

The Determinants of the Social performance in the Microfinance Institutions (A case study of India and Pakistan)

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Abstract

There are two main goals of microfinance institutions, financial stability and social performance. The welfare model of microfinance institutions states that microfinance institutes should increase social performance by increasing the number of active borrowers as well as increasing the average loan per borrower to the needy people of society. Numerous determinants are related to social performance. The study's objective was to look at the factors mentioned earlier and how they affect social performance in Pakistan and India. The secondary sources for the data collection were used and the sources for the data were the annual reports of the microfinance institutions. Based on the Hausman test, a fixed effect model was suggested and according to the results age and firm size remain positive and significant with the social performance in both India and Pakistan. The credit remains negative but insignificant in India and Pakistan. It is the profitability that has a negative and significant impact on the social performance in Pakistan. There is a tradeoff between profitability and social performance in case of Pakistan. The research recommended that MFIs should increase the social performance in order to target more and more poor people in the country by increasing the total assets, controlling the credit risk and reinvestment of the profit.

Key words: *Microfinance, Social Performance, Fixed Effect Model, Return on Assets*

Introduction

The pandemic of poverty in developing economies has prompted scholars and decision-makers to propose solutions to reduce poverty and raise living standards in society (Bent, 2019). MFIs' primary goals are to aid the impoverished by offering loans and savings (financial services) to reduce their financial hardships and poverty. The microfinance sector is distinct in several ways,

including its youth, its varied organizational structure that includes both for-profit and nonprofit entities, and its emphasis on women and the underprivileged as part of its social purpose (Mori & Randoy, 2011).

One of the primary objectives of all MFIs is to carry out their social purpose. Making money when helping the underprivileged with financial services is viewed as incidental or ancillary to the issue that they are attempting to tackle (Sriram, 2011). The general goal of microfinance institutions (MFIs) is to increase the underprivileged access to financial services while maintaining their financial viability (Hermes & Hudon, 2019). One of MFIs' primary objectives is to carry out its social mission function (Mori & Randoy, 2011).

It has been observed that poor people of the society are ignored by the traditional banking system, it is the social performance that increase the outreach to the needy and poor people of the society. (Lafourcade et al., 2005). The social performance of the microfinance institutions can be elaborated through breadth of outreach, depth of the outreach and the volume of services that are provided by these microfinance institutions. Social performance also refers to MFIs' ability to reach out to the underprivileged by offering services that impoverished family's requirements (Hermes et al., 2019).

Since 1970, it has been observed that access to financial resources is common and easy for the developed countries as compared to the developing countries. The expansion of the reach and depth of current microfinance institutions, increased rivalry among microfinance service providers, diversification of product and service offerings, and the availability of private and commercial funding for microfinance operations are some indicators of the microfinance industry's growth (Reed, 2015). However, a substantial proportion of individuals in underdeveloped nations lack access to financial resources (Hermes & Hudon, 2019) which indicates the low social performance of the MFIs across the region.

Now to reach the poor people of the society is it the utmost duty of the MFIs to focus on social outreach. Studies have out that microfinance organizations are exclusively helping the very poor. Furthermore, most MFIs lack precise guidelines and standards for identifying the lowest of the poor. According to Hasan and Batra (2018), the MFI sector in Ethiopia has trouble reaching many impoverished individuals who live below the poverty line, has inconsistent profitability, and has a defined policy for targeting women. It also performs poorly in terms of depth outreach.

It is anticipated that microfinance would uphold financial sustainability while concurrently advancing social objectives. For the survival of the MFIs profitability is important which brings financial sustainability. In the words of Olasupo et al. (2014), it is the main responsibility of the top management to work on the financial as well as the social stability of the MFIs as they have to achieve their two main objectives. Researchers who focus on MFI sustainability are drawn to

the organization because of its significance in reducing poverty and its impact on the economy as a whole.

The social performance in microfinance institutions has been investigated in India as well as in Pakistan by different authors in different frameworks. In India, the determinants of outreach performance were investigated by (Singh & Padhvi 2019; Beg et al., 2023; Biswas & Gupta 2021). In Pakistan, few studies were conducted to investigate the determinants of microfinance social outreach. The determinants were investigated by (Saad et.al, 2018; Iqbal et.al, 2019; zeb et.al, 2021).

The main objective of this research paper was to investigate the relationship of these aforementioned determinates with social performance in India and Pakistan. The research work has investigated whether the behavior of these variables changes or it remains the same in India and Pakistan. It has also answered the question of the social performance in the microfinance institutions in India and Pakistan.

