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## Article

# Effect of board and ownership attributes on corporate performance in transition economy

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## Effect of board and ownership attributes on corporate performance in transition economy

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### ABSTRACT

Corporate governance is one of the key factors in corporate performance for the economy. In particular, for a transition economy, which is on the way of developing economies from the least developing economy, the relevant attributes of corporate governance are a vital issue. This study explores the most important board and ownership attributes that affect corporate performance in a transitional economy. A static panel fixed effects model is used to identify the most significant board and ownership attributes that affect corporate performance. It is found that board independence, board size, inclusion of women on the board, foreign shareholding and institutional shareholding significantly influence corporate performance, whereas executive shareholding has an adverse impact on corporate performance in the context of a transition economy. There is a paradoxical finding representing that although the foreign shareholdings significantly influenced the corporate performance in the transitional economy the inclusion of foreign members on the board has no significant impact on corporate performance. In addition, the government shareholding has no significant role in earning profit. These diversified findings implied that not all corporate governance attributes have the same effect on corporate performance. Based on the outcomes of this study, the regulatory body of the transitional economy can design its corporate governance policy.

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## 1. Introduction

During the last few decades, an accelerated trend in academic research on corporate performance has been observed (Enache & Hussainey, 2020; Hoque et al., 2022; Hossen et al., 2023). Although academic research on the effect of corporate governance on company performance fails to provide a precise conclusion, the literature shows ambiguous findings on these issues (Al-Matari & Mgammal, 2020; Assidi, 2023; Fauzi & Locke, 2012; Masum et al., 2023; Sarhan et al., 2019; Zamil et al., 2023). Nonetheless, academicians agree that the findings of empirical research on corporate governance issues, such as ownership attributes and board attributes, have gained remarkable attention from various stakeholders in determining corporate performance (Hassan et al., 2022; Masum et al., 2023; Wijaya & Murhadi, 2020; Yang & Ko, 2020). To ensure good governance within an organization, business entities require funds that are ultimately ensured by good performer companies (Masum, 2010; Masum & Khan, 2019). Congenial corporate performance is a prerequisite for business expansion. Business organizations with sound performance tend to contribute more to extra-curricular and co-curricular activities in both the internal and external environments. The investors and owners of the business want to engage with more performing companies because of the assurance of their investment returns. Therefore, the governance mechanism

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of a company always assists management in optimizing the goal of profit maximization or wealth maximization. Financing this governance mechanism is the outcome of a business entity's good performance. In addition, a good performer company not only helps the government to accelerate economic development but also persuades the government to concentrate on ensuring a congenial sustainable investing atmosphere. The board members are the core people who run the business and design various policies of an organization in order to achieve sustainable corporate performance (Masum et al., 2023). In addition, the diversity in ownership structure of a company might have synergic effect in accelerating such corporate performance of a company (Zamil et al., 2023). Therefore, at the micro and macro levels, the causes of corporate performance – both internal and external factors and both direct and indirect factors – must be critically analysed. As a result, corporate performance has become a burning issue due to the overwhelming requirements of stakeholders regarding their enthusiasm for it (Ahmed et al., 2017; Gakhar, 2012; Masum & Khan, 2019; Shukla & Gekara, 2010; Usenko & Zenkina, 2016). More specifically in a transitional economy that shifted from the least developing economy to developing economy – the diversity in board members and ownership structure may attract and induce the prospective investors. These attributes of corporate governance might bring congenial impact in corporate performance (Assidi, 2023; Masum et al., 2023; Zamil et al., 2023).

Corporate governance is one of the key factors in corporate performance in the entire economy (Assidi, 2023; Pillai & Al-Malkawi, 2018; Sarhan et al., 2019). In particular, for a transition economy, which is on the way of developing economy from the least developing economy, the relevant attributes of the corporate governance are a vivacious issue (Wijaya & Murhadi, 2020). A transitional economy is a country's economy that transforms from one status to another. The graduation process of the economy requires the country to transition from an aid-based economy to a trade-based economy. Therefore, a transitional economy requires both local and foreign investments. As a result, the transition economy requires to shift their economy from aid to trade (Masum et al., 2021). Therefore if the transition economy cannot attract the local and foreign investors they it must be jeopardized. The congenial atmosphere in good governance has accelerated corporate performance in any sort of economy. The role of good governance in corporate performance is an undisputed issue; however, the impacts of the attributes of good governance are not similar for all economies (Masum & Khan, 2019; Masum et al., 2023). Although a lot of academic research has been conducted to explore the impact of corporate governance on corporate performance in developed, developing and least developing economy, few studies have explained the role of corporate governance in corporate performance in a transition economy. As the transition economy has been designed based on trade rather than aid (Masum et al., 2020b), it is very important to identify which attributes of corporate governance more specifically – the relevant board and ownership attributes which have significant role on corporate performance. This study explores the most important board and ownership attributes that affect corporate performance in a transitional economy. The findings of this study will help the transition economy to focus on more relevant and value-worthy board and ownership attributes that result in corporate performance. The findings of this study will assist the regulatory body in designing a code of corporate governance that brings sustainability to corporate performance.

## 2. Literature review and hypothesis development

The board of directors of an organization plays an essential role in upholding effective corporate governance, specifically in a public limited company. The agency problems may possibly get up from the segregation of business ownership and corporate control. Similarly, ownership attributes have become one of the core contributing factors to corporate performance by numerous researchers due to the acceleration of globalization (Ciftci et al., 2019; Wicaksono et al., 2024). Ownership attributes may optimize corporate governance practice in which business entities are comparatively scarce (Hassan et al., 2022; Heugens et al., 2009; Masum et al., 2023). A transitional economy, in which the economy is in a transforming stage by shifting from aid concentration to trade concentration, usually works on a weak corporate structure (Masum et al., 2020b). Thus, it is crucial and vital issue for the transitional economy to identify the most important determinants of the board and ownership attributes that significantly influence corporate performance.

