Article QR

| | |
|---|---|
| **Title:** | **Assessment of Government Intervention in Microfinance Banks of Pakistan** |
| **Author (s):** | Amina Rizwan, Talha Zubair Ahmad Khan, Rubeena Tashfeen |
| **Affiliation (s):** | University of Central Punjab, Lahore, Pakistan |
| **DOI:** | https://doi.org/10.32350/jfar.62.01 |
| **History:** | Received: April 02, 2024, Revised: June 24, 2024, Accepted: August 06, 2024, Published: October 04, 2024 |
| **Citation:** | Rizwan, A., Khan, T. Z. A., Tashfeen, R., (2024). Assessment of government intervention in microfinance banks of Pakistan. *Journal of Finance and Accounting Research*, *6*(2), 01–22. https://doi.org/10.32350/jfar.62.01 |
| **Copyright:** | © The Authors |
| **Licensing:** | |
| **Conflict of Interest:** | Author(s) declared no conflict of interest |

# Assessment of Government Intervention in Microfinance Banks of Pakistan

Amina Rizwan, Talha Zubair Ahmed Khan, and Rubeena Tashfeen*

University of Central Punjab, Lahore, Pakistan

## Abstract

This paper presents a panel data study of microfinance banks in Pakistan. The data includes a random sample of financial statements from 8 microfinance banks over the period from 2011-2015, totaling 40 firm year observations. The study aims to evaluate the effect of government interventions on these microfinance banks and brings up a statistically critical assessment of various government policies applied to the sector. To quantify the effects of government intervention, panel data analysis is conducted. For a better selection of model, the Hausman's specification test is employed. The random effect model was found suitable for analysis. Using statistical tools, this paper investigates the causal effect of government regulations, government grants, market size, and governmental audits on the profit ratios of microfinance institutes. This is one of the few studies that investigates the impacts of the small and medium sized government policies on microfinance bank from inception of these policies. By analyzing the period during which these policies were first implemented, the study provides a clear and direct picture of the relationship between governmental policy and SME entities. Taking a snapshot of the impacts in the beginning provides undiluted results that are not confounded by other environmental and regulatory effects. The results show that most of the variables used in the study, such as market size and number of audits are significantly related, while government grants have an insignificant relationship with the performance of microfinance banks. The study makes a significant contribution by demonstrating that government policies and grants have limited impact on SME performance and should be reevaluated, while they should rely more on audits.

*Keywords*: government audits, government intervention, government regulations, grants, microfinance banks, profit ratio

---

* Corresponding Author: rubeena.tashfeen@ucp.edu.pk

# Introduction

Microfinance is a branch of banking service aimed toward the unemployed or low-income earners who are incapable of utilizing financial services and wish to perform business activities. The purpose of microfinance institutes (MFIs) is to provide the underprivileged with the service in a way such that they become self-sufficient and have adequate resources (Micheal, 2012). Researchers suggest that microfinance is vital to poverty alleviation in Pakistan (Khan et al., 2021). Microfinance, defined as "a credit methodology that employs effective collateral substitutes to deliver and recover short-term, working capital loans to micro-entrepreneurs", has proven success as a poverty reduction strategy.

The microfinance sector in Pakistan is an emerging industry and has a vast number of incumbents. By 2013, there were approximately 2.8 million borrowers, and this number has since grown significantly (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 government intervention, there are fewer chances to increase the financial performance of the microfinance sector in Pakistan (Imai et al., 2012). Additionally, recent studies highlight the role of the MBFIs in disaster management and control (Kamran & Omran, 2023).

An important distinction to make is that governmental intervention does not mean that the government will directly be providing financial services. The organizations provide these financial services, which often receive support from the government (Luyirika, 2010). Interference by the government in the management of MFIs affects sustainable development. This interference can compel MFIs to lend loans at lower rates, and to unfit customers leading to the access of loans by poor borrowers (Consultative Group to Assist the Poor [CGAP], 2013). Microfinance banks cannot work without a proper and regular framework that cannot be included in the analysis because this variable cannot be captured easily. The government has an imperative role in developing the framework of the organization, and typically requires 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 SME lending should be of major concern to policymakers in developing countries, because of their unintended negative impacts on SME financing. According to Von Pischke (1991), some of the impacts associated with default include: the inability to recycle funds to other borrowers, the 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 the defaulters' profiles are key to the valuation of the impact of government regulations on the profitability of the microfinance institutes (Bichanga & Aseyo, 2013). It is imperative for microfinance banks, to focus on deposit regulations. However, complying with regulations can be costly. An analysis of data from 245 MFI banks from all over the world through OLS regression revealed that supervision is negatively related to profitability and outreach. The cost of supervision is absorbed by curtailing the outreach to the markets (Cull et al., 2011).

