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Branch Expansion and Institutional Sustainability of MFIs in Bangladesh

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Abstract

Sustainability of microfinance institutions (MFIs) in relation to branch expansion and related decisions has been widely debated in the microfinance sector. The present study explores the factors that are taken into consideration by the MFIs in Bangladesh while opening a new branch. Specifically, the study examines the locational considerations relating to branch expansion and implications relating to service delivery and other MFI operations. The analysis covers both head office and branch level information collected using stratified random sampling approach ensuring proportional representation of small, medium and large MFIs. The study finds locational characteristics and number of borrowers as the most important factors while deciding on opening a new branch. The decision on branch location responds to three main considerations: (i) reducing cost of loan operation; (ii) serving target people in remote areas; and (iii) implementing targeted programmes. It is seen that very large and medium categories of MFIs have greater incentives for branch expansion relative to large and small categories while larger MFIs tend to establish new branches close to growth centres.

Keywords: Branch expansion, MFIs, Sustainability, Location.

Branch Expansion and Institutional Sustainability of MFIs in Bangladesh

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1. Introduction

With rapid growth of the microfinance sector and increase in the number of borrowers, the microfinance institutions (MFIs) have adopted branch expansion as an important vehicle of delivering loans to the poor households. It is difficult to provide loan by the MFIs, especially in remote areas, from the head/zonal offices since it involves high transaction costs and information asymmetry. As a consequence, a rapid increase has taken place in the number of MFI branches operating in Bangladesh. The Microcredit Regulatory Authority (MRA) statistics in 2014 show that there are 697 licensed NGO-MFIs in the country. Out of these, 676 MFIs have a total of 16,991 branches. According to Credit and Development Forum (CDF) Statistics 2014, out of 511 MFIs for which information are available, 90 MFIs (with 1,025 branches) have implemented programmes in remote areas, while the rest 421 MFIs do not have any such programme. This shows that, despite a substantial rise in the number of branches in the rural areas, still a large portion of the rural population in remote areas suffers from lack of physical access to MFIs.

Additionally, the MFIs feel increasing pressure to achieve sustainability as the microcredit market becomes more competitive. The MFIs can expand their portfolio and achieve sustainability by increasing the outreach and providing financial services to a larger number of borrower while at the same time fulfilling the social mission. In practice, the MFIs can achieve a significant scale of outreach by using three major pathways: (i) expansion of geographical coverage and widening the range of services; (ii) advocacy and partnerships with organisations working for similar causes enabling leveraging partners' resources; and (iii) restructuring microfinance (MF) operations e.g. through merger and acquisition, franchising, growing existing operations, legal restructuring, strategic alliances and other means.

The location of MFI branches that offer financial services is one of the fundamental determinants of access to financial services by the poor. From the economic point of view, it would be rewarding for MFIs to invest in opening a new branch if the expected revenue from the branch exceeds its expected costs. However, such a strict economic logic may not be tenable in all cases if, for example, MFIs decide to promote social impact and the poor's welfare rather than economic returns alone. Such considerations would encourage MFIs to go to poorer regions or in locations where social impact would be maximised.

On the other hand, some branches may be established near the growth centres based on a different set of considerations. Thus, it is important for MFIs to understand the factors that should be taken into account while opening a new branch so that such decisions are both rational and create positive impact on the organisation's efficiency and productivity. Thus, although there could be a differing set of determinants, the relevant questions are: what are the main reasons for branch expansion? What important factors MFIs take into consideration while taking decision on opening a new branch? How do they decide on its location? Does the decision to open a new branch and its location have any

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implications on MFIs' efficiency and productivity? How an optimal decision can be made by the MFIs in these respects? These are some of the issues that have been examined in this study.

One must also realise that just opening a new branch is not enough, providing access to financial services to the poor residing in the locality requires time-consuming efforts and MFIs must have the capacity (both financial and organisational) to undertake these activities. Otherwise, the efforts towards opening new branches may become counter-productive which would require provision of subsidies/grants for operation or these may have to be merged with other branches or may have to be closed down. It is important, therefore, for the MFIs to take a rational decision regarding when to open a new branch or whether it would be efficient to serve a specific location by extending the coverage of an existing branch. As MFIs seek to reach as many poor people as possible, therefore, it is important to constantly look for possible cost reductions or reallocations in order to operate in an efficient and economically viable manner.

The present study investigates the above issues; in particular, the main thrust of the study is to explore the factors that should be considered while deciding on opening a new branch by the MFIs. Specifically, the study examines the locational considerations (e.g. locating near a growth centre) relating to branch expansion and implications relating to service delivery and other MFI operations. The study analyses the perceptions about branch expansion decisions that can influence organisational structures to facilitate expansion. The impact of branch expansion on MFIs' long term sustainability and performance is also analysed in the study. Further, cost-effective ways of enhancing the outreach in remote areas e.g. alternative options to reach the unbanked low income people is examined. Finally, the study suggests optimal sizes of MFI branch coverage in terms of number of beneficiaries and other characteristics that could ensure greater branch sustainability.

2. Branch Expansion and MFIs: An Overview

Now-a-days, alternative distribution channels such as automated teller machines (ATMs), internet banking and electronic delivery, mobile financial services are widely used in the banking sector. These alternative distribution channels might suggest a lower demand for branch offices. But the operation of the microfinance sector is not similar to that in the banking sector. It has no ATMs, internet banking facilities or other modern technologies but MFIs are the most powerful driver of financial inclusion that leads to greater asset accumulation by the poor. At present, about 30 million poor which is more than half of the total number of the poor in the country, are in the financial folds of the MFIs. No other institution either public or private has been as successful as MFIs to reach the poor with finance that helps them promote income, employment and alleviate poverty.

The very large and large MFIs (top 20 MFIs) have 71 percent of the market share among the MRA-licensed MFIs in terms of borrowers and 77 percent market share in terms of loans outstanding.⁴ The market share of two very large MFIs is 50 percent in terms of borrowers and 54 percent in terms of loan outstanding. In FY2016, top five MFIs (Grameen Bank, BRAC, ASA, TMSS, BURO Bangladesh) disbursed a total amount of Taka 662.61 billion and the total loan outstanding was Taka 396.75 billion.⁵ The equity of seven very large and large sized MFIs has already exceeded BDT 1 billion.⁶

All these numbers indicate that the microfinance sector in Bangladesh has achieved enough maturity and they can expand their branch at any place of choice. By expanding branches, MFIs can offer a greater array of financial products and services (e.g. savings, loans and insurance) to meet various needs of their borrowers who are poor and mostly rural, living outside the purview of the formal

¹ MRA 2015, NGO-MFIs in Bangladesh, June 2015.