Agency theory has dominated corporate reporting for over five decades. It entails the agency relationship between shareholders and managers, where managers act as agents, appointed by shareholders through the board of directors to operationalize various aspects of the business (Jensen & Meckling, 1976; Watts & Zimmerman, 1978). Usually, the shareholders of the organization delegate power, responsibility and authority to initiate strategic and operational decisions (Cotter et al., 2011). Nevertheless, as per the proposition of agency theory, corporate executives might operate the business to maximize the wealth of the organization until or unless there is any conflict of interest between them; for instance, a manager can use their discretionary power to maximize their own benefits. Legitimacy theory assumes that there is a socially invisible contract between business organizations and society (Cormier & Gordon, 2001). To accomplish the pledged requirements of the social contract, corporate people legitimize their actions and enhance legitimacy through good governance (Branco & Rodrigues, 2008). Therefore, an organization usually pursues legitimacy, which is converted by social order based on the invisible social agreement between society and the business organization (Cotter et al., 2011). Once the legitimacy of a business entity becomes susceptible, the entity espouses several strategies to recuperate such legitimacy. In addition, business entities seek to maintain and fortify their legitimacy by disclosing more information (Mousa & Hassan, 2015). Therefore, in this study, both agency and legitimacy theories are used to explore the effects of board and ownership attributes on corporate performance. The relevant literature on these proxy variables and corporate performance is presented below:

### **2.1. Board independence and corporate performance**

According to the formation of a public limited corporation, the board of directors of an organization is selected by the shareholders to operate the business entity on behalf of the owners. The term 'board independence' indicates that board members have no affiliation with the management of the organization. Agency theory depicts the relationships between management and shareholders, and internal and external capital providers (Jensen & Meckling, 1976; Watts & Zimmerman, 1978). Agency theory assumes a strong proposition that independent directors have competitive advantages in raising questions regarding the actions of managements towards the business organization (Dalton et al., 1999). Thus, the proportion of independent directors on board composition ensures managers' accountability (Kaymak & Bektas, 2017; Masum & Khan, 2019) as well as the improved performance of the business (Ramdani & Witteloostuijn, 2010). Moreover, independent directors play a pivotal role not only in short-term performance, but also in long-term performance (Masum & Khan, 2019; Saidat et al., 2024). As independent directors closely monitor and control management through various bonding devices such as debt contracts, remuneration packages, stock options and so on (Cotter et al., 2011) and persuade them to act on behalf of the interest of the capital providers (Masum & Khan, 2019), agency problems and information asymmetries diminish; consequently, the value of the firm becomes optimized (Jensen & Meckling, 1976). Prior research on the relationship between independent boards and business performance is inconclusive (Masum & Khan, 2019). Some researchers have brought into being a progressive link between board independence and corporate performance (Anis et al., 2017; Dahya & McConnell, 2005) and some have explored the inverse relationship between board independence and business performance (Bhagat & Black, 2002; Klein, 1998) while some of the prior studies did not find any significant connection between board independence and corporate performance (Johl et al., 2015; Mehran, 1995). Most prior studies have been accompanied by a developed economy (Fauzi & Locke, 2012; Sharma & Davey, 2013) and developing or emerging economies (Ciftci et al., 2019), whereas few have focused on transitional economies. It is very important for the transitional economy to ensure more non-executive members on the board as it increases the transparency and accountability of the organization, which ultimately triggers the performance of any organization. Thus, we need to determine whether board independence has a substantial positive relationship with corporate performance in a transitional economy. Consequently, the following hypothesis concerning this issue is proposed:

Hypothesis 1: There is a positive relationship exists between board independence and corporate performance in a transitional economy.

## **2.2. Foreign members on board and corporate performance**

Foreign board members encourage both indirect and direct foreign investments (Hossen et al., 2023; Masum & Khan, 2019; Wicaksono et al., 2024). Business entities with family capitalism systems may face problems with handling extensive capital investment from foreign countries; as such entities are based on weak contractual rights and lack of operating such a gigantic business setup (Masum et al., 2023). On the other hand, investors from abroad may capitalize on competitive advantages in dealing with extensive foreign investment as they may have experience in divergent national contexts (Ciftci et al., 2019) and may apply more sophistication to encourage the espousal of top practices from foreign set-up (Brewster et al., 2008). In addition, the composition of foreign members on the board may possibly improve the performance of the business by utilizing the technical skills of the members (Doidge et al., 2004; Hossen et al., 2023), even enlightening the recommended panels of the board (Adams et al., 2009; Oshim & Igwe, 2024) and may be more effective in the case of safeguarding the interests of the investors (Ciftci et al., 2019). On the contrary, foreign members' on board may results adverse impact like – less understanding on local problems (Masum & Khan, 2019; Ujunwa et al., 2012), less support from domestic networks of corporate relationship (Fainshmidt et al., 2016) etc. Numerous studies have examined the relationship between foreign members' inclusion on boards and business performance. Some of the previous literatures have witnessed positive relationship between foreign members on board and business performance (Oxelheim & Randøy, 2003; Ujunwa et al., 2012), some of the studies have concluded with negative relationship (Fainshmidt et al., 2016) while others did not get any noteworthy association between them (Kilic, 2015; Kizito, 2013). However, prior empirical studies have focused on developed economies (Sharma & Davey, 2013) and developing or emerging economies (Ciftci et al., 2019); few have focused on a transitional economy. It is very important for a transitional economy to ensure the existence of foreign members on the board as it attracts, protects and sustains foreign investments (Adams et al., 2009; Ciftci et al., 2019) in the capital structure of the business. Thus, it is important to know whether the inclusion of foreigners in the board of directors has any noteworthy effect on corporate performance in a transitional economy. The hypothesis concerning this issue is as follows:

Hypothesis 2: There is a positive relationship between foreign board members and corporate performance in a transitional economy.

