

Factors Affecting on Expansion of the Microfinance Industry in Pakistan

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Abstract

The main objective of the study is to explore the factors that affect the microfinance industry expansion in Pakistan. To attain the objective of the study we collected the data from the microfinance industry from 2010-2020. Our results show that there is a negative relationship between the previous year's log of the gross loan portfolio and the current year's log of the gross loan portfolio. There is a positive relationship between the loan amount disbursed and the log of the gross loan portfolio. The probability value of the log of loan amount disbursed is 0.2518 which is statistically insignificant. There is a negative relationship between the previous year's log of loan amount disbursed and the current year's log of gross loan portfolio. There is a positive relationship between the log of several active borrowers and the gross loan portfolio. There is a positive relationship between the previous year's log of the number of active borrowers and the current year's log of gross loan portfolio. Microfinance is a sort of banking service that is provided to unemployed or low-income persons, and clusters who or else have no other right to use economic services. Eventually, microfinance aims to provide low-income groups and circumstances become sovereign by providing a method to save money, the sponge money and obtain insurance.

Keywords: Factors affecting, Microfinance, Pakistan, Banking sector

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1 Introduction

Microfinance is a sort of banking service that is provided to unemployed or low-income persons, and clusters who or else have no other right to use economic services (Kithinji, [2023](#)). Eventually, microfinance aims to provide low-income groups and circumstances to become sovereigns by providing a method to save money, sponge money, and obtain insurance (Bawa & Opoku, [2023](#)). Microfinance is frequently defined as the financial services for reduced and small-income consumers available by dissimilar types of service providers. Microfinance normally refers to the series of financial services including credit discounts, indemnity, currency transfers, and other economic goods provided by the abnormal services provider (Adnan & Kumar, [2021](#)).

A lot of studies have been derived to scrutinize casual affiliation liberalized macro financing. Several studies also included other variables for investigations (Gupta & Mahakud, [2020](#)). Number of active borrowers, gross loan portfolio, and loan amount disbursed, number of loans disbursed, no. of offices, and no. of policyholders and make a try to explain their influence on two variables. The microfinance institution must promote more lending to the borrowers (Remer & Kattalakoski, [2021](#)). The number of microfinance institution offices must be increased (Sinha & Ghosh, [2022](#)). There must be a focus on the advertisement of microfinance institutions. Microfinance is frequently defined as the financial services for reduced and small-income consumers available by dissimilar types of service providers (Cull & Hartarska, [2023](#)). Microfinance normally refers to the series of financial services including credit discount, indemnity, currency transfer, and other economic goods provided by the abnormal services provider (Waris & Din, [2021](#)).

This study was conducted to know about the main factors affecting the expansion of the micro-financing industry in Pakistan. This study is also conducted to know how these factors expand microfinance in Pakistan we determine the main factor in the effect efficiency of the micro-financing finance industry in Pakistan. The country of Pakistan, which had a population of 169.9 million people at the end of June 2009 and a population growth rate of 2.05 percent per year, is anticipated to overtake the United States as the fourth most populous country on the planet by 2050. Pakistan is the sixth most populous country on the planet (Khan et al., [2021](#)). Despite the most difficult challenges, the financial system displayed its resilience in 2009 (Ali et al., [2020](#)). GDP increased by a record 4.1 percent in 2009-10 when measured in terms of price rises as compared to the previous year, according to official data. When compared to the previous year's GDP growth of 1.2 percent, this represents a significant improvement (Guluzada, [2020](#)). Even though the Baluchistan province is the least urbanized of Pakistan's four provinces, a whopping 35 percent of its population lives below the poverty line as a result of a lack of resources in the region (Shaikh et al., [2020](#)). When comparing 2010 and 2011, the number of people who were laid off increased by 7 percent, reaching 0.07 million persons (Pakistan Fiscal Policy Statement [2011-12](#)).

