Research Article

Impact of Micro Finance on the Agricultural Development in Balochistan, Pakistan

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Abstract | This research study was conducted to explore the role of micro finance on the agricultural development in the district Jaffarabbad, Balochistan through survey method. Eight districts were selected purposively by using random sampling techniques to investigate eligibility, education and obstacles of the respondents for obtaining micro finance loan from Zarai Taraqiati Bank Limited (ZTBL). Out of selected districts; ten respondents were chosen randomly who obtained micro finance loans. The information of the selected districts and respondents was obtained (ZTBL). Thus, the respondents were interviewed personally and necessary data were collected through structured questionnaire. The research revealed that majority of the respondents i.e. 50% were in the age limit between 31-40 years. Almost 36.25% respondents had elementary level education. Further, it is reported that 28.75% respondents had 30 acres landholding, while 28.75% of the farmers having upto 20 acres landholding. Land tenure system of the respondents were examined and found that most samples i.e. 64 % were in absentia training load (zamindar). Samples were analyzed on the basis of farmers' income, and it has been found that 34% respondent had income of Rs.45,000 and Rs.60,000 per acre respectively. However, remaining 47.50% of the respondents had old and outdated farming techniques in practice. The mainstream 35.72% respondents obtained credits upto Rs. 40,001-50,000 and others 33.92% secured loan up to Rs.50,001-80,000. It was reported that 51.25 % respondents considered that procedures of the credit are more complicated and difficult to be followed. However, 63.75 % revealed that Passbook is one of the obstacles in getting loan. On the basis of findings, it is suggested that inquire about perceptions of the borrowers in obtaining credit from ZTBL. Although, most of the validity of credit borrowers complained that the interest rates are higher on the loans. As subsistence farmers, the interest rates are too high for farmers' community and not satisfied. Majority of the farmers have low levels of education, and cannot fulfil the formalities to get a loan. At the end, it is recommended that ZTBL authority may initiate training programs for farmers to make the process of the loan more feasible and character building programs for the bank staff.

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Introduction

Agriculture is the most important sector of the Pakistan's economy. This sector provides employment to 42.3 % of the total labors force. About 70 % of total population of the country lives in the rural areas and agriculture is the main source of their livelihood. Agriculture sector is also the largest source

of foreign exchange earnings (GOP 2015-16). Due to its importance, the Government of Pakistan gives high priority to the development of the Agriculture Sector. Main purpose of agricultural policy is not only to increase the crop production in the country but also is to increase export capacity country.

Agricultural development requires timely and adequate supplies of essential farm inputs. Investment capacity of majority of our farmers is low as they are poor and they cannot afford to meet increased demand for the purchase of improved seeds, recommended dose of fertilizer, hiring farm machinery etc; so lack of finance is one of the main reasons for low productivity in our agriculture. A number of studies show that farmers' yields of various crops were higher for borrowers than non borrowers (Dawar, 2013). All these studies recommend that credit is one of the important inputs to meet the cash requirements of the farmers and play the role of a bridge leading from subsistence to cash economy and eventually to invisible surplus. There are two types of credit advanced to the farmers in Pakistan i.e. institutional and non institutional. In early history of Pakistan main sources of agriculture credit were relatives and friends, landlords, shopkeeper's commission agents (Alam *et al*., 2014). It is revealed that 83.9 % loan was provided by informal sources (Khan *et al*., 2013). Despite its extreme importance of growth, exports, income and food security, the agricultural sector has been suffering from a long-term decline. The growth of the sector, especially in the cultivation of sub-sector, has been declining over the past three decades. Productivity remains low, rising and the output gap. The key is not being made to invest in new seeds, farming techniques and processes, as well as water infrastructure. New challenges, no new significant investment in agriculture, it is unclear how to prepare Pakistan will address issues such as reduced water supply, and climate change (Dawar, 2013). Agricultural development needs in a timely and adequate supply of essential agricultural inputs. Low investment capacity of farmers, because they are poor, they cannot meet the increased demand to buy seed, the recommended dose of fertilizer, agricultural machinery hire; so the lack of funding is one of the main agricultural production in the country inefficient. A number of studies show that a variety of crops farmers higher yields than non- borrowers borrowers. All of these studies suggest that the credit is to meet the cash needs of farmers and play a major role in one of the important input bridge from subsistence to commodity economy and, ultimately, of the invisible surplus (Dawar, 2013).

