۸۴۰ پست الکترونیکی Rplanning@um.ac.ir
- وب سایت: <http://jrnp.um.ac.ir/>

فرم اشتراک (یک ساله / دوشماره) مجله پژوهش و برنامه‌ریزی روستایی

این جانب..... شغل..... با ارسال فیش بانکی به مبلغ..... ریال به حساب جاری شماره ۴۲۵۲۹۹۶۳۸ بانک تجارت شعبه دانشگاه مشهد کد ۴۲۵۰ به نام عواید اختصاصی دانشکده ادبیات و علوم انسانی، متقاضی اشتراک فصلنامه از شماره..... هستم. چنانچه صاحبان مقالات منتشر شده متقاضی دریافت مجله و تیراژی آن از طریق پست پیشتاز باشند، باید هزینه‌ی آن را به شماره حساب مذکور واریز و اصل فیش پرداختی را به نشانی دفتر مجله ارسال کنند.

نشانی:..... کدپستی:.....

شرایط پذیرش مقاله

برای سرعت بخشیدن به امر داوری و چاپ مقالات، از همه پژوهشگرانی که مایل به چاپ مقالات علمی خود در این نشریه هستند، درخواست می‌شود به نکات زیر توجه کافی داشته باشند:

۱. مقاله ارسال شده نباید قبلاً در هیچ نشریه داخلی یا خارجی چاپ شده باشد. هیئت تحریریه انتظار دارد نویسندگان محترم تا هنگامی که جواب پذیرش از نشریه نرسیده است، مقاله خود را به مجله دیگری برای چاپ ارسال نفرمایند.

۲. مقالات انگلیسی با قلم نازک Times New Roman 11 با نرم افزار Word تهیه شود. مقالات، روی کاغذ A4 (با حاشیه از بالا ۳ و پایین ۲ و راست ۲ و چپ ۲ سانتی‌متر) تایپ شود. متن به صورت دو ستونی با رعایت فاصله ۱ سانتی‌متر بین دو ستون و فواصل بین خطوط به صورت single باشد. ۳. حجم مقاله نباید از حدود ۹۵۰۰ کلمه و یا حداکثر ۱۵ صفحه چاپی به قطع نشریه بیشتر باشد (با در نظر گرفتن محل جداول، اشکال، خلاصه فارسی و فهرست منابع).

۴. عنوان مقاله با در نظر گرفتن فواصل بین کلمات نباید از ۶۰ حرف تجاوز کند و با قلم Times New Roman 14 سیاه تایپ شود.

۵. نام نویسنده مقاله با قلم سیاه Times New Roman 10 عنوان علمی یا شغلی او با قلم Times New Roman 10 در زیر عنوان مقاله ذکر شود. ضمناً آدرس الکترونیکی و شماره تلفن نویسنده مسؤول در پاورقی آورده شود.

۶. چکیده مقاله ساختاریافته با قلم نازک Times New Roman 11 به صورت تک ستونی باشد.

۷. شکل‌ها و نمودارهای مقاله حتماً اصل و دارای کیفیت مطلوب باشد. فایل اصلی اشکال (تحت Word، Excel، PDF) و با دقت ۳۰۰ dpi ارائه شود. اندازه قلم‌ها خصوصاً در مورد منحنی‌ها (legend) به گونه‌ای انتخاب شوند که پس از کوچک‌شدن مقیاس شکل برای چاپ نیز خوانا باشند.

۸. ساختار مقاله شامل عناصر زیر است:

۱.۸ صفحه عنوان: در صفحه شناسنامه باید عنوان مقاله، نام و نام خانوادگی نویسنده (نویسندگان)، درجه علمی، نشانی دقیق (کد پستی، تلفن، دورنگار و پست الکترونیکی)، محل انجام پژوهش، مسؤول مقاله و تاریخ ارسال) درج شود. عهده‌دار مکاتبات باید با علامت ستاره مشخص شود.

۲.۸ چکیده: شامل چکیده‌های فارسی ساختار یافته (شامل هدف، روش؛ یافته‌ها؛ محدودیت‌ها؛ راهکارهای عملی؛ اصالت و ارزش و واژگان کلیدی (۳ تا ۶ کلمه)) است. تا حد امکان چکیده مقاله از ۳۰۰ کلمه تجاوز نکند. علاوه بر چکیده ساختار یافته، لازم است چکیده مبسوط فارسی بین ۷۵۰ تا ۱۰۰۰ کلمه نیز حاوی مقدمه، مبانی نظری، روش، نتایج و بحث، نتیجه‌گیری و کلیدواژه‌های مقاله تهیه شود، به طوری که حاوی اطلاعاتی از کل مقاله باشد و بتوان جداگانه آن را چاپ کرد. با توجه به این که مقاله بعداً به صورت کامل به انگلیسی برگردانده خواهد شد، نیازی به ترجمه چکیده مبسوط به انگلیسی نیست.

