

Overcommitted to Show up in the Board? The Moderating Effect of Ownership

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Abstract

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Keywords:

Multiple Directorships; Board Attendance; Ownership

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Statements and Declarations

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Overcommitted to Show up in the Board? The Moderating Effect of Ownership

Abstract

This study investigates the impact of multiple directorships on board meeting attendance at the individual director level. By using the individual director attendance rate in Pakistani-listed firms, we find no direct effect of multiple board appointments (director busyness) on the tendency to remain absent from board meetings, even not when making the distinction between executive and non-executive directors. Furthermore, we introduce ownership percentage as an important moderator in the model. Our results show that higher directors' shareholdings will motivate busy non-executive directors to attend more board meetings. In contrast, higher executive director busyness will lead to declining board meeting attendance when director ownership is higher.

1. INTRODUCTION

Generally, boards of directors are considered a vital firm resource as they provide the critical expertise to effectively address the firm's monitoring, service, and strategic challenges (Carpenter & Westphal, 2001). Accordingly, it may come as no surprise that highly qualified and experienced directors are in high demand, which substantially raised the number of directorships per director among the director population, leading to the phenomenon of multiple directorships (i.e., directors serving on several boards) (Harris & Shimizu, 2004). Multiple directorships may be a proxy for higher director quality in well-functioning markets of outside directors (Fama, 1980; Fama & Jensen, 1983). Moreover, directors with multiple directorships can benefit firm performance by bringing critical resources to the company (Booth & Deli, 1996; Mizuchi & Stearns, 1994; Pfeffer, 1972). However, the dark side of this director market trend is that when directors have a large number of board appointments, they can become overcommitted, which compromises their ability to advise and monitor the top management on behalf of the shareholders (Ferris, Jagannathan, & Pritchard, 2003). Indeed, directorships require a substantial amount of time, and taking multiple directorship positions raises concerns about an overstretched director workload and lower board meeting attendance (Brown, Dai, & Zur, 2019; Ferris et al., 2003). Consequently, corporate governance reformers worldwide have taken these concerns seriously and placed strict limits on the number of board positions individuals may hold.

Although most corporate governance codes nowadays recommend a limitation on the number of directorships, academic research is not conclusive about the merits of this measure. Some studies have reported that multiple directorships adversely affect a firm's performance ('busyness hypothesis'), lower the sensitivity of CEO turnover, and manifest a positive reaction in the market following the departure of a busy director from the board (Fich & Shivdasani, 2006). Multiple directorships also lead to excess CEO and executive remuneration (Core, Holthausen, & Larcker, 1999; Shivdasani & Yermack, 1999) and enhance the chances of accounting fraud (Beasley, 1996). However, other studies contend that directors with multiple appointments can

better serve the interest of shareholders and thus positively affect firm performance (Miwa & Ramseyer, 2000; Sarkar & Sarkar, 2009). In addition, multiple directorships can also enhance the experience of executives, provide the opportunity to build a business network, and certify the directors' ability (Booth & Deli, 1996; Carpenter & Westphal, 2001; Loderer & Peyer, 2002; Mace, 1986; Rosenstein & Wyatt, 1994).

One of the explanations for this inconclusive evidence is that most prior studies overlooked critical variables in the director busyness debate, namely an increasing workload and a *lack of board meeting attendance*. Indeed, it is rational to say that individual directors can only adequately exercise their duties by asking questions, seeking explanations about problems, reviewing meeting materials, and giving their independent advice and judgment on several crucial issues *during board meetings* (Min & Chizema, 2018). Although some recent studies started to investigate the workload argument indirectly by, for example, a Merger & Acquisition (M&A) event analysis (Brown et al., 2019; Daniliuc, Li, & Wee, 2021; Hauser, 2018), a direct test of the influence of directorships on board meeting attendance is scant, and the few studies that investigated the topic provided inconsistent evidence (Jiraporn, Davidson, DaDalt, & Ning, 2009; Sarkar & Sarkar, 2009). Sarkar and Sarkar (2009) reported a positive relationship between multiple directorships and board meeting attendance for outside directors. In contrast, Jiraporn, Davidson, et al. (2009) generally found a negative relationship, while Harris and Shimizu (2004) and Ferris et al. (2003) (for board committee meetings) did not find evidence that overboarded directors miss a disproportionate number of meetings. To solve this controversy, some papers started to point to moderators on this relationship. As director busyness seems to have different consequences depending on whether the director is an executive or a non-executive (Liu & Paul, 2015), this director distinction has been examined and found to be an important moderator on the director busyness – board meeting attendance relationship (Sarkar & Sarkar, 2009). We build further on this research route and introduce director ownership as a second overlooked moderator. Indeed, director ownership is considered an important motivator for directors to execute their duties, including being present at board meetings (Jiraporn, Davidson, et al., 2009).

Therefore, this study aims to examine the effect of directors' busyness on board meeting attendance at the individual director level. Accordingly, we perform a direct test of one of the central arguments behind the director busyness hypothesis (i.e., busy directors will show lower board meeting attendance) and take into account the moderating influence of director ownership of executive versus non-executive directors. In so doing, we contribute to the ongoing multiple directorships debate in several ways. First, studies on the direct

relationship between multiple directorships and board meeting attendance are scant¹ and concentrated on the meeting attendance by outside directors. Additionally, most studies are restricted to data on US firms. However, directors' board meeting attendance data of US firms are not precise because firms in the US only have to report whether or not a given director has attended 75% of total board meetings (Adams & Ferreira, 2008; Jiraporn, Davidson, et al., 2009; Lawler & Finegold, 2006). Therefore, the current study intends to overcome this shortcoming by investigating the effects of more directorships on meeting attendance for non-executive and executive directors, using a more comprehensive data set of the directors' board meeting attendance in Pakistani firms. Compared to US firms, firms listed on the Pakistan Stock Exchange have to provide detailed information about the board meeting attendance of all directors in their annual reports (Latif, Voordeckers, Lambrechts, & Hendriks, 2020).

Second, the Pakistani context is invaluable for investigating board meeting attendance. Most developed economies like the US have a long history of strict imposed limits on the number of directorships. Under such circumstances, the incidence of multiple directorships in listed firms may be endogenously determined, making it hard to find much variation in directorship data. This, in turn, makes it challenging to investigate an empirical relationship between directorships and meeting attendance by using data from developed countries (Dahya & McConnell, 2003; Sarkar & Sarkar, 2009). In contrast, the incidence of multiple directorships in the Pakistani context is higher than in developed countries like the US². While the limit in the US is defined as a maximum of three directorships (Ferris et al., 2003; Fich & Shivdasani, 2006), the directorships limits in emerging countries like India, Malaysia, and Pakistan are much higher (Kamardin, Latif, Mohd, & Adam, 2014; Sarkar & Sarkar, 2009). During the 2006-2011 period (as per the Code of Corporate Governance 2002), the recommended limit of the maximum number of directorships in Pakistan was ten, which is significantly higher than the best practices in vogue in the US and other developed countries. This period allows us to test our hypotheses with the necessary variation in our variables of interest.

Third, we contribute by investigating the moderating effect of directors' shareholding on the relationship between multiple directorships and meeting attendance. We will argue that directors' stock

¹ The only exception is the work of Jiraporn, Davidson, et al. (2009) which discussed this relationship in the US context and faces the problem of data limitations. These authors reported that "Data are not available on what percentage of meetings directors attend. Firms are only required to report whether or not a given director attends more than 75% of the total meetings. Future research, perhaps, should look into this issue as more detailed data become available" (Jiraporn, Davidson, et al., 2009, p. 1163).

² While mean busyness of directors for the US companies is between 1.6 (Ferris et al., 2003) with corresponding estimates of the percentage of busy directors is 14.97% (Ferris et al., 2003). The estimates of mean busyness and percentage of busy outside directors for Pakistani listed companies are 2.01 and 24.37% respectively.

ownership will motivate non-executive directors to perform their director duties with more diligence because they would have a stronger alignment of interest with the interest of shareholders as their own wealth is tied to the value of the firm (Jensen & Meckling, 1976; Weisbach, 1988). In contrast, we expect the opposite effect for executive directors based on agency and power arguments, i.e., more directorships will lead to less board meeting attendance when their ownership is high.