## **2.3. Board member's duality and corporate performance**

Board members' duality indicates that a single person becomes both the director and the CEO. As per the formation of a limited company, board members are appointed to monitor the organization's functions. Board members are responsible not only for executing board meetings but also for supervising, hiring, firing, evaluating, monitoring and controlling the management of an organization (Jensen, 1993). Therefore, agency theory entails that the duality of board members – for instance, the CEO also holds the position of managing director – may lessen the role of board monitoring over the organization (Sarhan & Ntim, 2019). There may arise a conflict of interest, as the operational body and the monitoring authority become the same person; therefore, board members with a dual role may adopt decisions to maximize their own benefits (Khalil & Maghraby, 2017; Pillai & Al-Malkawi, 2018). Consecutively, the dual roles of board members may have an adverse effect on monitoring, controlling and persuading managers to maximize the optimum interest of capital providers and may generate agency problems (Haniffa & Cooke, 2005; Masum & Khan, 2019). Conversely, separating the two roles – the role of operational authority as a CEO and the role of monitoring and controlling authority as an MD – may improve the quality of monitoring the business enterprise (Hassoun & Aloui, 2017) and ensure their pellucidity (Donnelly & Mulcahy, 2008). Moreover, the twofold role of board members may violate the social agreement between the organization and society, thus threatening the legitimacy of the organization. Therefore, legitimacy theory also suggests that separating the role of operational authority as a CEO and monitoring and controlling authority as an MD may improve checks and balances of managerial

performance. In a transitional economy based on trade, these two roles must be separated to attract potential investors. Consequently, the following hypothesis is considered:

Hypothesis 3: There is a negative relationship between board member duality and corporate performance in a transitional economy.

#### **2.4. Board size and corporate performance**

The board members of an organization must perform a definite starring role, covering counselling, monitoring and controlling the organization to maximize the interests of the shareholders (Sarhan & Ntim, 2019). Agency theory shows that directors with diversified qualities can intensify board efficiency, which triggers corporate performance by accumulating various ideas and opinions at board governance meetings (Anifowose et al., 2017; Elmagrhi et al., 2017), enhancing corporate networking in resource sharing (Ntim & Soobaroyen, 2013) and providing better links between business organizations and their external environment (Sarhan & Ntim, 2019). Several studies have explored the relationship between board size and firm performance (Ciftci et al., 2019; Johl et al., 2015; Masum & Khan, 2019), but the outcomes have been inconclusive, as the corresponding cultural, political and economic contexts are distinct. Similarly, the context of Bangladesh is different and distinct, and even the economies of the country in the decades of 2000 and 2010 are not the same. The Bangladesh Company Act, 1994, requires that every publicly limited company operating in Bangladesh shall have a minimum of three directors. The Corporate Governance Guideline (2012) issued by the SEC, provides strict guidelines for having at least five board members, and while the upper range of board members should not be more than 20. Thus, the board size of Bangladeshi publicly listed companies have a greater chance of enjoying the opines of diversified board members. Although some previous studies have found that organizations with few board members are more effective (Anis et al., 2017) for business organizations, Coles et al., opined that a large board is more effective in this regard. The previous studies on exploring the relationship between board size and organizational performance are also unconvincing, some studies have found that board size influence the firm performance positively (Johl et al., 2015), some also have explored negative relationship (Mak & Kusnadi, 2005) while the others found no significant relationship between them (Anis et al., 2017; Oshim & Igwe, 2024). Business entities in a transitional economy also require qualified board members with diversified knowledge and networks, thus entailing a wider board of governance. The agency theory also depicts that a wider board of governance improves managerial monitoring and performance (Sarhan & Ntim, 2019). Therefore, the following hypothesis is proposed:

Hypothesis 4: There is a positive relationship between board size and corporate performance in a transitional economy.

#### **2.5. Women on board and corporate performance**

Board diversity in terms of gender has become the most explored common board characteristic in literature (Orazalin, 2019). Business entities with female directors on the board gather diversified opinions and knowledge in board meetings (Masum & Khan, 2019) as they have distinct values, personalities, leadership styles and modes of communication compared to their male counterparts (Al-Shaer & Zaman, 2016). The agency theory shows that directors with diversified qualities can intensify board efficiency, which triggers corporate performance by accumulating various ideas and opinions on the board of governance meetings (Anifowose et al., 2017), enhancing corporate networking in resource sharing (Ntim & Soobaroyen, 2013) and providing better links between business organizations and their external environment (Sarhan & Ntim, 2019). In addition, female directors exhibit more sophisticated behaviour on ethical issues and play a more social and ethical role in executing business operations (Isidro & Sobral, 2015). Former studies on exploring the influence of women on board on the corporate performance is also unimpressive, some of the studies have found that women on board influence corporate performance positively (Bear et al., 2010; Masum & Khan, 2019; Saidat et al., 2024), some also have explored negative relationship (Adams &

Ferreira, 2009) while the others found no significant relationship between them (Chemweno, 2016). In a transitional economy, where one of the development phases is measured through the empowerment of women, women must be involved on board as it also ensures better compliance for the business organization (Isidro & Sobral, 2015). For these reasons, the following hypothesis is proposed:

Hypothesis 5: There is a positive relationship between female board members and corporate performance in a transitional economy.

## **2.6. Foreign ownership and corporate performance**

A transitional economy is a kind of transformation of the economy of a country, where the economy has graduated from an aid-based economy to a trade-based economy. Thus, a transitional economy requires both local and foreign investment. Foreign ownership in ownership structures opens the door to new investment opportunities in both local and international contexts (Hassan et al., 2022; Masum et al., 2020a; Masum & Khan, 2019; Wijaya & Murhadi, 2020). Business entities based solely on family or local ownership may face problems with the handling of extensive capital investment from foreign countries, as such entities are based on weak contractual rights and lack such a gigantic business setup (Ciftci et al., 2019). In addition, foreign investors may have experiences in different national contexts (Ciftci et al., 2019) and may promote the adoption of benchmarks in an international context (Masum & Khan, 2019). Foreign investors from abroad might be competent to explore new R&D ideas from the international market as well. Masum et al. (2017) also argued that multinational corporations (MNC) comply more with corporate governance standards than other business entities do. Based on these reasons, the following hypothesis must be tested:

Hypothesis 6: There is a positive relationship exists between the share of foreign ownership and corporate performance in a transitional economy.

