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# Rural Development Factors with an Emphasis on the Role of Cooperatives in Guilan Province, Iran

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## Abstract

Rural development is a process involving local people in solving their problems. As a strategy designed to improve the social and economic well-being of rural populations, rural development undoubtedly supports nation-wide development in a country like Iran with a rural-based society. The constitution of the Islamic Republic of Iran stipulates that rural development should be viewed as a key function of the government. This paper aims to determine factors that constitute rural development in Guilan Province (North of Iran). The present study examined 75 rural development indices derived from official documents. They were then standardized and classified according to six factors using the numerical taxonomy approach: human resources, infrastructure costs, socio-cultural costs, economic performance, location and natural resources, and rural management. Share of each factor was rated by statistical analysis. The results of the analysis showed a negligible change in rural management and economic costs, while other factors remained constant and no change was made to the impact status and rank of the six factors germane to rural development. The studies recommend revising the economic structure and rural management of the province based on cooperatives.

### Keywords:

*Development indices, Co-operation, Numerical taxonomy, Rural economics, Rural management*

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## INTRODUCTION

Today, the term development is often used in combination with other words and applied to agencies. Examples include, but not limited to, economic development, structural development, infrastructure development, political development, cultural development, communication development, social development, national development, urban development, rural development, human development, development strategies, development stages, development planning, development patterns, and development arrangements, each of which has a different meaning. Yet more generally, development can be conceptualized as a public-oriented participation process organized to maximize the requirements necessary to meet the physical, mental and social needs of the public with the aim of achieving are and social justice. The necessary condition for such development are the excess of energy in a community and new ideas and methods generated by innovators toward collective activities aiming to raise standards and to improve organization operational efficiency (Esmaeeli, 2006).

After six decades of experience in planning and economic programs in Iran, seems planning have not been achieved the common goal of economic growth and development yet, but underdevelopment indices (environmental degradation, poverty, inequality, and massive immigration) have improved significantly (Alavizade, 2009).

The concept of development has been changed (Table 1) from one-dimensional interpretation (economic growth) to a multi-dimensional one (sustainable development). Furthermore, human centrality has been the focus of development in recent decades (Midri & Kheyrikhahan 2004).

More than half of the world's population live in rural areas in developing countries, and these

areas are now the most socially deprived parts of the world in terms of poverty, malnutrition, and literacy. To solve these problems that have affected many populations across the globe, strategies need to be implemented so as to alleviate poverty through development-informed planning. This can be accomplished through increased productivity and participation of rural people as well as increased development benefits (Karami & Rezaei Moghaddam, 2006). Priority of addressing the need for development of rural areas is not rooted in the fact that the majority of people in developing countries live in rural areas, but in the fact that the final solution to problems of unemployment and urban population density lies in improving economic, social, political, and cultural environment in rural areas as part of an attempt to reverse migration (Todaro, 2004). Migration of rural people to urban areas because of widespread poverty has contributed to numerous problems in cities such as rapid urban population growth, suburbanization, and uneven urban spread. In recent years, however, especially since the realization that growth-oriented and technocratic strategies of the 1970s and 80s have failed, rural development has been a top priority (Azkia & Ghaffari, 2004).

Despite the availability of massive natural and human resources in Guilan Province, measurement of the development level of rural districts in Guilan Province based on the variable categorized into four groups (agricultural, health, infrastructure, and social) has shown that out of 109 rural districts in the region, 5.5% (6 rural districts) were underdeveloped, 53.2% (58 rural districts) from the studied rural districts were in the less developed group, 40.4% (44 rural districts) were classified as a semi-developed group, and only one rural district was in a developed

Table 1

*Comparison of Theoretical Models and Development Practical Policies in Different Time Periods*

Dominant patterns of development in the past half-century	Development of policy-making courses
1. Growth pattern (50s)	1. Big government approach (from the end of the World War II until the end of 1970s)
2. Redistribution patterns or constructionist pattern (60s)	2. Small government approach (from the early 1980s to the late 1990s)
3. Pattern of provision of basic necessities (70s)	3. Good governance policy (from the late 1990s ongoing)
4. Sustainable development pattern (80s)	