A Bangladeshi-born economist named Professor Muhammad Younas was the first to establish the concept of microfinance at the township level amid a famine in his country's Bangladesh in 1974. Microfinance has been around for decades. A small loan could make all the difference in the world to someone who is struggling to make ends meet on a limited income. He followed in the footsteps of the Grameen Bank, which has a long history of giving loans to underprivileged Bangladeshis. According to Grameen Bank, which has 8.37 million borrowers, with 97 percent of them being women, it is the world's largest lending institution as of June 2011. In Bangladesh, it is estimated that the Grameen Bank supplies armed troops to more than 97 percent of the country's population (Baser & Hasnath, [2022](#)). The rural poor, to whom it has provided the microfinance armed forces, have managed to cling to it for the time being, anyway. Bank borrowers own 90 percent of the company's shares, with the remaining 10 percent held by the company's executive team (Grandi et al., [2021](#)). The Grameen Bank is a microfinance institution of international renown. For the present study, time series quarterly data is taken from Microwatch (provided by the Pakistan microfinance network). Data of variables like with Number of active borrowers, Gross loan portfolio, and Loan

amount disbursed, Number of offices, Number of policyholders.

A lot of studies have been derived to scrutinize casual affiliation liberalized macro financing. Several studies also included other variables for investigation. Number of active borrowers, gross loan portfolio, and loan amount disbursed, number of loans disbursed, no. of offices, and no. of policy holders and make a try to explain their influence on two variables. The microfinance institution must promote more lending to the borrowers. The number of microfinance institution offices must be increased. There must be a focus on the advertisement of microfinance institutions.

- To examine the Microfinance institutions in Pakistan.
- To evaluate the efficiency of micro-financial institutions in Pakistan.

2 Literature Review

This section presents a summary of the related literature review. A few researchers conducted studies on the performance of micro-financial institutions in Pakistan. This chapter discusses reviews from national studies and international studies. This study is also conducted to know how these factors expand microfinance in Pakistan we determine the main factor in the effect efficiency of the microfinance industry in Pakistan.

Invented by Professor Mohammad Younas, the founder of Grameen Bank in Bangladesh and a well-known economist, the concept of microfinance was developed as a means of assisting people who otherwise couldn't afford to expand their small companies. There is a low total amount of money borrowed in contrast to the reduced ability of the borrowers to repay the loan over a short period (a year or less). The loan is unsecured or guaranteed open, and daily instalment payments are required to be made. The ability to provide protected microcredit without the requirement for guaranteed criteria or restrictions is the core notion in microfinance."

Because the poor lack property and the majority of them are illiterate, they are unable to keep track of their sales in an office setting, and as a result, they are unable to obtain a typical bank loan. Generally, if the poor do not have access to traditional lending sources, they turn to payday loan companies for assistance instead. In a growing world, the less fortunate are more likely to acquire loans from convenient sources (Waris & Din, [2024](#)). Lack of income and property forces them to seek out loans to supplement their subsistence income and the impossibility of providing collateral places them at the mercy of forgiving landowners.

Rauf and Mehmood ([2009](#)) analyzed the topic of growth and performance of microfinance in Pakistan. For this purpose, the study used time series data from the period of 2004 to 2007. Ratio analysis technique used for estimation. Ratio analysis concluded that there was a positive relationship between Efficiency, productivity-intensive growth, and poverty Alleviation. Basharat et al ([2015](#)) investigated about Efficiency, Productivity, Risk, and Profitability of the Microfinance Industry in Pakistan. Time series data was used from 2003 to 2006 for estimation. The study used the OLS technique. Growth rate and interest rate were negatively correlated with Gross Loan Portfolio while GLP was positively correlated with peer group.

Imai et al. ([2011](#)) empirically analyzed the macroeconomic and institutional perspective in Pakistan. The paper used secondary data by using the OLS technique for estimation. GDP positively correlated with Profitability, Efficiency Portfolio, and Loan Portfolio. Iqbal et al. ([2015](#)) scrutinized the impact of microfinance on poverty elevation in District, BWN, and Punjab Pakistan. The author used primary data by using the conveyance sampling technique. The study concluded that positive relationship between MF and BN, SE, and LS. Khan ([2014](#)) investigated the social and financial performance of conventional and Islamic microfinance institutions in Pakistan. Two techniques were used in this study for estimation DEA technique and statistical technique. Time series data was used from the period of 2000 to 2012. Different variables were

used in this model like total assets, GLP, number of active bowering, efficiency

A study conducted by the Bangladesh bucolic conservatory committee and Mia et al. (2019) sought to establish a link between microcredit and the decline of poverty and openness in the country. According to the findings of the study, microcredit has a good impact on a variety of parameters associated with exposure to toxins. Adding a practical assessment of home survey data obtained in one Bangladeshi district in 1995 has helped academics better understand why the split exists. As a result of microcredit, a digit-based strategy can aid in the reduction of liability, which is increasing with time. Meyer (2002) published a report on microfinance donations after researching the situation in Bangladesh. The research shows that the task created and presented by the institution is to play around with illumination in microfinance institutions' dropouts and delinquencies, as well as to move beyond and use common financial methods other than those that are currently in use. The method should be changed to account for changes in reimbursement schedules, loan amounts, gap loan costs, and the location of the manufacturing line, among other factors.

