

## **The effectiveness of rural housing facilities on the physical development of villages (Case study: villages in the central part of the city of Kashmar)**

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### **Abstract**

Giving credit to the villages for physical development and strengthening housing is one of the strategies and programs implemented in rural areas that to some extent, it has caused the empowerment of villages. Some facility will be provided to villagers as the loans of the improvement of rural housing in Iran which have some restrictions and requirements according to infrastructure, materials, and plan of houses and these restrictions and requirements of these houses will distinct them from the traditional rural housing. The goal of this research is the effectiveness of rural facilities on physical development of villages and providing some solutions in this field. The method of the research is analytic-descriptive and the documentary and field methods are used for collecting data. Due to the size of the population (3769 families), 348 families were determined as the sample questioned families based on Cochran formula. The results show that the facilities have caused physical development in studied villages.

**Key words:** Housing facilities, Village, Physical development, Kashmar

### **Introduction**

The issue of housing is one of the most important elements in rural spaces and it is as symbol of human's interactions with its natural environment and it is formed according to the time-place conditions during years and it is an indication of the type of activities in the economic, socio-cultural attitudes of the villagers, the manner of development and use of technology and ultimately, the income and livelihood of its inhabitants (shamsadini, 2008: 44).

Rural communities has been faced with many problems in the fields of development So that the cost of making houses very low in the past while the architecture plan and materials were providing by villagers, the rural housings have met the needs of the villagers and their activities (Mosavi and Salehi, 2005: 28).

The rural environment has an integrated environment with an attractive architecture and is consistent with the environment. But today, some changes have been created in rural environments and housing, these changes are from villager's new constructions or rural upgrading and modernization. With these conditions, due to changes in the cost of materials and the need to cost a lot to build housing so, one of the alternative thinking is giving credit to rural communities by the Islamic Revolution Housing Foundation in the field of physical development and strengthening of housing and this work will be supervised by technical supervisors. The result is the construction of houses with high strength and resistant to natural disasters that it has provided the peace and tranquility of rural areas and has improved the quality of rural housing. The necessity of the plan of strengthening in Iran emanated from the fact that Villagers often live at dark home by insufficient and inadequate ventilation equipment and inappropriate health status of rural housing is a serious problem indeed (Motilangrodi, 2007: 100). In addition, resistless of rural housing to disasters and natural hazards such as earthquakes, floods, landslides, storms and so on are most important problems of rural housing. The use of less durable materials, particularly non-compliance

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with technical standards in housing construction has a major role in this regard (Rezavni, 2011: 164). Some factors such as, conductor plans, Personal capital, the physical fabric of the village, rural financial capability, incentives for staying in the village, the value of land, the distance of village from town are effective in physical development of villages. This research is aimed to assess and evaluate the impact of housing facilities as an intervening factor in the development of the physical environment of rural villages in the central part of Kashmar in Khorasan Razavi until the strengths and weaknesses of these plans will be recognized and its results may be used for future planning in rural areas of the country and its effectiveness may be increased.

### **The history of the research**

In a research entitled "the role of rural housing improvement funding on enabling and sustainability of the rural population in the rural city of Beihagh in the city of Sabzavar" Motilangrodi and Bakhshi (2009) have concluded that housing credits have been effective both in creating empowerment and satisfaction of rural housing and also in the survival of the population in rural areas.

In a research entitled "the role of housing credit in the changing patterns of the rural areas in the city of Bahmai" Anabestani et al (2011) have concluded that the most impact of credit on the changing patterns of housing in villages has been from housing Foundation of Islamic Revolution in the course of time of credits so that 26/4 percent of the effectiveness of credit facilities was related to this index and 18/3 percent was related to the index of the supervision of the construction.

Murphy and Scott (2013) in their article called " issues related to housing loans in economy crisis: Evidence from rural families in Ireland" have studied the manner of applying neoliberal ideas in ownership and development during the housing boom of Ireland and the results pointed out that rural households have suffered from immense hardship and pressure and as well as through rural housing, have shown the extent to which the actions and consequences of neoliberal policies in the field of housing loans in space are different in rural areas.

