

Factors Affecting the Efficiency and Effectiveness of Agricultural Financial Market: The Viewpoint of Finance & Credit Experts in Kohgiluyeh and Boyer-Ahamad Province, Iran

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ABSTRACT

Achieving economic development requires some infrastructure in social, cultural and economic arenas. Among this infrastructures in economic arena are powerful financial markets, and these financial markets require some effective financial organizations; agricultural financial credits are one of these organizations. The subject of financial credits is an important issue in agriculture which requires delicate, precise attention in its employment and distribution in order to help improve the economy and agricultural development, as well as the farmers' income and their life. The aim of this paper is studying the efficiency and effectiveness of agricultural facilities and the related factors from the viewpoint of finance & credit experts during the fiscal year 2009 in Kohgiluyeh & Boyer-Ahamad Province, Iran.

KEYWORDS: Agricultural financial credits, efficiency, effectiveness, job creation, production, agriculture bank.

INTRODUCTION

By definition, financial market is one in which financial assets are often distributed. The companies' shares and stocks are examples of such assets. From economic viewpoint, pricing, yielding of financial assets, providing cash and reduction of the exchange service fees are among the major roles and duties of finance markets. The finance market can be divided into two parts: money market and capital market. According to this classification, the money market includes short-term loans such as bank facilities, and the capital market includes bonds and shares. Considering the weakness of the capital market in the country, and not using the existing financial tools in the market to provide the financial means of agriculture sector, a major part of required financial resources for investments in this sector is provided outside the finance market and by the government; therefore, the finance market of agriculture has just been cash market without any capital market; in other words, the payment of credits and facilities is the only method of financial supply based on a market for rural and agricultural sector. In addition, the financial market can be classified as formal and informal. The part that acts according to laws, regulations and monetary policies of the country is the formal one, or including financial market, and the other part that acts outside the formal framework of laws and regulations are known as 'informal section' or 'non-organized'. At present, a vast part of the agricultural financial market of the country is supervised by the government, so that 76% of the supply of cash in this market is provided from the formal resources like Agriculture bank, Rural Cooperatives, and Trade Banks. Easy and fast access to financial resources can be regarded as the main cause of investment and development in agriculture.

Study has proved that in order to create efficiency in the agricultural finance markets the government has to advise appropriate policies and also take action in eliminating its inefficient interferences in this sector and consequently eliminating the financial dealerships (1).

Many people tend to believe that agricultural facilities comprise a major part of required foundations for expediting agricultural development, and consequently the economic development in the country. The performance of the agriculture bank implies the fact that this bank has had an effective role in strengthening the financial status of the farmers, and this bank, as the credit of the government, plays a sensitive role in the most important section of the country. Since it is possible to direct the process of decision-making in the private sector in line with the government plans and policies, therefore the agriculture bank will be as a tool to make essential investments in order to improve the country's agriculture (2).

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Many economists attribute the low level of efficiency in the agriculture of developing countries to low level of compatible technology and lack of sufficient funding in production; in other words, several factors have been blamed for the low level of productivity and farmers' incomes. One of the most serious ones is insufficient funding and allocation of credits, which is a hindrance on the way of development and acceptance of new technology by minor farmers and stops agriculture from a move toward modern methods of agriculture as advised by the development policy makers (3). Seasonal nature of the farming productions often creates a gap between the farmers' incomes and payments ; therefore, in order to make the current payments and invest on farming projects farmers will need to save the past incomes and also loan from finance & credit organizations. The possibility of saving the past incomes is very low since farmers do not earn much and therefore they are not able to make any investment relying on their income (4). It was generally accepted that the effects of finance markets on the promotion of agricultural growth has been positive. In other words, improvement of the financial structure in the country has a positive effect on improving the agriculture (5).

Achieving a high level of productivity in agriculture firstly depends on the existence of sufficient fund and also making optimum use of this fund. Therefore, the credits of agriculture bank are of high significance since on the one hand it contributes to the formation of capital, and on the other, it provides for the moving capital in this sector. This is so important to the extent that existence of an efficient system of agricultural credits will help the agriculture survive and improve in developing countries and increase the GNP (6). Agriculture plays a significant role in the economy of IRAN; in recent years, approximately 15% of the GNP has been gained by this sector; it is also contributing to 36% of job creation, 80% of food provision, one-third of non-oil exports, and 90% of the requirements in industry sector. Despite the dependence of agriculture to climate conditions, there is less fluctuation in this sector compared to other sectors of economy, has less dependence to oil revenues, and enjoys a relative self-sufficiency, as well. Among other advantages of this sector is that this sector has the lowest portion of input to output in economic sectors (7).

