Assessment of Government Intervention in Microfinance Banks in Pakistan

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Abstract

This paper presents a panel data study of microfinance Banks of Pakistan over the past 5 years. The data includes a random sample of 8 Microfinance Banks' financial statements from year 2019 to 2023. The study aims is to capture the effect of government interventions in microfinance banks of Pakistan and brings up a statistically critical assessment of various policies applied by the government in the sector. To quantify the government intervention panel data analysis is conducted through fixed effect model and random effect model. For better selection of model, the Housman's specification test is employed. The random effect model found suitable for analysis. Using the statistical tools, this paper attempts to find out the causal effect of government regulations, grants from government, market size and governmental audits on profit ratios of the microfinance institutes. Multitude of widely cited literature has been juxtaposed with the study underhand and the paper attempts to capture a better result. The results show that most of the variables used in the study market size, and number of audits and regulations are significantly related while government grants have insignificant relationship with performance of MFBs. The paper aims to provide results that might of use for policy implication and as a reference for future studies in the required field.

Keywords: Microfinance Banks, Profit Ratio, Government Intervention, Government Audits, and Government Regulations.

Microfinance is a branch of banking service aimed towards the unemployed or low-income earners which are incapable to utilize the financial services and wish to perform business activities. The purpose of MFIs is to provide the underprivileged with the service in a way such that they become self-sufficient and have adequate resources (Micheal, 2012). Microfinance, defined as "a credit methodology that employs effective collateral substitutes to deliver and recover short-term, working capital loans to micro entrepreneurs", it has demonstrated success as a poverty reduction strategy.

Microfinance sector in Pakistan is an emerging industry and has a vast number of incumbents in the industry. It is reported market share of 2.8 million borrowers in 2013 and is expected to have grown exponentially by the current year (Rosenberg, 2014). It is also reported that a potential market size of twenty-seven million borrowers for the sector is developing. This shows the strength of the sector and forms an important variable for analysis which is the market response. "Recognizing the need to increase the depth and outreach of financial markets, policymakers and regulators along with other stakeholders worked hard for the development of the microfinance in the country". It is evident that without the government intervention and stake holding, there are less chances to increase the financial performance of the microfinance sector in Pakistan (Imai et al., 2012).

An important distinction to be drawn here is that it is thought that the governmental intervention does not mean that the government will directly be providing services. These financial services are provided by the organizations and these organizations take help from the government (Luyirika, 2010). Interference by government in management of MFIs effects the sustainable development. This interference can force them to lend at lower rate and to unfit customers that limits the access of loan to poor borrowers (CGAP, 2013).

Microfinance banks cannot work without a proper and regular framework that cannot be included in the analysis because of the fact that this variable cannot be captured easily. The government has an imperative role in developing the framework of the organization itself and that development of framework is not possible without the intervention of government. The purpose of research is to develop the causality of how these frameworks are developed through government (Chen & Ravallion, 2008).

High default rates in SMEs lending should be of major concern to policy makers in developing countries, because of its unintended negative impacts on SMEs financing. Von-Pischke (1980) states that some of the impacts associated with default include: the inability to recycle funds to other borrowers; unwillingness of other financial intermediaries to serve the needs of small borrowers and the creation of distrust.

If the government is effective in regulating the credit risks, the default ratios can be reduced; hence as a data variable, the defaulters' profiles are key to the judgment of the impact evaluation of government regulation on the profitability of the microfinance institutes (Bichanga & Aseyo, 2013). Microfinance banks specially aiming towards deposits regulation is imperative. With complying regulation, the supervision can be costly. By taking data of 245 MFI banks from all over the world it was concluded through OLS Regression that supervision is negatively related to profitability and outreach. The cost of supervision is absorbed by curtailing the outreach to the markets (Morduch et al., 2011).

Government intervention plays a positive role in developing the MFBS in all over the world. In Pakistan, the people living under

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the poverty line accumulate to a huge population and thus MFBS has active role in alleviating the class gap in economy. Comparing with the global ranks, the Pakistani MFBS are failing to a larger extent because of the leading corruption and the systematic disturbance in the distribution channel. In Pakistan these MFBS are underperforming, and to gauge the performance one uses Profit Ratio.

