Ownership Structure, Board Characteristics and Firm Performance: Evidence from Bangladesh

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Received: January 18, 2023; Accepted: February 27, 2023; Online Published: February 28, 2023

doi:10.5539/ijef.v15n3p35 URL: https://doi.org/10.5539/ijef.v15n3p35

Abstract

Using a panel of listed manufacturing companies in Bangladesh, this paper intends to empirically assess the relationship between firm-level governance mechanisms and firm performance using an integrated theoretical framework. For this purpose, data has been compiled from Dhaka Stock Exchange (DSE); and published yearly annual reports of particular organizations. The empirical findings of this paper shed light on the impact of ownership structure and board characteristics on its firm’s performance measure by the accounting rate of the return on assets. Although these results are in line with the majority of the literature, this model can still be examined using other proxy measures of firm performance and/or more years of observation. Findings of this study can be useful to managers, investors, and regulators, especially those who want to change their company’s ownership structure and board composition to increase its performance on the stock market.

Keywords: corporate governance, ownership structure, board characteristics, firm performance, manufacturing companies, Bangladesh capital market

1. Introduction

The corporate governance (CG) framework was developed utilizing agency theory, which suggests that good corporate governance can lessen agency issues and increase firm value. Corporate governance is a term used to describe the best way to ensure a company is accountable to its stakeholders (Solomon & Solomon, 2004). Due to corporate-level scandals in the world’s major economies, it has achieved the prominence it holds today. The experience obtained from these scandals has helped the less developed nations make some proactive measures aimed at improving corporate responsibility and performance. External factors include the legal framework, market control, and financial accounting standards; internal mechanisms include ownership structure, the board of directors, and financial policies. The current study investigates the effect of one mechanism. The present study examines the impact of one mechanism - ownership structure and board characteristics - on firm’s performance for listed manufacturing companies of Dhaka Stock Exchange (DSE) for the period of 2015 to 2019.

Promoters/sponsors, managers, block holders, institutional holdings, foreign holdings, family members, etc. typically make up the ownership concentration. Ownership structure of a company is an important area of research due to the effect of agency theory. If management is not given control of the companies, the management may take advantage of any opportunity to ensure their own interests, which essentially undermines the principle of shareholder wealth maximization. Although this is a contentious field of study, researchers are yet to reach any consensus (Fazlzadeh, 2011).

Investor confidence has been undermined by corporate failure, controversy, and stock market disasters worldwide in the early 2000s. In light of this devastating fallout, researchers, regulators, practitioners, and investors have questioned what went wrong. This troubled corporate world signals to all interested parties that corporate governance needs to be scrutinized. Are the corporations properly governed so that control of the corporation is not centralized in the hands of management? Are shareholders and other stakeholders taking part in the corporate governance so that corporate practice remains unbiased, efficient, and goal driven? Is corporate governance sufficiently decentralized and or distributed among different stakeholders so that management is monitored and controlled properly? Many studies have been undertaken in this area in developed nations, looking at the relationship between ownership structure and performance or the relationship between corporate governance and performance.

According to Popli et al. (2017a, b); Singh et al. (2017), an “all-in-one” CG approach based on agency theory is unreliable. As a result, future research on board characteristics and firm performance must take a
multi-theoretical perspective in order to be useful to policymakers and practitioners (Singh & Gaur, 2009). This research represents an effort in that direction. The researcher combines agency theory, resource dependence theory, stewardship theory, and stakeholder theory to build the hypothesis linking board attributes to corporate performance.

Given the context, this paper intends to inspect whether ownership structure and board characteristics have any impact on the firms’ performance. The current study makes numerous contributions to the corpus of knowledge already in existence. Firstly, the study investigates how CG affects the performance of manufacturing firms in emerging economies. Secondly, the study looks at the validity of the multi-theoretic framework developed by Gaur et al. (2015) to account for the various roles played by board members. Finally, it provides empirical findings on Bangladeshi boards’ effectiveness, a setting less explored in the literature.

The remainder of the paper has been organized as such. After this brief prelude, part 2 introduces a thorough overview of the literature. The current study’s methodology is described in part 3, while the findings of the data analysis are presented in part 4. Finally, the last section has made concluding remarks.