Meyer et al. (2019) investigated the competition and performance of microfinance institutions in the Netherlands. For this purpose, cross-sectional data was used by using the OLS technique. MI, competition, and Financial Intermediation were used as variables, and observed a negative relationship between MI and competition. Zainal et al. (2021) analyzed the Efficiency of Microfinance Institutions in ASEAN (Malaysia). A proposed framework. For this purpose, they used primary data by using Descriptive analysis. The authors analyzed the relationship with PTE, AE, deposits bowering, total assets, operating assets, and MFI efficiency.

Parvin et al. (2020) investigated the performance of microfinancial institutions in the macroeconomic context in Bangladesh. Panel data was used from the period of 2004 to 2011. OLS technique was used for estimation. The study concluded that MFI is less correlated with the stock market but more correlated with GDP levels. Fadikpe et al. (2022) analyzed the profitability and social performance of micro-financial institutions, and empirical evidence of relations between different types of variables. CA (multivariate technique) was used for estimation. The study analyzed the relationship between Microfinance, Financial Institutions, and Development. Nawaz (2010), investigated the efficiency and productivity of microfinance incorporating the role of subsidies. Two techniques, DEA and Tobit regression analysis were used for the estimation of the relation between variables. The author analyzed the relationship of microfinance, efficiency, non-parametric analysis, total assets, operating cost, and several costs with gross loan portfolio, financial revenue, and revenue subsidy. On the ground of the previous empirical and theoretical literature, we developed the following hypothesis,

H1: *There is a positive relationship between the Gross Loan Portfolio and the Number of active borrows.*

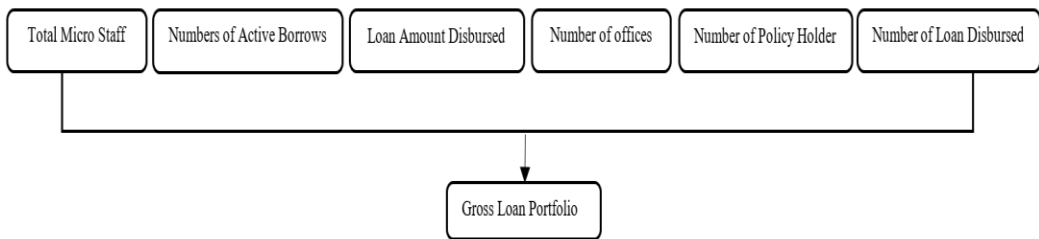
H2: *There is a positive relationship between the Gross Loan Portfolio and the Loan amount disbursed.*

H3: *There is a Negative relationship between the Gross Loan Portfolio and the Number of Offices.*

H4: *There is a positive relationship between the Gross Loan Portfolio and the Number of the policyholders.*

H5: *There is a positive relationship between Gross Loan Portfolio and their Total micro staff.*

H6: *There is a Negative relationship between Gross Loan Portfolio Number of Loan disbursed*

**Figure 1:** Conceptual Framework

3 Methodology

3.1 Data and sample

For the present study, time series quarterly data is taken from Microwatch (provided by the Pakistan microfinance network). Data of variables like with Number of active borrowers, Gross loan portfolio, Loan amount disbursed, Number of loans disbursed, PAR > 30 days, Number of offices, Total Microfinance Staff, Number of Policy Holders conventional microfinance providers is collected from the last forty quarters 10 years from the period of 2008 to 2020.