Literature Review

Microfinance

An approach for development that offers social and financial intermediation is microfinance. While social intermediation entails organizing citizen organizations to express their concerns and ambitions to politicians and to boost their confidence, in the words of Robinson (2002 the term "microfinance" describes the financial services offered to low-income people or organizations that are not usually accepted into standard banks. The majority of microfinance organizations concentrate on providing credit in the form of small working capital loans, often known as microloans or microcredit.

Performance measures of the microfinance institutions

An organization's or institution's performance should be evaluated using both the industry average and the organization's objectives. According to Woldeyes (2012), the MFI's effectiveness was evaluated based on its outreach to check the number of borrowers served in the year and how much increase has been recorded in average loan per borrower. Based on past experiences, microfinance interventions by funding agencies provide greater outcomes when they are specifically designed, reported on, and monitored based on important performance indicators. Sadly, a lot of projects forget to include this kind of measurement. Nonetheless, these five fundamental metrics provide fundamental instruments for assessing MFI performance (CGAP, 2009).

- Breadth of outreach refers to the active number of borrowers (NAB)
- The depth of outreach identify the level of the clients poverty (ALPB)
- The profitability which is required for the smooth operations of the MFIs without considering the help of the donors.
- Credit risk which is attached with the repayment of the loan to the microfinance institutions

- Size of the microfinance institutions which indicates that possessing more assets brings social sustainability or not?
- Age of the microfinance which indicate that older microfinance institutions perform better than new one in the context of the social outreach.

Social outreach of the microfinance institutions

The terms "outreach" and "depth of outreach" relate to the distribution of financial services to economically disadvantaged people as well as to a sizable segment of society (Conning, 1999). The goal of microfinance is to improve the well-being of the impoverished as a social benefit. Outreach is frequently utilized to provide information about MFI's clientele, such as their level of poverty. Singh, & Padhi (2019) define outreach as the breadth and depth of an organization's primary services, which include money transfers, micro insurance, savings mobilization, credit supply, and payment services.

Measurement of the Social performance

Because social performance is such a complex issue, research on it shouldn't be restricted to using just one dimension. Instead, assessing social performance calls for a multimodal approach. This is why the examination of social performance should take into account a variety of proxies or indicators related to the different MFI consumer groups. Even if it's not always mentioned, social performance frequently refers to the scope or depth of outreach to women borrowers. A microfinance institution's outreach is measured by the breadth and depth of its primary services, which include money transfer, micro insurance, savings mobilization, credit supply, and payment services (Rao, 2014). It assesses how successfully an MFI has attracted and satisfied the financial services demands of its target market.

Depth of Social Outreach

The Depth of the outreach refers to the degree of the socioeconomic status of the needy and poor people served by the MFIs. Depth of outreach was defined by Rao (2014) and Rauf & Mahmood (2009) as the "poverty level of clients served by MFI". The amount to which the impoverished lack access to commercial banks is represented by the outreach's depth, which also serves as a narrative of poverty. Since other indications of outreach depth are typically costly to gather, the average loan amount serves as a stand-in for outreach depth Saad et.al, (2018).

Breadth of Social Outreach

"The scale of operations of an MFI" is referred to as the outreach's breadth (Rao, 2014). The quantity of impoverished people that a microfinance organization serves may be determined by looking to active borrowers served by the MFIs, which is also referred as the scope of the outreach (Woller, 2002). Numerous scholarly investigations have employed the quantity of current debtors as an indicator of the extent of outreach (Bhuyan, 2018, Kinde, 2012; Tesiso, 2023)

Empirical studies and hypothesis development

The elements influencing MFIs' Social performance will be covered in the section that follows the direct investigations conducted by various authors, particularly focusing on the factors influencing MFI performance, have yielded varying conclusions about the factors that influence

MFI performance. Numerous factors have influenced the Social performance of microfinance institutions.

Return on assets (ROA)

The profitability of a business in relation to its total assets is shown by its return on asset. It is the ratio of the net income to the total assets. This helps us understand how well management uses its resources to generate a profit. ROA is very common proxy used for the profitability (Ma'ruf, & Azad, 2023). According to Abdulah and Tawar's (2017) research, return on asset (ROA) is a major factor that has a negative relationship with the scope and depth of Social performance as shown total female borrowers from the MFIs. They recommended portfolio investment, in which MFIs invest in other assets thought to provide greater profits rather than increasing loans to the underprivileged. Using the Welfarists method, Kipesha and Zhang (2013) discovered that the financial revenue ratio and return on asset (ROA) had negative coefficients with outreach initiatives. This suggests that prioritizing profitability causes outreach to the underprivileged to decrease, which is why trade-offs occur. On the basis of these empirical studies the hypothesis of the study is

