THE EFFECT OF SOCIAL OUTREACH ON FINANCIAL PERFORMANCE OF MICROFINANCE INSTITUTIONS IN BANGLADESH

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ABSTRACT

Microfinance institutions (MFIs) were first initiated to solve poverty problems by extending credit to poor communities. The emphasis on financial performance has created a concern that MFIs would be having a mission drift and be driven away from their social mission to serve the poor. This study examines the impact of breadth and depth of social outreach on the financial performance of 434 MFIs in Bangladesh in 2015 using The Ordinary Least Squares (OLS) regression method. The findings show a significant positive relationship between the breadth of social outreach and financial performance. On the contrary, it is found that the depth of outreach has a negative significant impact on MFI financial performance. This finding confirms the notion that MFI is not supposed to be commercially driven and it is more suitable to run MFI as a non-profit. This study offers analysis of both depth and breadth of outreach in a specific developing country to give an insight into how the focus on social outreach would impact the financial performance of MFI in the poverty prevalent environment.

1. INTRODUCTION

Poor people have long been neglected by commercial financial institutions due to their risk profile and their unsuitability with the profit maximization objective. As a response to this, Microfinance Institution (MFI) emerged as an institutional innovation to extend loans and financial services to the low income and unbankable

community (Abate, Borzaga, and Getnet, 2014). Access to financial services is essential to foster small-scale entrepreneurship among the low-income population to ensure their financial independence and raise them above the poverty line.

Under the same mission, the first MFI in Bangladesh, Grameen Bank, was established by Muhammad Yunus in 1976 which was initially started as a research project in designing a credit delivery system for the poor. Since then, MFI has grown rapidly not only in Bangladesh but also globally. According to the Microcredit Regulatory Authority (2015) the number of NGO based MFI in Bangladesh has reached 659 institutions in 2015 and these have extended financing to more than 20 million borrowers. Globally, MFI is endorsed and utilized by the World Bank and the United Nations as a tool for financial inclusion and poverty eradication across developing countries around the world.

MFI extends financing to the poor population by giving loans without collateral as the clients do not own any assets. Most MFIs operate locally and employ a relationship-based lending to get information about their clients and to capture customer loyalty (Schreiner, 2000). To reduce non-repayment cases, MFIs use several techniques such as quick follow-up for loans in arrears, employ group lending method with joint liability, and concentrate the lending scope (Norell, 2001). Group based lending has been known to be the best approach to credit delivery for the poor, while joint liability terms allow MFIs to leverage risk assessment and information searching cost to the clients (Ahlin and Townsend, 2007). Moreover, MFI clients may have more local information on their peers and the prospectus target of credit-worthy borrowers than the MFI itself. Unlike commercial banks, MFI does not rely on deposit as a source of funds. The Bangladesh Microcredit Regulatory Authority (MRA) report in 2015 states that client savings only account for 34% of the funding source funds; the rest are from donor's fund, commercial banking loans and Palli Karma-Sahayak Foundation (government backed financial institution), and other funds.

In the early days, MFI operation was strongly backed by government subsidy and donor's fund. MFIs are run with a non-commercial orientation and their main mission is to help reach out to the poor. Now that MFIs have experienced years of operation, they are expected to be self-sustainable and no longer dependent on the funding from donors and government subsidies. At the same time, the focus to achieve financial self-sufficiency has raised a big concern that MFIs have deviated from their fundamental social mission. This happens because in most cases, MFI move their portfolio toward relatively wealthier clients by giving bigger loans in

order to reduce costs and lower non-repayment to boost their financial performance.

The trade-off between financial performance and social outreach has attracted attention among researchers but empirical studies testing the relationship between the two are still rare. Especially in Bangladesh, a developing country which was among the first pioneers of Microfinance initiatives, research on financial performance and social outreach was only done on an exploratory level (Mia and Chandran, 2016) without examining the causal relationship between the two. Thus, the objective of this paper is to assess the impact of social outreach on MFI financial performance in Bangladesh and to analyze whether there is a trade-off between the two.

This study uses a multilinear OLS regression as an estimation of the model. It incorporates robust and comprehensive explanatory variables to find the effect of social outreach on MFI financial performance. Considering the significant differences in customer behavior, poverty landscape and approach of lending for each country, a study focusing on one single country is important. This study would be among the few attempts to find empirical evidence of trade-off between financial performance and social outreach in a single country with a large number of samples (434 MFIs) representing the population.

