IMPACT OF MICROFINANCE ON HOUSEHOLDS WELLBEING. CASE STUDY OF GUJJAR KHAN

By

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CERTIFICATE

This is to certify that this thesis entitled: **"Impact of Microfinance on Households Wellbeing Case Study of Gujjar Khan"** submitted by Ms. Saira Afaq is accepted in its present form by the Department of Business Studies, Pakistan Institute of Development Economics (PIDE), Islamabad as satisfying the requirements for partial fulfillment of the degree of **Master of Philosophy in Business Economics**.

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AUTHOR'S DECLARATION

I, Saira Afaq hereby state that my MPhil thesis titled "Impact of Microfinance on household wellbeing. A case study of Gujjar khan" is my own work and has not been submitted previously by me for taking any degree from this University Pakistan Institute of Development Economics, Islamabad or anywhere else in the country/world.

At any time if my statement is found to be incorrect even after my Graduation the university has the right to withdraw my MPhil degree.

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ABSTRACT

Micro financing is a mode of financing that can open doors of opportunities for the low-income group of society and empower them to be a productive part of the society. Microfinance got international recognition especially after the Grameen project in Bangladesh as poverty is one of the major economic problems, especially for under developing countries. In Pakistan, there are a number of active microfinance institutions trying to uplift the social wellbeing of their poor clients and society as a whole Wellbeing is one of the important indicators for the economic condition of households. This study measured wellbeing through income, more income indicates more wellbeing. This study attempted to compare the wellbeing of clients to non-clients of microfinance programs in the Gujjar Khan. Data is collected from Barki district Gujjar Khan. There are a good number of microfinance institutes operating in Gujjar khan. Thus, a survey was carried out by interviewing two different set of people comprising of 50 microfinance clients and 50 non-clients. It has been observed that client's wellbeing increases from microfinance conditioned upon their skill set and productive utilization of microfinance loan. Finally, two samples Kolmogorov-Smirnov test, mean comparison analysis, and logistic regression are used for econometric analysis.

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LIST OF ABBREVIATIONS

MFI	Microfinance institute
SME	Small medium enterprises
FINCA	Foundation for International Community Assistance
NRSP	National rural support program
NC	Non-clients
C	Clients
WBC	Wellbeing of clients
WBNC	Wellbeing of non-clients
HHSC	Household size of clients
HHNC	Household size of non-clients
OSIC	More than one income source of clients
OSINC	More than one income sources of non-clients
NODC	Dependent's number of clients
NODNC	Dependent's number of non-clients
EDUC	Education level of clients
EDUNC	Education level of non-clients
MDC	Microfinance institute membership duration of clients
MDNC	Microfinance institute membership duration of non-clients
LUC	loan utilization of clients
RFL	Reason for not taking microfinance loan.
IPDNC	Income per day of non-clients.
IPDC	Income per day of clients.
GC	Gender of clients
GNC	Gender of non-clients
AGEC	Age of clients

AGENC	Age of non-clients
NOEHC	Number of earing hands in clients house
NOEHNC	Number of earning hands in non-clients house.
W	Wellbeing of respondent.
λi	Probability that the well-being of the respondents has increased.
Dc	Dummy variable to show clients and non-clients; assuming values of 1 or 0.
Ds	Dummy for other sources of income, assuming values of 1 or 0.
Xa	Education level of respondents
Xm	Membership duration of respondents.
Xfs	Respondent's household size
C	Consumption
Y	Income.
F	Function.
D	Absolute Difference of Cumulative Distribution

CHAPTER 1
INTRODUCTION

The lack of sufficient income-generating resources leads to lower levels of household income, that return can explain the high incidence of poverty that characterizes many of the third world nations. In the contemporary era Microfinance emerged, as one of the most potent instruments to address and alleviate this problem. Access to microfinance has allowed many individuals to enter the credit market individuals who do not have access to the formal credit market because of their inability to provide collateral. The microfinance loans are for the formation of new small businesses or expansion of existing; because of this income-generating capacity of the poor may be increased. Dr. Muhammad Yunus introduced microfinance in Bangladesh as the founder of Grameen Bank and received the Nobel Prize in 2006. Dr. Muhammad Yunus stressed that the basic principle of microfinance is to help collateral constrained individuals achieve self-sufficiency (Sharma, 2001). However, it must note that despite the increasing popularity of microfinance programs in the last three decades, 2.7 billion (72 percent) of the people in developing countries are yet to gain access to formal banking (Kendall *et al.*, 2010).

It is important to note here that almost all the microfinance programs (like Grameen Bank in Bangladesh, Khushali Bank in Pakistan) use traditional banking practices in which the borrowers are obliged to pay interest on their loans. It is of interest to note that although nearly 44 percent of the microfinance clients around the world are from Muslim countries, even today, almost 72 percent of the Muslims do not participate in these microfinance programs because the repayment of loans demands interest payments (Honohan, 2008; Karim *et al.*, 2008). Thus to a large extent, the conventional microfinance programs have not reached all their potential customers. Moreover, casual empiricism suggests that many borrowers currently utilizing the standard microfinance products might switch to non-interest-based microfinance products if and when they are available. Indeed, because of such sentiments, several Islamic Microfinance Institutions (IMFIs) have emerged in recent years offering various non-interest bearing products, but the progress and growth of these institutions are far below compared to the conventional MFIs (Dusuki, 2008).

Even though the last thirty years have witnessed a large increase in the working scope of microfinance programs worldwide, its performance in the provision of technical and cost-effective advice/training has not been satisfactory (Aguilar and Claussen, 2013). The aim of microfinance programs in increasing the productivity of the poor and assisting economic development remains unclear. The evidence of the positive impacts of microfinance on poverty reduction and social uplifting remains mixed (Armendariz and Morduch, 2005).