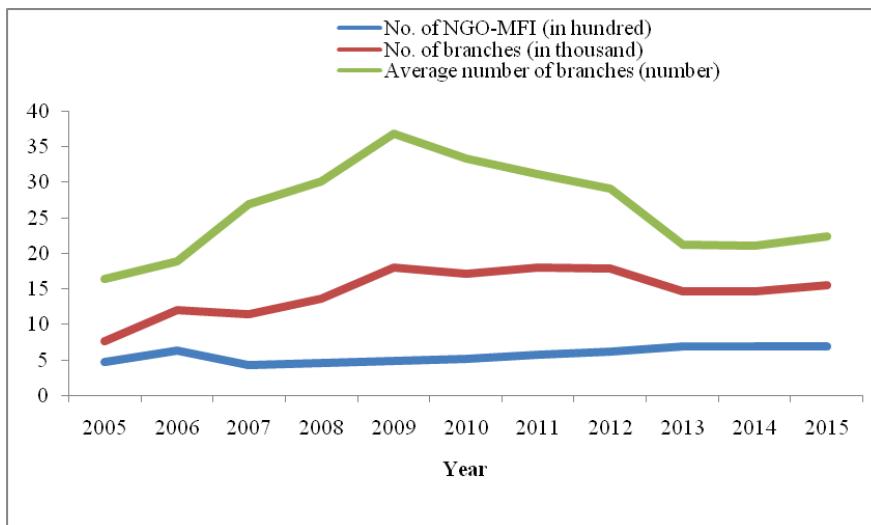
² Bangladesh Bank, Annual Report 2015-2016.

³ Based on analysis of data of MRA Report 2015, NGO-MFIs in Bangladesh, June 2015.

banks. Further, these services help the clients to smooth consumption in the face of vulnerabilities or shocks that challenge low-income informal sector households that are excluded from the social safety net programmes.

The number of branches of MFIs have steadily increased from 7,733 (469 MFIs) in 2005 to 15,609 (697 MFIs) in 2015, whereas the number of institutions has also increased during the same period (Figure 1). However, the concentration of NGO-MFIs in Bangladesh is high in economically advanced regions compared with the backward rural regions. In June 2010, Dhaka district had the highest concentration where more than 60 licensed NGO-MFIs had been operating. The lowest concentrations are observed in four districts i.e. Rajbari, Shariatpur, Bandarban and Rangamati where less than five NGO-MFIs licensed from MRA were operating.

Figure 1: Current Status of NGO-MFIs in Bangladesh



Source: MRA 2015, NGO-MFIs in Bangladesh, June 2015.

3. Driving Forces of Branch Expansion

Studies on branch expansion related to banks are widely available, but very few such studies exist for the microfinance sector. Burgess and Pande (2005), while examining the effects of bank branch expansion on poverty in India, suggest that branch expansion into rural unbanked locations significantly reduce rural poverty. They show that this effect is, at least partially, mediated through increased deposit mobilisation and credit disbursement by banks in the rural areas.

Zeller et al. (2001) argue that the branch placement of an MFI is dependent on four considerations: level of poor ness of a district, potential demand for credit, costs, and risks. They discuss a number of district characteristics that influence these four dimensions. The possible role that district characteristics play and how this may depend on the logic and the goals the MFI wants to maximise are also analysed. Additionally, the effect of competition between different types of financial institutions is also taken into account.

In a rural American study, Nam and Ellinger (2008) focused on the relationship between branch expansion as a means of providing banking services and characteristics of financial institutions and markets. The study uses a nested logit model to analyse the characteristics to affect the expansion decision and location choice of commercial banks due to a two-level nesting structure for branch

expansion decision. The decision for branch expansion by a bank has a two level nesting structure: the first decision is on branch expansion; and the second is on location e.g. whether to expand in a rural area or an urban area.

The advancement in communication technology has been a driving force in delivering remote banking services at low-cost. From this point of view, it is argued that branches are relatively expensive channels of delivering retail financial services (Orlow, Radecki and Wenninger 1996). However, Spieker (2004) highlights that bank branches are a highly effective and profitable distribution channel for retail services relative to other methods like the internet or call centres. He also identifies three factors that are mainly responsible for the increase in the number of branches. These are: (1) changes in bank branching laws; (2) branching may improve performance when it is well operated; (3) changes in economic and demographic conditions encourage branching in certain markets.

In a recent study in Peru, Vanroose (2015) shows that MFIs mainly go to regions that are less costly to serve and that have more dynamic markets. Furthermore, the probability of having an MFI is higher in districts with bank presence. This is also true for the presence of other MFI branches.

Carlson and Mitchener (2005) identify that the expansion of statewide branch banking in the US induces greater competition in states where it is permitted and improves the stability of the banking systems by removing weak and inefficient banks. Women's World Banking (2005) identifies some factors that are considered to evaluate the expansion strategies for MFIs. According to the study, when evaluating options, it is important to take into account market attractiveness; competitive positioning; fit and organization's ability to execute them. To determine which strategy is best for an institution, some key questions should be considered:

- **Market attractiveness:** what is the size of the market and how quickly is it growing? How strong is the understanding of customer's needs and preferences?
- **Competitive positioning:** Are there barriers to entry?
- **Fit:** Does the expansion strategy fit with the mission of the organisation?
- **Executability:** Does the organisation have the capacity to make a substantial change?

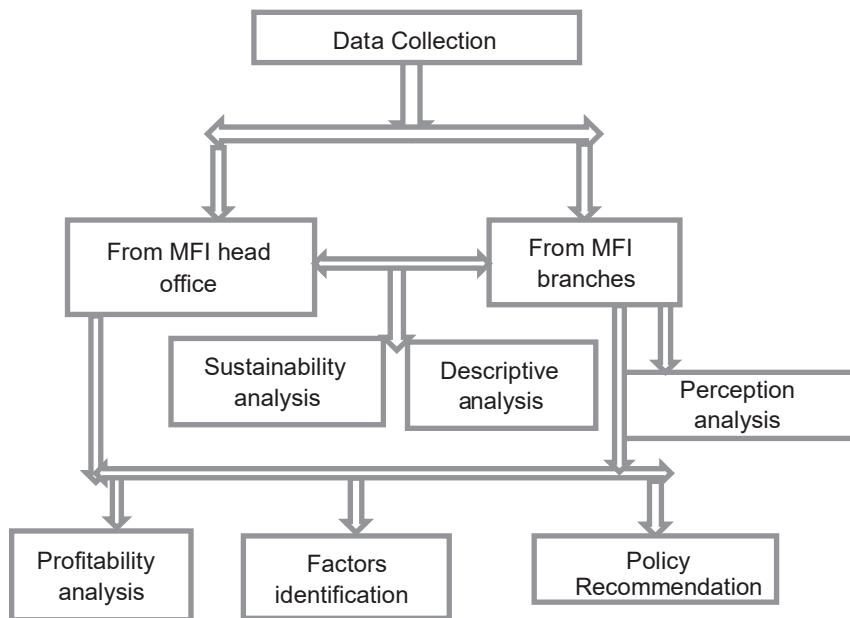
In a recent study in Bangladesh, Sadeque (2015) examine the correlation between mushrooming of MFIs with customer dropouts. They find that one branch of DSK (Dusto Sastho Kendro) competes with a minimum of three branches, maximum of 22 and on an average 12 branches of other MFIs.

