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BOARD OF DIRECTORS CHARACTERISTICS AND EARNINGS MANAGEMENT: EVIDENCE FROM INDUSTRIAL JORDANIAN LISTED COMPANIES

YOUSEF IBRAHIM ABU-SIAM

Accounting Department, Faculty of Business, Applied Science Private University, Amman, Jordan.
Email: yousefabusiam@asu.edu.jo

NUR HIDAYAH BINTI LAILI

Faculty of Economics and Muamalat, Universiti Sains Islam Malaysia, Nilai, Malaysia.
Email: hidayah@usim.edu.my

Abstract

This study focuses on examining the relationship between the board of director's characteristics and earnings management. This study uses a secondary-data and the population study's consists of all industrial firms listed on Amman Stock Exchange (ASE) over the period 2017-2021. The results reveal that board independence is negatively associated with earnings management at significant level. Moreover, the results indicate that the board size and CEO duality are not significantly associated with earnings management. The results of this study could be useful to regulators in their attempts to constrain the incidence of earnings management and enhance the quality of monitoring mechanisms, especially in an environment where the capital market is still evolving and the legal protection and law enforcement is weak.

Keywoards: Board Independndce, Board Size, CEO Duality, Earnings Management.

INTRODUCTION

It is widely believed that financial reporting as the key means that allows managers to communicate firms' economic performance to external stakeholders (O'Regan et al., 2005). Nevertheless, financial reporting may provide a channel through which allow to managers engage in earnings management practices to attain particular objectives and to report earnings that do not correctly reflect their firms' underlying economic positions (Bedard et al., 2004; Issa & Siam, 2020). As such, practicing earnings management may reduce the transparency and integrity of financial reports and thus will affect the decisions of users of financial reports who rely on their accuracy (Lo 2008). Indeed, these harmful effects of earnings management lead researchers to employ agency theory as a framework in majority of accounting research in earnings management (Louis & Robinson, 2005; Alexander, 2010; Idris, 2012). Therefore, agency theory proposes that corporate governance mechanisms such as board of directors are one of the important key parts in aligning the interest of the different parties (Fama & Jensen, 1983; Lin & Hwang, 2010). Consequently, it is assumed that activating this mechanism will enhance financial reporting issues thus restricting the practices of earnings management and preserve shareholders wealth.

Accordingly, mechanisms that can be used and that could help in reducing level of earnings management are the effectiveness of the board of directors as one of internal mechanisms

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(Jensen & Meckling, 1976; Warrad & Khaddam, 2020). The board of directors is the governance body to which shareholders delegate the responsibility of overseeing, compensating and substituting managers, as well as approving major strategic projects. It therefore plays a key role in the overall overseeing of the company and the monitoring of top management in particular (John & Senbet, 1998; Chatterjee et al., 2003; Issa & Siam, 2020). In other words, the agency theory anticipates that boards will enhance the integrity of their financial reporting by monitoring management (Vafeas, 2005). Consequently, the effectiveness of board of directors, as one of the important elements in internal corporate governance mechanism, depends on its characteristics such as board independence, board size and non-CEO duality to reduce the level of earnings management (e.g. Ruth et al., 2011; Ishak & Al-Ebel, 2013; Burghleh & Al-Okdeh, 2020).

Very scanty studies have been conducted in Jordan to examine the relationship between corporate governance mechanisms and earnings management practices, although evidence of these relationship exists from developed and developing economies (e. g., Xie et al., 2003; Bedard et al., 2004; Peasnell et al., 2005; Saleh et al., 2007; Osma, 2008; Jaggi et al., 2009; Alves, 2011; Abed et al., 2012; Habbash et al., 2013; Soliman & Ragab, 2014). Such inconclusive conclusions seem to be largely affected by differences in institutional settings, governance structures, and litigation environments. Therefore, the Jordanian business environment has distinctive characteristics that make Jordan a well suited case to examine this relationship. More specifically, the present study seeks to examine the effect of different characteristics of board of directors (i.e., independence, size, CEO duality,) on earnings management in Jordan.

