Article:
Alhaddad, L., Gerged, A.M., Saidat, Z. et al. (2022) Do multiple directorships stimulate or inhibit firm value? Evidence from an emerging economy. International Journal of Accounting & Information Management, 30 (4). pp. 546-562. ISSN: 1834-7649

https://doi.org/10.1108/ijaim-05-2022-0094

Do Multiple Directorships Stimulate or Inhibit Firm Value? Evidence from an Emerging Economy

Running head: MULTIPLE DIRECTORSHIPS AND FIRM VALUE

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Compliance with Ethical Standards:

i. Disclosure of potential conflicts of interest: all authors declare that they have no conflicts of interest.

ii. Research involving Human Participants and/or Animals (not applicable)

iii. Informed consent (not applicable)

This paper is cited as: Al-Haddad, Gerged, Saidat, Al-Qudah & Aziz. (2022). Do Multiple Directorships Stimulate or Inhibit Firm Value? Evidence from an Emerging Economy. *International Journal of Acconting and Information Management*: Forthcoming. DOI 10.1108/IJAIM-05-2022-0094

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Do Multiple Directorships Stimulate or Inhibit Firm Value? Evidence from an Emerging Economy

ABSTRACT

Purpose: This study examines the potential influence of multiple directorships on the firm value of listed firms in Jordan.

Design/methodology/approach: Using a sample of 1067 firm-year observations of Jordanian listed companies from 2010 to 2020, this study applies a pooled ordinary least squares (OLS) regression model to examine the above-stated relationship. This technique was supported by conducting a Generalized Method of Moments (GMM) estimation to address the possible occurrence of endogeneity concerns.

Findings: Our results show a significant negative relationship between multiple directorships and firm performance, supporting, thereby, the "*Busyness Hypothesis",* which suggests that directors with multiple directorships are expected to be over-committed, too busy, and less vigilant. Thus, their ability to effectively monitor the company management on behalf of the shareholders is quite limited.

Originality/value: To the best of our knowledge, this is the first study in Jordan, and one of the very rare in the Middle Eastern and North African (MENA) region, to examine the relationship between multiple directorships and firm performance. This study provides important policy and practitioner implications in the field of corporate governance by highlighting the necessity of imposing stricter limits on the number of directorships allowed for board directors. Crucially, our empirical evidence implies that limited directorships ensure that directors are able to fulfil their board responsibilities appropriately, which is significantly associated with the firm value.

Keywords: Boards of directors, corporate governance, Jordan, multiple directorships, performance.

Paper Type: Research paper

1. INTRODUCTION

The board of directors is a cornerstone internal corporate governance mechanism responsible for monitoring the quality of the firm's financial statements (Loukil et al., 2019). It has the legal authority to monitor and approve managerial activities, evaluate the performance of executive managers, and reward or punish that performance (Mohapatra and Mishra, 2021). Likewise, the board of directors protects the interests of shareholders and other stakeholders (Jensen and Meckling, 1976; Fama,1980; and Fama and Jensen, 1983). According to the UK Combined Code, the primary responsibilities of a board of directors are to *"provide entrepreneurial leadership of the company within a framework of prudent and effective controls which enables risk to be assessed and managed"* (UK Combined Code, 2003, p.4). The board should set the corporation's strategic goals, make sure that the essential financial and human resources are in place for the corporation to achieve its objectives, and evaluate management performance (Gerged et al., 2022; Parada et al., 2020; Saidat et al., 2019). The board should set the corporation's standards and values and confirm its obligations to shareholders and others are well perceived and satisfied. Thus, the quality of board decisions eventually affects the firm value; better management monitoring encourages managers to act in the best interests of the shareholders and reduces the agency conflict between managers and shareholders (Alhaddad and Whittington, 2019; Gerged and Agwili, 2020; Masli et al., 2022; Mori and Charles, 2019).

Multiple directorships refer to the number of external appointments corporate directors hold (Ferris et al., 2003). According to Hermalin and Weisbach (2003), the issue of multiple directorships has important implications for the structure and the effective functioning of the companies' boards. This, in turn, has a significant role in company performance and corporate governance (Haniffa and Hudaib, 2006). A review of previous literature reveals that most of the previous literature on the relationship between multiple directorships and firm performance has been conducted in South-Eastern Asian countries, e.g., Haniffa and Hudaib, 2006; Sarkar and Sarkar,2009: Jackling and Johl, 2009; Lei and Deng 2014; Raithatha and Ladkani, 2022; among others.

Although numerous studies were undertaken in Jordan assessing various relationships in corporate governance (board size, board independence, CEO duality, etc.) and corporate performance, no single study comprehensively investigates the association between multiple directorships and firm performance not only in Jordan but also in the Middle East and North Africa. Such a study is expected to help policymakers evolve best practices that are aligned with the institutional context of Jordan, where ownership is highly concentrated, mainly in family-owned businesses (Saidat et al., 2019), and investor protection is considered weak (World Bank, 2016).