Similarly, Market Share is another indicator. Government has set precedence in regulations; however, these are just on paper and corruption still persists. To fight the black economic systems of these institutes, governments have hired overt participant supervisors who regulate the proper channeling of funds such as sponsorships or grants. In the recent years, the government's overt participation has proven fruitful and so the results have shown that there is a proper channeling of funds. This, however hinders profitability, because the governmental audits (overt supervisors) take control of most profit-making activities because government's aim is welfare maximizing. Because the two principle agents' conflict, the MFBS make losses.

One evident result is that these overt participation (namely audits) have not worked and instead, using Adam Smith's arguments, the free market system is a more workable and efficient measure that leads to equilibria in the most efficient way. Henceforth, the purpose of the study is to assess the role of government in building and contravention of microfinance sector. The author builds a hypothesis that government plays a vital role in dictating the performance of a microfinance sector. However, there are certain limitations on collection of data; nevertheless, there is sufficient data to produce generalize results. The paper presents a widespread contrast with the literature available on the topic, and juxtaposes the research results along with methodologies across multitude of research across the globe. For the purpose of research, the paper presents methodology that has been used in the study and then provides the key findings of the empirical result, from the data collected. The research objectives of the study are.

- To check whether government has an effective role in the performance of microfinance banks.
- To assess which of the governmental involvement are effective in the performance of MFI banks.
- The research tests for which governmental tools are vital
- To gauge a policy recommendation

Literature Review

The model under analysis was to draw the effects of government intervention on the performance of the microfinance institutes. Performance is a subjective and broad term; the paper limits the decision variables to the profitability ratio as the key indicators of performance. Profit ratio states the managers' ability to generate profit from sales, it shows how effective the management is in creating value surplus out of the operations, that is how well a firm can do (Velnamby & Ajanthan, 2013) .Market share captures the organization's size in comparison to the competitors, and so can be used as a performance measure (Bertay et al., 2013). The data presented by Berta, Kunt and Huizinga was taken from over 90 countries, and shows the importance of market share in gauging the performance of the banks. In conformity to literature, the model presents two dependent variables as a proxy for performance dependent on certain variables that may affect them. The difference between the microfinance banks and nonbanks can be significantly identified as MFI banks are regulated by state bank and non-bank MFIs do not fall under these regulations. There is relationship between efficiency of MFIs and regulations (Basharat et al., 2014).

A vital variable, affecting the sustainability and performance of the microfinance banks and organizations in Pakistan which also acts as another proxy to the quantifying effect of government intervention that is subsidies its role in affecting the microfinance banks performances. In analysis, the literature presented that subsidies by the government robust government interventional tool and plays an effective role in the sustainability of the microfinance banks in all over the world. "Subsidy is substantial to measure the sustainability of Microfinance institutions. A large number of microfinance programs in the world are subsidized in different ways, sustainability of the programs poses a question in the mind of academics and researchers. Grameen Bank of Bangladesh has to face high repayment rate but also have to depend on subsidies (Morduch 1999)" (Mukhtar & Almas, 2015).

It is evident from the literature, that subsidies help in lowering the operational costs and cover the administrative expenses. In some of the literature, it is argued that the microfinance banks cannot operate and exist in the market without the help of the subsidies, which is exactly coincidental with the hypotheses stated. Marek and Traca (2011) worked on the panel data across various Microfinance banks and came with the result at the subsidies are vital in distinguishing the performance of the Microfinance institutes.

As subsidies play a vital role in the form of government grants where MFIs get money below the interest rate, the other imperative variable is the government regulation. "More specifically, governments can encourage the shift toward sustainable, market-based microfinance through three specific roles: (1) eliminating unfair competition from public institutions; (2) undertaking regulatory reform; and (3) improving the business environment" (Purkayastha, Tripathy, & Das, 2014). There is empirical evidence of impact of subsidy on efficiency of microfinance institutions. Subsidies are positively related to efficiency of MFIs (Hudon & Traca, 2011).