It is assumed that activating the characteristics of board of directors would lead to enhance the monitoring role of board to protect shareholders interests and reduce the agency cost. As such, it is reasonable to hypothesize that score of effectiveness of the board of directors will help to restrict earnings management practices. Therefore, the present study seeks to investigate whether the influence of characteristics of the board of directors (board independence, size and CEO duality) in reducing earnings management practices in Jordanian firms.

Board of Directors Characteristics and Earnings Management

According to agency theory which suggests that the board of directors is one of an important mechanism to ensure that the agent works to maximize the shareholders' interest. It is also noted that, the board of directors as one of internal corporate governance mechanisms plays a significant role in reducing the information asymmetry that leads to an increase in agency problems. In addition, the effectiveness of the board of directors plays a vital role in protecting the interests of various stakeholders against management's self-interests. For example, previous literature suggested that effective board monitoring helps to maintain the credibility of financial reports. Thus, it is reasonable to hypothesize that an effective board of directors will help to limit the earnings management (e.g., Beasley, 1996; Klein, 2002b; Anderson et al., 2004; Sarkar et al., 2008). Thereby, the absence of appropriate supervision from the board of directors or any weakness in the board of directors will lead to encourage management to engage in earnings management practices. As such, it is suggested by the agency perspective

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that the board of directors should possess some crucial characteristics, like independent members, sufficient size and the separation of the CEO and chairman to perform its duties more effectively.

Board Independence

The primary responsibility of the board of directors is to monitor management to protect shareholders' interests; thus, it is expected that the higher level of board independence reduces of possibility the firm will engage in earnings management. From an agency perspective, the ability of the board to act as an effective monitoring mechanism depends on its independence from management (Davidson et al., 2005). Previous studies have supported the notion that the independence of directors would reduce the likelihood of financial statement fraud and constrain earnings management (Xie et al., 2003; Sharma, 2004; Duh et al., 2009; Idris et al., 2018). Both Klein (2002b) in the USA and Peasnell et al. (2005) in the UK find that independent directors play a critical role in constraining earnings manipulation. Most of the large firms in the UK and the USA follow the requirement from regulators to have a board with a majority of independent directors.

Existing research shows that a negative association between board independence and earnings management such as Xie et al. (2003) find evidence between board independence and the extent of earnings management. Their study documented that there is a negative relationship. Moreover, based on a sample of Canadian firms Niu (2006) found that the percentage of independent directors on boards is negatively associated with the level of earnings management. In Pakistan, Shah et al. (2009) found a negative relationship between role of the independence of non-executive directors and earnings management. Lin & Hwang (2010) find a negative relationship between independence board of directors and earnings management. In Iran, Roodposhti & Chashmi (2011) suggested that companies with high independent boards are associated negatively with earnings management. Similarly, Metawee (2013) found that the board independence is negatively associated with earnings management.

Others provide empirical evidences to support a positive relationship between board independence and earnings management (Amer & Abdelkarim, 2011; Basiruddin, 2011; Sukeecheep et al., 2013). Amer & Abdelkarim (2011) using a sample from Palestine companies, they found the board independence was positively related with earnings management. Likewise, Sukeecheep et al. (2013) supported this relation where they found a positive relationship between board independence and earnings management for a sample of Thai companies.

On the other hand, some other studies have not observed a statistically significant correlation between board independence and earnings management (Tian & Lau, 2001; Gao & Ma, 2002; Kam, 2007; Soliman & Ragab, 2013; Hsu & Wen, 2015). Gao & Ma (2002) find that no significant association between board independence and earnings management in China. Similarly, Wenyao & Qin (2008) found that inclusion of independent directors did not enhance monitoring of earnings management in manufacturing Chinese listed firms. In Jordan, Abed et al. (2012) found that the existence of independence members within the board of directors is

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not significant related to earnings management. In addition, Soliman & Ragab (2013) show that the ratio of independent board members is not significantly related to earnings management in Egypt.

