Islamic Microfinance and Poverty Alleviation: An Empirical Ascertainment from Pakistan

Hafiz Zahid Mahmood1, Mehreen Fatima2, Muhammad Khan3, Muhammad Ali Qamar4

Abstract
Islamic Microfinance (IMF) is an emerging mode for empowering the poor. The current study has been devised to observe the implications of IMF on the assets and poverty status of the households who borrowed from three pioneering organizations i.e. Akhuwat Foundation, Farz Foundation and NAYMAT based in Lahore, Punjab, Pakistan. Pre and post project approach was rendered to observe the impacts of microfinance on the targeted respondents. In this regard, purposive sampling was employed for data collection to avoid randomized error where self-administered structured questionnaires were used for data collection. Foster, Greer and Thorbecke measures of poverty assessment were used to achieve the objectives of the study. Results exhibited positive impacts of Islamic microfinance on the lives of the poor. This study is a contribution in the literature as there is no empirical study about the impact casted by the Islamic microfinance in Pakistan.

Keywords: Islamic Microfinance, Microfinance, Islamic finance, Poverty, Impact Assessment, Pakistan.

Introduction:
Poverty is a multifaceted phenomenon exhibited by food deprivations, physical disability and lack of basic necessities. Halving poverty and hunger is the top agenda of United Nations’ Millennium Development Goals from 1990-2015. A large numbers (47%) of poor had been living below poverty line (i.e. $ 1.25 a day) in developing countries, in 1990s, were reduced to less than half (22%), in 2010 (United Nations, 2013). Today more populations have access to clean drinking water,
reduction in hunger, controlling infectious disease. However, there is still a lot to be done to overcome curse of human deprivations by making collaborative efforts of the international development agencies, civil society and public sector initiatives by the indigenous policy makers.

Though, poverty has halved in the Asia during the last decade of 20th century, 30% population in Asia is living below the poverty line. This grave situation is not different in Pakistan where 35% population is living below the poverty line (WDI 2013). Nearly 40% of Pakistani children are malnourished due to poverty. Off all the programs initiated to tackle poverty (i.e. People Works Program, Tamer-e-Watan Program, BISP, Pakistan Bait ul Maal), microfinance is highly credited for its contribution in poverty reduction.

In the contemporary world, financial institutions may play pivotal role in alleviating poverty by extending loans but they need collaterals to fulfill this obligation. Therefore, nearly 75% the world’s poor are financially excluded from institutional finance for different reasons (World Bank, 2013) and, consequently, poor are kept un-bankable. Lack of capital did not allow the poor to utilize economic opportunities and shelter themselves from financial crisis (Obaidullah & Khan, 2008). In this regard, various efforts have been initiated from international development organizations. Microfinance is one of those efforts initiated by Grameen Bank in Bangladesh, in 1976. Since its inception, the Grameen Model has been replicated in many countries where MFI’s provide financial services under the umbrella of social collateral.

Small initiative of microfinance is not micro any more. In 2011, around 1400 MFIs around the world provided financial services to 94 million poor with estimated loan portfolio of US$87,650 million. Although global microfinance industry is expanding, rapidly, and it is playing significant role in alleviating poverty (World Bank, 2013; Aghion and Morduch, 2005; Khandker, 2003; Mosley, 1999) but its success has been questioned due to its interest based feature which is normally very high (Fernando, 2006) and discourages poor to opt this route.

Mannan (2007) argued that Grameen Bank charges 54.95 percent interest rate if the hidden costs are also included. In an independent study, Sadeq (2007) concluded that Bangladeshi NGOs charge 25-30% interest which ignites unrest in the population. Most of the MFIs in Asia and Pacific region charge nominal interest rate of 30-70% per year while effective interest rates are much higher due to the fees and commissions charged by them (Fernando, 2006).

