THE ASSOCIATION BETWEEN BOARD DIVERSITY, EARNINGS MANAGEMENT AND FIRM PERFORMANCE IN KUWAIT: A RESEARCH AGENDA

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Abstract

This paper aims to examine the consequences of board diversity. The objectives are to measure the impact of gender, age, national diversity on earnings management (EM). This research study raises the following questions: Does board diversity affect earnings management and firm performance? Has the 2013 Kuwait Corporate Governance Code impacted on board diversity on earnings management, beside firm performance? The research uses data from 103 non-financial Kuwaiti listed companies in the period from 2010 to 2017. The data is collected from the companies’ data from secondary sources such as their annual reports. The data analysis methods are correlation, multi-regression and robust regression. Earnings management was measured using the model modified by Jones (1995) and Kothari et al. (2005). Firm performance measured by ROA, ROE, Tobin’s Q and total shareholder return. The independent variables are gender diversity, age diversity, nationality diversity, board size, board independent and role duality. Control variables are firm size, industry type, total debt, total revenue, oil price, percentage change oil price, gold price, the percentage change of gold price and, ROA.

1. INTRODUCTION

This research aims to examine the consequences of board diversity. The objectives are to measure the impact of board diversity on earnings management.
management (EM) and on firm performance (FP). This research study raises the following questions: Does board diversity affect earnings management? Does board diversity affect firm performance? Has the 2013 Kuwait Corporate Governance Code impacted on board diversity on earnings management and on firm performance?

2. LITERATURE REVIEW

The literature review consists of two sections. Section 2.1 explains the background and context of this research. Section 2.2 reviews previous similar research studies.

2.1. Background and research context

2.1.1. Corporate governance

There has been an increasing interest in corporate governance since the 1990s arising from the major collapses of giant corporations and the privatisation of the public sector in the United Kingdom and the increased importance of globalization (Dreher et al., 2008) and (Vickers & Yarrow, 1991). This interest has been in parallel with many significant developments in corporate governance practices worldwide in response to these corporate and financial crises and in particular, the 2007 global financial crisis. There are various concepts of corporate governance depending on the time of the definition, the country's legal system and the country’s economic culture (Salacuse, 2002). Despite the different definitions of corporate governance, each share a common element which is that corporate governance is a set of mechanisms which arranges the relationship between the firm’s management, its shareholders and other stakeholders. For example, according to the Cadbury Code of Corporate Governance (1999), corporate governance can be defined as “the system by which companies are directed and controlled”. On the other hand, La Portal et al. (2000), introduced corporate governance as a set of mechanisms which the firm’s external stakeholders could use to protect their interests and the rights of internal stakeholders such as the board of directors and shareholders. Furthermore, the Organisation for Economic Co-operation and Development (OECD, 2004, p. 11) defines corporate governance as follows: "Corporate governance involves a set of relationships between a company’s management, its board, its shareholders and other stakeholders. Corporate governance provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. Good corporate governance should provide proper incentives for the board and management to pursue objectives that are in the interest of the company and its shareholders and should facilitate effective monitoring”. However, despite the fact that these definitions can identify some essential elements of corporate governance, the general
definitions remain vague. Perhaps, one of the clearer definitions is the one provided by Solomon (2007) that corporate governance is a set of mechanisms used to manage and control organizations in order to provide effective internal control systems and risk management. The next paragraph discusses agency theory, resource dependence theory, human capital theory and social capital theory.

2.1.2. Theories related to diversity

There are different theories, such as resource dependence, human capital, social capital, busyness, signaling, behavioral and agency theories, which can be used to study CG. This research used agency, resource dependence, human capital and social capital theories to study the relationship between board diversity (BD) and EM, besides FP.