2. Literature Review

The main literary theme and the focus of a plethora of empirical studies have been the connection between ownership concentration and firm performance. Inconsistency and disagreement over the nature and direction of this relationship can be seen in the present literature, though. The United States in particular, and other developed market countries, have been the focus of the majority of this research. Few research has taken into account emerging market economies. By examining the nature of the relationship in the context of an emerging economy like Bangladesh, this study seeks to add to the existing literature. Moreover, agency theory is the cornerstone of governance research. Theoretically, the monitoring and control roles are based on agency theory, the strategy roles are based on resource dependency and stewardship theories, and the service roles are based on stakeholder theory. The researcher investigates these four theories in the following section that follows to understand how they relate to board effectiveness in particular and governance issues in general.

2.1 Agency Theory

The main principle of agency theory is that managers frequently behave against the best interests of the shareholders because they are motivated by their own objectives. Self-interest-driven behaviors of managers raise the costs to the company, which may include the expenses of contract structure, the costs of observing and policing agent behavior, and losses sustained as a result of agents’ suboptimal judgments. By using properly drafted contracts that specify the rights of agents and principals, these agency difficulties can be overcome (Jensen & Meckling, 1976). Yet, unanticipated occurrences or circumstances call for the allocation of residual rights, the majority of which go to the agents (managers), giving them the authority to allocate cash as they see proper (Shleifer & Vishny, 1997). Therefore, the agency issues are encapsulated by the greater managerial discretion that results from the impossibility or difficulty of writing flawless contracts.

Scholars recommend alternative governance systems to handle agency problems because it is challenging to mitigate agency problems through the use of contracts. Owners can directly encourage management to safeguard their interests through a governance mechanism called ownership concentration (Shleifer & Vishny, 1986; Coffee, 1991; Maug, 1998). A board’s function in overseeing company management becomes even more crucial when ownership is widely dispersed because no single owner may have sufficient influence to change the composition of the board (Dalton et al., 1998; Daily et al., 2003).

2.2 Stewardship Theory

Stewardship theory rejects agency theory, arguing that most agents are reliable and responsible with the resources they are given, negating the need for oversight (Donaldson, 1990; Davis et al., 1997). Davis et al. (1997) found that managers who identify with their firms have the propensity to personalize the latter’s success or failure. Managers strive to maximize financial performance, especially shareholder returns, because how the firm performs directly impacts how managers are perceived as performing personally (Daily et al., 2003). From the standpoint of stewardship theory, CEO duality, or having the same person serve as both chair and chief executive, is advantageous since it boosts corporate performance through clear, unified leadership and goal alignment (Davis et al., 1997).

2.3 Resource Dependence Theory

Resource dependence theory states that groups try to influence their environment by coopting the resources required for survival (Pfeffer & Salancik, 1978). In light of this, this viewpoint sees the board’s composition and governance structure as a resource that can benefit the company (Johnson et al., 1996; Carpenter & Westphal, 2001). The resource dependence theory has been used by a number of academics to analyze board composition and its impact on firm performance. They have discovered indications to back up the idea that boards have a
bigger impact on obtaining resources from the outside environment than they do on simply monitoring firm management (Pearce & Zahra, 1992; Hermelín & Weisbach, 1988). A bigger board increases the organization’s knowledge and resource pool, and more qualified members increase the pool’s quality (Dalton et al., 1999).

2.4 Stakeholder Theory
Stakeholders are “any group or individual who can affect or is affected by the fulfillment of the organization’s objectives,” according to Freeman (1984), one of the stakeholder theory’s original proponents. Although this definition of stakeholders is rather broad, other academics have offered more specific definitions. Stakeholders, for example, are people or organizations with legitimate interests in the substantive and/or procedural operations of a corporation, according to Donaldson and Preston (1995). It signifies a departure from agency theory, which takes a more restrained stance and focuses mostly on the interests of the shareholders.