Growth rate is more related to regulate to MFI Banks. Literature has treated the microfinance as binary variable that in a specific period MFI Banks were regulated or not. These are the leading causes of the improvement or deterioration of the profitability ratio. The direct effect was implied on the market share in their research, and they confirmed the result with over more than 90 banks across Africa. In another research by Vincent et al., (2014), the research conducted in three different segments including World Bank, Microfinance Banks, and commercial banks upon their research they deduced that regulation has a direct effect on profitability ratios and the market share was induced to a higher level through government's help. The regulations have not affected directly the performance but in the terms of outreach and self-sustainability (Hartarska & Nadolnyak, 2010).

Another key variable effective in Microfinance institute's performance is governmental audits. In literature, there has not been widespread studies (Hartarska, 2005). In the study of 140 banks, Hartarska (2005) found out through study that audit is a significantly important variable that has had effect on the financial statements of the company. It is vital to notice that this data presents a milestone in the achievement that provides with a unique identifier of the institute's performance. The Audit as an independent variable in analysis comes is supported by a study in Pakistan. "Preparation and audit of accounts based on international standard and best practices resulted in the disclosure of true and fair picture of the organizations" (Isa et al., 2011). In their rich datum the significant results showed that the audit ratings were highly significant in building the institute's image, which becomes a pivotal determinant of the market share for the institute. This identifier has also government influenced audits.

The social audit includes the external and internal assessment for self-reported information regarding social information, quality of internal process and performance of a MFIs with a social mission. The objective of social audit is to achieve a financial rating for internal and external audience (Woller, 2010).

In addition to the standardized social rating scale, the internal processes to be audited can also be standardized. Five internal processes were identified that appeared to offer good potential for standardization. Each is also an internal process common to all MFIs and contributes in a significant manner to social performance. The internal audit process can also be standardized in addition to standardized social rating scale. They include (1) mission statement and communication and management leadership, (2) hiring and training, (3) incentive systems, (4) monitoring systems, and (5) strategic planning (Roy, 2008).

Data is gathered quarterly and yearly basis through PMN. Quarterly and yearly data is used to monitor the performance and trends through micro watch. Ordinary Least square methods on Panel data was used to measure the relationship between key performance indicators such as efficiency, risk, productivity and profitability (Haider, 2016).

The final variable for analysis under hypothesis is the Market size, proxies as a percentage of the whole population. It had a reported market share of 2.8 million borrowers in 2012 and is expected to have grown exponentially by the current year (Saleem, 2012). The report also presents a potential market size of 27 million borrowers for the sector. Saleem (2012) in the report has surveyed almost 140 institutes and deduced this figure with the help of Federal census data. It was presented that how the market size, and active borrowers are imperative in determining of the institute's performance.

Another research paper by Mersland (2008) gave evidence where he explicitly concluded through his study of 278 Microfinance Institutes across 60 countries, that larger market size, especially urban market size, yields a higher profit ratio by yielding a higher market share (Mersland, 2008). The fix cost quality investments used for quality investments to capture the demand when size of market increases that in turn raises barriers to entry. There is correlation between number of firms, concentration and competition (Dick, 2010). It is important to illustrate that government has had some negative impacts on the development of the microfinance institutes. The paper mentioned how the government became a competitor against the microfinance institutes and creates problems for these organizations. The analysis tried to depict through the independent variable, regulations, and this variable helps us support the claim. The paper further claimed that how government can abet and how it will support (ADB, 2010).

Theoretical Framework

Theoretical framework is the building block for the model to test for the hypotheses and gauge the effect of government intervention on the performance of the microfinance banks. Using Almazari, (2012) proxy, the profit ratio can be defined as net profit after tax of the banks taken in sample. This dependent variable acts as a proxy to capturing the performance of the microfinance banks. The model presented in paper does not confines itself to one measure of performance and so the framework comes up with another proxy namely market size of the organization. As suggested by Gunsel, (2012) market size is one of the independent variable will play the role of determining how the organizations perform in the market. It has been emphasized in the literature that this is a key variable in understanding the performance of the bank and so the model here replicates the proxy (Astrid, 2007; Lynn 2011).