Generally, a large number of studies provide support for the notion of boards with a high percentage of independent outside directors reinforce the integrity of the financial reporting process and can enhance good governance by providing a better representation of stakeholders' interests and better able to monitor managers. Nevertheless, a small number of studies have shown peculiar results, such as that conducted in Asian countries, declaring that board independence may not be effective in reducing earnings management. Their results may be due to their sample, control variables used, and the nature of ownership structure and the corporate governance practices. Therefore, it is reasonable to expect that more independent members on the board is more likely to constrain earnings management in Jordan. Thereby, based on the arguments above, the following hypothesis is proposed:

H_1: The independence of the board of directors is negatively related with earnings management.

Board Size

Prior researches have considered the size of the board as an important governance characteristic. On one hand, the resource dependence theory argued that a large board may have more experience, knowledge, and opinions from different sources; therefore, this can strengthen its monitoring function (Chaganti et al., 1985; Dalton et al., 1999). On the other hand, a larger number of members might present barriers in reaching a unified decision on important issues. These barriers can be explained through many reasons: first, larger groups usually have more communication and coordination problems because of the larger number of potential interactions between group members (Lipton & Lorsch, 1992). Second, larger decision making groups experience less levels of motivation and satisfaction due to the lack of participation usually observed in large decision making groups. Therefore, larger boards may be less likely to become involved in strategic decision making (Goodstein et al., 1994).

Jensen (1993) claims that the board of directors, which includes a large number of members, is inefficient. The reason for this is that the CEO will be unable to control the discussions involving a large number of members owing to the difficulty of coordinating among, and dealing with the problems faced by the company. Therefore, it has been suggested that a small number of board members may be an effective tool to appropriately control the executive management. Along the same lines, Lipton and Lorsch (1992) recommend between eight and nine board members. If the board needs increased monitoring to obtain more benefits, adding members will act in offsetting the costs associated with slow decision making. Goodstein et al. (1994) posit that smaller boards comprising four to six members might be more efficient, as they are able to make quicker strategic decisions, albeit larger boards are better equipped to monitor the actions of top management. In relation to this, Lefort and Urzua (2008) find a positive relationship between the small size and the performance of companies, while Yermack

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(1996) states that firms with smaller boards, consisting of less than ten directors perform better than firms with larger boards.

Previous studies that have examined the relationship between the board size and earnings management provide somewhat mixed results, for example, Chtourou et al. (2001), Kamran et al. (2006) and Soliman & Ragab, (2013) provide evidence that earnings management is negatively related to board size. Their findings are consistent with the assumption that smaller boards can be more effective than larger boards. Consequently, small boards might be more effective in monitoring managerial behavior. Wenyao & Qin (2008) supported this notion that small boards are more effective in constraining income-increasing earnings management than a large board for a sample of Chinese firms. However, Abdul Rahman & Ali (2006) finds a positive relationship between board size and earnings management. They conclude that if board size increases, it may become difficult after a certain point (optimal size) for boards to monitor managerial behavior and, consequently, to limit earnings management. In larger boards the responsibility of monitoring management is diffused, leading to great dilution on each member personally. Therefore, neither argument by itself is likely to explain satisfactorily the relationship between board size and earnings management. Instead, arguably both arguments can coexist.

In Jordan, as one of less developed countries where Jordanian firms' boards lack a diversified composition (i.e. lack of representation of independent board members and an adequate mix of relevant experience). Furthermore, several boards represent the direct interests of the controlling owners. For this reason and consistent with an agency framework, it is more likely that a large board in the Jordanian firms lead to make monitoring activities less effectively. Therefore, this research is going to test following hypothesis:

H_2: The size of board of directors is negatively related with earnings management.

CEO Duality

According to the agency theory, the separation of the CEO and chairman is to ensure that the CEO does not have too much power over the board. Separating these roles is likely to reduce earnings manipulation because the CEO is monitored by an independent chairman, which in turn, reduces the likelihood of the CEO disregarding the interests of shareholders. This conjecture is supported by the USA and UK's regulatory recommendation that a board be chaired by an independent director (see the Cadbury Report, 1992; and Sarbanes-Oxley Act, 2002). International Australian guidelines Standards (2003) stipulate that board monitoring role will be jeopardized if board chairperson is also the CEO of the firm (in Davidson et al., 2005).

