

## Use of Credit for Poverty Reduction by Small Farmers

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**Abstract:** The agricultural economy of Pakistan grew at a rate of 4.5 percent annually during the last one decade. There were various factors responsible for this low growth rate including agricultural credit. It is imperative that credit and services should be provided to poor farmers so that they can emerge out of their poverty trap through financially viable and productive activities. This paper used econometric model to evaluate the effectiveness of credit disbursement in income generation activities of poor farmers. For the purpose of collecting information from farmers, three villages of tehsil Samundri, district Faisalabad were randomly selected. From each village then twenty respondents were selected randomly, making the total sample of sixty households. The estimated equation showed that there was a positive and significant relationship between the amount of credit and the total income. It was also observed that the major constraints faced by farmers in getting agriculture credit were lack of guidance, difficulty in the preparation of passbook by the revenue department, high interest rate and bribery.

**Key Words:** Poverty Reduction, Credit, Constraint

### Introduction

Over the last one decade, agriculture in Pakistan grew at a rate of 4.5 percent per annum. This low growth rate is attributed to bad weather conditions and pest attacks on crops. Agriculture has also been suffering from various other problems, such as traditional methods of farming, shortage of key inputs (surface irrigation water, credit, fertilizer, improved seeds, and insecticides) at crucial times, Adulteration of pesticides and fertilizers etc. are the other factors leading to low agricultural productivity. All these factors in turn stem from lack of finance and technical know how. In Pakistan about 81 percent farmers being small (Govt. of Pakistan, 1994) are not in a position to remove all these constraints due to the lack of funds at their disposal.

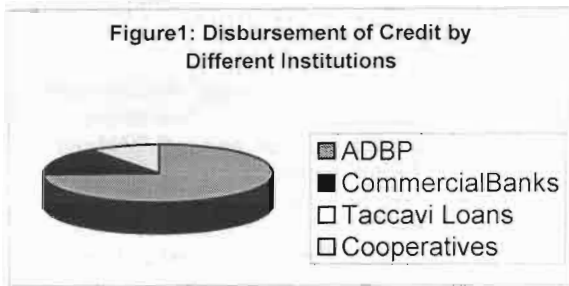
For increasing farm production and uplifting the non-possessed, it is important to promote economic opportunities for the impoverished, especially those living in the rural areas. It is imperative that credit and services be provided to them so that they can emerge out of their poverty trap through financially viable and productive activities. Both early and recent macro finance theories have reached on a common conclusion that finance influences not only prices but also employment and output growth. This would largely result from growth in investment including working capital and financial deepening. These theories, therefore, emphasis the development of institutional finance, although they differ in their advocacy of polices (Desai and Mellor, 1993). Institutional credit for agriculture would also facilitate growth in employment and output. This would, however, require rapid and broad-based land and labor augmenting technological change in agriculture. This is because under such conditions, institutional credit would have more favorable impact on employment and output growth (Malik *et al.*, 1991).

The transformation from conventional to modern day farming methods demands a change in agronomic practices to enhance productivity per unit area of cultivation. This led to cash based transactions for the purchase of quality seeds, chemical fertilizers, pesticides mechanical equipments and tube well water to supplement the irrigation requirements. About 81 percent of the farmers own land below 12.5 acres and operating on approximately 39 percent of the total cultivable land in the country (Muktadir, 1999). These small farmers, whose farm incomes are small and family sizes are relatively large, are generally constrained for want of funds to meet their farm input requirements. To Improve productivity and income of these tillers of the soil, who constitute more than three fourth of the farming community, appropriate measures should be taken on priority basis. Credit is also needed by the medium and large farmers in order to increase their productivity and for developmental purposes. The increasing flow of institutional agricultural credit under given conditions might increase intensive use of modern productive technology.

Credit is an important instrument of acquiring command over the use of working capital, fixed capital and consumption goods. Credit is a key element in modernization of agriculture. Not only it removes financial constraints but also accelerates the pace of adoption of improved technologies. Use of capital and adoption of modern techniques for production, which have become major sources of growth of agricultural output, necessitate access to credit markets for financing agriculture. Financing and servicing of small farmers has become the need of the hour because living conditions of rural masses urgently demand it. Most people are interested in finding ways of improving their lives, and credit can give them opportunities to earn more money and improve their standard of livings (Oludium and Fabiyi, 1983). Therefore, there must be

credit agencies to help them in undertaking improved farm practices. In Pakistan credit disbursing agencies such as Agricultural Development Bank of Pakistan, Commercial Banks and Federal Bank for Co-operatives have increased loaning facilities according to the instructions of the government. The small farmers, with a limited ability to finance investment, are the logical target group for loans advanced by the credit institutions. The credit disbursements by various institutions during the last fifteen years are given in Table 1 and also shown in Fig. 1. The main objectives of the present study were to evaluate the credit disbursement to small farmers by Agricultural Development Bank of Pakistan, to quantify the impact of credit and other inputs on income and to identify the constraints of credit flow to the small farmers.