Agricultural credits are provided for the producers in two ways : state(formal) and non-state(informal). According to research, over three-fourth of the credits received by the farmers and the rural settlers has been provided by state foundations. In this regard, the Agriculture bank provides about 70% of the credits and facilities required by this sector. According to the results of the research proposals and the resources related to effectiveness of the credits on added value in agriculture , and the boom in the market of agricultural products, the positive effect of credits on added value in agriculture has been undisputable; in fact, 1% increase in the granted credits from Agriculture bank there will be at least 15% increase in "constant price" of the added value (8-9).

Agriculture bank is a major official agricultural credit foundation and is responsible for providing the financial means required by this sector, or the manifold objectives of increasing production, balance of incomes, facilitating the acceptance of new technology and compensating the unexpected damages, and the like. This bank grants 60 to 80 percent of the allocated budget to its sub sectors every year. The study of the results of granting the said credits is indicative of the fact that this is the most important factors in optimization of raising and distribution of credits. The aim of the present paper is to study the effective factors on efficiency and effectiveness of the agriculture finance market from the viewpoint of finance and credit experts in Kohgilouyeh and BoyerAhamd Province, Iran (10-13).

MATERIALS AND METHODS

This is a descriptive-analytical research that has been conducted fragmentally. The statistical subjects include the experts of credit and finance, Agriculture bank and Jihad Foundation staff. Sampling was done in several stages; the number of staff in Kohgilouyeh and BoyerAhmad was 300, but 200 of them were participated in the plan and were surveyed using the designed questionnaire.

With regard to the type of the study and the aim of the research, the flaw of sampling was 5%, and the maximum estimation flaw was 0/1% and $P=0.50$.

Efficiency is defined as ability to use the minimum resources in order to reach the organizational targets. The effectiveness of a plan or an activity is the level to which the activity reaches the objectives (12).

The questionnaire surveying the experts was designed using the views of common professors and experts of economy, agriculture, and management , and following two stages of pre-test its efficiency was approved; its stability was also studied with SPSS software as well as splitting method; it was concluded that with Cronbach,s Alpha it had acceptable stability. The questionnaires were distributed and, once filled, they were collected. The collected data was analyzed following some corrections and modifications using SPSS. To describe the data, the central indicators and dispersion , and to analyze the data, single-variant linear regression as well as multi-variant linear regression were used.

RESULTS AND DISCUSSION

About 200 experts in finance and credit from Agriculture bank and Jihad Foundation in the province were assessed and it was discovered that basically the educated people manage works far better and with higher efficiency; likewise based on the present study, higher education, update technology and younger age all have positive impacts on increasing the efficiency and productivity, as well as effectiveness of granted facilities. Distance from the city center, lack of access to relevant technology, and the amount of farmers' income will have a negative impact on efficiency and effectiveness of granted facilities. Also, the findings of the research imply that allocation of facilities in cattle raising-a subsection of agriculture-had far higher efficiency and effectiveness in the province which is due to the climate conditions. The granted credits in the agriculture in this province have been as follows: 286 million Rls. in 2005; 389 million Rls. in 2006; 259 million Rls.in 2007; 265 million Rls. in 2008 and 501 million Rls. in 2009.

Farming and cattle products were reported as:

672 T.T (2005); 754 T.T (2006); 673 T.T (2007); 509 T.T (2008) and 764 T.T (2009). (T.T= Thousand Tons).

The major cause of the fluctuations in the above mentioned figures are the severe droughts during 2007 and 2008, and undesirable climate. In all, the total trend in growth of agriculture was 9.2% in 2005, 4.7% in 2006, 6.2% in 2007, and finally in 2008 it reached its rock bottom of -10.3%.

Table 1: Capital and income in various sub-sectors of agriculture in the Province

Activity	Min.	Max.	Average	deviation	
Farming	Capital	50	100	34.2	61.6
	Income	2	40	4.8	8.3
Horticulture	Capital	5	500	39.7	78.9
	Income	0	30	4	6.6
Cattle raising	Capital	2	200	22.7	45.7
	Income	1	30	4.1	7.3
All sectors	Capital	1	150	32.4	35.8
	Income	5	10	4.3	7.3

Table 2: the level of granted facilities to farmers in different sectors of agriculture in the province

Activity	Min.	Max.	Average	Deviation
Farming	5	900	11.2	20.3
Horticulture	5	700	10.8	17.9
Cattle raising	5	200	3.4	5.6
Total	5	200	9.1	15.3

Table 3: statistical performance of granted facilities and farm & cattle products in the country and province; 2005-2009

	2005	2006	2007	2008	2009
Granted facilities to agriculture in the country (billion Rls.)	49894	52921	55414	74494	67818
Granted facilities to agriculture in The province (billion Rls.)	286	389	259	265	501
Total statistics of productions in horticulture, crops and cattle of the country (1000 tons)	95400	97571	101717	80367	93148
Total statistics of productions in horticulture, crops and cattle of the province (1000 tons)	672	754	763	509	764
Total performance of the growth in agriculture	9.2	4.7	6.2	-10.3
The total added value in agriculture	59602	62386	66335	69502

The model of effective factors on benefit, production raise, and job creation from the granted facilities is presented as follows:

(Note: the variants which had no meaningful effect on the model were removed using the step-by-step method).

