

## Impact of Agriculture Bank Loan on Adaptation of Modern Technologies by Farmers Kashmore, Sindh

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### Abstract:

*The main aim of this study was to explore the impact of agriculture credit on farmers of Kashmore, Sindh. The sample size of this research study is comprised of 80 sugarcane growers of eight purposively selected Dehs of Kashmore. Results of this study investigated that majority (34%) of the respondents have farm income between 45000 to 60000 per acre. 61.25 % of the respondents revealed that they need credit need to a great extent and they feel that they could not get such good returns from the crops without the agricultural loans. It was noted that 76.25 % of the respondents used improved farm practices after having the credit facility and the data gathered for adoption of improved farming practices majority showed that 71.25% of the respondents are using now balanced fertilization and are using farm yard manure for improving soil fertility and majority multiple responses were again received from the respondents and 76.25 % of the respondents reported that they obtained high crop yields and*

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*it was reported by the 68.75 % and 68.75% equally that markup rate on the credit may substantially be reduced.*

**Key words:** Agriculture Bank Loan, Modern Technologies, Farmers, Kashmore, Sindh, Pakistan

## 1. Introduction

The living standard in low income developing countries always remains crucial issue to be addressed (Akram and Hussain 2011). The roots of the Pakistan economic development depends mainly on agriculture sector. In Pakistan growth of agriculture sector has been declining since past three decades. Productivity is low and yield gaps are rising. Development of agriculture sector requires newly developed high yield varieties of quality seed, proper and timely use of chemical fertilizer and pesticides and mechanized farming. Use of improved inputs, mechanization of farms, infrastructure development and marketing elements are interconnected with each other and their main objective is ultimately to increase production.

Sindh province of Pakistan ranks second in agricultural production of the country. In Sindh Province of Pakistan productivity of agriculture sector is six times less than developed farming of the world. Presently, the province is facing serious crises such as speedy land degradation, declining water resources, inadequate supply of seed, fertilizers, pesticides, slow process of mechanization, poor infrastructure, ill-conceived agriculture marketing, taxation policies, environmental, cultural hurdles, use of old and outdated agriculture technologies and constraints in institutional credit system. These crises lead to instability in agric-growth, affect rural development process and hamper socio economic development of the region (Arif. 2001; Muhamrnad *et al.*, 2002; Anil and Bhulmall 2000; Harun and Bayaner 2006).

Causes for using of old and outdated agriculture technologies is lack of availability of capital to invest for purchasing new crop management technologies and the water infrastructure therefore poor infrastructure and marketing facilities reduce the grower's performance, keeping them out of market and reducing the opportunities of agricultural capital gains. Without major new investments in agriculture, it would be very difficult for Sindh and other provinces of Pakistan to tackle emerging challenges such as declining water availability, and climate change (Alam, *et al.* 2014; GOP, 2010). Poor access to modern inputs is mostly due to low availability of credit due to weak rural financial markets and mismanagement in intuitional credit system.

In Pakistan out of the total countrywide target credit of Rs. 260 billion, 11.11 percent has been earmarked for Sindh, 86 percent for Punjab, 2.61 percent for NWFP and 0.28 percent for Balochistan respectively (Shaikh, 2010). Three types of Agricultural loans are provided by the banks in Pakistan. (1) short term loan is provided to the farming communities for the period up to 18 months (2) medium term loan is provided for the period up to 1.5 years to 5 years and (3) long term loan is provided for the period 5 – 7 years.

Bank loan can plays an important role in providing capital for investment in farming system. Microcredit is particularly relevant to increasing productivity of rural economy. Microcredit can enable small and marginalized farmers to purchase the inputs they need to increase their farm productivity as well as financing a range of activities adding value to agricultural output (Nosiru & Omobolanle 2010). Easy and quick and timely availability of farm credit is essential for agriculture and rural development (Mir, *et al.* 2008; Shah, *et al.* 2008; Hamzo and Tagar, 2010). Aim of the present research was to study the impact of credit on farm productivity and income of the sample farmers in Kashmore, Sindh.