The paper is divided into four sections. Section II contains a discussion on methodology followed by results and discussion in Section III. The conclusions are drawn in the final part of the paper.



**Materials and Methods**

**Data Source:** The present study evaluated the effectiveness of credit disbursement by Agricultural Development Bank of Pakistan in tehsil Samundri of district Faisalabad and the role of credit in income generation activities of poor farmers. For the collection of data, stratified random sampling technique was adopted to select the respondents. For the purpose of getting information from farmers, three villages of tehsil Samundri were randomly selected. From each village then twenty respondents were selected randomly, making a total to sixty respondents. The selected respondents were divided into small, medium and large farmers on the basis of their land holdings.

**Specification of the Model:** To assess the impact of credit on agricultural production and ultimately on income, a linear multiple regression was applied. For the specification of the model, the present study followed the earlier work done by Haye (1990), Nawaz (1991), Ikram (1994) and Sheikh (2001).

The functional form of the model is as under:

$$Y = f(C, F, W, P, L)$$

Or

$$Y_i = \beta_0 + \sum_{i=1}^n (\beta_i x_i) + \mu_i$$

$$Y_i = + \beta_1 C + \beta_2 F + \beta_3 W + \beta_4 P + \beta_5 L + \mu_i$$

Where:

- Y = Farm income (Rs.)
- C = Credit per acre (Rs.)
- F = Fertilizer cost per acre (Rs.)
- W = Irrigation cost (Canal+Tube well) per acre (Rs.)
- P = Ploughing cost per acre (Rs.)
- L = Hired labour cost per acre (Rs.)
- $\beta_0$  = Constant term
- $\beta_i$  = Estimated coefficients
- $\mu_i$  = Random error term

Various functional forms were tried to get the results but the above-mentioned model yielded the most desirable results. Equation was estimated by using the Ordinary Least Square Method (OLS) by using the SPSS computer package.

**Results and Discussion**

**Factors Affecting the Income:** The estimated equation showed that there was a positive relationship between the amount of credit per acre and the total income. The coefficient had positive sign and was significant at the 10 percent level with a value of 0.5894. The result shows that with one unit increase in credit, the income would increase by 0.59 units. The coefficient of labor had positive sign with was significant at 10 percent level of significance. The coefficient of fertilizer was also positive sign with a value of 0.5568 and was significant at 5 percent significance level. The variable for ploughing cost had positive sign and was significant at 1 percent significance level. The variable for total irrigation cost was positive but non-significant; this could be due to bad quality of underground water in the area. The adjusted R<sup>2</sup> for the equation indicated that 88 percent variation in the farm income is being explained by the variables included in the model. The value of F-Ratio was 92.64 and was significant at 1 percent level. This shows that the overall regression equation was highly significant. The results are shown in Table 2.

**Institutional Constraints of Lending to Poor Farmers:**

The major constraints faced by the poor farmers in availing institutional credit are shown in descending order in Table 3. It was found that proper guidance was a major constraint faced by the loanee farmers as 85 percent of the sample farmers had difficulty in having the proper guidance. The results also show that 83.5 percent of sample farmers were of the view that they had difficulty in the preparation of passbook by the Revenue Department. The supervised credit is a package of three things i.e. credit, supplies (input and output services) and proper guidance. If any of these three things is missing, the program will be of little success.

The majority of farmers complained about the charging of high interest rate by the bank. 56.6 percent respondents faced problem of bribery by the bank officials and revenue department. Lack of information was also a constraint as 50 percent of the farmers were of the view of that there was lack of publicity regarding the loans. High transaction cost of credit was reported by 37.5 percent of farmers. Insufficient amount of loan, delay in disbursement and indifferent attitude of bank officials were reported by 31, 25 and 19.5 percent of farmers respectively.

