

Gender Diversity in the Boardroom and the Firm Financial Performance of DSE Listed Companies in Bangladesh

Shobnom Munira

Assistant Professor, Department of Business and Technology Management (BTM), Islamic University of Technology (IUT), **BANGLADESH**

*Corresponding Contact:
Email: shobnom@iut-dhaka.edu

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ABSTRACT

The effect of gender diversity on firm performance is a long debated topic in the business world. The percentage of women representation in the board of directors is comparatively low than women presence in the general population and in the corporate world. Some research suggests board diversity as one of the corporate governance mechanisms that improve firm performance whereas other research suggests the opposite. This study intends to investigate the association between women representation in the boardroom and the companies' financial performance indicator of Dhaka Stock Exchange (DSE) listed companies in Bangladesh. Total 259 companies' data from 18 different sectors of DSE are collected from the audited published annual reports. The sample are selected through simple random sampling technique. The data are analyzed using descriptive analysis, correlation analysis and ordinary least square regression method. The study findings indicate that there is positive association between women representation in the boardroom and firm financial performance indicator.

Key Words: Gender Diversity, Boardroom, Firm Performance, DSE Listed Companies, Bangladesh

INTRODUCTION

Gender diversity in the board of directors is a high-profile discussion point in today's corporate world. Though the presence of women in the general population and in the corporate world is high, the representation of women on boards is limited (Conyon and He, 2017). Even though women are holding 15 percent of board seats but the CEO and board chair positions are only 4 percent (The Financial Express, 2019). According to a recent research on gender diversity in boards conducted by IFC indicates that, women represented 17 percent of listed companies' board of directors in 2017 which rises to 18 percent in 2018. Moreover, the sustained progress of women as independent directors was 3 percent last year which rises to

4 percent now is also highlighted. The significant participation of Bangladeshi women was publicized in the World Economic Forum's Global Gender Gap Index 2020, where the rank of Bangladesh is in 50th place out of 153 countries. Because of the low presentation of women on boards of directors worldwide, companies' boardrooms are not yet much diverse as the concern of gender diversity in general (Dutta and Bose, 2007). Therefore, this study is performed to analyze the association between women representation in the boardroom and the companies' financial performance of DSE listed companies in Bangladesh.

LITERATURE REVIEW

The relationship between gender diversity and firm financial performance in Malaysia is examined in some studies. Julizaerma and Sori (2012) investigated the association between gender diversity in the board of directors and firm performance of the companies listed in Bursa Malaysia. The result of the study suggested positive relationship between gender diversity and firm performance which indicates that firm performance may influenced by women directorship. Khan et al. (2017) analyzed the relationship between gender diversity among corporate board and firms' financial performance using 100 non-financial companies in Malaysia. The result of the study showed women representation among the board of directors has significant positive impact on the companies' financial performance. Yap et al. (2017) analyzed the relationship between gender diversity in a firm's board of directors and firm financial performance on Bursa Malaysia using unbalanced panel data analysis. The result of the study suggested that higher women representation on the board of directors increases a company's financial performance.

The investigation of the relationship between women representation on board of directors and firm financial performance is also done by other countries worldwide. Mentis (2011) investigated the association between women representation on board of directors and companies' financial performance of Istanbul Stock Exchange (ISE) Industrial Index firms. The study result revealed that there is a negative relation between Tobin's q and women representation on board of directors. The result also showed that the relationship between return on assets and women representation on board of directors is insignificant for ISE Industrial Index listed firms. Assenga et al. (2018) examined the impact of board characteristics on the financial performance of listed firms in Tanzania by using balanced panel data regression analysis. The result of the study revealed that gender diversity has a positive impact on financial performance. Furthermore, the results of the study do not support the relationship between financial performance and board size. Naseem et al. (2017) analyzed the relationship between board features and companies' financial performance of the listed companies in Pakistan Stock Exchange with Panel Data regression analysis. The study result revealed that firm size, number of board of directors and unbiased audit committee are positively related with companies' financial performance, whereas board independence and women representation in the board of directors are negatively related with companies' financial performance. Ionascu et al. (2018) examined the relationship between gender diversity on corporate boards and firm performance for a European emerging market. A sub-sample of the study showed positive relationship between financial performance and gender diverse board of directors. On average, the study revealed that women representation in the boardroom has no significant impact on firm-performance. Darmadi (2011) examined the relationship between board members diversity and firm financial performance of Indonesia Stock Exchange (IDX). The study result showed that both accounting and market performance have significant negative associations with gender diversity. Solimene et al.