As interest is strictly forbidden in Islam therefore most of the practicing Muslims try to avoid conventional microfinance. It has been observed that 72 percent of Muslims
in majority countries avoid financial services (CGAP, 2008). According to a study undertaken by ADB (2009), 80% of the respondents interviewed claimed to avoid interest. Similar kinds of results were observed by different international organizations during the surveys to know the preferences of the people of different Islamic countries. In this regard, 20-40%, 60%, 40%, 43-46% and 49% respondents of Jordan, Gaza, Yemen, Syria and Indonesia respectively, prefer Islamic Microfinance (ADB, 2009). The situation is not different in Pakistan where, Jaffari et al. (2011) observed that 80% of the respondents belonging to Lahore, Karachi and Islamabad cities of Pakistan considered loans disbursed by conventional microfinance institutions as un-Islamic. Ashraf et al. (2014) also stated in their study that religion is one of those factors which obstruct the participation of rural Bangladeshi Muslims in microfinance institutions.

Laila (2010) suggests that credit should be offered to the poor on more benevolent and zero interest basis because loan with compounded interest rate inflicts serious hardships on the poor. Islamic microfinance (IMF) is getting popular as an alternative to conventional microfinance not only in many Muslim countries but also in non-Muslim communities due to its interest free attribute. This mode of financing presents moral rulings on answerability to God in order to check human moral weakness. Islamic Finance implements market control and discipline by putting limits on “leverage, excessive lending and derivatives” (Laila, 2010). Moreover, it has several distinguished sub-modes like zakat, sadaqat, waqf, Qarz e Hassan, Murabaha, Zakat, Waqf, Sadaqah Istisna, Musharakah, Salam, Mudaraba etc. (ADB 2009, Bano, 2012; IFAD 2013).

Islamic Microfinance (IMF) is an attraction for Muslim poor who can change their social status by becoming bankable and, in this way, poverty can be reduced to greater extent in the Muslim world (Gustina & Ihsan, 2010). Rahman (2010), Rahman & Ahmad (2010) and Ahmad & Al-Mubarak (2014) observed that the availability of Islamic microfinance brought ethical change in their behavior which is desirable and appropriate to alleviate poverty and which also improved their income, expenditure and crop production. Islamic banking system is grounded on the principles of Shari’ah while conventional banking system is built on the basis of interest rate (Al-Mamun et al., 2014). Islamic banking is emerging around the globe (Rahman & Rosman, 2013) and is taken as a separate banking system as it forbids interest and imply profit sharing as a substitute (Mohamad et al., 2008). According to International Fund for Agriculture Development (2013) 500 Islamic financial Institutions have been established, globally, to cater Sharia Compliant products with market size of $ 1.3 trillion in 75 countries in last thirty years. In addition, the sector is appealing for the
population of both Muslims and non-Muslim countries (International Fund for Agriculture Development, 2013). It also proposed by some reports that in next few years, assets of Islamic financial institutions might increase five times as compared to the current level (Shaikh, 2013).

CGAP claims, some 255 microfinance service providers are offering Sharia compliant services mostly (92%) concentrated in two regions i.e. East Asia and Pacific (164) and Middle East and North Africa (72) (CGAP, 2013). Islamic microfinance institutions have observed fourfold increases in their clients since 2006 with estimated clients about 1.3 million in the world (Ibid). Microfinance mod of financing may be a key to poverty alleviation to 650 million Muslim populations living below 2 dollar a day (Ibid).

Overview of Microfinance in Pakistan

Microfinance took roots in Pakistan in 1970s with the establishment of Agriculture development Bank of Pakistan (ADBP) to serve rural farmers by providing them with subsidized credit (Rauf & Mahmood, 2009). Later, the success of Agha Khan Rural Support Program (AKRSP), paved the way for microfinance in Pakistan. Khushhali Bank was the first microfinance bank established in 2000, as result of Microfinance Ordinance introduced by the central bank, in 2001. Since then, State Bank of Pakistan is putting great efforts in promoting microfinance sector. Pakistan is one of the few countries of the world having separate legal and regulatory framework for microfinance banks (Allen & Overy LLP, 2009). Currently, a large number of MFBs, MFIs and RSPs are providing financial services to the neglected segment of society (Pakistan Microfinance Review, 2012).