The remainder of this paper is organized as follows. In section 2, we present a literature review and the hypothesis development. In section 3, we discuss the methodology of this study and the data. We discuss empirical results in section 4 and offer a conclusion in section 5.

2. LITERATURE REVIEW AND HYPOTHESES

2.1 Institutional Context

According to Acemoglu, Johnson, Robinson, and Thaicharoen (2003), it is essential to understand the differences between institutional contexts of countries because it is considered a key factor in forming rules-based systems and formal structures of a country (Claessens & Yurtoglu, 2013; DiMaggio & Powell, 1983). Accordingly, corporate governance factors may be influenced by institutional settings. It is important to note that Asian socio-economic institutional settings and behavioral peculiarities differ from western economies (Sheikh, Shah, & Akbar, 2018). Pakistan is an important context to study due to its unique governance features. The political and legal environment is weaker and overall governance is poor (Rehman, Hasan, Mangla, & Sultana, 2012). In recent years, the regulatory quality index and government effectiveness index remained negative, and the Pakistani governance and corporate environment have been under the surveillance of the International Monetary Fund (IMF) and other funding agencies (Sheikh et al., 2018).

Furthermore, ownership is concentrated, even in the firms quoted on the stock exchange. Shareholder activism is very limited, and investor and shareholder protection are also weak. Thus, autocratic management can be observed by the controlling owners (Farooq, Kazim, Usman, & Latif, 2018). Therefore, the prevalent agency problem is the risk of expropriation of minority shareholders' interests by the dominant (family) shareholder (Sheikh et al., 2018). The corporate governance structure in Pakistan is influenced by the Anglo-American (common law) model, which may not adequately address this predominant agency problem (Samara & Berbegal-Mirabent, 2018). Furthermore, the Pakistani market is afflicted with greater corruption (lower score on the Corruption Perception Index), which makes most office-bearers of Pakistan (including directors) more prone to opportunistic and unethical behavior (Mujtaba & Afza, 2011).

In Pakistan, an overall understanding of the importance of corporate governance is relatively new. The first corporate governance code was introduced in 2002 and revised in 2012 and 2017. The implementation and compliance with most of the requirements of the codes have been based on a “mandatory” approach. Recently, a new governance regime was introduced (in 2019), and the regulations of the code were revised based on the “comply or explain” approach except for the requirements for which it is explicitly stated as “mandatory”.

Typically, a board of directors is structured as a one-tier board consisting of at least seven directors. As per the corporate governance code 2019, boards primarily comprise executives, non-executives, and independent directors. It is mandatory that at least two or one-third of the board members - whichever is higher - should be independent directors. In addition, executive directors, including the CEO, should not represent more than one-third of the board. Further, it is also mandatory that the board has at least one female director. A non-mandatory recommendation is that the chairman and CEO should not be the same person.

The Pakistani context is also unique and well suited to the topic of this study because the limits on directorships per director were loose, i.e., the maximum number of directorships was ten until 2012. In the revised corporate governance code 2012, the limit was reduced to seven, while in 2017, the limit was further reduced to five directorships. However, in 2019 the limit was again raised to a maximum of seven directorships per director. Given Pakistan's particular corporate governance context, it is an important study laboratory to investigate the topic of multiple directorships because of the wide variation in our main variable of interest in the time frame until 2012 (Latif et al., 2020).

2.2 Prior studies on multiple directorships

Prior academic literature on multiple directorships presented two opposing views. Proponents of the bright side argue that multiple directorships are beneficial as it enlarges directors' visibility, commercial contacts, and prestige (Mace, 1986). It may open new markets for the firm and provide access to vital resources. Furthermore, outside directorships provide new insights to the executives, and they can learn different strategies and management styles implemented in other firms (Booth & Deli, 1996; Carpenter & Westphal, 2001). As a result, they become more able to perform their board roles effectively, resulting in more rigorous oversight of top management and hence, fewer wealth-diminishing decisions (Ahn, Jiraporn, & Kim, 2010).

Similarly, Fama (1980) and Fama and Jensen (1983) stated that multiple directorships signal a director's quality. Thus, the market for directorships provides incentives for directors to develop their reputation as monitoring specialists by accepting more directorships. Harris and Shimizu (2004, p. 793) posit that “busy directors are busy for a good reason – they are good contributors.” Therefore, researchers have also taken the

number of board positions held by directors to proxy the reputation of the director in the external labor market and provided empirical support in favor of multiple directorships (Boyd, 1990; Coles & Hoi, 2003; Di Pietra, Grambovas, Raonic, & Riccaboni, 2008; Yermack, 2004).

However, abundant evidence points to the dark side of multiple directorships. Indeed, multiple directorships may reduce the effectiveness of outside directors as corporate advisors and monitors (Core et al., 1999; Shivdasani & Yermack, 1999) and lead to excessive CEO compensation packages (Core et al., 1999), which seem to hurt firm performance. Indeed, managers start taking advantage of less effective oversight and extract their own benefits at the expense of shareholders (Ahn et al., 2010). In addition, when boards are busy (i.e., majority of outside directors holding three or more directorships), their firms are associated with weak corporate governance, lower sensitivity of CEO removal to firm performance, weaker profitability and performance ratios (Fich and Shivdasani, 2006) and, they suffer from a deeper diversification discount (Jiraporn, Kim, & Davidson, 2008).

2.3 Multiple directorships and directors' attendance

Establishing a link between multiple directorships and firm performance is not straightforward because it would require the identification of all possible exogenous variables that will affect the relationship between multiple directorships and firm performance (Jiraporn, Davidson, et al., 2009). A potential method to deal with these measurement problems is to study a director's advising and monitoring *activities*, which thus affect board effectiveness. However, the actual board behavior of directors is a variable that is hard to observe directly in reality. One possible way to examine this critical variable is to observe a director's absence at board meetings, as directors who are not present at these meetings will consequently not adequately perform their service and monitoring duties (Davies, 1991; Vafeas, 1999). Attending board meetings make directors more effective in exercising their role as advisors and monitors³ (Nowland & Simon, 2018). As the workload and effort arguments are central in the decision of corporate governance reformers to impose strict limits on the number of directorships, it is warranted to focus on board meeting attendance to judge the relevance of one of the key arguments behind this corporate governance regulation.

We argue that building up knowledge about a firm is time-intensive and requires a good understanding of the affairs of a company by attending board meetings, where information is shared and discussed. If directors have too many board appointments, it will become difficult for them to pay attention and remain involved in the

³ It would be a signal of low quality of advising and monitoring when directors are not attending board meetings. But whether failure to attend board meetings will adversely affect firm performance is a question which is beyond the scope of this study.

affairs of a company (Jiraporn, Davidson, et al., 2009) which compromises the execution of their monitoring and advising tasks (Nowland & Simon, 2018). Therefore, we posit that busier directors will attend fewer board meetings.

Thus, our baseline hypothesis is:

Hypothesis 1: The number of directorships of a director will have a negative relationship with his/her board meeting attendance frequency.

Prior studies (e.g., Jiraporn, Davidson, et al., 2009; Lin, Yeh, & Yang, 2014) have suggested a significant difference between non-executive and executive directors in terms of attendance behavior. Inherently, executive directors differ from outside or non-executive directors in several ways. These fundamental differences would affect their meeting attendance.

First, *non-executive directors* are not firm employees and are invited to join the board as outside members. Mostly, they have other careers and professional responsibilities that will demand their full commitment and attention (Min & Chizema, 2018). In addition, they are under less pressure to attend board meetings. Therefore, we expect that time constraints coupled with other more compulsory professional commitments will lead to a weaker board meeting attendance rate by directors serving on multiple boards.