Jordan is a developing country with sufficient data for us and can give a frame to potentially gain more insights for Jordan and many other developing countries with even less information (Al-Haddad et al., 2019; Al-Haddad et al., 2021; Gerged et al., 2021a). The Jordanian capital market has the advantage of having almost half of its market capitalization comprised of foreign ownership (Gerged, 2021). Specifically, in 2020, the non-Jordanian ownership in Amman Stock Exchange formed approximately 48.1% of the total market capitalization (ASE Annual Report, 2021). This suggests that any failures in implementing corporate governance standards in Jordan may have severe consequences far beyond the Middle Eastern region and developing countries. For this, we believe that Jordan provides a unique setting for conducting this study (Al-Haddad et al., 2021). Such characteristics allow our study to offer relevant insights into corporate governance implementations in other emerging countries, especially with the increasing integration into the world's economies (Elmghaamez et al., 2020; Salem et al., 2020; Gerged et al., 2021b).

In 2009, the Jordanian Securities Commission (JSC) issued the Corporate Governance Code for Shareholding Companies Listed on the Amman Stock Exchange (JCGC). The main goal of this code was to establish a clear framework that regulates the management and relations of shareholding companies listed on the Amman Stock Exchange, defines their rights and responsibilities, protects the rights of all stakeholders, and realizes their objectives. The "Compliance or Explain Approach" was adopted to adhere to these rules. In addition, in 2017, the JSC issued another corporate governance code; however, this time, the adherence to this code became binding under the

responsibility. The 2017 JCGC addresses many corporate governance issues, including (i) board of directors, (ii) general assembly meetings, (iii) disclosure and transparency, and (iv) shareholders' rights (JCGC, 2017). The rules of this code are built on some legislations, such as the Companies Law, the Securities Law, and the international principles established by the Organization for Economic Cooperation and Development (OECD). Adhering to these rules has become a slogan for public and private sectors and a way to raise investors' confidence in the national economy and evidence of transparent and fair policies for protecting investors. It also signals the professional commitment level reached by the managers towards good corporate governance, accountability, and transparency. This, in turn, enhances the economy's competitiveness to attract local and foreign investments (JCGC, 2017). Regarding multiple directorships, the 2017 JCGC and the Companies Law state that the maximum number of multiple directorships in Jordanian firms is only five. Similarly, in Palestine, the maximum number is also five (Saleh et al., 2020). However, different countries appear to have different requirements; for example, in Malaysia, the maximum number of multiple directorships is fixed at 25 (Kamardin et al., 2014). While in the USA, no more than two directorships are allowed for each director (Ferris et al., 2003).

This study contributes to the current stream of research that examines the relationship between multiple directorships and firm value (e.g., Ferris et al., 2003; Perry and Peyer, 2005; Fich and Shivdasani, 2006; Saleh et al., 2020; Latif et al., 2020, among others) by being the first study in Jordan to empirically show that multiple directorships are significantly and negatively related to Jordanian firm's performance. This, in turn, supports the "busyness hypothesis", which suggests that holding multiple directorships distracts directors from serving their boards effectively due to their over-commitment.

The remainder of this paper is structured as follows: Section 2 reviews the previous literature and explains how the research hypotheses are designed in light of the previous literature; section 3 describes our research design; section 4 presents the empirical results; robustness checks are presented in Section 5 and conclusions are presented in section 6.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Busy directors and firm value

A review of previous literature reveals that two arguments dominate the present literature on director busyness, the Busyness Hypothesis and the Reputation or Quality Hypothesis. Consistent with the busyness hypothesis, directors who hold board seats in multiple companies are assumed to be over-committed, too busy, and less vigilant. Thus their ability to effectively monitor the company management on behalf of the shareholders is limited. Previous empirical literature found that the busyness of directors can (i) negatively affect a firm's financial performance (e.g. Haniffa and Hudaib, 2006; Non and Franses,2007; Jackling and Johl, 2009; Niblaeus and Sellman, 2011; Cashman et al., 2012; Roudaki and Bhuiyan; 2015; Lusiana et al., 2019; Saleh et al., 2020; Latif et al., 2020; and Nuskiya et al., 2021), (ii) lower the sensitivity of CEO turnover to performance, (iii) manifest in a positive market reaction following the departure of a busy director (Fich and Shivdasani, 2006), (iv) lead to excess remuneration of CEOs (Core et al., 1999; Shivdasani and Yermack, 1999; Andres et al., 2013), (v) lower board meeting attendance (Jiraporn et al., 2009), and (vi) increase the likelihood of committing accounting fraud (Beasley, 1996).