Having members from these groups on the board is crucial in order to serve the interests of all stakeholder groups, as suggested by stakeholder theory. Therefore, managers should not attempt to identify all stakeholders as it is an impractical undertaking (Sundaram & Inkpen, 2004). As a result, it is unclear how stakeholder theory may be used to analyze board composition and its effects on performance. Stakeholder theory also suggests a positive relationship between board size, board competency, and firm performance at the most fundamental level, presuming that a bigger, more capable board may be better able to safeguard the interests of various stakeholder groups.

2.5 An Integrative Approach
These theories provide a different emphasis on how the board influences the company’s performance. Gaur et al. (2015) recommended merging these theories utilizing ownership concentration (agency theory) as the primary strategy to lessen agency difficulties. This study is being conducted in a developing economy. In addition to highlighting the agency theory’s critical importance, the study also adopts the resource dependency theory and illustrates the board members’ supportive stance. Figure 1 displays the conceptual model for this investigation.

![Figure 1. An integrative framework of firm governance and firm performance](image)

2.6 Ownership Concentration
Although Berle and Means (1932) initially hypothesized a relationship between ownership concentration and performance, some of the subsequent investigations failed to find one (Demsetz & Lehn, 1985; Demsetz, 1983 and etc). Demsetz and Lehn’s (1985) study, which considered ownership structure to be an endogenous variable, looked at the association between accounting profit rate and the proportion of shares held by the top five and ten shareholders, but failed to find any support for it for U.S. corporations. Although there are larger incentives to monitor when there is a higher concentration of ownership, they suggested that the expected benefit from active monitoring and the price of alternative ownership arrangements vary across organizations. Morck et al. (1988) overlooked the endogenous problem and obtained comparable results. The negative association of the study variables was confirmed by Amin and Hamdan (2018); Abdullah et al. (2019) and so on.

Kao et al. looked into the impact of ownership concentration on the financial performance of Taiwanese listed companies from 1997 to 2015. (2019). The study discovered a significant positive impact of foreign ownership
on enterprises’ financial performance using the 2SLS regression model. Similar evidence was discovered by Saleh et al. (2017), Al-Matar et al. (2017), and Detthamrong (2017). According to Bui et al. (2004), when shares are issued to overseas investors, the requirement for more transparent financial disclosure for cross-border listings and the monitoring influence of the often more knowledgeable foreign investors both increase the firms’ valuation. Among other governance practices, they found that CEOs serving as board chairs have a detrimental impact on firm valuation, demonstrating that boosting the board of directors’ independence can improve business performance. They also discover that businesses tend to have lower market valuations when the state is the major stakeholder. Gürbüz et al. (2010); and Tsegba and Ezi-Herbert (2011) in developing countries confirmed similar findings.

There have been several research done on the connection between state ownership and corporate performance. Among them, Tian (2002) discovered that a firm performs poorer when there is little government ownership; yet, a firm performs better when there is considerably more government ownership.

The aim of the study of Rashid (2020) was to investigate how corporate board features mediated the association between ownership structure and company performance of listed public limited enterprises in Bangladesh. The findings showed that institutional ownership only has a positive influence on accounting-based performance while foreign ownership and director ownership had a significant positive impact on both market- and accounting-based business performance (return on assets). The findings indicate that the association between ownership structure and firm performance is partially mediated by board size and board independence.

The research for emerging countries generally concluded, as can be seen from the aforementioned, that there is a positive relation between ownership concentration and performance. As a result, there is disagreement among the empirical findings regarding how ownership concentration affects company performance. Additionally, because earlier research primarily concentrated on large industrialized nations that had already finished the institutionalization process, its findings might not apply to developing nations. The author of this study has attempted to close this gap by analyzing this problem for a developing economy, namely Bangladesh.

### 2.7 Board Independence and Competence

If the board chair is not the company CEO, the board is more likely to have a high level of independence. Following the agency rationale, academics and decision-makers support board independence on the grounds that a board that is independent of firm management would be successful in overseeing the management of the company (Bertoni et al., 2014). On the other hand, many academics argue against board independence based on the stewardship theory, which proposes that the CEO be assigned the role of board chair for the company to have a unified structure of control and command (Anderson & Anthony, 1986). According to Davis et al. (1997) and Finkelstein and D’Aveni (1994), the stewardship theory also opposes having foreigners on the board since they lack the necessary knowledge of the advantages and disadvantages of the companies to be able to provide any useful advice. Boyd (1995) found that CEO duality was associated with better performance among USA enterprises than CEO and board chair separation, which is consistent with this viewpoint. Similar to this, a company’s performance may be affected by the personal relationships of its board of directors (Anderson & Reeb, 2003).