Microfinance is created in response to the missing credit market for the poor. In the developing countries, most recently for instance, governments are also incorporating microfinance in their strategies towards achieving the Millennium Development Goals that involves halving extreme poverty by the target date, which is 2015 (Ayanda and Ogunsekan, 2016). Although there have been a number of studies to assess the impact of microfinance on rural development, a high proportion of them have been focusing on poverty eradication e.g children's education, improving health outcomes for women and children, and empowering women by participation in microfinance programs see (Khandker, 2015). In contrast, there is inadequate empirical evidence to assess the impact of microfinance on agricultural productivity in rural areas where majority of the low income and subsistence farmers exist. This justifies the need for more research studies to come up with a robust policy implication of the impact of microfinance on major industry (Agriculture) and its development. Although there have been some studies to assess the impact of microfinance on rural development, and their high proportion has been focused on the eradication of poverty, such as children's education, to improve the health of women and children, and empowering women through participation in microfinance projects Look (Khandker, 2015). In contrast, there is not enough empirical evidence to assess microfinance on agricultural productivity in most low-income and subsistence farmers there are affecting rural areas. Keeping in view of the facts stated above, therefore the present survey is carried out to study of the impact of micro finance on agriculture development in district Jaffarabbad, Balochistan

Materials and Methods

Agriculture Research is a study to discover facts the problems in research study. Every researcher follows different criteria and methods, which depends upon the objectives research work and its layout. Theme of successful and meaningful research work starts with appropriate planning. The main objectives of this study are to know the farmers/respondent's characteristics, their perception about the production constraints and valuable opinion about the educational program on crop production. Sampling procedure

and research techniques used in the present study, are discussed as under.

Study area

Jaffarabad district lies in the South-East of the Pakistani province of Balochistan. Jafarabad's headquarters are at Dera Allah Yar. Formerly known as the Jhatpat subdivision, the region was part of the Jacobabad District until 1970 and part of the Sibi District until 1975. It became a district of its own in 1987. Jaffarabad District is sub-divided into three tehsils. At the end of 15th century, Jaffarabad was under of Lasharis. The main tribes of this district are: Jamali, Khoso, Rind, Marri, Bugti, Bulledi, Magsi, Mengal and other communities are Gola, Umrani, lashari, Domki, Kanrani, Gajani, Siapad Brohi and small number of Soomro, bhanger, abro tribes.

Map of district Jaffarabad

Population and sample size

Thus a sample of eight respondents 80 from each district/village was randomly selected. The list of all districts and respondent was obtained from the office of ZTBL Branch. All respondents were interviewed personally by researcher. All such necessary information was gathered and recorded on the well structured questionnaire.

The questionnaire

The questionnaire was developed with the help of supervisor than sent to the technical committee for recommendations and observations of questionnaire administration. Personal interviews conducted regarding socioeconomic characteristics, social problems, technical problems, financial problems and physical problems of respondents were involved in enterprises. It was subsequently validated from secondary sources of information.

Preparation of interview schedules

In order to collect data, the survey method was followed. Two comprehensive survey schedules were prepared in such a way that all the information relating to the entrepreneurs can be obtained. The schedules were pre-tested and after pre testing necessary modifications were made in order to ensure their applicability in actual field conditions.

Date analysis

Collected data from the field were verified to avoid errors and inconsistencies; the first step was to look into the data entered in each interview schedule to ensure consistency. In order to arrive at meaningful conclusion, mainly tabular technique of analysis was followed. A list of tables was arranged in agreement with the objectives of the study.

Initially the data were arranged and organized in coding system. By using the coding sheet, all the data were tabulated, summarized and analyzed through SPSS (Package for Social Sciences) Frequencies, mean, standard division and rank were calculated by using SPSS program.

Results and Discussion

The study was conducted in District Jaffarabbad Balochistan through survey method. Respondents from the area were selected with the help random sampling techniques. Sample of eight districts were selected. From each district least ten respondents were selected who obtained loans. Thus a sample of eight respondents 80 from each district/village) was randomly selected. All respondents were interviewed personally by researcher. All such necessary information was gathered and recorded on the well structured questionnaire. The results so obtained are reported bellow, where the data in the tables are interpreted accordingly.

Age distribution of the respondents

Age greatly influences the attitudes and knowledge of young people, take the recommended agricultural practices are very fast, more than the elderly. The collected information regarding age composition of the respondents is shown in Table 1.