Table 1: Data Range, Unit of Measurement, Data Source

Abbreviation of variables	Variable	Date range	Unit of measurement	Data source
GLP	Gross loan portfolio	2008-2020	Million rupees	micro-watch (provided by Pakistan microfinance network)
NOAB	Number of active borrowers	2008-2020	Million rupees	micro-watch (provided by Pakistan microfinance network)
NOLD	Number of loans disbursed	2008-2020	Million rupees	micro-watch (provided by Pakistan microfinance network)
NOF	Number of offices	2008-2020	Million rupees	micro-watch (provided by Pakistan microfinance network)
NOPH	Number of policyholders	2008-2020	Million rupees	micro-watch (provided by Pakistan microfinance network)
TMS	Total micro staff	2008-2020	Million rupees	Microwatch (provided by Pakistan microfinance network)
LAD	Loan amount disbursed	2008-2020	Million rupees	Microwatch (provided by Pakistan microfinance network)

3.2 Model Specification

The present analysis describes the different independent variables and their impact on dependent variables. By explaining the econometric model of all dependent and independent variables the study has formulated the following model.

$$GLP = \alpha_0 + \alpha_1(NOAB) + \alpha_2(LAD) + \alpha_3(NOLD) + \alpha_4(NOF) + \alpha_5(TMS) + \alpha_6(NOPH) + \mu_i$$

3.3 Definition and Measurement of Variables

A Gross Loan Portfolio is excellent and most important for the entire great consumer finance, so as well as present, antisocial, or reorganized credit, the loan is not in the form of writing. Which does not consist of the interest receivable, which does not take in worker finance. The number of active borrowers is the number of creatures who presently include huge loans, balance through MFI, or are accountable for settling up any sector of the Gross Loan Portfolio. The real move of monetary assets. The amount of small credit returns the payback of lending organization to the borrowers is known as disbursed.

4 Results and Discussion

In this section, we will explain the Descriptive analysis (Mean, Median, Kurtosis, Skewness maximum, and minimum,). We will describe the graphical analysis of the gross loan Portfolio, No. of active borrowers, loan amount disbursement, No. of loan disbursed, No. of offices, No. of policyholders.

Table 2: Descriptive Statistics

	GLP	LAD	NOAB	NOF	NOLD	NOPH	TMS
Mean	265000000.00	101000000.00	18305.18	9.91	4123.56	14685.62	58.29
Median	228000000.00	80900748.00	17800.50	8.50	4058.50	13987.50	57.00
Maximum	444000000.00	189000000.00	23327.00	19.00	6085.00	20713.00	77.00
Minimum	179000000.00	54446000.00	14637.00	7.00	2375.00	8885.00	0.00
Std. Dev.	83400192.00	42357274.00	2689.60	3.32	982.58	3054.70	14.07
Skewness	0.75	0.88	0.50	1.70	0.27	0.47	-1.87
Kurtosis	2.24	2.29	2.07	4.97	2.19	2.34	9.76
Jarque-Bera	3.98	5.10	2.66	21.84	1.35	1.86	84.43
Probability	0.14	0.08	0.26	0.00	0.51	0.39	0.00

The table shows the central tendency of microfinancing Mean of each variable is not the same. Our average mean value of the Gross loan portfolio is 265000000.00 million rupees, the Loan amount disbursed is 101000000.00 million rupees, No. of active borrowers is 18305.18 million numbers, no. of loans disbursed is 4123.56 million numbers, no. of offices is 9.91 million numbers, no. of policyholders is 14685.62 million numbers & Total micro staff is 58.29 million number. The table shows the central tendency of the microfinancing median of each variable is not the same. Our average median values of the Gross loan portfolio are 22800000.00 million rupees, the Loan amount disbursed is 80900748.00 million rupees, No. of active borrowers is 17800.50 million numbers, no. of loans disbursed is 4058.50 million numbers, no. of offices is 8.51 million numbers, no. of policyholders is 13987.50 million numbers & Total micro staff is 57.00 million numbers.

The table shows the central tendency of microfinancing Maximum values of each variable are not the same. The maximum value of the Gross loan portfolio is 444000000 million rupees, Loan amount disbursed is 189000000 million rupees, No. of active borrowers is 23327.00 million numbers, no. of loans disbursed is 6085.00 million numbers, no. of offices is 19.00 million numbers, no. of policyholders is 20713.00 million numbers & Total micro staff is 77.00 million numbers. The table shows the central tendency of microfinancing Minimum values of each variable are not the same. The minimum values of the Gross loan portfolio are 179000000.00 million rupees, Loan amount disbursed is 54446000.00 million rupees, No. of active borrowers is 14637.00 million numbers, no. of loans disbursed is 237500.00 million numbers, no. of offices is 7.00 million numbers, no. of policyholders is 8885.00 million numbers & Total micro staff is 0.00 million numbers.

