Performance of Microfinance Providers in Sindh, Pakistan: A Study of Formal and Informal Microfinance Institutes

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Ghazala Tunio1* | Ahmed Shafique Joyo2 | Zhang Lei3 | Nizamuddin Channa4 | Noor Ahmed5

Abstract

This research aims to analyze the performance of microfinance providers of the Sindh province of Pakistan. For this purpose, the formal and informal microfinance institutes were selected. Data was gathered from a sample of 150 managers of microfinance banks and institutions. In this research, the random sampling technique is used to collect the data through questionnaires. The OLS regression model is employed to analyze the data. The results of this study show that the number of branches, and less number of defaulters significantly affect the performance of microfinance institutes in Sindh, Pakistan. Moreover, the total cost also has an important relationship with the performance of microfinance organizations in Sindh. However, the study finds the interest rate, and more diversified financial services to have no significant impact on the performance of microfinance organizations. Due to the lack of financial information of the microfinance institutions in Sindh, there is dearth of the research on the performance of microfinance institutions. Rather than using only the published financial information this study relies on the information provided by the managers of the microfinance providers for the analysis. The results of this study have implications for the well-functioning of microfinance institutes, and for the government to achieve the poverty alleviation objectives in Pakistan.

Keywords: Microfinance institutes, Firm’s Performance, Sindh, Pakistan, Poverty.

JEL Classification: H11, E42, G18, G28, G38

Author’s Affiliation:
Institution: University of Sindh1,5,6 | Shaheed Benazir Bhutto University2 | University of Finance and Economics Nanjing4
Country: Pakistan | Pakistan | China
Corresponding Author’s Email: *ghazala.tunio@faculty.muet.edu.pk

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1) INTRODUCTION

Pakistan is a developing country which is struggling for poverty eradication, as its 24.3% population is still below the poverty line (Asian Development Bank, 2019). The government and non-governmental institutions have been involved in eliminating poverty in Pakistan. The Microfinance institutions provide small short term loans to the poor people of the society in the rural or suburban areas. The purpose of such loans is to elevate poverty by providing loans that help them to boost their business or meet their needs. However, the modern-day microfinance providers have been involved in other services similar to commercial banks in Pakistan also. The microfinance intuitions have been growing in the poverty-ridden regions due to their contributions in eradicating poverty and increasing the living standards of the people. These institutions are providing their services based on conventional as well as fintech based platforms for example E-banking or mobile banking (Anand & Chhikara, 2013; Ozili, 2018; Rafeeq, 2018). There is an increase in the per capita GDP in Pakistan since the advent of microfinance. During the 1980s the per capita GDP of Pakistan was only 294 (USD) which rose to 1017(USD) in 2010 (World Bank, 2012).

Internationally the most successful model in microfinance has been suggested by Muhammad Yunus through Grameen Bank in Bangladesh. According to this model small loan is given to a group of five people. Each member is required make a contribution to pay off the loan. The interesting thing of this model is that loan is not given to all members at the same time, however, once a member is given the loan then all members are liable to pay off the loan. Later all members are given loan one by one. The group of borrowers is fully guided, supported and supervised by microfinance institutions. This model has been implemented more than 40 countries in Asia, and Africa (Prakash & Malhotra, 2017). With the purpose of increasing the number of branches, the microfinance industry has started to gain strength. As of the end of June 2007, some 1.28 million active borrowers have been represented by microfinance institutions. Nonetheless, given this progress in terms of outreach, there are some important issues related to the viability of commercial conditions microfinance operations (Majid Riaz & Qasim, 2016). Today, virtually all market participants are greatly dependent in one way or another on grants and subsidies provided by government and foreign donors and even then they suffer losses (Madiha Riaz, 2016).