## **2.7. Government ownership and corporate performance**

Business entities with majority government shareholdings can enjoy government assistance by practising good governance (Sarhan & Ntim, 2019). Government assistance helps business entities legitimize their operations (Hossen et al., 2023). Legitimacy theory suggests that business is a member of society and should operate because of social agreement between society and corporations (Cotter et al., 2011). Governments, as owners of any business, do not execute corporate activities to earn profits; rather, in most cases, serving society is the main motive of the government (Masum, 2010). In addition, an organization with government shareholding has substantial competitive advantages through subsidies and tax exemptions, which consecutively optimize corporate performance (Haniffa & Hudaib, 2006; Hassan et al., 2022). Even, previous studies provide evidence that state shareholdings provide protections to the business entities from the rigorous reviews and exaggerating rules and regulations of the regulatory bodies (Alnabsha et al., 2018). Based on the arguments discussed above, the following hypothesis is proposed.

Hypothesis 7: There is a positive relationship between government ownership and corporate performance in a transitional economy.

## **2.8. Institutional ownership and corporate performance**

Institutional ownership plays a pivotal role in decreasing agency problems between the shareholders of a company and the management of a corporation (Wicaksono et al., 2024). Business entities with large institutional ownership often have more control over management (Wicaksono et al., 2024). Hossain et al. (2001) conducted a study based on listed companies in New Zealand and found that although the top shareholders of the New Zealand Stock Exchange are highly institutional, this highly institutional

ownership structured organization pursues better monitoring of management. Ciftci et al. (2019) find that institutional ownership, in terms of high concentration by family members, also ensures better corporate performance. However, some studies (Fauzi & Locke, 2012) have found an inverse relationship between institutional ownership and corporate performance. In reality, organizations with institutional ownership gradually become less accountable to non-controlling or minority shareholders and more accountable to institutional shareholders (Fauzi & Locke, 2012). Previous studies found no significant evidence that institutional ownership may influence agency costs. Certainly, the legal system of a country affects the association between institutional ownership and corporate performance (Fauzi & Locke, 2012), economic system and environmental stability of a country. Therefore, the hypotheses to be tested were as follows:

Hypothesis 8: There is a positive relationship between the institutional ownership and corporate performance in a transitional economy.

### **2.9. Executive ownership and corporate performance**

The agency theory shows that there exists an agency relationship between management and shareholders. Internal capital providers may even have agency issues with external capital providers (Jensen & Meckling, 1976). There is a divergence of interests among stakeholders, but goal congruence between them can occur if managers' ownership intensifies (Jensen & Meckling, 1976). Therefore, the acceleration of executive ownership might have an inverse effect on agency costs and, consecutively, push towards corporate performance. Previous findings of the study concerning the executive ownership and corporate performance were inconclusive. Some studies have found that executive shareholding positively influences corporate performance (Fauzi & Locke, 2012), while others epitomize negative connotations (Masum et al., 2020a). Usually, most exploratory research on ownership attributes and corporate performance has been conducted based on developed countries (Fauzi & Locke, 2012), and emerging economies also have a take-off stage in such exploration. Certainly, the association between ownership structure and corporate performance is greatly influenced by the legal system (Fauzi & Locke, 2012), economic system and environmental stability of a country. Therefore, the following hypothesis is assumed in this regard:

Hypothesis 9: There is a positive relationship between the executive ownership and corporate performance in a transitional economy.

## **3. Materials and methods**

To conduct this study, nine independent variables, one dependent variable and six control variables were examined. Here, the return on assets (ROAs) is used as the dependent variables. Out of nine independent variables, five proxy variables of board attributes, namely, independent board members, foreign members in board composition, duality in board members, board size and women in board composition and four proxy variables of ownership structures (foreign shareholding, government shareholding, institutional shareholding and executive shareholdings have been used. In addition, this study uses six control variables: sales growth, earnings per share (EPS), return on equity (ROI), leverage, company size and age of the company.

Attributable to the nature of the study, all the fifteen categories of the Dhaka Stock Exchange (DSE) listed companies having a total population of 872 company year are considered as initial samples. However, like the previous studies (Hassan et al., 2022; Hoque et al., 2022; Hossen et al., 2023; Masum et al., 2023), this study also excludes the banking, insurance and financial companies as they are operated in separate legislative regulations. Masum et al. (2023) and Masum et al. (2019) opined that since the banking, insurance and financial companies are operated through a separate act in Bangladesh, their inclusion in the final sample may mislead the outcome of the study. Even in Bangladesh, the banking, insurance and financial companies are operated by separate regulatory bodies and guidelines also (Ahmed et al., 2021; Hassan et al., 2022). At this juncture, the annual reports of the DSE-listed companies

for the period from 2016 to 2019 are considered as the initial samples. The year 2016 has been selected for the study as the transitional phase of the Bangladesh's economy started from 2015 as it satisfies one of the conditions of being a developing economy during the year. Annual reports were considered as it is more relevant, reliable and available source of information (Ahmed et al., 2021; Hassan et al., 2022; Masum et al., 2019). Besides no further permission is required for its utilization in research endeavours. Due to the unaudited annual report, newly established companies, availability of annual reports, a final sample of 368 annual reports were usable.

