Impact of Financial Performance of Islamic and Conventional Microfinance Institutions on their Outreach

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Abstract: The purpose of this research was to examine the impact of the financial performance of Islamic and conventional microfinance institutions (CMFIs) on their outreach. Further, the study also checked the moderating role of institution size in this relationship. This study used unbalanced panel data from 350 microfinance institutions (including 300 CMFIs and 50 IMFIs) for the period 2015–21 by applying the fixed effect method. Financial performance (FP) was measured through return on assets (ROA) and portfolio yield (PFY) as independent variables, while Average loan size per borrower to gross national income (ALSBNI) represented the dependent variable (outreach). Other variables, such as gross domestic product (GDP), consumer price index (CPI), and regulatory quality (RQ), were used as control variables, while institution size (IS) was used as a moderator. Both ROA and PFY showed a negative relationship with the ALSBNI of IMFIs and CMFIs. IS positively impacted the ALSBNI of IMFIs, whereas it negatively impacted the ALSBNI of CMFIs. The two control variables, namely GDP and CPI, had a negative relationship with the ALSBNI of both institutions. The third control variable, i.e., RQ, however, showed a positive relationship with the ALSBNI of IMFIs and a negative relationship with CMFIs. The moderator (IS) further strengthened the negative relationship of ROA and PFY with the ALSBNI of IMFIs. It had a similar effect on the negative relationship of ROA with ALSBNI of CMFIs while converting their PFY's negative relationship with ALSBNI into a positive one. The results indicate negative impact of the financial performance of CMFIs and IMFIs on their outreach, therefore these institutions need to focus on social performance to enhance their outreach.

Keywords: *Financial Performance, Islamic Microfinance, Microfinance, Outreach*

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1. Introduction

 Microfinance (MF) is the combination of two words: micro and finance. Micro means small, and here finance means providing financial services. Therefore, microfinance is the term used to provide financial products and services to low-income individuals and groups that are excluded from traditional banking. Financial services include providing small credit and loans, saving accounts, financial advising, money transfers, and insurance services (Watkin, 2018). Microfinance institution (MFI) is a term used for all types of microfinance providers. "Microfinance institutions" include credit unions, non-governmental organizations (NGOs), government banks, savings cooperatives, commercial banks, and nonbanking financial institutions (Ledgerwood, 1998). Microfinance institutions (MFIs) play their role both as financial and social intermediaries. The

role of financial intermediation is to channel resources from lenders to borrowers. Microfinance plays the role of an intermediary for financial interdependence at both the macro and micro levels. In the formal sector, usually commercial banks provide credits to micro organizations that further lend them to the poor (Cervelló-Royo et al., 2017). Other than financial intermediation, MFIs play the role of group formation according to economic activities, health and financial education and training, skill development, and marketing knowledge (Thai-Ha, 2021).

1.1 Conventional Microfinance Products and Services

Currently, conventional microfinance institutions are providing services and products in many forms. From "beneficiaries" to MFIs, the microfinance industry is facing more complex needs as compared to traditional financing. From the "beneficiaries" point of view, customer needs are changing from "poor to poorer". Similarly, MFIs are aiming for sustainability and independence in donor processes and fund generation. In today's financial environment, simply providing credit is insufficient. Previously, the microfinance industry followed a "product-driven" rule. As customer activities have become more entrepreneurial, to fulfill these requirements, complex product development processes are required. In the modern era, microfinance should be "market driven (Trezza, 2006). Currently, microventure capital, microsavings, microequity products, microinsurance, and digital money transfers are some examples of the products and services microfinance institutions are providing (Elle, 2012).

1.2 Islamic Microfinance (IMF)

Islam emphasizes the fulfillment of the needs of the whole society. It involves rich people fulfilling the needs of the poor. Studies indicate that the poor are unable to become part of the development process because they are excluded from the financial system. Islamic microfinance is providing financial services to low-income people in accordance with Shariah principles (Nazim, 2012). Islamic microfinance is the fusion of two rapidly growing industries: Islamic finance and microfinance. Microfinance and Islamic finance are very much related. The aim of Islamic finance is to work for the moral, ethical, social, and religious progress of society. Bangladesh, India, Morocco, Pakistan, Indonesia, and Malaysia are some of the prominent countries working under the International Islamic Development Bank (IsDB) for microfinance. Islamic finance focuses on entrepreneurship, risk sharing, and social and economic growth, which are similar goals to those of conventional microfinance (CMF). CMF works on the system of interest, which can be as high as 60–70% of the lending, while IMFIs have an interest-free system of including the poorest of the poor in the financial cycle in the form of Zakat, Waqf, and Sadqat (Obaidullah, 2008). A microfinance contract should be free from certain elements as per the rules and regulations of Shariah. These elements are riba, ghrar, and other prohibited items such as wine, pork, and drugs (Mansori et al., 2015). Any transaction where riba is involved is prohibited. Riba is the access amount paid on the usage of money. In the Holy Quran, Allah says, "When riba is given for the purpose of increasing wealth, in the sight of Allah it is not an increase, and when zakat is given for Allah's will, basically Allah will reward him as a multiplier." Ayah ar-Rum (the Romans, the Byzantines) 30:39