Micro-financing in Pakistan has established in different phases. Each phase presenting the onset of a new style of micro-financing. The microfinance started in the year of 1970, when Pakistan’s Government initiated micro-financing facilities as a development tool. After a decade, the government also started providing small loans in rural areas. The scope of these loans was extended by starting new schemes through the Small Business Finance Corporation, Yellow-Cab Scheme, and Youth Investment Promotion Scheme. The Government also made it compulsory for commercial banks to give small loans to the youth who are jobless. Currently, most commercial banks and Islamic banks in Pakistan are providing separate window for microfinance.
Two major institutes that took the initiative of establishing microfinance in Pakistan are the Agha Khan foundation program and the Orangi pilot project. In the year of 1980 for the first time, Agha Khan Foundation started the microfinance program in association with the government of Pakistan in Gilgit-Baltistan, which inspired the Government to start the RSP (Rural Support Program) later on AKSP (Agha Khan Rural Support Program) became the pioneer in development service in rural areas of Pakistan. The Orangi Pilot Project assumed the challenge of reducing metropolitan poverty in the slum settlement in Karachi. Akhtar Hameed Khan started this project in the year of 1987 and its growing services comprised of accommodation, sanitation, and schooling in these vicinities. The SRP (Sarhad Rural Support Program) was the first RSP that was started in the year 1989 similar to the AKSP (Agha Khan Rural Support Program) model in Khyber Pakhtunkhwa. A Pakistan-German development project restructured as a rural support program and was named as the BRSP (Baluchistan Rural Support Program) was initiated in the same decade. The Government of Punjab also launched the PRSP (Punjab Rural Support Program), which is still operational and is quite successful (Khan, Haider, & Asad, 2011). Similarly, in Sindh, several microfinance institutions are working to provide their services in each district.

This study investigates the performance of formal and informal microfinance providers in Sindh. The objective of this research is to study the factors affecting the performance of the microfinance provider’s formal and informal institutes. Past studies have focused on the performance of the microfinance organizations of Pakistan through the financial statements which give quantitative views of the performance of the microfinance organizations of Pakistan (Mohsin, Bashir, & Tariq, 2019). However, the microfinance institutes lack proper financial reporting information (Bruett et al., 2005; Dumont & Schmit, 2014). In this study we used the empirical framework given by O’sullivan and Abela (2007) to analyze the institutional performance through primary data collected from the manager of the microfinance facilities in the selected towns of the Sindh province. We selected, formal, and informal microfinance institutes thus making a marginal contribution to the existing literature. Among the formal microfinance providers, microfinance banks have been selected while for the informal institutes, we choose the rural support programs networks (RSPN), and microfinance NGO’s (Non-Governmental organizations) from the Sindh province of Pakistan. The microfinance banks have been classified as formal institutions and NGOs are informal based on microfinance ordinance 2000 (Alemu, 2012).

The rest of the paper contains the literature review, in the second part. The third part contains the details of theoretical framework, hypothesis development, data collection, and the methodology. We assumed five hypotheses based on the objectives of the study and explained dependent and independent variables. In the fourth section, the results of the empirical analysis are given. The last section of this study concludes the study along with the limitations and future directions.

2) LITERATURE REVIEW

The microfinance a successful innovation in the history of finance which have
played a crucial role in uplifting the poor people from below the poverty level and gave the easier credit access to the emerging entrepreneurs. Microfinance is observed as a development tool pointing at reducing poverty in developing countries (Barry & Tacneng, 2014; El-Maksoud, 2016). The formal banking system requires financial assets as collateral which makes it very difficult for the poor people to get finance from formal finance providers like banks. Therefore, microfinance institutes emerged as the alternative finance providers with aim of providing finance to the poor and low income house hold with little or no credit history (Vanroose & D’Espallier, 2009).

The literature on the microfinance institutes is broad which can be categorized into different strands. The first major class of the literature addresses the development issues especially in entrepreneurship and the role of microfinance institutions at national and firm level around the world. The results of these studies have found that the microfinance have proved to be an instant source of finance for small and medium enterprises and led to the development at micro and macro level (Ashraf, Kabir Hassan, & William, 2014; Rashid Amber & Ejaz, 2019; Sinha, Mahapatra, Dutta, & Sengupta, 2019; Yousfani, Aslam, Mahar, & Kazi, 2019).