On the contrary, *executive directors* are firm employees, and it is considered a (moral) obligation for them to be present at board meetings (Jiraporn, Davidson, et al., 2009). Therefore, they are under more internal pressure to attend board meetings because absence will adversely affect their careers. Furthermore, when executive directors accept additional board positions, they are expected to bring needed resources, knowledge, and skills to the home firm, and they can introduce new value-enhancing strategies in their home firm (Kiel & Nicholson, 2006; Perry & Peyer, 2005; Pfeffer, 1972). A key role of directors on the board having multiple directorships is their linking role of the firm with its external environment (Huse, 2005). The experience and knowledge of individual directors gained by external board appointments are very important and valuable, leading to a competitive advantage for the firm (Gabrielsson & Huse, 2005; Huse, 1998). Thus, multiple directorships are beneficial for the home firm. Accordingly, this would be an important reason for executives to be present at board meetings because contributing to the service role of the board will be mainly established by participating in the discussions during board meetings. Given these arguments, we postulate that:

Hypothesis 2a : The number of directorships of a non-executive director will have a negative relationship with his/her board meeting attendance frequency.

Hypothesis 2b : The number of directorships of an executive director will have a positive relationship with his/her board meeting attendance frequency.

2.4 Multiple directorships, director shareholdings, and board meeting attendance

The board is expected to guide and supervise the managers in the company's operations on behalf of the owners (Lin et al., 2014). However, aligning the directors' and owners' interests remains challenging. Accepting multiple directorship positions without dedicating the necessary efforts to executing the essential board roles and attending board meetings could be beneficial for directors but does not serve the interests of the shareholders. Agency theory (Jensen and Meckling, 1976) proposes that these potential agency conflicts between directors and owners can be mitigated by director ownership. Indeed, equity ownership concentrated in the board provides direct incentives for the directors to act in the best interest of shareholders as their own wealth is tied to firm performance, which in its turn, depends on the adequate execution of board roles (Brickley, Lease, & Smith, 1988; Weisbach, 1988). Numerous studies (e.g., Ang, Cole, & Lin, 2000; Filatotchev, Lien, & Piesse, 2005; Han & Suk, 1998; Krivogorsky, 2006) found that a higher director's equity ownership is indeed associated with lower agency costs. For example, Bhagat and Bolton (2013) found that greater director ownership will refrain firms from engaging in value-destroying activities such as acquisitions.

In addition, Beasley (1996) stated that the more shareholdings belong to outside directors, the lower the likelihood of fraud or malpractice in the company. These agency arguments are also expected to impact directors' incentives to attend board meetings. More specifically, Jiraporn, Davidson, et al. (2009) proposed that directors holding a higher percentage of shares will have a lower probability of being absent from board meetings. Still, they did not find empirical support for their hypothesis. We argue that such non-significant findings result from overlooking the distinction between equity ownership for executive versus non-executive directors. The agency arguments above are especially relevant for non-executive directors as higher stock ownership increases their incentive to attend board meetings and perform their board roles adequately. However, this argument does not hold for executive directors. First, stock ownership by executives may also align the interests of managers and shareholders and refrain management from self-serving behavior. But this alignment of interests between managers and owners will decrease the need for a vigilant board in which executive directors have to defend and justify their corporate policy towards the board (and thus have to be present at board meetings). Accordingly, there is a *lower incentive* to attend board meetings when executive directors have a higher proportion of ownership, which will especially materialize when they have multiple

directorships and thus an overstretched agenda. Second, Lemma, Mlilo, and Gwatidzo (2020) point to the fact that higher directors' shareholdings could increase directors' political power, which is especially relevant when these directors are executives. The strong power position indeed decreases their incentives to attend board meetings as they can easily dominate the strategic decision processes in their position as managers. Under such managerial hegemony, boards often have a rubber-stamping function (Hung, 1998) that does not stimulate busy executive directors to attend board meetings.

In conclusion, non-executive directors holding more directorship have unique resources that they can bring to the board table (i.e., expertise in monitoring and advice as well as networking services), and a higher level of equity ownership will motivate them to perform their board roles with more diligence and more tightly integrate their interests with those of the firm, thus creating more willingness to attend board meetings⁴. In contrast, busy executive directors have declining incentives to attend board meetings when their ownership is higher because of a stronger alignment of manager-owner interests and a stronger power position (i.e., a managerial hegemony situation). Therefore, we postulate that

Hypothesis 3a : The negative relationship between the number of directorships of a non-executive director and his/her board meeting attendance frequency will become less negative when the director's ownership in the firm is higher.

Hypothesis 3b : The positive relationship between the number of directorships of an executive director and his/her board meeting attendance frequency will become less positive when the director's ownership in the firm is higher.

3. METHODOLOGY

3.1 Data

Our database comprises the directors of all firms in non-financial sectors listed on the Pakistan Stock Exchange⁵. We obtained the required data from the annual reports of all listed firms and other sources, including DSpaceRepository, Opendoors.pk, Securities and Exchange Commission of Pakistan, Islamabad and Pakistan Stock Exchange, Karachi. We did not include financial companies in the study because of their different regulatory requirements and unique financial structure. We collected data from 422 non-financial firms listed on

⁴ It is not sure that directors attending board meetings are always fulfilling their monitoring role adequately, but not attending board meetings is a clear indication that a director is evading his/her responsibilities.

⁵ Formerly Karachi Stock Exchange.

the Pakistan Stock Exchange across 28 different sectors during the 6-year period from 2006-2011. We have chosen the period of 2006-2011⁶ due to two reasons. First, a Statement of Compliance with the Code of Corporate Governance was not found for most firms before 2006. Secondly, the Code of Corporate Governance was revised in 2012 in Pakistan, and the limit on the number of directorships has been lowered to seven. Therefore, to avoid data inconsistency due to changes in the governance code and the non-availability of the compliance report, the selected sample period spans six years, from 2006-2011.

Next, we removed 41 firms that were delisted during the period of 2006-2011. Thus, our final sample consists of 17,218 director-level observations from 381 firms from the period 2006-2011. Since our analysis requires data on individual directors of each of these firms, we used the annual reports to collect detailed information on the individual director level. All data of multiple directorships had to be hand compiled and are based on directorships found in the final total sample of the Pakistan Stock Exchange, i.e., the directorships held by any individual director in the study include appointments to the boards of our sample firms. In addition to the data on multiple directorships, we need information about the total number of board meetings in a year, a director's attendance at the board meetings, directors' equity shareholdings, the status of a director (whether the director is an executive or non-executive), director's membership of the audit committee and membership of other committees and median board meeting attendance of each board. Further, we also collected data for firm-level control variables such as return on assets, firm size, firm age, board size, and proportion of non-executive directors.

3.2 Variables

3.2.1 Directors' board meetings attendance

In the United States, according to the Securities and Exchange Commission (SEC) requirements, firms only have to disclose the directors' names absent from more than 25% of the board meetings during a fiscal year. Therefore, more detailed data on a director's meeting attendance are unavailable (Chou, Chung, & Yin, 2013). Thus, in this study, we have taken the advantage that Pakistani companies must disclose the details of each director's board meeting attendance during a fiscal year. Therefore, the dependent variable is the

⁶ During the period of 2006 to 2011, the Code of Corporate Governance 2002 was implemented, and the code encouraged listed firms to voluntarily adopt at least one independent director on the board, and the executive directors may not represent more than 75% of the board, including the CEO.

percentage of board meeting attendance, which is calculated by dividing the number of board meetings attended by each director by the total number of board meetings in a year.

3.2.2 Directors' busyness

In this study, we employ *Directorships per Director* as a measure of directors' busyness which is the total number of board seats held by each director on the board. Since we have complete and detailed information about the directorships of each director, we chose this measure to capture the concept of busyness in this study.

3.2.3 Directors' shareholdings

In the interaction model of this study, we propose that higher directors' shareholdings will moderate the directors' busyness - board meeting attendance relationship. Thus, we have taken the *Percentage of Directors' Shareholdings* as a moderator, which is calculated as the total number of shares owned by a director divided by the total number of shares (Jiraporn, Davidson, et al., 2009; Lin et al., 2014).

