

ASSOCIATION BETWEEN FACTORS & FINANCIAL STABILITY OF MICROFINANCE BANK IN PAKISTAN

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ABSTRACT

Introduction: Microfinance quarter in Pakistan is booming with 6 MF banks, 13 MFIs and 5 rural support programs reaching 12 million borrowers in 1480 branches [1]. Microfinance, which pertains to furnishing financial services to low-income users or clients, is a very important tool for poverty alleviation. The study is significant as it responds to a critical need for sustainable microfinance practices in Pakistan, which continues to face high poverty levels, particularly in its rural areas. As macroeconomic policies have tended to benefit higher income groups, microfinance is a viable pathway to economic empowerment for low-income households. The results of this study will help policymakers, practitioners and MFIs in Pakistan to formulate successful models that promote sustainable MF. In addition, insights derived from the fiscal soundness and operational sustainability of MFIs will enable policy makers to develop initiatives that will further enhance the benefaction that microfinance region can make to socio economic enhancement.

Objective: The objective of this study is to evaluate the association between factors & fiscal viability of Microfinance (MF) Bank Pakistan and their potential role in reducing poverty and fostering economic development, particularly in rural and low-income regions.

Materials and Methods: This descriptive cross-sectional study uses secondary data from 2018 to 2023 from financial statements of microfinance banks in Pakistan. For the dependent variable (financial sustainability) against independent variables which are (Size, age, efficiency, outreach, capital, leverage, and credit risk) will be done through quantitative analysis.

Results: The results show that age of the institution, higher efficiency ratio and high leverage ratio significantly contribute to financial sustainability while size, capital and credit risk has very low significant impact.

Conclusion: This study substantiates the previous literature on the significant effects of institutional age, efficiency and leverage on financial sustainability, while the effects of size, capital and credit risk are able to call for further research using larger datasets and longitudinal studies.

Keyword: Microfinance, Portfolio, Pakistan, Efficiency, Financial Sustainability & Viability.

INTRODUCTION

The MF industry is nascent but also rapidly expanding and has avast potential to alleviate poverty in Pakistan. Banks, institutes and non-government organizations provide MF. A

total of 06 MF banks, 13 MFIs (MFI) and 5 rural support programs (RSPs) are working in Pakistan. There were 1480 branches of MF providing services to 12 million active borrowers as of 2018.

Total market size, number of domestic pets for 2018 = 27 million [1]. MF is still quite earlier here in Pakistan and has great future ahead. MF is essentially finance for those not Financed, or banking for people not banked. Some fiscal assistance to low people. MF includes a wide category of financial aid like loan, deposits, monetary assistance, to low and low-earning households, in accordance with the Asian Development Bank. MF not only offers financial services, it also has significant role in poverty alleviation and social stability of a society [2]. Financial sustainability is important for micro finance institutes. In the sense Fiscal viability is the capacity of MFI to cover all forms of expenditure by creating earning from their own sources. MF Fiscal sustainability implies that a MFI can cover expenditures without donors and subsidy) [3]. It also called as fiscal independence. Without profitability either (1) the MFI is not viable by definition, or (2) it is viable but itself depends upon the provision of continued growth capital to cover operating deficits. Thus operational self-sufficiency can be in the form of covering operating expenditures of the firm from its own sources of earning while fiscal self-sufficiency on the other hand in essence covering funding expenditure from self-generated sounds. Multiple factors influence Fiscal Viability. The present research seeks to recognize the factors that drive MFIs in Pakistan towards fiscal viability. This Paper uses Fiscal Viability as the dependent variable and efficiency, size, leverage, growth, risk and outreach of micro finance bank as explanatory variables. MF has broad fiscal help classes for as: advances, payment help, protection, money exchanges and stores to low, low-wage, and unbaked family holders of city and provincial micro-undertakings. MF is defined by Copestake [1] as providing financial aid to very low people who are freelancing, or to those who are below the national average wage. This study focuses on the fiscal sustainability of MFIs in Pakistan, examining factors like efficiency, size, leverage, growth, risk, and outreach that influence their ability to maintain financial viability without relying on external donations.

LITERATURE REVIEW

Microfinance is not a brand new idea. Around the globe, microfinance has been researched and studied, in developed and emerging markets alike.

Microfinance has practiced since the beginning, and numerous scholars and fiscal specialists have worked in the segment. Thing to Note Microbank performance is largely dependent on fiscal viability which is an essential criteria.