The betterment of an individual is dependent on several multiple factors that can be subjective and objective. The Subjective factors are happiness, social security, reputation, and others, and Objective factors are measurable factors like income and consumption level. According to the Keynesian consumption function, keeping other factors constant consumption level depends on income high income indicates high consumption. Al-Shami, S. S. A., Majid, I. B. A., Rashid, N. A., & Hamid, M studied in 2014 and concluded that developing countries strive to enhance the living of households. That can be possible by the utilization of human or non-human resources. In this pretext, the management of resources plays a significant role in creating a sense of household wellbeing.

1.1 Microfinance

The inability of the poor for the provision of collateral gave birth to the need for micro financing. Micro financing is a way of providing collateral-free loans. It is one of the proposed solutions for poverty alleviation. It is one of the modes of financing that offers different products and services like microloans to individuals and groups, insurance, and transactional services. The targeted segment of this mode is the lower-middle-income class. Microfinance loans can be into two ways that are group loans and individual loans. Group lending is on the mechanism of joint liability. In group lending whole group is considered liable for the loan repayment (Nawai & Shariff 2010). Grameen project is one of the Microfinance projects that were founded by Muhammad Yunus in Bangladesh in 1976. Microfinance programs in Pakistan were as small projects for rural areas but not institutionalized before 2000. This shift to formal institutes made micro financing more easy and approachable for the poor. According to the Second Quarterly Report (FY06) of the State Bank of Pakistan report, micro financing can grow in Pakistan. Now there are about 83 microfinance institutions (MFIs) active in Pakistan, like Akhuwat, Foundation for International, Community Assistance (FINCA), Advans Pakistan Microfinance Bank, Khushali Bank, First Microfinance Bank, Kashaf Foundation, and others. The main focus of MFIs is to help the poor to help them grow economically and socially.

1.2 Household's wellbeing

Household wellbeing is the betterment of an individual livelihood (Das, Manob Houqe, Rejaul, 2020). The well-being of an individual depends on subjective and objective factors (Das et al., 2020). ***Subjective factors*** are happiness, social security, and reputation. ***Objective factors*** are measurable factors like income and consumption level. According to the Keynesian consumption function, with other factors consumption depends on the income (Friedman, 1957). Individuals can increase their income by investing in any business. Middle and lower-middle-class can increase their income by investing in small-medium enterprises (SME). SME indicate the presence of channels the trends and patterns of earning opportunities for poor people (Al-Shami, Sayed Samer Ali Majid, Izaidin Bin Adbul Rashid, Nurulizwa Abdul Hamid, Mohd Syaiful Rizal Bin Abdul, 2014). Poverty does not indicate the absence of resources, but poor management of human or non-human resources. In this pretext, the efficient use of resources plays a role in household wellbeing.

1.3 Microfinance impact on wellbeing

According to Bangoura, Lansana, Albert, Diaw, Diadié. (2019) microfinance is one of the proposed solutions for alleviating poverty by economically empowering households. Borrowers of MFIs loans can have a better living if they use the loans for productive activities (Shu-Teng Zariyawati, M A, Suraya-Hanim, M, Annuar, M N.., 2015).

This study attempts to evaluate the household's wellbeing through consumption and income level affected by microfinance programs. The study examined how microfinance loans have impacted the household wellbeing of their clients. While considering factors as other sources of income, duration of membership, education level, age, and family size are among the factors that could also affect the household's wellbeing.

1.4 Problem Statement

MFIs aim to enhance the financial well-being of their client. The role of socio- Economic factors is also very significant for knowing the magnitude of the other factors that are, other sources of income, age, education, household size, membership duration, and gender on wellbeing. We selected the tehsil Gujjar Khan, which is one of the important tehsils of District Rawalpindi Punjab. It is located in the photohar region with diverse population conditions. There is disparity on the economic front in the tehsil there could be a varying number of income groups can be found including lower-middle to upper-middle. This income segregation attracted a good number of MFIs to start operations in Gujjar Khan. The prevailing socio-economic conditions of Gujjar

Khan incited us to study the wellbeing of the people and examine how effectively these MFIs are contributing.

1.5 Research objective and Questions

Several microfinance institutions are working in Gujjar Khan like Khushali bank, FINCA Microfinance, Al-Barakah, Bank Islamic, National rural support program (NRSP), and Apna Bank. The concentration of several microfinance institutions (MFIs) indicates the potentiality of MFIs in Gujjarkhan. Gujjar Khan has attracted the attention of MFIs led us to explore the impact of the programs of MFIs on wellbeing. The survey was from Microfinance clients and non-clients.

This study addresses the following questions

1-Do MFIs have an impact on the wellbeing of the poor people in Gujjar khan?

2-This study differentiates between the following:

a. Is there any difference between the wellbeing of clients and non-clients of MFI?

b. Is there any impact on wellbeing before and after membership of MFI?

1.6 Significance of the study

This study will help us understand the importance of wellbeing through micro financing and would pave the way for a more critical analysis of the effectiveness of MFIs. The recommendation part of the study will help the MFIs to see the potential changes in the program.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

Poverty is one of the economic issues, especially for developing countries. Economists have tried to address poverty in many ways, such as providing conditional and unconditional loans. The conditional loan requires collateral people lacing the condition become out of the process. The types of loans that require collateral are only suitable for people who are already financially stable, but provision based on collateral is not possible for the poor. According to Shirazi & Khan (2009), Poverty is one of the economic issues for developing countries. MFI helped to solve this issue.

The core issue of poor people is the non-availability of collateral micro-financing provides a way to facilitate through collateral-free loans at a predefined interest rate. MFIs usually target poor people for improving their living through active participation in productive business on a small scale. Poverty alleviation is the predicted goal of MFI, according to the mission statement of microfinance institutions (Bangoura et al., 2019).