(2017) investigated the relationship between gender diversity on corporate boards of Italian listed companies. The result of the study showed that the percentage of professional qualified women directors and the percentage of women board of directors of other companies have consistently increased during the mentioned time.

Miller and del Carmen Triana (2009) analyzed how board diversity is related to firm performance through two mediators: firm reputation and innovation. The study result showed a positive relationship between board racial diversity and both firm reputation and innovation. Moreover, the result suggested a positive relationship between board gender diversity and innovation. Conyon and He (2017) analyzed the relationship between firm performance and boardroom gender diversity using quantile regression methods. The result of the study showed that the influence of female directors is significantly positive in profitable firms rather than low-profit firms. The instrumental variable quantile regression suggested that there is a positive correlation between companies' financial performance and gender diversity in the boardroom. Post and Byron (2015) combined the results of the relationship between women on boards and firm financial performance from 140 studies and investigated whether the results of those studies differ by companies' regulatory and cultural circumstances. The result of the study suggested that women representation in the boardroom is positively related to companies' financial returns and this relationship is significant in influential shareholder protected countries.

Some studies are performed to examine the association between the women representation in the boardroom and the financial performance of the commercial banks in Bangladesh. Dutta and Bose (2007) examined the association between the women representation in the boardroom and the financial performance of commercial banks in Bangladesh. The study faced some limitations of data unavailability. Hence, the analysis has yielded conflicting results at different significance levels. Das (2017) investigated the impact of corporate governance mechanisms (board size, the proportion of independent directors on board, the proportion of female directors on board, institutional ownership and size of audit committee) on firm's performance on listed conventional banking companies at Dhaka Stock Exchange (DSE). Uddin et al. (2017) measured the impact of corporate governance on firm performance in commercial banks of Bangladesh. The study result showed that good corporate governance principles improves firm performance. To analyze the association between the women representation in the boardroom and the financial performance, no study is done for all the DSE listed sectors in Bangladesh yet. Therefore, this study will be helpful to analyze the association between gender diversity and firm financial performance of the companies of all the DSE listed sectors.

OBJECTIVE OF THE STUDY

By the gap found in the literature review, the main objective of the study is to analyze the association between gender diversity and firm financial performance of the companies of all the DSE listed sectors. To achieve the main objective, the following sub-objectives are set:

- To determine the Return on Assets of the sample companies as financial performance indicator.
- To investigate the women representation in the board of directors of the DSE listed companies.
- To study the association between gender diversity and firm financial performance of the DSE listed companies.
- To make some suggestions for policy implications.

HYPOTHESES OF THE STUDY

Based on the previous argument, the study proposes the following hypothesis to be tested:

- H₀: Return on Assets is not positively associated with women representation in the board of directors.
- H₁: Return on Assets is positively associated with women representation in the board of directors.

METHODOLOGY

Selected Variables

The study sets one dependent variable, one independent variable and three control variables which are interchangeable variables previously used in other research. Since the variables are tested in previous research, these variables are assumed to be constant while conducting the analysis as they have the probability to influence the Return on Assets. The measurement scale on each variable used in the study is as follows:

Table 1: Measurement Scales of the Variables

| Variables | Variable Type | Measurement Scale |
|-----------------------------|----------------------|---|
| Women Directors Percentage | Independent Variable | Number of women directors on the board/Number of total directors on the board |
| ROA | Dependent Variable | Earnings before Interest and Taxes/Total Assets |
| Board of Directors Meetings | Control Variable | Total number of board meetings convened within the financial year |
| Board Size | Control Variable | Total number of directors on the board |
| Firm Age | Control Variable | Number of years of business operation |

The OLS-regression is constructed for the variables used in this research. All the findings of the regression analysis are stated using f-statistics and the relation with the dependent variable is expressed using coefficients. The regression model is established to test the relationship between women percentage in the board of directors and the companies' financial performance as follows:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \xi_i \dots \dots \dots (i)$$

$$ROA = \alpha + \beta PWOMEN + \beta BSIZE + \beta FAGE + \beta BMEETING + \xi_i$$

Sampling and Data Collection

Based on the objective of the study, the research data is collected from the listed companies of Dhaka Stock Exchange (DSE) represent different industries of the economy. The reason behind choosing sample from DSE listed companies is- these companies are public limited companies. Hence, DSE listed companies must have an annual report which is the main source of data collection for this study. The annual data of selected firms are from 18 sectors of DSE collected from 2018 to 2019. The total firm observations are 259. For the selection of the samples, simple random sampling technique is used. Audited and published annual reports of the selected companies are the source of collecting data related to the board of directors and companies' financial performance. Table 2 present the frequency distribution of selected companies in different sectors.