Islamic finance and Islamic microfinance are emerging industries in Pakistan. The State Bank of Pakistan has devised guidelines for Islamic microfinance in 2007 (Karim et al., 2008). These guidelines lay down different types of arrangements for institutions to offer Islamic microfinance services and set forth the requisites concerning appointing Shariah advisors, licensing and separating the funds for Islamic and conventional products if the bank or institution is providing both conventional and Shariah based products. In Pakistan, some institutions like Akhuwat, Farz Foundation, Wasil Foundation, Naymat, and Islamic Relief are disbursing Islamic MF products.

Akhuwat foundation is the largest that has disbursed Qarz e Hassan to 0.355 million households with 175 branches in 116 cities of Pakistan (Akhuwat 2013). Loans have been extended to 224,308 male and 131,143 female entrepreneurs of the country with
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98.84% return rate in a small duration of about ten years. Farz Foundation started its operation with pilot project in 2009 while NAYMAT initiated in 2002 but they started Islamic MF services in 2009. Likewise Islamic Relief Pakistan began their Islamic microfinance services in 2001 along with other Sharia compliant social services to help deprived and destitute but not on such a large scale like Akhuwat Foundation. These organizations are catering their Islamic Microfinancial services in the form of Murabaha to help entrepreneurs’ in the country. Moreover, WASIL Foundation (Murabaha, Ijara, Istisna, Salam etc.) and Asassah have started working a short time earlier to help poor to make them financially self-reliant.

The current study has been devised to observe the implications of IMF on the assets and poverty status of the households who borrowed from three pioneering organizations i.e. Akhuwat Foundation, Farz Foundation and NAYMAT based in Lahore, Punjab, Pakistan.

![Graph](image)

**Source:** Pakistan Microfinance Review (2012)

**Fig. 1.** An overview of microfinance development in Pakistan (2009 to date)
Methodology: Experimental Design and Data Collection

Three institutions pure Islamic Microfinance organizations namely Akhuwat Foundation, NAYMET (Naziran Yousaf Memorial Trust), and Farz Foundation working in Lahore, the provincial capital of Punjab, Pakistan, were selected. Pre and post project study design was adopted to achieve the targets of the study. In this regard, only those clients of the targeted institutions were selected, who borrowed about three years back from the time of data collection. Normally, impact assessment studies are executed to observe the impacts of any social interventions on the people after 5-6 years. But NAYMAT and Farz Foundation executed their IMF projects in 2009 while Akuwat Foundation started its operations in 2002, its clients were also selected with the same time periods to avoid any bias. Therefore, it may be said that this study might be the midterm assessment of the said organizations. As Islamic microfinance is in its developmental stage in Pakistan therefore this span of three years is justified to find out its impact on its clients.

Purposive non-probability sampling technique was employed for respondent selection. Sekaran & Bougie (2010) defined purposive sampling as a technique of sampling where sample consisted of those people who have the required information. Hence, 168 respondents were selected from these institutions. Moreover, respondents are selected from certain areas according to the ease of access of the researchers. As large numbers of MFIs’ clients are illiterate or marginally literate, face-to-face interview method was adopted to collect data from the target respondents by using structured questionnaire.

