International Journal of Economics, Business and Management Research

Vol. 2, No. 01; 2018

ISSN: 2456-7760

THE CRITICAL MASS HYPOTHESIS: EMPIRICAL EVIDENCE FROM THE MICROFINANCE INSTITUTIONS' BOARDS

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Abstract

The objective of the present study is to empirically test the validity of the critical mass hypothesis (Kanter, 1977a, 1977b) using data from the microfinance sector. A sample of ninety five microfinance institutions from Bangladesh is used in the present study. While majority of the clients in the microfinance sector are women it is known to have lack of women representation in the governing boards, both general and executive. The results reported in this study show convincing evidence that the predictions of the critical mass hypothesis hold up in the microfinance sector. The policy implication of this finding is to alert the regulators to focus on women representation in the governing boards - and possibly, mandate MFIs to have a critical mass of women in the governing boards instead of requiring some arbitrary number, as prevalent in many countries.

Keywords: Critical Mass Hypothesis, Microfinance Institutions, Governance, Performance and Boards

1. Introduction

The underrepresentation of women on corporate boards is widely discussed in the extant literature and the issue of gender diversity is becoming more and more important in the policy debate. The proportion of women in the for-profit corporate board is relatively small across the globe. Many countries initiated or are initiating governance reforms which explicitly stress the importance of gender diversity in the boardroom. While fostering women representation in the boardroom for ethical and social reasons is beyond dispute, the performance effects of an increased women representation on the board are rather ambiguous. Some empirical studies report a positive link (Mahadeo et al., 2012; Smith et al., 2006; Carter et al., 2003; etc.), some report a negative link (Ahren & Dittmar, 2012; He & Huang, 2011; Bohren & Strom, 2010; Luckrath-Rovers, 2010; Adams & Ferreira, 2009; etc.) and some show no link between gender diversity and firm performance (Haslam et al., 2010; Miller & del Car-men Triana, 2009; Rose, 2007; Randoy et al., 2006; etc.).

Majority of the microfinance institutions (MFIs) around the world operate as not-for-profit organizations.

A unique aspect of the microfinance sector is that it involves gender targeting - offering loans, primarily to women as opposed to men. Consequently, the majority of MFI clients across the world are women due to this deliberate gender targeting (Morduch, 1999; Cull et al., 2007;

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Daley-Harris, 2007; etc.). Two important arguments put forward by donors or practitioners in favor of targeting women are gender equality and poverty reduction. With respect to gender equality, microfinance is considered an effective means to promote the empowerment of women. As far as poverty reduction is concerned, it is argued that women invest their income to nurture the well-being of their families and therefore, one dollar loaned to a woman has greater development impact than one dollar loaned to a man (World Bank, 2007). But while women are seen as being the key to economic development they are not adequately represented in many of the MFI boardrooms just as the case with the for-profit sector. Given the conventional wisdom that more a company mirrors its markets demographically the better positioned it is to sense and respond to evolving market needs, an MFI with a gender-diverse board can be expected to differentiate itself as an organization committed to understanding and serving women and may lead the organization to superior financial performance.

The *critical mass hypothesis* emerged from the ground breaking research in organizational theory (Kanter, 1977a, 1977b). It is interesting to note that a lot studies, in social sciences, on gender diversity often explicitly refer to *critical mass hypothesis* but it is very seldom put to direct test (Tsui et al., 1992). The understanding of the *critical mass hypothesis* is important for MFI regulators initiating or contemplating governance reforms mandating MFIs to have (or increased) women representation in the governing boards.

Against this backdrop, the objective of the present study is to empirically test the *critical mass hypothesis*, in terms of women representation in the executive board and its effect on MFI performance, using a sample of MFIs from Bangladesh. The current study is, in fact, the first to test this hypothesis in the microfinance sector. The results reported in the present study show that the link between gender diversity in the executive boards and MFI performance do follow the pattern predicted by the *critical mass hypothesis*. The rest of the paper is organized as follows. Section 2 delineates what the *critical mass hypothesis* postulates. A description of the sample, data and methodology is contained in Section 3. The findings of the present study are reported in Section 4. Finally, Section 5 contains concluding remarks.