Table 2: Sample Distribution

| Sector | No. of Companies |
|-----------------------------|------------------|
| Bank | 30 |
| Cement | 7 |
| Ceramics | 5 |
| Engineering | 38 |
| Financial Institutions | 22 |
| Food & Allied | 7 |
| Fuel & Power | 18 |
| Insurance | 30 |
| IT Sector | 10 |
| Jute | 2 |
| Miscellaneous | 9 |
| Paper & Printing | 1 |
| Pharmaceuticals & Chemicals | 28 |
| Services & Real Estate | 3 |
| Tannery Industries | 5 |
| Telecommunication | 2 |
| Textile | 37 |
| Travel & Leisure | 5 |
| Total | 259 |

ANALYSIS AND INTERPRETATION OF DATA

Graphical Analysis of Gender Diversity in Different Sectors

Figure 1 shows the average percentage of women in the board of directors in different sectors of DSE listed companies. From Figure 1, it can be derived that Insurance companies' board of directors represent the highest percentage of women directors. On the other hand, Paper and Printing companies of our sample have no woman in the board of directors.

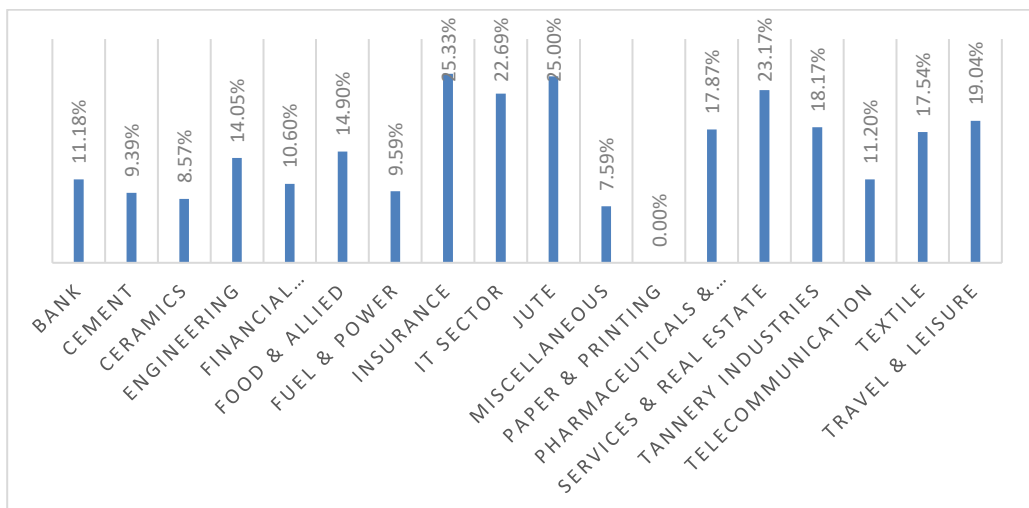


Figure 1: Average Percentage of Women in the Board of Directors in Different Sectors

Descriptive Analysis

Table 3 shows descriptive statistics of the variables used in this study. The ROA of the selected companies are quite significant and the maximum ROA is 44.21% whereas the mean of ROA is 4.77%. The mean of women director percentage is 15.45%, which indicates significant progress of women in obtaining key decision-taking role of a company. The mean firm age of the selected companies are 27 years. The DSE listed companies board meeting held on average eight times in a year.