MF AS AN AREA OF RESEARCH

According to Patten, Rosengard, and Johnston [1] MF is the category of Mini bank, which provides minor financial savings, where the minor scale of credit is given to those who own fish, cattle or farm; microenterprises operate where manufactured goods are designed, recycled, repaired or sold; use of their expert skill; receive payment or a commission for their labor, or profit from a small number of leases to their land. Like from other rural and urban houses and communities in developing countries, and from equipment, vehicles, and implements. The Asian Development Bank [2] also provides a relatively short definition of MF, which includes not only payment assistance but also deposit, loan, and insurance services, along with money transfers—for low-income people, low-income households, and their farm and non-farm microenterprises. Micro credits are being used to launch microbusinesses or grow existing microbusinesses to provide the essentials for very low-income individuals. With progressive lending and regular repayment schedules, collateral replacements, group lending, or individual clients, MF provides microcredit or loans, savings, insurance money transfers, and other financial help for low-income households.

ECONOMIC VIABILITY

Currently, micro-finance organizations are of acknowledged as a promising area for growth and potential profit generation through money lending to micro-borrowers. Cost-effectiveness is defined as "the ability to offer monetary returns that are adequate to generate interest and continue sponsorship," according to Morduch [3]. In some regions, including Asia, Africa and Latin America, MF banks have been competing vigorously, and as Honohan [4] notes, this has threatened their cost-effectiveness. The cost is the primary concern and sustainability is the most important issue in the industry because of the rapid growth of the industry because of the increase in demand. Cost effectiveness is an important step in paving the way for MF viability,

but the two can be accomplished when MF institutions manage to reduce their transactional costs while providing better services and products that meet client's needs, become affordable enough, and be able to access cutting-edge funding sources for poor households. From Hartarska & Nadolnyak [5] the statement that "Microfinance cost effectiveness is related to their fiscal viability": Fiscal self-sufficiency is the non-profit equivalent of cost effectiveness. If everything else is equal, a company's financial viability might greatly rely on its profit. Using this method, MF banks will only be characterized as sustainable when and if they are better positioned to cover all operational and financial requirements from their own resources, especially interest rate payments. It is very clear from above, that MF banks relying only on their created funds being able only to maintain their existing level of operation and to grow to their desired level in the past cost effectiveness is a premise of such measurement of fiscal survivability.

MF's VIABILITY

The emergence of the term MF also raised the question of long-term donor support and the sustainability of such foundations. It is often said that long as the money reaches small business owner and initial help is given, MF banks really are not in it for the long haul. This could indicate that the health of the long-term financial basis that emerged after the start-up is secondary to the manageability of small-scale ventures. There are different ways of defining MFI viability (licensing costs) which generally measures the ability of the institution to break even. That is why, according to Kurosaki & Khan [6], viability is the capacity to continue performing a particular activity into the future that lies within the potential remaining assets of the company, which is part of a company's present financial and managerial processes. Common viability is the notion that a strategy can apply an effort breed common and its efforts colliding with its legislative purposes. Previous MF field experiments have described maintainability from a productivity point of view. They call this high expectocracy: the extent to which gainfulness impacts the effectiveness of MFBs. The system will work best if loan fee charges essentially enable MFBs to cover all of their working & financial expenses while being able to repay purely through

their own earnings. This range is defined as supportability and is actually the level of money related task at which every one of the costs of the loan specialist are completely secured from the premium expenses and these costs have not been financed somewhat nor it has been simply secured from the outer assets.

MF BANKS SUSTAINABILITY AND FINANCIAL SELF-SUFFICIENCY

Predecessors of the Ohio State University Rural Finance Program showed the collapse of many rural credit institutions between 1960 and 1970 was directly the result of lack of institutional viability. This study identified two critical findings: 1. Institutional viability has been critical to the effective delivery of financial aid to the low-income. 2. The belief is that institutional viability presupposes fiscal viability. Most of the MF literature, Ahlin, Lin and Maio [7] claimed, axiomatically associated viability with achieving "fiscal" viability. In juxtaposition to the notion of fiscal viability, suggested as "viability," the terms have been disaggregated into two separate levels by a host of academics, operating self-sufficiency and fiscal sufficiency.

OPERATIONAL INDEPENDENCE

This means that MF banks can collect enough revenue to finance their operating expenses, without the entire amount spent on capital. According to Smith [8], OSS means that MF banks can meet their operating expenses from operating profits, with or without subsidies. So here is the working or well-being of the working costs comprising of advance misfortune arrangement expenditures and so forth and this has to do with operating independence (OSS) which has a close connection with the operational supportability. If it exceeds 100%, the MFI is covering most of its costs through its own operations. Indeed, viability in its sense of operational viability vis-a-vis sustainability of MFI's OSS in future. MFIs are viewed to play a vital role in achieving OSS to improve, sustain and further perfect their operations. F. Fiscal Self-Sufficiency The Fiscal Viability described as the capacity of MF banks, to effectively use subsidized resources and funds to generate revenue. Fiscal viability of MF banks is the main dimension of MF viability.

