

IMPACT OF MICROFINANCE ON POVERTY: EVIDENCE FROM RURAL PAKISTAN

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Abstract. *This study aims at finding out the socio-economic impact of microfinance services, offered by MFIs, in one of the poorest districts of Pakistan. A sample of 344 respondents has been selected for this purpose. The study takes children's nutrition and education expenditures, savings of clients, and investment of loan as explained variables. Our findings show that microfinance services have myriad influences on the subsistence of the poor. Though respondents have concerns over the performance of MFIs, the overall impact goes in concord with the results of previous studies. This study validates the relationship between microfinance and poverty alleviation.*

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1. Introduction

Microfinance is supposed to provide financial access to low-income communities aiming at providing them with chances of self-employment to combat poverty. Microfinance has been in discussion since 1970, and the first services are considered to have been introduced by Dr. Muhammad Younas in 1976 in Bangladesh. Younas' initiatives were revolutionary in the field of microfinance in many ways: they were only for the poor, free of charges; and without collateral as a security. These outstanding features lent quick popularity to the scheme among the poor communities of Bangladesh. At the beginning, inspired by Grameen bank, these loans were small in quantity and personal in nature and were extended to the poor people of the village to start direct income activities, like making pots, stools, and various agriculture-use equipment. Microcredit though helps the poor's but these benefits were found no uniform. Initial income was identified as a key determinant which

enable poor's to exit poverty (Hulme & Mosley, 1996; Rahman, 1997; Zaman, 1999). The success of microfinance could be gauged from the fact that presently more than 1252 Microfinance institutions serving 90 million people both in the developing and developed world (Mix Market, 2018). Microfinance has currently received considerable attention in the developing world. Microfinance with its entrepreneurial roots contributes tremendously to poverty mitigation and growth. Poverty and economic growth happen to be the two debatable issues in the developed as well as in the developing economies as poverty is a key challenge faced by these economies to attain economic growth and development (Binger, 2004; Armendariz & Morduch, 2010; Morduch, 2000). Microfinance institutions provide financial services to the poor to alleviate poverty and bring financial development to a country (Sinha, 1998; Bateman, 2010). From a broader perspective microfinance includes insurance and saving (Brennan, 2008) and enables the poor in starting their own business to generate revenues which help them to live a sustainable life (Morduch, 2000). It has a positive impact on the life of the poor by enabling them to avail financial service which previously they cannot have (Morduch, 2000; Morduch & Haley, 2002). It has been found that microlender recipients earn economic values such as an increase in income, an increase in spending, increased expenditure on foods, and an increase in overall expenditure i.e. house expenditures (Mustafa, 1996; Hossain, 1988). To alleviate poverty in Pakistan, economic growth and development are necessary for all fields. Economic growth at the micro-level can create job opportunities for skilled labor of the society which may break the shackles of poverty. However, sustainability in economic growth is essential because poverty reduction is not a one-step process. The developed world has achieved this sustainability in decades. Microfinance is growing in Pakistan but at a slow rate. In Pakistan, according to (Nenova *et al.*, 2009) microlending has grown 40 % per year since 1999, but the number of people that have accessed the services of microfinance institutions is small, i.e., 3 million. This number is very low compared to a neighbor developing country, Bangladesh, where the income level of the average citizen is below 2 dollars a day, but 12.6% of 150 million people have access to microfinance services (Malik, 2013).

The rest of the paper is organized as follows; Section 2 outlines the conceptual framework of the study. Section 3 explains the survey profile that was used to draw inferences regarding the presence of impact of MFIs on poverty-related indicators in the area. Section 4 discusses the results and analysis while 5 concludes the paper and added to discuss some of the policy implications of the results.

1.2 Rural poverty in Pakistan

Pakistan is a developing country facing poverty issues since independence in 1947. Pakistan is the sixth largest populous country in the world, having 175.11 million people in (2010-11). Pakistan has rated world 146 poor countries out of 187 countries in the world. About 3 million people have access to microfinance service which is very low compared to neighboring developing country Bangladesh, where the income level of the average citizen is below 2 dollars a day, but 12.6% of 150 million people have access to microfinance services. In Pakistan MFIs are providing microfinance services to the poor, among them eight are banks, five are specialized microfinance institutions and the remaining are NGOs (Non-governmental organizations). These institutions have imminent importance for Pakistani people, where the income level of an average family is below \$ 2 per day (Economic Survey 2011-2012). The economic survey shows that poverty in Pakistan has been significantly decreased in the last decade. Below table 01 shows the increase in poverty of all, Pakistan, urban and rural have, from (1999-2001), 30.6, 20.9, 34.7 to 34.5, 22.7 and 39.3 respectively, but in 2011 the two-digit decline can be seen and was reported overall 12.4 percent.