Koskela and Stenbacka (2000) suggest that greater competition decreases interest rates and increases the likelihood that borrowers are able to remain solvent and repay their loans. They also suggest that the introduction of competition may improve the stability of banking systems. On the other hand, Matutes and Vives (1998) argue that raising the level of competition causes an increase in failures as lower profits resulting from competition encourage banks to take on more risks.

4. Study Methodology

4.1 Data source

This study uses primary data from institutional level as well as from branch level collected through using a structured questionnaire. A stratified random sampling approach is adopted ensuring proportional representation of small, medium and large MFIs. For branch level analysis, the study collected data from 362 branches of 17 MFIs. A total of 55 MFIs are selected for institutional level analysis. The data collection procedure is shown in Figure 2 and the sample distribution from different categories of MFIs is shown in Table 1. In addition, some case studies are done especially relating to closed branches.

Figure 2: Data Collection Procedure**Table 1: Sample Selection of MFIs**

Category	Range of borrowers (in lakh)	Head office		Branches	
		Selected number of MFIs	% of respective total MFIs	Number of head office	Number of selected branches
Very large	More than 5	3	60	1	33
Large	1-5	6	30	3	91
Medium	0.1-1	25	20	11	225
Small	0-0.1	21	4	2	13
Total	...	55	...	17	362

Source: Author's calculations

We have collected institutional level information from different categories of MFIs that have already received MRA licence and the data are collected for three financial years (2014 to 2016). The MFIs are categorised based on the number of borrowers (Table 1). We follow the range of borrowers for categorisation as used in MRA statistics.⁴ However, in some cases, starting year information are also collected. We have collected financial data (including financial and non-financial income, expenditure including salary and benefits, other operating costs like rent, depreciation along with loan loss provision and also grants and donation). Along with these, we have also collected information on the total amount of loan outstanding and savings and the number of borrowers. However, for the analysis, we concentrate on revenue and expenditure. Besides, we have also collected information

⁴ http://www.mra.gov.bd/images/mra_files/Publications/vol2015.pdf

on how many branches are newly opened and closed during the survey years. The location of branches and perception related information are collected only for the year 2016.

4.2 Data analysis

The head office and branch level data is the main source of information used for analysis. In the study, three categories of data analysis have been conducted to fulfil the research objectives: descriptive analysis, econometric analysis and composite score analysis. Based on the literature and findings from current statistics, this section gives an overview of the findings.

Descriptive Analysis

Descriptive statistical analysis issued to investigate the status of branches. However, for understanding the trends in selected MFIs, descriptive statistics (e.g. number of branches, speed of MFIs' expansion and so on) analysis has also been used.

Sustainability Analysis

The study explicitly addresses the issue of sustainability of MFIs that expand branches in the rural areas. Most of the MFIs target to reach the poor through financial instruments like loans, savings, insurance and they expand branches for fulfilling these objectives. It is held that microfinance programmes will effectively work if the branches are sustainable. The cost of delivering the services to ultra-poor households is generally very high. Therefore, for increasing the client outreach it is important to know the sustainability status of branches that will help to design the programme more efficiently for future growth (possibly in other regions with similar conditions). Such information are necessary to take organisational decisions like expanding existing operations, legal restructuring, strategic alliances, merging with other branches and so on. It is argued that 'unsustainable MFIs might help the poor now, but they will not help the poor in the future because the MFIs will be gone' (Schreiner 2000).

Here we attempt to draw some insights from head office and branch level data and assess operational sustainability. For the purpose, several factors have been identified that will affect operational sustainability of the branches as well as the head offices of MFIs.

Operational sustainability of microfinance institutions is probably the key dimension of microfinance sustainability. According to Meyer (2002), operational sustainability refers to the ability of the MFI to cover its operational costs from its operating income regardless of whether it is subsidised or not. Operational sustainability accompanies the concept of operational self sufficiency (OSS) which measures operating revenue as a percentage of operating and financial expenses, including loan loss provision expense and the like. If this ratio is greater than 100 percent, the MFI is covering all of its costs through own operations and is not relying on contributions or subsidies from donors to survive (Churchill and Frankiewicz 2006). The OSS in general includes all the cash costs of running an MFI, depreciation and the loan loss reserve. Sometimes, cash costs of funds are excluded from the analysis because 'those MFIs that begin to access the commercial financial markets and pay the cost of capital would look relatively worse than other institutions with the same costs and outreach, but who have remained reliant on donor capital to fund their portfolio' (UNCDF 2002). This applies due to the fact that some donor fund dependent institutions do not have the same financing cost as commercial MFIs. When an MFI becomes sustainable, it is no longer limited to donor funding. It can draw on commercial funding sources to finance massive expansion of its outreach to the poor people. Experience proves that microfinance can be operated sustainably, even with very poor borrowers. Sustainable MFIs can continue to operate even after grants or soft loans are no longer available.

The operational self sufficiency ratio is estimated in the following way:

$$\text{OSS} = \frac{\text{Operating income}}{\text{Operating cost} + \text{loan loss provisions} + \text{financial cost}}$$

Where,

Operating income = Loan service income + income from client+ other financial income

Operating cost = Salary+ administrative expenses+ office rent+ conveyance

Financial cost = Service charge from head office +saving interest expenditure +other financial expenses

As MFIs provide multiple microfinance services, they face various costs and generate revenues and growth. In this study, we calculate operating and net profits of MFIs. Operating profits can be calculated from operating income and operating expenses. While net profit can be calculated from revenue and expenses. For calculating operating income, we exclude grant and for calculating operating expenses we exclude loan loss provision and other related costs. The net profit comes from revenue and expenses. Revenue includes loan service income, income from clients, grants and other financial income, whereas expenses includes service charge from head office, saving interest expenditure, other financial expenditure, salary, administrative expenses, office rent, conveyance, depreciation, other expenses and loan loss provision.