The theoretical underpinning of the busyness hypothesis is embedded in the agency theory. That is, due to the fees and prerogatives related to board memberships, multiple directorships are viewed as a form of perquisite consumption. Multiple directorships can be harmful as some directors may behave in an opportunistic way that can be considered unethical because they benefit from the prestige and fees accompanying the board memberships while overcommitting themselves at the expense of shareholders. Thus, due to this kind of agency problem, multiple directorships might reflect organizational slack (Ferris et al., 2003; Latif et al., 2020).

On the other hand, the reputation or the quality hypothesis predicts that multiple directorships can signal a director's reputational capital so that a director with multiple directorships may proxy for high director quality (Fama, 1980, Fama and Jensen, 1983). In other words, multiple board appointments can add more value to the firm by sharing their knowledge, expertise, and experience gained because such directors are

determined to preserve or enhance their reputation by providing sound advice (Fama and Jensen, 1983). The notion supporting the “reputation” hypothesis is that busy directors have a broader network of connections and are more likely to confront a wide range of challenges of a listed firm, suggests that their abilities are held with valued with increasing coverage on the advantages of multiple directorships (Carpenter and Westphal, 2001; Coles et al., 2008; Stuart and Yim, 2010; Ishii and Xuan, 2014). The reputation theoretical foundation of the role of multiple directorships is linked with the resource dependency theory that argues the main role of directors is to serve as suppliers of resources that involve information guidance, legitimacy, support to obtain resources or commitments from outside the firm, and channels of communication between the firm and the external environment (Pfeffer and Salancik, 2003). Although the busyness hypothesis (agency theory) suggests a negative impact of multiple directorships on firms’ financial performance, the reputation/quality hypothesis (resource dependency theory) indicates a positive multiple directorship-firm performance nexus. In this study, therefore, we examine whether the influence of multiple directorships in emerging economies on firm performance gives credibility to the busyness or reputation hypothesis.

2.2 Hypothesis Development

A survey of the existing empirical literature on the relationship between multiple directorships and firm performance reveals that the overall impact of multiple directorships on firm performance is somewhat mixed. For example, Boyd (1990) found that those with more interlocks (greater number of multiple directorships) demonstrated superior performance as measured by return on equity and sales growth in firms facing greater environmental uncertainty. Moreover, using a sample of 500 large Indian firms from 2002-to 2003, Sarkar and Sarkar (2009) show that multiple directorships by independent directors are positively related to the firm value, thereby supporting the “quality hypothesis” that busy directors are likely to be better directors.

Using a unique panel data set covering all Hong Kong-listed firms, Lei and Deng (2014), investigate the effect of independent directors’ multiple directorships (MDs) on firm value. Further, they examine the countervailing effects of quality and “busyness”. Their results reveal that despite independent directors’ busyness, there is a strong and

positive relationship between the number of multiple directorships of independent directors and firm value.

In the same vein, based on a sample of Spanish-listed companies between 2007 and 2009, Iturriaga and Rodriguez (2014) show a nonlinear relationship between multiple directorships and firm performance. This is mainly due to the combination of the reputation and dedication effects. That is, the reputation effect is more pronounced at low levels of multiple directorships. However, after a certain level, the directors become overwhelmed and too busy to perform their duties appropriately.

Moreover, based on a sample of 11,537 firm-year observations from 1997 to 2013, James et al. (2018) find that busy directors in Metro firms can improve the firm performance and are associated with lower cash effective tax rate, lower default risk, lower real earnings manipulations, and more effective assets utilization. In addition, they show that, after the 2007–2008 financial crisis, not in the early years after The Sarbanes–Oxley Act, busy independent directors appeared to improve the firm performance.

Recently, based on a strongly balanced panel data consisting of 168 firms of BSE 200 indices of India for the period that ranges from 2010–2011 to 2016–2017, Manna et al. (2020) found a significantly positive relationship between multiplicity of directorship and the corporate performance of the sample firms. Thus, a director with multiple directorships is highly able to build his reputational capital through his knowledge, excellence, valuable experience, and effective decision-making abilities. Most recently, Raithatha and Ladkani (2022) investigated the moderating impact of the board of directors on the strategic decisions made by family firms in India over the period that ranges from 2006 to 2019. Supporting the quality hypothesis, their results show that family firms with busier boards can benefit from the vast pool of knowledge shared and accumulated by such directors due to their appointments on several boards.

On the other hand, multiple directorships appeared to hurt the company's performance as measured by Tobin's Q for a sample of Malaysian companies (Haniffa and Hudaib, 2006). They show that firms with busy boards display lower operating ROAs, lower asset turnover ratios, and lower operating returns on sales. These effects are also economically meaningful. Similarly, Non and Franses (2007) examine the impact of

interlocks on firm performance for 101 large Dutch firms. Using five different performance measures, their results show that board interlocks can hurt the firm's future performance.