Table 1: Supply of Agricultural Credit by Different Institutions, 1985-2001 (Rs. Millions)

Year	ADBP	Commercial Banks	Taccavi Loans	Cooperatives	Total
1985-86	5217.11	5321.86	4.62	1975.23	12518.82
1986-87	5939.83	7305.58	13.30	2376.83	15635.54
1987-88	7598.48	5171.45	9.14	2864.42	15643.29
1988-89	8526.76	3051.95	24.93	2559.65	13463.13
1989-90	9271.44	3629.58	55.58	506.53	14968.46
1990-91	8218.40	3861.80	56.30	2831.96	14125.04
1991-92	6917.28	4172.20	56.30	2279.26	15825.20
1992-93	8533.52	4519.08	50.80	2721.81	15413.32
1993-94	8877.90	4052.10	50.80	2432.52	15413.32
1994-95	14399.61	4018.10	-	3553.34	21971.05
1995-96	10260.50	5031.80	-	5923.16	21215.46
1996-97	11687.1	4410.7	-	4919.8	21017.6
1997-98	223630.0	5653.2	-	4722.9	32739.1
1998-99	30176.0	7236.0	-	5440.0	2852.0
1999-2000	24423.9	9813.5	-	5951.2	40188.6
2000-2001	27210.2	13001.8	-	4369.2	44981.2
2001-2002 (July-March)	20161.7	11729.1	-	708.8	32599.6

Source: Government of Pakistan, 1985-2002.

Table 2: Results of Estimated Model

Independent Variables	Coefficient	St. error	t-value	Significance level
Credit	0.5894*	0.3437	1.714	0.0920
Labour	3.4160*	1.8554	1.8411	0.0711
Fertilizer	0.5568**	0.2527	2.2032	0.0318
Ploughing	15.9127***	3.9065	4.0733	0.0002
Irrigations	0.2225	1.1145	0.1996	0.8424
Adjusted R <sup>2</sup>	0.88			
F-Ratio	92.64*			

\*\*\* Significant at 99 percent confidence level,

\*\* Significant at 95 percent confidence level.

\* Significant at 90 percent confidence level.

Table 3: Major Constraints Faced by Farmers

S. No.	Nature of Constraints	Farmers Reporting (%)
1	Lack of Proper Guidance	85.0
2	Difficulty of Preparation of Pass Book by Revenue Department	83.5
3	High Interest Rate	65.0
4	Bribery	56.6
5	Lack of Publicity	50.0
6	High Transaction Cost of Credit	37.5
7	Less Loan than Needed	31.0
8	Insufficient Term-wise Loans	25.0
9	Delay in Disbursement	25.0
10	Indifferent Attitude of Bank Officials	19.5

## Conclusions

Credit is the key element in the modernizations of agriculture. Not only it can remove the financial constraints, but it also accelerates pace of adoption of improved technologies. The results of econometric model shows that credit contributed significantly in reducing the poverty. The main findings of the study were:

- The signs of all parameters estimated in the empirical model were consistent with expectations. Most of the parameter estimates obtained were

significant at the 5 or 10 percent level of significance. The coefficient of determination (R<sup>2</sup>) was also quite high (0.88).

- Major constraints faced by loanee farmers in availing agriculture credit were lack of guidance, difficulty in the preparation of passbook by the revenue department, high interest rate and bribery

## Policy Implications

- There is a need for publishing salient features of credit facilities for various purposes through circulating leaflets and programs on radio and television.

- The loaning for small farmers and landless laborers still needs a realistic policy to be evolved.
- Loaning procedures need to be simplified for the convenience of farmers and for better delivery of credit.
- The right amount of credit especially for production purposes should be disbursed to save the poor farmers from the exploitation of non-institutional credit sources.
- Credit packages for non-conventional crops should be designed according to the local agro-climatic conditions and should be communicated to the prospective borrowers.
- Rate of interest should be reasonable and simple instead of compound on all types of loans.
- Mobile credit officers should be an advisor and supervisor for farmers. They must not exploit the poor farmers.
- Supervised Agricultural Credit Program still needs to be introduced in its true spirit. The advancement of timely loans equipped with supply of development ingredients and impartation of technical know-how which are prerequisites of a supervised credit program need to be implemented.
- Banking policies for agricultural credit are still business oriented rather than directed towards development. So it is imperative on the part of such institutions to chalk out policies and program aimed at larger national interest.

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