1.2 Products in Islamic Microfinance

Islamic microfinance is different from conventional finance as it is based on the concept of Shariah. Islamic microfinance is free from riba. Islamic microfinance provides loans on the basis of "Qard-e-Hasana, Murabaha, Salam,Ijara, etc. In Islamic microfinance, Mudarbah and Musharkah models are used for venture capital. Micro savings have a similar concept in Islamic microfinance as in conventional microfinance. Depositors want to earn through saving, but in Islamic microfinance, savings should be invested in halal activities. IMFIs provide insurance services in the form of micro-takaful for natural calamities, health issues, business crises, crop failures, and death (Mahmood et al., 2019).

1.3 Share of Islamic Microfinance in the Islamic Finance Industry

According to the Global Islamic Finance Report of 2020, out of 5 markets including Islamic banking, Sukuk, takaful, Islamic microfinance, and other institutions, Islamic banks share has decreased by 1%, Sukuk share has increased by 2%, and Takaful industry share has increased by 1%, while no change was found in the Islamic microfinance industry. Its assets increased by $ 27 billion to $ 30 billion from 2016 to 2019 (Islamic Financial Services Industry Statistics, 2020).
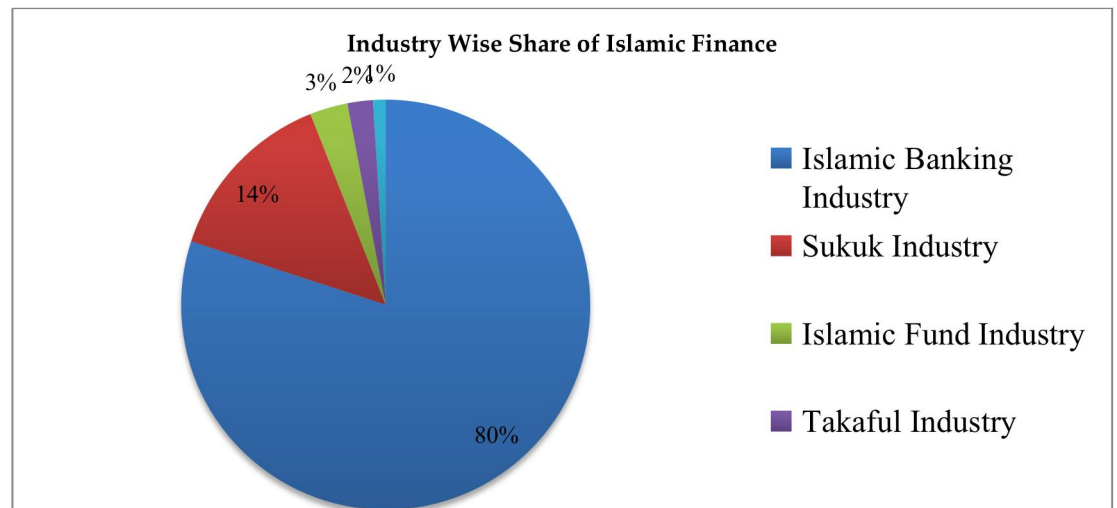
Industry Wise Share of Islamic Finance

Figure 1: Share of Islamic Finance Industry
(Source: Islamic Financial Services Industry (IFSI) Statistics, 2020)

1.4 Difference between Conventional and Islamic Microfinance

Both conventional and IMFIs are targeting the bottom of the pyramid, or the unbanked population. The target population consists of poor families, women, children, and senior citizens. Conventional microfinance provides interest-based financing, while Islamic microfinance modes of financing are profit-and-loss sharing (Mudrabah, Musharkah), Salam, Istisna, Murabahah, debt-based (Qard-e-Hasana), and rental-based (Micro-Ijarah). As compared to conventional microfinance, Islamic microfinance transfers funds in both asset and money form. Along with social development, IMFI also focuses on religious ethical and moral development (Ahmed, 2002; Obaidullah, 2008).