In microfinance loans, joint liability is one of the potential ways of ensuring repayment MFIs lend loans to a group then the whole group becomes liable for the loan. In case one group member defaults, other members become liable to pay the loan, thus creating peer pressure within the group forcing the timely repayment of borrowed loans. In 1976, Grameen bank in Bangladesh practiced this group lending, and other developing countries also adopted this system (Hermes & Lensink, 2007). This mode of financing can bring financial empowerment. According to the Consumer Financial Protection (Financial, 2015), Financial wellbeing means that one can meet his financial urgencies and prepare to meet any catastrophe in the future. In this connection, microfinance is considered one of the tools for providing financial stability to the poor on which researchers have not shed much light. Microfinance requires accompany by other factors while lending loans. The aim of poverty alleviation requires outreaching it is necessary to break the barriers of limitations for sustainability. Outreaching is a differentiating feature of MFI from formal banking. Micro financing is all about overextending the program and make terms and conditions feasible for the poor and providing them services that can increase their social/economic wellbeing (Quayes, 2015).

According to Di Pucchio (2015), after the Grameen project founded by Muhammad Yunus, Iran also started a microfinance project to provide loans. One of the microfinance projects in Iran was the Microfinance Support Project purpose was to provide small loans to poor people with feasible repayment. The experimental study by Di Pucchio (2015) conducted in Iran evaluated that microfinance can help in poverty alleviation.

2.1.2 Surveys on Microfinance

Different surveys of areas where MFI are active evaluate the impact of Microfinance.

A critical survey by Hermes & Lensink (2007) concluded that microfinance is an efficient tool for poverty alleviation. The question arises here is it alleviating poverty or not?

According to a study by Hermes & Lensink (2007), it is contrary to the aim of MFIs that is poverty alleviation microfinance institutes avoid lending to core poor people. Giving loans to the core poor is risky when microfinance has to lend collateral-free loans. MFI bear monitoring cost as well, which make it costly for the institute, in some areas this problem is addressed like in Bangladesh, by providing other services like education and training to core poor. But still, it is not a very effective way of resolving the mentioned problem Forest dwellers (FD) in India made use of this tool by adding value to non-wood forest products (NWFP) like different herbs. A survey of villages in Madhya Pradesh and Andhra Pradesh concluded that microfinance saves FD's from local lenders and traders. Lending from Microfinance helps them add value to NWFP with ease (Pethita & Surayya, 2005).

The MFIs seem a way for poverty alleviation, but every solution comes with its problems. Outreaching the poor can be costly and affect the sustainability of microfinance institutes. But without outreaching the poor and empowering them, poverty alleviation is impossible. That raises the question that are MFIs a panacea for poverty or not, and which steps are needed to make them a panacea for poverty.

According to Borbora & Sarma (2020) impact of MFIs is contextual studies are present that conclude different results of microfinance, positive and negative. The study compared the wellbeing of participants with non-participants participants were well off than non-participants. The role of microfinance loans was one of the facets. Amendment in the microfinance project should be according to geography and demography (Onyuma & Shem, 2005).

A study in Indonesia on the impact of MIFs on households in rural areas showed that demographics play an important in the effectiveness of micro financing. Primary data was collected through the survey, which concluded that microfinance needs to accompany other factors like age, marital status, and education (Santoso, Danang Budi, Gan, Christopher, Revindo, Mohamad Dian, Massie, Natanael Waraney Gerald., 2020).

2.1.2 Impact of Microfinance

The literature on microfinance portrays a picture that micro financing had a positive impact on the wellbeing of households. Different case studies of various areas indicate that microfinance reduced poverty. In Asia, microfinance projects are Grameen Bank in Bangladesh, BoncoSol in Bolivia, and Bank Rakyat in Indonesia. These projects empowered the poor by giving small loans to them through which they opened small cottage industries, which became the reason for economic empowerment and self-confidence. The provision of small loans was to empower poor people. Earning can give a sense of empowerment to both men and women. In peninsular Malaysia, SMEs were upon formal financial institutes, and the issue in that was the provision of collateral that was resolved by MFIs (Khawari, 2004).

Micro financing made it easier for SME owner to finance their businesses through microcredits. Smooth mode for financing for SMEs increases chances for a positive impact on the wellbeing of households. Repayment is dependent on business experience, education level, loan amount, and loan tenure (Shu-Teng Zariyawati, M A, Suraya-Hanim, M, Annuar, M N.., 2015). Microcredit credit harmed poverty and economic vulnerability in Peninsular Malaysia. Because of microcredits income of households increased. Household income increased due to SME's, which also became the reason for women's empowerment (Al-Mamun & Mazumder, 2015).

A study by Maîtrot & Niño-Zarazúa (2017) exhibits Microfinance is an efficient tool for alleviating poverty. It can increase capital inflow in the economy while empowering the poor. Micro financing has multiple dimensions for unveiling those aspects work is required. This tool isn't just about giving loans but empowering the poor is also an important aspect.

For full utilization of this tool, it needs to be accompanied by other factors such as awareness and financial literacy.

2.2 Summary

Micro financing is a mode of financing which can be one of tool for poverty alleviation. This tool is used by many countries and specifically under-developing. Different studies showed the positive impact of microfinance, and that is dependent on the usage of clients.

CHAPTER 3
DATA AND METHODOLOGY

3.1 Data and sample

We collected the data through door to door survey in tehsil Gujjar khan using questionnaire (Appendix-A). A total of 100 interviews were conducted out of which 50 were the microfinance institutes clients and 50 were not the clients of any microfinance institute.

Microfinance institutes such as National Rural support program (NRSP), Apna Bank and Khushali Bank were approached to help us in initial field work to reach out clients at various vicinities of Gujjar Khan Area. From the same locality of clients the non-clients who were small entrepreneurs and owns a family or small business but at the same time they were not the MFI loan borrower.

3.2 Methodology

For the study, we collected a sample of 100 respondents (50 MFI clients and 50 non-clients). All the clients and non-clients were asked to fill out a questionnaire1 (See Appendix A).