The rest of the paper is organized as follows: section two gives an overall overview on the theoretical foundation and empirical studies on MFI social outreach and financial performance; section three describes the data source, variables and the methodology used; section four discusses the empirical findings; and section five concludes the study with policy implications and recommendations for future research.

2. LITERATURE REVIEW

As a poverty eradication initiative, microfinance institution was not and was never meant to be commercially driven. Unlike commercial banks, MFIs incur much higher operational and informational cost due to the nature of their customers. It is therefore difficult to expect MFI to operate like a normal financial institution. In fact, a large number of MFIs still depend on donor funds and government financial support to cover the high cost they incur which makes most of them financially unsustainable (Bhanot and Bapat, 2015).

However, many believe that in order to create a greater social impact in the future, MFIs have to be financially independent. This debate has divided opinion into two theories which are the poverty lending approach and the financial systems approach (Robinson, 2001).

The poverty lending approach – sometimes called the 'welfarist approach'— emphasises social outreach over financial sustainability. According to Conning (1999), social outreach is divided into two elements which are breadth (extending loans to a wider customer base) and depth (targeting the poorest of the poor population). Brau and Woller (2004) explained that the 'welfarist approach' put more weight on the depth of outreach to reach the poorest people. The approach gives access to finance to the poorest by giving subsidized interest rates as the poor cannot afford high interest rate. It is almost impossible to gain profit while giving interest rate subsidy and incurring high cost at the same time. Thus, the welfarist approach believes that aiming at financial sustainability will drive MFIs away from their original social mission.

In the financial system approach, or also known as institutionalist approach, the theory highlights the importance of financial self-sufficiency and the ability to cover operating and financing cost (Louis et al., 2013). The institutionalists believe that financial viability is the only way for the MFI to survive and serve more customers in the long term, resulting in a higher breadth of outreach. Further, they argued that both schools aim at maximizing the social impact but differ on the target and the way of achieving the goal.

This has caused a big concern and raised a question mark on whether there really is a trade-off between MFI social outreach and financial performance. Several empirical studies have been conducted to evaluate the impact and relationship between the two and the results are inconclusive and conflicting. A few notable studies showing a negative relationship between social outreach and financial performance will be explained in the following paragraph.

Cull, Demirgu, and Morduch (2007) show a trade-off between the two and the magnitude of the trade-off differs depending on the lending type that the MFIs adopt; whether individual, group or village based lending. Mersland and Strom (2010) also found a similar result in their regression study where the increase in average profit is associated with increase in average loan and other mission drift measures. These results were also found by Hermes, Lensink, and Meesters (2011) and Adhikary and Papachristou (2014). They argued that the trade-off happened due to increase in the cost of

lending to the poorest customers which is related to the higher cost of extending smaller units of loan. Abate et al. (2014) used stochastic frontier approach on MFIs in Ethiopia to answer this question and they found the same finding of trade-off, proving that financial efficiency and social outreach cannot occur simultaneously. Thus, they suggested to keep MFI in the form of financial cooperative instead of institution owned by shareholders. Widiarto and Emrouznejad (2015) though did not specifically see the causal relationship between the financial performance and social outreach; their study found that in all of their models, nonprofit MFIs show a higher social efficiency compared to commercial MFIs. The same finding is also found by Shu and Oney (2014) for MFIs in Cameroon.

However, the literature also provides evidence that social and financial performance can co-exist. Quayes (2012) found a complementary positive relationship between depth of outreach and financial self-sufficiency, and also pointed out that the commercialization of BancoSol in Bolivia has not reduced its social outreach. Another interesting finding was made by Gutierrez-Nieto, Molinero, and Serrano-Cinca (2009) who found a low positive relationship between outreach and financial efficiency. They also mentioned that no MFIs that were financially unsustainable have high social outreach (only with one exception). The positive relationship could happen as they found that poorest clients exhibited disciplined behavior in loan repayment because they lack any other source of borrowing. The Lebovics, Hermes, and Hudon (2016) study on Vietnamese MFI revealed that no trade-off exists between financial performance and social outreach. The successful MFI in Vietnam are proven to show a high financial efficiency and at the same time attain their social goals. Another study conducted by Quayes (2015) on 764 MFIs in 87 countries also found no trade-off between financial performance and social outreach in MFIs. Instead, the depth of outreach actually affects financial sustainability positively. This finding is supported by Meyer (2015) where she found that the social engagement and outreach done by the MFIs lead to a higher profit yield. Azad et al. (2016) back up this finding by their empirical study; they also stated that social outreach is a sequential event arising from efficient performance. They argued that financially sound MFIs are able to take higher risks and be more flexible in their credit terms when lending to the poor. Louis et al. (2013) used a unique method of self-organizing maps (SOM) which

is chosen to tackle the heterogeneity problem among the MFIs in different geographical area. From the sample of 650 MFIs, the results show an association between social outreach and financial performance, but it is not a trade-off; instead a   a significant positive relationship exists between the two.