Poverty Measurement: Poverty Line

There is no official Poverty line available for year 2009 and 2012 from the public or private sector agencies to estimate ratio of the poor in Pakistan and the Planning Commission of Pakistan has used Consumer Price Index to adjust the official poverty line till year 2006. Therefore, poverty line was calculated for the years 2009 and 2012. However, high inflation rates may have distorted our poverty measurements for the data collected in the target years; therefore, to avoid any anomalies, inflation adjusted poverty lines for 2006 and 2012 were estimated as proposed by Awan and Iqbal (2010). In this regard, poverty line (i.e. Rs. 1140/month/adult) of 2008 was taken as base poverty line and the poverty lines were calculated as Rs. 1334 and Rs. 1850 for the years 2009 and 2012. Moreover, the international poverty line (US$1.25/day) was also taken for Foster Greer and Thorbecke (FGT) poverty measures.
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Foster Greer and Thorbeck Measure of Poverty
Foster, Greer and Thorbecke (Foster et al., 1984) class of poverty measures was used to evaluate the impact of Islamic microfinance services on poverty level of respondents. ADB (2007) reports “Foster, Greer and Thorbecke (FGT) class of poverty measure” as the most familiar and extensively used. This measure has been used by World bank and UN agencies for the evaluation of poverty (Foster et al., 2010). Many researchers (Jan et al., 2009; Shinkai et al., 2007; Chaudhry et al., 2006; Malik, 1996) have used it to estimate the incidence, depth, and severity of poverty. This model includes three tools of assessing human deprivations in the society which are;

(i) Head-Count Index / Head Count Ratio (i.e. Incidence of poverty),
(ii) Poverty Gap Index (i.e. Intensity of poverty)
(iii) Squared poverty gap index (i.e. Inequality of poverty).

(i) Head-count index
It is the proportion of population having consumption (y) less than poverty line Z. It explains the actual percentage of poor population living in the society / percents of poor in the sample
\[ P_0 = \frac{N_p}{N} \]  
Where,
\[ P_0 = \text{proportion of poor population} \]
\[ N_p = \text{number of poor} \]
\[ N = \text{total population} \]

(ii) Poverty Gap Index (Intensity of poverty)
Poverty gap index is the aggregate short-fall of the poor relative to the poverty line Z. It may also be explained in terms of distance of poor in financial terms from the poverty line. If this distance/gap is filled by some public / private
institutions then the poverty of the area can be alleviated. This tool can help policy makers identify poverty gaps in any area and make appropriate interventions for poverty alleviation.

\[
(P_1) \text{PG} = \frac{1}{n} \sum \left(\frac{Z-Y_i}{Z}\right)\] \text{eq. 2}

\(n = \) total population
\(Z = \) poverty line
\(Y = \) income of the poor

(iii) Squared Poverty Gap Index (Inequality of poverty).

Squared poverty gap index is the mean of the squared proportionate poverty gap. It reveals the severity of poverty and inequality of income among the poor under study.

\[
(P_2) \text{SPG} = \frac{1}{n} \sum \left(\frac{Z-Y_i}{Z}\right)^2\] \text{eq. 3}

Squared poverty gap index takes into account the distributional changes in the poor section of population which poverty gap index cannot measure.

These all components of FGT helped us to understand the true impacts of IMF on the poverty and its concerned attributes in the target area.

RESULTS AND DISCUSSION:

Descriptive Analysis

Mean family size was found similar with minor difference between Akhuwat and Farz Foundation and NAYMAT(Appendix-1) perhaps due to the fact that the respondents belong to same city with no difference of religion, culture, traditions, customs, norms and taboos amongst them. Culture, religion, traditions and norms of a society affects the preferred size of family (Freedman et al., 1963).

Moreover, it is evident from Figure-2 that maximum household heads were illiterate in all of cases followed by primary, middle (i.e. 8 years of schooling) and matriculated and above. Interestingly, if household heads with zero and 5 years of
schooling are summed up together and those, both, together are considered illiterate and in this case illiteracy rates were found 85%, 91% and 92% amongst the Akhuwat, Farz foundation and NAYMAT. The literacy figures exclaim that illiteracy is an evident trait of the poor. Therefore, it can be recommended to the policy makers that they must take serious measures to combat illiteracy in the battle against poverty. The results can be found closer to the observations of Mahmood et al (2013) that food insecurity is attributed to illiteracy and deficiency of school infrastructure in the Punjab province of Pakistan.