Further, using a sample of top Indian firms, Jackling and Johl (2009) show that outside directors with multiple appointments hurt performance, implying that “busyness” did not add value in terms of networks and enhancement of resource accessibility. Likewise, based on a sample of 253 companies from Sweden, Niblaeus and Sellman (2011) show a negative and statistically significant relationship between busy directors and firm performance. That is, busy boards are less effective than non-busy boards. In the same vein, using a sample of 11,494 firm-years for the 1999 to 2008 period, and after controlling for the firm’s fixed effects, Cashman et al. (2012) document a significant negative relationship between busy directors and firm performance.

Similarly, based on a sample of 276 firm years and 1,783 directors from New Zealand listed companies, Roudaki and Bhuiyan (2015) show that interlocking board membership in New Zealand is negatively associated with firm performance. Further, Lusiana et al. (2019) show that multiple directorships have a significant and negative impact on the firm's value for a sample of 266 Indonesian companies listed on the Indonesia Stock Exchange over the 2011 to 2017 period.

Recently, Saleh et al. (2020) investigated the impact of multiple directorships, board characteristics, and ownership structure of non-financial companies listed on the Palestine Security Exchange (PSE). Based on panel data of 200 observations during the period that ranges from 2009 to 2016, their results show that multiple directorships of board members, more especially independent directors, reduce the firms' overall effectiveness and lower their performance. In the same vein, using a sample of 333 non-financial firms listed on the Pakistan stock exchange from 2006–to 2011, Latif et al. (2020) document a significant negative impact of multiple directorships on firm performance measured by Tobin's Q. Most recently, Trinugroho et al. (2022) investigated whether a board having busy commissioners could be beneficial or detrimental for tom performance for a sample of 392 Indonesian listed firms over the 2014 to 2020 period. Their results reveal a significant negative impact on board busyness on firm performance. This

negative impact of busy directors is more pronounced in state-owned firms, and however, it appears to be less pronounced in small and young firms.

No association between multiple directorships and company performance is documented by Kiel and Nicholson (2006), who find that holding multiple directorships does not appear to affect the firm's financial performance for a sample of listed Australian companies. Similarly, using a sample of 132 Malaysian public listed companies, Latif et al. (2013) show that multiple directorships do not affect firms' market performance. Further, Chiranga and Chiwira (2014) show that multiple directorships do not appear to affect the company's performance for a sample of Johannesburg Stock Exchange (JSE) listed companies in South Africa.

Based on the previous discussion and given the adopted theoretical foundation, we formulate our hypothesis as follows:

H0: *There is a negative relationship between multiple directorships and financial performance.*

H1: *There is a positive relationship between multiple directorships and financial performance.*

3. DATA AND METHODOLOGY

3.1 Sample and Data

Our initial sample comprises 228 publicly listed firms on the Amman Stock Exchange from 2010 to 2020. The study covers two main sectors in Jordan: the industrial and the services sectors. Data on multiple directorships are hand-collected from the annual reports of the sample firms that are publicly available on the Amman Stock Exchange (ASE) website. Following previous literature (e.g., Gerged et al., 2018; Gerged et al., 2021c), the financial sector is excluded since it has different financial reporting regulations. Further, all firms with missing data and all firms that have been liquidated or stopped their operations are excluded from our sample. These procedures result in a final sample that consists of 97 firms. Thus, our tests are run on a final sample of 1067 firm-year observations.

3.2 Measures

3.2.1 Busy Director Measurements

Following Ferris et al. (2003), Latif et al. (2020), and Alhadi et al. (2021), our independent variable is the number of directorships per director (NDIR), calculated as the total number of other directorships divided by the total number of directors on the board. However, Sarkar and Sarkar (2009) argued that it is more accurate to employ the median than the average number of external directorships held by directors because it has the advantage of eliminating the extreme observations and reflecting the multiple directorships of the majority of board members. In our paper, we follow Sarkar and Sarkar (2009) and measure the independent variable (MDIR) by the median of the number of outside directorships held by board members[6]. Data on multiple directorships is not directly provided in any of the sources. Hence, we created a dataset by listing all directors' names and affiliated companies, sorted the data by name, and counted the number of directorships held by each director.

3.2.2 Firm Performance Variables

Following previous literature (e.g. Sarkar and Sarkar, 2009; Hauser, 2018; Hundal, 2017; Saidat et al., 2019,2020: Latif et al., 2020), to analyze firm performance, we employ Tobin's Q. However, Tobin's Q may also serve as a proxy for a firm's incentive to invest and may be mechanically inflated due to underinvestment. Therefore, we also measure firm performance using the return on assets ROA. Accordingly, both Tobin's Q and return on assets are considered in this study as proxies for market return and accounting return, respectively.