Though these studies have given a strong empirical evidence on social outreach and financial performance, they have mainly focused on the depth of outreach. Besides, most of the studies examined global data with little to no highlight on developing countries. Considering the importance of measuring both depth and breadth of outreach, this paper incorporates both in the model to examine social outreach more comprehensively. In addition, a study for a specific developing country is useful to give an insight into how the focus on social outreach would impact on MFI financial performance in the poverty prevalent environment. Thus, this paper attempts to see the evidence in the context of Bangladesh where both poverty and MFI services are rampant.

3. DATA AND METHODOLOGY

3.1 DATA

The data used in this study were extracted from statistical publication reports by the Microcredit Regulatory Authority (MRA) of Bangladesh in 2015 which consists of MFI specific variables data. MRA is a trustworthy source of data and information on NGO-MFI in Bangladesh as it was especially established by the government of Bangladesh as the central body to monitor and supervise NGO-MFIs operations. A total of 434 NGO-MFIs were selected as sample based on data availability. To minimize the influence of outliers on the data, the top and bottom 5% data point of two variables (loan size and savings to total asset) were winsorized. This methodology allows us to treat outliers without the need to drop the observation (Dixon, 1960). On top of that, variables not in ratio form (average loan size, total borrower and total asset) are transformed into logarithmic form to ensure comparability with other variables.

3.2 METHODOLOGY

In analyzing the impact of social outreach on MFI financial performance, this study adopts a model from previous studies by incorporating depth and breadth of social outreach as focus variables

and MFI specific factors as control variables. Ordinary Least Square regression estimator is used to estimate the effect of outreach on MFI financial performance. Since heteroscedasticity problem is common in cross-sectional data, White (1980) heteroskedastic-consistent standard error is used in the linear regression model. The regression equation used in this study was formed based on previous studies on performance of MFI and reconstructed as follows:

$$(1) \qquad ROA_i = \alpha + \beta_1 Loan\ size_i + \beta_2 Number\ of\ borrowers_i + \beta_3 Total\ asset_i + \beta_4 Operating\ cost\ to\ income_i + \beta_5 Loan\ to\ asset_i + \beta_6 Equity\ to\ total\ loan_i + \beta_7 Deposit\ to\ asset_i + \varepsilon_i$$

Financial performance is measured by return on asset which indicates MFI efficiency in generating income from assets. ROA also assesses the ability of MFIs to earn commercially acceptable return and its potential to become a formal financial institution (Adhikary and Papachristou, 2014). This proxy is widely used as a measurement of MFI profitability by previous researchers (Cull et al, 2007; Hartarska, 2005; Mersland and Strom, 2010; Mersland, Randoy, and Strom, 2011; Strom et al., 2014; Tchakoute-Tchuigoua, 2010; and Adhikary and Papachristou, 2014). Another widely used performance measurement for MFI is Operational Self-Sufficiency (OSS) which indicates whether the institutions are able to generate enough revenue to cover financial and direct costs. Unfortunately, due to data availability issues, this study could not incorporate OSS as a dependent variable.

The focus variable in this study is social outreach which according to Conning (1999) a has two main dimensions: depth (extending credit to the poorest population) and breadth (reaching out to broader client base). Depth of outreach indicates whether the MFI serves relatively poorer or wealthier clients. The best proxy to assess this is borrower income; unfortunately none of available database could provide this data, hence researchers have widely used average loan size as a proxy for borrowers' wealth (Adhikary and Papachristou, 2014; Ahlin, Lin, and Maio, 2011; Cull et al, 2007; Mersland and Strom, 2010; Tchakoute-Tchuigoua, 2010; Hermes et al., 2011; Quayes, 2012). A bigger loan size indicates that the MFI serves relatively wealthier customers because poor customers would not have the capacity to borrow a big amount. The other dimension of outreach is breadth which is assessed by the total number of

borrowers served by the MFI (Ahlin et al., 2011; Bibi et al., 2018; Tchakoute-Tchuigoua, 2010; Quayes, 2012; Widiarto and Emrouznejad, 2015).