Table 1: *Poverty trend in Pakistan (%)*

Year	1999	2001	2006	2011
Pakistan	30.6	34.5	22.3	12.4
Urban	20.9	22.7	13.1	7.1
Rural	34.7	39.3	27.0	15.1

Source: Government of Pakistan, Ministry of Finance, Economic Survey 2013-2014. Islamabad

To take initiative for poverty reduction in the country government operate various programmes to reduce poverty and bring development in all part of the country, especially in two provinces. I.e. Khyber Pakhtunkhwa and Baluchistan where people suffer a lot due to numerous actions taken by the government for bringing peace in these provinces. Khyber Pakhtunkhwa is the 3rd populous province facing serious law in order situation in the last decades. In (2009) the flood causes serious damages to poor people. 1.5 million people migrate to a safe place in various parts of the country. In (2010) the military operation against the Taliban works as a fuel to fire for the poor people in this already destructed province. About four million people migrated from Khyber Pakhtunkhwa to other provinces to save their lives. Their houses have been damaged and their businesses have also been destroyed. This military operation was ended in three months but, their destructive impacts can still be visible from

the visual of the area. The government receives millions of dollars for the rehabilitation of the affected area in the last three years.

2. Methodology

2.1 Conceptual framework

By definition, a conceptual framework, according to (Miles & Huberman, 1994) is a visual or written product that “explains either graphically or in narrative form, the main thing to be studied—the key factors, concepts or variables—and the presumed relationships among them” (p. 18). It is the system of concepts, expectations, assumptions, theories, and beliefs that supports and informs the subject research (Robson, 2011). Keeping these explanations in mind, and the extant literature on the subject the researcher presents the following conceptual framework (Figure 1) for the current study.

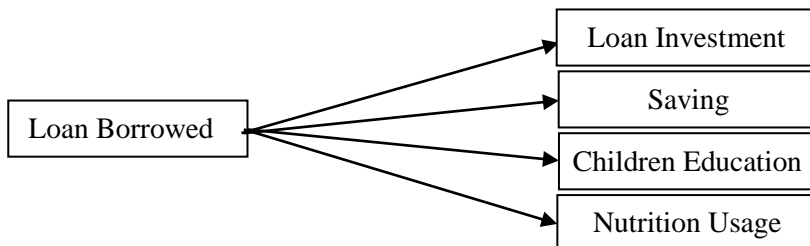


Figure 1. Conceptual Framework of the Study

2.2 Econometric specification of the model

To check the magnitude of the impact of microcredit on loan investment (usage), savings, children education, and nutrition difference in difference (DID approach) (Coleman, 1999) were used. The researcher's estimate:

$$Y_i = \partial_0 + X_i \partial_i + Z_i \partial_i + \omega_i \quad (1)$$

Where Y_i is the impact variables (loan investments, savings, children education, and nutrition usage), X_i is the vector of borrower individual characteristics, and Z_i is a vector of MFI characteristics.

3. Survey Profile

The current study is survey research. The populations for the study are the microfinance loanees in District Dir Lower. Data has been collected from the clients of the three MFIs among them one is NGO and the remaining two are microfinance banks (Helping Hand an NGO and two microfinance banks i.e. Zaire Tariqyati Bank and Bank of Khyber) working in the three Tehsils (Timergara, Adenzai, & Balambat) which has 18 union councils. NGOs ' role

along with financial institutions is very important in poverty reduction because they reach the poor and help them at their doorsteps. A structured questionnaire has been used for data collection. We use microcredit (the amount borrowed) as an independent variable while investments of loan, saving of clients, expenditure on children education, and children's nutrition as dependent variables. Helping Hand lends a loan free of interest and the amount value was 34000, which is equal to (approx. 340 dollars). While the two banks use various modes of lendings for livestock (Rs. 12,000, approx. 120 dollars) and agriculture purposes (Rs. 200,000, approx. 2,000 dollars). A total of 508 questionnaires were randomly distributed out of which 344 were received followed by in-depth interviews with 205 respondents and MFI staff (table 2 gives the details). The high response rate is because of continuous follow-up and cultural cooperation.