In this empirical study, a multiple regression has been used to explore the consequences of board and ownership attributes on CP in a transitional economy. Based on the collected data no multicollinearity has been found as the VIF value is less than two for all the variables. From the Modified Wald statistic, no heteroskedasticity was found. Moreover, the woldridge test showed no autocorrelation problems. In this study, the outliers are detected and eliminated through the Cook's distance test. Finally, in this empirical study, the fixed effect model – static panel model is used for numerous reasons. First, the fixed effects model is recommended to investigate the degree of relationship among the variables that vary over time (Stock & Watson, 2012). In this study, five proxy variables for board attributes and four proxy variables for ownership attributes were used as independent variables, whereas ROA was used as the proxy for CP. In practice, all proxy variables of board attributes, ownership attributes and ROAs have different slopes and intercepts, and their values vary across time. Thus, the fixed effects model is recommended to examine the influence of board and ownership attributes on CP in a transitional economy. Second, the time-invariant features of the dataset can be overcome using the fixed effect model (Law, 2018). In addition, the errors in a multiple regression model for each observation will be correlated or dependent over time owing to unobserved characteristics that may vary from one observation to another. In the prevailing situation, the assumption of independence of errors is violated, but the fixed effects model can provide robust outputs in the case of correlated errors. Third, from the Breusch–Pagan LM test (Law, 2018), it becomes certain that the dataset has an individual-specific effect in other words, there are company specific effects, and thus, the random effects model is more suitable than the ordinary least square model. Furthermore, the Hausman test shows that each company has a different intercept; thus, the fixed model is more appropriate here (Law, 2018). Lastly, although the panel dataset used to examine the consequences of board attributes and ownership attributes on CP in a transitional economy has a short time duration ( $t = 4$ ) and larger company dimensions ( $n = 92$ ), which recommends using the generalized methods of moments (GMM) but the lagged differences of the regressors are not significant (Law, 2018) thus, the static panel model is more appropriate for this study.

### 3.1. Model summary

This study considers the following mathematical models

Model 1 (Pooled OLS):

$$CP = \alpha + \beta_1 W\_B + \beta_2 Size\_B + \beta_3 D\_B + \beta_4 F\_B + \beta_5 I\_B + \beta_6 ES\_O + \beta_7 IS\_O + \beta_8 GS\_O + \beta_9 FS\_O + \beta_{10} SG\_C + \beta_{11} EPS\_C + \beta_{12} ROE\_C + \beta_{13} LEV\_C + \beta_{14} SC\_C + \beta_{15} AGE\_C + \varepsilon$$

Model 2 (Random Effect):

$$CP = \alpha + \beta_1 W\_B + \beta_2 Size\_B + \beta_3 D\_B + \beta_4 F\_B + \beta_5 I\_B + \beta_6 ES\_O + \beta_7 IS\_O + \beta_8 GS\_O + \beta_9 FS\_O + \beta_{10} SG\_C + \beta_{11} EPS\_C + \beta_{12} ROE\_C + \beta_{13} LEV\_C + \beta_{14} SC\_C + \beta_{15} AGE\_C + \varepsilon$$

Model 3 (Fixed effect):

$$CP_{it} = \alpha + \beta_1 W\_Bit + \beta_2 Size\_Bit + \beta_3 D\_Bit + \beta_4 F\_Bit + \beta_5 I\_Bit + \beta_6 ES\_Oit + \beta_7 IS\_Oit + \beta_8 GS\_Oit + \beta_9 FS\_Oit + \beta_{10} SG\_Cit + \beta_{11} EPS\_Cit + \beta_{12} ROE\_Cit + \beta_{13} LEV\_Cit + \beta_{14} SC\_Cit + \beta_{15} AGE\_Cit + \varepsilon_{it}$$

where

CP=Corporate performance

W\_B = Women on board

Size\_B=Board size

D\_B=Duality in board members

F\_B=Foreigners on board

I\_B=Independent board member

ES\_O=Executive ownership

IS\_O=Institutional ownership

GS\_O=Government ownership

FS\_O=Foreign ownership

SG\_C=Sales growth

EPS\_C=Earnings per share

ROE\_C=Return on assets

LEV\_C=Leverage ratio

SC\_C=Size of the company

AGE\_C=Listing history

*Eit* = Error term

## 4. Results and discussions

### 4.1. Board independence and CP

Based on the empirical results, Hypothesis 1, where it is assumed that there is a positive relationship between board independence and CP in a transitional economy. Board independence has a significantly positive relationship with ROA, with a regression co-efficient of  $\beta = 0.0964$  at  $p < 0.05$ . This outcome is also consistent with the results of previous studies (Anis et al., 2017; Dahya & McConnell, 2005). It was also found that the inclusion of more independent members on the board is based on their skills and knowledge in the respective field; thus, the involvement of independent board members significantly changes corporate performance. Antagonistic to these empirical results, Masum and Khan (2019) found inverse insignificant relationship between board independence and corporate performance. But they have considered more samples (around 32% of the total samples) from the banking, insurance and financial institutions in their samples thus their findings might be different. However, the results of this study contradict those of previous studies (Bhagat & Black, 2002; Klein, 1998) which found that board independence inversely influences firm performance, but the context of their study is different. In addition, the outcomes of the study are strengthened by agency theory, which assumes a strong proposition that independent directors have competitive advantages in raising the question regarding the actions of managers towards the business organization (Dalton et al., 1999). Thus, too many independent directors on the board ensure the accountability of managers (Kaymak & Bektas, 2017; Masum & Khan, 2019) and better corporate performance (Ramdani & Witteloostuijn, 2010).

### 4.2. Foreigners on board and CP

In Hypothesis 2, it is assumed that companies having foreigners on board influence CP positively, whereas the outcomes of the study show a contrasting relationship ( $\beta = -0.0317$ ) between them at  $p < 0.05$ . Therefore, this hypothesis could not be accepted. These findings are not unusual in the previous studies. Fainshmidt et al. (2016) conducted a comprehensive study to explore the relationship between foreigners on boards and CP. They found an inverse relationship between them, whereas other studies did not establish any significant relationship between them (Kilic, 2015; Kizito, 2013). Since the involvement of foreign members on board is minimum, they have a little power to execute and also get less support from their local counterparts (Fainshmidt et al., 2016). Incompatible to these empirical results, Masum

and Khan (2019) found significant relationship between foreign members on board and corporate performance. But they have considered more samples (around 32% of the total samples) from the banking, insurance and financial institutions in their samples thus their findings might be different.