The survey was conducted at Gujjar khan during months of June and July 2020. However, we suffered from mobility issues due to COVID-19 pandemics that made reaching out to people challenging. Clients of MFI were approached in two ways, first through Gujjar khan's local residents and secondly, with the help of MFI those were Khushali Bank and Apna Bank. Rural

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[1] While designing the questionnaire we sought help from the studies conducted by the Hermes & Lensink (2007) who measured the wellbeing of MFI clients through a change in income level. They observed the impact of other factors those were Age, gender, household size, and several dependents on the wellbeing of the loan. Further, we also investigated the survey conducted by Pethiya, B. P. & Surayya, T. (2005) in Madhya Pradesh and Andhra Pradesh studying the impact of loans on Forest dwellers concluding that the loans taken by the clients positively affect the wellbeing. Similarly,Al-Mamun & Mazumder (2015) surveyed Peninsular Malaysia and recorded the before and after microfinance loan income as one of the important factor determining the effectiveness of MFI loan towards the wellbeing of the MFI clients.

areas have the communal system therefore the locals are often aware of MFI membership of their neighbors, and MFI does group lending that makes the membership status obvious. Women were interviewed in the presence of their family members considering their values and customs. Some respondents were interviewed while they were at the MFI office for paying their installments. In the same vicinity the local non-clients were interviewed by visiting them door to door.

Study aims to evaluate the impact of MFI on financial wellbeing of client. Financial wellbeing is measured is measured by the help of consumption of individuals, according to Keynesian income function consumption is directly proportion to income (Friedman, 1957). Income of clients and non-clients is evaluated with the help of their consumption.

High Consumption $\longrightarrow$ High Income $\longrightarrow$ Financially well off

3.1.1 Clients: -

Clients can be further categorized into the following categories

- Extremely poor but skilled
- Extremely poor but not skilled.
- Financially better off but skilled.
- Financially better off but not skilled.

3.1.2 Non-Clients: -

Those non-clients were interviewed who were running any SME, without taking the help of microfinance loan, they can also be categorized into the following ways: -

- Aware of microfinance loans.
- Not aware of microfinance loans.

3.2 Limitations

Following are the limitations of the study: -

- Survey was conducted during times of COVID-19 pandemic. Thus, reaching out the respondents was bit difficult to reach out.

- As the study was not been funded from any source thus the survey wasn’t conducted on larger scale.

CHAPTER 4
RESULTS AND DISSCUSION

4.1. Descriptive Statistical Analysis

Data was collected from clients and non-clients, in order to compare wellbeing of clients and non-clients. Data was pooled together. Data is divided into two samples clients and non-clients, by using Kolmogorov- Simrnov test[2], logistic regression and mean comparison we will explain the results.

We represented the client and non-clients with 1 and 0 respectively. The education of both clients and non-

clients is categorized as illiterate as 0, primary as 1, middle as 2, secondary school as 3 higher secondary school as4, diploma with 5, graduation with 6 and post-graduation is numbered 7. The wellbeing is also referred as 0 no wellbeing and 1 as increase in wellbeing. We adopted two categories of loan utilization 1 for business and productive purpose and 0 for personal use or we may call it a nonproductive utilization of loan. Those who were aware of microfinance programs and their loan structure were denoted as 1 and otherwise 0. Lastly, male subjects were represented with number 1 and female with 0.

In "Table 1 & 2" the results of summary statistics for both client and non-clients are given. The results reveal that the average wellbeing of clients and non-clients is 0.46 and 0.66 respectively. Where household size of client is also bigger than the non-clients, there is a marginal difference between the other sources of income between the clients and non-clients as the clients are utilizing some other sources of income largely than the clients because their household size is bigger and more income is required to feed their family that increasing their

[2] According to (Kanji, 2006) Kolmogorov- Simrnov test is used for observing difference of two samples

per day income compared to the non-client. This also certifies the results that the clients have more earning hand than non-clients. Here data also reveal no difference in the educational setting of both the categories of the subjects.

Table 1: Summary statistics (Microfinance Clients**)**

Variables	N	Mean	St.Dev	min	max	skewness	kurtosis	t-value
Well Being	50	.46	.503	0	1	.161	1.026	6.461
Household Size	50	6.22	2.735	2	16	1.296	5.262	16.08
Other Sources of Income	50	.56	.501	0	1	-.242	1.058	7.897
No. of Dependents	50	4.52	2.476	1	13	1.271	4.877	12.907
Education	50	2.08	1.957	0	6	.63	2.112	7.515
Membership Duration	50	4.69	4.659	.33	20	1.487	4.655	7.118
Loan Utilization	50	.74	.443	0	1	-1.094	2.198	11.809
Income per day	50	1129.08	607.492	200	3000	1.008	4.374	13.142
Reason for Loan taking	50	1	0	1	1	.	.	.
Gender	50	.16	.37	0	1	1.855	4.44	3.055
Age	50	37.5	10.799	21	60	.381	2.021	24.554
No. of Earning Hands	50	1.72	.757	1	4	.793	3.118	16.066

Table 2: Summary statistics (Microfinance Non-Clients**)**

Variables	N	Mean	St.Dev	min	max	skewness	kurtosis	t-value
Well Being	50	.66	.479	0	1	-.676	1.456	9.753
Household Size	50	5.72	1.75	3	10	.528	2.763	23.111
Other Sources of Income	50	.36	.485	0	1	.583	1.34	5.25
No. of Dependents	50	4.26	1.454	2	9	.827	3.951	20.714
Education	50	2.82	1.804	0	6	-.319	1.734	11.056
Membership Duration	50	0	0	0	0	.	.	.
Loan Utilization	50	0	0	0	0	.	.	.
Income per day	50	924	418.237	400	3000	2.494	13.294	15.622
Reason for Loan taking	50	.7	.463	0	1	-.873	1.762	10.693
Gender	50	.96	.198	0	1	-4.695	23.042	34.293
Age	50	43.48	9.836	27	68	.461	2.508	31.258
No. of Earning Hands	50	1.46	.676	1	3	1.145	3.05	15.262