The ideal number of board members has not been determined, and it is still unclear how the size of the board affects a company’s performance. Nonetheless, both the resource dependence approach and the stakeholder theory indicate a strong correlation between board size and performance. According to the notion of resource dependence, companies choose their board members to maximize the availability of essential resources to the organization (Pfeffer & Salancik, 1978; Pfeffer, 1972). A larger board increases the company’s links to the outside world and makes it easier for it to get access to crucial resources (Pearce & Zahra, 1992; Pfeffer, 1972). According to the stakeholder theory, companies that can please all stakeholder groups create higher value for both shareholders and other interest groups (Freeman et al., 2004). A larger board can ensure that the interests of various stakeholder groups are not compromised and can effectively interact with them. Hence, a board’s size can be used to gauge its competence.

### 3. Methodology

#### 3.1 Sample and Time Frame

This study uses a data set of manufacturing companies listed on the DSE for the years 2015-2019 to explore the hypotheses presented in the previous section. Since the nature of these businesses differs from businesses in other industrial sectors in terms of regulations, financial statement profitability measures, and liquidity assessment, all banks, insurance companies, and other financial institutions are excluded from this study (Zeitun & Tian, 2007; Pinar & Guluzar, 2010; Al-Saidi, 2020; and Soliman, 2013). Data concerned with companies’ ownership concentration are gathered from Dhaka Stock Exchange (DSE); and board characteristics and firms’ performance are taken from its published annual reports.
3.2 Variable Description

Broad objective of the study is to find out whether ownership concentration and board characteristics affect the firm performance of the sample companies. For this purpose, return on assets (ROA); and return on equity (ROE) have been taken as proxy variables for measuring firms’ performance which were used by the earlier researchers reported in Table-1 (Popli et al., 2017a, b; Contractor et al., 2016). ROA and ROE are employed as a backward-looking accounting performance indicator in this study. The ratio of earnings before interest and taxes (EBIT) to the book value of all employed assets is used to calculate the aggregate rate of return on capital (ROA), whereas the ratio of earnings before interest and taxes (EBIT) to shareholders’ equity is used to calculate the aggregate rate of return on equity capital (ROE).

To further explore how ownership structure affects a firm’s performance, the study examined ownership concentration (OC) as the most crucial variable. The study employed Managerial Ownership (MO), Institutional Ownership (IOC), Foreign Ownership (FOC), Government Ownership (GOC), and Public holding (POC) as proxy variables to measure the ownership concentration of firms.

Besides, the study examined board characteristics into two categories - board competency and board independence. Board size (BS) is used as a proxy of board competence; CEO duality (CEO_Dul); and Family Relationship between board members (FMR) is used as proxy variables of board independence. As for ‘CEO duality’ and ‘family relationship between board members’, both are binary variables. The value of CEO duality is 1 if the CEO also serves as Chairman and 0 otherwise, whereas the value of a family relationship between board members is 1 if at least 20% of them are related and 0 otherwise.

As shown in Table 1, additional firm- and industry-level characteristics have also been employed as control variables to study the effect of ownership concentration on firms’ performance. For the purposes of the study, firm size (FS), as indicated by the natural logarithm of total assets, is regarded as a significant element that influences performance. Because of its scale, a large company is more likely to outperform smaller ones in terms of market value and financial performance (Dwipayani & Prastiti, 2014). Meriyani et al. (2021) used data from 55 manufacturing sector-listed companies on the Indonesia Stock Exchange to find that the size of the firm had no impact on the financial performance of the firm as measured by ROA and ROE.

Furthermore, the number of years between the firm’s incorporation year and 2019 is referred to as the firm’s age. According to Berger and Udell (1998), companies go through phases of financial cycle growth and capital structure transformation as they age. If they are unable to innovate, older companies risk approaching the end of their product life cycle, while younger companies are still trying to make a name for themselves and may run into scaling issues as they expand. They show that as businesses age, their performance complexity increases (Ujunwa, 2012).