Government intervention plays a positive role in developing the MFBS all over the world. Consequently, these microfinance institutions play an important role in improving the standards of living (Anwaar, 2022), and, thereby the economic development of the countries (Latif et al., 2023). In Pakistan, the people living under the poverty line constitute a huge part of the population and thus MFBS has an active role in alleviating the class gap in the economy.

Compared 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 indicators such as profit ratio and market share. The government has set precedence in regulations. To fight the black economic systems of these institutes, governments have hired overt participant supervisors who regulate the proper channelling of funds such as sponsorships or grants. In recent years, the government's overt participation has proven fruitful and so the results have shown that there is a proper channelling of funds. This, however, hinders profitability, because the governmental audits (overt supervisors) take control of most profit-making activities since the government's aim is welfare maximization.

One evident result is that these overt participations (namely audits) have not worked. Drawing on Adam Smith's arguments, it appears that the free-market system is a more workable and efficient measure, leading to equilibria in the most efficient way. Henceforth, the purpose of the study is to assess the role of government in the building of the microfinance sector. The authors build a hypothesis that the government plays a vital role in dictating the performance of a microfinance sector. Despite certain limitations on the collection of data, there is sufficient data to produce generalized results. The paper presents a widespread contrast with the literature available on the topic, and juxtaposes the research results along with methodologies across a multitude of research conducted globally. The study outlines its methodology and presents the key findings of the empirical result, from the data collected. The research objectives of the study are:

1. To determine whether government has an effective role in the performance of microfinance banks.

2. To assess which forms of governmental involvements are effective in enhancing the performance of MFIB.

3. To identify which governmental tools are vital.

4. To gauge policy recommendations based on research findings.

## Literature Review

The model under analysis aims to evaluate the effects of government intervention on the performance of the microfinance institutes. Since performance is a subjective and broad term, the paper limits the decision variables to the profitability ratio as the key indicators of performance. The profit ratio reflects the managers' ability to generate profit from sales, illustrating how effective the management is in creating value surplus out of the operations, that is, how well a firm can do (Velnamby & Ajanthan, 2014). Market share, which represents the organization's size in comparison to the competitors, is also used as a performance measure (Bertay et al., 2013). The presented data was taken from over 90 countries and shows the importance of market share in gauging the performance of the banks. In conformity with the literature, the model presents two dependent variables as a proxy for performance dependent on certain variables that may affect them.

The distinction between the microfinance banks and non-banks is that MFI banks are regulated by state bank and non-bank MFIs do not fall under these regulations. There is research suggesting a relationship between the efficiency of MFIs and regulations (Basharat et al., 2014; CGAP, 2013). Subsidies are a vital variable affecting the sustainability and performance of the microfinance banks and organizations in Pakistan, serving as a proxy to the quantifying effect of government intervention. In analysis, the literature indicates that subsidies by the government are a robust government interventional tool and play an effective role in the sustainability of microfinance banks 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 minds of academics and researchers. Grameen Bank of Bangladesh has to face high repayment rate but also has 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 microfinance banks cannot operate and exist in the market without the help of subsidies, which is exactly coincidental with the hypotheses stated. Marek and Traca (2011) worked on the panel data across various microfinance banks and came up with the result that subsidies are vital in distinguishing the performance of these institutions. 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 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 et al., 2014). There is empirical evidence of the impact of subsidies on the efficiency of microfinance institutions. Subsidies are positively related to the efficiency of MFIs (Hudon & Traca, 2011).

The growth rate of microfinance institutions (MFIs) is closely related to regulatory practices. Literature has treated microfinance as a 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 more than 90 banks across Africa. In another research by Javeed et al. (2020), conducted in three different segments including World Bank, microfinance banks, and commercial banks showed that regulation has a direct positive effect on profitability ratios and the market share. Others find that the regulations have no direct effect on the performance but in terms of outreach and self-sustainability (Hartarska & Nadolnyak, 2011).

Another key variable effective in microfinance institutions' performance is governmental audits. The literature on this topic is relatively sparse (Hartarska, 2005). In the study of 140 banks, Hartarska found out that audit is a significantly important variable that has had an effect on the financial statements of the company. It is vital to notice that this data presents a milestone in the achievement that provides a unique identifier of the institute's performance. The Audit, as an independent variable in our analysis, 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 p.16). In their rich datum, the results showed that the audit ratings were highly significant in building the institute's image, which in turn influenced its market share. This identifier has also government-influenced audits. The social audit includes the external and internal assessment for self-reported information regarding social information, the quality of the internal process, and the performance of MFIs with a social mission. The objective of a social audit is to achieve financial ratings for internal and external audiences (Woller, 2010).