Table 2 *Detail of Respondents' Response Rate*

Name of the MFI	Questioners distributed	Questioners Received	% of response
Helping Hand	145	84	57%
Zaire Tariqyati Bank	192	121	63%
Bank of Khyber	171	139	81%
Total	508	344	67%

3.1 Reliability statistics

To check the reliability of the scale, Cronbach's Alpha test was employed. The test value was 0.806 which validated the measurement scale.

3.2 Area profile- District Dir Lower

According to the 2017 census, the country has a total population of 1.46 million people. Khyber Pakhtunkhwa is the 3rd populous province of the country. District Dir (Lower) is situated to the north of this province. For the last decade, the province has observed many calamities. They include the 2005 catastrophic earthquake, the 2009 Military Operation in Swat, the 2010 devastating flood, and the deteriorating law and order situation. These incidents have directly or indirectly affected a major portion of the province. The district has six Tehsils that have thirty-four union councils. There are six financial institutions and five NGOs working in the area but mainly three MFIs working in this district have a considerable amount of microfinance clients. They are: Helping Hand and two microfinance banks i.e. Zaire Tariqyati Bank and Bank of Khyber.

4. Results and Discussion

4.1 Frequency distribution of the respondents: Table 3 shows the information regarding the amount borrowed, their investment, and saving of the recipient of microloans.

Table 2 *Frequency Distribution of the Respondents (N=344)*

Loan Size			Loan Investment			Saving		
Type	Frequency	%	Type	Frequency	%	Type	Frequency	%
Rs12,000-50,000	148	43.0	Basic needs	78	22.7	No saving	92	26.7
51,000-80,000	52	15.1	Start your own business	112	32.6	Below Rs 2000	82	23.8
81,000-150,000	106	30.8	Agri purpose	126	36.6	2100-5000	142	41.3
151,000-200,000	38	11.0	Livestock	28	8.1	5100-10000	28	8.1
Total	344	100.		344	100.		344	100.

It was found that 43% of the clients borrowed up to fifty thousand and 30.8% up to one hundred and fifty thousand. It means that people were more attractive to lesser amounts because of default risk. One reason during data collection, the researcher found that the majority of the people have personal property, either land or house, which they keep as collateral with microfinance institutions.

In terms of loan investment, 22.7 % borrow money to satisfy their basic needs indicating that the people of the subject area are poor; 32.2 % borrowed money to start their own business indicating the presence of a positive and encouraging entrepreneurship trend; 36.6 % borrowed for agriculture purpose and 8.1 % for livestock purpose indicating the traditional trend of apprenticeship in the agriculture and livestock sectors. Nenova *et al.* (2009) found that the provision of small financial services and small loans to poor people create self-employment opportunities. Similarly, Imai *et al.* (2010) & Morduch (2000) contend that microfinance services increase the satisfaction level of the poor as these services increase the poor's income.

On the other hand, the saving capability shows that 26.7 % of the clients don't have the ability to save, 23.8 % save below two thousand, 41.3% saving ranges between two to five thousand, 8.1 % of recipients' saving touches the level up to ten thousand. If all the three behaviors of the clients are compared, it is clear as the borrowed amount increases people move from satisfying their basic needs to invest in starting their own business and in agriculture which, ultimately, cause their saving to reach to the optimum levels. These findings

validate the findings of (Zeller & Meyer, 2002) who hold that availing credit and saving help poor people to acquire funds for all kinds of investments.

Table 4 shows that 62.2 % of microfinance recipients agreed that microloans facilitate them in providing education to their children's while 37.8 % have the contrary opinion. In terms of nutrition usage, 73.3 % of people agree that microloans facilitate them to increase their nutrition usage. And 26.2 % of people do not experience any change in their nutritional usage.

Table 4 Respondents' Children Education and Nutrition Usage (N=344)

Children Education			Children's Nutrition		
Type	Frequency	%	Type	Frequency	%
Yes	214	62.2	Yes	254	73.8
No	130	37.8	No	90	26.2
Total	344	100.0		344	100.0

4.2. Microfinance and investment behavior

Table 5 shows the purpose of the loan borrowed. The trend shows that as the borrowing of amount increases, people are shifting from basic need satisfaction to long term investments.