As a control variable, financial leverage (LEV), which is calculated as the ratio of total debt to total assets, has been utilized. Using dynamic panel techniques, Das et al. (2021) looked at the heterogeneous impact of leverage on the performance of 165 listed nonfinancial companies in Bangladesh from 2007 to 2016 and discovered that the firms’ performance was negatively impacted by leverage. However, Vo and Ellis (2017) found that there is a positive relationship between leverage and performance when the firm is using optimal leverage, and when the firm is unable to modify its capital structures, the relationship turns negative. Expected signs of these variables are also reported in Table 1.

Table 1. Definition and sources of study variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Legends/ Level</th>
<th>Definition</th>
<th>Expected Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Firms’ Performance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return on Assets</td>
<td>ROA</td>
<td>Net profit after tax/ Total Assets</td>
<td></td>
</tr>
<tr>
<td>Return on Equity</td>
<td>ROE</td>
<td>Net profit after tax/ Shareholders’ Equity</td>
<td></td>
</tr>
<tr>
<td><strong>Ownership Concentration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managerial Ownership</td>
<td>MO</td>
<td>Number of Shares Held by Directors / Number of Total Outstanding Shares</td>
<td></td>
</tr>
<tr>
<td>Institutional Ownership</td>
<td>IOC</td>
<td>Number of Shares Held by the Institution / Number of Total Outstanding Shares</td>
<td></td>
</tr>
<tr>
<td>Foreign Ownership</td>
<td>FOC</td>
<td>Number of Shares Owned by Foreigners / Number of Total Outstanding Shares</td>
<td>+/-</td>
</tr>
<tr>
<td>Government Ownership</td>
<td>GOC</td>
<td>Number of Shares Owned by Government / Number of Total Outstanding Shares</td>
<td></td>
</tr>
<tr>
<td>Public Holding</td>
<td>POC</td>
<td>Number of Shares Owned by General Public / Number of Total Outstanding Shares</td>
<td></td>
</tr>
<tr>
<td>Board Competence</td>
<td></td>
<td></td>
<td>+/-</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-----------</td>
<td>--------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>Board Size</td>
<td>BS</td>
<td>Total number of directors on the board</td>
<td>+/-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Board Independence</th>
<th></th>
<th></th>
<th>+/-</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO Duality</td>
<td>CEO_Dul</td>
<td>Dummy variable equals 1 if the CEO and Chairman positions are held by the same person, and 0 otherwise</td>
<td>+/-</td>
</tr>
<tr>
<td>Family Relationship</td>
<td>FMR</td>
<td>Family Relationship between board members (At most 20% of the board members)</td>
<td>+/-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control Variables</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Size</td>
<td>FS</td>
<td>Natural Logarithm of Total Assets</td>
<td></td>
</tr>
<tr>
<td>Firm Age</td>
<td>FA</td>
<td>Year 2019 minus date of Incorporation</td>
<td></td>
</tr>
<tr>
<td>Leverage</td>
<td>LEV</td>
<td>Total Liabilities / Total Assets</td>
<td>+/-</td>
</tr>
</tbody>
</table>

3.3 Model Specification/ Estimation

Multiple regression analysis has been applied to achieve the study objective. The hypotheses of the study are stated below:

H1: Managerial ownership is significantly related to firms’ performance.
H2: Institutional ownership is significantly related to firms’ performance.
H3: Foreign ownership is significantly related to firms’ performance.
H4: Government ownership is significantly related to firms’ performance.
H5: Public Holding is significantly related to firms’ performance.
H6: Board size is significantly related to firms’ performance.
H7: Separation of board chair and CEO position will be negatively related to firm performance.
H8: Family relationship is significantly related to firms’ performance.
H9: Firm size has a positive influence on firms’ performance.
H10: Firm age has a positive influence on firms’ performance.
H11: Leverage is significantly related to firms’ performance.