1.5 Importance of Micro Finance

Microfinance services help to coup poverty alleviation and unemployment, fasten development in health, education, business, life style improvement and emergencies i.e. natural disasters and economic crisis. These are the important reasons for the growth of micro financing. Microfinance has aim to serve the poor, stabilize the economy and strengthening the current financial system Microfinance services also help to increase spending on necessities of life. Financial services also reduce administrative cost and cost of distribution (Omoro & Omwange , 2013).

1.6 Financial Performance and Outreach

Microfinance institutions have to achieve dual objectives in the form of financial and social performance. Social performance includes accessibility of financial products to the needed population. Outreach means spreading and promoting microfinance products and services to the targeted segment, or the poorest of the poor, to the maximum extent possible. There are many ways to measure outreach. It is measured by how many clients have used the service. Branches of microfinance institutions can also be a proxy for outreach in terms of breadth. Another proxy is the number of active borrowers (Mia & Chandran, 2016).

1.7 Research Problem and Objective of the Study

Microfinance institutions have to focus on two types of objectives as financial and social performance that can create conflict of interest. That is why, it is important to find out performances impact on each other. Therefore, this research objective is to find out if there is any significant impact of financial performance on outreach of Conventional and Islamic microfinance institutions and moderating role of institution size on the relationship between financial performance and outreach of these institutions. This paper consists of four sections including introduction, literature review, methodology and conclusion.

2.Literature Review

It is vital to explore the ideas and phenomena that drove the growth of microfinance organizations in order to acquire a better grasp of the objective achievements of microfinance. The market failures of traditional banks and institutions are the reason for the appraisal of microfinance. This notion is applicable in microfinance organizations since donors desire to fulfill welfare goals while management wants to maximize profit for the purpose of the institution's

financial condition. Because donor financing is limited, cost and benefit efficiency are also components of agency theory (Mersland & Strm, 2008). These theories and concepts explain the goals and conflicts that exist in microfinance. Welfarism is the theory that places the highest value on human well-being. It is related to moral philosophy, consensual conceptions, and utilitarianism, in which resources are used to the greatest extent possible for well-being. The researcher here is integrating welfareism with microfinance since microfinance works for the public's well-being, and similarly, stakeholder theory can be related because microfinance should meet all stakeholders' interests. Welfarism and stakeholder theories lead towards institutionalism approach. The study of the relationship between organizations and social structure is known as institutional theory. The goal of institutional theory is to adapt organizations to changing societal needs (Aldemir & Uysal, 2017). Microfinance institutions, according to the institutionalism concept, should focus on financial sustainability because they cannot rely on donors indefinitely (Kent & Dacin, 2013). Islamic microfinance is essential for fulfilling Maqasid ul Shariah for the benefit of stakeholders. Maqasid ul Shariah refers to Shariah's goals. Shariah provides individuals with principles to manage their way of life and benefit society. It prohibits all harmful behaviour (Auda, 2008; Dusuki & Abdullah, 2007). The concept of Maqasid Al Shariah relates to the concept of public interest. Maqasid al Shariah works with microfinance to address the demands of institutions while also delivering services and products to as many individuals as possible.

Microfinance is an important subject of study, according to Oxford Development Studies. Firstly, microfinance includes the "excluded population" in the financial inclusion cycle. Secondly, microfinance involvement at the national level certainly affects the global socio-political and economic environment. Third, this subject is the contribution of research regarding many socioeconomic factors such as poverty, unemployment, gender inequality, education, and business (Fouillet et al., 2013). The year 2005 was declared the "International Year of Microfinance" by the United Nations General Assembly (UNCDP, 2017).

Zeller & Meyer (2002) introduced the three dimensions of "outreach, impact, and financial sustainability" in the "triangle of microfinance." Annim's (2012) research results indicated that MFIs compromise on social objectives to gain financial efficiency. In this article, data from 164 MFIs is used for the years 2004–2008. The results showed that efficient MFIs failed to reach out to poor clients, and vice versa. MFIs primary objective is to provide financial services to the poor, but financial sustainability is also very important (Mia et al., 2018). An organization's drift away from its initial purpose or mission results in mission drift. Organizations face financial problems that lead them to target rich customers. Mostly, it is faced by organizations that have a social mission, such as microfinance institutions, nonprofit organizations, hospitals, and educational institutions (Jones, 2007). According to Navajas et al. (2000), financial performance helps achieve social objectives. The studies raised different questions regarding profitability, efficiency, and an increase in operating costs (Qayyum & Ahmed, 2006). Many researchers answered these questions. According to them, "institutional delivery strategies" and "sources of funding" can be the reason MFIs are financially stable or reach out to the poorest.