EVIDENCE FROM THE WORLD

Inquiries of the Financial Viability of MFIs were conducted by Kurosaki and Khan [6]. He identified the factors affecting MFIs financial sustainability. MF aims to alleviate poverty through streamlined financial and fiscal assistance. The MF for better welfare of the poor. The study recommended that MF Expansiveness and profundity of effort, reliance proportion and expenditure per borrower impact the budgetary manageability of MF establishments in Ethiopia, however MF capital structure and staff effectiveness does not impact the budgetary maintainability of MFIs. Ghalib [9] wrote a paper on MFIs fiscal viability. A sustainable MFI will help maintaining, Continue reading at: Data up to October 2023 The study found out a positively and statistically significant relationship between loan size and intensity and fiscal viability, and negatively significant impact of management inadequacy and portfolio at risk on fiscal viability, but no relationship being found for outreach and deposit utilization with the fiscal viability of MFIs.

MICROFINANCE'S VIABILITY

The microfinance institution must be sustainable. Fiscal Viability The ability of MFI to earn an income from its own funds and cover various expenses. A MFI is considered to be self-sufficient if it generates enough income to be able to cover its expenses without the support of an external source of funding such as grants and subsidies. Or, fiscal solvency. One that stands out and affects MFI viability is fiscal viability. Operational efficiency – when independent income from revenue can pay the business' operating expenditures – versus fiscal self-sufficiency – the ability to sustain expenses from internally generated revenue. Macro indicators of the profitability of microfinance are its fiscal self-sufficiency. Financial sustainability requires a ratio of operating self-sufficiency and government subsidies. It has been shown in a few research that subsidized financial viability is an inaccurate surrogate for the proxy of viability and the operating self-sufficiency is indeed a correct stand-in to measure viability [10]. It is the only model that can keep a micro finance bank in the market for a longer duration because it is able to be self-sufficient in its operational costs as it is generating its own fiscal revenue. Capacity of

micro finance banks is based on many factors as presented and discussed in the earlier studies.

FINANCIAL VIABILITY AND REACH

While MF suggests that the outreach of a company forms the operational and financial viability. It will be computed using the natural logarithm of the number of existing MF company borrowers [11]. Outreach is the most controversial and investigated factor influencing the efficiency and sustainability of microfinance. The outreach is measured through a variety of metrics. Two of the areas that are examined are the scope and extent of outreach. Outreach scope –the number of borrowers served by a microfinance bank. It is one of the key factors for viability. According to Patten et al. [1], effort estimation is separated into six pieces. These are depth, client value, client expense, expansiveness, length, and degree. The profundity of effort alludes to "the worth to which the general public bestows on the net increase from the utilization of the miniaturized scale credit by a given borrower Empirical show that an expansive scope of product will build operational and fiscal plausibility of a firm.

SCALE AND EFFICIENT USE OF FINANCIAL RESOURCES

The size of a company has a huge influence on its risk profile. A lot of research indicates that large organizations are normally more sustainable than small businesses. There are many proxies used to measure the size of the firm. For example, the natural logarithm of total assets or number of employees in a company are only proxies in finance to measure variables [12].

CONDITION TO FINANCIAL VIABILITY AND OPERATIONAL EFFICIENCY

A company's operational efficiency is extremely important to indicate its operational self-sufficiency. A working business would be able to sustain itself in the market and pay its bills out of its revenue. Historically, operating expense to gross loan portfolio, and expenditure per borrower, have been used to measure these operational efficiencies.

This study measures the impact of Financial Sustainability of Pakistani MF banks by spending per borrower (CPB). Reduced expenses per borrower help increase MFIs' operational efficiency or fiscal viability. It is used as an

independent variable to access financial sustainability. This variable measures the efficiency of MF banks by assessing their ability to smartly route their expenditures in line with the debtor base. It includes spending increases that, ultimately, make it easier to sustain the budget. Based on borrowers' measurements, Morduch [3] found that the cost per borrower is roughly equivalent to the cash and in-kind information sources necessary for achieving a particular level of yield. He then elaborated on the inverse relationship between the cost per borrower and financial independence.