The data regarding the classification of age group of the respondents is reported in Table 1, which illustrated that majority of the farmers/respondents

(50.00%) were in the age limit between 31-40 years, while 20.00% of the respondents were in the age range of 21-30 years. It was observed that 13.75 % youngsters having age upto 20 years were also involved in the farming activities, while a similar percentage (13.75%) were in the age ranged between 41-50 years (Hamzo and Tagar, 2010). However, the respondents having age more than 50 years were in the lowest number (2.50%). It was observed that the farmers in Jaffarabbad were mostly landlords and were looking well to do, and while they were approached for interview they behaved positively and their hospitality was appreciable.

Table 1: *Distribution of respondents by their age group.*

Age group	Frequency	Percentage
Up to 20 yrs	11	13.75
21-30 yrs	16	20
31-40 yrs	40	50
41-50 yrs	11	13.75
Above 50 yrs	2	2.5
Total	80	100

Educational level of the respondents

Education usually is considered as a main factor with the adoption of new ideas and technologies. A well educated grower can easily adopt recommended technologies/ practices than illiterate grower. The key to agricultural development lies in proper education of farmers and their interest in the adoption of new technology. More over education plays an important role in the development of human behaviour. The collected data regarding education level of respondents are shown in Table 2.

Table 2: *Distribution of the respondents by their educational level.*

Education	Frequency	Percentage
Illiterate	17	21.25
Primary	29	36.25
Secondary	19	23.75
H/Secondary	7	8.75
University level	8	10
Total	80	100

Table 2 envisaged that the situation of the respondents was positive and 10.00% of the respondents had acquired higher education (university level), i.e. Graduation and Masters degrees, 8.75% could accomplish higher secondary education, 23.75% could acquire education upto matriculation, while majority of the respondents (36.25%) could reach only in the primary school. However, 21.25 % of the farmers interviewed were uneducated (Kashif *et al.*, 2016). This facts reported in Table-2 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.

Land holding of the respondents

Land holding is one of the most influencing characteristics among farming communities and being big landlord is always the sign of pride in our society.

The results reported in Table 3 demonstrated that 28.75% of the respondents had land holding upto 30 acres, while and same percentage (28.75%) of the farmers reported land holding upto 20 acres. Similarly, 21.25 % of the interviewees had land holding upto 10 acres, while the respondents who have land holding upto 5 acres were 10.00 %. However, 6.25 % of the respondents owned land upto 40 years, while remaining 5.00% of the farmers under study were owner operators of more than 50 acres land. The study showed that there was a sizeable number of respondents having averagely standard land holding and for making the sample balanced, the farmers having land holding in the range of 5-10 acres were also included in the study.

Table 3: *Distribution of the respondents by their land holding.*

Land holding	Frequency	Percentage
5 acres	8	10
10 acres	17	21.25
20 acres	23	28.75
30 acres	23	28.75
40 acres	5	6.25
50 acres and above	4	5
Total	80	100

Land tenure system of sample respondents were examined and found that majority (64%) of sample respondents were landlord (Zamindar), followed by 24% owner, 3% tenant (Hari), 9% lease holder (Table 4).

Farm income of sample respondents was analyzed

and found that majority (34%) of the respondents have farm income between 45,000 to 60, 000 per acre, followed by 6%, 10%, 18% and 32% respondents farm income was 15,000, 15,000 to 30,000, 31,000 to 45,000 and above 60,000 respectively (Table 5).

Table 4: *Land tenure system of the respondents.*

Categories	Frequency	Percent
Landloard/ Zamindar	51	64.0
Owner	19	24.0
Tenant/Hari	2	3.0
Lease Holder	8	9.0
Total	80	100.0

Table 5: *Farm Income of the respondents (Rs/acre).*

Categories	Frequency	Percentage
Below 15000	5	6.0
15000 to 30000	8	10.0
31000 to 45000	14	18.0
45000 to 60000	27	34.0
Above 60000	26	32.0
Total	80	100.0

Farming experience

Innovation can often be observed to take is directly proportional to the experience. After the greater will be the rate of adoption (Table 6).