In their study, Ngumo et al. (2020) examined the performance of microfinance banks (MFBs) in Kenya. The data was taken from 2011–2015. Results indicated that bank size, operational efficiency, and capital adequacy have a significant relationship with financial performance. In their paper, Raihan et al. (2017) analyzed the macroeconomic impact of microfinance institutions in Bangladesh. The paper applied the "Computable General Equilibrium" (CGE) model to find out the positive impact of MFIs on gross domestic product (GDP). Murad et al. (2017) found out the impact of microfinance institutions on the economic growth of Nigeria for the years 1992–2012. Results indicated that MFIs didn't have a significant impact on economic growth in the long run. The research by Tang et al. (2020) analyzed the impact of financial performance on MFI deposits. Return on assets, operational self-sufficiency, profit margin, and yield on gross portfolio are taken as independent variables, and deposits to total assets are taken as dependent variables. Results indicated that cost management is necessary for improvement.

The paper by Alkhan et al. (2021) analyzed the case study from the years 2017–21 to find out whether microfinance serves the purpose of Maqasid ul Shariah. Results indicated that the circulation and distribution of wealth, poverty reduction, and improvement of social conditions were aligned with Maqasid ul Shariah. The study by Anwar et al. (2019) examined the impact of governance and accountability on MFIs in Indonesia and the Philippines. Results indicated that MFIs are lacking in financial and social efficiency. Rule of law and government integrity have

positive effects on the financial performance of MFIs, and government spending has positive effects on social performance (Hussain et al., 2021). The paper by Abdelkader and Mansouri (2019) examined the efficiency of MFIs in the Middle East and North Africa (MENA) region. Data was used for the years 2002–2012 for 72 MFIs from 10 countries. The data was taken from the MIX database. Results indicated variation in efficiency both on a time and country basis.

The study by Sukmana et al. (2020) compared the performance of conventional and rural banks in Indonesia. Conventional banks are called "Bank Perkreditan Rakyat" (BPR), and Shariah-based banks are called "Bank Pembiayaan Rakyat Syariah" (BPRS). Results indicated that rural banks working in cities are more efficient as compared to rural areas. The paper by Abdul et al. (2015) investigated the performance of IMFBs in Indonesia. The data was taken from the years 2012–2017. Results show that, compared to conventional microfinance banks, IMFBs performed poorly. The purpose of this study by Widiarto and Emrouznejad (2015) was to compare the efficiency of IMFIs with conventional MFIs. A comparison was performed on a social and financial efficiency basis. Results indicated that IMFIs have low efficiency as compared to conventional MFIs, and IMFBs have lower efficiency than IMFIs. Fersi & Boujelbene (2016) examined the social and financial performance of IMFIs and MFIs. Panel data from 333 conventional and 49 Islamic MFIs for the period 1996–2012 was used. Results indicated that IMFIs place more focus on social performance. The study by Muhammad et al. (2020) examined the impact of internal factors on the non-performing finance (NPF) of Islamic rural banks (IRBs) in Indonesia. Islamic rural banks provide financing to small and medium enterprises. Variables used for internal factors are return on assets, capital adequacy ratio, bank size, and financing to deposit ratio (FDR). Quarterly panel data from 162 IRBs was used for the period 2012–2016. Results indicated a negative relationship between ROA, BS, and CAR and NPF. Churchill (2019) analyzed the financial sustainability of MFIs for the years 2005–2014. Data was collected from 1595 MFIs in 109 countries. Unbalanced panel data was used for the study. 966 organizations were profit-based. The GMM method was used for the research. Thomas and Kumar (2016) found that the performance indicators of microfinance institutions are different from those of traditional institutions because social indicators are also required. Microfinance institutions are analyzed on the basis of outreach and sustainability; therefore, judgments of social and financial performances differentiate MFIs from other traditional institutions (Navin & Sinha, 2020). Another aspect is the increase in commercialization, which causes mission drift in the respective industry (Augsburga and Fouillet, 2010). According to Quayes, in 2020, there is a tradeoff between the depth of outreach and financial sustainability. The gap is being explored with respect to Islamic microfinance. Therefore, the purpose of this study is to find out the impact of financial performance on the outreach of conventional and Islamic microfinance institutions.
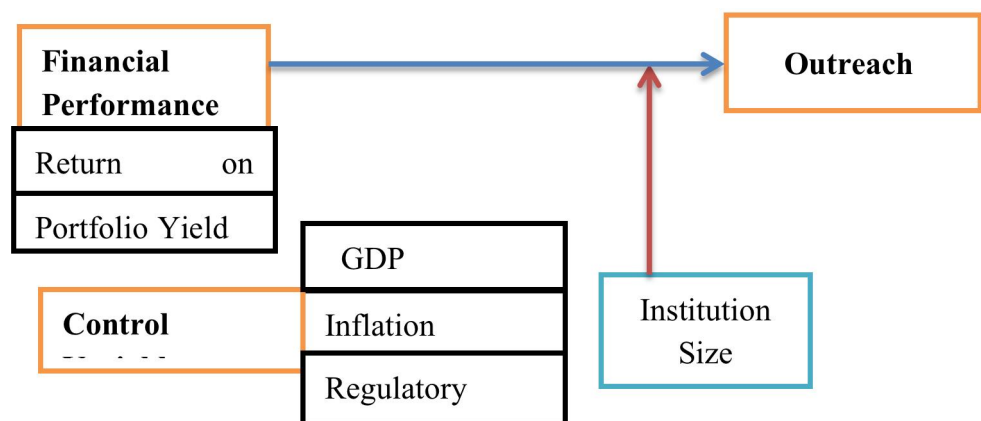