The second strand of the literature accesses firms’ performance based on past financial data and surveys from the managers (Mia & Rana, 2018; Mohd, 2018; Taj, Rashid, & Tariq, 2019). These studies determined the performance of the microfinance institutions using the financial performance indicators of the microfinance institutions like return on assets (ROE), Profit margin (PM), operational self-sufficiency (OSS), and the macroeconomic indicators like GDP growth and inflation rate (Shkodra, 2019). Some of the studies also used the primary data through the surveys from the managers, and employees to analyze the managerial competencies and risk taking behaviors in microfinance institutes in Pakistan. The results show the managerial competencies and risk taking behaviors affect the financial outreach in microfinance institutes in Pakistan (Taj et al., 2019). Moreover, Ashraf et al. (2014) compared the determinant of the performance of microfinance institutions between Muslim and non-Muslim countries. It was found that the Muslim countries prefer Islamic microfinance over the conventional microfinance. It is found that religious and cultural factors play a crucial role in the success of the microfinance institutes. Anduanbessa (2009) believes that the performance of microfinance institutes is based on the variables such as mobilization of the deposits in the microfinance institutions, total loan disbursed, and the number of active borrowers.

Among the other variables (Ahmad, 2008) focused on the Interest rate charged in microfinance a factor determining the performance of microfinance institutes. He found that interest rate charged in microfinance institutes is comparatively greater than conventional banking services. However, the high interest rate discourages borrowers. Rauf and Mahmood (2009) found number of branches as a determining factor of the performance of the microfinance institutes also improves. The results of this study revealed that with the increase of number of Branches the performance also increases. Bichanga and Aseyo (2013) included the management of the staff as the determinant of the performance of the microfinance institutes in Kenya. It is found the lack of the management abilities among the staff of the microfinance
institutes are the major cause of the nonpayment of the loans given by the microfinance institutes. It is observed that insufficient management of borrowers by microfinance institutions staff on loan utilization and loan payback result to failure of repayments. Moreover, the diversified financial services have been used as an independent variable for the performance of microfinance institutes. The results show the diversity in the services being provide enable the microfinance institutes to satisfy the existing as well as the potentials customers of the microfinance institutes (Moll & van Tilburg, 2010). Taking the delivery of microfinance institutions as a proxy of the performance of microfinance intuitions Nitin Agarwal (2006) used the delivery cost of the microfinance services as a dependent variable to determine the performance of the microfinance institutes.

The literature suggests that substantial work is being done on poverty alleviation and microfinance. Most studies have examined microfinance growth in terms of outreach, loan repayment, and the number of borrowers. However, the performance of microfinance institutes has been not much studied in the context of the perception of the microfinance managers and what they think about the factors which can contribute towards the performance of microfinance organizations (Felix K. Aveh, 2011). This study has focused on the performance of the microfinance institutes (formal and informal) of the major cities of Sindh with primary data and focusing on the factors which are affecting the performance of microfinance providers. This study fills the space in the literature by studying the variables that contribute to microfinance performance in the Sindh province of Pakistan.

3) HYPOTHESIS DEVELOPMENT, DATA COLLECTION, AND METHODOLOGY

3.1) HYPOTHESIS DEVELOPMENT

According to Nakayiza (2013) Among the major factors which affect the performance of the microfinance institution Interest Rate, Number of Branches, Number of Defaulters, Diversified Financial services, and total cost of microfinance operations are the major factors which affect the total loan distributed and the number of the active borrows in the microfinance providers. The conceptual framework is given in the figure 1, below. Based on the conceptual framework of the study proposed five hypotheses which are described below.
Saunders and Schumacher (2000) points out that interest rates in combination with the flow of goods, services, and money within and around the economy influence economic activity. Kar and Bali Swain (2014) states that the hike in the interest rates charged by microfinance institutes is aimed at sustaining the microfinance institutions. The results based on a panel of 71 countries show the significant impact of the interest rate on the financial performance of the microfinance institutions. Based on the above discussion we propose the following hypothesis.

**H1:** Interest rate has a significant impact on the performance of microfinance organizations.

Tchuigoua (2014) used the number of branches as a variable to determine the performance of microfinance institutions (MFI). Yaron, Benjamin, and Piprek (1997) used two primary benchmarks, sustainability of the MFIs, and the outreach (number of branches) to evaluate microfinance institution’s quality. Based on the above discussion we propose the following hypothesis.

**H2:** The numbers of Branches have a significant impact on the performance of microfinance organizations.

Moll and van Tilburg (2006) states that the diversified financial services contain a variety of products and services that are offered by companies. Diversified financial services that not only meet the needs of current customers but also tackle new and emerging customer needs. Based on the above discussion we propose the following hypothesis.