Table 6: *Distribution of respondents by their farming experience.*

Experience in years	Frequency	Percentage
Up to 1-5	9	11.25
6-10 yrs	38	47.5
11-15 yrs	21	26.25
16-20 yrs	10	12.5
Above 21 yrs	2	2.5
Total	80	100

Farming is the parameter of great significance when the farmers are asked for their opinion in any agriculture related aspect. It was observed from the gathered data (Table 6) that majority of the respondents (47.50%) had farming experience in the range of 11-20 years; while 26.25 % of the respondents having farming experience in the range of 21-30 years (Hartarska and Nadolnyak, 2012). It was further noted from the results that 12.50 % of the farmers under study had 31-40 years farming experience and 11.25% of the respondents had 1-10 years farming experience. However, the lowest percentage of farmers/respondents (2.50%) had more than 40 years huge experience. The results indicated that the farmers assembled for this study had plenty of farming experience and they had sufficient information about the needs and proper time of inputs to be used for the agricultural crops.

As evident from Table 7 that majority of the farmers have obtained loan for medium term. The medium term loan accounted for 66.25 % and short term loan was only 10%. It seems that major share of the loan had gone for production purpose.

Table 7: *Nature of loan obtained.*

Particulars	Frequency	Percent
Short term	8	10
Medium term	53	66.25
Long term	19	23.75
Total	80	100

Table 8 shows that majority (35.72 %) of the respondents obtained credit in the range of Rs. 40,001-50,000 and 33.92 % obtained loan in the range of Rs. 50,001-80,000. Other 14.28 %, 10.72 % and 5.36 % borrowers have obtained loan to the tune of Rs.800,001-100,000, Rs.40,000 and more than Rs.1,00,000, respectively.

Table 8: *Amount of loan obtained by sample respondents.*

Loan amount (Rs.)	Frequency	Percent
Up to 40000	9	10.72
40001-50000	29	35.72
50001-80000	27	33.92
80001-100000	11	14.28
> 100000	4	5.36
Total	80	100

Impact of credit on cropping pattern of the respondents

The results show that only area under crops showed significant result while the area under vegetables and fruits shows non-significant results (Hashemi, 1997). It may be due to the fact that most of the farmers have obtained loan for short purposes and they have used for agriculture inputs mainly for crops.

Impact of credit on crop yield

Table 10 shows that in corn, a significant increase in

wheat, gram and rice production. The results justify the use of loans for the purpose of acquisition. It seems, the borrower has to use loans to develop land and crops, vegetables and fruit production.

Table 9: *Percentage of sample of availed agriculture credit in farming.*

Particulars	Frequency	Percent
Crop (wheat, mustard, gram, rice)	57	71.66
Vegetables	11	13.34
Fruits	12	15
Total	80	100

Table 10: *Impact of credit on crop yield.*

Crop	Yield (Maunds)	
	Before credit	After credit
Wheat	33.5	35.9
Mustard	29.5	30.7
Gram	32.2	37.52
Rice	32.41	35.78

Table 11: *Obstacles and problems in the procedure of agricultural credits as perceived by the respondent farmers (N = 80).*

Barriers / obstacles	Frequency	Percent	Rank
Complicated procedure of pass book system	51	63.75	1
Long and time consuming procedures of Banks	41	51.25	2
Non-cooperation of Revenue Department	39	48.75	3
Illegal demands from concerned functionaries	31	38.75	4
Land categorization	27	33.75	5
Credit not released in time	17	21.25	6

The farmers were enquired about difficulty in getting credit facility from the government institutions or banks. The responses to this effect given in Table 1. Further, Table 11 discloses difficulties of multiple nature, Similarly, other difficulties and hurdles faced by the respondents during the process of credit were also unfold. It was observed that 51.25% considered that procedures of credit are complicated and difficult to follow, 63.75% showed Passbook one of the difficulty/obstacle in loaning process. Moreover, 48.75 % told that non-cooperation of the personnel of concerned department/ banks is one of the main obstacles, while 38.75% respondents were of the problem/ obstacle of illegal demand by the personnel of concerned agency. The respondents further told that land categorization is also one of the obstacles and even they had sufficient land area, but the amount of loan is not sufficient due to B or C category of the land. A considerable number of respondents (21.25%) expressed that the loan amount even after its sanction is not released in due course of time.