3.2.4 Control variables

In addition, we control for factors other than multiple directorships that may affect directors' board meeting attendance. It includes demographic factors such as the status of a director (either executive or non-executive director). The status of a director is a dichotomous variable, equal to one for non-executive directors and zero for executive directors. In line with the existing literature, we have labeled a director as an executive director if he or she is a full-time employee of the firm vested with the responsibilities of managing the business. In contrast, a non-executive director (or outside director) is not an employee of the company and is brought in as an advisor and a monitor (Sarkar & Sarkar, 2009). Attendance behavior may be different for executive and non-executive directors (Lin et al., 2014). We also included the median board meeting attendance to control the overall attendance culture of the board (Nowland & Simon, 2018). Furthermore, we also control for the frequency of board meetings in a year because a high number of board meetings may lead to lower board attendance. Companies with an overly high frequency of board meetings are likely to use their board as a decision-making mechanism in daily routine matters (Jiraporn, Davidson, et al., 2009). A high frequency of board meetings requires more time from directors, but the time and efforts of each person are limited; therefore, the attendance rate in such frequent board meetings could be lower. In most cases, corporate boards delegate their tasks to board committees as an audit committee or a nominating committee (Vafeas, 1999). Directors are appointed as members of these committees, and boards that form more monitoring committees meet significantly more often (Vafeas, 1999). Therefore, membership of board committees may affect the directors' board meeting attendance in such a way that directors attend board meetings more frequently. A likely reason

for this positive relation between committee memberships and meeting attendance would be that directors have to defend their decisions taken in the board committees. Therefore, we controlled for the directors' membership of an audit committee or other committees and created a dummy equal to one if a director is a committee member and zero otherwise.

As several firm and board characteristics have been found to be associated with directors' board meeting attendance, we control for firm size, firm age, ROA, board size, and proportion of non-executive directors (Adams & Ferreira, 2008; Jiraporn, Davidson, et al., 2009). It is less likely that directors in larger firms remain absent at board meetings (Masulis, Wang, and Xie (2012) as it may adversely affect their director reputation in the director market. Therefore, we added firm size as a control variable. We also control for the board size because, in larger boards, absence in board meetings may not be easily noticed, and members may find it easy to remain absent at board meetings (Jiraporn, Davidson, et al., 2009). In addition, directors will generally carry less weight and decision-making power on larger boards, resulting in low motivation to attend board meetings (Lin et al., 2014). Similarly, larger boards may stimulate free-riding behavior among directors (Adams & Ferreira, 2012); thus, it will be less important that a particular director is not present at the meeting. As firm performance may also affect the board meeting attendance, we control for ROA. ROA is calculated by dividing a company's annual earnings by its total assets (Chou, Li, & Yin, 2010). We winsorize ROA at the 1% level on both sides to remove extreme values. Moreover, the attendance rate may improve when boards include more non-executive directors. Therefore, we added this proportion of non-executive directors variable as a control (Jiraporn, Davidson, et al., 2009).

3.3 Econometric estimation and regression models

We use a random-effects Tobit model to estimate our models for two reasons. First, our dependent variable is the board meeting attendance percentage bounded by 0 and 100%. We also see that many directors fulfill their director duties adequately and attend all board meetings (i.e., a score of 100% meeting attendance). These observations indicate that our dependent variable is censored, especially on the right side. Therefore, it is recommended to use a Tobit regression model to investigate board meeting attendance of directors (Sarkar & Sarkar, 2009). The likelihood ratio test shows that the panel-level variance component is important and, thus, the data's panel dimension should be taken into account (xttobit command in Stata). Year effect controls are included to capture any systematic institutional change effects, such as regulatory changes (Coles & Li, 2020). We estimate a set of regression models to test our hypotheses. First, we estimate a regression model including only the control variables (model 1). In model 2, we test H1 by adding the *Directorships Per Director* (β_1).

Additionally, in this study, we examine differences in attendance behavior between the executive and non-executive directors (H2a and H2b). Therefore, we estimate (model 3) the effect for non-executive directors by adding *Outside Directorship per Director*Status of Director* and for executive directors *Outside Directorship per Director*(1-Status of Director)* (Yip & Tsang, 2007). This modeling of an interaction effect is called the partition approach and is mathematically equivalent to the base approach but makes the interpretation of results easier as it gives a direct answer to our hypotheses 2a and 2b (Yip & Tsang, 2007). To test H3a and 3b, we also estimate an interaction model (model 4) in which the percentage of a director's shareholdings is interacted with the number of directorships of a director per type of director (executive vs. non-executive), which is a three-way interaction model. To ease the interpretation of the outcomes of this model, we performed a marginal effects analysis with the margins and marginsplot commands in Stata and included the visual figure of the interaction effect. We estimate each model at the individual director level. Therefore, subscript *i* indexes the individual director in each regression.

Model 1:

$$\text{Board Meeting Attendance}_{i,t} = \beta_0 + \text{Control Variables} + \text{Year Effects} + \varepsilon_{i,t}$$

Model 2:

$$\text{Board Meeting Attendance}_{i,t} = \beta_0 + \beta_1 \text{ Directorships Per Director}_{i,t} + \beta_2 \text{ Percentage of Director's Shareholdings}_{i,t} + \beta_3 \text{ Status of Director}_{i,t} + \text{Control Variables} + \text{Year Effects} + \varepsilon_{i,t}$$

Model 3:

$$\text{Board Meeting Attendance}_{i,t} = \beta_0 + \beta_1 \text{ Directorships Per Director}_{i,t} * \text{Status of Director}_{i,t} + \beta_2 \text{ Directorships Per Director}_{i,t} * (1 - \text{Status of Director}_{i,t}) + \beta_3 \text{ Percentage of Director's Shareholdings}_{i,t} + \beta_4 \text{ Status of Director}_{i,t} + \text{Control Variables} + \text{Year Effects} + \varepsilon_{i,t}$$

Model 4:

$$\text{Board Meeting Attendance}_{i,t} = \beta_0 + \beta_1 \text{ Directorships Per Director}_{i,t} + \beta_2 \text{ Status of Director}_{i,t} + \beta_3 \text{ Percentage of Director's Shareholdings}_{i,t} + \beta_5 (\text{Directorships Per Director}_{i,t} * \text{Status of Director}_{i,t}) + \beta_6 (\text{Directorships Per Director}_{i,t} * \text{Percentage of Director's Shareholdings}_{i,t}) + \beta_7 (\text{Status of Director}_{i,t} * \text{Percentage of Director's Shareholdings}_{i,t}) + \beta_8 (\text{Directorships Per Director}_{i,t} * \text{Status of Director}_{i,t} * \text{Percentage of Director's Shareholdings}_{i,t}) + \text{Control Variables} + \text{Year Effects} + \varepsilon_{i,t}$$

4. RESULTS

4.1 Descriptive statistics and univariate analysis

***** Insert Table 1 About Here *****

In Table 1, we report the distribution of the number of directorships held by directors in our full sample. The largest frequency, 76.64%, is for the directors with only one directorship and no outside directorship, whereas 13.04% hold two directorships in total and have one outside directorship. 0.11% of the directors in the sample hold a total of ten directorships or nine outside directorships. Consistent with Ferris et al. (2003), we observe that the percentage of directors holding multiple directorships falls as the number of board seats increases. Ferris et al. (2003) found that 84.39% of directors hold one board seat, while the corresponding statistics for our sample is 76.64%. Furthermore, about 10.31% of directors in our sample hold three or more directorships, whereas Ferris et al. (2003) report that only 6% of the directors hold three or more board seats which indicates that in our sample the incidence of multiple directorships is higher compared to studies conducted in the US context. The total number of directors is 3,149, of which 428 are female directors and 2,721 male directors, holding 5,259 total directorships in the total sample.

