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THE ROLE OF FORMAL AND INFORMAL CREDIT IN AGRICULTURE SECTOR: A CASE STUDY OF DISTRICT FAISALABAD, PAKISTAN

Khadija Akram ^a, Muhammad Amjed Iqbal ^{a,*}, Muhammad Munawar Hayat ^b

^a Institute of Agricultural and Resource Economics, University of Agriculture Faisalabad, Pakistan

^b Department of Economics, University of Lahore, Sargodha Campus, Sargodha, Pakistan

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ABSTRACT

The study aims to examine the role of formal and informal credit in the agriculture sector. The agriculture sector is considered the backbone of the economy of Pakistan. Credit is used as the most important source to enhance the productivity of the agriculture sector. Primary data were collected after choosing a sample of respondents of formal and informal credit users from district Faisalabad. It was observed from the literature that the disbursement of credit to farmers has a more important and effective role in agricultural output. So to check this impact the study in hand was carried out. The study also includes an exploration of the role of formal and informal credit on the productivity and profitability of farmers. The data were collected from 100 formal credit borrowers and 50 informal credit borrowers from district Faisalabad. Primary data were collected randomly through a well-designed questionnaire from farmers. Multiple regression analysis was used for the estimation of the results. This method was used to estimate the role of formal and informal credit in the agriculture sector. The results showed that annual income increased after getting the loan. The focus of the study was to investigate the role of formal and informal credit in the agriculture sector. The result showed that informal credit was more convenient in terms of timely availability of loans, less distance to travel, less time delay, and no specific securities. In this way, this study concluded that formal and informal credit has a significant impact on agricultural productivity, and the trend of agriculture credit has been gradually increased has a positive impact on income.

* Corresponding Author: Muhammad Amjed Iqbal

Email: amjadiqbal1775@yahoo.com

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INTRODUCTION

Agriculture holds great importance for Pakistan. Pakistan's economy has a huge potential for agriculture and since the 1950s it was mainly an agrarian economy. About 70% of residents are living in rural areas and their livelihood is directly or indirectly dependent on agricultural activities. Since 1960 industrial revolution came in Pakistan that brought social and economic change and transformed a country from an agricultural economy to an industrial one. Pakistan's main natural resources are fertile land and an irrigation system. Agriculture accounts for about 18.5% of GDP and employs 42% of the total labor force (Adams and Fitchett, 1992). The Agriculture sector is the backbone of

Pakistan's economy and it is the only source of raw material to the industry (GOP, 2015). Credit availability is the most important factor to facilitate small farmers to improve their agricultural production. Since most of the farmers in Pakistan are small farmers who need finance for improvement in their agricultural production. To fulfil the credit requirements of small farmers for improvement in agricultural productivity both institutional and non-institutional sources are available in a developing economy (Chisasa and Makina, 2012). Credit borrowers in the agriculture sector have comparatively higher production of different crops as compared to non-borrowers (Khan, 1981; Amir, 1999; Rehman, 2003). There is a positive impact of institutional

financing on agricultural production (Qureshi et al., 1992).

There are both formal and informal sources of credit for farmers in the agricultural system of Pakistan. The informal credit sources in Pakistan include relatives, friends, commission agents, etc. While, the formal credit sources include Zarai Taraqati Bank Limited (ZTBL), Commercial Banks, and other financial institutions. Few non-government organizations (NGOs) are also offering credit to rural communities and small farmers (Iqbal et al., 2003). Generally, informal credit sources offer credit for a very short period with high interest rates. These sources are both inadequate and non-dependable (Chandio et al., 2016). Formal and informal credit markets in rural areas are playing an important role in developing countries such as Pakistan. Besides, the formal credit markets include professional banks and cooperatives (Jan et al., 2012). Generally, small landholders in Pakistan are unable to obtain formal credit. As a result, most of these small farmers borrow credit for agriculture use from only informal sources. Hence, in rural areas of Pakistan, informal sources of credit have been playing a significant role in agricultural credit utilization among smallholders (Hussain and Thapa, 2012).