H1: There is a negative association between social performance and return on assets

Age of the microfinance institutions

The number of years an MFI has been in operation is its age. Furthermore, Hermes et al. (2008) discovered that older MFIs may also be less sustainable due to their lower efficiency. Nyamsogoro (2010) found that financial sustainability in Tanzania is positively impacted by the age of rural MFIs. Similarly, Hiratsuka et al. (2011) discovered that an MFI's age had a beneficial impact on the global MFIs' capacity to maintain their financial sustainability. According to Wijesri et al. (2015) it is the older MFIs that perform well not only financially socially as well as described in the case of Kenya and Sri Lanka. MFIs that are older have superior outreach and profitability results (Tesimo, 2023). Vanroose (2009) discovered a large negative second-order effect and noted that the effect diminishes with age.

H2: The age of the microfinance has positive and significant impact on the social performance of the microfinance institutions

Size of the microfinance institutions

The amount of an MFI's loan portfolio or total assets may indicate the size of the organization, and this might have an impact on performance because larger organizations can offer financial services at a lower cost due to economies of scale and scope. Larger organizations can operate more efficiently thanks to scale and scope economies, which improves their financial performance. If larger MFIs choose to cross-subsidize such operations with profits from economies of scale, then it's possible for the MFIs to access the needy and poor customer (Armendàriz and Szafarz, 2011). Regarding the correlation between size and social performance, the evidence is more ambiguous. The social performance of bigger MFIs is found to be inferior by Rao and Reda (2015). The findings show that a company's size has a considerable beneficial influence on profitability and a considerably negative association with Social performance in Ethiopia (K.Pal Narwal, M. Kumar Yadav, 2015).

H3: The size of the MFIs and social performance has positive and significant relationship

Credit risk

The most valuable factor for MFI is its credit risk. The risk of loan default is reflected in the quality of an institution's portfolio, which also affects future earnings and its capacity to reach out to new and existing customers. The loans that are overdue for 30 days are used as proxy for the quality of the portfolio (Lafourcade, et al., 2005). The microfinance will be less financially viable and more inefficient the higher the PAR. According to Nyamsogoro (2010)'s econometric analysis, PAR and the long-term viability of microfinance organizations are negatively correlated. This demonstrates that a microfinance institution's efficiency and likelihood of sustainability decrease with increasing PAR. Collection of loans by MFIs in time shows their success which ultimately reduce the credit risk. In the event that a loan payment is overdue by thirty days, the loan is said to be in danger and have low chances of recovery. Additionally, Saad, Taib and Bhyuin (2018) discovered that portfolio quality had an insignificantly negative effect on ALPB when evaluated by $PAR > 30$. This suggests that MFIs' outreach is unaffected by the risky portfolio.

H4: There is negative and significant impact of the credit risk on the social performance of the microfinance institutions

Research Methodology

Research Design

According to Creswell (2003), a deductive approach is an approach used in the research design that develops a hypothesis from theory, and through data analysis, these hypotheses and theories are tested. In this research work deductive approach is used for the investigation of results. The way the research questions are phrased and the hypothesis being investigated determine the procedures for gathering data and performing statistical analysis on the acquired information. The study employed the positivist philosophy to investigate the empirical link between variables influencing microfinance institutions' social performance and their own social performance. In this study, an explanatory research design was employed.

Data and Sampling

Secondary data were employed in this research work. The data were collected from the annual reports of the selected microfinance institutions from 2011 to 2020 the method employed by the researcher was purposive sampling. The quality and accessibility of the data as well as the final estimations are used to determine the appropriate sample size. The sample size of the study is 20 which means 10 microfinance institutions each from India and Pakistan.

Variables of the study

Dependent variable

The social performance is considered as the dependent variable that can be measured through depth of outreach and breadth of outreach.

Depth of outreach = $\text{Gross loans} / \text{total number of borrowers}$

Breadth of outreach = the total active borrowers of the MFIs

Independent variables

In order to check the social performance of the microfinance institutions in India and Pakistan the following independent variables are used.