**Agency theory**

The "Agency theory" is one of the main theories. At this point, it is very important to explain this theory in order to understand the context in which this study examines CG. According to Jensen and Meckling (1976) agency theory is the relationship between shareholders and board of directors is a contract. This means that the first party (the shareholders) has an agreement with the second party (board of directors) whereby the second party manages the company’s resources (both financial and human resources) and looks after the first party's interests. Hence, the agency theory differentiates between ownership and control whereby the shareholders own the company and the board of directors is responsible for managing the firm and, therefore, the shareholders' assets. Bhagat and Black (2002) explain that in an agency theory context the managers-shareholders relationship is a major challenge since it is linked with Agency problems such as conflict of interest and information asymmetry. Consequently, agency theory problems arise from the separation between the firm’s shareholders and its managers. The board of directors, which sits between the shareholders and the managers is responsible for solving problems and working on behalf of the shareholders to protect their interests and wealth (Donaldson & Davis, 1991), (Hermalin & Weisbach, 2001) and (Rowley et al. 2017). Since the shareholders are a mix of men and women, the board of directors should consist, also, of a mix of men and women to provide “Board diversity” and solve the agency theory problem.

**Resource dependency theory**

Resource dependence theory refers to the impact of resource acquisition on organizational behavior (Hillman, et al., 2009). The theory is based on the principle that, in order to acquire resources, organizations must engage in transactions with other actors and organizations in their
environment (Pfeffer, 1982). In this regard, as explained by Pfeffer and Salancik (1978), executives serve as the link between the firm and external factors through co-selecting the assets expected to survive. Therefore, they serve as an essential instrument in bringing basic components of ecological vulnerability into the firm. With regard to the board, the resource dependence theory addresses how the board facilitates access to valuable resources. As explained by Rondoy et al. (2006), the theory emphasizes a firm’s ability to form links to secure access to critical resources including capital, customers, suppliers and cooperative partners. Consequently, given that it is likely to have different insights, a more diverse board is seen as having a greater ability to understand the customer group. According to Thomsen & Conyon (2012), board diversity with regard to nationality, education, experience and background means that the board of directors has a considerable range of different knowledge and skills. Accordingly, they have greater insights into markets, customers, employees and business opportunities. This is likely to lead to a better understanding of business conditions and, hence, better organizational performance (Hillman et al., 2000). For instance, given that women have more insights, a gender diversified board of directors is better able to understand the needs of the entire market. Therefore, women representatives on the board are better able to understand women’s needs and the same is true for men representatives on the board (Hillman et al., 2007; Drees & Heugens, 2013). The same can be said of age diversity where having board members of different age brackets is essential if the firm is able to meet the needs of the market with regard to all age brackets. In addition, national diversity on the board of directors brings different insights with regard to the different nationalities. This is important in ensuring the company’s ability to acquire different resources that are vital to its success (Carter et al., 2010).

**Human capital theory**

Human capital theory is based on the assumption that formal education is highly instrumental and necessary in improving a population’s productive capacity (Gibbons & Waldman, 2004). In other words, the theory postulates that an educated population is a productive population and, hence, education increases the firm’s productivity and efficiency through increasing the level of cognitive stock of economically productive human capability that is a product of innate abilities and investment in human beings. Based on Terjesen’s et al. (2009) research, gender differences result in a board of directors that has unique human capital. Similarly, having boards with different nationalities brings in unique human capital (Burgess & Tharenou, 2002). Consequently, those, who make it to the top, tend to be consistently better educated and with
better skills and, thus, bring in unique human capital. In turn, this results in better corporate performance (Adams & Ferreira, 2009). Similarly, Luckerath-Rovers, (2011) see age diversity as conferring the firm with differing levels of human capital and this is essential for organizational success.