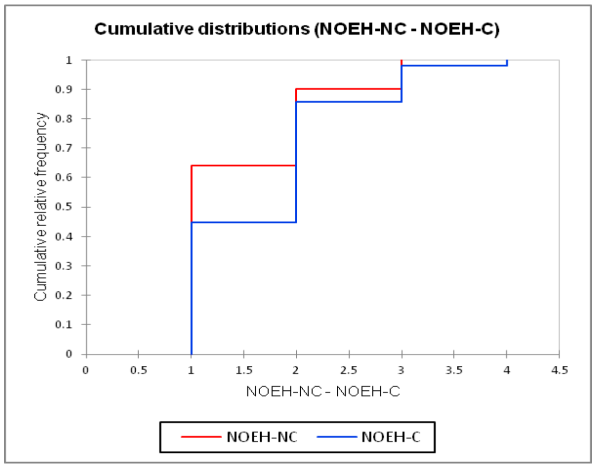
4.2. Non-Parametric (Kolmogorov- Simrnov Test)

The results depicted in table 3 shows that there are no significant differences in the wellbeing of both client and non-client. However, there are some significant difference in terms of age and gender as younger females prefer to be the microfinance client and this is inclining with the existing practice in the microfinance programs around the globe. The results also revealed a significant utilization of loan towards the productive purpose showing the tendency of clients obtaining the loan and investing in a productive business effectively. However, a certain proportion of clients have obtained the loan for their personal use but that proportion is not significant. The results thus obtained in table 1 & 2 are ascertained in table 3. Graphically the results of Two-sample Kolmogorov-Smirnov (Two Tailed) Test are presented in figure 1.

Table 3: **Two-sample Kolmogorov-Smirnov (Two Tailed)Test**

Variables	WBC-WBNC	HHSC-HHNC	OSIC-OSINC	NODC-NODNC	EDUC-EDUNC	MDC-MDNC	LUC-LUNC	IPDC-IPDNC	RFLC-RFLNC	GC-GNC	AGEC-AGENC	NOEHC-NOEHNC
D	0.200	0.080	0.200	0.120	0.240	1.000**	0.740**	0.260	0.300**	0.800**	0.320**	0.191
P-value	0.270	0.997	0.270	0.864	0.112	0.000001	0.000001	0.068	0.022	0.000001	0.012	0.327

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$



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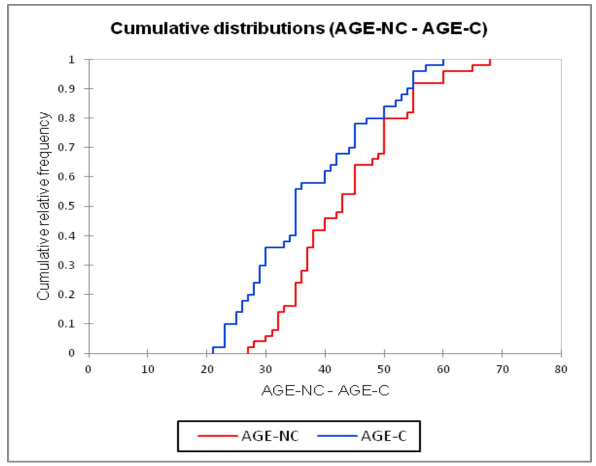

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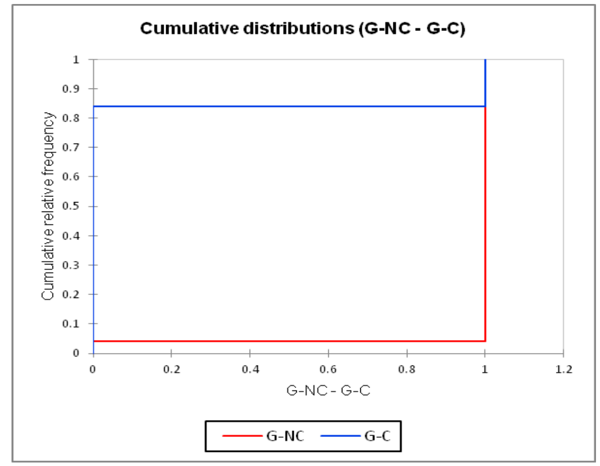

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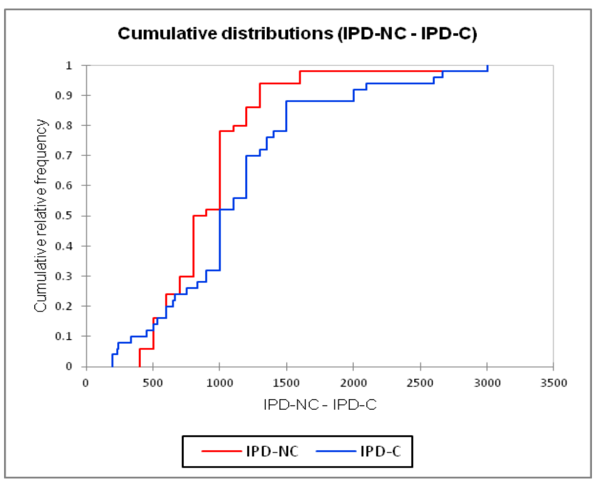

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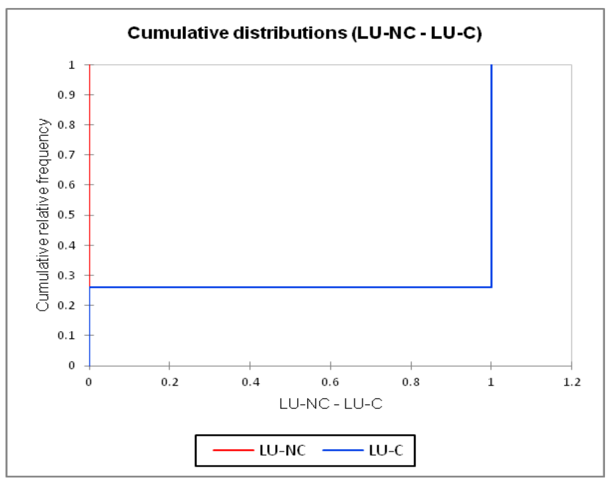