The rest of variables are used as control variables that are proven to have significant impact on ROA of MFI by previous researchers. In this study, the MFI specific variables are picked as control. The first chosen control variable is size and measured by total assets (Cull et al., 2007; Gul et al., 2017; Hartarska, 2015; Mersland et al., 2011; Strom et al., 2014 and). The second variable is liquidity to total asset that shows how much the institution keeps liquid asset out of its total assets; the higher the liquidity ratio shows that less loan has been disbursed (Ghenimi, Chaibi, and Omri, 2017). The next variable is total loan to total asset that shows how much loan is disbursed over the total asset the MFI possesses (Cull et al., 2007). Capital ratio is also used as a control variable; it is measured by the total equity over total loan which shows the cushion fund that the institution has for its disbursed loan (Boehe and Cruz, 2013; Tchakoute-Tchuigoua, 2010, 2016). The last variable is total deposit over its asset (Gul et al., 2017) which measures the portion of MFI asset that comes from deposit. Unlike commercial banks, the majority source of fund for MFI is not from deposit but from elsewhere such as loan from government and donations. Table 1 below summarize the chosen variables used in the study.

TABLE 1
Description of Variables

Variables	Description
Dependent Variables	
Financial performance (ROA)	Net Operating Income / Total Assets
Focus Variables	
Depth of outreach (Average loan size)	Loan outstanding / total borrower
Breadth of outreach (Total number of borrowers)	Total borrowers
MFI specific control variables	
Size	Total asset
Liquidity ratio	Liquid asset / total asset
Total loan	Total loan / total asset
Capital ratio	Total equity / loan outstanding
Deposit	Total deposit / total asset

4. RESULTS AND FINDINGS

The following Table 2 shows the descriptive statistics on the variables used in the study. The Return on Asset (RoA) figure shows that MFI financial performance in Bangladesh varies very broadly from zero to 0.78 which is quite profitable for microfinance institutions. The size and scale of MFIs under the observation is also very wide; there are MFIs with assets from only 2 million up to 514 billion Taka. The size and the scale can also be seen from the total borrowers served by the institution which varies from only 220 up to 38 thousand borrowers. The average of liquid asset to total asset is only 6%, it shows that MFIs utilize their funds maximally by channelling them to productive use such as extending loans to borrowers. This is understandable as MFIs usually do not have much concern on liquidity problems. The issue of mismatch maturity between asset and liability is not prevalent in microfinance institution because their sources of funds are mainly not coming from depositors. The average deposit to total asset ratio is only 14.7%, which means that MFIs are mainly funded by other types of funds such as borrowing from other institutions and donors, this is unlike commercial banks where the deposit represents more than 90% of source of funds.

TABLE 2
Descriptive Statistics of Variables ($n = 434$)

Variable	Mean	Std. Dev.	Min	Max
Return on Asset	0.322	0.193	0.000	0.780
Average Loan Size	11,734.97	5,257.28	2,024.66	38,118.76
Total Borrowers (Tk)	20,544	58,259	220	689,345
Total Asset (mil. Tk)	5,490	29,400	2.076	514,000
Liquid asset to total asset	0.066	0.085	0.000	0.470
Loan to total asset	0.358	0.291	0.001	0.996
Total equity to total loan	0.376	0.212	0.010	0.790
Deposit to total asset	0.147	0.132	0.003	0.438

A Pearson correlation analysis was run to examine the correlation among the variables used in the model (Table 3). None of the correlations between the variables has more than 0.90 coefficient; this implies that the model is free from multicollinearity problems. In addition, the variation inflation factor (VIF) of the independent variables was also computed. The variance inflation factor (VIF) of more than 10 is an indication of multicollinearity problem (Wooldridge, 2015). Since none of the values exceeded 10, no serious multicollinearity problem was found in the model.