**Social capital theory**

Social capital can be defined as all the resources, whether real or implicit, that a person or group accrues through possession of a long-lasting network of institutionalized relationships of shared contact and respect (Sealy & Vinnicombe, 2007). Social capital entails advantages that individual or collective actors have owing to their location in the social network structure. Consequently, this theory advocates for diversity in the board of directors given that a diverse board of directors is able to bring in different types of social capital from its members (Niu & Chen, 2017). For instance, a gender diverse board is likely to have more social capital than a single gender board given that both genders differ a lot in terms of social capital. The same case applies to nationality of diverse boards (Adams & Ferreira, 2009). This is because the different nationalities have substantial differences that are likely to result in substantially diverse social capital (Luckerath-Rovers, 2011). In addition, age diversity on the board of directors brings with it a wealth of social capital. This is because different age groups have different insights needs and the inclusion of every age group on the board brings related to different social capitals. Therefore, a board, which has various diverse aspects, is likely to possess more social capital and, hence, it is likely to perform better than a board that has no diversity (Carter et al., 2010).

**2.1.3. Why Kuwait?**

The purpose of choosing Kuwait is that it has a different democratic policy. In democratic terms, Kuwait is the best of the Gulf Cooperation Council (GCC) Countries and in 2017, was ranked 119 globally. This was the last time that Kuwaiti democracy was tested (The Economist Intelligence Unit, 2017). The Kuwaiti Constitution, which was issued in 1962, was the first Constitution in all GCC countries (Cordesman, 2018). The Kuwaiti Constitution, which is the fundamental law of the State, is the foundation of the instructions that apply to the country and its citizens (National Assembly, 2015). Also, in 1963, Kuwait set up the first National Assembly in GCC countries and, thereafter, was followed by Bahrain in 2002 (Cordesman, 2018). Also, in 2009, Kuwait was the first GCC country to introduce Kuwaiti women into its Parliament (Odine, 2013) and (National Assembly, 2015). The Kuwait National Assembly, which is the country’s legislative authority, consists of 50 members elected by the Kuwaiti people. One of the National Assembly’s important tasks is the study of Ministerial decisions (Herb, 2002). When compared
to other GCC countries, Kuwait has an open economy because all the country’s investors want this market which contains comprehensive disclosure of all listed firms (Al-Shammari & Al-Sultan, 2010; Alotaibi, 2014). In addition, at the beginning of 2017, the Kuwaiti Government announced a vision of the new Kuwait in 2035 with the aim of changing Kuwait into a commercial, regional financial, and cultural centre attracting all investments (New Kuwait, n.d). Surprisingly, Kuwait was the first GCC country to establish a stock market in 1977. This was followed by the Kingdom of Saudi Arabia, Oman, Bahrain and the United Arab Emirates in 1980, and lastly Qatar in 1990 (Cheikh et al., 2018). Conversely, Kuwait was the last GCC country to issue a Corporate Governance Code in March 2013 and began operating it in June of the same year (Capital Markets Authority, 2013).

2.2. Review of similar research studies (empirical studies)

2.2.1. Board diversity (gender, age & nationality) and earnings management

Furthermore, Gull et al. (2018) and Peni and Vahamaa’s (2010) assume that women on the board provide greater motivation because, among other aspects, they have moral values that reduce the firm’s earnings management because they follow more conservative earnings management strategies. Also, Sanda et al. (2006) findings show that, in some developing countries, women comprise less than five percent of directorship and CEOs positions due to their management’s conservativeness. Sanda et al. (2006) and Peni and Vahamma’s (2010) findings show clear evidence that, where there is gender diversity within the firm, earnings management becomes effective because the gender parity is conservative, and they are cautious about spending and other forms of management.