Adapted from: Midri and Kheyrikhahan (2004)

condition (Alipour & Allahyari, 2010). World Bank defines rural development as a kind of strategy planned to improve the socio-economic life of people such as poor villagers. The strategy involves the spread of the benefits of development among the poorest people living in rural areas (World Bank, 2000). The scope of rural development activity in the context of institutional development consists of five parts: (a) natural resource management, (b) rural infrastructure affairs, (c) human resource management, (d) agricultural development, and (e) non-agricultural activities, development (Azkia & Ghaffari, 2004).

The main issue in rural development is comprehensive development, meaning a multi-functioning rural program with the following goals (Qazi, 2009):

- To improve living standards and the welfare of people and to meet their basic needs such as food, housing, clothing, and employment
- To enhance productivity in rural areas and to reduce people's vulnerability in the face of natural hazards, poverty, and overexploitation and to develop economic integration at a regional, national, and international level
- To promote autonomous development
- To promote decentralized administration

Today, the most important agents of management in the new process of rural development are people, government, and market. They are actively involved in the process of formulation, implementation, monitoring, and evaluation of rural development programs by institution-building and coordination with participation methods (Roknoddin Eftekhari et al., 2007). According to Madu (2007), patterns of basic elements of rural development in South Eastern Nigeria highlight the following four main factors: (a) development of the rural market, (b) territorial resources, (c) effectiveness of executive agencies and local government, and (d) access to rural development that is in general covered by the first and third factors. Roknoddin Eftekhari and Badri (2012) classified factors of rural development into three categories: basic factors (capital, land, labor, management, and planning); Support factors (transportation, communication, infrastructure, education, health, social services),

and institutional factors (rules and regulations, organizations and agencies, production networks and relationships, and markets and participation). Amiri Entekhabi (2011) listed factors affecting facilities in rural areas and their centrality to each other:

- Administrative centrality: Sometimes by real capacity of a habitat and sometimes by leveraging regional and trans-regional power
- Demographic class or population size: A village enjoys a level of service proportional to its population
- Local economic power: Agricultural capability of mineral resources, production capacity, industrial investment, services, trade and tourism, historical, cultural and natural attractions, and economic and social areas of centrality of settlements, and facilities and services
- Geographical location and natural capabilities: Water resources, vast and fertile areas of agricultural land, and a favorable climate

As development in its broadest sense includes different aspects of people's lives, rural development is multifaceted and requires an integrated approach (Madu, 2007). Therefore, although each study in this regard mentions specific strategies, approaches, or determinants to establish and achieve rural development targets, it cannot be solely attributed to a variable or a specific group of variables. Cooperation is identified and introduced as one of the main factors affecting development strongly. Sometimes, spirit of cooperatives, sometimes cooperative organizational structure, and sometimes forming cooperative organizations is considered as a development factor in a country and sometimes in development of a particular region Alufohai and Okorosobo (2013), Karami and Rezaee Moghaddam (2006), Roknoddin Eftekhari and Badri (2012).

At the early stages of implementing the development plan in Iran, the rural population of Iran failed to have an effective role in the constitutional revolution and its subsequent development due to extreme economic and cultural poverty (illiteracy and low information level), social inequality, and lack of power in autocratic village management. This explains why change predominantly took place in cities and was

driven by urban elite and urban middle class (Roknoddin Eftekhari et al., 2007). As the main purpose of agricultural reform was rapid industrialization, some internal and external pressure had been made to carry out some reforms in production resources ownership and changing agricultural structure and management.

A rational non-participatory planning approach in the theoretical framework of renovation is generally top-down and serves to transform villages to locations for consumption of urban productivity (Roknoddin Eftekhari & Behzad-nasab, 2004). This type of planning has led to mass migration of peasants to cities in search of work and a better life (Roknoddin Eftekhari, 2007).

