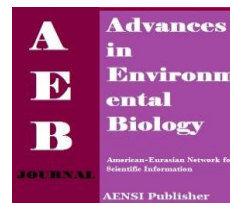




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### Determining the Factors Influencing the Effectiveness of the Capital Credits Received from the Agricultural Bank by Wheat Farmers of Kohgiluyeh-and-Boyer-Ahmad Province, Iran

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#### ABSTRACT

The purpose of research was identifying effective factors in effectiveness of capital credits and refunding barriers in Agricultural Bank. This descriptive-correlative research was conducted using survey method. Three hundred seventy wheat farmers were selected from statistical population of this research using stratified random sampling. The research's major tool was a questionnaire whose validity was tested by agricultural bank workers and faculty members of Islamic Azad University. Its reliability was also tested by Cronbach's coefficient alpha. The research results revealed a positive and significant relationship between social participation, social status, educational level of wheat farmers, degrees of supervision of bank experts, income from agricultural activities, amounts of credits received by wheat farmers, and effectiveness of capital credits. The results also showed a negative and significant relationship between variables of age of wheat farmer and wheat farmer experience and effectiveness of capital credits. Regression results indicated that the variables: "social participation, social status, educational level of wheat farmers, degrees of supervision of bank experts, income from agricultural activities" explained 65.6 of the changes of research's dependent variable.

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#### INTRODUCTION

Many economists believe that a progressive and powerful agriculture sector is one of the requirements of the economic development and that development of the agriculture sector is the prerequisite of a country's economic development in all circumstances. They believe that the other sectors will not flourish unless the development obstacles of this sector are overcome [7]. However, it is impossible to achieve economic development without capital. Capital plays a very important role since it can be converted into other factors influencing the production process. In addition to global challenges, the sustainable agricultural development of our country deals with many other challenges such as lack of investment in this sector [6].

Expert reviews reveal that currently, not only less than half of the potential is exploited in the agriculture sector but also it is not utilized in a completely scientific manner. Low levels of investment in this sector during the past years were the most important factor leading to this situation. An obvious example is the remarkably low share of the agriculture sector in total economic investment compared to its share in gross domestic product [2]. According to many researchers, bank credits, increasing their amount and easy access to them are among factors influencing the development of the agriculture sector [3]. Credits are necessary for development and they provide the capital requirements of the farmers and entrepreneurs for new investments or utilizing novel technologies. Agricultural credit is a type of directed credit that is granted to people for expanding agricultural products [10]. Agricultural credits are granted for farmers in two types, operating and investment credits. Operating loans are used by the borrowers to cover a portion of the required liquidity and working capital and their repayment period is as long as a production cycle (twelve months at most). Investment loans, on the other hand, are generally granted to increase the production capacity. They include more credits and a longer repayment period [23].

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Agricultural bank states that the purpose of providing investment and operating credits is to create or increase new capacities and to maintain the existing activities and capacities in the projects concerning the various subsections of agriculture, respectively [1].

According to the report of Central Bank in August 2013, the performance of agricultural bank in different years reveals that there was a high demand for working capital credits. In addition, the amount of granted working capital credits was more than the amount of granted investment credits in most of the agricultural subdivisions. Comparing the statistics of both institutions, these questions come to mind "Have the granted capital credits by agricultural bank had the desired effectiveness?" and "Which factors influence the effectiveness of these credits?" Evaluating the aforementioned programs before their further expansion can help with detecting the problems, solving them and improving the performance.

One of the most important stages of planning is evaluating the effectiveness of the projects. This process facilitates optimizing the decisions and planning realistic and feasible projects in the end. Effectiveness evaluation can be considered as an important factor in rectifying the weak points of development plans and increasing supervision [8]. The most important purpose of effectiveness evaluation is determining the impact of executing financing plans at different levels in order to specify the degree to which the plans are successful in fulfilling their goals. In addition, the aforementioned studies make it possible to rectify and improve the performance of the plans [5].

Many studies are conducted on effectiveness of the agricultural credits inside and outside of Iran;

For example, by studying the productive effects of the credits allocated to agriculture sector, Zare [24] demonstrated that quick response to the farmer's request, i.e. minimizing the interval between requesting and granting the credit, is one of the important factors in proper credit absorption and utilization for production and finally, its effectiveness.

Saadi and Arabmazar [19], evaluated Zeynab Kobra program whose purpose is providing credits for rural female head of households. The research results revealed that educating women, supervising facility usage, the education level of female head of households and their age had a significant effect on the project success.

Talebi and Najafiasl [21], conducted a research on the effect of the microcredits of Agricultural bank on economic empowerment of the active women in the livestock sector of the villages covered by Hazrat Zeinab program in Buin-Zahra. The following items were identified as the factors influencing the effectiveness of the credits of this program: facility rates, education and awareness, age, education level, economic status and credits such as land, livestock, stable, household employee count and financial debt rate.