Table 5 Investment Pattern among the Respondents (N=344)

Loan Investment	Frequency	Basic needs	%	start own business	%	Agri-purpose	%	Live-stock	%	Total
12,000-50,000	148	76	51.4	44	29.7			28	18.9	148
51,000-80,000	52					38	73.1	14	26.9	52
81,000-150,000	106	2	1.9	24	22.6	80	75.5			106
151,000-200,000	38			6	15.8	32	84.2			38
Total	344	78		74		150		42		344

76 recipients in a total of 344 which represent 22.6 % borrow money up to Rs. 50,000 to satisfy their basic needs. These findings are in concord with (Lindvert, 2006) findings who report that people living in extreme poverty lack access to food, clothes, shelter, and clean water. 21.5 % of respondents borrow money to start their own business. Besides, the above facts, some technical bottlenecks, like education, experience, and skills required to manage business may also retard people to opt for micro-financing. The poor people in the developing world mobilize financial resources to develop their enterprises. The

credit provision enables them to leverage their initiative by accelerating the process of generating incomes (Mustafa *et al.*, 2000)

4.3. Microfinance and saving behavior

In the absence of solid saving behavior, the economy cannot grow unless there are alternative sources of investments exists (Akanji, 2001). An increase in income causes increases in savings. Poor people are likely to contribute less to economic saving.

Table 6 gives information about saving trends among the respondents. 92 out of 344 recipients which represent 26.7 % do not save at all.

Table 6 *Saving Pattern of the Respondents (N=344)*

Saving pattern	Fre-quency	No saving	%	below Rs. 2,000	%	Rs. 2,100-5,000	%	Rs. 51,000-10,000	%	Total
Rs. 12,000-50,000	148	92	62.1	54	36.5	2	1.4			148
Rs. 51,000-80,000	52			18	34.4	34	65.6			52
Rs. 81,000-150,000	106			10	9.4	78	73.6	18	17	106
Rs. 151,000-200,000	38					26	68.6	12	31.4	38
Total	344	92		82		140		30		344

Out of the total, 82 loan recipients which consist of 23.8 % save below Rs. 2,000; 140 recipients which represent 40.7 % of loan recipients save up to Rs. 5,000; and 8.8 % save up to Rs. 10,000. (Hossain, 2012) reported that microfinance is a means through which poor people in the urban and rural areas are facilitated with saving and with credit facilities people expand a business, invest in self income-generating business and thereby increase household security. Similarly, Asemelash (2002) examined microfinance services' impact on saving and GDP (Gross domestic product) and found that these services have a direct impact on both. Now, if table 6 and table 7 are compared, it will give the reader a good understanding in the sense that when the borrowing amount is increased saving of the recipient also increases. Furthermore, as the borrowing amount is invested in long term business, saving also increases. Balkenhol (2006) found that customer income increases by utilizing microfinance services which help the poor to cross the extreme poverty. He further elaborates that such interventions increase employment opportunities; clients tend to start their own business and their overall profitability increases.

Though no significant increase in solid saving has been found, the behavior of borrowers has been found positively changed toward saving.

4.4. Microfinance and children education

Table 7 shows that 62.3 % of loan recipients believe that they can provide better education to their children after getting a microfinance loan.

Table 7 Information Regarding Children Education of the Respondents (N=344)

Loan	Frequency	Yes	%	No	%	Total
12,000-50,000	148	28	18.1	120	81.9	148
51,000-80,000	52	50	96.8	2	3.2	52
81,000-150,000	106	102	96.2	4	3.8	106
151,000200,000	38	34	89.5	4	10.5	38
Total	344	214		130		344

130 recipients which are nearly 38 % believed that microloans do not facilitate them in providing education to their children. However, according to Chen & Snodgrass, (2001) microfinance has a positive impact on the lives of the poor in Ethiopia. The research observed that increase in income helped these poor having access to better education and medical facilities. Similarly, Barnes *et al* (2001) found that household invests money to generate income for children education and various other expenditures.