After the Islamic revolution and establishment of new institutions such as the Housing Foundation of the Islamic Revolution and the Imam Khomeini Relief Committee, value-based management was deployed to eradicate poverty and develop infrastructure through 'Jihad Sazandegi' which aimed at spontaneous management with an emphasis on rural populations. The movement was driven by changing attitudes in management, planning, and policy making in the country. In particular, there was confusion in development management due to land reform that placed the resources and rural economic foundation as well as social and ecological capabilities as a function of central government (Razavi & Alinia, 2000; Roknoddin Eftekhari, 2007). In the early years after the revolution 1979, planners established Islamic Councils to follow a more decentralization policy, leaving construction, economic and welfare work to the people, accelerating the flow of affairs, removing discrimination of social control, implementing the work of government agencies, leading local programs, informing people and increasing the government's capacity to promote rural development (Alavitabar, 2000). Notwithstanding, fragility of the economic structure during the war contributed to the failure of these councils in achieving their objectives for rural development, leading to the integration and dissolution of such revolutionary institutions in subsequent development programs and the reduction of the status of rural decision making from a ministry

to a deputy, and then to that of a directorate general. This strategy meant that 70 percent of the people in the country were excluded from having official representation in strategic management. Worse than that is that people's support for spontaneous and decentralized Jihad management system has been eroded (Roknoddin Eftekhari, 2007; Rezvani, 2004).

Stimulation of social and economic organizations is one of the new economic development characteristics. Cooperatives are examples of socio-economic institutions are associated with participation, and their efficiency in aiding rural development should be estimate. This paper aims to determine factors that constitute rural development and their efficiency in Guilan Province. So the main research questions are as follows:

Q1: What is the share of each of the following factors: (a) human resources, (b) natural resources, (c) cultural and social costs, (d) economic costs, (e) infrastructure costs, (f) rural structure and management when it comes to achievement or failure of sustainable rural development in Guilan Province?

Q2: In particular, does the formation of cooperative units have an impact on rural development in Guilan Province?

## MATERIAL AND METHODS

The research method was quantitative (descriptive-analytic), and the statistical population consisted of 109 rural districts comprising 43 districts in 16 townships of Guilan Province. The data collection method was based on documentary evidence. After initial evaluation of available statistics and official documents obtained through population census and housing, [Statistical Center of Iran (2006)] as well as analysis of documents of classification of rural settlements in Guilan with an emphasis on ranking development and level of deprivation, [Amir Entekhabi, S. (2011)] data were extracted for 75 statistical features for each rural district of the province. The data were divided into three categories: 'basic resources', 'institutional factors', and 'supporter factors'. As 'institutional factors' and 'supporter factors' were derived from 'basic resources', the

study concentrated on ‘basic resources’. Basic resources were divided into three categories for analysis and comparison of ‘human resources’, ‘social costs’, and ‘infrastructural costs’, in which human resources in turn were divided into two categories of ‘quality and quantity of human resources’, social costs were divided into two categories of ‘cultural costs’ and ‘health costs’, and finally infrastructural costs were divided into two categories of ‘development costs’ and ‘communication costs’.

Data were arranged again according to six categories for ranking of the factors on ‘rural development’, ‘rural management’, ‘location and natural resources’, ‘economic costs’, ‘social costs, infrastructure costs’, and ‘human resources’.

Data were also analyzed for the classification of indices and the evaluation of each factor, and the development of all rural districts were rated in MS-Excel by using the multivariate numerical taxonomy. SPSS 18 was then used for statistical analysis of the quantitative data. The analysis was carried out based on the results of an ANOVA analysis. Duncan test was also applied to determine the effect of each factor on rural development score and the t-test was employed to determine the share of each component in the desired factor. Finally, the impact of cooperation on rural development was evaluated by removing the component related to the cooperation factor and repeating the procedure.

## RESULTS AND DISCUSSION

Factors of rural development were examined

to determine the share of each factor and the size of its effect on the cooperative components of rural development factors in Guilan Province. Results are summarized in Table 2 below.