Table 3: Descriptive Statistics of the Variables

| <i>Variables</i> | <i>Minimum</i> | <i>Maximum</i> | <i>Mean</i> | <i>Std. Deviation</i> |
|--------------------------------------|----------------|----------------|-------------|-----------------------|
| Return on Assets (ROA) in percentage | -.2221 | .4421 | .0477 | .0668 |
| Women Director Percentage | .0000 | .6600 | .1545 | .1445 |
| Total Board of Directors | 3.0 | 22.0 | 9.236 | 4.1627 |
| Firm Age | 7.0 | 119.0 | 27.954 | 14.3104 |
| Board meeting held in a year | 1.0 | 29.0 | 8.220 | 5.2134 |

Correlation Analysis

Table 4 shows the correlation between each variable tested in this study using bivariate analysis. In this study, there is positive correlation between women representation in the board of directors and firm performance having insignificant effect. ROA and number of board meetings held in year shows negative correlation with significant effect. The board size and board meeting which are control variables of the study are positively correlated having high significant impact at 1 percent.

Table 4: Correlation Analysis of the Variables

| | <i>ROA</i> | <i>PWOMEN</i> | <i>BSIZE</i> | <i>FAGE</i> | <i>BMEET</i> |
|---------------|------------|---------------|--------------|-------------|--------------|
| <i>ROA</i> | 1 | .070 | -.026 | .075 | -.241** |
| <i>PWOMEN</i> | | 1 | .050 | -.048 | -.105 |
| <i>BSIZE</i> | | | 1 | .027 | .165** |
| <i>FAGE</i> | | | | 1 | .101 |
| <i>BMEET</i> | | | | | 1 |

** Significant correlation at the 0.01 level (2-tailed).

ROA = Return on Assets

PWOMEN = Women Directors Percentage

BSIZE = No. of Board of Directors

FAGE = Total Business Operation years

BMEET = Board Meetings held in a financial year

Regression Analysis

Regression analysis shows the impact of the independent variable on the dependent variable and also measures the model fitness on the data. The results of the regression analysis presented in table 5 shows that some variables have positive relationship but insignificant effect with companies' return on assets (ROA) which is assumed as the firm's financial performance indicator. Moreover, the study also depicts negative and significant relationship of some variables with the companies' financial performance. The women representation percentage in the board of directors which is the independent variable in this study has a positive relationship

with the selected companies' financial performance. This result supports the hypothesis that *Return on Assets is positively associated with women representation in the boardroom*. The results have insignificant effect when $p > 0.05$. The insignificant effect of this independent variable may be explained by very few number of woman director in the board of directors. This result is similar to a prior study done by (Wang and Clift, 2009) where there is insignificant relationship between women representation on the boardroom and the companies' financial performance because of few female directors in the sample. The board size and the firm age illustrate positive relationship with companies' financial performance having insignificant effect. Moreover, number of board meetings held in a financial year has negative relationship with significant effect which is consistent with the previous research (Julizaerma and Sori, 2012).

Table 5: Regression Analysis

| <i>Model</i> | <i>Coefficient</i> | <i>t-statistic</i> | <i>Significant</i> |
|------------------------------|--------------------|--------------------|--------------------|
| (Constant) | .056 | 3.969 | .000 |
| Women Director Percentage | .048 | .792 | .429 |
| Total Board of Directors | .010 | .159 | .874 |
| Firm Age | .102 | 1.683 | .094 |
| Board meeting held in a year | -.248 | -4.000 | .000 |
| R-Square | .071 | | |
| F-Statistics | 4.827 | | |

CONCLUSIONS AND RECOMMENDATIONS

The study concluded that positive correlation and association exist between gender diversity in the boardroom and firm financial performance. However, the results do not have significant effect. This may be because of the small number of women directors in the sample companies' board of directors. In Bangladesh, women have significant participation in key decision-making areas. However, women representation in the board of directors of Bangladeshi companies is still relatively low. There are some limitations that can be improved on this study for future research. Firstly, collecting consistent sample that includes women director is difficult. Secondly, there can be some omitted variables in the regression model which could lead to better analysis of the firm financial performance. Thirdly, the use of ROA as a proxy for financial performance has its own limitations. Other financial indicator as a measurement could lead to better result in the findings. Lastly, only two financial years cannot reflect the overall scenario. The implications of the study are-the outcome of the study can be used by the board of directors of the companies and also by the policy makers for future decision making. It is recommended that firms should gain the advantage of having better financial performance by more gender diverse boardrooms. If women are more involved in the board of directors of the companies, there will be positive impact in the society through women empowerment and better financial performance by the companies. Firms' better financial performance could be a motivation for performing large number of corporate social activities. Therefore, future research can be performed by focusing on the gender diversity in the board of directors and the firm social performance in Bangladesh.

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