Aliyu et al (2014) in an article entitled "theoretical perspectives in the development of rural housing and the problems associated with housing developers in Nigeria" reviewed that man needs house to satisfy their personal needs such as privacy and personal satisfaction psychologically and house is a symbol that shows the situation of one person in the family or community socially and culturally and it also reflects the economic value of a society. Thus the need is felt to study in order to find a solution to the housing development of rural housing and living conditions of rural dwellers.

Yu Lihong and Dai Lin (2014) in a study entitled "Study of practical experience of rural land and right management of housing loans in China" have found that the government should support and guide the promotion of the establishment of rural land and financial institutions should also participate in a new trade actively as well as rural land circulation market should be set completely.

### **The study area**

Kashmar is one of the cities of Khorasan Razavi and it is located in 217 km of southeast of Mashhad with an area about 3390 square kilometers and geographically, it is located at latitude of 35 degree and 11 minutes of north and at longitude of 58 degree and 27 minutes of east and at altitude of 1215 meters above the sea level (Jaafari, 1995: 12).

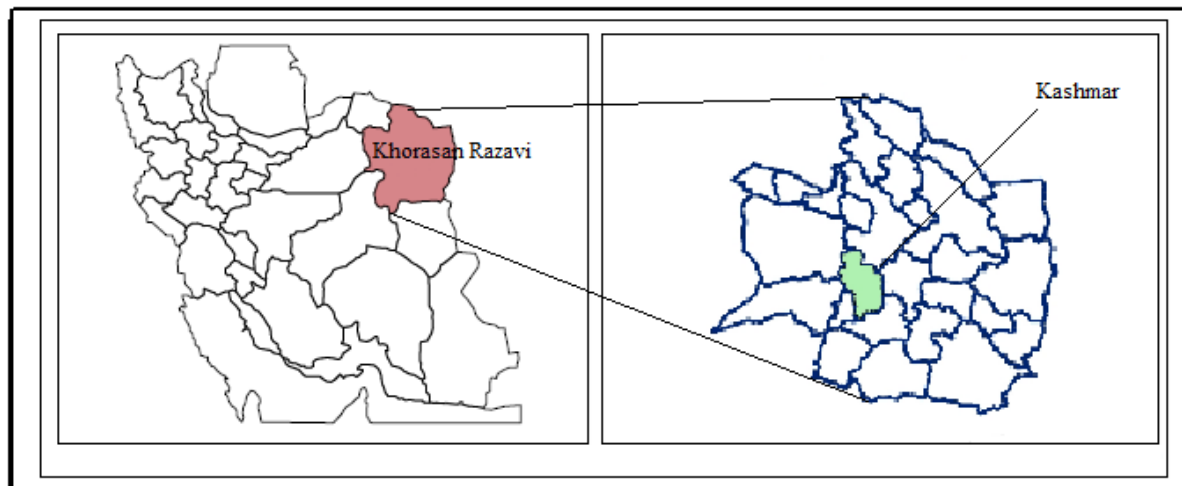


Figure (1): Location of the study area, Source: research results

The city of Kashmar has 483 villages that 420 villages have been vacated and it has 63 residential villages currently. In the central part of Kashmar, the rural district of Balla Valayat has 20 residential villages and the rural district of Paein Valayat has 14 residential villages. The place range of the study in this research is the villages of central part of Kashmar. According to the results of census of 2011, this section has 34 villages that 44 percent of it has been selected as the study villages, which are about 15 villages. For selecting the sample villages among 34 rural villages in the central part of Kashmar, First, the "villages that have a population of over 20 households, and secondly," the case had received a mortgage for housing improvements have been selected within time range of 6 courses from the ceding credit of rural housing between 2005-2013.

Table (1): The number of sample villages

Percent loans	The number of loans	specimen	Population	Family	Rural	Percent loans	The number of loans	specimen	Population	Family	Rural
36.29	188	17	1708	518	Zende Jan	42.09	426	39	3277	1012	Farotagha
45.90	202	19	1386	440	Mohammadiéh	26.46	339	31	4344	1281	Ghozhd
44.23	211	20	15.38	477	Sar Hozak	62.58	393	36	2182	628	Aref Abad
48.61	176	16	1189	362	Mmarr Abad	23.78	303	28	4206	1274	Fadafan
35.29	240	23	2274	680	Moqan	40.56	217	20	1735	535	Tarbaghan
38.03	275	25	2353	723	Farah Abad	24.65	195	18	2590	791	Rezgh Abad
34.89	223	21	2092	639	Kasrineh	31.22	227	21	2459	727	Farag
36.40	3769	348	34047	10352	Total	58.11	154	14	715	265	Nay