Variable	Measurement	Formula	Expected sign
Return on assets	The net income that is generated by total assets	Net income/ Total assets	- ive
Age	The time period of the microfinance institutions'	Total number of years served by MFIs	+ ive
Size of the microfinance institutions	Total assets of the microfinance institutions	Log (Total Assets)	+ ive
Credit risk	Non-performing loans to the microfinance institutions	NPL/ Total Loans outstanding	- ive

Model of the study

Examining the variables affecting MFIs' social performance in Pakistan and India is the aim of this research. The regression equation for this study is

$$Y_{it} = \alpha + \beta X_{it} + \epsilon_{it}, i = 1 \dots N; t = 1 \dots T \quad (1)$$

Now in order to investigate the determinants of the social performance in India and Pakistan, the following models were used for the data analysis.

$$ALPB = \alpha + \beta_1 ROA_{ict} + \beta_2 CR_{ict} + \beta_3 AG_{ict} + \beta_4 FS_{ict} + \epsilon_{ict} \quad (2)$$

$$NAB = \alpha + \beta_1 ROA_{ict} + \beta_2 CR_{ict} + \beta_3 AG_{ict} + \beta_4 FS_{ict} + \epsilon_{ict} \quad (3)$$

While NAB represents the total number of active borrowers, ALPB stands for average loan per borrower. While the acronyms ROA (return on assets), CR (credit risk), AG (age of the business), and FS (firm size) represent the MFIs in India and Pakistan.

Empirical Results

In order to investigate the determinants of the social performance in India and Pakistan the correlation matrix as well as the regression analysis are used.

Descriptive Statistics (India)

Variable	Obs	Mean	Std. Dev.	Min	Max
NAB	130	323211.33	183036.61	6590	876120
ALPB	130	54835.792	142950.12	1027.965	600000
ROA	130	.019	.05	-.206	.277
Credit risk	130	.059	.454	-3.416	1.518
Age	130	22.503	21.397	1	101
Firm size	130	7.663	1.169	4.503	9.779

Matrix of correlations (India)

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) NAB	1.000					
(2) ALPB	0.539	1.000				
(3) ROA	-0.094	-0.204	1.000			
(4) Credit risk	-0.151	-0.229	0.524	1.000		
(5) Age	-0.136	-0.238	-0.104	-0.057	1.000	
(6) Firm size	0.238	0.370	-0.226	-0.047	0.139	1.000

A correlation matrix of the dataset's key variables, which offers useful details regarding their interactions. The relatively positive correlation of around 0.539 between the two variables indicates that there is a clear propensity for an increase in the number of active borrowers (NAB) to be accompanied by a considerable increase in the average loan per borrower (ALPB). Furthermore, there is a little negative correlation between Return on Assets (ROA) and both NAB (-0.094) and ALPB (-0.204), indicating that higher ROA values are associated with somewhat lower NAB and ALPB values. The correlation between credit risk and NAB (-0.151) and ALPB (-0.229) is slightly negative, suggesting that higher values of NAB and ALPB are associated with lower credit risk. Age of enterprises (Age) and NAB (-0.136) and ALPB (-0.238) have a minor negative connection, indicating that older businesses often have fewer active borrowers and lower average loan amounts per borrower. Significant positive correlations between firm size and NAB (0.238) and ALPB (0.370) are evident, indicating that larger companies tend to have more active borrowers and somewhat higher average loan amounts per borrower. Different correlations provide insight into the relationships between different variables, which is essential for a full understanding of the dataset.

Regression analysis (India)

For the regression analysis Hausman test was conducted which recommended the fixed effect model.

VARIABLES	(FE) NAB	(FE)ALPB
ROA	-0.453 (1.156)	-1.844 (1.659)
AGE	0.190*** (0.0110)	0.0214 (0.0158)
FM.SIZE	0.161*** (0.0495)	0.120* (0.0711)
CRED.RISK	-0.00686 (0.0505)	0.00202 (0.0726)
Constant	1.164*** (0.375)	-0.724 (0.538)
Observations	102	102
R-squared	0.786	0.104
Number of code	12	12

According to the Table, which shows that older MFIs have more borrowers than newer ones, age of the MFIs has a favorable and substantial influence on social performance (Abu Wadi, 2022). However, as noted by Navin and Sinha (2021), new MFIs in India outperform their older counterparts in terms of social performance, even while older MFIs still do better monetarily. The results are in the favor of H2. The average loan amount per borrower is unaffected by the age of the MFIs; only the total number of active borrowers is. The bulk of India's impoverished population benefits from MFI services, as the concept of microfinance is not new there. At the beginning of the year, MFIs create goals for themselves. They work to achieve these goals and so improve social performance. Along with increasing the quantity of money loaned, the Indian MFIs have to concentrate on expanding their outreach in depth.

When compared to MFIs with lower assets, those with greater assets have superior social performance. The amount of assets increases both the average loan amount per borrower and the number of active borrowers (Kendo and Tchakounte, 2022). The results are supported by H3. The MFIs can expand both the number of borrowers and the amount disbursed to the borrowers by effectively utilizing their assets. The profitability appears to be negligible in comparison to the social performance, indicating that a portion of the cash is used to pay for expenditures and several other activities in India rather than going toward the social performance. Abdulai and Tewari's (2017) investigation yielded the same conclusion. In case of India our H1 and H4 are rejected.