In addition, the companies with CEO duality did not perform as well as their competitors. Abdul Rahman & Haniffa (2005) supported that by saying companies with CEO duality did not perform well and incline to do earnings management. Roodposhti & Chashmi (2010) found that a negative relationship between board CEO duality and earnings management. Additionally, Hamad (2010) found the similar results in Malaysia. Also, Metawee (2013) found

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that a negative relationship between board CEO duality and earnings management in Egyptian companies.

In contrast, Klein (2002b) tested if earnings management is positively related to the CEO duality and found a significant positive relationship between these variables. Likewise, Gulzar & Wang (2011) and Soliman & Ragab (2013) supported that there is a significant positive relationship between CEO duality and earnings management. However, empirically, most authors do not find any significant positive relation between CEO duality and earning management. So, it doesn't seem to support this theory (Bugshan, 2005; Tehranian et al., 2006; Davidson et al., 2005).

Furthermore, Abdul Rahman & Ali (2006) did not find any significant positive relation between CEO duality and earning management. Similarly, a meta-analysis study by Garcia-Meca & Sanchez-Ballesta (2009) found no relationship between CEO duality and earning management. Abed et al. (2012) in Jordan and Hsu & Wen (2015) in China, examined the relationship between CEO duality and earnings management. The results of their studies show that the duality role is not significant related to earnings management. The JCGC recommends that the role of the chairman should be separated from that of the CEO to more effective monitoring. Thus, consistent with agency theory and based on the arguments above, the current study argues that the separation of the positions of CEO and chairman will lead to restraining earnings management in Jordanian firms. The following hypothesis is proposed:

H_3: CEO duality is positively related with earnings management.

Data Collection Procedures

The data set of the present study consists of the industrial firms listed on Amman Stock Exchange for five consecutive years of reporting periods from 2017 to 2021 (www.ase.com.jo). The total number of industrial listed firms in 2021 was 71 firms. Seven (7) firms were excluded from the analysis due to insufficient financial data and the annual reports were not found, thus, the final population of 64 firm for five years from 2017 to 2021 (320 firm-year observations).

Operational Definitions and Measurements of the Variables

Variables are classified into dependent and independent variables and control variables. The dependent variable is earnings management; independent variables are board independence, board size, and CEO duality, as well as control variables are firm size and leverage. The Table (1) shows operational definitions and measurements of the variables.

$$ABAC_{it} = a_0 + \beta_1 BDIND_{it} + \beta_2 BDSIZE_{it} + \beta_3 CEODUA_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 Year_{it} + (u_i + \varepsilon_{it})$$

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Table 1: Summary of the Measurements of the Variables

Variables	Symbol	Measurement
Dependent Variable:		
Earnings management	ABAC	The discretionary accruals estimated by the Kothari et al. (2005) model.
Independent variables:		
Board independence	BDIND	The percentage of independent directors to the total number of directors on the board.
Board size	BDSIZE	Total number of directors on the board.
CEO duality	CEODUA	Dummy variable with "1" if the CEO who is also the chairperson of the board, and "0" otherwise.
Control variables		
Firm size	SIZE	Natural logarithm of total assets.
Firm leverage	LEV	Total liabilities scaled by total assets.
Year	Year	Value of one "1" for specific year and zero "0" otherwise.

Descriptive Statistics

Descriptive statistics will be used in this study to transform the data into more meaningful and easy to interpret (Genser et al., 2007). Table (2) present the descriptive statistics of the continuous and dichotomous variables used in this study for 320 firm-year observations and covering the period between 2017-2021. The descriptive statistics include mean, median, standard deviation, maximum and minimum value. According to the findings of descriptive analysis as summarized in Table (2), the absolute value of performance-matched discretionary accruals (ABAC) for the companies in this study's sample has a mean (median) value of 0.071 (0.051), with the minimum and maximum value of 0.011 and 0.453 respectively. To compare with other countries, for instance, Canada and France the mean are 0.06 and 0.030 (Othman & Zeghal, 2006) respectively, USA is 0.070 (Jiraporn et al., 2008), Malaysia are 0.066 and 0.050 (Abdul Rahman & Ali, 2006; Rauf et al., 2012) respectively, and Egypt is 0.072 (Khalil, 2010). These data indicate that discretionary accruals in Jordan are not different from the one in other countries.