However, the major difference here is that, since the model captures ratios as the proxy for most of the variables, the model differs in the extent that it takes a ratio of market size to the population of Pakistan. For any business in the private sector there are numerous models to describe how well the business is running. The theoretical framework will help to develop the model having relationship between dependent and independent variables. The dependent variable of this study is profit ratio independent variables are market size, government regulations, government grants to gross portfolio and total number of audits within a year. Following up with the literature, the variables have been defined in the model in such a way that they capture causal effects and help in gauging the policy implications that can help improve the microfinance banks' performance. The proxy used by both Astrid (2007) and Lynn (2011) for measuring market size is taking ratio of microfinance customers of bank i at t=time to total number of microfinance customers in Pakistan at t time government audits in a year captured in literature is the same as for this study used it as a number of audits. The variable used for this study is the same as number of total audits in a year which can range from 0 to 4. Audits is measured as taking the proxy frequency of audits in a year. Audits include both internal and external audits conducted within the banks within one year (Athanasios, 2013).

The variable regulations is treated as the government regulations as per the statement of these banks showing penalties of compliance with these either yes or no. In case there is a penalty in statements that refers the bank didn't follow regulations and vice versa (Hubka & Zaidi, 2010). Government regulation is a qualitative measure of gauging the effect of government intervention in microfinance banks. Using Hubka & Zaidi, (2010) model the framework of this paper checks with the banks that whether they were regulated, that is was government

involved in operation in any capacity. This gives the result in a yes/no and taken as dummy variable in the analysis value 0= not following regulations and 1= following regulations which is captured from the binary coding in analysis.

Government grants to gross portfolio is the ratio of total grants from government received by the bank i at t time to total grants received by the bank i at that time. Grants from government is an important variable that decides the performance. There is abundance of evidence in literature that justifies the importance of grants in improving the profitability of these banks. Government grants are taken as grant to profit ratio (Louis & Seret, 2013).

Data And Methodology

This study tries to capture the effect of government intervention in microfinance banks of Pakistan. For the purpose of research, the microfinance banks of Pakistan have taken in the best of their capacity. The model uses a sample of 8 strongly balance microfinance banks in Pakistan. The data taken is panel data from the sample is from financial statements of these 8 banks across 5 years ranging from 2019 to 2023.

Panel data methodology is to use same cross-sectional banks across same time-period (Wooldridge, 2009). The data is an intersection of both time-series data as well as cross-sectional data, covering the causal influence of both the data types. Amongst the widely used statistical tools, the most popular and effective tool is the use of fixed effects and random effects whichever yields better results is rated as the best. The assumptions are important to approximate the exact association among variables. These assumptions consist of normality tests that is checked by histograms, linearity is checked by normal probability plot, though linearity and normality is not considered a serious problem in panel data analysis. Multicollinearity and Heteroskedasticity is checked by Heteroskedasticity and Pearson correlation tests. Summing all the literature evidence in conformity to theoretical framework, there is model being presented in the larger model that are to regress profit ratio on audits, regulation, and market size and grant to gross portfolio. The model is:

$PA_{i,t} = \beta_0 + \beta_1 NA_{i,t} + \beta_2 RG_{i,t} + \beta_3 MS_{i,t} + \beta_4 GP_{i,t} + \mu_{i,t}$

PA = 0.0634*NA01 + 0.9195*MS + 0.1697*GP + 0.0984*RG - 0.4514 + µi,t

Where:

$PA_{i,t}$ = Profit Ratio (Net Profit after tax/Revenue) of Microfinance i at time t

$NA_{i,t}$ = Number of audits at Microfinance i at time t

$RG_{i,t}$ = 1 if organization i penalty at time t and 0 otherwise

$MS_{i,t}$ = Market Size (Microfinance customers in Pakistan/total microfinance customers of Pakistan) at time t

$GP_{i,t}$ = Grant to Gross Portfolio (Govt Grants/Total Grants) of microfinance i at time t

β_i = Beta Coefficient for i variable.