#### **4.3. Board members' duality and CP**

Hypothesis 3 assumed an inverse relationship between board members' duality and CP. According to the hypothesis, the findings of the study also showed a negative relationship between them, but with no statistical significance. Thus, based on the empirical findings, this hypothesis cannot be accepted. However, previous studies (Hassoun & Aloui, 2017) have found that separating the two roles – the role of operational authority as a CEO and the role of monitoring and controlling authority as an MD – not only improves the quality of monitoring but also ensures corporate transparency (Donnelly & Mulcahy, 2008). Nevertheless, agency theory entails that the duality of board members, for instance, the CEO also holds the position of managing director, may lessen the role of board monitoring over the organization (Sarhan & Ntim, 2019). The scenario of corporate culture in a transitional economy such as Bangladesh is slightly different, and the findings also show an insignificant relationship between the duality of board members and the CP with an inverse direction for various reasons. First, only 22 annual reports out of 368 annual reports have dual board members in the compilation of their board of governance. Second, an individual most often has less positional power to make specific decisions.

#### **4.4. Size of the board and CP**

Based on the empirical results, Hypothesis 4, where it is expected that the size of the board positively influences CP in a transitional economy. Therefore, Hypothesis 4 was accepted. From this empirical study, it is found that board independence influences the ROA at  $\beta = 0.0964$  at  $p < 0.1$ . The board members of an organization cannot fulfil certain roles, including controlling the organization to maximize the interests of the shareholders (Sarhan & Ntim, 2019), so a larger board size might influence the CP as the larger board size aggregates the skills of diversified people. Moreover, some previous studies show that a comparatively lower board size is more effective (Anis et al., 2017) for the smooth operation of a business; on the other hand, Coles et al., have opined that a large board is more praiseworthy in this regard. Therefore, the outcomes of this study are no exception. Masum and Khan (2019) also found significant relationship between board size and corporate performance. As per the code of corporate governance in Bangladesh, the board size must have a minimum size of two members and maximum size of twenty members that's why over the years, the impact of board size on corporate performance has a consistent effect. The results of this study also contradict the findings of Mak and Kusnadi (2005) who found a negative relationship between board size and CP. It is also interesting that agency theory depicts that a wider board of governance improves managerial monitoring and performance (Sarhan & Ntim, 2019).

#### **4.5. Women on board and CP**

In this study, Hypothesis 5 is incorporated to examine the impact of women on boards on CP. Based on the findings presented in Table 1, it is found that women on board affect CP with a regression coefficient of  $\beta = 0.0148$  at a statistical significance of  $p < 0.05$ . Therefore, Hypothesis 5, where it is assumed that there is a positive relationship between women on the board and corporate performance in a transitional economy, is accepted. These outcomes are also consistent with those of Bear et al. (2010) who also found that women on boards influence corporate performance. In addition, the findings of the study also become consistent with the characteristics of a transitional economy, where one of the development phases is measured through the empowerment of women. Moreover, Isidro and Sobral (2015) found that the involvement of women ensures better compliance for business organizations. Some previous studies (Chemweno, 2016) also found a negative relationship between women's on-board and CP, although female directors show more sophisticated behaviour on ethical issues and play a more

**Table 1.** Model summary.

	Model 1 Fixed effect with robust standard error	Model 2 Fixed effect and time effect	Model 3 Only fixed effect no time effect
<i>Independent Variables:</i>			
Women on board	0.0148 (0.0121)**	0.0295 (0.0183)**	0.0294 (0.0129)**
Board size	0.2627 (0.0728)*	0.5046 (0.1268)	0.5046 (0.0815)*
Board members duality	-0.0333 (0.3878)	-0.2368 (0.6461)	-0.2368 (0.4863)
Foreign members on board	-0.0316 (0.0178)**	0.0009 (0.0250)**	0.0009 (0.0149)**
Board Independence	0.0964 (0.0200)**	0.1403 (0.0303)**	0.1403 (0.0179)**
Executive shareholdings	-0.0270 (0.0081)***	0.0295 (0.0183)**	0.0294 (0.0129)**
Institutional shareholdings	0.0706 (0.0161)**	0.0046 (0.1268)	0.0056 (0.0815)*
Government shareholdings	-0.0119 (0.0086)***	0.0009 (0.0250)**	0.0009 (0.0149)**
Foreigner shareholdings	0.0706 (0.0239)**	0.0803 (0.0303)**	0.0703 (0.0179)**
<i>Control Variables:</i>			
Sales growth	-0.0013 (0.0042)***	0.0020 (0.0113)**	0.0020 (0.0075)***
EPS	-0.0189 (0.0220)**	-0.0101 (0.0387)**	-0.0107 (0.0210)**
ROE	0.274 (0.0252)**	0.2266 (0.0447)**	0.2266 (0.0168)**
Leverage	-0.0537 (0.0483)**	-0.1057 (0.0577)***	-0.1057 (0.0837)***
Size of the company	-0.163 (0.182)	0.6327 (0.4026)	0.6327 (0.2497)
Age	-0.231 (0.0163)**	-0.0403 (0.0449)**	-0.0403 (0.0182)**
Constant	-0.9823 (1.9332)	-1.1647 (1.3864)	-1.1647 (1.4951)
Adjusted R square	0.8188***	0.7168***	0.7081***
N	339	368	368

\*\*\*Significant at 0.01.

\*\*Significant at 0.05.

\*Significant at 0.10.

social and ethical role in executing business operations (Isidro & Sobral, 2015). Discordant to these empirical results, Masum and Khan (2019) found insignificant relationship between foreign members on board and corporate performance. But they have considered more samples (around 32% of the total samples) from the banking, insurance and financial institutions in their samples thus their findings might be different. However, women's participation in corporate affairs is increasing in Bangladesh in recent years.