ORGANIZATIONAL STRUCTURE AND FINANCIAL SUSTAINABILITY

Higher obligation in MF firms' capital structure leads to more firm productivity, and MF organizations with extensive use of obligation are more productive [13]. Some studies have been conducted to find out whether capital structure determines the supportability of MF organizations. For example, they are more able to face positive hazards and hostile decisions than their relatively less influenced peers in high-utilization MF companies. As stated by H. Weber [14], though the manner of the arrangement of capital affects budgetary management, having several sources of capital does not improve supportability of money matters. They also explained that value is a lower cost source of funding, making it financially more sustainable.

This ratio has been used for measuring establishments financial sustainability. An obligation to value proportion:

Debt to equity = Total Debt/ Total equity

Equity-to-Asset Ratio:

This is a capital adequacy ratio but because it is not looking at risk weighted assets. The equity-to-asset ratio identifies the portion of the equity of the business that has been accounted for by holdings. The equity ratio determines how many of a company's assets have been financed by the shareholders. A higher Equity ratio in an institute shows new investors and creditors that their money is credible. And desire of investors to fund it with their savings. Total debt can be estimated as Total Equity to Total Assets.

Formula: Equity to asset = Total equity/ Total assets

FINANCIAL VIABILITY AND CREDIT RISK

Microfinance is a term for funds to the poorest of the poor. As a consequence, businesses are going to be more exposed to credit risk. $PAR > 30$ days A portfolio at risk (PAR) greater than 30 days is an indicator of credit default risk to the company. PAR or Portfolio at risk measures the collection rate of the company. A low portfolio at risk is more favorable for the financial health of a firm, whereas a higher PAR implies a poor repayment rate and decreases the fiscal viability of the firm. Portfolio at risk (PAR) is another factor that could affect the capital adequacy of MF banks. The ambitious portfolio reflect MF Bank's collection performance level. Anything over 30 days in PAR is a real danger to fiscal viability.

PAKISTANI EVIDENCE

MF is a new domain in Pakistan. In Pakistan, for scholars and academia, the general areas of focus remained the same as with traditional finance, corporate finance, and investment analysis. Microfinance has only been studied for not even a decade much less in the past thirty years. The body of literature in Pakistan is not a very dense one. There are still relatively few studies in the last several decades observing MFI performance that could be linked to "viability of MFIs" factors. A brief summary of different research studies on the variables behind sustainable MFI in Pakistan. Pakistani MF Banks: Mushtaq [15] has examined the development and the functioning of MF banks in Pakistan. They conclude the industry has low efficiency ratios, rising costs per debtor and weak fiscal results.

As stated by Sohail, Rasul, and Fatima [16], MF foundations are an essential part of progress business enterprise in Pakistan. MF organizations are an essential part of the business development in Pakistan, according to the research. MF banks give advances to customers and customers use such advances for starting business and for marriage, training, home construction, etc. In 2009, an extensive report on the financial and social sustainability of microfinance institutions in Pakistan was jointly launched by the State Bank of Pakistan (SBP) and the International Labour organization (ILO). Qualitative methodology was employed for the research. This report is based on a field survey of loan officers and borrowers. The survey also highlights that product diversity and product development are two of the

biggest barriers to outreach. The survey has also revealed that access to credit is the primary concern of clients in micro finance sector rather than being worried over interest rates. The report also maintained that allocative efficiency and better protection of clients, micro credit information system and competition among the players would enhance the viability of micro finance institutes in Pakistan.

Qamar, Masood and Nasir [17] explored the struggle of MFIs towards viability, operational efficiency versus their aim of switching the lives of poor people. Donor subsidies are the main source of MFIs funding their social character. Consequently, the existence of subsidies cannot be overlooked in the efficiency and production analysis of MFIs. The results reinforce the association between financial wherewithal and engagement with the underserved. That means MFIs targeting poor clients are seen to be more incompetent than MFIs targeting relatively needs clients. This situation shows that women's finance is only organised where subsidies happen. Compared to MFIs in other regions, those in the Middle East and North Africa and South Asia are generally more unsophisticated. A study on the impact of the growth strategy of the MF sector on the performance of MFIs was carried out by Zulfiqar [18].