μ_i = Error term across i observation at time t

Where:

Profit $Ratio_{i,t}$ = Profit Ratio (Net Profit/Revenue) of Microfinance i at time t

Government $Audit_{i,t}$ = Number of Government audits at Microfinance i at time t

$Regulated_{i,t}$ = 1 if organization i regulated at time t and 0 otherwise

Market Size as a percentage of portfolio $_{i,t}$ = Market Size (Microfinance customers in Pakistan/Population of Pakistan) at time t

Table 1: Operationalization of Variables

VARIABLES	PROXIES	SOURCES
Profit Ratioi	Profit Ratio (Net Profit/Revenue) of Microfinance i at time t	I think through financial statement
Government Auditi	Number of Government audits at Microfinance i at time t	Number of external and internal Audit
Regulated	1 if organization i regulated at time t and 0 otherwise	If Palenties charged in a year taken from Financial statement.
Market Size as a percentage of portfolios	Market Size (Microfinance customers in Pakistan/Population of Pakistan) at time t	How would you know that how many customers and population of Pakistan mean any source
Grant to Profit Ratioi	Grant to Profit Ratio (Grant/Gross Portfolio of microfinance i at time	Through financial statement

Grant to Profit $Ratio_{i,t}$ = Grant to Profit Ratio (Grant/Gross Portfolio) of microfinance i at time t

β_i = Beta Coefficient for i variable.

µi = Error term across i observation at time t

Table 2: Descriptive Statistics

Variables	Obs.	Mean	SD	Mini	Max
$\mathbf{PA_{it}}$	40	0.149	0.456	1.37	0.26
$\mathbf{NA_{it}}$	40	2.310	0.464	2	3
$\mathbf{MS_{it}}$	40	0.113	0.155	0	0.54
$\mathbf{GP_{it}}$	40	0.213	0.326	0	1

This part of study includes the descriptive statistics, Pearson correlation matrix and results of models. First of all, the descriptive statistics is given in Table 2. This table contains the descriptive statistics of the panel for all variables. Number of observations in the panel is 40 for all variables as this data contains a strongly balance panel of 8 microfinance banks for 5 years from 2019 to 2023. Average value of dependent variable profit ratio is -0.14%. Standard deviation which is measure of dispersion shows that profit ratio of the banks in panel is deviate from its mean around 45.67%. The least value of Banks's profit ratio is -13.7% while highest value of profit ratio of the banks in panel is 26%. Likewise, the average value, standard deviation, least value and highest value of each independent variable of panel is mentioned in this table.

Table 3: Pearson Correlation Coefficient

Variables	$\mathbf{PA_{it}}$	$\mathbf{NA_{it}}$	$\mathbf{MS_{it}}$	$\mathbf{GP_{it}}$
$\mathbf{PA_{it}}$	1			
$\mathbf{NA_{it}}$	0.244	1		
$\mathbf{MS_{it}}$	0.4742	0.2959	1	
$\mathbf{GP_{it}}$	0.0645	-0.0211	0.1132	1

Source. All calculations are based on data from Microfinance Information Exchange at 5% significance level.

Pearson's correlation coefficient matrix is shown in Table 3. Before running the panel data models, it is essential to check the correlation between independent variables in order to confirm that there is no multicollinearity problem is present. The results in this

table confirm that there is no chance of multicollinearity in the models as the values of correlation not exceeds from cut point 0.6. The next two tables depict the outcomes of both panel data approaches. Table 4 describes the results of fixed effects model under this model number of audits and regulations is highly significant at 1% level of significance while out of all other variables only grants is not significant. The $R^2$of this model is 59.89%. The R^2 means that independent variables explain 59.89% variations in the profitability in this whole panel from year to year like 2019 to 2023. Model is a good fit as F test 3.80 is significant at 1% level of significance.

Table 4: Hausman Specification Test

Variables	Fixed	Random	Difference
GP_{it}	-0.022	-0.005	0.005
MS_{it}	1.007	1.162	0.629
NA_{it}	0.200	0.202	0.001
RG_{it}	0.027	-0.016	0.004

Notes: chi^2 =1.703316, and Prob. >chi^2 = 0.7901

Source. All calculations are based on data from Microfinance financial statements at 5% significance level.