**H3:** The diversified provision of financial services has a significant impact on the performance of microfinance organizations.

Bichanga and Aseyo (2013) Claimed that, in order to lower the loan repayment rate (Defaulters), microfinance institutions need to have control over the use and repayment of loans, which should be carried out every four months. Based on the
above discussion we propose the following hypothesis.

H4: Less number of defaulters have an important impact on the performance of microfinance organizations.

Microfinance is strongly connected with a client that is why it is a high-cost business. As a business model, reducing operating costs to reduce borrowers’ service costs is a major challenge for microfinance institutions (Yusuf, Shirazi, & MatGhani, 2013). The business environment is a critical element for figuring out how convenient it is to do business in various countries. It is anticipated that microfinance should be established with lower cost in countries where doing business is a great challenge (Gonzalez, 2007). Based on the above discussion we propose the following hypothesis.

H5: The Cost of operation has significant relationship with the performance of microfinance organizations.

3.2 DATA COLLECTION

The target group for this research is the managers of microfinance institutions of formal and informal microfinance organizations in Sindh. According to the 2016 microfinance review in Pakistan, the total number of branch offices is 2,367 and the total number of microfinance employees is 29,413 (Ali Basharat, 2016). In this research convenient sample size is used. The study used 150 sample of managers chosen from formal and informal microfinance institutes following previous studies (Felix K Aveh, 2011; Naser, Jamal, & Al-Khatib, 1999).

3.3 METHODOLOGY

In order to study the factors that contribute to the performance of formal and informal microfinance institutions this study selected performance of microfinance providers as dependent variable while interest rate, number of branches, less number of defaulters, diversified financial services, and cost of operations were selected as independent variables. The responses of these variables were collected through questionnaire based on five point Likert scale. The histogram, P-p plot, kurtosis, and skewness were employed to test the distribution, symmetry, and normality of data. Cronbach’s Alpha for all items was executed for reliability testing. However, Analysis of Variance and Linear regression were also used. The Model used is modified form of the study conducted by Felix K Aveh (2011) to analyze the performance of Microfinance institutions in Ghana. The Linear Regression model is expressed as follows:

\[ P = \beta_0 + a_1 I + b_2 B + c_3 D + d_4 DFS + e_5 C + \varepsilon_t \]  

Where,

P represents the “Performance” which is the dependent variable. \( \beta_0 \) shows Constant of the equation. Among the independent variables “I” shows the Interest rate, “B” characterizes the number of Branches, “D” stands for the less number of defaulters
in a given branch, “DFS” is the extent/types of Diversification of financial services provided by a specific branch selected in the sample, “C” shoes the estimated Cost of the operations in a branch or office. The last term is the error term of the model, and a, b, c, d, and e are the regression coefficient of the independent variables of this study.

4) RESULTS AND DISCUSSION

4.1) PRELIMINARY ANALYSIS

Before applying the ordinary least square regression (OLS) models it is necessary to test the data for the basic assumptions of the OLS models. Among these tests validity, reliability, Normality, Multicollinearity, Autocorrelation, Homoscedasticity and the variance are important. We applied the necessary tests to the data to make it suitable for the model. We explain each of these tests one by one. First, the Content Validity is an expert opinion. It should be done at the stage when the questionnaire is designed that it is up to the level to gather the required data or not. In this research opinion on the questionnaire was taken from the manager from the microfinance manager. Second, the average variance obtained reflects the variance’s proportion perceived by the latent factors from the measurement error. The derived higher average variance is the latent variables that could represent the higher variance of the predictor and the smaller relative error measured.

Table 1. Average variance extracted (AVE) of the variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Average Variance Extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest rate</td>
<td>0.431</td>
</tr>
<tr>
<td>Branches</td>
<td>0.658</td>
</tr>
<tr>
<td>Diversified financial services</td>
<td>0.876</td>
</tr>
<tr>
<td>Defaulters</td>
<td>0.321</td>
</tr>
<tr>
<td>Cost of operations</td>
<td>0.527</td>
</tr>
<tr>
<td>Loan disbursement</td>
<td>0.801</td>
</tr>
<tr>
<td>Active borrowers</td>
<td>0.976</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.