In addition to the standardized social rating scale, the internal processes to be audited can also be standardized. Five internal processes have been 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 a standardized social rating scale. These processes 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 annually through PMN. Quarterly and yearly data is used to monitor the performance and trends through micro-watch. Ordinary Least Square methods on Panel data were used to measure the relationship

between key performance indicators such as efficiency, risk, productivity, and profitability (Haider, 2016).

The final variable for analysis under the hypothesis is market size, which proxies as a percentage of the whole population. In 2012, the reported market share included 2.8 million borrowers, with expectations for significant growth by the current year. The report also presents a potential market size of 27 million borrowers for the sector. in the report has surveyed almost 140 institutes and deduced this figure with the help of Federal census data. It was presented that the market size and active borrowers are imperative in determining the institute's performance (Akyuz, 2017). Another research paper by Mersland and Strom (2009) gave evidence where it was 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. The fixed-cost quality investments are used for quality investments to capture the demand when the size of the market increases which in turn raises barriers to entry. There is a correlation between the number of firms, concentration, and competition (Dick, 2010). It is important to illustrate that the government has had some negative impacts on the development of microfinance institutes. The paper mentioned how the government became a competitor against the microfinance institutes and created problems for these organizations. The analysis explores how regulations, as an independent variable, can support or hinder the performance of microfinance institutions. Additionally, the paper discusses potential ways in which government actions could be more supportive (Asian Development Bank [ADB], 2010).

**Theoretical Framework**

A theoretical framework is the building block for the model to test the hypotheses and gauge the effect of government intervention on the performance of microfinance banks. According to Almazari (2012), proxy, the profit ratio can be defined as the net profit after tax of the banks taken in the sample. This dependent variable acts as a proxy to assess the performance of the microfinance banks. The model presented in this paper does not confine 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 variables that will determine 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 presented by Dick (2010) and Lynn (2011).

However, the major difference here is that, since the model captures ratios as the proxy for most of the variables, it specifically examines the 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 a relationship between dependent and independent variables. The dependent variable of this study is the profit ratio and the independent variables are market size, government regulations, government grants to the gross portfolio, and the 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 microfinance banks' performance. The proxy used by both Dick (2010) and Lynn (2011) for measuring the market size is taken as the ratio of microfinance customers of bank i at t = time scaled to the total number of microfinance customers in Pakistan at t time government audits in a year is captured in literature as "number of audits per year". The variable used for this study is the same as the number of total audits in a year which can range from 0 to 4. Audits are measured by taking the proxy frequency of audits in a year. Audits include both internal and external audits conducted within the banks within one year (Tagkalakis, 2013).

The variable "government regulations" highlights the statement of banks showing penalties for compliance. This variable shows penalties in bank statements regarding adherence to regulations (Hubka & Zaidi, 2005). Government regulation is a measure of gauging the effect of government intervention in microfinance banks. Using the same proxy, this study checks with the banks whether they were regulated and the government was involved in the operation in any capacity. This gives the result in a dichotomous (yes/no) format and is taken as a dummy variable in the analysis where the value 0 means not following any regulations and 1 means following regulations which is captured from the binary coding in the analysis. Government grants to the gross portfolio is the ratio of total grants from the government received by the bank "i" at "t" time to total grants received by the bank "I" at that time. Grants from the

government are an important variable that decides performance. Substantial evidence in the literature supports the importance of grants in improving the profitability of these banks. Government grants are taken as a grant-to-profit ratio (Louis & Seret, 2013).

It is important to understand that while financial repression policies like interest rate caps can help control certain economic factors, they often come with unintended consequences. For instance, these caps can stifle the growth and expansion of the microfinance market. Government grants, though beneficial in boosting the gross portfolio of microfinance institutions, can also create a dependency that threatens their long-term sustainability (Čihák et al., 2021). Essentially, when financial institutions rely too heavily on these government interventions, they become less resilient over time. This decreases the long-term profitability potential of the business.