This chapter revealed impact of micro finance on the agriculture development in district Jaffarabbad, Balochistan. The following results of the study are discussed:

The data regarding the classification of age group of the respondents is reported, out of which majority of the farmers/respondents (50.00%) were in the age limit between 31-40 years. At other hand, (36.25%) respondents could reach only to the primary school level. The results demonstrated that 28.75% of the respondents had landholding upto 30 acres. Land tenure system of sample respondents were examined and found that majority (64%) of sample respondents were landlord (Zamindar). Farm income of sample respondents was analyzed and found that majority (34%) of the respondents has farm income between 45,000 to 60,000 per acre. Farming is the parameter of great significance when the farmers are asked for their opinion in any agriculture related aspect. It was observed from the gathered data that majority of the respondents (47.50%) had farming experience in the range of 11-20 years. Similarly Saadatu *et al.* (2018) reported that besides farm size; extended exposure, level of education, cooperative members and access to credit were found to be significantly beneficial to the promotion of commercialization and privatization of services.

The medium term loan accounted for 66.25 % and short term loan was only 10%. It seems that major share of the loan had gone for production purpose. Degene (2013) estimated results indicate that credit has a favourable impact on crop returns, and thus provision of short-term credit is an effective way of increasing farm returns. Other 14.28 %, 10.72 % and 5.36 % borrowers have obtained loan to the tune of Rs.800,001-100,000, Rs.40,000 and more than Rs.1,00,000 respectively. The findings show that most of the borrowers have obtained loan less than Rs. 80,000. Frank (2016) reported the starting point for the farmers' decisions regarding the use of credit. As

long as the farmers have their own capital, they tend to avoid using credit cards, the perception of credit from any source is risky. Farmers prefer to apply for government loans, rather than from private sources, because it has lower interest rates, more suitable repayment plan, are considered low risk.

The results show that only area under crops showed significant result while the area under vegetables and fruits shows non-significant results. It may be due to the fact that most of the farmers have obtained loan for short purposes and they have used for agriculture inputs mainly for crops. Data show that there was significant increase in yield of mustard, wheat, gram and rice. The results confirm proper utilization of loans for the purpose obtained for. It seems that borrowers have utilized the loan for the development of land and for crops, vegetables and fruits production. Degene (2013) estimated results indicate that credit has a favourable impact on crop returns, and thus provision of short-term credit is an effective way of increasing farm returns.

The farmers were enquired whether they had any difficulty in getting credit facility from the government institutions or banks, the farmers who expressed their difficulties were further enquired to explain the difficulties. The responses to this effect given in Table 11 disclosed that they had difficulties of multiple nature one respondent have a number of difficulties and hurdles to face during the process of credit. It was observed that 51.25 % considered that procedures of credit are complicated and difficult to follow, 63.75 % showed Passbook one of the difficulty/ obstacle in loaning process. Moreover, 48.75 % told that non-cooperation of the personnel of concerned department/ banks is one of the main obstacles, while 38.75 % respondents were of the problem/ obstacle of illegal demand by the personnel of concerned agency. The respondents further told that land categorization is also one of the obstacles and even they had sufficient land area, but the amount of loan is not sufficient due to B or C category of the land. Mir *et al*. (2012) reported complaints about interest rate charged and get this certificate ware also recorded program. In light of these findings, we recommend a review of interest rates and further simplification for obtaining credit advance ZTBL process.

Conclusions and Recommendations

Majority of the farmers (50.00%) were in the age limit between 31-40 years, while majority of the respondents (36.25%) could reach only in the primary school. The results demonstrated that 28.75% of the respondents had land holding upto 30 acres, while and same percentage (28.75%) of the farmers reported land holding upto 20 acres. Land tenure system of sample respondents were examined and found that majority (64%) of sample respondents were absentee landlord (zamindar). Data show that in corn, a significant increase in wheat, gram and rice production. The results justify the use of loans for the purpose of acquisition. It seems, the borrower has to use loans to develop land and crops, vegetables and fruit production. The government and other stakeholders ensure smooth and easy channel to provide micro finance loan facilities to the farmers community in order o enable them for enhancing agricultural production.

Novelty Statement

This is baseline study and information about the micro finance on agricultural development.

Author's Contribution

Tariq Ali Mastoi and Zulfiqar Ali Mastoi: Conceived the idea and wrote the manuscript.
Zahoor Ahmed Khetran: Wrote abstract.
Ghulam Hussain Alizai, Binish Baig, Mitha Khan and Syed Jahangir Shah: Presented methodology, did SPSS analysis and concluded the study.

Conflict of interest
The authors have declared no conflict of interest.

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