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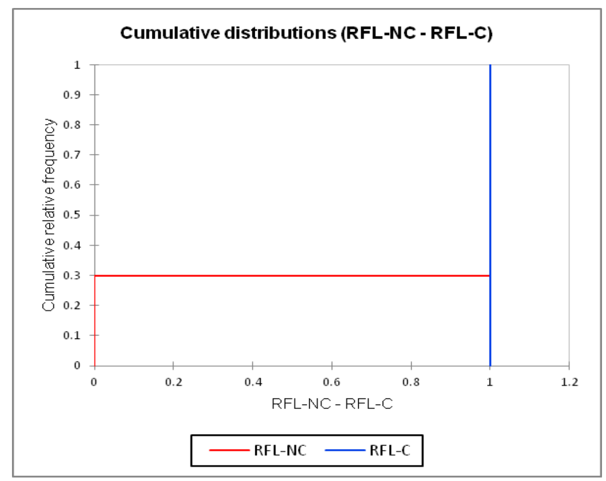

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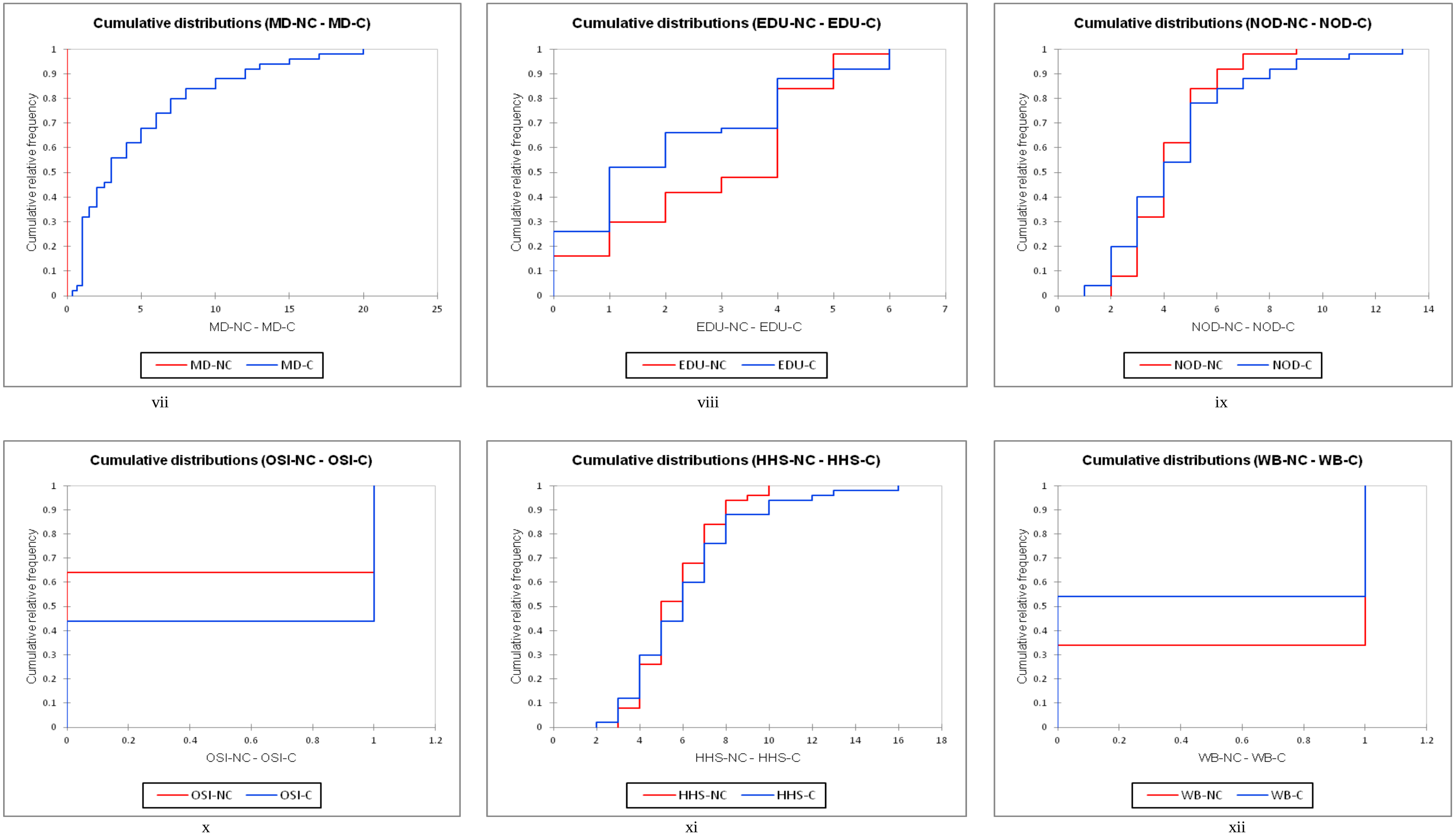