Composite Score Analysis

While assessing the views of branch managers regarding branch expansion, we have collected a set of information. A total of six issues are combined together as scale variables. The issues relate to: branch operating system, cost effectiveness, market research, availability of skilled office staff and competition. If the branch manager has a positive response to the relevant question, we code them as one and similarly, for negative responses, we code them as zero. Considering the responses of the managers on these six items, a composite score is generated. Some previous studies also used this method to generate the composite score.⁵ By analysing the composite score of different categories of MFIs, one can analyse the decision regarding opening or closing of a branch or to merge with other branches.

5. Results and Discussion

5.1 Descriptive branch level analysis

One of the main objectives of this study is to analyse the reasons and identify the determinants of branch expansion of MFIs. However, before analysing the reasons we need to know key characteristics of branches related to their years of operation, characteristics of the employees of the branch, area characteristics of the branch and others. Our analysis shows that MFIs tend to appoint young branch managers; mostly around 35-39 years and around 95 percent of them are males. It is expected as one of the main activities of branch managers is to supervise the repayment collection from door to door of the beneficiaries. As it is a laborious job, MFIs tend to hire young male as branch managers. It is also important to note that the branch managers are educated and experienced in their field; they are graduates and have worked in the field of microfinance for an average of around 11 years. There is also a minimum difference in the years of operation of the branch. The branches of large MFIs are operating for about 15 years whereas, for the branches of small MFIs, this figure is

⁵ Hashemi, S. M., Schuler, S. R., & Riley, A. P. (1996). Rural credit programs and women's empowerment in Bangladesh. *World Development*, 24(4), 635-653.

about 13 years. One of the important observations about branch location is that majority of the branches tend to be located on plain land and this tendency is higher for the branches of very large and small MFIs. More than 90 percent of these branches are located in the plain land. On the other hand, for the large and medium MFIs around 80 percent and 86 percent of the branches are located in plain land respectively (Table 2). Also the small MFIs' branches tend to be closer to the upazila headquarters than the giant and medium MFIs and they also have the highest distance from another branch which is around 19 km. In contrast, the branches of very large, large and medium MFIs have more branch density. The nearest distance from another branch in these cases is about 10 km on average. This has also an impact on area coverage.

Table 2: Information on Key Indicators of MFIs' Branches, 2016

Indicator	Very Large	Large	Medium	Small	Total
Branch characteristics (average value per branch)					
Age of branch manager (years)	37.27	35.76	37	39.85	36.89
Gender (male %)	100	95.60	95.11	100	95.84
Schooling of branch manager (years)	15.03	15.14	14.77	14.38	14.87
Branch manager's experience in MFIs operation (years)	11.44	8.98	11.90	9.77	11.05
Number of training received by branch manager	3.12	3.54	5.47	7	4.81
Age of branch (years)	15.59	12.26	12.61	13	12.81
Locational characteristics (land type--plain land %)	93.33	79.75	86.16	91.67	81
Distance from upazila headquarters (km)	7.58	5.96	7.71	5.42	7.22
Distance from nearest MFI branch(km)	9.85	10.82	10.32	18.85	10.71
Branch coverage area (km)	11.19	9.05	9.82	12.84	9.88
No. of growth centres in the upazila	11.28	8.59	14.73	19	13.15
Distance from nearest growth centre (km)	2.85	2.77	2.21	1.43	2.38
Number of other MFIs in branch area (within 5 km)	12.64	13.99	12.93	10.69	13.06
Number of employees	8.44	9.37	7.57	3.61	7.96
Performance indicators					
Number of borrowers	4,449.60	2,170.79	1,271.98	296.76	1,752.58
Number of savers	1,844.93	1,852.25	1,641.23	449.53	1,669.81
Volume of savings (million Taka)	7.60	10.49	8.30	1.47	8.54
Average loan disbursement(million Taka)	197.20	53.85	49.08	10.49	62.40
Average loan outstanding(million Taka)	21.99	8.07	14.61	3.35	13.1

Source: Field Survey

It is seen that each branch of small MFIs cover around 13 km on average, whereas the large and medium MFI branches cover around 9 km. It is expected because smaller MFIs have less branch density and hence they have more coverage area. However, to serve this large area they have lower number of employees. On an average, the branches of small MFIs employ around 3.6 persons whereas the branches of other three categories of MFIs employ around 8 persons to cover around

8-9 km. For large categories of MFI branches, the average number of borrowers is 14 times higher than small sized MFIs. The small size MFIs' branches disburse lower amount of loans (Table 2).

5.2 Descriptive head office level analysis

For the study, it is important to examine the basic characteristics of the MFIs based on their size. It is observed that the giant MFIs have a high tendency to open more branches compared with other sizes of MFIs. As expected, the larger the MFI the more branches they have opened. It is important to observe that the larger MFIs cover less area but more beneficiaries than the smaller MFIs. The giant and large MFIs cover on an average of 9 km with around 1,900 borrowers whereas medium and small MFIs cover 8 km with around 1,400 borrowers (Table 3). So it may be said that larger MFIs are more efficient in terms of serving more borrowers with less area coverage. The locational preferences of the MFIs are also different based on their size. However, all MFIs irrespective of their size tend to have more branches in plain areas. Though the giant and large MFIs have tried to cover the remote areas too, the numbers are insignificant compared with the number of branches they have established in plain areas. However, the medium and small MFIs have almost negligible numbers of branches in remote areas.

Table 3: Head Office Information about Branches of MFIs, 2016

Indicator	Very large	Large	Medium	Small	Total
Average number of branches	529	137	34.04	4.67	61.05
Average number of closed branches	1.00	12.00	1.50	1.00	3.00
Average number of new branches	32.66	12.00	6.05	2.57	8.82
Average area covered (km)	7.66	10.33	8.2	9.66	8.96
Average distance for branches in urban areas (km)	10.33	10.33	7.24	8.2	8.17
Average distance for branches in rural areas (km)	8.67	10.4	11.30	12.77	11.59
Average borrower coverage (no.)	1,931.33	1,802	1,697.68	1,305.47	1,586.42
Average no. of branches in char areas	36	12.67	2.96	0.19	4.76
Average no. of branches in riverine areas	14	5	1.72	0.24	2.18
Average no. of branches in islands	1.66	1.5	0	0	0.25
Average no. of branches in haor areas	15	4	.24	.047	1.38
Average no. of branches in hilly areas	13.33	3.5	1.04	.19	1.65
Average no. of branches in plain land	453	107.66	23.84	3.952	48.8