In a comparative analysis of farmer behavior regarding the expenditure of agricultural bank credits, Varmarzyari *et al.*[23] demonstrated that the behavior of the farmers in the two groups being compared was different in terms of the following variables: type of the agriculture loan, agricultural insurance usage, amount of supervision after loan grant, loan amount and education level.

Shahbazzadeh *et al.*[20], studied the effect of credits on the development of the quick-impact firms in the livestock industry of Babol township. The research results revealed that although these credits had a positive impact on employment and resulted in new investment in this sector, the impact did not last in long term and the investment and employment decreased considerably in these firms during this period.

Comparing the effectiveness of microcredits in the rural communities of Azadshahr, Nazari and Adeli, demonstrated that the credits were more effective among the rich than the poor in various aspects (employment, loan to total investment ratio and income increase) because they had better income and the average loan granted to them was higher.

Reed and Befus [18] studied the microcredit programs in several countries such as Indonesia (Rakyat Bank) and Honduras. The results revealed that the microcredit programs that combined lending with education were more effective in employment.

The results of Folt's research [9] indicated that the size of the operational land had an impact on the effectiveness of the microcredits. The farmers that owned big lands used microcredits as transfer incomes in off-farm investment. Credits received by small farmers were more effective.

The results of Mohieldin and Wright's work [12] in Egypt revealed that the credits provided by formal sources were more effective than the informal ones.

Khandkar and Farquee [10] studied agricultural credits in Pakistan and concluded that short-term credits were less effective than the long-term ones.

Pitamber [17] studied the factors influencing the effectiveness of microcredits in decreasing poverty in Ethiopia and Malawi. Result analysis revealed that the most important factors influencing the effectiveness of microcredits were the size of the credit granted to the borrower, credit utilization strategy and management, the interest rate on the loan and the amount of the savings of the borrower.

On the subject of granting agricultural loans to the farmers of Nigeria's Niger Delta, Okerenta and Orebiyi [15] stated that the following factors were the most important ones influencing the effective management of agricultural credits by the lending organizations: investment profitability, the amount of assets owned by the borrowing farmers, the interest rate on the loan, loan availability, transaction costs and risk level of the loan.

Ansari *et al.*[4], studied the factors influencing the efficiency and effectiveness of agricultural credits from the viewpoint of farmers and experts. They revealed that there was a positive and significant relationship between agricultural training, facility to income ratio, young age, higher education and the efficiency and effectiveness of the agricultural credits.

According to the aforementioned discussions, it is clear that due to low income and high risk and production costs in agriculture sector, one of the prerequisites of developing the activities in his sector is to provide the farmers with credits and ensure their effectiveness in production. Therefore, the main purpose of this research is to study the factors influencing the effectiveness of the working capital credits received from the agricultural bank by the wheat farmers of Kohgiluyeh-and-Boyer-Ahmad with a focus on determining the effectiveness rate the received working capital credits.

## MATERIALS AND METHODS

The research method was descriptive and correlation. Kohgiluyeh-and-Boyer-Ahmad was the research area and the statistical population contained all of the wheat farmers in this province who received the capital credit of agricultural bank at least once during 2011 and 2012. There were 6168 qualified wheat farmers. Applying the Krejcie & Morgan table, the sample size was determined as 370 based on the statistical population size. Using the stratified random sampling method, the samples were selected among the agricultural bank in Kohgiluyeh-and-Boyer-Ahmad province.

The research's major tool was a questionnaire whose validity was tested by agricultural bank workers and faculty members of Islamic Azad University. Its reliability was also tested by Cronbach's coefficient alpha. According to the results, the questionnaire had a reliability of 0.78 in average, which is acceptable. The effectiveness of the working capital credits received from the agricultural bank by the wheat farmers of Kohgiluyeh-and-Boyer-Ahmad was considered as the dependent variable.

The research studied the effect of the following independent variables on the dependent variable: personal attributes of the wheat farmers, professional attributes of the wheat farmers, economic attributes of the wheat farmers, social attributes of the wheat farmers and supervision by the officials of the agricultural bank on all the stages of loan grant and expenditure. The data processing and calculation were performed using SPSS19 software application.

### Results:

#### *Effectiveness Results of the Capital Credits:*

In order to evaluate the effectiveness of working capital credits in the population under study, the following four different aspects were considered for effectiveness, effectiveness of working capital credits in production, employment, income and improving the life and welfare of the wheat farmers.

After evaluating the effectiveness of the credits in each aspect, the effectiveness in production, employment, income and welfare were studied together to evaluate the effectiveness of the credits among the population under study. Table (1) presents the effectiveness of working capital credits among the statistical population under study.