## **1.1 Objectives**

The study was carried out to:

1. To find out the barriers obstacles is obtaining loan as perceived by farmers
2. To identify in use of agricultural loan as perceived by farmers

## **2. Materials and Methods**

The study was under taken in District Kashmore through survey method. District Kashmore is basically agricultural side, having rich soils of different kinds, also facilities of tube wells. Sugarcane, wheat, cotton, onion, along with mango (a major fruit and each crop) is the main crop of the area. The sample size of this research study is comprised of 80 sugarcane growers of eight purposively selected Dehs. In rural areas of Pakistan agriculture based communities mostly live in dense or scattered units called Deh in Sindh Province and Mouza in Punjab Province. Each Deh is demarcated and recorded by the ownership shown in the documents of Revenue Department. In other words, Deh is a name given to the smallest and gross root level revenue estate) of District Kashmore. For this study, from each Dehs 20 sugarcane growers who obtained agriculture loans from bank were randomly selected. The list of all Dehs and respondent was obtained from the office of Agricultural Development Bank of Pakistan Branch. All respondents were interviewed personally by researcher. All such necessary information was gathered and recorded on the well structured questionnaire.

A well- structured questionnaire was designed, and a list of production constraints faced by sugarcane growers was developed with the help of research supervisor for the collection of data. The questionnaires consist of three sections. Section A includes questions regarding general Information, section B includes questions regarding overall of perception of farmers

reading hurdles in obtaining agriculture loans and section C includes questions regarding perception of farmers about usefulness of loans. Majority of the respondent were interviewed at their field. Researcher interviewed them at the morning time, when they were working at the field. The survey for collecting information was carried out during 2014. Initially the data were arranged and organized in coding system. By using the coding sheet, after the coding of collected data, all the data were tabulated, summarized and analyzed through SPSS (Statistical Package for Social Science) Computer Software. Frequencies, mean, standard division and rank were calculated by using SPSS (PC) program.

### **3. Results**

#### **3.1 Size of land holding of sample respondents**

Size of land holding has significant importance in obtaining agriculture loans in Pakistan. For example, amount of production loan for a crop is estimated based on cost of inputs used for production of that crop and acreage of land under that crop. Table-1 shows that 20 respondents were randomly selected from each of the four sizes of land holdings i.e. from 5 to 12 acres, 13 to 20 acres, 20 to 30 and 30 to 40 acres of land.

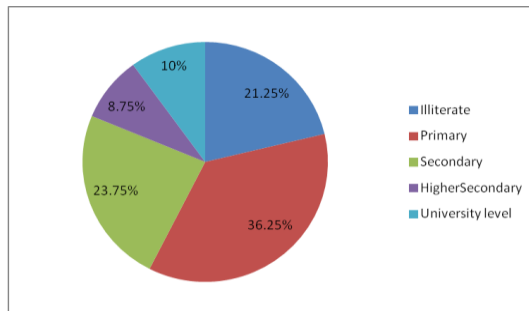
**Table-1 Distribution of the respondents by their land holding**

Land holding in acres	No
5 to 12 acres	20
13 to 20 acres	20
20 to 30 acres	20
30 to 40 acres	20
Total	80

#### **3.2 Educational level of farmers**

Education is the prerequisite in successful execution of any business either it is related with the production or with the marketing of any commodity. The data gathered on the

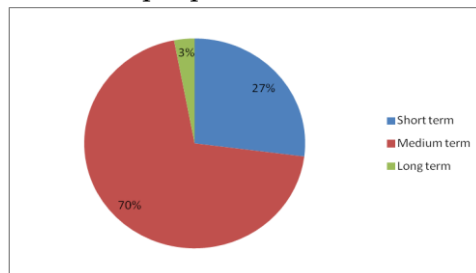
educational level of the respondents envisaged 10.00% of the respondents had acquired higher education (university level), 8.75% of respondents could accomplish higher secondary education while 23.75% could acquire education up to matriculation, while majority of the respondents (36.25%) could reach only in the primary school. However, 21.25 % of the farmers interviewed were uneducated. This facts reported in Figure 1 further explicit that the literacy rate among the interviewee farmers was 78.25 percent, which is a positive sign regarding literacy among the farming communities.



**Figure 1 Distribution of the respondents by their educational level**

### **3.3 Nature of loan obtained by sample respondents**

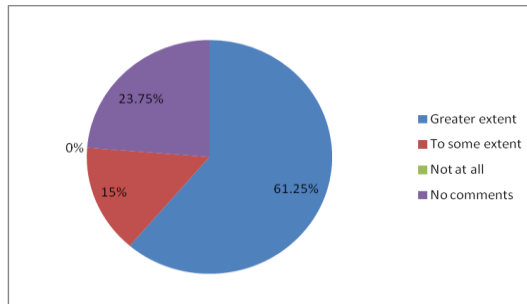
As evident from Figure 2 that majority of the farmers obtained loan for medium term. Medium term loans are usually obtained from banks for purchase of small machinery and inputs. The medium term loan accounted for 70 % and short term loan was only 27%. Long term 3%. It seems that major share of the loan had gone for production purpose.