In Pakistan, there was a positive and significant impact of the supply of formal and informal credit on agricultural output (Chandio, et al, 2016). According to Abedullah (2009), the best way of raising agricultural productivity in Pakistan is the provision of flexible and easy access to agricultural credit to smallholders.

Improvement in Agriculture is based on the efficient and timely use of all necessary inputs. The farmers obtain low agricultural production who are unable to use agricultural input timely. The role of agricultural credit is very important for farmers to purchase inputs for timely usage in the field to get a high yield. This study has shown the significant result of independent variables in both formal and informal credit in the agriculture sector. In the case of formal and informal credit, farmers want to get a loan for all kinds of inputs which consist of seeds, machinery, urea, spray, and other purposes of life. It means that the purchasing of inputs is one of the elementary reasons/issues for their formal and informal credit demand. Other reasons contain marriage ceremonies, purchasing extra acres of land, and achieving daily expenditures. If due to some reasons normally due to natural calamities, if the productivity is ruined or not as considerable as in preceding years then due to limited income level, farmers take a loan from relatives, friends and commission agents for every day basic needs (food, shelter, and cloth). So, in the study

area, interviews with farmers exposed that sometimes they misappropriation the credit for the marriage of their daughters/sons, purchasing additional acres of property, and for some representative functioning. In the situation of informal loans, the risks of exploitation of credit are relatively lower for the reason that they have a nearby connection with farmers and identify an appropriate request. And sometimes, informal ways as well give some farming inputs if they don't have durable currencies; in this case risks of misapplication are again lower. When a farmer authorizations the credit, they are free to the usage of it due to the bank is disturbed with its appropriate (monthly) interest reimbursement and unusual payment (at end of the debt period). The focus of the study was to investigate the role of formal and informal credit in the agriculture sector. Informal credit is more convenient because of the timely availability of loans and no requirement for specific securities. While formal credit sources like banks are convenient in terms of low interest rates and a huge amount of money. Banks have many weaknesses which include complicated loan approval procedures, more delay, and high demand for collateral securities. The current study is aimed to observe the effect of formal and informal loans on the productivity and profitability of agriculture and to suggest the policy recommendation.

METHODOLOGY

Sampling and Data Collection

The research aimed to study the effect of formal and informal credit on agricultural productivity. For this purpose primary data were collected from two Tehsils of District Faisalabad viz. i) Samundri ii) Jaranwala. There were different villages in Faisalabad District out of which 12 villages were been selected randomly through stratified sampling for the survey; 6 villages from every Tehsil were selected. A total of 150 respondents were interviewed during the survey out of which 100 farmers were those who availed formal credit and 50 were those who utilized credit from informal sources. The respondents' information was collected from different sources like commercial banks, relatives, friends, and others. Zarai Taraqati Bank Limited (ZTBL), Bank Alfalah, Habib Bank, National Bank, and Allied Bank were selected to represent all the commercial banks in Faisalabad District. The basic aim of selecting these five banks was to cover their borrower farmers who got credit to enhance agriculture productivity and profitability. Since the problem is to get suitable information about credit amount and other lending policies, for these two individuals i.e. branch manager and agricultural credit manager proved to be very

informative for such type of information about respondents. The respondents who obtained informal credit were those who got credit from relatives, friends, and commission agents, and from different resources without interest rate.

Data Analysis

The data gathered by the field survey were entered in Statistical Packages for Social Science (SPSS) software which was used for the analysis. Multiple Regression model was applied to find the relation between dependent and independent variables. Multiple regression model was used for determining the major factors influencing an increase in income (annually) after getting the formal and informal credit information and their effect on productivity and profitability. In this study income of farmers was used as a dependent variable. There are different explanatory variables used in this study.