The outcome of random effects model suggest that our independent variables except grants is highly significant. Based on the study of 8 Microfinance institutes across 2019 to 2023, it can be concluded that there is a governmental effect on the performance of the microfinance institutes in Pakistan. To assess these effects, the results are vital to note. While there were some limitations in data collection, it was evident from the statistical tests that the results derived were significant. Nevertheless, certain variables were not as per hypothesized; Government grants were rejected because of their insignificance, regardless of the method used. It is also vital to note, that the governmental audits, market size have a significant and positive impact and regulations has negative and significant impact on the performance of these institutes, and hence as a policy recommendation, should be discouraged. The grant was found insignificant. The results exhibited that Random Effects was a better method for Profit Ratio model for MFIs performance. The Microfinance institutes average more than a 7% profit ratio, which is significant in an underdeveloped country like Pakistan. With over more than 30 million customers in the sector, government is prone to play a vital role, which it does. In a country like Pakistan where the poverty ratio is so high, these institutes play a role for human development and thus deserve their due appraisal. Thus, it is vital for the government to inject better improvements for these institutes and avoid any damage that they may cause. Conclusively, there is still room for a lot of studies, which might be carried out in long-term, to induce better and applicable policy implications.

References

Aajmal, H., & Qureshi, T. (2011). Micro-Finance and Sustainable Development: Evidence from Pakistan. *Paradigms*, *5*, 88-113.

Alagathurai, A. (2013). A nexus between liquidity & profitability: a study of trading companies in Sri Lanka. Ajanthan, A.(2013). A Nexus Between Liquidity & Profitability: A Study Of Trading Companies In Sri Lanka. European Journal of Business and Management, 5(7), 221-237.

Alemayehu, M., & Lemma, M. (2014). Assessment of factors affecting the performance of microfinance institutions: The case of Hawassa City. *Journal of Business and Administrative Studies*, *6*(1), 1-46.

Almas, H., & Mukhtar, M. (2015). Measuring the performance and achievement of microfinance institutions incorporating subsidy dependence index and outreach index in Pakistan's case. *The Pakistan Development Review*, 353-369.

Basharat, A., Arshad, A., & Khan, R. (2014). Efficiency, productivity, risk and profitability of microfinance industry. *Pakistan Microfinance Network*, *22*, 1-10.

Bashir, M. S., Machali, M. M., & Mwinyi, A. M. (2012). The effect of service quality and government role on customer satisfaction: Empirical evidence of microfinance in Kenya. *International journal of Business and social science*, *3*(14), 312-319.

Cull, R., Demirgüç-Kunt, A., & Morduch, J. (2008). Does microfinance regulation curtail profitability and outreach?. *NYU Wagner Research Paper*, (2011-06).

Hartarska, V., & Nadolnyak, D. (2007). Do regulated microfinance institutions achieve better sustainability and outreach? Cross-country evidence. *Applied economics*, *39*(10), 1207-1222.

Hubka, A., & Zaidi, R. (2014). Innovations in Microfinance. Background paper for the WDR.

Hudon, M., & Traca, D. (2011). On the efficiency effects of subsidies in microfinance: An empirical inquiry. *World development*, *39*(6), 966-973.

Imai, K. S., Gaiha, R., Thapa, G., & Annim, S. K. (2012). Microfinance and poverty—a macro perspective. *World development*, *40*(8), 1675-1689.

Luyirika, M. N. (2010). The role of microfinance in the socio-economic development of women in a community: a case study of Mpigi *Town Council in Uganda.*

Mairura, V, & Okatch, B (2014). Factors affecting profitability in microfinance institutions: Acase study of selected microfinance institutions in Nairobi,*3*(2),118-126.

Morduch, J. (1999). The microfinance promise. *Journal of economic literature*, *37*(4), 1569-1614.

Pretes, M. (2012). Microequity and microfinance. *World Development*, *30*(8), 1341-1353.

Velnamby, T., & Ajanthan, A. (2014). Efficiency and financial sustainability of microfinance institutions: A study of Jaffna district. *Asian Journal of Multidimensional Research (AJMR)*, *3*(2), 103-121.

Woller, G. (2006). Evaluating MFIs' social performance: A measurement tool. *Micro Report*, *35*.

Yu, V., Damji, R., Vora, V., & Anand, L. (2014). Regulation on microfinance: effect upon profitability and loan diversity. *UChicago Undergraduate Business Journal*, 1-20.