The mean-variance limit obtained is greater than 0.5 (Wu, 2009) have stated that the derived average variance of more than 0.5 indicates the higher validity of the building. Interest rate, and less number of defaulters have less value than the threshold value. Third, Reliability statistics is performed to investigate a few factors with other variables to see the inner consistency between various factors. Lai, Hutchinson, Li, and Bai (2007) Have recommended that Cronbach’s Alpha demonstrates the inward steadiness between the scale of factors and it should be
0.70 or more to get a solid scale for research (Joyo & Lefen, 2019).

Table 2. Reliability Statistics of the variables

<table>
<thead>
<tr>
<th>Items</th>
<th>Cronbach’s Alpha</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combine</td>
<td>0.832</td>
<td>23</td>
</tr>
<tr>
<td>Interest</td>
<td>0.409</td>
<td>4</td>
</tr>
<tr>
<td>Branches</td>
<td>0.725</td>
<td>3</td>
</tr>
<tr>
<td>Diversified financial services</td>
<td>0.7113</td>
<td>3</td>
</tr>
<tr>
<td>Loan disbursement</td>
<td>0.860</td>
<td>3</td>
</tr>
<tr>
<td>Less number of Defaulters</td>
<td>0.544</td>
<td>3</td>
</tr>
<tr>
<td>Cost of operations</td>
<td>0.806</td>
<td>3</td>
</tr>
<tr>
<td>Active borrowers</td>
<td>0.80</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.

Cronbach’s alpha shows the internal consistency of variables and it should be 0.75 or higher (Ling, Fern, Boon, & Huat, 2015). Combine Cronbach’s is average of all variables taken for study which is 0.832, suggesting greater internal accuracy. Interest rates and less number of defaulters are less reliable. The Branches, diversified financial services, Loan disbursement, active borrowers, and cost have greater internal consistency. Fourth, Joseph F Hair, Black, Babin, Anderson, and Tatham (1998) proposed that composite reliability is the addition of all calculated variables’ internal uniformity, indicating the internal all indices. The higher the accuracy of these indexes the greater the value of internal consistency. Joseph F Hair et al. (1998) Proposed more than 0.7 composite reliability. The variables are in the normal range are Interest, Diversified financial services, less number of defaulters, and loan disbursement. The variables which are not in the normal range are Branches, Cost, and the number of active borrowers. Data normality and symmetry are evaluated using numerical and graphical methods. The Skewness and kurtosis test are used for the statistical normality.
Table 3. Composite Reliability (CR) of the variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Composite Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>0.84</td>
</tr>
<tr>
<td>Branches</td>
<td>0.61</td>
</tr>
<tr>
<td>Diversified financial services</td>
<td>0.91</td>
</tr>
<tr>
<td>Less number of Defaulters</td>
<td>0.92</td>
</tr>
<tr>
<td>Cost of operations</td>
<td>0.56</td>
</tr>
<tr>
<td>Loan disbursement</td>
<td>0.725</td>
</tr>
<tr>
<td>Active borrowers</td>
<td>0.591</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.

Table 4. Table of Skewness and Kurtosis for normality

<table>
<thead>
<tr>
<th>Performance</th>
<th>Interest Rate</th>
<th>Branches</th>
<th>Diversified Financial Service</th>
<th>Defaulters</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skewness</td>
<td>0.122</td>
<td>-0.203</td>
<td>-0.458</td>
<td>-0.247</td>
<td>-0.180</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.980</td>
<td>-0.376</td>
<td>-0.547</td>
<td>-0.609</td>
<td>0.048</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.

There are few strong rules in the directory as to how much non-normality a problem proposes. It is recommended that more than 3.0 showed absolute values of univariate skewed indices to label skewed data sets. As far as kurtosis is concerned, it appears that the index of kurtosis may cause more than 10.0 risks. In the above table, the scope of skew and kurtosis is unacceptable, therefore the model is a good fitted model (Chou & Bentler, 1995). Fifth, the normality can be tested through various tests however, we used the graphical testing of the normality of data is done with a Histogram and P-p plot. As shown in figure 2 the histogram is the bell-shaped pattern of the curve shows the normal distribution of data with a good fit of the model. In the P-p Plot the points of data are laying closer to the diagonal line showing that data are normally distributed (Julie Pallant, 2013). The normal P-p plot is shown in figure 3 below.
Sixth, the multicollinearity test shows all variance inflation factor values are below 10 in the table above, so there is no multicollinearity (Joseph F Hair et al., 1998). The inflation factor of the variation should be less than 3.3 (Diamantopoulos & Siguaw, 2006). If the inflation rate of variance is less than 10, indicating the nonexistence of collinearity. All the independent variables are correlated with sensitivity ranges from zero to one. Allison (1999) states in his book that there is no clear tolerance.
limits but indicate that a sensitivity of less than 0.40 is a cause of alarm sign. Weisburd and Britt (2014) say anything below 0.20 in a template indicates severe multicollinearity. All the values are within the normal range as shown in table 5.