Moreover, it was observed (Figure-3) that Akhuwat Foundation disbursed maximum mean amount of loan (Rs. 21375) amongst its clients followed by NAYMAT (Rs. 16120) and Farz Foundation (Rs. 11823). However, overall average funds disbursement was found Rs. 18830 to the clients of all of the institutions under study. The three institutions have depicted quite different standard deviations from the mean loan amount which are shown in figure 3. This might be due to the fact that all three institutions offer different amounts of loan so deviation of loan amount from the mean also varies.

**Fig. 2.** Literacy Rates of the Household Head

**Source:** From Survey Data

Moreover, it was observed (Figure-3) that Akhuwat Foundation disbursed maximum mean amount of loan (Rs. 21375) amongst its clients followed by NAYMAT (Rs. 16120) and Farz Foundation (Rs. 11823). However, overall average funds disbursement was found Rs. 18830 to the clients of all of the institutions under study. The three institutions have depicted quite different standard deviations from the mean loan amount which are shown in figure 3. This might be due to the fact that all three institutions offer different amounts of loan so deviation of loan amount from the mean also varies.
The possession of assets by the sampled respondents shows that there is quite a significant difference in assets possession (figure 4) in pre/post scenario of funds disbursements amongst the households. The results corroborates that there is huge difference of assets holdings of households like washing machine, sewing machine, gas cylinder for cooking and bicycle. Moreover, small change as compared to aforesaid assets was found in the possession of motor cycle, TV and refrigerator holdings. Furthermore, appendix 2 explains the assets holdings of the clients of all of institutions and it can be observed that respondents of all of the institutions under study experience increase in their all kinds of assets. The results are in line with Coleman (2002) who reported that microfinance has impacted household assets significantly. Filmer and Pritchett (2001) used assets in their study as a variable to measure income or wealth. Moreover, in the report of UNCDF (2004), assets are considered as an indicator to judge the impact of Islamic micofinance.

It means taking loan affects the lives of clients in a positive manner. This shows that poverty also is associated with lack of asset ownership. As poor people get better-off after taking loan, their asset possession has shown significant change.
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Fig. 4. Overall Descriptive statistics of Assets in Pre & Post Financing Scenario

**T Test Results for Monthly Incomes and Expenditures of the Households**

Paired sample t-test was applied to assess the differences between average monthly incomes and expenditures in pre/post loaning scenario of the respondents. Appendix-3 shows the detailed paired sample t-test results exhibiting differences between incomes and expenditures of the households before and after taking loans from the organization under study. The results of t-test reveal that monthly incomes and expenditures of the households increased in post loan scenario in all of the cases whether it was Akhuwat, Farz or NAYMAT. Moreover, all of the t-test results regarding the said indicators were found highly significant at 1% levels in all of the cases. However, figure 5 gives the graphical comparisons of the incomes and expenditures of the respondents showing wide differences in incomes and expenditures in pre and post funding scenario of the IMF institutions to their clients. In summary, it can be concluded that Islamic Microfinance is, considerably, effective tool in increasing incomes and expenditures of the households under study. Therefore, paired sample t-test suggests that respondents have acquired more money to spend after taking loan due to rise in their incomes. These results are in line with work of Coleman (2002)who also reported positive impact of microfinance activities on the income of borrowers. The results are exhibiting a rise in the welfare of the Islamic microfinance clients after taking loan. There is highest difference between monthly incomes and expenditures of the clients of Farz Foundation.

*Source: From Survey Data*
Tabel-1 exhibits the results of poverty measurements using different components of FGT measure in the study area. As far as the %age of the poor in the study area is concerned, it is evident from the table-1 that 26% households were living below poverty line as per indigenous poverty line cut off limit, in 2009. But a, surprisingly, significant increase (i.e. 95 percent) in this ratio can be seen in case of international poverty line in the said table. The great differences in the poverty rates can be witnessed in the local and international poverty line which exclaims that people were living far below international livings standards in 2009 in the study area, in Pakistan. However, post funding poverty scenario is amply encouraging with zero and 29 percent poor as per local and international poverty lines limits, respectively. It can be concluded that Islamic Microfinance services helped 100% and 66% poor of the study area to get rid of poverty as per local and international standards, respectively.