***** Insert Table 2 About Here *****

Table 2 lists the descriptive statistics for the key variables. The average board meeting attendance rate of directors is 81.12%, and the average directorships per director is 1.992. Compared to the studies of Ahn et al. (2010) and Ferris et al. (2003) conducted on US data, the statistics of directors' busyness suggest that the rate of multiple directorships in Pakistani firms is higher as compared to firms in the US. In our sample, we found that about 66% of directors are non-executives. The average frequency of board meetings is 5.401 per year (the median is 5), with the lowest at 1 and a maximum of 35 meetings per year. This overly high number of board meetings suggests that some firms may use their boards as a decision-making body for daily routine matters. The mean value of director's shareholding is 3.263. Forty percent of directors are members of an audit committee, while about 8% of directors are members of other board committees. The average board consists of 8 members, with the smallest board composed of 7 directors and the largest of 15 directors. Similarly, on average, a firm is 32.5 years old with assets of Rs. 21.38 billion and a ROA of 5.038%.

***** Insert Table 3 About Here *****

In Table 3, which presents the univariate analysis, we find a significant difference in the mean value of almost every variable under observation between the executive and non-executive directors. On average, the board meeting attendance rate of non-executive directors is significantly less than the attendance rate of executive directors ($t = 21.47$, $p < 0.001$), which is also echoed in the differences in median board meetings

attendance ($t = 5.52, p < 0.001$). Non-executive directors hold, on average, more board seats (2.170) than do executive directors (1.697, $t = -16.93, p < 0.001$). As expected, non-executive directors are more in demand because they can provide more objective advice to the board (Jiraporn, Singh, & Lee, 2009).

In terms of directors' shareholdings, non-executive directors hold 2.175%, whereas the average ownership of executive directors is 5.438%. The non-executive director's ownership ratio is significantly lower ($t = 27.50, p < 0.001$). The average frequency of board meetings of outside directors is 5.395 times, which is lower than 5.540 times for the executive directors ($t = 3.54, p < 0.001$). Regarding the membership of audit committees, non-executive directors sit more on the audit committee with a mean value of 49.1%, which is significantly higher than the membership of executive directors (23.7%, $t = -32.52, p < 0.001$), while there is no significant difference between the executive and non-executive directors concerning the membership of other board committees and firm age.

Regarding the proportion of non-executive directors, the average of the non-executive directors' group is 71.766%, while for the executive directors' group, the value is 56.497% indicating a significant difference ($t = -54.41, p < 0.001$). Further, the average board size of the executive directors' group is 7.709, and that of the non-executive directors' group is 8.151, and the difference is statistically significant ($t = -16.75, p < 0.001$). Similarly, the average value of ROA of non-executive directors is 5.786, which is higher than the executive directors' 4.783, and the difference is statistically significant ($t = -4.46, p < 0.001$).

In sum, univariate analyses suggest that non-executive directors (1) are relatively busier by holding a higher number of board seats, (2) have a lower ownership stake, and (3) attend fewer board meetings as compared to executive directors. Furthermore, evidence from univariate analysis also lends credence to *Hypothesis 2a* and *Hypothesis 2b*. Statistics also support the notion of a higher prevalence of multiple directorships in Pakistani firms compared to the US context. For example, Perry and Peyer (2005) reported that the mean value of directorships of executive directors is 0.85, whereas the corresponding value in our sample is 1.697. Likewise, Ahn et al. (2010) found that the mean value of directorships of outside directors is 1.82 and Ferris et al. (2003) show 1.89, while in our sample, we found 2.170 directorships per outside director which is higher than reported in US studies.

***** Insert Table 4 About Here *****

Table 4 displays the Spearman Correlation between all variables. Several points are noteworthy. First, directorships per director does not seem to be correlated with board meeting attendance. Second, the attendance

percentage is negatively associated with the status of a director, which suggests that non-executive directors attend fewer board meetings. Third, non-executive directors are busier as the status of directors is positively correlated with directorships per director. Fourth, non-executive directors hold fewer equity shares as the director's shareholding is negatively related to the director's status. Fifth, the percentage of a director's shareholding is positively associated with board meeting attendance, which shows that firm ownership can motivate a director to attend more board meetings. Sixth, as the number of board meetings increases, the attendance rate decreases, as shown by the negative association between the number of board meetings and the percentage of board meeting attendance. Seventh, memberships of audit and other committees are positively associated with board meeting attendance. Eighth, in larger boards, directors tend to miss more board meetings as the association between board size and percentage of meeting attendance is negative.

4.2 Regression Analysis

*** Insert Table 5 About Here ***

Before estimating the regression models, we first tested for the presence of multicollinearity. The highest VIF is 3.51, which suggests that multicollinearity is not a concern in our study. To test whether directors' busyness influences board meeting attendance, we estimate random effects Tobit regressions. In model (1) of table 5, we estimate a model containing only control variables, while in model (2), we included our measure of directors' busyness and all control variables to test H1. In model (2), the estimated coefficient of directorships per director is positive but not statistically significant ($\beta = 0.302$, $p = 0.390$), implying that directors' busyness has no significant influence on board meeting attendance. The result is inconsistent with our baseline *Hypothesis 1*, which proposes that higher multiple directorships negatively affect board meeting attendance.

In model (3) of table 5, we further investigate whether the effect of a director's busyness on board meeting attendance differs between an executive versus a non-executive director. Therefore, we re-estimate Model (2) by interacting the measure of director's busyness (directorships per director) with two dummy variables ('status of director' and '1-status of director'), taking the value one if the director is a non-executive and zero for an executive director. This partition approach of a moderation effect (Yip & Tsang, 2007) allows us to test H2a and H2b directly. The results of the interactions (Directorships Per Director*Status of Director) - representing the non-executive directors' group - and (Directorships Per Director*(1-Status of Director)) -

representing the executive directors' group - are not significant. These results do not support the hypothesized effects of H2a and H2b.

In addition, we also control for those variables that can affect board meeting attendance in all three models to prevent errors or interference in the results. The coefficients of the control variables are mostly along expected lines. Higher meeting frequency demands more time from directors, but time and effort are limited for each individual. Apart from the required time to acquaint with the agenda of the board meeting, a director also requires time for commuting to and attending board meetings. Therefore, a higher number of board meetings is expected to lead to a lower attendance rate. We control for this effect (*Natural log of Board Meetings*) and found that the number of board meetings significantly negatively affects board meeting attendance. In addition, a higher percentage of equity shares held by directors (*Percentage of Director's Shareholdings*) results in a higher meeting attendance rate. The *Status of director* can also directly affect the attendance behavior of a director. Non-executive directors are more likely to miss board meetings (Jiraporn, Davidson, et al., 2009). Therefore, we include the status of a director as a control variable, and this status dummy shows a negative and significant effect.

Further, membership in board committees may affect the directors' board meeting attendance. Therefore, we control for *Membership of audit committee* and *Membership of other committees*. The membership dummies show positive and significant effects in all the models. Directors of larger boards (*Board Size*) tend to miss more board meetings. Therefore, we control for this effect and found a negative impact of board size on directors' board meeting attendance (Lin et al., 2014). *Proportion of non-executive directors* has a positive effect on board meeting attendance which supports the notion that when boards include more non-executive directors, the attendance rate will improve. Further, we found that *ROA* has no significant effect on board meeting attendance.

***** Insert Table 6 About Here *****

Hypothesis 3a proposes that a higher level of equity ownership of non-executive directors will motivate them to perform their board roles with more diligence and more tightly integrate their interests with those of the firm, thus creating more willingness to attend board meetings. In contrast, hypothesis 3b proposes the opposite effect for executive directors building on agency and power arguments. To test the moderating effect of director ownership, we tested a three-way interaction model in which we interact *Directorships Per Director*, *Status of Director* and *Percentage of Director's Shareholdings*. The results of this interaction model are presented in

Table 6. Three-way interaction models are not straightforward to interpret because the individual coefficients have standalone a limited meaning. To interpret the findings of model 4 in table 6, we need to take the derivative of the regression function for several values of the moderators. Therefore, we calculated the marginal effects (margins command in Stata) and plotted the outcomes (marginsplot in Stata) in a figure to ease the interpretation (see Figure 1⁷) and to visualize the results.