As a result, the intensive growth strategy is apparently cheaper at early stages of development; it also achieves a balance between outreach and poverty alleviation. In addition, this tactics is incorporated to upsurge productivity, performance, and efficiency. Some took a 'go large' approach, investing heavily in expanding both their human resources and their branch networks, and sunk a lot of cash into physical premises. Hence, while this observation is the correct approach to take, the focus of credit constrained institutions should be shifted toward viability instead of being run by social support as a primary strategy. For the industry with an aggressive growth strategy the question of viability is not considered as critical. The study shows how some fully self-supporting institutions are leading the sector growth. Urge MF sector expansion It has already impacted the MF expansion in previous few years & may continue to affect further development & functioning of the sector until & unless more assets are pumped in. While microfinance banks are a new breed of

institutions emerging between the formal financial sector (such as banks, credit unions, etc.) and informal financial institution sector (moneylenders, etc.) [19], Tarik, Haris, and Yao MFBs in any country basically have the primary target of poverty alleviation through increased lending, and that support is expected to be expanded to those who are less self-sufficient. This indicates how much MFBs have become a feasible solution in Pakistan. In so doing, the study can compute a viability that MFBs can reach in Pakistan it seems to centralize an impact in their active topic while on economy viability these impacts of MFBs costs with effects of welfare. This study draws data on MFBs in Pakistan from semi-structured interviews and focus groups from three MFBs across two cities and easily accessible secondary data.

METHODOLOGY

It describes material and method used to carry out this study. Variables taken in study. Research involves a theoretical framework. It talks about sampling methods, nature of data and tools for analysis.

Research Study Design

Descriptive Cross Sectional Study

Quantitative Research

This analyses the relationship between two or more variables, using numbers and statistical methods.

Sources of Data

Study had taken secondary data. Data was taken from financial statement of microfinance bank, Pakistan Microfinance Network.

Population

Micro Finance Sector of Pakistan

Sample

Micro Finance Bank working in Pakistan. Duration for study was 6 months. The economic data proved basic for analyzing the econometric analysis with panel data for the 45 observations from 2018 to 2023.

Unit of Analysis

Sustainability of Microfinance Banks in Pakistan. Data was collected for quantitative analysis. The

unit of analysis will be microfinance banks. It consists of combining several observations on a cross section of units during a number of time periods.

Dependent Variable

Where dependent variable was the outcome (Financial Sustainability) of an MF bank, or not, effectively indicating if an MMF bank is financially sustainable. It is proposed that MF bank if fiscally sound at certain period is equal to 1 and otherwise =0.

Independent Variables

Size: Total asset are used for bank size and maturity. Bank size = Total asset.

Age: It represents number of year bank was working as MFP.

Operational Efficiency (Expenditure Per Borrower): Variable measure MF bank's effectively in control in expenditure for figuring

out the debtor they are serving. Expenditure per borrower was calculated by using the formula.

$$\text{Expenditure Per Borrower} = \frac{\text{Operating Expenditure}}{\text{No of Borrower}}$$

Outreach: Active borrowers served by MF banks. Active referred number for active outreach borrowers.

Leverage (Debt to Equity): The D/E ratio was calculated by dividing total debt or liabilities by stockholders:

$$D/E = \frac{\text{Total Debt}}{\text{Total Equity}}$$

Capital (E/A Ratio): E/A Ratio identify the portion for a company equity which holdings today have covered.

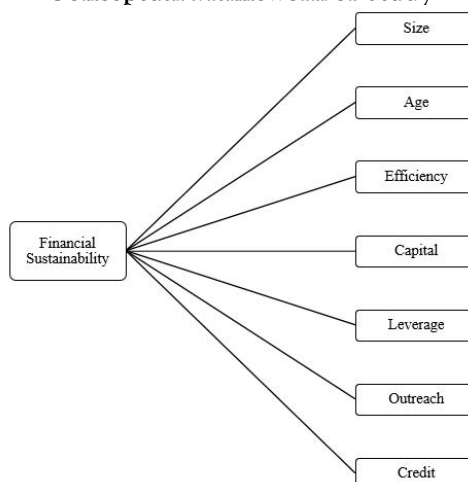
$$\text{Equity to asset} = \frac{\text{Total equity}}{\text{Total assets}}$$

Portfolio at Risk (>30,60,90 days): Displays the credibility for debtor more often the number of days (30,60,90) former day of the month for instalment payment.

Measurement of Variables

Name of Variable	Symbol	Formula	Expected Sign
Dependent Variable			
Financial Sustainability	FSS	Revenue/Operating Expenses	
Independent Variable			
Size of Firm	TA	Total Assets	+
Age of Firm	Age	Number of years in operations	+
Operational Efficiency	CPB	Cost per Borrower	-
Capital	Cap	Equity to Total Assets Ratio	+/-
Leverage	Gr	Debt to Equity Ratio	+
Outreach	Borr	Number of borrowers	+
Credit Risk (portfolio at Risk)	PAR	PAR>30 days Portfolio at Risk greater than 30 days	-

Conceptual Framework of Study



Hypothesis

A hypothesis is a testable and falsifiable statement or educated guess that serves as a starting point for scientific investigation or experimentation. It is formulated based on prior knowledge, observations, or research and seeks to explain a phenomenon, relationship, or process.