3.2.3 Other control variables

While we are interested in studying how the multiple directorships of board members can impact the firm performance, there are some other board characteristics and firms' specific factors that can influence the performance of Jordanian firms, such as board size, board independence, CEO duality, firm size, market capitalization, and growth opportunities. Thus, following previous studies (e.g. Fich and Shivdasani, 2006; Coles et

[6] It is worth to note here that when we calculate the number of outside directorships accumulate by directors, we do not take into account directorships they hold in the company, in which they are already directors, or in firms controlled by the company.

al., 2008; Andrés and Rodríguez Sanz, 2011; Faleye et al., 2011; Iturriaga and Rodríguez, 2014; Hundal, 2017; Saleh et al., 2020; Latif et al., 2020), we control for these variables.

3.2 Analysis

In order to investigate the impact of multiple directorships on Jordanian firms' performance, this study follows prior studies (e.g. Lei and Deng, 2014; Iturriaga and Rodriguez, 2014; Saleh et al., 2020; Latif et al., 2020; among others) and adopts the following regression model:

$$PERF=\alpha 0+ \beta 1MDit + \beta 2BODSIZE+\beta 3\ BODINDit +\beta 4FSIZEit+ \beta 5GROWTHit + \beta 6MKTCAPit + \beta 8\ LEVit +\beta 9\text{-}19YEARDit+\beta 20\text{-}26\ INDUSTDit+\varepsilon i\ldots\ldots..(1)$$

Where PERF is the firm performance, measured by the return on assets, and Tobin's Q, MD is multiple directorships, measured as the median of the numbers of outside directorships held by board members, BODSIZE is the board size, measured as the total number of directors on the board, FSIZE is the firm size, equal to the natural log of total assets. GROWTH is the firm's growth, measured as the market-to-book ratio. MKTCAP is the market capitalization measured as the natural market capitalization log, YEARD, the year dummy variables, and INDUSTD is the industry dummy variables.

4. RESULTS AND DISCUSSIONS

4.1 Descriptive Statistics

Table (1) presents the basic descriptive statistics for the main variables used in this study. The table shows that the mean of multiple directorships is 2.17, which is quite similar to the 2.14 that has been reported in Pakistan by Latif et al. (2020). In addition, the mean (median) of the board size is 8 (9), respectively, exhibiting the optimal size according to Lipton and Lorsch (1992) and Jensen (1993). The mean (median) of board independence is 0.42 (.44) respectively, compared with the 0.34 (0.28) documented by Alhaddad and Whittington (2019), it can be concluded that Jordanian listed firms are becoming more independent than before. CEO-duality has a mean of 16%, indicating that about 84% of Jordanian firms are following the recommendations of the 2017 Jordanian Corporate Governance Code and separate the roles of chief executive officer and chairman. The firm size ranges from 5.5 to 9.25, with a mean of 7.40, which is quite similar to the 7.79

reported in India by Raithatha and Ladkani (2022). Market to book ratio has a mean (median) of 1.38 (1.52), while Market capitalization ranges from 4.87 to 9.14. Leverage has a mean of 35%, which is quite higher than the 31% documented in Palestine by Saleh et al. (2020).

INSERT TABLE 1 RIGHT HERE

Table 2 presents the Pearson correlations between the variables used in the multivariate analysis. The table shows that the proxies for the hypotheses are not highly correlated with one another or with the control variables. As can be seen from the table, the highest pair-wise correlation coefficient between the variables is 0. 5084, indicating that multicollinearity is not a problem in the current study.

INSERT TABLE 2 RIGHT HERE

4.2 Multivariate Analysis

Table (3) presents the multivariate pooled regression analysis results for the model used in this study. Overall, the study model is statistically significant, where F-value = 7.17 and Prob>F = 0.000. Using Tobin's Q as a proxy for firm performance, multiple directorships appear to be significantly and negatively related to firm performance (coefficient = -0.02, and $p<0.01$), indicating that Jordanian firms with multiple directorships can be over-committed, too busy, less vigilant, and thus their ability to monitor the company management on behalf of the shareholders effectively is limited. This supports the "busyness hypothesis", which suggests that multiple directorships would negatively affect their ability to do their best for the company. Collectively, our evidence implies rejecting H1 (i.e., the reputation hypothesis) and accepting H0 (i.e., the busyness hypothesis). That is, wearing too many hats may prevent directors from performing their duties effectively due to their over-commitment. The results also suggest that busy directors in Jordan may not have the necessary networking contacts and reputations that are essential to creating benefits for their companies. In fact, the process of selecting and appointing independent directors in Jordan is affected by nepotism, and directors may be compromised by personal relationships with the executive managers (Al-Jazi, 2007). This increases the probability of appointing unqualified busy directors who may not be able to perform their

director duties efficiently. Moreover, in Jordan, the labour market for independent directors might not be well developed; hence independent directors might devote little time and interest in monitoring the firm performance. Empirically, our finding is consistent with a body of previous studies (e.g., Haniffa and Hudaib, 2006; Non and Franses, 2007; Cashman et al., 2012; Niblaeus and Sellman, 2011; Roudaki and Bhuiyan; 2015; Saleh et al., 2020; Latif et al., 2020; Lusiana et al., 2020; and Trinugroho et al., 2022) that also indicate a negative impact of multiple directorships on firm performance.