The standard deviation of the Gross loan portfolio is 83400192.00 million rupees, The Loan amount disbursed is 42357274.00 million rupees, No. of active borrowers is 2689.60 million numbers, no. of loans disbursed is 982.58 million numbers, no. of offices is 3.32 million numbers, no. of policyholders is 3054.70 million numbers & Total micro staff is 14.07 million numbers. The skew of Gross loan portfolio, Loan amount disbursed, No. of active borrowers, No. of Loan disbursed, No. of policyholders is highly left skewed, because the value is less than 1.00.

The kurtosis of Gross loan portfolio, Loan amount disbursed, No. of active borrowers, No. of Loan disbursed, No. of policy holders is platy kurtic, because the value is less than 3. The kurtosis of no. Of offices & Total micro staff is leptokurtic because the value is greater than 3. The probability values of jarque-Bera of Total micro staff, Loan amount disbursed & no. of offices is significant. The probability values of Jarque-Bera of Gross loan portfolio, No. of Loan disbursed, No. of active borrowers & No. of policyholders are insignificant.

In this figure, x-axis shows the year y-axis shows the gross loan portfolio. From quarter 2 (2008) to quarter 4 (2008), the gross loan portfolio increased. From 2008 to 2013 the gross loan portfolio increased at a moderate rate. From 2013 to 2015 the gross loan portfolio increased at a high rate. In this figure, x-axis shows the year y-axis shows the number of active borrowers. From quarter 2 (2008) to quarter 4 (2008) the number of active borrowers increased. From 2008 to 2013 the number of active borrowers increased at a moderate rate. From 2012 to 2015 the number of active borrowers increased at a high rate.