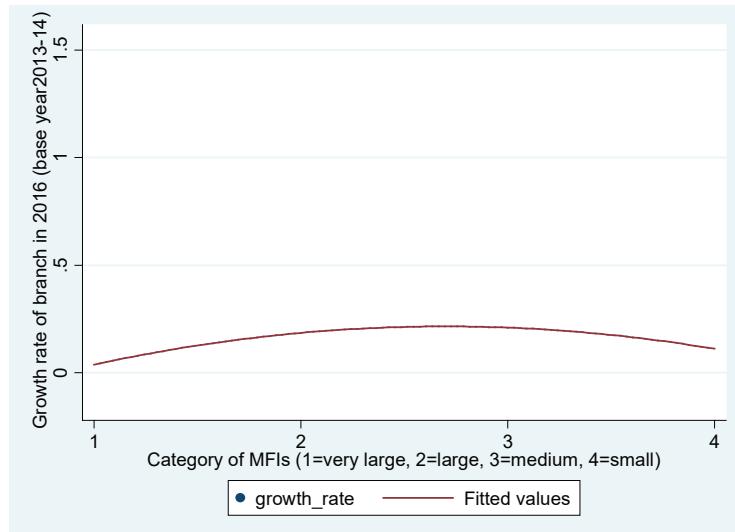
Source: Field Survey

5.2.1 Growth Rate of MFIs

As mentioned earlier, the study categorises MFIs on the basis of number of borrowers. We have also observed that there is a strong positive relationship between the number of branches and number of borrowers. Therefore, it may be hypothesised that the more the number of borrowers, the more will be the growth rate of branch expansion of MFIs. Alternatively, the bigger the branches in terms of borrowers, the higher the growth rate of opening new branches. In reality, the analysis shows that giant MFIs have the lowest growth rate of branch expansion at around 7 percent. It is obvious because giant MFIs in the sample have been operating for an average of 27 years and, during this long span of time, they have opened on an average 530 branches. Therefore, the scope of expansion

of giant MFIs is somewhat saturated. On the other hand, the medium MFIs have the highest growth rate, which is around 22 percent. The data in the sample show the medium MFIs have so far opened 131 branches. So it seems that they are still at a high growth stage. The small MFIs have the lowest growth rate of around 10 percent. It is because small MFIs have limited availability of funds which is necessary to set up new branches.

Figure 3: Growth Rate of Branches of Sample MFIs



Source: Field Survey

5.2.2 Reason for Branch Expansion by MFIs' Categories

Although different categories of MFIs have different growth rates but all of them have a tendency to expand the number of branches. As microfinance market becomes more competitive, MFIs feel increasing pressure to achieve and sustain growth. A crucial driver of success and sustainability, growth allows MFIs to expand their portfolio by providing financial services to a larger number of customers while, at the same time, fulfil their social mission. To serve a large number of clients, expanding the number of branches are still one of the effective traditional ways considered in Bangladesh. The crucial issue is: why the MFIs decide to expand branches? Obviously 'one-size-fits-all' strategies do not work as there are differences among MFIs in terms of the revenues, expenses, profits, number of borrowers, operational strategies, area coverage and many other characteristics. We have surveyed the MFIs about their rationale for branch expansion. Table 4 provides some results. As expected, the results are different for different MFIs depending on their size.

Table 4: Reasons for Branch Expansion by MFIs Categories

Sl. no	Main Reason	Very large MFIs	Large MFIs	Medium MFIs	Small MFIs
1	Economically profitable (%)	46.33	-	-	-
2	Achievement of aim of organisation (%)	33.33	-	-	11
3	Provide financial services for reducing poverty (%)	20.33	-	-	-
4	Expensive to operate from nearest branch (%)	-	40	42	32
5	Provide economic services in remote areas (%)	-	40	-	-
6	For operating new programmes (%)	-	20	8	-
7	Expansion of service area (%)	-	-	21	21
8	Increase organisation value (%)	-	-	17	-
9	Marginal people involved in various programmes (%)	-	-	8	-
10	Increase number of members (%)	-	-	4	-
11	Poverty reduction and employment generation (%)	-	-	-	16
12	High loan demand in the area (%)	-	-	-	16
13	Reducing transportation cost of members for getting loan (%)	-	-	-	5

Source: Field Survey

The giant MFIs report that they perceive economic profitability as the main reason for expanding branch. In other words, if opening a new branch is not profitable they will not go for it. On the other hand, the large, medium and small MFIs expand branches because they think it becomes expensive to continue the operation of the existing branch if they do not open new branch in a new place. May be initially it might not be profitable to operate the new branch for these MFIs but they are still eager to open because they do not want to increase the operating cost of existing branches. Around 40 percent of large and medium MFIs and 32 percent of small MFIs report this as the main reason for branch expansion. It is important to note that large and medium MFIs also expand branch for operating new programmes. Around 20 percent and 8 percent of large and medium MFIs respectively report this reason, whereas small MFIs do not consider such a factor. This is expected because it is not cost effective for small MFIs to open a new branch just to operate a new programme, whereas large MFIs may afford to open a branch for operating a new programme. Another important observation from the results is that around 16 percent of small MFIs point out poverty reduction and employment generation are important reasons for branch expansion whereas other MFIs do not perceive this factor. This may be due to the fact that small MFIs initially want to increase their value and goodwill by serving the poor people. Initially profit generation may not be their prime objective. The giant and large MFIs have already established their goodwill. Hence, they can afford to look for profitability while they intend to open a branch.

5.2.3 Factors Governing Opening of New MFIs' Branches

So far we have observed why the MFIs opt for opening a new branch. It is also important for the study to analyse the factors that the MFIs consider while they decide to open a branch. The giant and large

MFIs tend to establish new branches near to the growth centres. All the giant MFIs intend to open the new branch near the growth centre. For the large MFIs, this figure is 83 percent (Table 5). On the other hand, for medium and small MFIs this factor seems not that important. For small MFIs, only 61 percent of new branches are established considering the location of growth centres. Cost effectiveness is important for the giant and large MFIs while establishing a new branch. Almost all MFIs of giant and large category mention this factor to be an important one. On the other hand, 80 percent of small MFIs do cost effective analysis while deciding on opening a new branch. Similar results can be found in the case of market research. For small MFIs, 80 percent of the new branches are opened after conducting demand analysis of the beneficiaries whereas for the MFIs of other categories market research before establishing a branch is a norm. Another important observation from the analysis is that medium and small MFIs have lower tendency to follow any institutional guidelines while opening a new branch. Around 84 percent and 62 percent of the medium and small MFIs respectively have followed specific policies while opening branches. On the contrary, it is a regular practice of the giant and large MFIs to maintain institutional policy guideline for opening a branch.