Below models have been used to explore the effects of independent/explanatory variables which are presented below:

\[
ROA_{it} = \beta_0 + \beta_1 MO_{it} + \beta_2 IOC_{it} + \beta_3 FOC_{it} + \beta_4 GOC_{it} + \beta_5 POC_{it} + \beta_6 BS_{it} + \beta_7 CEO\_Dul_{it} + \beta_8 FMR_{it} + \\
\beta_9 FS_{it} + \beta_{10} FA_{it} + \beta_{11} LEV_{it} + \epsilon_{it} \quad (1)
\]

\[
ROE_{it} = \beta_0 + \beta_1 MO_{it} + \beta_2 IOC_{it} + \beta_3 FOC_{it} + \beta_4 GOC_{it} + \beta_5 POC_{it} + \beta_6 BS_{it} + \beta_7 CEO\_Dul_{it} + \beta_8 FMR_{it} + \\
\beta_9 FS_{it} + \beta_{10} FA_{it} + \beta_{11} LEV_{it} + \epsilon_{it} \quad (2)
\]

In the equations stated above, the corporate governance variables regressed on firms’ performance including the effects of control variables. In the equation, subscripts i stand for manufacturing companies that are listed on the DSE (i=1, 2, ⋯, 43) and (t=1, 2, ⋯, 5); \( \beta_0 \) and \( \beta_i \) are the series of parameters that need to be estimated and \( \epsilon_i \) is the error term. In two models, the dependent variables in the equation were return on assets (ROA) and return on equity (ROE), respectively. However, the ownership concentration was the independent variable proxied by Managerial Ownership (MO); Institutional Ownership (IOC); Foreign Ownership (FOC); Government Ownership (GOC); and Public Holding (POC); and board characteristics were proxied by Board Size (BS); CEO Duality (CEO_Dul); and Family Relationship between board members (FMR). Control variables were Firm size (FS); Firm age (FA); and Leverage (LEV).

4. Discussion

4.1 Descriptive Statistics

The descriptive statistics of all variables used in the study are presented in Table 2.
Table 2. Descriptive statistics of the study variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>215</td>
<td>0.623545</td>
<td>0.0854</td>
<td>.9934</td>
<td>0.179538</td>
</tr>
<tr>
<td>ROE</td>
<td>215</td>
<td>0.789167</td>
<td>0.111978</td>
<td>0.96261</td>
<td>.2513151</td>
</tr>
<tr>
<td>MO</td>
<td>215</td>
<td>54.16398</td>
<td>0</td>
<td>90.00</td>
<td>27.67147</td>
</tr>
<tr>
<td>IOC</td>
<td>215</td>
<td>27.43245</td>
<td>0</td>
<td>36.51</td>
<td>11.24137</td>
</tr>
<tr>
<td>FOC</td>
<td>215</td>
<td>10.36515</td>
<td>0</td>
<td>28.21</td>
<td>3.032417</td>
</tr>
<tr>
<td>GOC</td>
<td>215</td>
<td>49.28039</td>
<td>0</td>
<td>60.08</td>
<td>34.76371</td>
</tr>
<tr>
<td>POC</td>
<td>215</td>
<td>42.86015</td>
<td>0.06</td>
<td>61.21</td>
<td>41.60388</td>
</tr>
<tr>
<td>BS</td>
<td>215</td>
<td>14.038557</td>
<td>5</td>
<td>19</td>
<td>4.2841254</td>
</tr>
<tr>
<td>CEO_Dul</td>
<td>215</td>
<td>0.458122</td>
<td>0</td>
<td>1</td>
<td>.00055048</td>
</tr>
<tr>
<td>FMR</td>
<td>215</td>
<td>0.60431</td>
<td>0</td>
<td>1</td>
<td>.0010577</td>
</tr>
<tr>
<td>FS</td>
<td>215</td>
<td>24.85572</td>
<td>14.1764</td>
<td>25.6412</td>
<td>8.41259</td>
</tr>
<tr>
<td>FA</td>
<td>215</td>
<td>20.038557</td>
<td>0</td>
<td>42</td>
<td>6.841569</td>
</tr>
<tr>
<td>LEV</td>
<td>215</td>
<td>.4038557</td>
<td>0</td>
<td>.896412</td>
<td>2.841339</td>
</tr>
</tbody>
</table>