As can be seen in the table, a significant difference exists between the shares of the two components forming each of the examined factors. In reviewing the priorities of each of the components, the results of descriptive statistics show that the variable of human resources quality was more important and more effective in forming the factor of human resources than its quantity. Moreover, in forming the factor of social costs, the importance and effect of health costs was more important than that of cultural costs. Finally the variable of communication costs had higher share and contribution to the infrastructure costs than the variable of development costs.

The significant difference between the shares of six rural development factors was examined through the equality test for the variables of human resources, the socio-cultural, economic, and infrastructural performances, location and natural resources, as well as rural management in level of development in rural districts using ANOVA. At this stage, as in previous stages, three components related to cooperation, namely the number of rural production cooperative units in each village, cooperative stores in every village, and the ratio of total number of cooperative units to population of each district, were also considered in taxonomy models. Results are presented in Table 3 below.

Table 2  
*Comparison and Contrast of the Share of Compound Factors*

Factor	Components	Mean	SD	t-statistics	p-value	Result	
						Difference	Priority
Human Resources	Quantity of resources	.9999047	.00004767	-19.764	.0	*	
	Quality of Resources	.9999950	.00000249				*
Social Costs	Cultural Costs	.9498442	.02507790	-8.306	.0	*	
	Health Costs	.9725812	.01370942				*
Infrastructural Costs	Development Costs	.9755799	.01221005	-5.585	0.0	*	
	Communication Costs	.9834677	.00826617				*

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Table 3  
*ANOVA Analysis Results for Rural Development*

	SS	df	Mean	F-value	p-value
Between group	154.445	5	30.889	121588.596	.000
Within group	.165	648	.000		
Total	154.610	653			

Table 4  
*Results of the Duncan Test*

Rural Development Factors	Subset for alpha = 0.05				
	1	2	3	4	5
Rural Management	.9732468				
Location and natural resources		.9975304			
Economic Costs		.9983613			
Social Costs			1.9224254		
Infrastructure Costs				1.9590476	
Human Resources					1.9998997
Significant level		1.000	.700	1.000	1.000

As can be seen, the results show there was a significant difference between the factors outlined above in terms of the rate of participation in rural development in Guilan Province. In addition, it can be observed that the six factors showed no equal share in rural development in the province. Duncan's test was also used to show the differences seen in the effects of individual factors on rural development of the province (see Table 4 below).

As can be seen, the results show that the greatest impact on rural development was related to human resources followed by infrastructure costs and social costs, in second and third places, respectively. Location and natural resources, as well as economic costs had only a small distance from one another; however, the comparison shows no significant difference. The lowest share in rural development, as can be seen, was that of rural management with a significant distance.

To investigate the possible influence of components of cooperation on rural development, or the share of factors forming rural development

in the province, three components including 'the number of rural production cooperative units', 'number of cooperative stores in each district' and 'the proportion of the number of cooperatives to the population of each district' were removed from the taxonomy equation of factors of economic costs and total rural development equations, and output was retested (see Table 5 below).

Comparing table 5 with Table 3, the results of the analysis of variance reported for the contributions of rural development showed that the difference was significant. Next, through repetition of the Duncan test, (table 6) the contribution of each of the six rural development factors was examined after removal of cooperation components.

Comparing the last two tables with Table 4 demonstrates that despite relatively small changes in figures and numbers, no change was made to the impact status and rank of the six factors on rural development; therefore, the conclusion

Table 5  
*Results of ANOVA Analysis for the Contributions of Rural Development Factors after Removal of Cooperative Components*

	SS	df	Mean	F-value	p-value
Between group	154.404	5	30.881	121959.280	.000
Within group	0.164	648	0.000		
Total	154.568	653			

Table 6  
*Duncan Test Results for the Contributions of Rural Development Factors after Removal of Cooperative Components*

Rural Development Factors	Subset for alpha = 0.05				
	1	2	3	4	5
Rural Management	.9736264				
Location and natural resources		.9975304			
Economic Costs		.9983593			
Social Costs			1.9224254		
Infrastructure Costs				1.9590476	
Human Resources					1.9998997
Significant level	1.000	.701	1.000	1.000	1.000

was that the cooperation factor between the two censuses conducted from 1996 to 2006 could not have impacted rural development of Guilan Province or its associated factors.