**Table 1:** The effectiveness of working capital credits among the statistical population under study.

Effectiveness of Working Capital Credits	Absolute frequency	percent	Cumulative percentage
very low	21	5.5	5.5
low	144	38.8	44.4
average	119	32	76.3
high	55	15.2	91.5
very high	31	8.5	100
TOTAL	370	100	-

Among the statistical population, the effectiveness of the working capital credit received by 21 wheat farmers was very low. In addition, 38.8% of the samples (144 wheat farmers), 32% of the samples (119 wheat farmers), 15.2% of the samples (55 wheat farmers) and 8.5% of the samples (31 wheat farmers) were categorized in the low, average, high and very high effectiveness groups, respectively.

### *Inferential Findings:*

Spearman test was used to study the correlation between the dependent variable "effectiveness of capital credits" and the independent variables. It revealed that there is a positive and significant relationship between the dependent variable and the following independent variables: social participation, social status, education level of the wheat farmers, the amount of supervision by the bank officials, the yield from agricultural activities and the amount of facility received by the wheat farmers. There is a negative and significant relationship between the dependent variable and the age and experience of the wheat farmers.

**Table 2:** Spearman Coefficient Correlation between effectiveness of capital credits and independent variables.

Variables	r	Sig
Variable		
Age	-0.296**	0.000
Education Level	0.119*	0.022
Household Size	0.099	0.057
The Area under Cultivation	0.046	0.374
The Amount of Main Product Per Hectare	0.018	0.734
Agricultural Experience	-0.269	0.000
Social participation	0.134**	0.01
Social Status	0.345**	0.000
Financial Debt Rate	-0.004	0.378
Salary from Agriculture	0.239**	0.000
Facility Rate	0.106*	0.041
Savings Rate of the Wheat Farmers	0.036	0.492
Repayment Period	0.082	0.113
Supervision by the Bank Officials	0.32**	0.000

Source: Research Findings \*\* : Significance Level : 0.01 \* : Significance Level : 0.05

### The Results of Regression Analysis:

The following regression equation was obtained using multivariate stepwise regression analysis test:

$$\hat{y} = 1.782 + 0.96 x_1 - 0.004 x_2 + 0.1 x_3 + 0.162 x_4 + 0.314 x_5$$

**Table 3:** The Regression Results between Effectiveness of Working Capital Credits and Independent Variables.

Steps	Independent variables	B	SE B	Beta	t	sig
Step 1	Social Status	0.314	0.049	0.301	7.408	0.000
Step 2	Supervision by the Bank Officials	0.162	0.048	0.164	3.394	0.001
Step 3	Age	-0.004	0.001	-0.172	-3.293	0.001
Step 4	Salary from Agriculture	0.1	0.32	0.135	2.7	0.007
Step 5	Social participation	0.96	0.046	0.106	2.107	0.036
-	intercept	1.782	0.241		6.404	0.000

sigif F = 0.000 F = 52.97 R<sup>2</sup> Adj= 0.644 R<sup>2</sup> = 0.656 R = 0.809

### Source: Research Findings:

The variables social participation community involvement (x1), age (x2), salary from agriculture (x3), supervision by the Agricultural bank officials (x4) and social status (x5) were the main independent variables influencing the dependent variable. Together, they determined 6.65% of the dependent variable variations.

### Discussion:

In this section, the results of this this research is discussed and compared with the results of other studies.

There is a positive and significant relationship between social participation of the wheat farmers and the effectiveness of capital credits, which is supported with the findings of Mohammaghoolinia [11].

There is a positive and significant relationship between wheat farmers' salary from agriculture and the effectiveness of working capital credits, which is supported with the findings of the works of Negarjan and Myer [13], Mohieldin and Wright [12], Saadi and Arabmazar [19], Nazari and Adeli [14].

There is a positive and significant relationship between the amount of facility received by the wheat farmers and the effectiveness of working capital credits, which is in line with the findings of Oakrenta and Orebiyi [15], Oluwasolaand and Alimi [16].

There is a positive and significant relationship between the amount of supervision by the Agricultural bank officials and the effectiveness of working capital credits which is in line with the findings of Saadi and Arabmazar [19], Varmarziari *et al.* [23].

### Recommendation:

Since there is a positive and significant relationship between social participation and the effectiveness of capital credits, providing information and training programs for people along with institutionalizing cooperation culture among them can increase the effectiveness of bank credits.

Since there is a positive and significant relationship between the amount of credits received by the wheat farmers and the effectiveness of capital credits, it is recommended to increase the amount of the credits granted to the wheat farmers so that their concerns regarding the costs of agricultural activities are alleviated and they remain loyal to the agricultural bank.

Since there is a positive and significant relationship between the amount of supervision by the agricultural bank and the effectiveness of working capital credits, it is recommended to use more advanced mechanized monitoring systems compared to the current ones for cost estimation and supervising facility expenditure.

Moreover, it is recommended to take economic conditions of the area into consideration while applying economic analyses for cost estimation.

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