***** Insert Figure 1 About Here *****

Figure 1 shows that for non-executive directors who do not have any shares or have shareholdings below 4.1% ownership, the number of directorships does not have any significant effect on board meeting attendance (83% of the number of non-executive directorships). When director ownership is above 4.1%, the effect becomes positive and significant and increases further when ownership is higher. This finding is in line with the hypothesized effect (H3a).

The findings concerning the executive directors show the opposite trend in line with H3b. More importantly, for executive directors who do not have shares or a very low percentage of shares (<0.3%), more directorships will lead to a statistically significant higher board meeting attendance. As 35% of the executive directors are in this situation, this finding is of high practical importance as it supports H2b, at least when ownership is very low or zero. We do not find a statistical significant relationship for directors when their director ownership is between 0.3% and 10.3%. When ownership is higher than 10.3%, a higher number of directorships will have a statistically negative effect on board meeting attendance which is in line with H3b. The fact that the effect becomes negatively significant from an ownership percentage of at least 10.3% supports our power argument. Indeed, the 10% ownership threshold is often used to identify ultimate controlling shareholders (La Porta, Lopez-de-Silanes, & Shleifer, 1999).

***** Insert Table 7 About Here *****

To mitigate endogeneity concerns, we tested the robustness of our results with an Instrumental Variable (IV) Tobit model. As a first step, we identified the one-year lag of our independent variable (Directorship per director) as a potential instrumental variable (IV) in the database, which fulfills the necessary IV requirements that they are not explanatory variables in the original regression model, correlated with the suspect independent variable and uncorrelated with the error term (Murray, 2006). Indeed, Reed (2015) found that the use of the lag of an endogenous variable is an effective strategy to cope with the endogeneity problem when the lag does not

⁷ Figure 1 shows the full ownership range of 0% to 60%.

belong to the original regression model and is strongly correlated to the suspect endogenous variable. Next, we re-estimated the three-way interaction model with the partition approach (see for an explanation of this approach in section 3.3, model (2)). The results of the interaction models concerning H3a and H3b were qualitatively similar (see table 7). For the non-executive directors, we find a positive effect for the directorships per directors on meeting attendance when director ownership increases (*Directorships Per Director*Status of Director*Percentage of Director's Shareholding*) while a negative effect was found for the executive directors (*Directorships Per Director*(1-Status of Director)*Percentage of Director's Shareholding*). This additional analysis supports our previous findings as reported in figure 1.

5. DISCUSSION & CONCLUSIONS

This paper examines the effect of multiple directorships on board meeting attendance. Using individual director attendance rates of listed firms in Pakistan, we found no direct effect that directors who cumulate several board seats (i.e., busier directors) tend to be more absent during board meetings. In addition, we did not find any direct effect of multiple directorships on the board meeting attendance when we distinguished between executive and non-executive directors. However, we found interesting results when we included the moderation effect of directors' shareholdings in the model. For non-executive directors, we did not find a significant effect when there is no or low director ownership. Still, the effect becomes positive and significant when director ownership is higher. In the case of executive directors, the situation is different. The effect is positively significant when there is no or very low director ownership. When director ownership passes a controlling ownership stake (i.e., 10% threshold, La Porta et al., 1999), the effect becomes negative and significant. Our findings suggest that director ownership is an important overlooked moderator in understanding the relationship between the number of directorships and board meeting attendance.

As the board of directors is an organization's critical strategic decision-making body, experienced and qualified outside directors are in high demand. Unfortunately, the supply of directors with a high-level profile is limited, which tends to cause an increase in the phenomenon of multiple directorships (Linck, Netter, & Yang, 2008). As the available time of directors is limited and taking multiple directorship positions can come at the cost of insufficient time and commitment, compromising the execution of the boards' fiduciary duties, corporate governance guidelines worldwide have started to recommend limits on the number of directorships. However, in academic research, the question about the costs and benefits of multiple directorships is still open. It is still unclear whether the imposed limits on directorships in current corporate governance codes are justified. Our

study contributes to this debate by directly investigating the relevance of a central argument, namely the board meeting attendance of busy directors.

Our findings do not support the prior results in the US context that non-executive directors who sit on multiple boards are overcommitted and experience time constraints in exercising their board roles adequately (e.g., Jiraporn, Davidson, et al., 2009). This finding is very important, as Vafeas (1999) reported that board meetings are critical to firm performance. Indeed, discussions about strategic decisions and monitoring occur during board meetings and determine board effectiveness. Directors with more directorships can be precious resources to fulfill these essential board tasks, at least when they are present at board meetings. In the Pakistani context, where governance needs may be higher than in developed countries, skipping board meetings does not seem to be a problem for the category of non-executive directors. This finding supports the scant evidence in emerging countries that outside busy directors are likely to be better directors with a strong commitment to fulfilling their director duties (Sarkar & Sarkar, 2009).

In addition, we introduced directors' shareholdings as a moderator to the academic discussion, and showed that the conditional effect of director ownership also depends on the type of director. First, our findings show that as director ownership of *non-executive* directors increases, the main effect becomes positive, i.e., non-executive directors attend more board meetings when their stake is aligned with that of the owners. These results support the agency arguments that being shareholder incentivizes nonexecutive directors to act in the firm's best interest. Indeed, firm performance will also depend on the proper execution of their board roles (Bhagat & Bolton, 2013; Weisbach, 1988). Busy non-executive directors can perform their board roles adequately by bringing invaluable director expertise and external connections through their networks to the board table when they are present at the meetings.

Second, our results reveal that *executive* directors with zero or low shareholdings will show a higher board meeting attendance rate when they have multiple directorships. This finding is in line with prior results in the US context (Jiraporn, Davidson, et al., 2009) and supports the argument that directors who are employees/managers of the firm are under more pressure to attend board meetings as absence can adversely affect their executive careers. Moreover, they are allowed to take additional board seats by the sender firm to bring this new expertise to their own board. Generally, our results thus suggest that busy executive directors experience a strong moral and formal obligation to attend board meetings, at least when they are not a powerful shareholder. However, when the directors' shareholdings are higher and surpass the threshold of a controlling shareholder (La Porta et al., 1999), the effect becomes negative, which supports another agency argument.

These results support our notion that when executive directors' interest is strongly aligned with that of owners (*manager-owner* alignment through higher shareholdings), the need for a vigilant board in which executive directors attend board meetings, are accountable, and defend the execution of corporate policies, will be reduced substantially.

Further, when executive directors hold a higher proportion of shareholdings along with multiple board positions, the incentives to attend board meetings are also reduced, building on a power argument. Indeed, the incentives to attend board meetings will be lower because higher directors' shareholding will increase the likelihood that the phenomenon of managerial hegemony will emerge. Such influential executives dominate the strategic decisions and tend to remain absent from board meetings when they feel pressure on their director agenda. Under managerial hegemony, the board is a rather ceremonial and rubber-stamping entity in which the executives dominate the agenda and decision outcomes (Hung, 1998; Lemma et al., 2020), even when they are not present at board meetings.

Overall, our results depict that a higher percentage of equity shares held by busy executive directors will not motivate them to attend more board meetings. We infer from these results that motives to attend board meetings related to their human capital seem more important than motives related to their financial capital. When executive directors join other boards, their knowledge, skills, and abilities are expected to be enhanced. They will bring needed resources and benefit the sender firm (Perry & Peyer, 2005). By multiple directorships, they can learn new management styles and gain new expertise from external environments (Conyon & Read, 2006). In addition, they can introduce new value-adding strategies in their home firm, building on their experience in other companies where they take a seat as outside directors (Booth & Deli, 1996; Kiel & Nicholson, 2006; Mizruchi & Stearns, 1994; Pfeffer, 1972). To do so, they must be present at board meetings and participate in discussions personally (Lin et al., 2014). Therefore, these results suggest that it are not directors' shareholdings that will motivate them to attend board meetings, but rather the duty of being an executive director and the potential negative consequences on their own human capital when they skip board meetings.