2. THE CRITICAL MASS HYPOTHESIS

In her seminal work on group interaction processes, Kanter (1977a, 1977b) construct four different categories of groups based on their composition: *Uniform Group*, *Skewed Group*, *Tilted Group* and *Balanced Group*. In a *Uniform Group* all members share the same visible characteristics (all men or all women). But in a *Skewed Group* one dominant type (e.g. the men) controls the minority (e.g. the women). In a *Skewed Group* the minorities are called the 'tokens'. Women cope with a token status by either pretending that the differences between women and men do not exist, or they hide their individual characteristics behind stereotypes. Kanter (1977a, 1977b) suggests that a men-dominated *Skewed* group consists of up to 20 percent women. *Tilted Groups* are still dominated by men but have less extreme distribution where minority members can ally and influence the culture of the group. According to Kanter (1977a, 1977b), a men-dominated *Tilted Group* consists of 20 to 40 percent women. Minorities in *Tilted Groups* are said to have reached a critical mass and they are likely to exhibit behavior that is distinct from that of the majority rather than just conforming to the majority norm. Finally, in a *Balanced*

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Group, majority and minority members turn into potential subgroups based on individual abilities and skills instead and gender-based differences become less and less important. A *Balanced Group*, per Kantor, consists of 40 to 60 percent women. With an increase in their relative numbers from a *Skewed* to a *Tilted* or even a *Balanced* group, women are more likely to be individually differentiated from each other and as a consequence, they might also bring in their different knowledge-bases, skills and perspectives to the table.

In sum, *critical mass theory* postulates that, until a certain threshold or critical mass of women in a group is reached, the focus of the group members is not on the different abilities and skills that women bring into the group. Per the critical mass hypothesis, firms falling in the *Skewed Groups* will have a lower performance than *Uniform Groups* or *Tilted* and *Balanced Groups*. Furthermore, firms in the *Tilted* groups, with a critical mass of twenty to forty percent women, will outperform the firms in the *Uniform* and *Skewed* groups.

3. SAMPLE, DATA AND METHODOLOGY

The *critical mass hypothesis* is empirically tested using a sample of ninety five MFIs from Bangladesh. The 2009 annual reports for these ninety five MFIs were collected from the PKSF and the data obtained from those reports are used in the current study.

Following Kanter's work (1977a, 1977b) these ninety five MFIs were grouped into following four categories based on the proportion of women directors, in relation to the board size, serving in the executive board – (1) *Uniform* group, where there is no women representation in the executive board, (2) *Skewed* group, where up to 20% women serve on the executive board, (3) *Tilted* group, where 21% to 40% women are on the executive board, and finally, (4) *Balanced* group, where women represent more than 40% of the executive board. Three alternate proxies are used to capture MFI performance – (1) financial spread, (2) portfolio yield and (3) return on assets. These proxies were calculated as follows:

Financial spread = Net operating income / Loan portfolio

Portfolio yield = Operating income / Loan portfolio

Return on assets = Net operating income / Average annual assets

4. EMPIRICAL RESULTS

Summary statistics on women representation in MFI executive boards in Bangladesh can be found in Table 1. The mean, median, minimum and maximum values for the number of women directors, size of

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Table 1
Summary Statistics on Women Representation in MFI Executive Boards

Variable	N	Mean	Median	Minimum	Maximum
Number of women directors	95	2.42	2.00	0.00	13.00
Executive board size	95	8.29	7.00	5.00	25.00
Proportion of women in the executive board (%)	95	0.29	0.29	0.00	1.00

the executive board and the proportion of women directors in relation to executive board size are reported in this table. The number of women directors range from 0 to 13 with a mean and median value of 2.42 and 2 respectively. The average size of the executive board is 8.29 and ranges from 5 to 25 with a median value of 7. Both the mean and median values are the same, 2, when it comes to proportion of women in the executive board with a range from 0 percent to 100 percent. Table 2 reports the frequency distribution of women MFI directors in Bangladesh. About 13 of the sample MFIs has no woman in the executive

Table 2
Frequency Distribution of Women Directors in MFI Executive Boards

No. of Women Directors	Frequency	Percent
0	12	12.63
1	27	28.42
2	22	23.16
3	10	10.53
4	12	12.63
5	5	5.26
6	2	2.11
7	2	2.11
8	1	1.05
9	1	1.05
13	1	1.05
Total	95	100.00

board. 49 MFIs and about 52 percent of the sample, have two or less women directors. Only about 23 percent MFIs has 3 or 4 women in the board and 13 percent has 5 or more.