INSERT TABLE 3 RIGHT HERE

Regarding board size, our results reveal that it is positively and significantly related to firm performance as measured by Tobin's Q (coefficient = 0.02, and $p<0.05$), indicating that large boards in Jordan are more efficient in performing their supervisory, controlling and decision-making role. According to Elmagrhi et al. (2017), larger boards enjoy some benefits, including having more talented and experienced directors. This finding is consistent with the results reported by previous literature such as Eisenhardt and Schoonhoven (1990), Pearce and Zahra (1992), Abidin et al. (2009), Boone et at., (2007), Roudaki and Bhuiyan (2015), Tulung and Ramdani (2018), Alqatan et al., (2019) and Saidat et al., (2019).

Similar to Weir et al. (2002), Dulewicz and Herbert (2004), El-Faitouri (2014), and Alqatan et al. (2019), board independence (BODIND) is found to be statistically insignificant. Further, supporting the agency theory, CEO-duality appeared to have a significant negative relationship with the firm performance, indicating that the effective monitoring role of the board over executives might be harmed and the severity of agency problems might be exacerbated as a result of giving one person too much power over the decision-making process in the company (Fama and Jensen, 1983; Jensen, 1993; Karim et al., 2012).

Concerning the firm size, large firms appeared to be less efficient than smaller ones (coefficient = 0.02, and $p<0.05$). Further, our results show that better-performing firms have high growth opportunities (coefficient = 0.08, and $p<0.05$). With regard to market capitalization (MARKETCAP), our results show that there is a significant positive relationship between market capitalization and firm performance as measured by Tobin's

Q (coefficient = 1.85, and p<0.01). This finding is consistent with the results Niblaeus and Sellaman (2011), and Hundal (2017) reported. Finally, compatible with Niblaeus and Sellaman (2011) and Shamsudin et al. (2015), our results show that there is a significant positive relationship between financial leverage (LEV) and firm performance (coefficient = 0.07, and p<0.05). This indicates that highly leveraged firms in Jordan experience better performance.

Table (4) shows that the results are qualitatively similar to those reported previously in the main analysis when using the ROA to measure firm performance. However, this regression provides better results in terms of an adjusted R-squared of 31.98%.

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5. SENSITIVITY ANALYSIS

In addition to the panel data estimates, our sensitivity analysis also addresses the endogeneity issue, which usually arises in corporate governance research. That is, corporate governance issues may be not only a determinant but also a result of the firm performance (Demsetz and Lehn, 1985; Coles et al., 2008; Iturriaga and Rodríguez, 2014). In fact, busy directors can be valuable assets (Harris and Shimizu, 2004). Thus, firms experiencing lower performance may prefer to appoint busy directors with multiple board seats in the hopes that their experience, knowledge, and connections will enhance the firm's performance. Thus, to confirm the robustness of the results shown in the previous section and following Latif et al. (2020), the current study uses the Generalized Method of Moments (GMM) model to address endogeneity.

INSERT TABLE 5 RIGHT HERE

As can be seen from the previous table, the overall results of this analysis are similar to those reported under the main analysis. Multiple directorships appeared to be significantly and negatively related to firm performance, which supports the results of the main analysis in the current study. That is, busy directors appeared to be detrimental to Jordanian firms' performance.

6. CONCLUSION

In this paper, we have examined the impact of multiple directorships on company performance in Jordan. Using a large sample of 97 Jordanian listed companies over the period from 2010 to 2020, our results show a significant negative relationship between multiple directorships and firm performance, supporting, thereby, the "*Busyness Hypothesis*''. That is, a director with multiple directorships is more likely to be over-committed, too busy, and less vigilant, and thus their ability to effectively monitor the company management on behalf of the shareholders is limited. This study is highly expected to provide important implications in strategy making in the field of corporate governance and act as a piece of supplementary information for policymakers and regulators in their attempts to improve the corporate governance quality in Jordan. That is, stricter limits must be imposed on the number of other directorships allowed to ensure managers can fulfil their board responsibilities appropriately. Moreover, in an attempt to avoid enabling social bias, Jordanian firms have a duty to seriously consider rational economic factors in the selection process of a director, bearing in mind their workload and other directorships.

Although our evidence reflects the Jordanian context, it might help other developing countries that share similar institutional characteristics with Jordan, such as weak investor protection, high market imperfection, and poor corporate governance system.