Finally, the findings concerning the busy non-executive directors question the imposition of limits on director positions. In line with Ferris et al. (2003), our study casts doubt on limiting the individual number of directorships held by directors just building on the argument of board meeting absence. Regulators should consider this because non-executive directors with higher shareholding and executive directors with no or low shareholdings may help the firm acquire diverse and critical resources and give valuable strategic advice to

maintain and promote growth when they are present at the meetings. Indeed, our findings suggest that these categories of directors are more present at board meetings when they are busy.

Our study also has some limitations, which can open new interesting routes for further research. First, we investigated the board meeting attendance but do not have insights into how well these busy directors prepared all board meetings in advance. It could be that executive directors are present at board meetings because they are obligated to do so but are less prepared. To date, we still do not know how significant their real input is in the strategic decision-making process when they are present. Future research should focus on this under-investigated aspect of board busyness which can require the use of research techniques that can capture internal team dynamics, such as case study designs. Second, directors have a wide range of unobservable characteristics (e.g., commitment in the community, chairman of a sports club, directorships in non-listed firms), which may impact their board meeting presence. Future research could try to identify these unobservable factors that could impact meeting attendance. This knowledge will allow policymakers to develop more fine-grained measures concerning multiple directorships in, for example, corporate governance codes.

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Table 1 Patterns in the number of directorships held by directors

This table describes the distribution of directors for our sample, in terms of the number of directorships held. The sample comprises 381 companies listed on the Pakistan Stock Exchange across 28 sectors. Distribution of directorships held by individual director is computed only based on the directorships observed within the sample firms.

Total Sample				
Number of Directorships	Frequency	Percent (%)	Total Number of directorships	Fraction of Total Directorships
1	2,792	76.64	2,792	53.09
2	475	13.04	950	18.06
3	210	5.76	630	11.98
4	71	1.95	284	5.40
5	37	1.02	185	3.52
6	23	0.63	138	2.62
7	14	0.38	98	1.86
8	11	0.30	88	1.67
9	6	0.16	54	1.03
10	4	0.11	40	0.76
Total directorships			5,259	
Total directors			3,149	
Number of Female Directors			428	
Number of Male Directors			2,721	
Number of firms			381	

Table 2 Descriptive statistics

Descriptive statistics for key variables for the 381 companies are presented in Table 2. *Directorships per Director* measures the number of sample firm directorships held by a director. *Percentage of Director's Shareholding* means the percentage of equity shares held by a director. It is measured by the number of shares held by director divided by the total number of outstanding shares and multiplied by 100. *Status of Director* is a dummy variable which is equal to one if a director is a non-executive director otherwise it is equal to zero. *Percentage of Board Meeting Attendance* is the percentage of board meeting attendance, which is calculated by dividing the number of board meetings attended by each director by the total number of board meetings in a year. *Median Board Meetings Attendance* is the median of the attendance of all directors on board of a firm in a year. *Number Board Meetings* are measured as the frequency of total board meetings in a year. *Membership of Audit Committee* indicates either a director is a member of audit and *Membership of Other Committees* shows a director is a member of any board committee other than audit committee. For both variables *Membership of Audit Committee* and *Membership of Other Committees* we have created a dummy which is equal to one if the director is a member of the committee and zero otherwise. *Return on Assets (ROA)* is calculated by dividing a company's annual earnings by its total assets. *Firm Size* is measured by the total assets which includes both current assets and non-current assets of a firm in a year. *Firm Age* is the number of years since an organization is incorporated. *Board Size* measured by the total number of directors serving on board of a firm in a year. *Proportion of Non-Executive directors* is measured by the number of non-executive directors on a board divided by board size.

Variable	Observations	Mean	Median	Std. Dev.	Min	Max
Directorships Per Director	17,218	1.992	1	1.701	1	10
Percentage of Director's Shareholdings	16,815	3.263	.05	7.263	0	77.78
Status of director	16,651	0.661	1	0.473	0	1
Percentage of Meeting Attendance	16,564	81.124	100	26.422	0	100
Median Board Meetings Attendance	16,836	4.620	4	2.075	1	34
Number of Board Meetings	16,864	5.401	5	2.4675	1	35
Membership of Audit Committee	17,082	0.406	0	0.491	0	1
Membership of Other Committees	17,218	0.080	0	0.272	0	1
ROA	17,153	5.0384	2.88	13.844	-32.82	50.12
Firm Size (ln)	17,146	21.384	21.350	1.951	10.571	26.294
Firm Age	17,218	32.503	28	17.305	1	145
Board Size	17,218	7.976	7	1.604	7	15
Proportion of Non-Executive Directors	16,662	66.488	71.42	18.531	0	93.33

Table 3 A test of the mean difference between non-executive and executive directors

This table compares the means of all variables between two subgroups. *Directorships per Director* measures the number of sample firm directorships held by a director. *Percentage of Director's Shareholding* means the percentage of equity shares held by a director. It is measured by the number of shares held by director divided by the total number of outstanding shares and multiplied by 100. *Status of Director* is a dummy variable which is equal to one if a director is a non-executive director otherwise it is equal to zero. *Percentage of Board Meeting Attendance* is the percentage of board meeting attendance, which is calculated by dividing the number of board meetings attended by each director by the total number of board meetings in a year. *Median Board Meetings Attendance* is the median of the attendance of all directors on board of a firm in a year. *Number Board Meetings* are measured as the frequency of total board meetings in a year. *Membership of Audit Committee* indicates either a director is a member of audit and *Membership of Other Committees* shows a director is a member of any board committee other than audit committee. For both variables *Membership of Audit Committee* and *Membership of Other Committees* we have created a dummy which is equal to one if the director is a member of the committee and zero otherwise. *Return on Assets (ROA)* is calculated by dividing a company's annual earnings by its total assets. *Firm Size* is measured by the total assets which includes both current assets and non-current assets of a firm in a year. *Firm Age* is the number of years since an organization is incorporated. *Board Size* measured by the total number of directors serving on board of a firm in a year. *Proportion of Non-Executive Directors* is measured by the number of non-executive directors on a board divided by board size.

Variable	Executive Directors (n=5,649)	Non-Executive Directors (n=11,002)	Mean difference in test	
	Mean	Mean	Mean Deviation	t-Value
Directorships Per Director	1.697	2.170	-0.473	-16.93***
Percentage of Director's Shareholdings	5.438	2.175	3.263	27.50***
Percentage of Meeting Attendance	87.233	77.960	9.273	21.47***
Median Board Meetings Attendance	4.774	4.582	0.191	5.52***
Number of Board Meetings	5.540	5.395	0.146	3.54***
Membership of Audit Committee	0.237	0.491	-0.254	-32.52***
Membership of Other Committees	0.086	0.082	0.005	0.99
ROA	4.783	5.786	-1.002	-4.46***
Firm Size (ln)	21.335	21.531	-0.196	-6.41***
Firm Age	32.678	32.397	0.281	0.99
Board Size	7.709	8.151	0.441	-16.75***
Proportion of Non-Executive Directors	56.497	71.766	-15.27	-54.41***