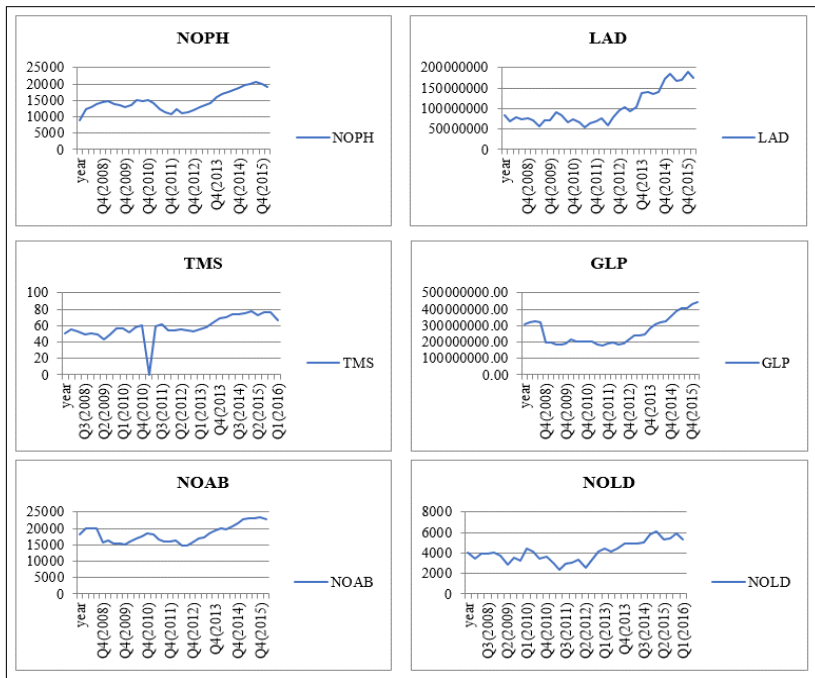


Figure 2: Description of variables

In this figure, the x-axis shows the year y-axis shows the number of loans disbursed. From quarter 2 (2008) to quarter 4 (2008) the number of loans disbursed increased. From 2008 to 2013 the number of loans disbursed increased at a moderate rate. From 2012 to 2015 the number of loans disbursed increased at a high rate. In this figure, the x-axis shows the year y-axis shows the loan amount disbursed. From quarter 2 (2008) to quarter 4 (2008) the loan amount disbursed increased. From 2008 to 2013 the loan amount disbursed increased at a moderate rate. From 2012 to 2015 the loan amount disbursed increased at a high rate. In this figure, the x-axis shows the year y-axis shows the total microfinance staff. From quarter 2 (2008) to quarter 4 (2010), the total microfinance staff increased. From 2010 to 2011 total microfinance staff decreased at a high rate. From 2011 to 2015 the total microfinance staff increased at a moderate rate. In this figure x-axis shows the year y-axis shows several policyholders. From quarter 2 (2008) to quarter 4 (2009) the number of policyholders increased. From 2009 to 2011 the number of policy holders decreased at a high rate. From 2011 to 2015 the number of policy holders increased.

4.1 Econometric Analysis

4.1.1 Unit Root Test

In this chapter, we will discuss the unit root test and econometric results explaining the relationship, statistical significance, unit interpretation, and justification of the result.

Table 3: Unit root test

Variable	Test in	Including	Probability	Conclusion
LGross loan portfolio	Level	Intercept	0.9759	I(1)
		Trend & intercept	0.6870	
	1 st difference	Intercept	0.0128	
		Trend & intercept	0.1869	
LLoan amount disbursed	Level	Intercept	0.8631	I(1)
		Trend & intercept	0.3168	
	1 st difference	Intercept	0.0001	
		Trend & intercept	0.0004	
LNumber of active borrowers	Level	Intercept	0.8205	I(1)
		Trend & intercept	0.4407	
	1 st difference	Intercept	0.0001	
		Trend & intercept	0.0003	
LNumber of loans disbursed	Level	Intercept	0.4672	I(1)
		Trend & intercept	0.4723	
	1 st difference	Intercept	0.0000	
		Trend & intercept	0.0000	
LNumber of offices	Level	Intercept	0.0954	I(0)
		Trend & intercept	0.3033	
	1 st difference	Intercept	0.0001	
		Trend & intercept	0.0003	
LTotal micro staff	Level	Intercept	0.06226	I(0)
		Trend & intercept	0.4501	
	1 st difference	Intercept	0.2382	
		Trend & intercept	0.9586	
Number of policy holder	Level	Intercept	0.2637	I(1)
		Trend & intercept	0.5740	
	1 st difference	Intercept	0.0000	
		Trend & intercept	0.0004	

LGross loan portfolio is stationary at 1st difference. The loan amount disbursed is stationary at 1st difference. The Lnumber of active borrowers is stationary at 1st difference. Lnumber of loans disbursed is stationary at 1st difference. The number of offices is stationary at level. Ltotal micro staff is stationary at level. Lnumber of the policyholder is stationary at 1st difference. Different co-integration methods have been proposed by many economists in the past decade. The most famous were Engle and Granger (1987) and Johansen (1988) co-integration. Engle and Granger used for simple regression, or more than two variables regression, and Johansen used for multiple regressions, or more than variables regression. If all variables are stationary at 1st difference, then we applied both techniques. These techniques show a long-run association between variables. ARDL techniques were proposed after these two co-integration techniques (Engle-Granger and Johansson) by Pesaran and Shin. ARDL approach is applicable for the regress integrated of order zero I (0) I (1).

Table 4: Regression analysis - Analysis Findings

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LLAD	1.451876	0.276818	5.244881	0.0005
LNOAB	0.476964	0.258999	1.841564	0.0987
LNOF	0.555670	0.106238	5.230409	0.0005
LTMS	-1.037866	0.178320	-5.820247	0.0003
LNOLD	-1.398407	0.446376	-3.132800	0.0121
LNOPH	0.326726	0.151322	2.159146	0.0591
C	-0.513827	1.565813	-0.328154	0.7503

The coefficient value of log of Loan Amount Disbursed (LLAD) is 1.451876 in long run which shows positive relationship. The probability value of statistic is 0.0005 which shows statistically significant at 1% level. 1% increase in log of loan amount disbursed will lead to 1.451876%

increase in log of gross loan portfolio. The coefficient value of the Log of number of active borrowers (LNOAB) is 0.476964 in the long run which shows positive relationship. The probability value of t.statistic is 0.0987 which shows statistically significant at 1% level. A 1% increase in the log of number of active borrowers will lead to 0.476964% increase in log of gross loan portfolio. The coefficient value of Log of a number of offices (LNOF) is 0.555670 in the long run which shows a positive relationship. The probability value of t. statistic is 0.0005 which shows statistically significant at 1% level. A 1% increase in the log of a number of offices will lead to 0.55% increase in the log of gross loan portfolio.