4.5. Microfinance and children's nutrition

Food is one of the basic needs of the human being. Several economists (e.g., Mahjabeen, 2008; Okpara, 2010) found a significant impact of microfinance on food security. Table 8 shows that 73.9 % of recipients of microfinance loans believe that their children's nutrition was increased by utilizing microfinance loans. 26.1% of the recipient experiences no increase in nutrition usage after utilizing microfinance services.

Table 8. Information Regarding Children's Nutrition of the Respondents (N=344)

Loan	Frequency	Yes	%	No	%	Total
12,000-50,000	148	74	50	74	50	148
51,000-80,000	52	42	80.8	10	19.2	52

81,000-150,000	106	102	96.2	4	3.8	106
151,000-200,000	38	36	94.8	2	5.2	38
Total	344	254		90		344

Research has found that microfinance helps to increase the income level and consumption of a poor household, at the same time decrease income disparity and positively affect the well-being of the household (Mahjabeen, 2008).

4.6 The impact of MFI on investment behavior

After controlling for sex and working hours per day, microcredit has a significant impact on all areas of poor likelihood.

Table 9: *Impact of MFI on Investment Behavior*

Variables	Coefficients	S.E	T-Value	Sig	VIF
(Constant)	-2934.94	2640.60	-1.11	.28	
Basic needs	298.06	33.93	8.78	.00	1.39
Start your own business	289.5	93.88	3.08	.00	1.30
Agri-purpose	4747.47	1361.43	3.49	.00	1.26
Livestock	5023.87	777.73	6.46	.00	1.28
F-Value=	55.08	Significance = .000 ^a	Adjusted R ² =	.36	

The results confirmed that microcredit facilitates poor borrowers to increase investments which they didn't before. The starting of their own business will definitely bring consistent income and will create employment for the family.

4.7 The impact of MFI on poverty indicators

Along with investment behavior, we were interested to check the loan usage on children's and as there any tendency of savings. The results indicate some interesting results; first spending on children's nutrition is a positive sign of healthy youth. But people didn't spend on their children education,

Table 10: *Impact of MFI on Poverty indicators*

Variables	Coefficients	S.E	T-Value	Significance	VIF
(Constant)	-7097.56	4482.499	-1.583	.114	
Savings	452.53	130.230	3.475	.001	1.207
children education	632.22	762.986	.829	.408	1.174
children's nutrition	6614.19	564.054	11.726	.000	1.033
F-Value=	45.804	Significance = .000 ^a	Adjusted R ² =	.240	

However saving signs show some good news for the future of these people, because savings enable them to combat adverse situations which are very common in rural Pakistan.

5 Conclusions and Recommendation

Poor people of the developing world utilize their entrepreneurial skills and energy to improve the quality of life, yet they are unable to earn sufficient earning for their families. Improving the standard of living of the poor is an important issue for all developing countries of the world. The main purpose of this study was to check empirically, whether microfinance reduces poverty which was measured in terms of loan investment for four purposes, i.e. satisfy a basic need, start own business, agriculture purpose, and livestock. Along with expenditures on children's education, nutrition usage, and clients' tendency to save the excess amounts. A positive and significant aggregate impact of MFI loan was found for loan investment, savings, and children's education. This was because of the productive utilization of loan amounts by MFI clients. These results are consistent with past findings of microfinance programs in Pakistan (e.g., Mustafa *et al.*, 2000; Shirazi & Khan, 2009). Microfinance services help bring positive changes in the lives of the poor people if these services are provided with the real spirit of the objective of micro-financing. These services can affect the behavior of the poor in many ways, like their sense of responsibility for their children's education, their saving for the rainy day, their nutrition for better health, and the like. The findings have also revealed that small loans are not more productive because people prefer to use them for basic needs only. People's dissatisfaction over some aspects of micro-financing should be an eye-opener for the policymakers.

What is needed is that more homework is required in terms of expanding the base, removing the bottlenecks, mass awareness, mass training for entrepreneurship, rules relaxation, and the like. The findings of the current research in the target area should provide assistance to government authorities while developing financial policies regarding the area. The findings of this paper show that most of the poor in the rural areas spend their microloans on their basic needs which clearly pushes a child's education into the back burner. MFIs performance in terms of individual serving is satisfactory because people are benefitted from these institutions but the growth indicators suggest that overall performance is not satisfactory and the overall impact was found low. It is recommended that government and non-government microfinance providers should improve their accessibility to the poor across the area. This will help to lower down the poverty and will bring positive changes in the lives of the poor.

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