Appendix: Variables Definitions		
Variables	**Definition**	
Dependent variable		***Reference***
PERF	Performance, measured by the return on assets and Tobin's Q ROA: Return on assets, measured as net income divided by total assets Tobin's Q: the ratio of the book value of total assets minus the book value of equity, plus the market value of equity to the book value of assets	Trinugroho et al., (2022); Saleh et al., (2020); Latif et al. (2020); Albitar et al., (2020); Alqatan et al., (2019);Iturriaga and Rodríguez (2014); Hundal (2017); Jackling and Johl (2009).
Independent variable		
MD	Multiple directorships, measured as the median of the numbers of outside directorships held by board members	Latif et al. (2020); Alhadi et al. (2021); Sarkar and Sarkar (2009); Ferris et al. (2003).
Control variables		
BODSIZE	Board size equal to the total number of directors on the board	Ananzeh et al. (2022); Trinugroho et al., (2022); AlHares et al.,(2020); Alhaddad and Whittington (2019); Alqatan et al., (2019) ; Sial et al., (2019); Iturriaga and Rodríguez (2014); Hundal (2017); Samaha et al., (2012); Jackling and Johl (2009).
BODIND	Board independence equal to the proportion of independent directors on the board to the total number of directors on the board	Chiang et al., (2020); Alhaddad and Whittington (2019); Alqatan et al., (2019); Sial et al., (2019); Hundal (2017); Iturriaga and Rodríguez (2014); Samaha et al., (2012); Jackling and Johl (2009).
CEODUAL	CEO-duality is a dummy variable equals 1 if the same person holds CEO and the chairman positions, 0 otherwise	Latif et al. (2020); Alhaddad and Whittington (2019); Samaha et al., (2012).
FSIZE	Firm size, defined as the natural logarithm of total assets	Trinugroho et al., (2022), Latif et al. (2020); AlHares et al.,(2020); Chiang et al., (2020); Albitar et al., (2020); Alqatan et al., (2019); Sial et al., (2019); Iturriaga and Rodríguez, (2014). Albitar (2015)
GROWTH	Sales growth is defined as the sales amount different from the previous year divided by the sales of the previous year	Raithatha and Ladkani (2022); AlHares et al., (2020).
MKTCAP	Market capitalization equal to the natural log of market capitalization	Hundal (2017); Elmarzouky et al. (2021)
FLEV	Leverage is defined as the total liabilities scaled by total assets	Albitar et al. (2022); Trinugroho et al., (2022), AlHares et al. (2020); Albitar et al., (2020); Alhaddad and Whittington (2019); Sial et al., (2019); Hundal (2017); Iturriaga and Rodríguez (2014); Samaha et al., (2012).
YEAR	Year dummy variables	Albitar et al., (2020); Latif et al. (2020); Alhaddad and Whittington (2019).
IND	Industry dummy variables	Albitar et al., (2020); Alhaddad and Whittington (2019); Alqatan et al., (2019); Iturriaga and Rodríguez (2014); Jackling and Johl (2009).

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Tables:

Table 1:
Descriptive Statistics

Variables	Mean	Median	Std.Dev.	Min	Max
MD	2.17	3	1.11	0	5
BODSIZE	8.11	9	2.25	3	13
BODIND	0.42	0.44	0.09	0.11	0.8
CEODUAL	0.16	0	0.36	0	1
FSIZE	7.40	7.73	0.62	5.50	9.25
GROWTH	1.38	1.52	4.05	-20.23	80.79
MKTCAP	7.17	7.17	0.62	4.87	9.14
FLEV	0.35	0.44	0.24	0.00	1.86

All variables as defined in the Appendix.

Table 2:
Correlation Matrix

Variables	MD	BODSIZE	BODIND	CEODUAL	FSIZE	GROWTH	MKTCAP	FLEV
MD	1.0000							
BODSIZE	**0.2418*** **	1.0000						
BODIND	**0.1563** **	**-0.0640**	1.0000					
CEODUAL	**-0.1750***	0.0471	0.635	1.000				
FSIZE	**0.2197*** **	**0.2683*** **	**0.0748** **	-0.0183	1.0000			
GROWTH	-0.0070	0.0323	0.0452	0.0169	**-0.1242*** **	1.0000		
MKTCAP	**0.1618*** **	**0.1018*** **	**0.0775** **	0.0360	**0.5084*** **	0.0613	1.0000	
FLEV	0.0415	-0.0453	**0.1360*** **	**0.0214***	**0.3585*** **	**0.0774** **	**0.0785***	1.0000

*This table presents the Pearson correlations for the variables used in the multivariate regression. Coefficients in bold are statistically significant, ***, **, * Indicate significance at 1 percent, 5 percent, and 10 percent levels. All variables as defined in the Appendix.*