**Figure 1**

*Theoretical Framework*
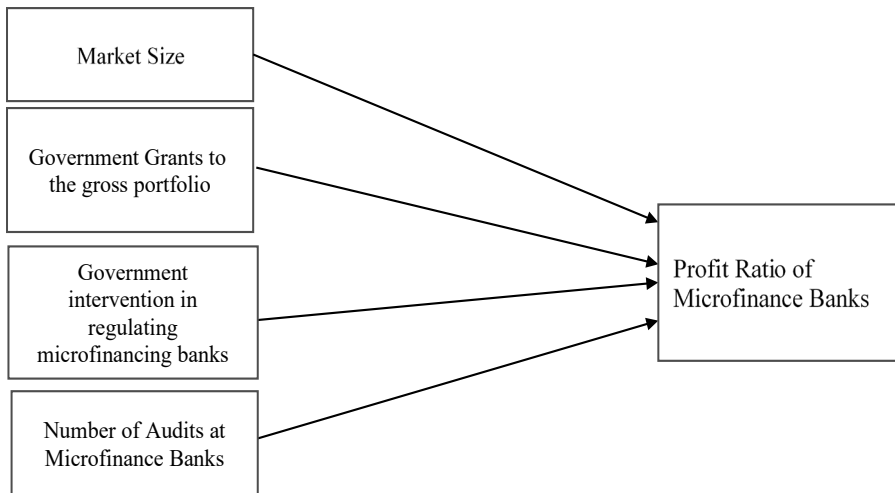


Moreover, financial repression can lead to capital misallocation. Regulations that enforce cheap loans or impose interest rate caps might seem beneficial initially but often result in a significant reduction in lending to small and medium enterprises. This can lead to financial exclusion rather than inclusion, as these businesses struggle to access the credit they need, thereby negatively impacting their growth and the broader economy in the

long run (Koskei, 2020). On the other hand, frequent and quality audits ensure transparency and accountability and could enhance investor and depositor confidence, potentially leading to more business and higher profitability in the long term for microfinancing banks (Muotolu & Nwadialor, 2023). The theoretical framework has been proposed in Figure 1.

## Methodology

This study examines the impact of government intervention in microfinance banks in Pakistan. The research focuses on a sample of eight well-balanced microfinance banks operating in Pakistan. The data taken is panel data, sourced from financial statements of these 8 banks, over a period of 5 years, from 2011 to 2015, constituting total of 40 firm year observations.

The Federal cabinet of Pakistan approved the SME Policy on January 17th, 2007. The SME Implementation Policy Plan matrix (Government of Pakistan, 2007), shows the start of implementation plan from 2007, ending by 2009 year end. However, "various organizations may be allowed a two-year time frame to align their current SME definition in line with the SME definition proposed in this Policy" (Government of Pakistan, 2007 p. 14), allowing a two-year grace period up to 2011 for some industries. Simultaneously, the Microfinance Institution Ordinance 2001, was amended in October 2007, to allow for some synchronism between the two policies. Therefore, the sample of the study is taken from 2011 to 2015 to study the effects of the SME policies and regulations. By taking this initial sample, the visualization of the direct impacts of government policies on the SME units and microfinance banks has been made possible, without confounding effects.

The panel data methodology uses same cross-sectional banks over the same time period (Wooldridge, 2010). The data is an intersection of both time-series data as well as cross-sectional data, covering the causal influence of both data types. Amongst the widely used statistical tools, fixed effects and random effects models are commonly used. The choice between these models depends on whichever yields better results, and is rated as the best. Key assumptions are important to approximate the exact association among variables. These assumptions consist of normality tests that are checked by histograms, and linearity is checked by normal probability plot, though linearity and normality are not considered serious problem in panel

data analysis. Multicollinearity and Heteroskedasticity are checked by Heteroskedasticity and Pearson correlation tests. Summing all the literature evidence in conformity to theoretical framework, the model being presented is to regress profit ratio on audits, regulation, and market size and grant to gross portfolio. Hence, OLS regression analysis is employed for the empirical tests, and the model is shown below:

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

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

$RG_{i,t}$ = Government intervention in regulating microfinancing banks

$MS_{i,t}$ = 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

$\beta_i$ = Beta Coefficient for i variable.

$\mu_i$ = Error term across i observation at time t

**Table 1**

*List of Variables and their Proxies*

| Variables | Proxies | Sources |
|---|---|---|
| Profit Ratio$_i$ | Profit Ratio (Net Profit/Revenue) of Microfinance *i* at time *t* | Through financial statement |
| Government Audit$_i$ | Number of government audits at microfinance *i* at time *t* | Number of external and internal audit |
| Regulated$_i$ | 1 if organization *i* regulated at time *t* and 0 otherwise | If penalties charged in a year taken from financial statement. |
| Market Size as a percentage of portfolio$_i$ | Market Size (Microfinance customers in Pakistan/Population of Pakistan) at time *t* | Calculated based on publicly available data |

| Variables | Proxies | Sources |
|-----------|---------|---------|
| Grant to Profit Ratio$_i$ | Grant to Profit Ratio (Grant/Gross Portfolio of microfinance $i$ at time | Through financial statement |

## Results

This part of the study includes the descriptive statistics, Pearson correlation matrix and results of models. Table 2 contains the descriptive statistics of the panel for all variables. The number of observations in the panel is 40 for all variables as this data contains a strong balance panel of 8 microfinance banks for 5 years from 2011 to 2015. The average value of the dependent variable profit ratio is -0.14%. Standard deviation which is a measure of dispersion shows that the profit ratio of the banks in the panel deviates from its mean of around 45.67%. The lowest value of the banks' profit ratio is -13.7% while the highest value of the profit ratio of the banks in the panel is 26%. Likewise, the average value, standard deviation, least value, and highest value of each independent variable of the panel are mentioned in Table 2 below:

**Table 2**

*Descriptive Analysis*

| Variables | Observations | Mean | *SD* | Minimum | Maximum |
|-----------|--------------|------|------|---------|---------|
| PA$_{it}$ | 40 | 0.15 | 0.46 | 1.37 | 0.26 |
| NA$_{it}$ | 40 | 2.30 | 0.46 | 2.00 | 3.00 |
| MS$_{it}$ | 40 | 0.11 | 0.16 | 0.00 | 0.54 |
| GP$_{it}$ | 40 | 0.21 | 0.33 | 0.00 | 1.00 |

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 present. The results of the correlation analysis are presented in Table 3 confirming that there is no chance of correlation above 0.6 level.

**Table 3**

*Correlation Analysis*

| Variables | PAit | NAit | MSit | GPit |
|-----------|------|------|------|------|
| Pait | 1.00 | | | |
| NAit | .24 | 1.00 | | |
| MSit | .47 | .30 | 1.00 | |
| GPit | .06 | -.02 | .11 | 1.00 |

Initially, the Hausman test was conducted to determine whether the fixed or random model is best suited for the empirical analysis. In the Hausman test, the null hypothesis posits that the Random Effects (RE) model is appropriate, while the alternative hypothesis posits that the RE is not appropriate and therefore, the Fixed Effects (FE) model should be used.

All calculations are based on data from microfinance financial statements at a 5% significance level. The results show that the p-value is 0.7901, indicating that the null hypothesis is significant and thus the Random Effects model is a better fit for the analysis.

**Table 4**

*Hausman Specification Test*

| Variables | Fixed | Random | Difference |
|---|---|---|---|
| $GP_{it}$ | -0.022403 | -0.005323 | 0.005915 |
| $MS_{it}$ | 1.007791 | 1.162568 | 0.629327 |
| $NA_{it}$ | 0.200843 | 0.202866 | 0.001416 |
| $RG_{it}$ | 0.027482 | -0.016153 | 0.004426 |
| Test Summary | Chi-Sq. Statistic | Chi-Sq. *df* | Prob. |
| Cross-section random | 1.703316 | 4 | 0.7901 |

In Table 5 shown below, we provide the results of the Random Effects test, with $PA_{i,t}$ = Profit Ratio (Net Profit after tax/Revenue) of Microfinance $i$ at time t, as the dependent variable. C = constant of the equation; $NA_{i,t}$ = Number of audits at Microfinance $i$ at time t; $RG_{i,t}$ = Government intervention in regulating microfinancing banks; $MS_{i,t}$ = 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

**Table 5**

*Random Effects Test using Panel EGLS (Cross-section Random Effects)*

| Variable | Coefficient | Std. Error | *t*-Statistic | Prob. |
|---|---|---|---|---|
| C | -0.74 | 0.37 | -2.00 | 0.06 |
| GP | -0.01 | 0.21 | -0.02 | 0.98 |
| MS | 1.16 | 0.68 | 4.70 | 0.04 |
| NA | 0.20 | 0.17 | 2.21 | 0.03 |
| RG | -0.02 | 0.18 | -0.09 | 0.93 |

| Effects Specification | | | *S.D.* | Rho |
|---|---|---|---|---|
| Cross-section random | | | 0.32 | 0.47 |
| Idiosyncratic random | | | 0.34 | 0.53 |
| Weighted Statistics | | | | |
| *R*-squared | 0.14 | Mean dependent var | | -0.06 |
| Adjusted *R*-squared | 0.04 | *S.D.* dependent var | | 0.34 |
| *S.E.* of regression | 0.33 | Sum squared resid | | 3.81 |
| *F*-statistic | 1.40 | Durbin-Watson stat | | 2.26 |
| Prob(*F*-statistic) | 0.002 | | | |
| Unweighted Statistics | | | | |
| *R*-squared | 0.23 | Mean dependent var | | -0.15 |
| Sum squared resid | 6.22 | Durbin-Watson stat | | 0.94 |

*Note.* Dependent Variable: PA. Sample: 2011 2015. Periods included: 5. Cross-sections included: 8. Total panel (balanced) observations: 40

The results show that MS and NA are significant at *p*-value of 0.0371 and 0.0333 respectively, significant at a level of $<0.05$, and have a positive relationship with profit indicating that both variables increase profits. However, GP and RG have p-values that are insignificant: showing that grants by government and government interference have no impact on the profits of microfinance entities. However, MS (market size) and NA (number of audits) have a significant and positive impact on the entity's profits, and the constant is also significant.