**Figure 2 Nature of loan obtained by the farmers of study area**

### **3.4 Perception of the respondents on extent of need for credit**

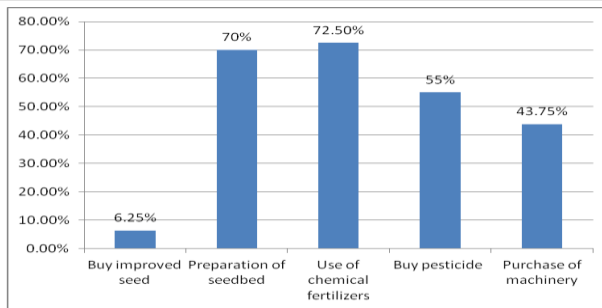
In Figure 3 results show that majority of farmer (61.25 %) respond that they have need of credit at great extent and they feel that they could not get good returns from the crops without the agricultural loans. On the other hand, 15.00% of the respondents perceived that the agricultural credit is needed to some extent and even without bank loan they could manage their crops optimally, while 23.75% of the respondents did comment on the extent of need of the credit because of the reason that they did not avail the credit facility because of a variety of causes.



**Figure 3 Perception of the respondents about extent of need for credit**

### **3.5 Utilization of agricultural credit as perceived by the farmers**

The response for this quarry is reported in Figure 4 which shows that that majority of the farmers (72.50%) utilized the loans on purchase of fertilizers and 70.00% of the farmers utilized the loans on seedbed preparation, while 55.00% spent the credit money on purchase and application pesticides on their crops. A considerable percentage (43.75%) of the respondents used credit money on purchase of farm machinery. It was observed that there was multiple use of the credit money by the farming community and a loan was being utilized for numerous purposes.



**Figure 4 Utilization of agricultural credit as perceived by the farmers**

### 3.6 Obstacles and problems in the way of credit

The farmers were also enquired about the difficulties they face in getting credit facility from the government institutions or banks. It assessed that 51.25 % farmers said that procedures of credit are very complicated, 63.75 % respondents told that Passbook one of the major obstacles in getting loaning. Moreover, 48.75 % respondents complained about the non-cooperation of the staff of the banks. A considerable number of respondents (21.25%) expressed that the loan amount even after its sanction is not released in due course of time (Table 2).

**Table-2 Obstacles and problems in the procedure of agricultural credits as perceived by the respondent farmers**

Barriers / obstacles	Total Number	Responses	Percent respondents
Complicated procedure of pass book system	80	51	63.75
Long and time consuming procedures of Banks	80	41	51.25
Non-cooperation of Revenue Department	80	39	48.75
Not released in time	80	17	21.25

### 3.7 Adoption of certain improved farming practices by the farmers after getting agricultural credit

In response to the question that what is the impact of agriculture loan on adaptation of improved and new farming and crop management practices, 71.25% farmers respond that



the use of agriculture credit help them in using new, updated, timely and balanced fertilization. 68.75% of the farmers adopt proper plant protection practices after getting loans, 66.25 % of the respondent farmers enable to complete sowing timely and with proper method, while 45.00 % of the respondents are able to use new, disease resistant and quality seed (Table 3). However, 27.50 % of the respondents are adopting now improved irrigation methods after getting loans. 76.25 % of the respondents reported that they obtained high crop yields after using agriculture loans and 72.50% farmers said that due to credit money they could complete sowing the crop timely, 47.50% told that due to credit they used quality seed of crops.

**Table-3 Adoption of certain improved farming practices by the farmers after getting agricultural credit**

	Number	Percent
<b>Adoption of improved farming practices by farmers after getting agricultural credit</b>		
Use of pure and quality seed of high yielding varieties	36	45
improved sowing method	53	66.25
Improved irrigation methods	22	27.5
Use of new machinery	57	71.25
Proper plant protection measures	55	68.75
<b>Benefits to the farmers from agricultural credit</b>		
Timely sowing	58	72.5
High crop yields	61	76.25
Purchase quality seed timely	38	47.5

#### **4. Conclusion**

Majority of farmers in Sindh are small farmers and living their life at subsistence level. For investment in agriculture and farmers mostly need agriculture credit to meet the cost of production of their crop. With the use of modern technologies operating expenses are increased at considerable level therefore credit is needed by the farmers to meet this additional expenditure. The main aim of this study was to explore the impact of agriculture credit on farmers of Kashmore, Sindh.