Table 5: Main Factors Governing Branch Expansion by MFIs

Factor	Very large	Large	Medium	Small	Total
Establishing near to growth centres	100	83.33	76.00	61.90	72.73
Cost effectiveness	100	100.00	96.00	80.95	90.91
Market research	100	100	96.00	80.95	90.91
Follow institutional policy for branch expansion	100	100	84.00	61.90	78.18

Source: Field Survey

5.2.4 Alternative Options for Branch Expansion: Perspective of MFIs

In several countries like India or countries in Latin America, MFIs have been adopting greater use of technological solutions (like mobile phones) to minimise the cost of transactions with customers. The low cost facilitates the MFIs to serve a larger number of poor households who are financially excluded. However, even though there can be significant benefits of operating branches through mobile banking, the present study shows low preference of MFIs to adopt such technological solutions. In the sample, the majority of MFIs never managed lending and borrowing activities with mobile banking. However, around 14 percent of the small MFIs have adopted mobile technology. This may be expected in the case of small MFIs since they have greater operating areas with lower number of employees. However, it is important to note that, although large and medium MFIs have almost no experience in operating the financial activities using mobile services, around 18 percent of these groups think that this may be a profitable option rather than opening a new branch as it can reduce transaction costs and save time. Some MFIs also think that operating branch activities through mobile phones would reduce direct communications with the beneficiaries which may increase the risk of loan default.

5.3 Composite Score Analysis: Perceptions of Branch Managers

The study has collected responses of the branch managers that can be used to analyse the perceptions of branch managers about branch expansion. We report the results in Table 6. To identify the perceptions, six indicators are used and branch managers provided information on present conditions of their branches and shared views regarding branch expansion. The indicators are related to profitability, establishment place, skilled manpower, locational loan demand, loan disbursement capacity and competition. The respondents are classified as 'agreed with expansion' if

he/she has a positive score (coded as one) and 'disagreed with expansion' if he/she has a negative score (coded as zero). Finally, we sum up all the scores in Table 7. If a branch manager agrees to all the questions, a score of six is generated and he/she is classified as 'highly agreed with expansion' and vice versa.

**Table 6: Perception of Branch Manager on Branch Expansion
(% of branch managers responding positively)**

Sl. No.	Indicators	Very large	Large	Medium	Small	Total
1	Do you think that the branch is located at the right place? (Yes %)	96.88	95.24	96.88	91.67	96.31
2	Is it profitable to operate this branch? (Yes %)	100	83.72	84.00	83.33	85.39
3	Do you think that skilled workers are not available due to remote location? (Yes %)	81.25	76.19	90.63	83.33	86.08
4	Do you think that the branch can fulfill poor people's loan/savings demand? (Yes %)	71.88	82.14	86.16	50	82.67
5	Does your organisation have enough ability to provide adequate loan? (Yes %)	100	98.82	87.95	50	90.34
6	Is the number of customers of your branch low due to presence of other MFIs' branches? (Yes %)	37.50	44.71	52.68	58.33	49.43

*1(Yes) = positive response, 0 (No) = negative response

Source: Field Survey

The analysis shows that MFIs' branch managers of all categories respond positively (around 96 percent) regarding right place of establishment of their branches. The majority (83 percent) of small categories of MFIs operate under profitable conditions at the branch level. In the case of large MFIs, all sampled branches are in profitable conditions. As many of the branches work in remote areas, skilled and efficient workers are not available in these branches; positive responses are relatively high in the case of medium categories of MFIs branches. This shows that availability of skilled workers is not a big constraint for large categories of MFIs branches. Only 50 percent of small categories of MFIs branches respond positively regarding fulfilling the poor people's loan/savings demand. Regarding competition from branches of other MFIs, only 37 percent of the very large MFIs' branches respond positively relative to 58 percent for small MFIs and 53 percent for medium MFIs (Table 6).

From Table 7, it can be said that, although small categories of MFIs branches hold a lower score for branch expansion decision, almost all categories show significant positive attitude towards branch expansion. This suggests that all categories of MFIs branches have a demand for branch expansion. But very large and medium categories of MFIs have higher demand for branch expansion compared with the large and small categories of MFIs branches.

Table 7: Aggregate Score of Branch Expansion for MFIs

	Very large	Large	Medium	Small	Total
Score	4.87	4.79	4.98	4.16	4.90

Source: Field Survey

5.4 Operational Self Sufficiency (OSS)

Sustainability in general means the ability of a programme to continuously carry out services and activities in pursuit of its specific goals. For an MFI, this would mean the ability to continue operating as a development financial institution for the rural poor (Khandker and Khalily 1995). Since MFIs view their financial services as profitable businesses, it is necessary to constantly look for possible cost reductions or reallocations for operating the institutions more profitably and in economically viable manner. For a better understanding of the profitability and sustainability, ratio analyses are often used. For this study, operational self sufficiency ratios of branches as well as head offices are estimated. Unlike many other studies, this study does not consider grants and donations as income of MFIs while estimating the OSS. Table 8 gives the results of OSS of MFIs branches and Table 9 gives similar results of MFIs head offices.

The OSS measures operating revenue as a percentage of operating and financial expenses, including loan loss provision expense and the like, which is mentioned in the discussion on methodology. If this ratio is greater than 100 percent, the MFI is covering all of its costs through own operations and is not relying on contributions or subsidies from donors to survive (Churchill and Frankiewicz 2006).

We find that OSS is higher for very large MFIs branches. In 2016, the OSS for our sampled branches is lower for small categories of MFIs which is less than one (Table 8). If we look at the individual components, the operating income and operating cost are also higher for large sized MFIs' branches and lowest for small sized MFIs' branches. These findings indicate that the very large, large and medium categories of MFIs' branches operate more effectively compared with the small MFIs' branches.

Table 8: Operating Self-Sufficiency of MFIs' Branches, 2016

Branch category	OSS ^a	Operating income (million Tk.) (except grant)	Operating cost (million Tk.)	Financial cost (million Tk.)	LLP ^b (million Tk.)
Very Large	2.51	9.86	2.62	1.09	1.34
Large	1.70	6.95	2.21	2.11	0.10
Medium	1.43	5.34	1.89	1.79	0.54
Small	0.61	0.83	0.82	0.20	0.37
Total	1.57	6.00	2.00	1.75	0.51

Source: Author's calculation from branch level data.

Note: aOSS stands for Operational Self Sufficiency; b LLP stands for Loan Loss Provision.

In the case of head offices, similar findings are given in Table 9. The large and medium categories of MFIs have lower OSS compared with the very large size of MFIs. Other indicators such as operating

income, operating costs and financial costs show similar trends (Table 9).