## Discussion

A key finding of the study is detrimental effect of government grants on profitability of microfinance institutions. This outcome aligns with prior research, which highlights superiority of equity and retained earnings as more financially sustainable sources of capital compared to grants and debt. These studies suggest that reliance on equity and internal funds foster more sustainable growth in microfinance banks, while grants and debt may hinder long-term financial performance by creating dependencies and reducing operational efficiency (Fonchamnyo et al., 2023).

This study also reveals a positive relationship between market size of microfinance institutions and number of audits on their profitability, aligning with prior research that emphasizes on the crucial role of market size in driving profitability growth for these institutions. This finding reinforces the idea that microfinance banks should focus on internal growth

strategies, such as enhancing marketing efforts to boost sales and improving operational efficiency to reduce costs. These approaches are key to achieving sustainable, organic growth over the long term (Parmeter & Hartarska, 2020).

This study also identifies negative impact of government regulatory interference on the profitability of microfinance institutions. While these regulations aim to enhance transparency and establish operational guidelines, they can simultaneously restrict operational flexibility and increase compliance costs (Gupta & Mirchandani, 2020). These findings, consistent with previous research, suggest that both excessive and insufficient regulatory involvement can adversely affect profitability. A balanced regulatory framework that maintains transparency while allowing operational flexibility is therefore essential for the sustainable growth of microfinance institutions.

## Conclusion

Based on the study of 8 Microfinance institutes from 2011 to 2015, it is evident that government intervention significantly affects the performance of the microfinance institutes in Pakistan. To assess these effects, the results are vital to note. Despite some limitations in data collection, the statistical tests revealed significant results. However, not all hypothesized variables were supported; specifically, government grants were found to be insignificant. It is also vital to note, that governmental audits and market size have a significant and positive impact on these institutions, whereas regulations have a negative but insignificant impact on the performance of these institutes. Therefore, as a policy recommendation, these regulatory measures should be discouraged. The grant was found insignificant. The random effects model was found to be more suitable for analyzing the profit ratio model for MFIs performance. Microfinance institutes average more than a 7% profit ratio, which is significant in an underdeveloped country like Pakistan. With more than 30 million customers in the sector, the 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 in 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. In conclusion, there is considerable scope for further research to develop policy implications that can better support the microfinance sector in Pakistan.

## Implications of the Study

The study delves into the impacts of government policies on SMEs. It is among the few studies that provide valuable snapshots of the effects at the inception of the policy implementation. Later periods might complicate this analysis due to various confounding factors such as environmental, geographical, and societal influences. The study provides crucial insights for government strategists and policy makers in shaping their future policies.

The study addresses whether government policies have a substantial impact on SME performance. The results show that government grants and regulations do not significantly impact the profits of SMEs. This is quite surprising as it shows that just baling out cash to these entities will not improve their performance. The study finds that the regulations also appear to have shortcomings and do not have any intended benefits on the entities. In contrast, government audits are found to have a positive and significant effect on the performance of SMEs and therefore there needs to be regular audits. If cash grants are not turning out any expected returns, then the government needs to look into this to determine if there is wastage or theft down the pipeline, and they need to provide restrictions on use, in line with robust vision of improvements.

## Conflict of Interest

The author of the manuscript has no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

## Data Availability Statement

The data associated with this study will be provided by the corresponding author upon request.

## Funding Details

No funding has been received for this research.

## References

Almazari, A. A. (2012). Financial performance analysis of the Jordanian Arab bank by using the DuPont System of financial analysis. *International Journal of Economics and Finance*, *4*(4), 86–99. http://doi.org/10.5539/ijef.v4n4p86

Akyuz, Y. (2017). Global economic prospects: The recession may be over but where next? In Y. Akyuz (Ed.), *The Financial Crisis and the global South* (pp. 37–62). Pluto Press

Anwaar, S., Ali, A., & Saleem, S., (2022). Role of micro financing institutions for the improvement of standard of living. *Pakistan Journal of Social Research*, *4*(3), 299–310.

Asian Development Bank. (2010, April 30). *Pakistan: Microfinance sector development program (program loan).* https://www.adb.org/sites/default/files/evaluation-document/35602/files/29229-pak-validation-01_6.pdf

Basharat, A., Arshad, A., & Khan, R. (2014). *Efficiency, productivity, risk and profitability of microfinance industry*. Pakistan Microfinance Network. https://www.findevgateway.org/sites/default/files/publications/files/efficiency_productivity_risk_and_profitability_of_microfinance_industry_in_pakistan_a_statistical_analysis.pdf

Bertay, A. C., Demirgüç-Kunt, A., & Huizinga, H. (2013). Do we need big banks? Evidence on performance, strategy and market discipline. *Journal of Financial Intermediation*, *22*(4), 532–558. https://doi.org/10.1016/j.jfi.2013.02.002

Bichanga, W. O., & Aseyo, L. (2013, April). Causes of loan default within micro finance institutions in Kenya. *Interdisciplinary Journal of Contemporary Research in Business*, *4*(12), 316–355.