As per Table 2, the average company performance is 62.35% under the ROA performance measure, ranging from 8.54% to 99.34%, and 78.92% under the ROE performance measure, ranging from 11.20% to 96.26%. The average managements’ shareholding (MO) is found to be 54.16%, ranging from 0% to 90%; Institutional investors’ shareholding (IOC) is found to be 27.43%, ranging from 0% to 60.08%; foreign investors’ shareholding (FOC) is found to be 10.36%, ranging from 0% to 28.21%; Government shareholding (GOC) is found to be 49.28%, ranging from 0% to 60.08%; and public shareholding (POC) is found to be 42.86%, ranging from 1.06% to 61.21%. There are typically 14 directors on a board, with the number varying from 5 to a maximum of 19. On average, the observed sample has a 0.45% incidence of CEO duality. Additionally, it reveals that, on average, 0.60% of the board members had familial ties. The typical business size is 24.85. (in million Taka). The age of the firm ranges from 0 to 42 years, with an average age of 20.03. From 0% and 0.89%, the average total debt to total assets (LEV) is 0.40%.

4.2 Diagnostic Checks

The nature of the research requires testing the presence of panel heteroscedasticity, autocorrelation and cross-sectional dependence in the data. Breush-Pagan Lagrange Multiplier, Wooldridge test and Pesaran CD test have been run on panel data to detect heterogeneous, autocorrelation and cross-sectional dependence, respectively.

Table 3. Diagnostic tests for panel data

<table>
<thead>
<tr>
<th>Test</th>
<th>Calculated Value</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heteroscedasticity (Breusch-Pagan LM), $\chi^2$</td>
<td>81.44</td>
<td>0.0000</td>
</tr>
<tr>
<td>Serial Correlation (Wooldridge, 2010), F-Statistics</td>
<td>31.102</td>
<td>0.0000</td>
</tr>
<tr>
<td>Cross-Sectional Dependence (Pesaran’s Test)</td>
<td>5.994</td>
<td>0.0000</td>
</tr>
<tr>
<td>Hausman Model Specification</td>
<td>36.59</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

Table 3 shows a summary of the test results conducted by the researcher. Breush-Pagan Lagrange Multiplier test result confirms the presence of heteroscedasticity. The Wooldridge test result suggests that there is strong evidence of first order autocorrelation in the data set. From the test result of Pesaran CD test, it is evident that there is cross-sectional dependence in the data set. Table 3 also reports the result of Hausman test. It reveals that the p-value of $\chi^2$ statistic is significant for this panel. It implies strong evidence of misspecification in the REM, that is, the FEM gives consistent estimates of this study.

Following the specification of the model choice, White-Huber or robust standard errors is used to address the heteroscedasticity issue. By estimating the regression model with little to no control for within-cluster error correction and then obtaining the post-estimation once more, the problem of serial correlation is handled. Tables 04 and 05 present the estimates from the post-diagnostic testing.

4.3 Regression Results

The findings of the regression analysis are shown in Tables 4 and 5, respectively. Table 4 examines the impact of ownership concentration and board characteristics on firm performance using ROA as the dependent variable; while Table 5 does the same using ROE as the dependent variable.
Using the first model (Table 4), it is evident that there is a positive relationship between managerial ownership and firm performance. The same direction of the relationship is true for foreign investors’ ownership and government ownership, while institutional ownership shows a significant negative relationship. Public holding and board size shows a negative relationship but that is not found significant. A positive association was found in the case of CEO duality and family relationships among the board members but those are also insignificant. However, the coefficient of firm size and firm age were found to be positive while the coefficient of leverage was negative and all these are statistically significant.