The coefficient value of log of total micro staff (LTMS) is -1.037866 in the long run which shows negative relationship. The probability value of t.statistic is 0.0003 which shows statistically significant at 1% level. 1% increase in log of total micro staff will lead to -1.037% decreases in log of gross loan portfolio. The coefficient value of log of number of loans disbursed (LNOLD) is -1.398407 in long run which shows negative relationship. The probability value of t.statistic is 0.0121 which shows statistically significant at 1% level. 1% increase in log of number of loans disbursed will lead to a 1-1.398% decrease in the log of gross loan portfolio. The coefficient value of Log of number of policy holder (LNOPH) is 0.326726 in long run which shows positive relationship. The probability value of statistic is 0.0591 which shows statistically significant at 1% level. 1% increase in log of number of policy holder will leads to 0.326% increase in log of gross loan portfolio.

Table 5: Cointegration Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D (LGLP (-1))	-0.421232	0.22449	-1.876320	0.0934
D(LLAD)	0.202623	0.16544	1.224698	0.2518
D (LLAD (-1))	-0.066536	0.07956	-0.836273	0.4246
D(LNOAB)	1.114736	0.23815	4.680682	0.0012
D (LNOAB (-1))	1.026613	0.45773	2.242799	0.0516
D(LNOF)	0.215079	0.06058	3.550199	0.0062
D (LNOF (-1))	-0.138239	0.089679	-1.541492	0.1576
D(LTMS)	-0.526308	0.136400	-3.858561	0.0039
D (LTMS (-1))	0.591123	0.164887	3.585030	0.0059
D(LNOLD)	-0.170175	0.204899	-0.830533	0.4277
D(LNOPH)	0.076680	0.225942	0.339380	0.7421
D (LNOPH (-1))	-0.228637	0.157829	-1.448638	0.1814
Coint-Eq (-1)	-1.040821	0.263495	-3.950055	0.0034

In the short run, the coefficient value of the previous year's log of the gross loan portfolio is -0.4212 which shows a negative relationship between the previous year's log of the gross loan portfolio and the current year's log of the gross loan portfolio. The probability value of the previous year's log of gross loan portfolio is 0.0934 which shows statistically significant. A 1% increase in the previous year's log of the gross loan portfolio will lead to a -0.4212% decrease in the current year's log of the gross loan portfolio. In the short run, the coefficient value of the log of loan amount disbursed is 0.2026 which shows a positive relationship between the loan amount disbursed and the log of gross loan portfolio.

The probability value of the log of loan amount disbursed is 0.2518 which is statistically insignificant. 1% increase in the log of loan amount disbursed will lead to a 0.202% increase in the log of gross loan portfolio. In the short run, the coefficient value of the previous year's log of loan amount disbursed is -0.0665 which shows a negative relationship between the previous year's log of loan amount disbursed and the current year's log of the gross loan portfolio. The probability value of the previous year's log of loan amount disbursed is 0.4246 which shows statistically insignificant. 1% increase in the previous year's log of loan amount disbursed will lead to a -

0.0665% decrease in the current year's log of the gross loan portfolio.

In the short run, the coefficient value of the log of several active borrowers is 1.1147 which shows a positive relationship between the log of several active borrowers and the Lgross loan portfolio. The probability value of the log of several active borrowers is 0.0012 which is statistically significant. 1% increase in the log of several active borrowers will lead to a 1.1147% increase in the log of the gross loan portfolio. In the short run, the coefficient value of the previous year's log of number of active borrowers is 1.0266, which shows a positive relationship between the previous year's log of number of active borrowers and the current year's log of gross loan portfolio. The probability value of the previous year's log of number of active borrowers is 0.0516 which shows statistically significant. A 1% increase in the previous year's log of several active borrowers will lead to a 1.0266% increase in the current year's log of the gross loan portfolio. In the short run, the coefficient value of the log of several offices is 0.2150 which shows a positive relationship between the log of several offices and the gross loan portfolio. The probability value of the log of several offices is 0.0062 which is statistically significant. A 1% increase in the log of several offices will lead to a 0.2150% increase in the log of the gross loan portfolio.