Table 5. Multicollinearity of the variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Tolerance</th>
<th>Variance inflation factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest rate</td>
<td>0.958</td>
<td>1.044</td>
</tr>
<tr>
<td>Branches</td>
<td>0.699</td>
<td>1.431</td>
</tr>
<tr>
<td>Diversified Financial Service</td>
<td>0.555</td>
<td>1.802</td>
</tr>
<tr>
<td>Less number of Defaulters</td>
<td>0.894</td>
<td>1.119</td>
</tr>
<tr>
<td>Cost of operations</td>
<td>0.694</td>
<td>1.441</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.

Seventh, Autocorrelation should not be present when conducting linear regression. One of the main tests for autocorrelation is the Durbin-Watson test. A general rule is that the values of Durbin-Watson between 1.5 and 2.5 are in the normal range. Values other than this set may be more dangerous (Joe F Hair, Sarstedt, Ringle, & Mena, 2012). The Durbin-Watson value is 2.148, which is in the within range. The model assumes that the error term has mean zero and equal all levels of independent variables. The figure 4 showing Residuals vs Predicted scatter plot of the regression model shows random displacement of values that form the shape of a rectangle, this show that homoscedasticity is present. In the below given figure homoscedasticity’s assumption is also met thus validating the results of regression model (Tabachnick & Fidell, 2007).

![Figure: 4. Residuals vs Predicted scatter plot of the regression model](image)
The last test is analysis of variance which shows the degrees of freedom correlated with sources of variability. For complete variance, there are N-1 degrees of freedom. Degree of freedom is one less than the number of observations in each source of variation. The degree of freedom of regression is the number of coefficients estimated minus 1. There are five coefficients in this study, together with the intercept, so the template is free of 5-1= 4 degrees. The degree of liberty mistake is the degree of full liberty less than the degree of the freedom model (Pandey & Bright, 2008).

Table 6. Analysis of variance

<table>
<thead>
<tr>
<th></th>
<th>Degree of freedom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>5</td>
</tr>
<tr>
<td>Residual</td>
<td>144</td>
</tr>
<tr>
<td>Total</td>
<td>149</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.

4.2) RESULTS OF LINEAR REGRESSION MODEL

The Table 7 shows results of the OLS regression model shows that the values of the Interest rate and diversified financial services are not significant at 0.05 percent. Additionally, the other three parameters are branches, the less number of defaulters and cost value are significant at 0.05 percent (Janda & Turbat, 2013).

Table 7. Results of Linear regression model

<table>
<thead>
<tr>
<th>Model</th>
<th>Coefficients</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0.328</td>
<td>0.036</td>
</tr>
<tr>
<td>Interest rate</td>
<td>0.064</td>
<td>0.078</td>
</tr>
<tr>
<td>Branches</td>
<td>0.214</td>
<td>0.000</td>
</tr>
<tr>
<td>Diversified Financial Service</td>
<td>0.043</td>
<td>0.252</td>
</tr>
<tr>
<td>Less number of Defaulters</td>
<td>0.576</td>
<td>0.000</td>
</tr>
<tr>
<td>Cost of operations</td>
<td>0.063</td>
<td>0.032</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.846</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.841</td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.

As in the section 2 we proposed the five hypotheses. Based on the empirical results we found that hypothesis number 1 of the study is not supported by the results the probability value (0.078) which is higher than the probability value (0.05) at five percent level. This shows that this hypothesis cannot be rejected at five percent significant level. Therefore, hypothesis number 1 is supported by the results.
However, the results of this study also contradict with past studies which show that the interest rate has a significant relationship with performance of microfinance institutions (Ahmad, 2008; Kar & Bali Swain, 2014).