Figure 1: **<u>Two-sample Kolmogorov-Smirnov (Two Tailed) Test (i to xii)</u>**

4.3. Logistic Regression Analysis

For the statistical significance of the earlier obtained results and findings, we employed the Panel logistic regressions with clustered robust standard errors[3] .These panel regressions were used with control variables for demographics of the subjects. Logistic regression helps to understand the complex phenomena the way present in the model, about the impact of MFI on the wellbeing. Wellbeing in the model is in dichotomy, "1" represents that the individual is better off after opting loan and "0" that he is not. Now, if clients are feeling well off after taking a loan, what are the other factors that are making that possible, and in case of client's answer is no, how factors like education, age, and household size are a hindrance in battering off the clients. Logistic regression methodology with clustered robust standard errors for both clients and non-clients is used in the study. Logistic regression is used with the wellbeing of the subjects as the dependent variable which took the value 1 when the individual's wellbeing showed an increase in terms of increase in its consumption and 0 otherwise. This study is taking membership, education level, membership duration, additional sources of income and household size of respondents as independent variable and wellbeing as dependent variable.

$$WB_{ci} = \alpha_0 + \gamma_1 C_i + \gamma_2 OSI_{ci} + \gamma_3 EDU_{ci} + \gamma_4 MD_{ci} + \gamma_5 HHS_{Ci} + \varepsilon_{ci} \qquad \text{-----------------} \quad \text{eq. (1)}$$

$$WB_{Ncj} = \beta_0 + \delta_1 NC_j + \delta_2 OSI_{Ncj} + \delta_3 EDU_{Ncj} + \delta_4 HHS_{NCj} + \epsilon_{Ncj} \qquad \text{-----------------} \quad \text{eq. (2)}$$

Where, *WBci* and WB_{NCj} represent the wellbeing of *ith* client and *jith* non-client. *Ci* and NC_j is a dummy variable used to show *ith* individual as clients and *jith* non-clients

[3] Since, we had multiple observations on each of the subject, the clustered robust standard errors model was the appropriate specification.

assuming values of 1 or 0. $OSIc_i$ stands for the client having any other sources of income and OSI_{NCj} for non-client having other sources of income it is a dummy if yes then 1 and 0 otherwise. EDU_{ci} and EDU_{NCj} depict the educational level of *ith* client and *jth* non-client. Membership duration of the client is represented by MD_{ci} and lastly the house hold size *(HHS_{ci} and HHS_{NCj})* of both the respondents such as clients and non-clients is given in the above model to estimate their effects on affecting the wellbeing of the respondents.

Table 4: Logistic regression (Microfinance Clients)

Well Being	**Coef.**	**St.Err.**	**t-value**	**p-value**	**[95% Conf**	**Interval]**	**Sig**
Household Size	15.246	1.105	13.80	0.000	13.079	17.412	***
Other Sources of Income	-14.092	1.538	-9.16	0.000	-17.106	-11.078	***
No. of Dependents	-15.793	1.262	-12.52	0.000	-18.266	-13.320	***
Education	-0.145	0.334	-0.43	0.664	-0.800	0.510	
Membership Duration	-0.253	0.183	-1.38	0.167	-0.612	0.106	
Loan Utilization	0.000	.	.	.	.	.	
Income per day	0.000	0.001	0.15	0.881	-0.001	0.002	
Gender	2.810	1.189	2.36	0.018	0.480	5.141	**
Age	0.054	0.060	0.90	0.371	-0.064	0.172	
No. of Earning Hands	0.000	.	.	.	.	.	
Constant	-14.524	2.485	-5.84	0.000	-19.395	-9.654	***
Mean dependent var		0.622		SD dependent var		0.492	
Pseudo r-squared		0.284		Number of obs		37.000	
Chi-square		.		Prob > Chi-square		.	
Akaike crit. (AIC)		51.167		Bayesian crit. (BIC)		64.054	

*** *p<0.01*, ** *p<0.05*, * *p<0.1*

According to logistic regression results given in table 4 for the clients, the coefficient of household size has a positively affected the subjects showing an increase in the chances of client's wellbeing, a greater number of household increases the helping hands in a household which increases participation in economic activities as well. On the other hand, OSI showed a negative co-efficient because the addition of new SME costs money when clients are investing but going into defaults. OSI is a significant indicator. The number of dependents has a negative co-efficient and significant indicator affecting the wellbeing of clients adversely. At the same time education showed a negative, while in survey formal education was considered as a benchmark, but in the case of rural areas of Pakistan trade and skilled education can be more beneficial. While addressing the membership duration, it has been observed that long term membership duration of clients with MFI means clients are under debt and paying installments so that decreases wellbeing thus showing a negative effect.

The Income per day has a positive co-efficient along with gender showing significant positive indicator of the wellbeing of the client. The coefficient of No. of earning hands and ages have positive sign but the magnitude of age is more than the number of earning hands means that people with higher age are more productive and are contributing in a positive manner for the wellbeing of their families.

Table 5: Logistic regression (Microfinance Non-Clients)

Well Being	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Household Size	-0.155	1.279	-0.12	0.904	-2.662	2.352	
Other Sources of Income	-0.285	1.708	-0.17	0.868	-3.631	3.062	
No. of Dependents	0.094	1.288	0.07	0.942	-2.431	2.619	
Education	-0.053	0.228	-0.23	0.816	-0.499	0.393	
Membership Duration	0.000	.	.	.	.	.	
Loan Utilization	0.000	.	.	.	.	.	
Income per day	0.002	0.002	1.08	0.280	-0.001	0.005	
Reason for not Loan Taking	0.404	0.702	0.58	0.565	-0.972	1.781	
Gender	1.134	1.574	0.72	0.471	-1.952	4.219	
Age	0.000	0.031	0.01	0.990	-0.061	0.061	
No. of Earning Hands	0.000	.	.	.	.	.	
Constant	-1.423	2.350	-0.60	0.545	-6.028	3.183	
Mean dependent var		0.660	SD dependent var			0.479	
Pseudo r-squared		0.065	Number of obs			50.000	
Chi-square		3.449	Prob > Chi-square			0.903	
Akaike crit. (AIC)		77.931	Bayesian crit. (BIC)			95.140	

*** *p<0.01*, ** *p<0.05*, * *p<0.1*

Table 5 shows the results of logistic regression of non-clients. The household size of the non- clients shows a negative effect on the wellbeing of the subjects which is statistically insignificant , larger HHS decreases well-being of non-clients as this put additional stress on the budget of the people. Also the OSI affected the wellbeing negatively but the effect is not significant means an increase in OSI also increases the chances of defaults thus creating additional burden on the people. The coefficient of No. of dependents has positive co- efficient with 0.094 magnitude showing that when the number of dependents increases that put pressure for earning more which increases wellbeing but the effect is not statistically significant. Education has a negative co-efficient; in the case of rural areas having skills can increase the wellbeing of households, instead of formal education. As far as the income per day is considered it has a positive impact on wellbeing. Reason for not taking loan showed a positive co-efficient; non-clients aren’t taking loans even when they are aware, they aren’t taking because of other reasons like because of interest. Gender remained a positive factor same in case of age and No. of earning hands, but insignificant.