#### 4.6. Foreign shareholding and CP

As per Hypothesis 6, a positive relationship between foreign shareholding and CP in a transitional economy is explored. Table 1 presents that foreign ownership positively influences corporate performance with a regression co-efficient of  $\beta = 0.0706$  at  $p < 0.05$ . Based on these findings, our hypothesis was accepted. These findings are justified because business entities based solely on family or local ownership may face problems with handling extensive capital investment from foreign countries, as such entities are based on weak contractual rights and lack of operation in such a gigantic business setup (Ciftci et al., 2019). Alternatively, foreign investors may have experience in different national contexts (Ciftci et al., 2019) and may promote the adoption of benchmarks in an international context (Brewster et al., 2008). Moreover, the transitional economy transforms from an aid-based economy to a trade-based economy, which requires designing an economic policy to induce foreign investors. Thus, the hypothesis accepted is consistent with the characteristics of the transitional economy.

#### **4.7. Government shareholding and CP**

Based on the empirical outcomes reported in Table 1, Hypothesis 7, where it is assumed that there is a progressive relationship between government ownership and CP. The findings of this study show a negative relationship ( $-0.0119$ ) between them, although such relationships are statistically significant ( $0.0086$ ) at  $p = 0.1$ . Thus, this hypothesis cannot be accepted based on empirical findings. These findings are also justified because the government, as an owner of any business, does not execute corporate activities to earn profit; rather, in most cases, serving society is the main motive of the government (Masum, 2010). Organizations with government shareholdings may tend to gain substantial competitive advantages through subsidies and tax exemptions, which consecutively optimize corporate performance (Haniffa & Hudaib, 2006). However, in a transitional economy, both the government and business organizations struggle to operate their activities in a transforming phase. This self-optimizing behaviour of the government may also hinder the optimization of corporate performance.

#### **4.8. Institutional shareholding and CP**

Based on the empirical results presented in Table 1, Hypothesis 8, which demonstrates a positive association between institutional ownership and corporate performance in a transitional economy, is accepted. The results show that institutional shareholding has a significant positive relationship with the ROA with a regression coefficient of  $\beta = 0.0706$  at  $p < 0.05$ . Ciftci et al. (2019) found that institutional ownership ensures better corporate performance. In addition, Hossain et al. (2001) conducted a comprehensive study on the listed companies of New Zealand and found that although the top shareholders of the New Zealand Stock Exchange are highly institutional, this highly institutional ownership structured organization pursues better monitoring of management. In contrasting to the above findings, Fauzi and Locke (2012) argue that organizations with institutional ownership gradually become less accountable to non-controlling or minority shareholders and more accountable to institutional shareholders. This study's outcomes are also consistent with the proposition of agency theory, as Hartzell and Starks show that institutional shareholdings may play a pivotal role in decreasing agency problems.

#### **4.9. Executive shareholding and CP**

Based on the empirical outcomes presented in Table 1, Hypothesis 9, which states that there is an inverse relationship between executive shareholdings and CP, is accepted. The findings of the study also show a negative relationship between them with a regression co-efficient of  $\beta = -0.0270$  at  $p < 0.1$ . This finding contradicts with the findings of (Morck et al., 1988) as they found a positive relationship between executive ownership and CP, whereas the findings of the study have no statistical significance in having such a relationship. From the agency theory perspective, Jensen and Meckling stipulate that there is a conjunction of interest between managers and stockholders when the proportion of managerial shareholding increases, which reduces agency costs and increases performance. However, Stultz recommends that a lower proportion of managerial ownership enhances corporate performance. A summary of all accepted and rejected hypotheses is presented in Table 2.

### **5. Robustness test**

This study explores the most appropriate board and ownership attributes for CP in a transition economy. A summary of the fixed-effects regression results is reported in Table 1. It represents the regression coefficients, standard errors and level of significance of the three alternative fixed models. Model 1 is operationalized considering the inherent limitations – autocorrelation and heteroscedasticity problems of the data, along with their outliers – while Model 2 is operationalized considering the adjustment of autocorrelation and heteroscedasticity adjustments of the dataset, while Model 3 considers the fixed effect only (since it qualifies the LM and Hausman tests, but the time effect is not significant for the model). It is found that for all three models, the proxy variables of the board and ownership attributes explain the variations in corporate performance at  $p < 0.01$ , with an adjusted r square of 81.88%, 40.70% and 60.81%,

**Table 2.** Summary of hypothesis.

Hypothesis No.	Details of hypothesis	Key findings	References
1	There is a positive relationship between board independence and CP in the transitional economy	Hypothesis Accepted	Anis et al. (2017); Dahya and McConnell (2005)
2	There is a positive relationship between the foreigners on board and CP in transitional economy.	Hypothesis Rejected	Fainshmidt et al. (2016)
3	There is a negative relationship between the board members' duality and CP in the transitional economy.	Hypothesis Rejected	Sarhan and Ntim (2019)
4	There is a positive relationship between the size of the board and CP in transitional economy.	Hypothesis Accepted	Coal et al. (2008)
5	There is a positive relationship between the women on board and CP in the transitional economy.	Hypothesis Accepted	Bear et al. (2010)
6	There is a positive relationship between the foreign shareholdings and CP in transitional economy.	Hypothesis Accepted	Ciftci et al. (2019)
7	There is a positive relationship between the government shareholdings and CP in transitional economy.	Hypothesis Rejected	Masum (2010)
8	There is a positive relationship between the institutional shareholdings and CP in a transitional economy.	Hypothesis Accepted	Ciftci et al. (2019); Hartzell and Starks (2003); Hossain et al. (2001)
9	There is a negative relationship between executive ownership and CP in transitional economy.	Hypothesis Accepted	Jenson and Meckling (1976)

respectively, for Model 1, Model 2 and Model 3. Consecutively, a fixed effects model that addresses the autocorrelation and heteroscedasticity problems after considering the outlier was selected as the final model (Model 1) to investigate the hypothesis of the study. For comparability, the regression coefficients, standard error and their level of significance for Model 2, which addresses the autocorrelation and heteroscedasticity problems before considering the outlier, and Model 3, which only considers the fixed effect, while having no time effect, are also presented. It is found from the Table 1 that the findings are similar and consistent, thus proving the robustness of the models. A summary of robustness is given in Appendix 1.