Table 1: Foster, Greer and Thorbecke poverty measures, Overall Assessment.

<table>
<thead>
<tr>
<th>FGT</th>
<th>Based on National Poverty Line</th>
<th>Based on National Poverty Line 1.25$</th>
</tr>
</thead>
</table>

Source: From Survey Data

Fig. 5. Mean Incomes and Expenditures in Pre and Post Borrowing Scenario

Poverty Assessment Results In Pre and Post Borrowing Scenario
The poverty gap and squared poverty gap index values are 6 and 39, and 2 and 20 in case of local and international poverty lines in case of pre and post borrowing scenarios of the IMF clients in the study area. It is evident from the table that once again there are big gaps between the values of local and international poverty line in case of said indicators. The average distance of the poor from the line reduced to zero in case of indigenous line while it reduced from 39 to 5 which is a plausible achievement by the clients who used their loan productivity and by the donors for catering an opportunity to alleviate clients’ poverty. Moreover, similar types of results can be seen concerning squared poverty gap index from the table 1. However, 2% of squared poverty gap index for national poverty line before taking loan shows that the respondents are clustered around the poverty line. While zero SPG index after taking loan is evident that all the respondents come out of poverty according to the national poverty line.

SPG index for international poverty line is very high, i.e. 20% which shows that there is strong inequality of incomes amongst the clients of the IMFI. This is because the international poverty line is much higher than the national and calories based poverty lines. After taking loan this percentage of SPG index has decreased to quite low percentage, i.e. 2 %. It depicts that taking loan has casted good impact on the living standard of the respondents.

Table 2: Foster, Greer and Thorbecke poverty measures for the three institutions separately.

<table>
<thead>
<tr>
<th>Institutes</th>
<th>FGT</th>
<th>Based on National poverty line</th>
<th>Based on (1.25$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Head-Count Index</td>
<td>Before(%) After(%)</td>
<td>Before(%) After(%)</td>
</tr>
<tr>
<td>Akhuwat</td>
<td></td>
<td>32% 0</td>
<td>97% 32%</td>
</tr>
<tr>
<td></td>
<td>Poverty Gap Index</td>
<td>7% 0</td>
<td>45% 6%</td>
</tr>
</tbody>
</table>
Akhuwat Foundation is targeting more poor as compared to other two institutions. Reason behind is the poverty criteria that these institutions apply for considering a person poor. As poverty criteria of Akhuwat Foundation is the lowest as compared to other two institutions that is why it is targeting poor more poor in number as well as in status. Zero percent of headcount index of all three institutions after taking loan tells us that taking loan definitely has good effect on the borrowers and so they come out of poverty. The poverty gap index before taking loan is highest for the clients of Akhuwat Foundation (6.71). It also proves that Akhuwat Foundation is targeting more poor people than other two institutions. While after taking loan, the poverty gap index reduces to zero which shows the successful strategy of these institutions that their clients are not poor anymore. Squared poverty gap index for Akhuwat Foundation, Farz Foundation and NAYMET for national poverty line before taking loan is 2, 1 and 1 %, respectively. This comparison clearly shows that Akhuwat Foundation is targeting much poor people than Farz Foundation and NAYMET. While SPG index after taking loan for the three institutions is zero. It depicts that all three institutions affecting positively the living standard of their clients. And clients are not in poverty after taking loan.
As far as results of poverty with reference to international poverty line are concerned, regarding all of the Islamic Microfinance Institution, the similar trends were observed like overall poverty scenario in pre and post time horizons in the study area. In this case ratios of the poverty estimates were found far higher in comparisons with local poverty line. According to the Head Count Index, Akhuwat, Farz Foundation and NAYMAT targeted 97, 90 and 88 percent poor of the area, respectively. Head count index is highest for pre loaning scenario in 2009. The highest change (90-19%) in poverty head counts overtime (2009-2012) was observed in Farz Foundation clients followed by Akhuwat and NAYMAT. However, significant reductions were also observed in case of Poverty Gap Index and Squared Poverty Gap Index due to the loan disbursed by all of the organizations in the study area. Therefore, it can be concluded that all of the IMFI played not only a significant role in alleviating poverty but those explicitly contributed in decreasing the distance of the poor from the standard poverty line cut off and helped in reducing inequality amongst the poor as explained by Poverty Gap Index and Squared Poverty Gap Index of the respondents in the study area.