۳.۸ مقدمه: شامل ۱- طرح مسئله؛ ۲- اهمیت و ضرورت؛ ۳- اهداف و سوالات اصلی تحقیق.

۴.۸ ادبیات نظری تحقیق: شامل ۱- تعاریف و مفاهیم؛ ۲- دیدگاه‌ها و مبانی نظری؛ ۳- پیشینه نظری تحقیق و ...

۵.۸ روش‌شناسی تحقیق: در برگیرنده ۱- محدوده و قلمرو پژوهش؛ ۲- روش تحقیق و مراحل آن (روش تحقیق، جامعه آماری، روش نمونه‌گیری، حجم نمونه و روش تعیین آن، ابزار گردآوری داده‌ها و اعتبارسنجی آن‌ها)؛ ۳- سؤال‌ها و فرضیه‌ها؛ ۴- معرفی متغیرها و شاخص‌ها؛ ۵- کاربرد روش‌ها و فنون.

۶.۸ یافته‌های تحقیق: ارائه نتایج دقیق یافته‌های مهم با رعایت اصول علمی و با استفاده از جداول و نمودارهای لازم.

۷.۸ بحث و نتیجه‌گیری: شامل آثار و اهمیت یافته‌های پژوهش و یافته‌های پژوهش‌های مشابه دیگر با تأکید بر مغایرت‌ها و علل آن، توضیح قابلیت تعمیم‌پذیری و کاربرد علمی یافته‌ها و ارائه رهنمودهای لازم برای ادامه پژوهش در ارتباط با موضوع، نتیجه‌گیری و توصیه‌ها و پیشنهادها احتمالی.

۸.۸ تشکر و قدردانی: قبل از منابع مورد استفاده ارائه شود و از ذکر عناوین دکتر و مهندس خودداری شود.

۹. نحوه ارجاعات: منابع و مآخذ باید به صورت درون‌متنی و همچنین در پایان مقاله ذکر شود.

۱۰.۹ ارجاعات در متن مقاله باید به شیوه داخل پرانتز (APA) نسخه ۶ باشد؛ به گونه‌ای که ابتدا نام مؤلف یا مؤلفان، سال انتشار و صفحه ذکر شود. شایان ذکر است که ارجاع به کارهای چاپ شده فقط به زبان فارسی بوده و در اسامی لاتین معادل آن در زیر نویس همان صفحه ارائه شود. به عنوان نمونه: (شکوئی، ۱۳۸۷، ص. ۵۰) یا (وودز، ۲۰۰۵، ص. ۲۷).

۲.۹ در پایان مقاله، منابع مورد استفاده در متن مقاله، به ترتیب الفبایی نام خانوادگی نویسنده بر اساس الگوی فهرست نویسی APA تنظیم گردد. نمونه فارسی:

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



دانشکده ادبیات و علوم انسانی

مجله پژوهش و برنامه‌ریزی روستایی

سال دوازدهم، شماره ۱، زمستان ۱۴۰۱، شماره پیاپی ۴۰

صاحب امتیاز: دانشگاه فردوسی مشهد

مدیر مسئول: دکتر حمید شایان

سرمدیر: دکتر علی اکبر عنابستانی

هیئت تحریریه (به ترتیب حروف الفبا):

کریستوفر برایانت	استاد برنامه‌ریزی روستایی و توسعه (دانشگاه مونترال کانادا)
خدیجه بوزرجمهری	دانشیار جغرافیا و برنامه‌ریزی روستایی (دانشگاه فردوسی مشهد)
سعید پیراسته	دانشیار جغرافیا و مدیریت محیطی (دانشگاه واترلو کانادا)
جعفر جوان	استاد جغرافیای روستایی (دانشگاه فردوسی مشهد)
محمدرضا رضوانی	استاد جغرافیا و برنامه‌ریزی روستایی (دانشگاه تهران)
عبدالرضا رکن‌الدین افتخاری	استاد جغرافیا و برنامه‌ریزی روستایی (دانشگاه تربیت مدرس)
عباس سعیدی	استاد جغرافیای روستایی (دانشگاه شهید بهشتی)
حمید شایان	استاد جغرافیای روستایی (دانشگاه فردوسی مشهد)
سید اسکندر صیدایی	دانشیار جغرافیا و برنامه‌ریزی روستایی (دانشگاه اصفهان)
علی عسگری	استاد مدیریت بحران (دانشگاه یورک کانادا)
علی اکبر عنابستانی	استاد جغرافیا و برنامه‌ریزی روستایی (دانشگاه شهید بهشتی)
آنا فرمینو	استاد جغرافیا و برنامه‌ریزی منطقه‌ای (دانشگاه لیسبون جدید پرتغال)
مجتبی قدیری معصوم	استاد جغرافیای روستایی (دانشگاه تهران)
دو-چول کیم	استاد مدیریت محیط زیست روستایی (دانشگاه اوکایاما ژاپن)
سیدحسن مطیعی لنگرودی	استاد جغرافیای روستایی (دانشگاه تهران)

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مجله پژوهش و برنامه ریزی روستایی

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