Table 9: Operating Self-Sufficiency of Head Offices of MFIs

MFI category	OSS ^a	Operating income (million Tk.) (except grant)	Operating cost (million Tk.)	Financial cost (million Tk.)	LLP ^b (million Tk.)
Very large MFIs (3)	1.39	3590	1240	1140	154
Large MFIs (6)	1.21	552	271	198	15.9
Medium MFIs (24)	1.09	120	66.9	36.8	4.43
Small MFIs (21)	0.92	8.83	5.30	2.24	2.68
Total MFIs (54)	1.06	318	131	103	13.5

Source: Author's Calculation from Branch Level Data

Note: aOSS stands for Operational Self Sufficiency; b LLP stands for Loan Loss Provision. Figures in parentheses in the first column refer to number of MFIs in the sample.

5.5 Determinants of Branch Expansion

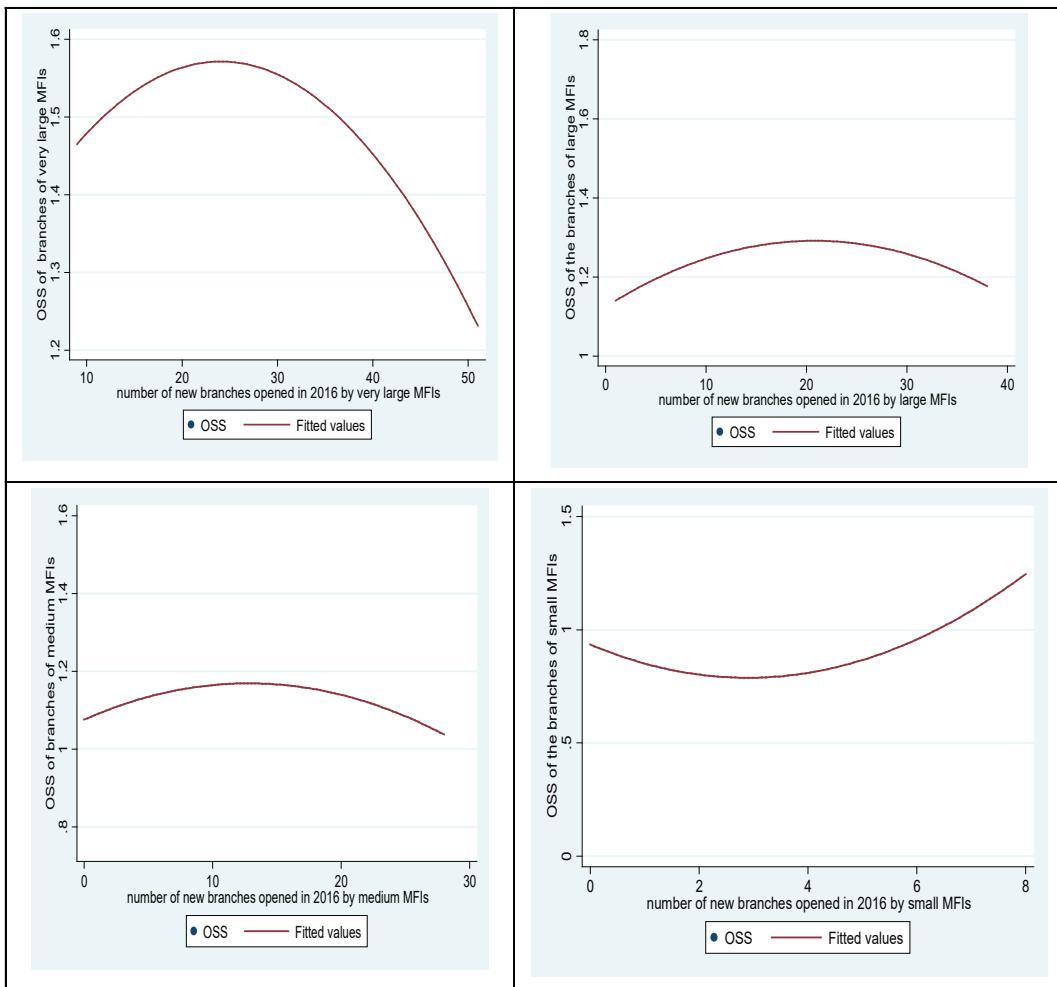
One of the objectives of this study is to investigate the important factors that MFIs consider while deciding on opening a new branch. We have conducted an OLS regression to investigate the determinants of branch expansion. We have collected information on whether the sampled MFIs have opened new branches in 2015-16 and how many branches they have opened. The regression gives us the results of variables influencing the intensity of opening new branches by MFIs. The number of new branches in 2015-16 is the dependent variable in the regression. We have set some independent variables based on the literature and the experience we gathered from the field survey. Through this regression, we have also investigated why some MFIs have opened more new branches than others. The regression results are given in Table 10. It is found that number of borrowers is an important factor while deciding on opening a branch. The MFIs that have expended more branches have more borrowers. The positive sign of the coefficient of the number of borrowers variable and the negative sign of the coefficient of its square together imply that the intensity of branch expansion initially increases with the number of borrowers, but it does so at a decreasing rate and beyond a certain borrower number, the number of new branches may actually decline. Our results show both the coefficients are significant. The regression results also show that location is an important factor while opening a branch. The MFIs that have fewer branches in haor areas have expanded more in terms of branches in 2015-16 and the result is significant. On the other hand, having more branches in hilly areas and plain areas may have positive impact on branch expansion although the coefficient is statistically insignificant. Another important factor is costs; and financial cost is inversely related to branch expansion. The MFIs that could open more new branches in 2015-16 have managed to keep their financial cost low.

Table 10: OLS Regression on Determinants of Branch Expansion

Variables	Estimated coefficient
Number of borrowers	0.0001522 ***
Square of number of borrowers	-5.97e-11**
Number of branches in haor areas	-1.398***
Number of branches in hilly areas	0.300
Number of branches in plain areas	0.0142
Financial cost of MFIs	-3.77e-08**
Constant	0.143
Observations	54
R-squared	0.604

We have also analysed whether there is any impact on sustainability if MFIs keep on opening new branches. The graphs below show the number of branches opened by the MFIs in 2016 on the horizontal axis and OSS of the MFIs on the vertical axis. The four graphs represent four different categories of MFIs such as very large, large, medium and small. We find a non-linear relationship. The OSS increases as the number of new branches increases except for the small MFIs. However, it does increase at a decreasing rate for the MFIs of three categories except smaller ones. At the aggregate level, we find that when MFIs have opened about 30 new branches, OSS has started to decline. This somewhat gives an indication that on an average MFIs may open 30 branches per year to keep its operation sustainable. However, this is a combined analysis of all MFIs; hence the implications are not applicable for different categories of MFIs. Hence, it is important to note that the size of MFIs matters while deciding on opening a branch.