Source: research results

### The research method

The dominant research approach is analytic-descriptive approach. To collect the required data, two methods of documentary and survey have been used. In theoretical part of the research, the documentary method has been used that it will includes Study resources such as books and papers in Persian and Latin and Reports and projects in this field. In practical part, the case study has been considered and the scope of the study were closely observed and studied. Using Cochran formula to estimate sample size was 348 cases from the 3769 questionnaire files that it was used to collect data. For this purpose, the questionnaire was provided to villagers in the central part of Kashmar. Then to analyze the collected data using the Pearson correlation test, some software were used such as Spss and Excel.

## Introduction of Indices and variables

Table (2): Study research variables and its reliability coefficient

Alpha	Number of items	Indices	Variable type	Variables
0/985	9	1) the time of the receipt of funds from the Housing Foundation 2) Supervision on construction 3) How to guarantee loans 4) received Bank Interest 5) How to pay credits through installments	Independent	Housing credits
0/990	15	1) Passages network changes 2) Physical development of the village 3) The proportionality of the population and use 4) Changes in patterns of architecture 5) Changes in the type of building materials	Dependent	Pattern of physical development

Source: research results

10 variables and 24 items were evaluated for investigating the role of credit in the changing patterns of physical development in the rural settlements. All items were set according to Likert scale (very low, low, medium, high, and very high).

## Theory

### Housing

The problem is that today all countries are affected by some kind of appropriate accommodation to their circumstances. While in developed countries, housing, social welfare and future of housing development programs are focused on improving quality in our nation's housing as a basic need and supply it with food and clothing. In other words, the right to adequate housing and shelter for one of the most basic needs of every individual and family has to live with human dignity (UN Habitat, 2002) And this right is considered in the second, thirty and forty-third article of country's constitution and the state obligation to provide adequate housing for all segments of society, especially poor and rural groups (Constitution of Islamic Republic of Iran). On the other hand the families as the cornerstone of society and social institutions have made the most natural effects and they have formed one of the main premises of this institution in suitable housing (Majles Research Center, 2005: 1).

Humanities scholars are looking at housing with a special approach. So that the public housing in general concept and rural housing in particular, on the view of sociologists is as an entity shelter and stability and solidarity of the family, anthropological perspective, a culture from the perspective of planning as a "basic needs", and from an economic perspective as "a commodity to be delivered without a successor and a capital (Fazeli, 2007: 63). Thus, housing is as physical facilities in unit or an economic commodity that plays social role and function of the wealth by generated tool in the economic growth (Bourne, 1995: 14). In other words, in addition to providing housing, "shelter" in the form of savings is made. Thus, capital goods and housing is a social value, which decreases the stability of society and social damage (Dix, 1995: 1-10).

However, housing is considered as immovable property and commodity that is bound to take place and also is affected by their environment and geographical conditions, such as access (Majles Research Center, 2005: 3). In the second Habitat Summit in Istanbul, in definition of proper housing several cases such as access to appropriate and comfort space, adequate security, property security, stability and durability of structural system, lighting, ventilation and heating and basic infrastructure have been emphasized. From the viewpoint of the England Kent home group, adequate housing is a vital element for rural residents security against natural disasters and their underlying development with development and investment

quality in tangible and relevant to residents' needs while providing opportunities for employment and basic services, supports the growth of rural economy (ERHA, 2011:4-6).

Concept of House includes a space for life, economic activity and production functions, providing physical infrastructure such as water and sanitation and access to educational services and other essential services. That indicating the interaction of work and livelihoods, and lack of separation of subject and duration of activities in the rural life (Tavakoli and et al, 2008). The Rural Housing works in regard to social and economic conditions and changes in the family. So, today in most developing countries, researchers have concluded that the definition of rural housing is not confined to one residential unit, but is in the residential environment.