TABLE 3
Pearson Correlation between Variables

	Return on Asset	Log Average Loan Size	Log Total Borrowers	Log Total Asset	Loan to total asset	Liquid to total asset	Total equity to total loan	Deposit to total asset
Return on Asset	1							
Log Average Loan Size	-0.248*	1						
Log Total Borrowers	-0.136*	0.395*	1					
Log Total Asset	-0.631*	0.563*	0.758*	1				
Liquid asset to total asset	0.593*	-0.292*	-0.257*	-0.541*	1			
Loan to total asset	0.851**	-0.255*	-0.141*	-0.632*	0.658*	1		
Total equity to total loan	0.426	-0.025	0.065	-0.230*	0.223	0.403	1	
Deposit to total asset	0.811*	-0.301*	-0.186*	-0.619*	0.801*	0.882	0.351	1

Notes: * and ** indicates level of significance at 1% and 5% respectively

The Ordinary Least Squares (OLS) regression is used as the base model to estimate the result. However, according to the Breusch-Pagan and White test, the cross-sectional data regression will suffer heteroscedasticity problems. To address this issue, a White's heteroscedasticity consistent standard error (White, 1980) is estimated. Robust standard error will tackle the issue of error terms that are not independent and identically distributed. Generally, the use of White's correction will make the standard error for the coefficients increase compared to the usual OLS standard error.

Besides that, Ramsey regression equation specification error test (RESET) was also conducted to see whether there are significant nonlinear relationships in the built model. The result shows insignificance which indicates that linear regression is the best fitted model for this equation and no significant variables have been

omitted. Residual normality has also been checked with a skewness and kurtosis (Jarque-Bera) test of normality. The result shows a normal distribution of the residuals. All these tests were done to ensure model consistency and efficiency.

Table 4 shows the result of regression between ROA and the independent variables. The result shows a significant positive relationship between ROA and average loan size. It means that a bigger average loan size is associated with a higher financial performance. A 1% increase in the average loan size would lead to 0.314% increase in the ROA. One explanation for this result is that a bigger loan size usually incur lesser cost. It is more cost efficient to lend $1000 to one person rather than lending $200 to five people each. The cost associated to a borrower includes transaction cost, assessment cost, service and delivery cost and monitoring cost incurred in every transaction. Besides having higher cost, MFIs might find it more profitable and safer to lend to relatively wealthier borrowers who request larger loans than to the poorest community (Armendariz and Marc, 2011). Thus, making an averagely smaller loan could lead to a lower financial performance. In other words, there is a tradeoff between depth of outreach (reaching the poorest of the poor) and financial performance. This result confirms the findings of previous studies done by Cull et al. (2007), Morduch (2000), Ahlin and Maio (2011), and Adhikary and Papachristou (2014) but contradictory to studies by Quayes (2012).

On the breadth of outreach, the result shows a positive significant relationship between total borrowers and ROA. A 1% increase in the number of total borrowers would lead to 0.0298% increase in the ROA. A higher number of borrowers shows an increase in the financial performance as borrowers are the main source of income for financial institutions including MFI. When the MFI is able to serve more borrowers, it allows them to generate more revenue from the loan disbursed. The more borrowers the MFIs cover, the wider their breadth of outreach. This finding is in line with the findings of Adhikary and Papachristou (2014) and Ahlin and Maio (2011).

Looking at other control variables, a positive and significant relationship is found between ROA and loan to total asset. Loan to total asset is a proxy of how much loan is disbursed by the institution from its total asset and it is a proxy of their focus lending. Though the relationship seems quite direct, MFIs have to be cautious when their focus to lending is too high as non-repayment rate in MFI tends

to be higher than for commercial financial institutions. A significant positive relationship indicates that the MFI is indeed becoming more financially profitable when they increase their focus on lending. This is similar to the result found by Kar and Swain (2014) and Quayes (2012). The other control variable included in the study is size which is measured by total asset. Most of the previous studies show a positive relationship between size and profitability (Cull et al., 2007; Gul et al., 2017; Mersland, 2009). A higher size of MFI is argued to contribute positively to profitability given the economies of scale. However, the result in this study shows a negative significant relationship between size and MFI profitability. This could be explained by the complexities that MFI might face with bigger size. Most of MFI give loans based on a relationship lending which very much depends on the proximity of MFI with their potential clients. This, however, could be less effective when the MFI size is bigger. This result is similar to that in Hartarska (2005) and Kar and Swain (2014).