## 6. Conclusion

This study explores the most important board and ownership attributes that affect corporate performance in a transitional economy. It is found that the corporate governance attributes significantly influence corporate performance in a transition economy context. It is also found that board independence, board size, inclusion of women on the board, foreign shareholding and institutional shareholding significantly influence corporate performance, whereas executive shareholding has an adverse impact on corporate performance in the context of a transition economy. On the other hand, inclusion of foreigners on the board, board members duality and government shareholding has no significant association with corporate performance. There is a paradoxical findings found in the study which indicates that although the foreign shareholdings significantly influenced the corporate performance in transitional economy but the inclusion of foreign members in the board has no significant impact on corporate performance. It may be happened as the foreign members have significant dependency on local board members that might hamper the business entities to get the benefits from foreign board members. In addition, the government shareholding has no significant role in earning profit as such an organization seriously lacks accountability issues. The Code for Professional Conduct has been effective in Bangladesh since 2012. The findings of the study will help the regulatory body shape their strategic decisions to implement the code of corporate governance in a congenial way. More specifically which code of corporate governance is responsible to bring more profit can be identified and through extensive research it can be incorporated in the revised code of corporate governance.

However, the study has several limitations. First, the study was conducted based on annual reports, and other sources such as websites, sustainability reports and ESG reports might be used to conduct a similar study. However, the availability of data from other sources and their reliability may not be supported by proper evidence. Second, this study only considers secondary data and primary data, such as observations and perceptions of corporate governance; the questionnaire might bring some thoughtful outcome. Third, the study considers the data from a single-country context, whereas outcomes from multiple countries may provide more robust and sophisticated results. Finally, besides good governance, the disclosure of non-financial information and its impact on the association between corporate governance and corporate performance might provide a more holistic picture in the literature.

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## Data availability statement

The authors had full access to all of the data in this study and the data are available upon reasonable request from the corresponding author. Since the data are sourced from publicly available platforms and already published, no further permission is required for its utilization in research endeavours.

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**Appendix 1.1: Robustness test – corporate governance and corporate performance**

	M 1 FE with robust standard error (ROA)	M 1a FE with robust standard error (ROE)	M 2 FE and time effect (ROA)	M 2a FE and time effect (ROE)	M 3 Only FE no time effect (ROA)	M 3a Only FE no time effect (ROE)
<i>Independent Variables</i>						
Women on board	0.0148 (0.0121)**	0.0098 (0.0421)**	0.0295 (0.0183)**	0.0245 (0.0383)**	0.0294 (0.0129)**	0.0194 (0.0329)**
Board size	0.2627 (0.0728)*	0.2227 (0.0828)*	0.5046 (0.1268)	0.4046 (0.0268)**	0.5046 (0.0815)*	0.5046 (0.0915)*
Board members duality	-0.0333 (0.3878)	-0.0434 (0.4878)	-0.2368 (0.6461)	-0.2258 (0.5461)	-0.2368 (0.4863)	-0.2468 (0.4763)
Foreign members on board	-0.0316 (0.0178)**	-0.0416 (0.0378)**	0.0009 (0.0250)**	0.0007 (0.0450)**	0.0009 (0.0149)**	0.0011 (0.0349)**
Board Independence	0.0964 (0.0200)**	0.0864 (0.0300)**	0.1403 (0.0303)**	0.1203 (0.0403)**	0.1403 (0.0179)**	0.0903 (0.0379)**
Executive shareholding	-0.0270 (0.0081)**	-0.0370 (0.0381)**	0.0295 (0.0183)**	0.0195 (0.0373)**	0.0294 (0.0129)**	0.0194 (0.0429)**
Institutional shareholding	0.0706 (0.0161)**	0.0606 (0.0261)**	0.0046 (0.1268)	0.0036 (0.3268)	0.0056 (0.0815)*	0.0196 (0.0915)*
Government shareholding	-0.0119 (0.0086)**	-0.0219 (0.0286)**	0.0009 (0.0250)**	0.0007 (0.0410)**	0.0009 (0.0149)**	0.0010 (0.0349)**
Foreign shreholding	0.0706 (0.0239)**	0.0506 (0.0339)**	0.0803 (0.0303)**	0.0703 (0.06303)*	0.0703 (0.0179)**	0.0603 (0.0299)**
<i>Control Variables:</i>						
Sales growth	-0.0013 (0.0042)**	-0.0003 (0.0042)**	0.0020 (0.0113)**	0.0050 (0.0213)**	0.0020 (0.0075)*	0.0040 (0.0095)**
EPS	-0.0189 (0.0220)**	-0.0289 (0.0320)**	-0.0101 (0.0387)**	-0.0201 (0.0487)**	-0.0107 (0.0210)**	-0.0207 (0.0410)**
ROE/ROA	0.274 (0.0252)**	0.274 (0.0252)**	0.2266 (0.0447)**	0.2266 (0.0447)**	0.2266 (0.0168)**	0.2266 (0.0168)**
Leverage	-0.0537 (0.0483)**	-0.0437 (0.0383)**	-0.1057 (0.0577)*	-0.0957 (0.0877)*	-0.1057 (0.0837)*	-0.0957 (0.0937)*
Size of the company	-0.163 (0.182)	-0.263 (0.282)	0.6327 (0.4026)	0.5327 (0.4026)	0.6327 (0.2497)	0.0927 (0.5497)
Age	-0.231 (0.0163)**	-0.131 (0.0063)**	-0.0403 (0.0449)**	-0.0303 (0.0549)*	-0.0403 (0.0182)**	-0.0503 (0.0482)**
Constant	-0.9823 (1.9332)	-0.8823 (2.9432)	-1.1647 (1.3864)	-1.2647 (1.5664)	-1.1647 (1.4951)	-1.2147 (1.3951)
Adjusted R square	0.8188***	0.7988***	0.7168***	0.6968***	0.7081***	0.6981***
N	339	339	368	368	368	368

\*\*\*Significant at 0.01.

\*\*Significant at 0.05.

\*Significant at 0.10.