Table 2: Descriptive Statistics

Variable	N	Mean	Median	Std.Deviation	Minimum	Maximum
ABAC	320	0.071	0.051	0.069	0.011	0.453
BDIND	320	0.258	0.253	0.165	0.000	0.800
BDSIZE	320	7.654	8.762	3.012	5.000	13.000
CEODUA	320	0.489	1.000	0.501	0.000	1.000
SIZE	320	6.748	6.533	0.601	5.348	9.208
LEV	320	0.410	0.267	0.231	0.012	1.302

Regarding to the board characteristics and based on the descriptive analysis, as summarized in Table (2), the mean value of board independence (BDIND) is 25.8%, indicating that some Jordanian industrial companies do not comply with the requirement made by Jordanian

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Corporate Governance Code which require at least one-third of board members to be independent. However, the maximum and minimum percentage of independent directors are 80% and zero respectively, which indicate that some boards are usually independent and some are not. The mean value of board independence in this study is consistent with the earlier studies in Jordan such as Abed et al. (2012) and Hamdan et al. (2013) who found that board independence has a value of 26% and 31% respectively, in industrial companies listed on the ASE.

The average board size (BDSIZE) of the sample is 7.654, with a standard deviation of 3.012. This is consistent with the findings of Lipton & Lorsch (1992) who suggested that the members of boards should be eight or nine people for board effectiveness, in addition that the board size is within the range recommended by Jensen (1993). These results also confirm that most of Jordanian listed industrial companies comply with recommendations of the code of corporate governance that states that each company should specify the number of members on the board of directors, provided that number is not less than five and not more than thirteen. This result is comparable to Jordanian studies such as Jaafar & El-Shawa (2009) and Alwshah (2009) who report an average board size of nine and eight members respectively. Similarly, Abdul Rahman & Ali (2006), the average board size of Malaysian companies is eight directors and in UK studies such as Beekes et al. (2004) and Peasnell et al. (2005) who report an average board size of eight members.

Table (2) shows the mean of CEO duality (CEODUA) on the board of sampled companies. It is found that about 48.9% of the sample companies practice role duality, whereas 51.1% of the sample companies separating in the position of CEO and the chairman. This result of the study is consistent with the earlier studies in Jordan such as Abed et al. (2012). However, these findings suggest that it is still common in Jordan for the chairman of the board to be also the CEO of the company even though the JCGC prohibits combining the position of the chairman of the board of directors with any other executive position in the company.

The current study uses four control variables namely: firm size, financial leverage, growth and year. Table (2) shows the descriptive statistics for these variables. In terms of firm size (SIZE), which measured by the natural logarithm of total assets, the results in the Table (2) indicated that the average of the firm size is about 6.748. This finding is similar to prior studies in Jordan such as Idris (2012) who conducted his study on industrial companies for the period 2005-2008. Compared to domestic, the average leverage (LEV) proportion for the sample firms in this study is about 41%. This figure is similar to the average leverage in study done Al-Fayoumi et al. (2010) for industrial companies between 2001 to 2005.

Main Regression Result

Taking into accounts the diagnostic tests on the data distributions and tests specifically for the panel data are present as highlighted in the previous section. In this section, panel data regression technique was conducted, in order to determine the relationship between board of directors' characteristics as independent variables and firm size, leverage, and year as control variables and earnings management as dependent variable. Table (3) presents also the results

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of the relationship between the effectiveness of the board of directors and with earnings management.