Results of this study investigated that literacy rate of majority of sample respondent farmers was 78.25 percent and 28.75% of the respondents had land holding up to 30 acres and majority (64%) of sample respondents was absentee land lord (zamindar). Majority (34%) of the respondents have farm income between 45000 to 60000 per acre. 61.25 % of the respondents revealed that they need credit need to a great extent and they feel that they could not get such good returns from the crops without the agricultural loans. Majority of the farmers (72.50%) utilized the loans for purchasing fertilizers. It was noted that 76.25 % of the respondents used improved farm practices after having the credit facility and the data gathered for adoption of improved farming practices majority showed that 71.25% of the respondents are using now balanced fertilization and are using farm yard manure for improving soil fertility and Majority multiple responses were again received from the respondents and 76.25 % of the respondents reported that they obtained high crop yields and it was reported by the 68.75 % and 68.75% equally that markup rate on the credit may substantially be reduced.

## **ACKNOWLEDGEMENT**

It is acknowledged this research is based on the data collected by the co-author of this research paper, Mr. Zuhaib Hassan, under supervision of Mr. Muhammad ali Shaikh for his Master degree in the Department of Rural Sociology, Sindh Agriculture University Tandojam.

## **LITERATURE CITED**

Akram, M., & Imtiaz, H. (2011). The role of microfinance in uplifting income level: A study of District Okara – Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*. Vol.2, No.11, March 2011

- Alam, M., Raza Ullah, Ali Iqtidar, Waqar Saleem, Mehboob Elahi & Hamid Sultan. 2014. Impact of Microcredit Scheme on Socio-economic Status of Farmers (A case study of PRSP in District Gujranwala). *A Research Journal of South Asian Studies*, Vol. 29, No. 1, January – July 2014, pp. 161-169.
- Anil, B. and A. Bhulmall. 2000. A cooperative credit society's impact on credit demand in agricultural production. *Econ. Affairs. Calcutta*. 45(2): 86-91.
- Arif. 2001. Effect of micro credit disbursed by ADBP on agricultural production in District Attock. M.Sc (Hons) Thesis, IDS, NWFP Agric. Univ. Peshawar, Pakistan.
- GOP, 2010. Agriculture: Economic Survey of Pakistan, 2009-10, Ministry of Food and Agriculture, Government of Pakistan, Islamabad.
- Harun, T., and A. BAYANER, 2006. Members' Perception and the Role of Agricultural Credit Cooperatives in Agricultural Finance in Turkey. *New Medit No. 3*, pp. 23-28.
- Mir Kalan Shah, Humayun Khan, Jehanzeb and Zalakat Khan. 2008. Impact of agricultural credit on farm productivity and income of farmers in mountainous agriculture in northern Pakistan: a case study of selected villages in district Chitral. *Sarhad J. Agric.* 24(4):713-718.
- Muhamrnad, S., M. Ali, I. Ashraf and M. A. Khan, 2002. Farmers' perception about one window operation of agricultural development bank of Pakistan. *Pak. J Agri science*, 39(3):
- Nosiru and Marcus Omobolanle (2010). Microcredits and agricultural productivity in Ogun State, Nigeria. *WJAS World J. Agric. Sci.*, 6 (3): 290-296, 2010.
- Shaikh, S. 2010. Unclear land title a drag on farm credit. *Economic and Business (Dawn.Com)*, 8th Feb. 2010.
- Shah, M. K., H. Khan, Jehanzeb and Z. Khan, 2008. Impact of agricultural credit on farm productivity and income of

farmers in mountainous agriculture in northern pakistan: a case study of selected villages in district chitral. *Sarhad J. Agric.* 24 (4): 713-718.

Tagar, Khan. Hamzo. And Panhwar, A. Iqbal. (2010). *Agricultural Credit in Sindh: Issues and Recommendations.* *Australian Journal of Basic and Applied Sciences.* Vol 4, No. 8.