Figure 2: Conceptual Framework

3. Methodology

This study used unbalanced panel data from 350 microfinance institutions (including 300 CMFIs and 50 IMFIs) for the period 2015–21 by applying the fixed effect method. Financial performance was measured through return on assets (ROA) and portfolio yield (PFY) as independent variables,

while Average loan size per borrower to gross national income (ALSBNI) represented the dependent variable (outreach). Other variables, such as gross domestic product (GDP), consumer price index (CPI), and regulatory quality (RQ), were used as control variables, while institution size (IS) was used as a moderator.

Table 1: Variables and Their Definitions

Independent Variables				
Variable	**Proxy**	**Abbreviation**	**Formula**	**Source of Data**
Financial Performance	Return on Asset	ROA	Net Income/Total Assets	World Bank MIX Report
	Portfolio Yield	PFY	Financial revenue from loans / Average gross loan portfolio	
Dependent Variables				
Outreach	Average Loan Balance Per Borrower by GNI Per Capita	ALSBNI	Average Loan Balance per Borrower/ GNI per Capita	World Bank MIX Reports & World Bank Database
Moderator				
Institution Size	Total Assets	IS	Total assets sums up the volume of activities of institutions. The logarithm of total assets	World Bank MIX Reports
Control Variables				
GDP	Gross Domestic Product Per Capita	GDP	Gross domestic product per capita (GDP) is an economic tool that breaks down a country's economic production per person and is calculated by dividing the gross domestic product of a country by its population.	World Bank Database
Inflation	Consumer Price Index	CPI	CPI calculates the average change in prices over a specific time that consumers pay for a basket of goods and services.	World Bank Database
Institutional Quality	Regulatory Quality	RQ	Reveals perceptions of the ability of the government to articulate and implement sound guidelines and regulations that permit and promote private sector development.	World Governance Indicator Database

$$\text{OUT it} = \alpha o + \beta 1 FP \text{ it} + \beta 2 \ X \text{ it} + \beta 3 Inst.TYP \text{ it} + \text{\euro it} \ \text{--Eq1}$$

  Here OUT it outreach is dependent variable of IMFs for the period 2015-2021.   It is calculated by gross loan portfolio to number of active borrowers by gross national income per capita.   FP it indicates financial performance variables including Return on Assets (ROA) and   Portfolio Yield (PFY). X it indicates control variables including Gross National Income per Capita (GDP per Capita), Consumer price index (CPI) and Regulatory Quality (RQ). Institution type is Islamic microfinance institutions. The expected results for IMFIs increase in ROA, PFY, RQ, GDP, and CPI will increase ALSBNI.