Consultative Group to Assist the Poor. (2013). *Advancing financial inclusion to improve the lives of the poor*. https://www.cgap.org/sites/default/files/organizational-documents/FY2013-CGAP-Annual-Report-Jan-2014.pdf

Chen, S., & Ravallion, M. (2008, August 1). *The developing world is poorer than we thought, but no less successful in the fight against poverty* (Policy Research Working Paper No. WPS 4703). The World Bank Group. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/526541468262138892/the-developing-world-is-poorer-than-we-thought-but-no-less-successful-in-the-fight-against-poverty

Čihák, M., Mare, D. S., & Melecky, M. (2021). Financial inclusion and stability: Review of theoretical and empirical links. *The World Bank Research Observer*, *36*(2), 197–233. https://doi.org/10.1093/wbro/lkaa006

Csikszentmihalyi, M., & Larson, R. (2014). Validity and reliability of the experience-sampling method. In M. Csikszentmihalyi & R. Larson (Eds.), *Flow and the foundations of positive psychology* (pp. 33–54). Springer.

Cull, R., Demirgüç-Kunt, A., & Morduch, J. (2011). *Microfinance regulation curtail profitability and outreach?* NYU Wagner. https://www.findevgateway.org/sites/default/files/publications/files/mfg-en-paper-microfinance-regulation-curtail-profitability-and-outreach-oct-2008_0.pdf

Dick, A. A. (2010). Market size, service quality, and competition in banking. *Journal of Money, Credit and Banking*, *39*(1), 49–81. https://doi.org/10.1111/j.0022-2879.2007.00003.x

Fonchamnyo, D. C., Anyangwe, T., Chantal, N. N., & Dinga, G. D. (2023). Capital structure and financial sustainability: stakes of microfinance institutions in Bamenda, Cameroon. *Future Business Journal*, 9(1), 41.

Government of Pakistan. (2007). *SME led economic growth–creating jobs and reducing poverty*. https://moip.gov.pk/SiteImage/Policy/SME%20Policy%202007.pdf

Gunsel, N. (2012). Micro and macro determinants of bank fragility in North Cyprus economy. *African Journal of Business Management*, *6*(4), 1323–1329. https://doi.org/10.5897/AJBM11.1055

Gupta, N., & Mirchandani, A. (2020). Corporate governance and performance of microfinance institutions: recent global evidences. *Journal of Management and Governance*, 24(2), 307-326.

Haider, M. (2016, July). *A quarterly update on microfinance outreach in Pakistan*. NRSP Microfinance Bank. https://www.nrspbank.com/sites/default/files/rates-charges-weightages/PMN-Microwatch-Jan-Mar17.pdf

Hartarska, V. (2005). Governance and performance of microfinance institutions in Central and Eastern Europe and the newly independent

states. *World Development*, *33*(10), 1627–1643. https://doi.org/10.1016/j.worlddev.2005.06.001

Hartarska, V., & Nadolnyak, D. (2011). Do regulated microfinance institutions achieve better sustainability and outreach? Cross country evidence. *Applied Economics*, *39*(10), 1207–1222. https://doi.org/10.1080/00036840500461840

Hubka, A., & Zaidi, R. (2005, January 27). *Impact of government regulations on microfinance*. The World Bank Group. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/261741468763524928/impact-of-government-regulation-on-microfinance

Hudon, M., & Traca, D. (2011). On the efficiency effects of subsidies in microfinance: An empirical inquiry. *World Development*, *39*(6), 966–973. https://doi.org/10.1016/j.worlddev.2009.10.017

Imai, K. S., Gaiha, R., Thapa, G., & Annim, S. K. (2012). Microfinance and poverty—a macro perspective. *World Development*, *40*(8), 1675–1689. https://doi.org/10.1016/j.worlddev.2012.04.013

Isa, Q. A., Ashfaq, Y., & Haq, A. (2011, November 14–17). *What makes a microfinance apex work?* [Paper presentation]. Proceedings of Global Microcredit Summit. Valladolid, Spain.

Javeed, S. A., Latief, R., & Lefen, L. (2020). An analysis of relationship between environmental regulations and firm performance with moderating effects of product market competition: Empirical evidence from Pakistan. *Journal of Cleaner Production*, *254*, Article e120197. https://doi.org/10.1016/j.jclepro.2020.120197

Kamran, H. W., & Omran, A. (2023). Role of microfinance in mitigating disasters in Pakistan. *Journal of Environmental Management and Tourism*, *14*(1), 150–159.