CHAPTER 5

CONCLUSION AND RECOMMENDATION.

Poverty is one of the economic issues, especially in the case of under developing countries. Provision of loans to the poor is one of the proposed solutions. In the formal banking system provision of collateral is an issue for the poor. This inability of the poor gave birth to the need for collateral-free loans. Micro financing proposed the collateral-free loans and it builds a social-economic system by group lending and individual lending. The dominant strategy of MFIs is group lending with joint liability. It got international recognition after Grameen Bank, which was founded by Muhammud Yunus in Bangladesh in 1976. Micro financing is opted by many other countries like India, Iran, Pakistan, Malaysia, and Indonesia. In Pakistan, the formal development of Micro financing started after 2000. Now around 83 Microfinance institutes are operating in Pakistan. The main goal of MFI is to alleviate poverty. This study is about the impact of MFI on household's wellbeing, and how the wellbeing of MFI clients differs from the wellbeing of non-clients. In this pursuit, a household's wellbeing survey was conducted in a semi-rural area Barki of tehsil Gujjar Khan. Gujjar Khan is an important tehsil of Rawalpindi situated in the Potatahar region. The numbers of MFI are operating in this region. Gujjar Khan has diversity in terms of income, culture well as social setup of the society. Thus, understanding the impact on the wellbeing of people with respect to their other sources of income, education and household size carries an important position. In this study, we tried to examine the wellbeing of clients and non-clients keeping in view the above factor in the picture coupled with the impact of membership duration on the microfinance clients.

A total of 100 people were interviewed. Out of 100 respondents, 50 were clients and 50 were non-clients from the same locality. Their way of living and education level was more or less similar to each other. Clients were reached through microfinance institutes which are NRSP, Apna Bank, and Khushhali Bank. Non-clients were the respondents who were doing business without taking any microfinance assistance from any institution. Data was collected during the Covid-19 Pandemic, and people were reluctant to interact easily. This limited our survey to a maximum of 100 respondents. Further, there were financial constraints which also limit us in data collection to only one rural area of Gujjar Khan.

The results of the study revealed that the household size has a positive impact on the wellbeing of clients, where other sources of income, education, and membership duration have a negative impact. A large household is helpful regarding participation in productive activities. But if the clients are going into defaults then other sources of income diminish wellbeing, specialized skills are required for making productive use of loans, not formal education can be helpful for the enhancement of wellbeing. If the client's membership duration is increasing that means the client is in debt and paying installments, so that decreases the wellbeing of the client. In the case of non-clients household size, other sources of income and education diminish the wellbeing. In the case of clients, there is potential for financial wellbeing, they can use the loan for income generation which can increase their wellbeing.

MFI's clients can be divided into three categories unskilled, skilled, and semi-skilled clients. Clients who were able to make productive use of the money were skilled and semi-skilled. In the case of unskilled clients, they were either going into default or end up using loans for personal/ non-productive purposes. Non-clients who were even aware of the microfinance loan availability were not availing the facility mainly due to the interest rate on the loans. We also observed that there were some non-clients who were not aware of any such provision of microfinance programs and were not been able to answer whether they need financial help to support their business or otherwise.

Finally, through this study, we recommend that as in the developing countries literacy level is very low and people can efficiently run small-medium enterprises if they have either formal education or practical experience of running businesses. It has been observed that people having formal education (till intermediate or Bachelors) or practical experience in running a business can generate capital by using Microfinance loans compared to those who are either illiterate and utilizing the loan for the personal non-productive purpose. Thus, we suggest that there should be specially designed courses on doing business coupled with the skills training according to the capacity of the people and market demand. MFIs need to collaborate with different training institutes and provide discounts or free training to their clients as well as other people who could be potential borrowers of the microfinance products. This will help people to enhance their skillset and social independence. Also, the donor agencies should provide financial aid to MFI for continuous, so that they can finance training for their clients. Lastly, the MFIs must come up with a basket of products that are non-interest-based so that the people who are not opting for any MFIs product may be able to adopt such products that suit them are non-interest bearing.

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APPENDIX A

Questionnaire

Name
Gender
Age
Household size
Earning Hands
Dependent
Education

1-Member of microfinance?

Yes No

2- If answer to previous question is yes then what motivated you to take microfinance loan?

3-If answer to previous question is yes then, what is duration of membership?

4-If answer to question no 1 is no then why you are not microfinance institute client?

5-What was your income before taking loan?

6-What is your income now (after taking loan)?

7-Do you feel financially well off after taking loan?

Yes No

8-How many sources of income do you have, and what are those?

9-How many loans you are taking (Group/individual)?

10-What is scale of your business?

11- What were daily returns from business before loan?

12-What are daily returns from business after loan?

13-What is impact on monthly income because of loan?

14-How many installments you paid?

15- Number of defaults?

16- Impact of loan on monthly income?

17- Did this loan affect your income household?

18-Did this loan to expand your current business?

19-Was there ease in repayment of loan?

20-If answer to previous question is no, then what difficulties you face during repayment of loan?

21-Did loan strictness affect your business?