Table 3:
Results of Multivariate Regression Analysis, Tobin's Q

Variables	Coefficients	t. Statistic	p-value
MD	-0.0248268	-2.90***	0.005
BSIZE	0.0137327	2.07**	0.018
BODIND	0.8267554	0.26	0.303
CEODUAL	-0.0157801	-1.94*	0.053
FSIZE	-0.0237817	-2.02**	0.045
GROWTH	0.0852818	4.56***	0.000
MKTCAP	1.858244	2.28**	0.041
FLEV	0.077989	1.99*	0.010
YEARD	Inc.	Inc.	Inc.
INDUSD	Inc.	Inc.	Inc.
_Cons	1.157975	3.12***	0.002
Adj R-squared		30.70%	

****, **, * Indicate significance at 1 percent, 5 percent, and 10 percent levels, respectively. The parameter estimates are based on the following model:*

$$PERF=\alpha 0+ \beta 1MDit + \beta 2BODSIZE+\beta 3\ BODINDit +\beta 4FSIZEit+ \beta 5CEODUALit+ \beta 6GROWTHit + \beta 7MKTCAPit + \beta 8\ LEVit +\beta 9\text{-}19YEARDit+\beta 20\text{-}26\ INDUSTDit+\varepsilon i\ldots\ldots..(1)$$

All variables as defined in the Appendix.

Table 4:
Results of Multivariate Regression Analysis, ROA

Variables	Coefficients	t. Statistic	p-value
MD	-0.0248268	-3.07***	0.002
BSIZE	0.0112485	2.76**	0.016
BODIND	-0.0210201	-0.18	0.860
CEODUAL	-0.013360	-2.60***	0.006
FSIZE	-1.834519	-1.99*	0.075
GROWTH	0.0363019	2.48**	0.031
MKTCAP	1.849296	2.40**	0.033
FLEV	1.159968	1.87*	0.080
YEARD	Inc.	Inc.	Inc.
INDUSD	Inc.	Inc.	Inc.
_Cons	0.8483225	2.41**	0.016
Adj R-squared		31.98%	

****, **, * Indicate significance at 1 percent, 5 percent, and 10 percent levels, respectively. The parameter estimates are based on the following model:*

$$PERF=\alpha 0+ \beta 1MDit + \beta 2BODSIZE+\beta 3\ BODINDit +\beta 4FSIZEit+ \beta 5CEODUALit+ \beta 6GROWTHit + \beta 7MKTCAPit + \beta 8\ LEVit +\beta 9\text{-}19YEARDit+\beta 20\text{-}26\ INDUSTDit+\varepsilon i\ldots\ldots..(1)$$

All variables as defined in the Appendix.

Table 5:
Results of the Generalized Method of Moments (GMM) model

Variables	ROA		Tobin's Q	
	t. Statistic	**p-value**	**t. Statistic**	**p-value**
LAGROA	2.91***	0.001	-	-
LAGTobin's Q	-	-	3.12***	0.000
MD	-3.81***	0.000	-3.01***	0.006
BSIZE	2.02**	0.043	2.22**	0.036
BODIND	0.83	0.503	-0.29	0.831
CEODUAL	0.71	0.345	-2.08	0.039
FSIZE	-2.06**	0.044	-2.09*	0.045
GROWTH	2.56***	0.001	2.27**	0.033
MKTCAP	3.13***	0.003	2.73***	0.007
FLEV	1.90*	0.087	2.56**	0.050
YEARD	Inc.	Inc.	Inc.	Inc.
INDUSD	Inc.	Inc.	Inc.	Inc.
_Cons	3.43***	0.001	2.91**	0.012
Endogenous variables	LAGROA MD		LAGTobin's Q MD	

****, **, * Indicate significance at 1 percent, 5 percent, and 10 percent levels, respectively. The parameter estimates are based on the following model:*

$$ROA = \alpha 0 + \beta 1 LAGROA_{it} + \beta 2 MD_{it} + \beta 3 BODSIZE + \beta 4 BODIND_{it} + \beta 5 CEODUAL_{it} + \beta 6 FSIZE_{it} + \beta 7 GROWTH_{it} + \beta 8 MKTCAP_{it} + \beta 9 LEV_{it} + \beta 10\text{-}20\ YEARD_{it} + \beta 21\text{-}27\ INDUST D_{it} + \varepsilon i \ldots\ldots\ldots (2)$$

$$Tobin's\ Q = \alpha 0 + \beta 1 LAGROA_{it} + \beta 2 MD_{it} + \beta 3 BODSIZE + \beta 4 BODIND_{it} + \beta 5 CEODUAL_{it} + \beta 6 FSIZE_{it} + \beta 7 GROWTH_{it} + \beta 8 MKTCAP_{it} + \beta 9 LEV_{it} + \beta 10\text{-}20\ YEARD_{it} + \beta 21\text{-}27\ INDUST D_{it} + \varepsilon i \ldots\ldots\ldots (3)$$

All variables as defined in the Appendix.