Table 5. Regression output of Model-2 (ROE)

<table>
<thead>
<tr>
<th></th>
<th>(1) Random-effects Model</th>
<th>(2) Fixed-effects Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO</td>
<td>0.0138***</td>
<td>0.0128***</td>
</tr>
<tr>
<td></td>
<td>(6.50)</td>
<td>(6.28)</td>
</tr>
<tr>
<td>IOC</td>
<td>-0.0000202</td>
<td>-0.0000173</td>
</tr>
<tr>
<td></td>
<td>(-0.73)</td>
<td>(-0.40)</td>
</tr>
<tr>
<td>FOC</td>
<td>0.00000433**</td>
<td>0.00000605**</td>
</tr>
<tr>
<td></td>
<td>(0.48)</td>
<td>(0.67)</td>
</tr>
<tr>
<td>GOC</td>
<td>0.0071*</td>
<td>0.0137**</td>
</tr>
<tr>
<td></td>
<td>(1.65)</td>
<td>(2.97)</td>
</tr>
<tr>
<td>POC</td>
<td>-0.00045</td>
<td>-0.00111*</td>
</tr>
<tr>
<td></td>
<td>(-1.03)</td>
<td>(-0.84)</td>
</tr>
<tr>
<td>BS</td>
<td>0.00985*</td>
<td>-0.00294</td>
</tr>
<tr>
<td></td>
<td>(0.32)</td>
<td>(0.76)</td>
</tr>
<tr>
<td>CEO_Dul</td>
<td>0.000204</td>
<td>-0.000765</td>
</tr>
<tr>
<td></td>
<td>(-0.42)</td>
<td>(-0.01)</td>
</tr>
<tr>
<td>FMR</td>
<td>3.243</td>
<td>3.212</td>
</tr>
<tr>
<td></td>
<td>(-0.37)</td>
<td>(-0.01)</td>
</tr>
</tbody>
</table>
Results reported in Table-05 took ROE as a dependent variable which somewhat shows the similar relationship shown by model-1. It also confirmed the statistically significant positive association between managerial ownership and firm performance; foreign investors’ ownership and firm performance; and government ownership and firm performance. This model shows a significant negative association between public holding and firm performance. Again, firm size and firm age have been found to have a significant positive impact on the firm performance. Moreover, the coefficient of board size and CEO duality was found to be negative while the coefficient of family relationship among the board members was positive but all these are statistically insignificant.

5. Concluding Remarks

In this study, the multi-theoretic framework of Gaur et al. (2015) has been applied in the context of an emerging economy. A full form model containing variables that represent ownership structure, board independence, board competency, and business characteristics was specified at the outset of the study. The integrated view of the study focused on the significant impact of ownership structure on firm performance covering 43 listed manufacturing companies on the Dhaka Stock Exchange. The statistical tests show that the preferred model has a fixed effect between firms. In line with Gaur et al. (2015) and Shahrier et al. (2016), the current study demonstrated that ownership concentration has a statistically significant impact on company performance as measured by ROA and ROE (2018).

Overall, from an agency theory perspective, research done in developed economies and the present findings on ownership concentration are very similar. The finding that there is a positive relationship between ownership concentration and firm performance lends support to the study by Shleifer and Vishny (1997), which asserts that since investor protection is low in developing countries, ownership concentration is accepted as an alternative corporate governance tool in these countries. This study’s results also consistent with past studies on developing countries by Joh (2003), Yammeesri et al. (2006), Barberis et al. (1996), and Claessens and Djankov (1999). Nonetheless, some research has revealed a conflict between ownership concentration and company performance (Roszaini & Mohammad, 2006; Millet-Reyes & Zhao, 2010; and Hu et al., 2010).

By including more precise observations and the external governance framework, the contingency paradigm suggested in this study could be applied in comparative CG research. The study’s lone contingency condition, one brought on by ownership concentration, was related to the contingency framework. By finding more conditions and examining how diverse theoretical perspectives can both limit and boost one another’s explanatory power, the proposed framework can be improved in the future. Such a strategy can also assist in identifying the circumstances in which the relative importance of the various functions played by board members varies. Future studies can potentially evaluate and improve the contingency framework in various settings. Future research may also take board gender, board nationality, board education, and board religiosity into account. This study should be extended to other industries to increase the generalizability of the results. Additionally, the results of a cross-country analysis of the similar type of economies can be confirmed for benchmarking purposes.

References


Al-Saidi, M. (2020). Corporate Governance Disclosure and Ownership Concentration in Non-Financial Listed


https://doi.org/10.1108/14720701211275587


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