Table 1a-Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	200	0194088	. 0775705	-1. 1301	1. 4228
PFY	200	0350984	. 3657634	-2. 09	10. 52
ALSBNI	200	2479. 671	12223. 41	1	293681. 4

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CPI	200	3. 760501	12. 82356	-3. 749145	382. 816
GDP	200	17423. 32	25605. 75	223. 8629	189487. 1
RQ	200	. 0113443	. 9982023	-2. 396936	2. 260543

In the above Table 1a, the researcher used unbalanced panel data of Islamic microfinance institution for the year 2015-2021. This table describes the variables number of observations, mean, standard deviation, minimum and maximum variables. The standard derivation of each variable is greater than its mean value that indicates that data is relatively heterogeneous.

Table 1b-Regression Results

ALSBNI	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
ROA	-. 5230514	. 2108597	-2. 48	0. 016*	-. 944292	-. 1018107
PFY	-. 0000217	. 0937212	-0. 00	0. 018	-. 1872513	. 1872079
GDP	-1. 620856	. 4297415	-3. 77	0. 000*	-2. 479363	-. 7623482
CPI	-. 9958727	. 2845174	-3. 50	0. 001*	-1. 564262	-. 4274837
RQ	1. 176676	.3521055	3. 34	0. 001*	.4732646	1. 880088
_cons	8. 367275	1. 610596	5. 20	0. 000*	5. 14974	11. 58481
Prob > F = 0. 0048,		R-squared = 0. 6272,		Adj R-squared = 0. 668		

*Significant=p <0. 01, **Significant= p <0. 05, ***Significant= p <0. 1,Dependent Variable: Outreach

A linear regression is a type of regression that analyzes the relationship between a dependent variable and one or more than one independent variables (Chatterjee & Hadi, 2006). In Table 1b, ROA, GDP, CPI, PFY and RQ p-values are less than significant level 1% which indicates there is significant relationship between ALSBNI and independent variables. ROA, PFY, GDP, CPI coefficient values are showing negative relationship between ALSBNI and independent variables while RQ is showing positive relationship. The F-value is 0.0048 which is less than 0.5 so overall the model is statistically significant. This indicates that the model we are running is statistically significant.

3.1 Diagnostic Tests

Many diagnostic tests are applied to find out the validity of regression applied on the specified data. As numbers of observations are more than 30, it is assumed data is normally distributed (Ghasemi & Zahediasl, 2012). Model mean vif is 1.85 which indicates there is no multicollinearity in the model (Gujrati, 2012). Cameron & Trivedi's decomposition of IM-test applied for heteroskedasticity. Fixed Effect method is applied as Hausman test value is lower than 0.05.

Table 1C-Correlation Matrix for Explanatory Variables

Variables	ALSBNI	ROA	PFY	GDP	CPI	RQ
ALSBNI	1. 0000					
ROA	-0. 0706	1. 0000				
PFY	-0. 1441	-0. 0466	1. 0000			
GDP	-0. 1849	-0. 0943	-0. 1697	1. 0000		
CPI	-0. 0964	-0. 0331	-0. 0618	-0. 1746	1. 0000	
RQ	-0. 0184	-0. 2662	-0. 3048	0. 6413	-0. 2968	1. 0000

Table 1c indicates that all variables have less than 0.9 which indicate that there is no multicollinearity exists between the variable data.

$$OUT_{it} = \alpha_0 + \beta_1 FP_{it} + \beta_2 Inst.SZ_{it} + \beta_3 Inst.SZ^* FP_{it} + \beta_4 X_{it} + \beta_5 Inst.TYP_{it} + €_{it} \text{--------Eq2}$$

Here OUT it outreach is dependent variable of Islamic microfinance institution for the period 2015-2021. It is calculated by gross loan portfolio to number of active borrowers by gross national income per capita. FP it   indicates financial performance variables including Return on Assets (ROA) and   Portfolio Yield (PFY). Here Inst. SZ it   indicates moderating variable, Log Asset is used as moderating variable. Inst. SZ*FPit indicates multiplication of ROA and Log Asset and Portfolio Yield and Log Assets. X it   indicates control variables including Gross National Income per Capita (GDP per Capita), Consumer price index (CPI) and Regulatory Quality (RQ). Institution type is Islamic microfinance institutions.