Null Hypothesis: There is a negative relationship between factors and financial sustainability.

Alternative Hypothesis: There is a positive relationship between factors and financial sustainability.

Data Collection

This study adopts a secondary data collection method, collecting existing and publicly available data. Data collection will be done by collecting the financial statements of selected micro finance banks in Pakistan as well as reports published by the Pakistan Micro finance Network (PMN). This is essential to get corporate data in a systematic and standardised way, as it is an important part of conducting a robust quantitative analysis.

Data Analysis

SPSS Version 26.0 was used for data entry & analysis, Mean (SD) or Median (IQR) was reported for quantitative variables; e.g. age, size, efficiency, capital, leverage, outreach and credit of the bank. Financial sustainability and financial determinants (age, size, efficiency, capital, leverage, outreach and credit of bank) was analyzed through logistic regression analysis. Initially univariate analysis to be performed and all variables with p-value <0.25 was included in multivariable model. Whereas in multi variable model, variable was considered in the model depending on clinical significance of p value <0.1 Unadjusted and adjusted odds ratio with 95% CI will be computed.

RESULTS & INTERPRETATIONS

The descriptive analysis of the data set gives important information about the institutions financial and operational aspects. Sustainability (FSS) is a binary variable (mean=0.53) that takes on the value of 1 if an institution falls in the sustainability group. The fact that skewness (-0.138) and kurtosis (-2.075) are low indicates that the distribution is almost symmetric, suggesting that

sustainability does not vary much across institutions.

There is also professional diversity among institutions, as evidenced by the standard deviation for firm size (TA), which has a mean of 3,046,529.33 but also a very large standard deviation. Since the distribution is positively skewed (skewness = 1.201), this implies that while most institutions are relatively smaller in size, some have extremely large asset bases, which impact the overall range (13,278,414).

It indicates that Age (Years) has a mean of 5.60 years along with a moderate positive skewness (0.907), which implies that, relatively younger institutions are often met in this dataset. The range (1 to 15 years) shows that while some institutions have been operating for a while, others are relatively new.

The measures for Efficiency (CPB) and Capital (ETA) show a similar positive high skewness (2.145 and 2.041 respectively) and a high kurtosis level (3.900 and 3.277) related to the wide dispersion of values that indicate a higher cost per borrower and high equity-to-assets ratio for outliers compared to other institutions as seen in their measure ratio. This indicates the existence of highly inefficient institutions and also some outliers with extremely high capital.

Leverage (DE) has a mean of 2.10 and a negligible positive skew (1.170), ranging from 0 to 7, indicating not very drastic differences in the debt levels. Most institutions have relatively lower debt but a few have high leverage – creating the skew in the distribution.

Both Outreach (BORR) and Credit Risk (PAR) have the same skewness (2.163) and kurtosis (3.845) suggesting a right-skewed distribution wherein most institutions have an average number of borrowers and average credit risk but some institutions are exceptionally high in value. (TABLE 1)

The regression analysis results show how the different financial and operational variables influence the dependent variable. Age has a large positive effect ($\beta = 1.322$, $p = 0.001$), demonstrating that older institutions had more positive aspect or effects on the outcome. Size has a statistically significant relationship ($p = 0.004$) with very small beta coefficient ($\beta = 0.000$) and points out a very little practical impact.

Efficiency ($\beta = 0.443$, $p = 0.003$) as a significant predictor, meaning that increases in efficiency

means a better outcome. However, capital ($\beta = 0.325$, $p = 0.108$) does not reach statistical significance which suggests that the levels of equity might not have a strong standing alone effects Research on Solvency ($\beta = 0.426$, $p = 0.009$) also indicates that capital structure has significant positive influence on Profits. Outreach ($p = 0.060$) and Credit Risk ($p = 0.060$) register borderline significance, indicating they may be weakly associated.

The Leverage ($\beta = 2.350$, $p = 0.004$) variable is highly significant with very strong positive effect, suggesting that firms with more debt are considerably more likely to have the favorable outcome. Results of the confidence intervals reinforce these results, as 1.0 was excluded from the upper and lower limits of the significant variables, confirming the validity results. (TABLE 2)

The multiple regression analysis gives information about the effects done by different predictors on the dependent variable.

Their age is indeed the most important predictor of how much impact they have on the outcome, with a strong positive impact ($B = 0.095$, $p < 0.001$, $Beta = 0.556$): older institutions tend to have higher impact. The confidence interval

(0.057 – 0.133) indicates the robustness of this association. The slope of their path (0.695 and 0.636 of zero-order and partial correlation respectively) indicates a direct link between the two variables.