TABLE 4
Robust Standard Error Linear Regression

Return on Asset	Coefficient	Robust Std. Error	*t*	p-Value
Log Average Loan Size	0.314**	0.014	2.28	0.023
Log Total Borrowers	0.030*	0.005	5.84	0.000
Log Total Asset	- 0.033*	0.004	-7.35	0.000
Liquid asset to total asset	- 0.079	0.067	-1.18	0.239
Loan to total asset	0.407*	0.045	9.04	0.000
Total equity to total loan	0.040	0.030	1.33	0.185
Deposit to total asset	0.120	0.106	1.13	0.257
Constant	0.253**	0.109	2.33	0.020
R-squared	0.838			
Prob > *F*	0.000			

Notes: *, **, *** indicate level of significance at 1%, 5%, and 10% respectively

The rest of MFI specific control variables which are liquidity, equity level and deposit level are found to be statistically insignificant in determining MFI profitability. Among the plausible reasons for this finding is that MFI does not face much of liquidity

issues as it does not use deposit as it main source of funding, unlike commercial banks. This also explains why the deposit to total asset ratio is insignificant to ROA. Similar result is observed in the equity over total loan; it is a proxy for capital adequacy ratio to see how much cushion fund the institution has to cover its risky assets (loan). Though this is among the most important factors for measuring the safety level of commercial banks, this does not seem to be the case for MFI.

To check the robustness of the regression result, a different proxy for profitability is used which is operating margin (Tchakoute-Tchuigoua, 2010). Operating margin is calculated as net operating income over financial revenue. It shows the proportion of MFI revenue left after paying all the operating expenses. In other words, it measures whether the MFIs are able to cover their day to day operating costs. With operating margin chosen as dependent variable, the new equation of regression is run and the result can be seen in Table 5.

TABLE 5
Regression with Operating Margin as Dependent Variable

Operating Margin	Coefficient	Robust Std. Error	t	p-Value
Log Average Loan Size	0.053**	0.017	3.050	0.002
Log Total Borrowers	0.030*	0.006	5.310	0.000
Log Total Asset	-0.034*	0.005	-6.720	0.000
Liquid asset to total asset	-0.067	0.096	-0.700	0.484
Loan to total asset	0.341*	0.058	5.910	0.000
Total equity to total loan	0.034	0.036	0.930	0.355
Deposit to total asset	0.257***	0.138	1.860	0.063
Constant	0.053	0.017	0.560	0.576
R-squared	0.762			
Prob $> F$	0.000			

Notes: *, **, *** indicate level of significance at 1%, 5%, and 10% respectively

As shown in Table 5, average loan size has a significant positive relationship with operating margin which means the bigger loan size results in a higher profitability. It confirms the main finding that depth of outreach is negatively related with financial

performance but with a smaller magnitude. An MFI with deeper level of outreach will have average smaller size of loan and lower profitability. The same result is found for breadth of outreach where total borrowers have a positive significant relationship with operating margin. It confirms the main finding with a similar magnitude.

5. CONCLUSION

To the best of our knowledge, this is the first study that measures the impact of social outreach on MFI financial performance in Bangladesh. A cross-sectional data of 434 MFIs were taken as a sample from year 2015. The finding shows that breadth of outreach has a positive significant impact on both ROA and OM. On the contrary, the depth of outreach has a negative significant impact on both of the financial performance measures. A high performing MFI does not usually have problem with extending loan to broader customers. However, the evidence shows that the borrowers they serve are shifting to relatively wealthier customers.

This study is important for the key stakeholders to formulate appropriate policy and take correct action. Since a negative relationship is found between depth of outreach and financial performance, the government needs to continue subsidizing and providing financial assistance to MFI in order to achieve their social mission. The government might also consider including MFI program as one of the nation's poverty eradication initiatives. In that way, MFI is treated as a social tool and not a money-making institution. The measurement of MFI performance might need to be redefined as targeting financial performance might hinder them from achieving their true objective of serving the poor community. This would also affect the MFI institutional design and orientation. This finding confirms the notion that MFI is not supposed to be commercially driven and that it is more suitable to run MFI as non-profit.

This study uses a cross-sectional data for only one year which makes us unable to see whether the higher average loan size is really an indication of mission drift. There is a possibility that MFI offers bigger loan size to support the growing business of their customers. This could only be seen by using panel data which measures the growth of average loan size from year to year. Besides that, panel data would allow us to incorporate more relevant variables such as growth of loan and other MFI specific variables. The possibility of endogeneity problem in the social outreach and

financial performance is also worth studying. This could be done with two stage least square regression or GMM method to check whether financial performance actually affects the social outreach and not the other way round.

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