Equation describes that;

$$Y_i = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + e$$

Where

Y_i = Annual income increase (Rs).

α = Constant.

X_1 = Family size (total number of family members).

X_2 = Education (total number of schooling years).

X_3 = Farm size (acres).

X_4 = Demand for formal credit (1= if formal credit is received, otherwise= 0).

X_5 = Demand for informal credit (1= if informal credit is received, otherwise= 0).

X_6 = Total credit amount of formal and informal ways (Rs).

X_7 = Interest rate (percentage).

X_8 = Payback period (years).

β_s = Regression coefficients.

e_i = Random error term independently and identically distributed with zero mean and constant variance.

RESULTS AND DISCUSSION

The results of the multiple regression model are described in Table 1 which illustrates whether the independent variables influenced the income increased after getting the credit or not. And indicate standardized coefficients which explain the extent of variation in the dependent variable (Income) due to changes in independent variables such as family size, education, Occupation, Income increased after getting the formal and informal credit, Farm size(acres), demand for Formal credit, demand for informal credit, Interest Rate, Payback period. The value of R^2 for the estimated model was 0.43 which shows that about 43 percent variation in income is described by the nine used independent variables while other thing remains constant.

Table 1. Significance of regression coefficients.

Variables	B	Std. Error	T	Sig.
(Constant)	-74899.986	171813.022	-.436	.664
Family size	-1528.074	11527.050	-.133	.895
Education	5397.996	8807.813	.613	.541
Farm size	40554.065	19189.974	2.113	.036
Demand for formal credit	226859.960	76528.028	2.964	.004
Demand for informal credit	125701.560	57444.134	2.188	.030
Credit amount of formal and informal	.382	.168	2.273	.025
Interest rate	4148.757	1986.039	2.089	.039
Payback period	-27985.981	16626.901	-1.683	.095

The farm size is showing a highly significant effect on income. Its coefficient value is 40554. The coefficient value expresses that a one-unit increase in farm size would result in 40554 unit increases in income (annually). The results are in line with Hussain et al. (2015). The demand for formal credit is showing a highly significant and positive effect on income. Its coefficient value is 226859. The coefficient value expresses that one unit increase in demand for formal credit would result in 40554 unit increases in income (annually). The demand for informal credit is showing a highly significant and

positive effect on income. Its coefficient value is 125701. The coefficient value expresses that one unit increase in demand for informal credit would result in 125701 unit increases in income (annually). The total amount of formal and informal credit is showing a highly significant effect on income. Its coefficient value is 0.382. The coefficient value expresses that a one unit increase in the total amount of formal and informal credit would result in 0.382 unit increases in income (annually).

The result showed that the coefficient of family size has a negative impact but that impact is not significant.

According to the results shown in Table 1, there is a positive impact of education but that impact is not significant even at a ten percent confidence interval. The interest rate is showing a highly significant and positive effect on income. Its coefficient value is 4148. The coefficient value expresses that a one unit increase in interest rate would result in 4148 unit increases in income (annually). The payback period is showing a highly significant and positive effect on income. Its coefficient value is 27985. The coefficient value expresses that a one unit increase in payback would result in 27985 unit increases in income (annually).

CONCLUSIONS

Formal and informal credit has an imperative role in the progress of the agricultural sector as it rises the quality of life of small farmers and also instrumental in the adoption of new technologies. In this way, this study concludes that formal and informal credit has a significant impact on agricultural productivity. The trend of the agriculture credit has been gradually increased which has a positive impact on the income of farmers. According to the results of the study variables of family size and education of farmers do not have a significant impact on agriculture production. Generally, agricultural improvements mainly depend on the adoption of new technologies in farming. The adoption of new technologies is the major factor in the improvement in agricultural production which increases the farmer's income level. Availability of formal and informal credit services to the farmers a key source to make farmers adopt advanced agricultural technologies. It is recommended that government should facilitate farmers to avail credit facilities.

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