It can be pointed to the approach of granting credits as the most important implemented plans in the field of the improvement and renovation of housing in developing countries. In recent decades, the success of financial institutions to provide credit to the poor for empowerment in developing countries has led that scientist mention these successes as micro-credit revolution (sengupta, 2008: 120). Considering the importance of rural housing development and the willingness of villagers to build good resistance houses and on the other hand, the weakness of financial strength of the villagers to carry out preventive activities (Such as principled resistance housing), rural housing upgrading and retrofitting projects supported by the government has been begun since 2005. In this plan, the Foundation of housing plans to distribute provincial housing facilities with priority event-prone areas and the foundation has to identify qualified applicants and introduce them for receiving facilities and As well as supervision of construction through rural technical observers and experts of this foundation ( Bakhshi, 2009: 100).

Table (3): The amount of credits granted to each rural household to improvements

The amount of credit	stage	year
50 million rials	first	In 2005-2006
57 million rials	second	In 2006-2007
65 million rials	third	In 2007-2008
75 million rials	fourth	In 2008-2009
100 million rials	fifth	In 2009-2011
125 million rials	sixth	In 2011-2013

Reference: Islamic Revolution Housing Foundation, 2003

### Description of the research findings

The research aims to evaluate the hypothesis of the study and based on the sample of 348 persons who were determined based on a formula Cochran, in this research data were collected through questionnaires and fields data as follows:

Table (4): General characteristics of respondents

Percent	The number of respondents	Breakdown of variables	General variable
87.65	305	Male	Gender
12.35	43	Female	
17.24	60	20-30	Age
37.36	130	31-40	
32.47	113	41-50	
12.93	45	Over 50 years	
1.44	5	Single	Marital status
98.56	343	Married	
17.24	60	Less than 2	Number of family members
30.17	105	2 to 4	
37.93	132	4 to 6	

14.66	51	More than 6	Employment Status
25.86	90	Laborer	
11.49	40	Employee	
47.71	166	Farmer	
14.94	52	Other	
27.30	95	Below 400 thousand Tomans	The monthly fee
55.46	193	400 to 800 tomans	
17.24	60	800 tomans and more	
20.11	70	Illiterate	Educational status
3017	105	Less than high school diploma	
24.42	85	Diploma	
14.37	50	Associate Degree and Bachelor's Degree	
1.93	38	Bachelor's Degree or higher	The amount of agricultural land
22.13	77	Less than 4	
35.34	123	4 to 6	
27.59	96	More than 6	
14.94	52	No reply	
32.47	113	Clay raw or mud Skeleton	Previous housing construction materials
54.02	188	Brick structure with cement block	
13.51	47	Reinforced concrete structure	
34.19	119	Old	Type of Previous housing
47.19	167	New Build	
17.81	62	Between	
32.47	113	Less than 90 m	The former Housing Infrastructure
51.44	179	Between 90 and 120 meters	
16.09	56	More than 120 m	
34.77	121	Less than 3 rooms	Number of rooms in each residential unit in the previous housing
57.18	199	3 to 5	
8.04	28	More than 5 rooms	
97.99	341	1st floor	Number of floors in the residential units in the previous housing
2.01	7	2 floors	

Source: research results

### Relationship between credits and pattern of physical development in the villages

Using Pearson correlation test, the credit correlation and the change of the pattern of physical development throughout the rural areas of the borrower equal to 0/982 and it is at the confidence level 99 percent (Sig =0/000). In distribution of spatial pattern, the amount of correlation between the variable of housing credits with the pattern of physical development in the study region, the most significant level of credits correlation and physical development is in the village of Nay and is equal to 1 and the least significant level of credits correlation and physical development is in the village of Kasrineh and is equal to 0/65. Likewise the significant level of both villages is 0.000. Namely, the impact of housing credits on physical development in the village of Nay is more than Kasrineh and in terms of physical development; this village has a better situation than the village of Kasrineh. So this hypothesis will be confirmed that the credit has led to the physical development in the village of Nay and Kasrineh. In terms of correlation between the variable of housing credits with the pattern of physical development, other villages will be ranked in the latter places with a little difference in relation to the village of Nay.