Table 3: Main Regression Result

Variables	Exp. sign	Coefficients	t_ stat
BDIND	-	-1.160***	-4.55
BDSIZE	-	0.035	1.18
CEODUA	+	0.055	0.36
SIZE	-	-0.050	-0.52
LEV		0.341	1.33
YEAR 2018		0.065	0.53
YEAR 2019		-0.051	-0.48
YEAR 2020		0.320***	2.51
YEAR 2021		0.083	0.72
Constant		-2.071***	-3.11
R2		0.375	
N		320	
Wald Chi2		5501.63	0.0000

Based on the results shown in Table (3), the percentage of independent directors on the board has a significant relationship with earnings management, and the beta coefficient is negative (at $p\text{-value} < 0.01$). This implies that there is an inverse relationship between the percentage of independent directors on the board and earnings management. This result indicates that earnings management practices decrease as the percentage of independent directors on the board increases. Therefore, H_1 is supported. This finding is consistent with the arguments of agency theory, which suggests that existence of independent directors on boards or higher proportions of independent directors on boards significantly enhance board effectiveness to mitigate earnings management practices and play an important role in mitigating agency problems (Fama & Jensen, 1983; Pfeffer & Salancik, 2003; Setia-Atmaja et al., 2011; Idris et al., 2018).

Furthermore, this result is in line with the results of many previous empirical studies that found that the existence of independent members lead to enhance the monitoring role of the board of directors. For example, Klein (2002b), Xie et al. (2003), Peasnell et al. (2005), Davidson et al. (2005), Benkel et al. (2006), Hutchinson et al. (2008), Jaggi et al. (2009), Dimitropoulos & Asteriou (2010), Alves (2011), Al-Ghamdi (2012), Habbash (2013) and Uwuigbe et al. (2014) these studies report a negative and significant relationship between the proportion of independent directors on the board and earnings management. Thus, it can argued that independent directors are a good monitoring mechanism to monitor the management and reduce the level of earnings management in companies.

In summary, the results from the multivariate regression are consistent with the proposition of the agency theory, which suggests that presence of independent members on boards of directors provide an effective monitoring mechanism to reduce earnings management practices as well

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as may improve in governance practices to protect shareholders' interest. Indeed, when there are independent members on boards this may be motivation to investors to rely on the information revealed in the financial statements to take their decisions.

The findings of testing hypothesis H_2 indicate that there is no relationship between board size and earnings management in industrial Jordanian companies. Based on results shown in Table (3), that the p-value ($P > 0.05$) indicates that the board size is not significantly related to earnings management. Thereby, the hypothesis H_2 is rejected. Thus, this result is in contrast to previous studies which found a significant negative relationship between board size and earnings management (e.g., Chtourou et al., 2001; Xie et al., 2003; Peasnell et al., 2005; Yu, 2008; Abed et al., 2012; Habbash, 2013 ; Bala, 2015). In addition, the result of this study is also in contrast to some previous studies that are conducted by Kao & Chen (2004) and Abdul Rahman & Ali (2006), who found a positive significant relationship between board size and earnings management. One possible explanation for the differences in previous studies' results may be due to differences in national institutional characteristics and firm specific characteristics (Guest, 2009).

However, the findings of this study are consistent with the results of Bradbury et al. (2006), Ayed-Koubaa (2009) and Burghleh & Al-Okdeh, (2020). who find that board size does not have a significant relationship with earnings management. Moreover, this result is in line with Idris (2012) who finds an insignificant relationship between board size and earnings management in the industrial companies listed in Jordan. In contrast to resource dependence theory, the result of this study indicates that the number of directors on the board might not reflect the directors' skill and knowledge, which are more valuable for a board to function effectively or it has not shown serious attention to monitor earnings management practices.

According to Bonn et al. (2004) who indicated that board size is only a factual number of directors, and does not reflect the directors' skill and knowledge, which are more valuable for a board to function effectively. The study of Shakir (2008) also confirmed that the board size does not reflect its effectiveness. If the board has adequate experience and knowledge, it would be crucial to ensure that the board functions effectively. Therefore, it can be said that the size of the board is not an issue if the board members possess the relevant skill to monitor the financial reporting process.

The third hypothesis (H_3) states that there is a positive relationship between the CEO duality and earnings management. As illustrated in Table (3), the results indicate that there is a positive relationship between CEO duality and earnings management but not significant (at p-value > 0.05). The direction of the hypothesis H_3 is positive as predicted, but it is statistically not significant, hence the hypothesis H_3 is rejected. The results of this study indicates that, CEO duality may reduce the effectiveness of the board of directors in monitoring the management, thus the likelihood of earnings management will increase (Agrawal & Chadha, 2005). In this regards, Davidson et al. (2004) found that firms with a dual leadership structure is associated with higher earnings management compared to firms with a non-dual structure.