In the short run, the coefficient value of the previous year's log of several offices is -0.1382, which shows a negative relationship between the previous year's log of several offices and the current year's log of gross loan portfolio. The probability value of the previous year's log of several offices is 0.1576 which is statistically insignificant. 1% increase in the previous year's log of some offices will lead to a -0.1382% decrease in the current year's log of the gross loan portfolio. In the short run, the coefficient value of the log of total micro staff is -0.5363 which shows a negative relationship between the log of total micro staff and the log of gross loan portfolio. The probability value of the log of total micro staff is 0.0039 which is statistically significant. 1% increase in the log of total micro staff will lead to a -0.5363% decrease in the log of the gross loan portfolio.

In the short run, the coefficient value of the previous year's log of total micro staff is 0.5911 which shows a positive relationship between the previous year's log of total micro staff and the current year's log of gross loan portfolio. The probability value of the previous year's log of total micro staff is 0.0059, which is statistically insignificant. 1% increase in the previous year's log of total micro staff will lead to a 0.591% increase in the current year's log of the gross loan portfolio. In the short run, the coefficient value of the log of several loans disbursed is -0.1701 which shows a negative relationship between the log of several loans disbursed and the log of the gross loan portfolio. The probability value of the log of several loans disbursed is 0.4277 which is statistically insignificant. 1% increase in the log of several loans disbursed will lead to a -0.1701% decrease in the log of the gross loan portfolio.

In the short run, the coefficient value of the log of several policy holder is 0.07668 which shows a positive relationship between the log of several policy holders and the log of the gross loan portfolio. The probability value of the log of several policyholders is 0.7421 which is statistically insignificant. 1% increase in the log of number of the policyholders will lead to a 0.076% increase in the log of the gross loan portfolio. In the short run, the coefficient value of the previous year's log of some policyholders is -0.2286 which shows a negative relationship between the previous year's log of some policy holders and the current year's log of gross loan portfolio. The probability value of the previous year's log of several policyholders is 0.1814 which is statistically insignificant. 1% increase in the previous year's log of the number of policyholders will lead to a -0.22% decrease in the current year's log of the gross loan portfolio.

5 Conclusion and implications

The investigation of this study stands on the quarterly data from 2010-2020. The study considered gross loan portfolio as the core variable and no. of active borrowers, loan amount disbursed, no of offices, no of policyholders, and no of loans disbursed as supportive variables. A lot of studies

have been derived to scrutinize casual affiliation liberalized macro financing. Several studies also included other variables for investigation. Number of active borrowers, gross loan portfolio, loan amount disbursed, number of loans disbursed, no. of offices, no. of policyholders and make try to explain their influence on two variables. The microfinance institution must promote more lending to the borrowers. The number of microfinance institution offices must be increased. There must be a focus on the advertisement of microfinance institutions. The microfinance institution must promote more lending to the borrowers. The number of microfinance institution offices must be increased. There must be a focus on the advertisement of microfinance institutions.

To foster the expansion of the microfinance industry in Pakistan, policymakers should focus on creating a supportive regulatory framework that enhances transparency and reduces bureaucratic hurdles. Strengthening the institutional capacity of microfinance institutions (MFIs) through training and development programs is crucial for improving service delivery and outreach. Government and financial authorities should promote public-private partnerships to leverage resources and expertise, ensuring broader access to microfinance services. Implementing favorable tax policies and providing financial incentives can encourage investment in the sector. Additionally, integrating technology in microfinance operations can enhance efficiency and outreach, particularly in rural and underserved areas. Ensuring consumer protection through robust regulatory oversight will build trust and encourage more individuals to participate in the microfinance sector.

Subsequent investigations must examine the effects of technology innovations, such as fintech and mobile banking, on the effectiveness and accessibility of microfinance services in Pakistan. Comparative research conducted in Pakistan's many areas could reveal opportunities and constraints unique to each area, offering a more complex picture of the variables influencing the growth of microfinance. It would be more beneficial to examine the long-term socioeconomic effects of microfinance on women's empowerment, entrepreneurship, and poverty reduction. Furthermore, studies should look at how social and cultural variables influence the need for and use of microlending services. Working with scholars from other countries could also yield comparative insights and highlight best practices from other growing economies that Pakistan could apply.

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