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Both the mean and median values for the 3 proxies of MFI performance, grouped under the *Uniform*, *Skewed*, *Tilted* and *Balanced* groups, are reported in Table 3. A look at the mean and median

Table 3

Women Representation in the Executive Board and MFI Performance

Variable	N	Mean	Median
MFIs in *Uniform* Group (no woman in the executive board)			
Financial spread	9	0.10	0.12
Portfolio yield	9	0.18	0.19
Return on assets	6	0.07	0.07
MFIs in *Skewed* Group (0% < women in the executive board < 20%)			
Financial spread	23	0.09	0.09
Portfolio yield	25	0.19	0.20
Return on assets	15	0.09	0.09
MFIs in *Tilted* Group (20% ≤ women in the executive board ≤ 40%)			
Financial spread	25	0.12	0.10
Portfolio yield	25	0.27	0.21
Return on assets	19	0.10	0.10
MFIs in *Balanced* Group (women in the executive board above 40%)			
Financial spread	24	0.09	0.09
Portfolio yield	29	0.19	0.20
Return on assets	13	0.09	0.09

Notes:

1. Financial spread = Net operating income / Loan portfolio
2. Portfolio yield = Operating income / Loan portfolio
3. Return on assets = Net operating income / Average annual assets

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values of all three performance proxies shows that the MFIs grouped under the *Skewed* category record a lower performance than those in the *Uniform*, *Tilted* and *Balanced* Groups. Also, the performance of MFIs in the *Tilted* category, with 20 to 40 percent women in the board, exceeds those in the *Uniform* and *Skewed* categories. The results reported in the present study are, indeed, consisted with what the *critical mass hypothesis* postulates.

5. CONCLUDING REMARKS & IMPLICATIONS

The present study provides convincing empirical evidence that the *critical mass hypothesis* does hold up in the microfinance sector. Per the predictions of the *critical mass hypothesis*, the MFIs under the *Skewed* category perform worse than those under the *Uniform*, *Tilted* and *Balanced* categories. Furthermore, the performance of MFIs grouped under the *Tilted* category, with a critical mass of 20 to 40 percent women in the board, outweigh those grouped under the *Uniform* and *Skewed* categories.

The *critical mass hypothesis*, in some variations, has been embraced by many countries when it comes to governance reforms related to political participation as well as for-profit corporate boards. The 1995 Beijing Platform for Action (4th World Conference on Women, Beijing, 1995) proposed a 30 percent *critical mass* in elected positions around the globe. As far as the for-profit sector is concerned several countries either already mandated or are in the process of mandating women quota or equivalent for corporate boards. To name a few - Norway became the first to introduce gender quotas for the Norwegian public companies in 2005 requiring 40 percent women representation in the board (if the board of directors has more than nine members) by early 2008; Malaysia in 2011 approved a policy whereby 30 percent female board representation is required; Belgium passed a new law (effective September 2011) requiring one-third of the directors to be women; Netherlands requires 30 percent women representation in the board effective January 1, 2013; Spain requires all listed companies to appoint 40 percent of all board seats to women by 2015; effective January 2017, France requires 40 percent quota for women; Brazil requires 40 percent by 2022; etc. As far as the MFIs are concerned, the relevant authorities in various countries have only begun the dialogue on governance reforms to ensure women representation in the boards. Bangladesh seems to be among one of the first countries to require at least 2 women in the general board of the MFIs (MRA Rules, 2010). While this is a positive step in the right direction, as the present study shows, the focus should be to include more women in the executive board of the MFIs in some systematic fashion because of the obvious direct positive contribution it makes to the day to day operations of a sustainable organization. Furthermore, when formulating relevant policies the regulators should consider requiring MFIs to have women representation in the board as a proportion of the board-size instead of just requiring an arbitrary number, as prevalent in many countries.

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