Table 2a -Regression Results with Moderator

ALSBNI	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
ROA	1. 413442	. 802305	1. 76	0. 083***	-. 1908655	3. 01775
PFY	1. 374837	1.070341	1. 28	0. 204	-. 7654423	3. 515117
LogAssets	. 3225237	. 1040523	3. 10	0. 003*	. 1144584	. 5305891
Asset*ROA	-. 1653615	. 08898	-1. 86	0. 068***	-. 343288	. 0125649
Asset*PFY	-. 2046117	. 1329502	-1. 54	0. 129	-. 4704621	. 0612387
GDP	-. 7764217	. 3563368	-2. 18	0. 033*	-1. 488961	-. 0638822
CPI	-. 597033	. 239661	-2. 49	0. 015*	-1. 076265	-. 1178013
RQ	. 618049	. 2825109	2. 19	0. 033*	. 0531337	1. 182964
_cons		2. 749993	1. 611012	1. 71	0. 093	-. 4714248	5. 971411
Prob > F = 0. 0000		R-squared = 0. 5539			Adj R-squared = 0. 4953	

*Significant=p <0. 01, **Significant= p <0. 05, ***Significant= p <0. 1, Dependent Variable: Outreach*

In Table 2a, ROA and logasset have positive relationship with outreach while Logasset to ROA created negative relationship with outreach. POY and Logasset to POY showed insignificant relationship with outreach. F-value is 0.0000 which is less than 0.5 so overall the model is statistically significant.   This indicates that the model we are running is statistically significant.

OUT it = αo+ β1 FP it + β2 X it + β3 Inst.   TYP it + €it --Eq3

Here OUT it outreach is dependent variable of conventional microfinance institution for the period 2015-2021.   It is calculated by gross loan portfolio to number of active borrowers by gross national income per capita.   FP it   indicates financial performance variables including Return on Assets (ROA) and   Portfolio Yield (PFY).   X it   indicates   control variables including Gross National Income per Capita (GDP per Capita), Consumer price index (CPI) and Regulatory Quality (RQ). Institution type is conventional microfinance institutions.

Table 3a-Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	900	. 0188831	. 0772516	-1. 1301	1. 4228
PFY	900	. 2481529	. 214352	-. 1849	4. 53
ALSBNI	900	4962. 291	133125. 8	0	6892194
CPI	900	4. 122632	14. 54885	-3. 749145	382. 816
GDP	900	16488. 08	23833. 18	9. 5	189487. 1
RQ	900	. 0484007	. 9972323	-2. 396936	2. 26054

In the above Table 3a the researcher used unbalanced panel data of conventional microfinance institution for the year 2015-2021. This table describes the variables number of observations, mean, standard deviation, minimum and maximum variables. The standard deviations of some variables are greater than their mean value which indicates that data is relatively heterogeneous but some variables data is homogenous.

Table 3b-Regression Results

ALSBNI	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
ROA	-1. 217255	. 3831945	-3. 18	0. 002*	-1. 968742	-. 4657678
PFY	-. 4035663	. 0407816	-9. 90	0. 000*	-. 4835435	-. 323589
GDP	-1. 32e-07	1. 19e-06	-0. 11	0. 912	-2. 47e-06	2. 20e-06
CPI	. 0076301	.0017887	4. 27	0. 000*	. 0041222	.011138
RQ	-. 0542793	.0278601	-1. 95	0. 052**	-. 1089161	.0003575
_cons	6. 067886	.0730575	83. 06	0. 000	5. 924612	6. 211159
Prob > F	=	0. 0000				

*Significant=p <0. 01, **Significant= p <0. 05, ***Significant= p <0. 1, Dependent Variable: Outreach*

In Table 3b, ROA, PFY, CPI, RQ p values are less than significant level 1% which indicates there is significant relationship between ALSBNI and independent variables while GDP p value is showing insignificant relationship. In Table 3b, ROA, PFY, GDP, RQ coefficient values are showing negative relationship between ALSBNI and independent variables while CPI is showing positive relationship.

3.2 Diagnostic Tests (A)

Many diagnostic tests are applied to find out the validity of regression applied on the specified data. As numbers of observations are more than 30, it is assumed data is normally distributed (Ghasemi & Zahediasl, 2012). Model mean vif is 1.80 which indicates there is no multicollinearity in the model (Gujrati, 2012). Cameron & Trivedi's decomposition of IM-test applied for heteroskedasticity.