Figure 4 shows that for very large and large MFIs, OSS has declined after opening around 25 new branches. However, the result is different for medium sized MFIs. We find that OSS has started declining after opening around 15 branches in 2016. This shows that probably medium sized MFIs can open 15 new branches on average per year if everything remains unchanged to keep its operation sustainable. On the other hand, for small MFIs the figure shows different results. The OSS keeps on declining as the small MFIs keep on increasing the branch number. It is because small MFIs already suffer from shortage of funds. When it expands the number of branches, financial cost increases and hence OSS declines as it is difficult for small MFIs to generate revenue from the new branch to start with. Moreover, we find that OSS has increased after opening about four branches. This shows that probably after this point the average cost starts declining and the branches start generating profit in the aggregate. Therefore, for small MFIs the number of new branches should be more than four if they want to be sustainable.

Figure 4: Determinants of Sustainability of MFIs

Source: Author's Survey Data

On the other hand, the very large and large MFIs already have slow growth rate of expansion as they are somewhat saturated operating for more than 25 years in this field. Probably opening more branches beyond 25 per year will hamper the OSS of these MFIs. The small MFIs have still long way to go to achieve that growth level. They need to expand their operation and need to attract more borrowers to be operationally sustainable.

6. Way Forward and Concluding Remarks

The analysis of this study shows that just establishing a new branch is not enough for providing financial services to the poor people. The sustainability of MFIs in the long run is also important in this regard. Otherwise, the efforts towards opening new branches may become counter-productive which would require provision of subsidies/grants for operation or these may have to be merged with other branches or may have to be closed down. It is important, therefore, for MFIs to take a rational decision regarding when to open a new branch or whether it would be efficient to serve a specific

location by extending the coverage of an existing branch. As MFIs seek to reach as many poor people as possible, therefore, it is important to constantly look for possible cost reductions or reallocations in order to operate profitably and become economically viable.

The main thrust of the study is to explore the factors that should be considered while deciding on opening a new branch by MFIs so that the expected positive benefits are realised. Specifically, we have analysed MFIs of different sizes (small, medium, large and giant) in terms of their sustainability parameters in relation to branch expansion and related decisions. When we analysed the main reasons and determinants of branch expansion, it is found that the giant MFIs perceive economic profitability as the main reason for expanding branches. On the other hand, the large, medium and small MFIs expand branches because they think it is expensive to continue the operation of the existing branches if they do not open new branches. Initially, it may not be profitable to operate new branches for these MFIs but they are eager to open because they do not want to increase the operating cost of existing branches. Around 40 percent of large and medium MFIs and 32 percent of small MFIs report this as the main reason for branch expansion. It is important to note that large and medium MFIs also expand branch for operating new programmes.

To enhance the outreach in remote areas and provide efficient services to existing borrowers, MFIs need cost effective channels. In this case, mobile financial services can be the best options. The MFIs may establish partnerships with mobile phone operators to reach the unbanked low income people. Interestingly, majority of our surveyed MFIs never managed lending and borrowing activities with the help of mobile banking. However, only around 14 percent of the small MFIs have done this and around 18 percent of this group think that this may be a profitable option rather than opening a new branch as it can reduce the transaction costs and save time. However, some also think that operating branch activities through mobile phone will reduce direct communications with the beneficiaries and it may also increase the risk of loan default.

The study also finds that very large and medium categories of MFIs' branches are 'highly receptive to branch expansion'. In almost five out of six expansion related questions, branch managers show positive responses. The findings of the study indicate that the number of borrowers is positively and significantly related to the decision of branch expansion. The results also show that those MFIs could expand more in terms of branches whose financial costs are relatively low.

The study suggests that OSS has a relationship with branch expansion. For relatively larger MFIs, the expansion needs to be slowed down after a certain point. For example, the analysis of the study shows that for giant and large MFIs after opening 25 branches, OSS starts to decline whereas for small MFIs the scenario is different. The small MFIs are required to open at least four branches per year to be operationally sustainable.

7. Recommendations

The present study brings out the challenge that many developing countries face in providing efficient financial services in rural areas. Overall, in order to increase access to financial services in remote areas, expanding MFIs' branches is one of powerful tools as the poor people prefer physical existence of institutions for money transaction. Based on the findings, several recommendations may be drawn:

- **Regional factor:** The findings of the study reveal that all MFIs irrespective of their size tend to have more branches in plain areas. However, for expanding financial services, it is necessary to establish branches in remote areas rather than convenient areas. This will reduce the transportation cost of borrowers and will increase their self-reliance. However, setting up new branches in remote areas also requires higher costs as it is risky to operate the borrowing activities in remote areas considering the geographical characteristics. In this regard, MFIs can adopt cross-subsidisation policies to make the operation sustainable as a whole.

- Market research: The findings suggest that market research is an important factor for consideration by MFIs before opening a new branch. However, the result shows that small MFIs are less interested to conduct market research in this regard compared with larger MFIs. They also have fewer tendencies to follow any institutional guidelines while opening a new branch. The study also finds that small MFIs are less operationally sustainable than larger MFIs. The study suggests that if small MFIs conduct market research and follow appropriate guidelines probably it will help them to increase their OSS.
- Partnerships with mobile operators: The analysis shows that majority of MFIs do not prefer operating borrowing activities through mobile phone instead of a physical branch as they think operating branch activities through mobile phone will reduce their communications with the borrowers and it may also increase the risk of loan default. However, in many countries, mobile financial services by the MFIs have proven to be an effective tool of operation. Hence, providing digital and financial literacy to both MFI staff and borrowers and then pilots may be taken up on operating MFI activities digitally.
- Sustainability and size of MFIs: The study shows that OSS has a relationship with the expansion of branch and the relationship differs with respect to the size of MFIs. The study recommends that larger MFIs may probably consider restricting the number of new branches opened during a year to around 25 under existing circumstances; while, for medium MFIs, the number is found to be around 15. However, for the small MFIs the study recommends to expand the branches by at least four per year to keep operations sustainable. One must, however, keep in mind the limitations of the above conclusion which specifically relate to small size of the sample. For getting more reliable results, one needs to conduct deeper analysis with bigger samples.
- Funding opportunities: It is observed that branch expansion offers some advantages. For increasing the outreach in remote areas, branches need to sustain themselves in the long term. The study suggests that sometimes there is a need to provide financial support as MFIs often expand branches for operating new programmes. Around 20 percent of large MFIs report this as a major reason. These findings have implications for refinancing institutions (e.g. PKSF) and development agencies for reshaping the support mechanisms for MFIs for poverty alleviation and special programme implementation.

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