Khan, A. A., Khan, S. U., Fahad, S., Ali, M. A., Khan, A., & Luo, J. (2021). Microfinance and poverty reduction: New evidence from Pakistan. *International Journal of Finance & Economics*, *26*(3), 4723–4733. https://doi.org/10.1002/ijfe.2038

Koskei, L. (2020). Interest rate ceilings and financial exclusion in Kenya: Evidence from commercial banks' sectoral credit distribution.

*International Journal of Business, Economics and Management*, *7*(5), 301–309. https://doi.org/10.18488/journal.62.2020.75.301.309

Latif, A., Saifi, I. A., & Ajmal, M. M., (2023). Inspecting the effects of natural resources, economic growth and trade openness on firm performance: a case of Danish economy. *Bulletin of Business and Economics (BBE)*, *12*(3), 185-191. https://doi.org/10.61506/01.00017

Louis, P., & Seret, A. (2013). Financial efficiency and social impact of microfinance institutions using self-organizing maps. *World Development*, *46*, 197–210. https://doi.org/10.1016/j.worlddev.2013.02.006

Lynn, M. (2012). Segmenting and targeting your market: Strategies and limitations. In M. C. Sturman, J. B. Corgel & R. Verma (Eds.), *The Cornell School of Hotel Administration on hospitality: Cutting edge thinking and practice* (pp. 351–369). John Wiley & Sons.

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* [Master Thesis, University of South Africa]. Unisa Institutional Repository. https://uir.unisa.ac.za/bitstream/handle/10500/4879/dissertation_luyirika_mn.pdf

Marek, H., & Traca, D. (2011). On the efficiency effects of subsidies in microfinance: An empirical inquiry. *World Development*, *39*(6), 966–973. https://doi.org/10.1016/j.worlddev.2009.10.017

Mersland, R., & Strom, R. O. (2009). Performance and governance in microfinance institutions. *Journal of Banking and Finance*, *33*(4), 662–669. https://doi.org/10.1016/j.jbankfin.2008.11.009

Micheal, P. (2012, August). Microequity and microfinance. *World Development*, *30*(8), 1341–1353. https://doi.org/10.1016/S0305-750X(02)00044-X

Morduch, J. (1999). The microfinance promise. *Journal of Economic Literature*, *37*(4), 1569–1614. https://doi.org/10.1257/jel.37.4.1569

Mukhtar, M., & Almas, H. (2015). Measuring the performance and achievement of microfinance institutions incorporating subsidy

dependence index and outreach. *The Pakistan Development Review*, *54*(4), 353–369.

Muotolu, C., & Nwadialor, E. O. (2023). Effect of audit quality on the financial performance of deposit money banks in Nigeria. *International Journal of Trend in Scientific Research and Development*, *3*(2), 923–932.

Parmeter, C. F., & Hartarska, V. (2020). Performance of Microfinance Institutions: A Review∗. Handbook of Production Economics, 1-29.

Purkayastha, D., Tripathy, T., & Das, B. (2014). The Impact of regulations on microfinance industry: A strategic perspective. *IUP Journal of Business Strategy*, *11*(3), 24–40.

Rosenberg, R. (2014, June). *Measuring results of microfinance institutions: Minimum indicators that donors and investors should track*. CGAP. https://www.cgap.org/sites/default/files/CGAP-Technical-Guide-Measuring-Results-of-Microfinance-Institutions-Minimum-Indicators-That-Donors-and-Investors-Should-Track-Jul-2009.pdf

Roy, M. (2008). *MFI internal audit and controls*. MicroSave. https://www.findevgateway.org/sites/default/files/publications/files/mfg-en-toolkit-mfi-internal-audit-and-controls-trainers-manual-aug-2007.pdf

Tagkalakis, A. O. (2013). Audits and tax offenders: Recent evidence from Greece. *Economics Letters*, *118*(3), 519–522. https://doi.org/10.1016/j.econlet.2012.12.031

Velnamby, T., & Ajanthan, A. (2014). Efficiency and financial sustainability of microfinance institutions: A study of Jaffna district. *An International Multidisciplinary Research Journal*, *3*(7), 545–561.

Von Pischke, J. D. (1991). *Finance at the frontier: Debt capacity and the role of credit in the private economy*. The World Bank Publications.

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. The MIT Press.

Woller, G. (2006). *Evaluating MFIs' social performance: A measurement tool* (Micro Report, 35). US Agency for International Development. https://pdf.usaid.gov/pdf_docs/Pdacg793.pdf