For the Hypothesis 2 the results show probability value (0.000) which is less than 0.05 at five percent level. This shows that this hypothesis can be rejected at five percent significant level. Therefore, the results show that the greater the number of branches improves the performance of microfinance institutions in Sindh. The results of this study are in conformity with the Rauf and Mahmood (2009). It is suggested to increase the number of branches to improve the performance of microfinance institutions in Sindh Pakistan.

For the Hypothesis 3 the probability value (0.252) of the diversified financial services is greater than the prescribed value (0.05) at level five percent significance level therefore, the null hypothesis cannot be rejected. Therefore, the diversity of service provided by the microfinance institutions does not improve the performance. It can be suggested for microfinance institution of Sindh should focus on the provision of the basic services of providing loans to their customers. The results support by the

The Hypothesis 4 is associated with less number of defaulters. The coefficient of the probability value (0.000) is less than 0.05. So, we can reject the null hypothesis of the association of less number of defaulters with the performance of microfinance institutions. This indicates that those microfinance providers having lower number of defaulters have better recovery rate which contributes to the success of the organizations. However, the performance can decrease if the number of defaulter increase.

For the Hypothesis 5 the coefficient has the probability value (0.032). This value is less than 0.05 so we can reject the null hypothesis. It shows that the cost of providing financial services has significant relationship with the performance of microfinance institutions in Sindh, Pakistan. The firms rendering quality services at extra cost perform better that the others with low cost of service. The table 8 shows that results of Hypothesis testing in brief. It shows that hypotheses 2 and 4 have been rejected at the one percent significant level while hypothesis 5 has been rejected at five percent significance level. Moreover, we don’t consider the ten percent significance level to reject the null hypothesis as in the case of hypothesis one (Janda & Turbat, 2013).

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Probability Value</th>
<th>Hypotheses Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1</td>
<td>(0.078)</td>
<td>Failed to reject</td>
</tr>
<tr>
<td>Hypothesis 2</td>
<td>(0.000)</td>
<td>Rejected</td>
</tr>
<tr>
<td>Hypothesis 3</td>
<td>(0.252)</td>
<td>Failed to reject</td>
</tr>
<tr>
<td>Hypothesis 4</td>
<td>(0.000)</td>
<td>Rejected</td>
</tr>
<tr>
<td>Hypothesis 5</td>
<td>(0.032)</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.
Further, the R-square is used to determine the goodness of fit of the model. The results of this model show that R-square is 0.846, which means that 84.6 percent of the total variance of performance (dependent variable) has explained which shows the model is a good fit (Julie Pallant, 2013). The improved version of R-squared is the Adjusted R-squared. In the table above Revised R-square is 0.841; the value of R-square is less than 1 (Julie Pallant, 2005).

5) CONCLUSIONS

Pakistan is facing various challenges in the growth of its microfinance sector. However, the microfinance has provided with easy access of credit to the poor in the region. From the research point of view there is scarcity of the literature addressing the performance of microfinance institution in Sindh, Pakistan. The intent of this research is to examine the variables contributing to and affecting the performance of microfinance providers. The research methodology for this research is quantitative in which the cross-sectional method was adopted. Data were gathered from a convenient sample of 150 managers to conclude performance is dependent variable and the less number of defaulters, diversified financial services, interest rate, and the less number of defaulters are independent variables for this research. The data have been analyzed through OLS regression model.

The study identified five main conclusions: (1) The interest rate has no significant impact on the performance of microfinance institutions. (2) the number of branches have strong relationships with the performance of microfinance organizations. (3) Diversified financial services have no significant impact on the performance of microfinance organizations. (4) Less number of defaulters have a significant impact on the performance of microfinance organizations. (5) Total costs of service have a significant impact on the performance of microfinance organizations.

The results of this study have various practical usages in two areas. Firstly, in academics it adds the latest information to the knowledge on the performance of microfinance organizations in Pakistan. Secondly, it has the practical implications for research results for the microfinance providers. It is suggested that microfinance institutes should start awareness campaigns along with disbursement of the loan in the different districts of Sindh. Moreover, this research has taken into account only the responses of the managers of the microfinance the future researches can be conducted on microfinance institutes along the views of the customers which can improve the findings.

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