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This result contradicts with the arguments of agency theory, which suggests that the separation of the role between CEO and chairman may lead to decrease agency problems (Jensen, 1993). In addition, the result of this study is inconsistent with the prior studies by Klein (2002b), Sarkar et al. (2008), Gulzar & Wang (2011), and Uwuigbe et al. (2014) who found a positive relationship between CEO duality and earnings management. On the other hand, this result is consistent with the prior studies that did not find relationship between CEO duality and earnings management such as Beasley (1996), Abdullah & Nasir (2004), Abdul Rahman & Ali (2006), Abed et al. (2012), Hsu & Wen (2015).

One possible explanation that may lead to insignificant results of this study is attributed to the chairman's lack of independence and lack of knowledge of firm affairs or there is no distinction between the roles of the chairman and the CEO in Arab region firms (Al-Ebel, 2013). Felton & Wong (2004) suggest that the key for making the split work, is to appoint an appropriate person for the chairman and the CEO post, as such, the chairman runs the board while the CEO manages the firm. Nevertheless, although most companies in Arab countries practice separate leadership structure, the roles of the chairman and the CEO are not defined clearly in the majority of the codes on corporate governance in these countries (Adawi & Rwegasira, 2011), which might explain the results of this study. Thereby, in order to achieve this change in governance culture and to correct the imbalance in the board focus, the corporate board will need to define clear roles for itself, the chairman and the CEO.

Firm size was found to has a negative sign and not significant with the earnings management in both models. This result fail to support the argument that larger firms may be more inclined to manage their earnings than smaller firms because financial reporting system in these firms is complex; thus making it difficult for users to detect overstatement (Johnson et al., 2002; Lobo & Zhou, 2006). This result is consistent with previous empirical studies such as Gulzar & Wang (2011), Abed et al. (2012), and Waweru & Riro (2013) who reported that firm size does not have a significant relationship with earnings management.

Based on the results of this study which suggest that firm leverage is not significant with earnings management. The result does not support the idea that firm leverage variable affect managers' discretionary accounting choices by practicing the earnings management when the firms are closer to default on debt convenient (DeFond & Jiambalvo, 1994; Sweeney, 1994). The finding in this study is similar to previous studies done by Abdul Rahman & Ali (2006), Jiang et al. (2008), Al-Fayoumi et al. (2010), Abed et al. (2012), and Nelson & Devi (2013).

CONCLOSION

The quality of the corporate governance system can reduce the possibility of information asymmetry and managerial opportunistic behaviour, hence ameliorating agency conflicts and protecting the interests of shareholders (Byun, 2007). Based on this argument, this study extends previous research by considering the relationship between the board of directors characteristics and earnings management. The current study suggests that boards of directors with a smaller board, more independent directors with separation between the CEO and chairman positions are defined as an effective board. Therefor, the present study suggests that

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earnings management practices in firms with a high score of effectiveness of board of directors is lower than for firms with a low score of effectiveness of board of directors (Davis & Useem, 2002; Cai et al. 2008; Al-Natsheh & Al-Okdeh, 2020).

The results of this study emphasize the usefulness and scope of the analysis of panel data in terms of the generalization of findings and reliability of estimates. In the markets such as Jordan and other Arab countries, the number of listed firms is small. Therefore, this method has been used in this study to overcome this deficiency by increasing the number of observations included in the analysis of the study of 320 observations. The inclusion of a large number of observations enhances the ability to generalize the study and the statistical power. In terms the reliability of the estimates, the panel data method makes the results of this study more reliable than the cross sectional and time series methods that have been used by majority of prior earnings management studies (Hsiao, 2003; Baltagi, 2008). In addition, this study contributes to the regulators and policy makers in Jordan such as Amman Stock Exchange, as it highlights a number of issues that can assist them to analyse the impact of other corporate governance mechanisms on this relationship in Jordan.

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