*** p<0.001, ** p<0.01, * p<0.05, † p<0.1

Table 4 Correlation

This table presents Spearman's Correlation between all key variables included in the study. *Directorships per Director* measures the number of sample firm directorships held by a director. *Percentage of Director's Shareholding* means the percentage of equity shares held by a director. It is measured by the number of shares held by director divided by the total number of outstanding shares and multiplied by 100. *Status of Director* is a dummy variable which is equal to one if a director is a non-executive director otherwise it is equal to zero. *Percentage of Board Meeting Attendance* is the percentage of board meeting attendance, which is calculated by dividing the number of board meetings attended by each director by the total number of board meetings in a year. *Number Board Meetings* are measured as the frequency of total board meetings in a year. *Membership of Audit Committee* indicates either a director is a member of audit and *Membership of Other Committees* shows a director is a member of any board committee other than audit committee. For both variables *Membership of Audit Committee* and *Membership of Other Committees* we have created a dummy which is equal to one if the director is a member of the committee and zero otherwise. *Return on Assets (ROA)* is calculated by dividing a company's annual earnings by its total assets. *Firm Size* is measured by the total assets which includes both current assets and non-current assets of a firm in a year. *Firm Age* is the number of years since an organization is incorporated. *Median Board Meetings Attendance* is the median of the attendance of all directors on board of a firm in a year. *Board Size* measured by the total number of directors serving on board of a firm in a year. *Proportion of Non-Executive Directors* is measured by the number of non-executive directors on a board divided by board size.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Directorships Per Director (1)	1												
Percentage of Director's Shareholdings (2)	-0.032***	1											
Status of Director (3)	0.130***	-0.211***	1										
Percentage of Meeting Attendance (4)	-0.005	0.113***	-0.167***	1									
Number of Board Meetings (5)	-0.045***	-0.003	-0.028***	-0.059***	1								
Membership of Audit Committee (6)	0.011	-0.012	0.245***	0.093***	0.005	1							
Membership of Other Committees (7)	-0.005	-0.099***	-0.008	0.031***	0.082***	-0.016*	1						
ROA (8)	0.007	-0.071***	0.035***	0.026***	-0.009	-0.015*	0.180***	1					
Firm Size (ln) (9)	0.124***	-0.123***	0.050***	-0.050***	0.173***	-0.006	0.331***	0.236***	1				
Firm Age (10)	0.021**	-0.053***	-0.008	-0.048***	-0.060***	-0.016*	0.089***	0.097***	0.047***	1			
Median Board Meetings Attendance (11)	-0.072***	0.026***	-0.043***	0.086***	0.874***	0.008	0.037***	0.006	0.109***	-0.092***	1		
Board Size (12)	0.027***	-0.156***	0.129***	-0.098***	0.086***	-0.056***	0.344***	0.177***	0.442***	0.155***	-0.010	1	
Proportion of Non-Executive Directors (13)	0.144***	-0.139***	0.390***	-0.015†	-0.081***	-0.017*	0.144***	0.074***	0.102***	-0.030***	-0.117***	0.311***	1

*** p<0.001, ** p<0.01, * p<0.05, † p<0.1

Table 5 Random effects Tobit regressions

This table presents Tobit regressions of multiple directorships and board meeting attendance. All regressions use a percentage of board meeting attendance as the dependent variable. Standard errors are reported in parentheses below each coefficient estimate. Rho is the proportion of the total variance contributed by the panel-level variance component.

VARIABLES	Model (1)	Model (2)	Model (3)
Directorships Per Director		0.302	
		(0.351)	
Directorships Per Director*Status of Director (i.e., <i>Non-executive Directors</i>)			0.717
			(0.714)
Directorships Per Director*(1-Status of Director) (i.e., <i>Executive Directors</i>)			-0.243
			(0.658)
Percentage of Director's Shareholding	0.584***	0.583***	0.587***
	(0.0920)	(0.0920)	(0.0921)
Status of director	-23.15***	-23.25***	-24.85***
	(1.456)	(1.460)	(2.424)
Natural log of Board Meetings	-63.61***	-63.61***	-63.60***
	(2.427)	(2.427)	(2.427)
Membership of Audit Committee	10.76***	10.77***	10.77***
	(1.137)	(1.137)	(1.137)
Membership of Other Committees	15.36***	15.40***	15.36***
	(2.102)	(2.103)	(2.104)
ROA	0.0519	0.0525	0.0519
	(0.0335)	(0.0335)	(0.0335)
Natural Log of Firm Size	-1.041**	-1.072**	-1.074**
	(0.395)	(0.396)	(0.396)
Firm Age	-0.104**	-0.104**	-0.104**
	(0.0377)	(0.0377)	(0.0377)
Median Board Meetings Attendance	8.959***	8.966***	8.963***
	(0.361)	(0.361)	(0.361)
Board Size	-1.962***	-1.942***	-1.942***
	(0.429)	(0.430)	(0.429)
Proportion of Non-Executive Directors	0.273***	0.271***	0.272***
	(0.0377)	(0.0378)	(0.0378)
Constant	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes
Number of Firms	381	381	381
Observations	15,605	15,605	15,605
Left-censored observations	466	466	466
Right-censored observations	8,327	8,327	8,327
Log-likelihood	-39875.511	-39875.141	-39874.558
Wald chi-square	1299.44***	1300.29***	1301.34***
Rho	0.557	0.556	0.556
	(0.010)	(0.010)	(0.010)

*** p<0.001, ** p<0.01, * p<0.05, † p<0.1

Table 6 Tobit regression with moderating effect

This table presents random effects Tobit regression of the interaction of multiple directorships and percentage of directors' shareholdings. The percentage of board meeting attendance is used as the dependent variable. We report standard errors in parentheses below each coefficient estimate. Rho is the proportion of the total variance contributed by the panel-level variance component.

VARIABLES	Model (4)
Directorships Per Director	1.650** (0.812)
Status of director	-20.90*** (2.235)
Directorships Per Director*Status of director	-1.507† (0.870)
Percentage of Director's Shareholding	1.180*** (0.181)
Directorships Per Director* Percentage of Director's Shareholding	-0.310*** (0.0630)
Status of director *Percentage of Director's Shareholding	-0.867** (0.271)
Directorships Per Director*Status of director*Percentage of Director's Shareholding	0.484*** (0.0997)
Natural log of Board Meetings	-63.74*** (2.425)
Membership of Audit Committee	10.78*** (1.136)
Membership of Other Committees	15.45*** (2.101)
ROA	0.0516 (0.0334)
Natural Log of Firm Size	-1.068** (0.396)
Firm Age	-0.104** (0.0377)
Median Board Meetings Attendance	8.970*** (0.361)
Board Size	-1.903*** (0.429)
Proportion of Non-Executive Directors	0.274*** (0.0379)
Constant	Yes
Year Effects	Yes
Number of Firms	381
Observations	15,605
Left-censored observations	466
Right-censored observations	8327
Log-likelihood	-39859.068
Wald chi-square	1327.89***
Rho	0.557 (0.010)

*** p<0.001, ** p<0.01, * p<0.05, † p<0.1

Table 7 IV Tobit regression with moderating effect

This table presents the Instrumental Variable (IV) Tobit regression of the interaction of multiple directorships and percentage of directors' shareholdings. The percentage of board meeting attendance is used as the dependent variable. We report standard errors in parentheses below each coefficient estimate.

VARIABLES	Model (5)
Directorships Per Director*Status of Director (i.e., <i>Non-executive Directors</i>)	-0.667 (0.916)
Directorships Per Director*(1-Status of director) (i.e., <i>Executive Directors</i>)	1.266 (0.817)
Percentage of Director's Shareholding	1.276*** (0.143)
Directorships Per Director*Status of Director*Percentage of Director's Shareholding (i.e., <i>Non-executive Directors</i>)	0.124** (0.054)
Directorships Per Director**(1-Status of director)*Percentage of Director's Shareholding (i.e., <i>Executive Directors</i>)	-0.248*** (0.049)
Status of director	-26.772*** (2.679)
Natural log of Board Meetings	-71.83*** (3.10)
Membership of Audit Committee	14.54*** (1.086)
Membership of Other Committees	14.73*** (2.102)
ROA	0.101 (0.039)
Natural Log of Firm Size	-0.575† (0.325)
Firm Age	-0.105** (0.0301)
Median Board Meetings Attendance	9.577*** (0.432)
Board Size	-2.135*** (0.387)
Proportion of Non-Executive Directors	0.368*** (0.0323)
Constant	Yes
Year Effects	Yes
Number of Firms	381
Observations	11,584
Left-censored observations	322
Right-censored observations	6,441
Log-likelihood	-45005.2
Wald chi-square	1417.27***

*** p<0.001, ** p<0.01, * p<0.05, † p<0.1

Figure 1 : Marginal effects analysis