Table 3c-Correlation Matrix for Explanatory Variables

Variables	ALSBNI	ROA	PFY	GDP	CPI	RQ
ALSBNI	1. 0000					
ROA	-0. 0662	1. 0000				
PFY	-0. 1441	0. 0476	1. 0000			
GDP	-0. 0041	0. 0055	-0. 0205	1. 0000		
CPI	0. 1005	-0. 0074	0. 0511	-0. 0254	1. 0000	
RQ	-0. 0340	0. 0027	-0. 0455	-0. 0345	-0. 0299	1.0000

Table 3c indicates that all variables have less than 0.9 which indicate that there is no multicollinearity exists between the variable data.

$$OUT_{it} = \alpha_0 + \beta_1 FP_{it} + \beta_2 Inst. SZ_{it} + \beta_3 Inst. SZ^* FP_{it} + \beta_4 X_{it} + \beta_5 Inst.TYP_{it} + \epsilon_{it} \text{--------Eq4}$$

Here OUT it outreach is dependent variable of conventional microfinance institution for the period 2015-2021. It is calculated by gross loan portfolio to number of active borrowers by gross national income per capita. FP it indicates financial performance variables including Return on Assets (ROA) and Portfolio Yield (PFY). Here Inst. SZ it indicates moderating variable, Log Asset is used as moderating variable. Inst. SZ* FPit indicates multiplication of ROA and Log

Asset and Portfolio Yield and Log Assets.   X it   indicates control variables including Gross National Income per Capita (GDP per Capita), Consumer price index (CPI) and Regulatory Quality (RQ). Institution type is conventional microfinance institutions.

ALSBNI	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
ROA	17. 56902	2. 735383	6. 42	0. 000*	12. 20469	22. 93336
PFY	-2. 872741	. 5650654	-5. 08	0. 000*	-3. 980887	-1. 764596
LogAssets	. 2053425	. 0164218	12. 50	0. 000*	. 1731378	. 2375472
Assets*ROA	-1. 231243	. 1755806	-7. 01	0. 000 *	-1. 575573	-. 8869129
Assets*PFY	. 1131555	. 0297195	3. 81	0. 000*	. 0548729	. 1714382
CPI	.0077872	. 0017337	4. 49	0. 000*	. 0043873	. 0111871
GDP	-4. 83e-08	1. 12e-06	-0. 04	0. 966	-2. 24e-06	2. 15e-06
RQ	-. 0412286	. 0267495	-1. 54	0. 123	-. 0936868	. 0112296
_cons	3. 525267	. 2888369	12. 21	0. 000	2. 958831	4. 091703
Prob > F	= 0. 0000	R-squared=0. 672	Adj R-squared = 0. 641			

*Significant=p <0. 01, **Significant= p <0. 05, ***Significant= p <0. 1, Dependent Variable: Outreach*

In Table 4a, ROA, PFY, Asset to ROA and PFY, CPI p values are less than significant level 1% which indicates there is significant relationship between ALSBNI and independent variables while GDP and RQ p value is showing insignificant relationship. F-value is 0. 0000 which is less than 0.5 so overall the model is statistically significant.. Model mean vif is 3 which indicates there is multicollinearity in the model (Gujrati, 2012). Fixed Effect method is applied as Hausman test value is lower than 0.05.

4. Discussion and Conclusion

In Table 1, Independent variables of FP of IMFIs are showing negative relationship with outreach. This indicates increase in ROA will decrease access to Islamic microfinance products and services to low income individuals and groups.   This result is not linking with (Quayes, 2020) results that outreach should increase by increasing ROA. Control variables analysis indicates that increase in GDP of a country reduces the access of products and services of IMFIs to low income individuals and groups.   Increase in CPI of a country reduces the access of products and services of IMFIs to low-income individuals and groups.Further increase in RQ of a country increases the access of products and services of IMFIs to low-income individuals and groups. In Table 2, institution size has positive impact on outreach of IMFIs. There are many other benefits can be achieved through increasing the asset size, this indicate the growth of the institution and increase in capital investment through internal or external resources Therefore, it is important for IMFIs to increase their capital through financial strategies.

In Table 3, Independent variables of financial performance of CMFIs are showing negative relationship with outreach. This indicates the similar results of IMFIs other than CPI.   The answer can be higher the CPI, more customer gain conventional microfinance serves, to improve their standard of living.   Therefore, CMFIs focus more towards well-off customers. This indicates increase in ROA will decrease access to CMF products and services to low income individuals and groups. Table 4, results indicates that in different situation ROA and PFY have different impacts. Increase in institution size will have negative impact on ALSBNI that indicates the commercialization of conventional microfinance institutions. According to commercialization theory, for survival institutions have to focus on financial performance as compare to social performance (Kent & Dacin, 2013).   The results of this model indicate that conventional microfinance instructions are leading towards commercialization.

5. Practical Implication

The results indicate negative impact of the financial performance of CMFIs and IMFIs on their outreach, therefore these institutions need to focus on social performance to enhance their outreach.

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