Descriptive Statistics (Pakistan)

Variable	Obs	Mean	Std. Dev.	Min	Max
NAB	100	274600.51	274027.02	0	1478934
ALPB	100	45514.24	49589.014	0	286428.84
ROA	100	-.004	.057	-.245	.164
Credit risk	100	.031	.246	-1.04	.589
Age	100	8.991	4.902	0	20
Firm size	100	7.844	.657	5.972	9.094

Matrix of correlations (Pakistan)

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) NAB	1.000					
(2) ALPB	0.063	1.000				
(3) ROA	-0.408	-0.217	1.000			
(4) Credit risk	0.457	0.134	0.687	1.000		
(5) Age	0.540	0.076	0.337	-0.224	1.000	
(6) Firm size	0.687	0.477	0.569	0.423	-0.581	1.000

Notably, there is a little positive correlation of around 0.063 between the average loan per borrower (ALPB) and the number of active borrowers (NAB). Although the relationship is not very strong, this study implies a little possibility that an increase in NAB will be linked to a slight increase in ALPB. The significantly negative correlation between Return on Assets (ROA) and

NAB (-0.408) and the weakly negative correlation between ROA and ALPB (-0.217) indicate a relationship between higher ROA values and lower NAB and ALPB values. Greater credit risk is thought to be linked to greater levels of both NAB (0.457) and ALPB (0.134), as indicated by the modestly positive correlation between credit risk and both variables. The age of enterprises (Age), which has a considerably higher average loan amount per borrower and a mildly positive link with ALPB (0.076) and a significantly positive correlation with NAB (0.540), indicates that older firms frequently have more active members. There is a significant positive correlation between business size and both NAB (0.687) and ALPB (0.477), suggesting that larger companies have more active borrowers and higher average loan amounts per borrower. Different correlations provide insight into the relationships between different variables, which is essential for a full understanding of the dataset.

Regression analysis of Pakistan

From the Hausman test it has been recommended that fixed effect model is suitable for the analysis.

VARIABLES	(FE)NAB	(FE) ALPB
ROA	-4.426 (4.100)	-2.763*** (1.046)
AGE	0.296*** (0.0893)	-0.0172 (0.0228)
FM.SIZE	1.401*** (0.514)	0.523*** (0.131)
CRED.RISK	0.816 (1.486)	0.113 (0.379)
Constant	-11.38*** (3.489)	-3.484*** (0.890)
Observations	100	100
R-squared	0.499	0.377
Number of code	10	10

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

In Pakistan, there is a high correlation between financial and social performance. The table indicate that there is a negative and significant relationship between average loan per borrower and social performance. Increase in the return on assets will have negative impact on the social performance in Pakistan. On the basis of results our H1 is rejected. The findings of this study are in line with those of Saad et.al, (2018), they discovered that ROA had a negative impact on MFI social performance as measured by the ALPB. Wejisera, Yaron, and Meoli (2015) discovered that

there is no significant correlation between ROA and social performance, indicating that social performance is not impacted by financial performance as assessed by ROA. There is a positive and substantial correlation between the age and size of microfinance institutions (MFIs) in Pakistan and their social performance. Additionally, Kendo & Tchakounte (2022) and Abu Wadi (2022) considered it to be important. The results indicated that H2 and H3 are accepted in case of Pakistan. It is also indicated that H4 in case of Pakistan is not accepted.

5. Conclusion

The main idea of the research paper was to investigate the determinants of the social performance in the microfinance institutions of India and Pakistan. It has been concluded that return on assets is negatively associated with the social performance in case of Pakistan. The return on assets has no impact on the social performance in case of India. It is concluded that age and size of the firm remain same in case of India as well as in Pakistan which indicate that age of the firm and increase in the total assets are positively associated with the social performance. In case of the credit risk it is managed well by the MFIs of India as well as in Pakistan.

Recommendations

According to this research paper, Indian and Pakistan microfinance institutions outperform the worldwide standard in terms of outreach to assist the underprivileged and vulnerable members of society. This suggests that active impoverished clientele are still being reached by Indian and Pakistani MFIs. Even with their incredible success thus far, the MFIs have only assisted a small portion of the impoverished in the nation. Thus, in order to serve a greater number of the impoverished, MFIs must advance more quickly. Policymakers should also take into account the percentage of the impoverished that the microfinance organization serves. Generally speaking, the author advises the management of microfinance institutions to especially focus on those factors that have a substantial impact on the institution's outreach success. The determinants are assets, profit, credit risk and age of the MFIs.

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