Table (5): The relationship between credits and spatial distribution patterns and physical development

Significant level	Correlation coefficient	Rural	Significant level	Correlation coefficient	Rural
0.001	0.65	Kasrineh	0.000	0.91	Fadafan
0.000	0.77	Mohammadih	0.000	0.79	Tarbaghan

0.000	0.93	Zende Jan	0.000	0.94	Ghozhd
0.000	0.91	Sar Hozak	0.000	0.87	Farotagha
0.000	0.86	Mmarr Abad	0.000	0.80	Rezgh Abad
0.000	0.86	Moqan	0.000	0.94	Farah Abad
0.000	0.82	Aref Abad	0.000	0.66	Farag
0.000	0.982	Total	0.000	1	Nay

Source: research results

### Evaluation of the amount of credit effectiveness on the pattern change of physical development in villages

Stepwise regression model has been used for evaluating the effectiveness of rural housing credits on physical development indices. According to the determining coefficient of 0/518, it will be specified that linear regression variables independent from the dependent variable will justify about 52% of the total changes. In the ANOVA table, the sum of squares, degrees of freedom, of square, Fischer statistics and significance level of regression has been reported. The amount of P-Value or the significance level equals to 0/000 that is smaller than 0/05 therefore, the null hypothesis of the test basis on the lack of significance of regression model will be rejected with the confidence of 99%, so the regression model is significant statistically.

Table (6): The effectiveness of rural housing credits on indices of physical development

Result	Significant level	T-statistics	Standardized coefficient beta	Variable coefficient	Independent variables
The model is meaningful	0.000	16.475	-	4.083	Fixed amount
The model is meaningful	0.000	6.589	0.205	1.870	Passages network changes
The model is meaningful	0.000	3.291	0.116	0.307	Physical development of the village
The model is meaningful	0.000	4.740	0.335	0.797	The proportionality of the population and use
The model is meaningful	0.000	8.010	0.440	1.031	Changes in patterns of architecture
The model is not meaningful	0.394	-0.854	-0.184	-0.253	Changes in the type of building materials

Source: research results

In Table 6, for each of the model parameters, standard regression model parameters, statistics test and significant level of parameter estimates have been reported. According to the obtained results, it can be seen that the amounts of P-Value is more than 0/05 only for variable of changes in the types of materials, that means that the effect of changes in the type of materials is not significant in the model. Finally, it can be said that greatest impact of housing credit on the pattern of physical development which has had a great impact in rural areas is in the pattern of rural architecture with beta coefficient of 0/440 and the physical fabric of rural development with the index coefficient of 0/116 has had the least effect.

### Conclusion and suggestions

It was specified in this research that rural housing of central part of Kashmar are not in good condition physically. The Foundation of Islamic Revolution Housing of this city has done serious measures in rural areas and although most of the villages in this area have the potential to migrate but Upgrading and retrofitting housing schemes and plans have been successful and it have led the villages to keep their population. But in spite of all achieved actions, the rural housing is not resistant in the villages and they need to be upgraded and retrofitted.

In this regard, Issues related to the research hypothesis which qualitatively is examined in relation to the quantitative findings are as follows:

1. Based on research data, the average price of a square meter of housing in new housing construction compared to traditional housing has been doubled for reasons such as the cost of materials used in the housing, the rental of transport material from the cities to rural areas and skilled manpower needed to build these homes, attention of many villagers in the Housing Foundation and banks etc.
2. About the documents, all houses built in the framework of the modernization of rural housing have property deeds which it is generally considered as an important point in contrast to the traditional rural homes that are without property deed. The villagers will be able to use these documents for receiving various banking facilities and as well as proof of guarantee for various items. Document of residential units will identify the villagers and they will be committed to their housing and as a result they will not leave their houses easily.
3. The economic index of housing is a dimension of housing issue and it is the ratio of housing costs to household income. The cost of housing is always a certain proportion of household costs. A logical proportion between housing costs and the total cost of the family is essential. The high cost of housing, families have to reduce the other necessary costs such as food, clothing, etc. Reducing these costs is usually followed by undesirable consequences for rural families, such as lack of food, health, physical health, and others. The villagers will be faced with many problems to repay the loan installments due to traditional agriculture in rural and low income. On the season of the year when agricultural work is not possible, some of these people will go to surrounding towns in which they work to repay their installments. Some of them have had a piece of land to sell to repay the loan installments and many of them will sell their animals to repay their installments. Some of the villagers mention the rural housing loans as trap which they have been trapped in it that is mainly due to their low income and high cost of living.

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