1. The linear correlation concerning the effective factors on the benefits of granted facilities considering the views of credit & finance experts.

Education + 1.457 (Technology) -0.193* (age)+0.137* (total of facilities)-0.232 (distance from the center of province)

Benefit= 54.768+1.925

R= .53

R²= .281

R² adjusted= .236

2. The linear correlation Model concerning the effective factors on increasing the granted bank facilities according to the finance and credit experts.

$$*(education)+ 1.853 (technology)* - (age) + 0.125* (total facilities) - 0.182 (distance from center)$$

$$\text{Increase in production} = 47.982 + 2.351$$

$$R = .474$$

$$R^2 = .225$$

$$R^2 \text{ adjusted} = .220$$

3. The linear correlation model concerning the effective factors on job creation of the granted facilities according to the experts in finance and credit.

$$28.71 + 6.123 *(education)+ 1.104 (technology)* - 0.064 (age) - 0.321* (distance from the center) - 0.232*(income) = \text{job creation}$$

$$R = .562$$

$$R^2 = .316$$

$$R^2 \text{ adjusted} = .229$$

Conclusions

Education in agriculture, related technology, young age and the education of most farmers had a positive and meaningful relation with effectiveness and efficiency of acquired facilities in profit gaining, increase of production, and job creation; basically, the educated do things with higher efficiency, and the level of education, knowledge of current technology and freshness of the executives in this sector will have a positive influence on rising the efficiency and effectiveness of allocated facilities and these effects are more evident in production creation. Education in agriculture, related technology, young age and the education of most farmers had a positive and meaningful relation with effectiveness and efficiency of acquired facilities in profit gaining, increase of production, and job creation.

The above results are compatible with the study (12-8, 10) and imply the fact that attention to education short-term trainings, young age especially in the sub sector of cattle raising will lead to increase in efficiency and effectiveness.

Distance from the center of province had a negative meaningful relation with profit, job creation, and increase of productivity, which implies the effect of localization of facilities in cities closer province centers; these results are also compatible with similar studies (13-11, 6). About 84% of the farmers had an annual income of less than 100 million Rls. and only 16% had an income more than the mentioned figure. Therefore the incomes have been so low in the province under study and the people are basically living in poverty (1). Also, more than 60% of the farmers used the 1-year facilities, which was due to farming situations as well as the situation of planting and harvesting. The droughts of 2006-2009 also had a negative impact the growth of production in agriculture as well as the amounts of granted facilities. Among other factors contributing to the reduction in efficiency and effectiveness of the facilities in this sector according to the results collected by the experts we can mention insufficiency of the facilities granted regarding the demands of the day and ever-increasing expenses in this sectors, inappropriate deadlines to pay off the loans, strict conditions to grant loans to the young & educated, lack of access to relevant technology in the province, the weather conditions, lack of an agricultural based financial market, and prevalence of a dealership system and distribution of lands to smaller lots, no efficient implementation of current agricultural methods and eventually the dominating poverty on the life of farmers.

Recommendations

Considering the findings of the study it is recommended, in order to increase the efficiency and effectiveness of financial credits in agriculture sector, to have relevant education with agriculture, and generally to have higher education, in the first place, and access to current technology and employment of young workforce in the second place. In order to make sure about use of credits in the designated field, continuous supervision and inspection over credit plans during the period of activities and spending the credit along with the introduction of technical knowledge, and training of technology relevant to the plans should be regarded as an important duty of the bank experts.

It is recommended that after granting the loan, the installments be arranged according to the progress of the projects and under an expert's supervision; also it would be a good idea if the bank and clients work on projects in collaboration, and also arrange for the facilities and the venue of the project to be insured at a reasonable price. Other ways that can help improve the whole situation for both farmers and the agriculture at large are expediting the time of granting the facilities, extending the time of pay backs, prioritizing the payment of facilities once the plan is economically justified, government's guarantee the purchase of farm and cattle products and eventually preventing black markets.

There were some obstacles providing the questionnaires for the experts in finance & credit, however, we tackled the problem benefitting the cooperation of some experienced and educated professionals

Despite the fact that answering the questions that clarified the level of effective factors on profiting, increase in production and job creation from an expert view point seemed very difficult at the start.

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