$B = 2.083E-8$, $p = 0.210$ $B = 0.030$, $p = 0.211$, for Size and Capital, respectively, indicate no significance. Size has a high zero-order (0.625) but low partial (0.203) – medium independent effect. The only variable that approaches significance is Efficiency ($B = 0.007$, $p = 0.061$), suggesting a positive effect, but it fails to cross the 0.05 level of significance.

Significant predictor in the model includes Leverage ($B = 0.063$, $p = 0.046$, $Beta = 0.249$), meaning that higher the leverage, higher will be the outcome. The confidence interval (0.001 – 0.126) shows the extent to which this effect is reliable, and the partial correlation (0.318) suggests substantial contribution after controlling for other variables.

Credit Risk ($B = -5.300E-7$, $sig = 0.632$) is not statistically significant and close to zero, and also very low Beta (-0.047) and negative partial correlation (-0.078) indicate no meaningful relationship. (TABLE 3)

Table 1: Descriptive Statistics of Variables (n=45)

Variable	Symbol	Mean	±SD	Median	IQR	Min	Max	Range	Skewness	Kurtosis
Sustainability	FSS	0.53	0.50	1.0	1	0	1	1	-0.138	-2.075
Size	TA	3046529.33	3493662.56	1312201.0	4799033	69799	13348213	13278414	1.201	0.416
Age	Years	5.60	2.95	5.0	5	1	15	14	0.907	1.056
Efficiency	CPB	13.51	14.40	7.88	7	2	62	59	2.145	3.900
Capital	ETA	1.66	2.03	0.90	2	0	8	8	2.041	3.277
Leverage	DE	2.10	1.97	1.30	3	0	7	7	1.170	0.090
Outreach	BORR	65493.58	89166.01	26549.0	54576	8841	352564	343723	2.163	3.845
Credit Risk	PAR	32746.79	44583.0	13274.5	27288	4421	176282	171862	2.163	3.845

SD (Standard Deviation), IQR (Interquartile Range)

Table 2: Univariate Analysis of Independent Variable Among Financial Sustainability (n=45)

Variable	Beta	Std. Error	Regression	95% C.I.	P-Value
Age	1.322	0.412	3.752	1.672 – 8.421	0.001
Size	0.000	0.000	1.000	1.000 – 1.000	0.004
Efficiency	0.443	0.148	1.557	1.165 – 2.080	0.003
Capital	0.325	0.202	2.585	0.931 – 2.056	0.108
Outreach	0.000	0.000	1.000	1.000 – 1.000	0.060
Leverage	2.350	0.826	10.485	2.079 – 52.878	0.004
Credit Risk	0.000	0.000	1.000	1.000 – 1.000	0.060

Table 3: Coefficient Correlation by using Linear Regression (n=45)

Variable	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations		
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part
Age	0.095	0.019	0.556	5.074	0.000	0.057	0.133	0.695	0.636	0.410
Size	2.083E-8	0.000	0.144	1.275	0.210	0.000	0.000	0.625	0.203	0.103
Efficiency	0.007	0.004	0.206	1.930	0.061	0.000	0.015	0.494	0.299	0.156
Capital	0.030	0.024	0.121	1.273	0.211	-0.018	0.078	0.263	0.202	0.103
Leverage	0.063	.031	0.249	2.065	0.046	0.001	0.126	0.636	0.318	0.167
Credit Risk	-5.300E-7	0.000	-0.047	-0.483	0.632	0.000	0.000	0.352	-0.078	-0.039

DISCUSSION

These study findings are consistent with, though not completely aligned, with other works describing financial sustainability and operational characteristics of institutions. The findings reveal larger relationships for sustainability with age, efficiency and leverage, yet weaker relationships with capital and credit risk. These results can be approached in the perspective of previous knowledge.

Age and Financial Sustainability The strong positive impact of age on financial sustainability ($p < 0.001$) corresponds to the results of Cull et al. (2007) [20], according to which age is reflected in the financial sustainability of microfinance institutions, as older institutions would be more stable than younger MFIs due to being able to develop more experience and large client bases. Similarly, Hermes et al. According to the latter study [21], older institutions reported greater profitability and operational efficiency, indicating that institutional maturity plays a role in financial resilience [22].