Poverty results of the study whether those were as per local poverty line or International poverty line showed positive impact of Islamic Microfinance on poverty in the study area. These results are in line with results and conclusions of Akram and Hussain (2011), Imai et al (2010) report of United Nations Capital Development Fund (2004) etc.

Conclusion:
The results of study explicitly display overall positive impacts on the indictors set prior to start this study i.e. monthly incomes and expenditures of households, development in assets holdings, and poverty levels of the target respondents. A significant increase in incomes and expenditures was observed in case of clients of all of the institutions. Moreover, similar increase was experienced in case of assets holdings in post funding scenario of the organizations to their clients.

The collective result for FGT poverty measure shows that all three FGT measures of poverty has shown better results after taking loan as compared to pre loan scenario in the study area. Our analysis has shown that the three institutions are showing good performance in targeting the poor but the target organizations are operating in the urban areas where poverty is not such grave like rural areas. These results display that Islamic microfinance has great potential to act as a poverty alleviation tool. On the basis of our results, it could be recommended that Government must not only make proper policies for Islamic microfinance institutions but they must employ all of their resources to implement it to get rid of poverty from the masses in Pakistan and the
world. As we have taken only three Islamic microfinance institutions from the city of Lahore, Pakistan, therefore we cannot generalize the results for all Islamic microfinance institutions in Pakistan or in any other country.

References:


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**BIBLIOGRAPHY**


BIBLIOGRAPHY


**Appendix-1** Age of household head and his/her Family Size of the respondents

<table>
<thead>
<tr>
<th>Age (HHH)</th>
<th>Family Size</th>
</tr>
</thead>
</table>
Appendix-2. Assts holdings of the Households before and after Taking Loans

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Assts/Institutions</th>
<th>%age of possession before taking loan</th>
<th>%age of possession after taking loan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Akhuwat Foundation</td>
<td>Farz Foundation</td>
<td>Naymet</td>
</tr>
<tr>
<td>1</td>
<td>Motor Cycle</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Bicycle</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Washing Machine</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>Sewing Machine</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>TV</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>6</td>
<td>Refrigerator</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>Gas Cylinder</td>
<td>4</td>
<td>13</td>
</tr>
</tbody>
</table>

Appendix-3. Results of Paired T - Test of Pre and post Income and Expenditures of Households

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean before taking loan</th>
<th>Mean after taking loan</th>
<th>Mean Difference</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly income</td>
<td>11271</td>
<td>25587</td>
<td>-14316</td>
<td>0</td>
</tr>
<tr>
<td>Monthly expenditure</td>
<td>14091</td>
<td>25062</td>
<td>-10971</td>
<td>0</td>
</tr>
<tr>
<td>Akhuwat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly income</td>
<td>9749</td>
<td>24002</td>
<td>-14252</td>
<td>0</td>
</tr>
<tr>
<td>Monthly expenditure</td>
<td>11715</td>
<td>23370</td>
<td>-11655</td>
<td>0</td>
</tr>
<tr>
<td>Farz Foundation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly income</td>
<td>14568</td>
<td>30540</td>
<td>-15972</td>
<td>0</td>
</tr>
<tr>
<td>Naymet</td>
<td>Monthly expenditure</td>
<td>20204</td>
<td>29768</td>
<td>-9564</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td>Monthly income</td>
<td>14000</td>
<td>26550</td>
<td>-12550</td>
</tr>
<tr>
<td></td>
<td>Monthly expenditure</td>
<td>17285</td>
<td>26881</td>
<td>-9596</td>
</tr>
</tbody>
</table>