Deficient rural administrative management systems make it difficult to find an efficient and appropriate method to measure development and hence to provide services in rural areas (Rezvani & Sahneh, 2005). In situations where central government is the main provider of goods and services but is not able to meet demands such as supply of goods, quality hygiene, and health care and general education, it is necessary to establish cooperatives (Sabagh Kermani & Agheli, 2004). Cooperatives, as socio-economic development organizations, also have multiple social and economic goals; therefore, organizations with such characteristics can be considered as a manifestation of social capital and play an important role in serving different requirements of a community (Allahyari et al., 2010). It is believed that collaboration among smallholder farmers to establish rural production cooperatives can lead to more desirable utilization of resources (Bakhsh et al., 2014).

**CONCLUSION AND RECOMMENDATION**

Factors affecting rural development were examined by addressing the a forementioned questions. The results of the study can be summarized as follows:

Human resources factor, despite limitations imposed such as negative growth and aging populations, still has the strongest effect on rural development, and the effect of human resources quality is comparatively stronger than its quantity in terms of separation of factor components.

This is quite understandable, as nowadays most inhabitants of rural areas in Iran are elderly and/or disabled. Yet, it should be noted that qualitative factors such as age and sex combination and education have an impact on the quantity of human resources and qualitative elements such as stopping migration and even reversing the current trend. An increased birth rate would strengthen the quality of human resources. It has also been noted that young people need to be considered within a program to reverse the trend of migration from rural areas.

Infrastructures the second priority and separation of the components of the variable showed that communication infrastructure (although not desirable) allocated a larger share of infrastructure development in villages. In contrast, development infrastructure was determined at a much lower level than was desirable. This finding is related to the urban building wear and a lack of regulated architectural planning in Guilan Villages.

Cultural and social performance was in third place, and, it was evaluated to have been close to the desired level of autonomous development due to high participation of people. However, the share of educational and cultural affairs was less than that of health affairs, indicating insufficient government attention to educational and cultural affairs, and with regard to desired level of statistics for schools and educational centers, lack of libraries, and cultural, artistic, and craft centers is a major concern.

In sum, the share of infrastructural performance was higher and social performance was average due to the relatively favorable contribution of the health situation. However, economic per-



formance had a negligible role in the share of financial resources. It indicated a lack of economic boost and lack of career options in villages.

Cooperation is considered important to various aspects of development; however, it plays no role in the inter-relationship of factors and their relationship to rural development in Guilan Province. This raises the question of why, despite long-term social cooperation in the rural economy of Iran, the relatively fair distribution of cooperative units in rural areas, and serious attention that has been paid to the formation of cooperatives in recent decades, the cooperative sector that had considerable spiritual and material costs has not been as effective as it should have been in rural development of Guilan?

Low share of location and natural resources, economic performance, especially rural management, suggests that after years of planning and experiencing different patterns of development a suitable framework and condition have not been provided to enhance the efficiency of these factors in aiding rural development. It also seems that in appropriate placement of many important factors for rural development is related to the inefficiency of cooperation in promoting rural development and strengthening the six factors, particularly because the components related to cooperation were considered in the last two factors. It is important because in practice, cooperative units were not involved in rural management, and the exploitation of natural resources was not considered in rural economic planning.

Given the challenges on the way of rural development, it can be concluded that there needs to be a revised strategy for a rural economic system, for appropriate exploitation of natural resources, and for rural management structure in Guilan. It should be recommended that cooperative organizations take a more serious role in the three above-mentioned categories of development. In this context, given the importance of cooperation in the Islamic economic system, and political and social redefinition of 'village' from a 'population' unit to an 'economic' unit, it is suggested that a national network of rural cooperatives should be established and be in operation to help promote rural development in the country.

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