Size and Financial Performance Size was statistically significant in univariate analysis ($p=0.004$), but does not demonstrate practical significance in the multiple regression model ($p=0.210$). Although the results are stream with findings, for example Hartarska & Nadolnyak (2007) [5], where asset size neither supports nor deteriorates financial sustainability yet provide stability in the long run. On the other hand, Tchakoute-Tchuigoua (2010) [23] observed a strong correlation between the financial self-sufficiency of institutions and their larger asset bases, indicating that the relationship may differ according to institutional contexts.

Efficiency and Cost Per Borrower In this study, Efficiency was a strong predictor ($p = 0.003$)

which supports the argument of Mersland & Strøm (2009) [24] that lower cost per borrower can enhance financial sustainability. This supports Gonzalez ([25], p. 124) who keep telling us: "institutions with reduced operational costs attain a higher level of sustainability". Although there is a direct relationship between efficiency and sustainability, and it highlights the need for cost management initiatives.

Leverage and Debt Ratios The importance of leverage ($p = 0.004$) is consistent with Bogan (2012) [26] who found that the debt-to-equity ratio exposes microfinance institutions to the risks associated with excessive leverage leading to over indebtedness and bankruptcies, but can lead to greater financial sustainability through careful task management. Kyereboah-Coleman's findings contradict this [27], as he stated that over-reliance on debt adversely affects financial performance, which increases financial distress.

Capital and Equity-to-Asset Ratios The results indicated that the effect of capital on sustainability is not significant ($p = 0.108$). This contrasts with the detection of Abbate et al. (2014) [28], who emphasized that having a high equity-to-assets ratio allows participating institutions to be less susceptible to financial shocks. However, the weak association observed in the current study might indicate that other financial mechanisms are likely to be more prominent in facilitating sustainability.

Credit risk and outreach Credit risk and outreach were borderline significant ($p = 0.060$), consonant with the discovery of Cull et al. (2007), [20] stated that institutions with high credit risk face challenges in maintaining financial sustainability. On the contrary, the results are not in line with studies of Schreiner (2002) [29-32] who claimed that a larger outreach improves the

financial performance based on wider risk exposure.

CONCLUSION

The study establishes the relevance of institutional age, efficiency and leverage in assessing financial sustainability while revealing the less significant roles of size, capital and credit risk. These results corroborate previous research but also reveal where the findings differ. Future studies should investigate these dynamics with larger datasets and longitudinal analyses to provide generalizable insights..

RECOMMENDATIONS

The MF sector growth hinges critically on establishing fiscally sustainable MFIs in Pakistan. The concept is gaining momentum in the globe of both Scholars and professionals. Sustainable microfinance among the developing state or region like Pakistan that unable to assists the little speculators to prosper, else will reinforce fiscal structure of Pakistan by uplifting numbers of savers and shifting their assets into profitable opportunity [33]. The objective of the study is to identify influential parameters of the financial viability of MF banks. The study found that MF banks face a serious burden on the way to fiscal soundness. The study recommends... based on the findings.

- The government would create Pakistan MF regulatory authority to regularize the microfinance institute's affairs, banks and rural support programs so that the efforts on microfinance institutes would be consolidated in order to achieve the common goal of poverty eradication and the development increase.
- According to the author, "In Pakistan, the reducing rate of microfinance banks is sustainably high that is the reason for credit fail to pay on the part of borrowers, the central bank situating at country would apply prudential regulation and would take estimation for reduction in interest rate charged by microfinance banks that raising portfolios risk.
- MF Bank, to increase the number of borrowers who are able to theoretically reach every corner, MF would state it comfortable for such people to benefit from their services [34].

- Lowest number of MF banks working in Balochistan which are the good time for these banks as the ratio of low-income people in Baluchistan is higher among any province of Pakistan.
- Research phenomenon noted that microfinance banks have lower economies of scale and high operating expenditure per borrower which is creating roadblocks in the way of fiscal viability, the management of MF banks would manage operation more efficiently i.e., expenditure can be contained to improve the financial viability.
- An increase in the branch network of microfinance bank in Pakistan will ensure greater accessibility.
- External resources of finance i.e. D/E should be used by MF banks in Pakistan for their operations financing.

LIMITATIONS

MFBs must define the objectives and purposes that they want to manage and decide their future strategies. Attracting a huge number of investments and low income household. Study would be extended in comparison to variables as well. Only the financial viability dimension was focused here; other dimension can be explored, such as mission viability, program viability, and human resource viability for MFBs in Pakistan [35]. Finally, through further investigation, it can be explored what are the other determinants having a major impact on the fiscal health of MFBs in Pakistan. We illustrate wider implications of the evaluation through actionable insights, typical of current efforts to apprentice with viability discourse for MF. Results limited for period and country examined.

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