However, Al-Mamun’s et al. (2013) and Guedes’s et al. (2018) findings show that there is no direct connection between either gender diversity in the boardrooms or that the firm’s management enhances good management skills in the earnings management to prevent unnecessary spending and similarly promote good monitoring. From their research study, Choi and Rainey (2010) drew similar conclusions that there was no positive relationship between gender parity and earnings management. Similarly, Strobl’s et al. (2016) findings show that, especially for top management, gender diversity is not directly correlated to better earnings. This implies that pressure to achieve equality in the representation of women may be counterproductive. Therefore, earnings management and gender parity are a firm’s independent variables and one does not necessarily affect the other. There are mixed results between board diversity and earnings management because of leverage; this is because some have high and others have low leverage. However, in either situation, all Nigerian
banks have the same earnings manipulations in Nigeria banks (Isa et al., 2018). A group of authors, such as Lakhal et al. (2015), Susanto (2016) and Omoye et al. (2014) found a negative relationship between gender diversity and the probability of company engagement in a high EM practice. This means less manipulation on earnings management. Similarly, Riley & Chow (1992), Powell & Ansic (1997), Hinz et al. (1997), Triki Damak (2018), Clikean, et al. (2001), Enofe et al. (2017), and Zalata et al. (2018), found the same results in that gender diversity reduced the earnings management. Accordingly, Omoye et al. (2014) believe that the reasons for the reduction in earnings management are due to women on boards avoiding risk in financial decisions. In addition, in making decisions, men have fewer ethical standards than women (Omoye et al., 2014). Na & Hong (2017) makes clear that male CEOs use aggressive discretionary accruals which increase firms’ earnings management. On the other hand, they did not find any female CEOs who used aggressive discretionary accruals on earnings management. Also, Gull et al. (2018) hypothesis is that the demographic diversity (e.g. behaviour, education background and experience) has the ability to monitor their activities and reduce the earnings management. However, the authors take into account that their hypothesis has been rejected and that demographic diversity has a positive relationship with earnings management (Gull at al., 2018).

The author found no study in the literature review which systematically examined age diversity and earnings management. Age diversity is the existence of age groups in the top management positions such as CEO, the board of directors and line management (Lausten, 2002) and (Carter et al., 2003). The appointment of young and older people to these positions brings about valuable management perspectives to that blend experience and creativity on the board of directors (Li et al., 2014). While the young directors bring creativity to the monitoring process and make it less hectic and error-prone, the older directors blend their experiences to ensure the effectiveness and accuracy of the monitoring system (Wegge, et al., 2008).

Author found few studies in the literature relating to national diversity. Hart’s (2014) findings show that diversity in the nationality of the board’s members brings divergent views to the board on management factors. This is because of their different backgrounds and experiences. From their examination, Isa & Farouk’s (2018) findings show that there is a significant positive relationship between foreign directors and earnings management. Ramaswamy et al. (2001) and French & Raven (1960) believe that foreign directors work in multi-position and firms that may have a good position that affect management process because of their export power. Gull at al. (2018) and Jiraporn et al. (2008) found that busyness theory that the directors’ busyness would be harmful to the firm. However, Baatour, Ben Othman & Hussainey (2017) found that there was no significant influence if the director had multiple directorships. In addition, Hooghiemstra’s et al. (2016) findings show a
significant relationship between foreign directors and the higher level of earnings management. This is because of their different accounting knowledge. Also, they believe that it is unnecessary to appoint non-Nordic directors on the board.

On the other hand, Enofe et al. (2017) found that there is a negative relationship in Nigerian firms between international diversity and earnings management. Also, their findings confirm that foreign directors have an important role in reducing earnings management (Enofe et al., 2017). In contrast, Rauf's et al. (2012) findings show that in Malaysian firms a foreign board does not affect earnings management, and they fail to find the evidence of that.

2.2.2. Board diversity (gender, age & nationality) and firm performance

Many authors, such as Rose (2007), Carteret et al. (2007), Gordini and Rancati (2017) and Adams and Ferreira (2009), examined the relationship between gender diversity and company performance. Gender diversity and performance is a significant concern in the labour market and various practices have been adopted as a strategy to improving a firm’s effectiveness (Miller et al., 2009). Both men and women have varying degrees of intelligence and, therefore, by making informed decisions from well-considered diverse perspectives, gender diversity can improve a firm’s performance (Damardi, 2010). In addition, Carter et al. (2003) and Gordini and Rancati (2017) found a positive relationship between the presence of women on the board and firm value as measured by Tobin’s Q. In a national American survey, firms, which had both men and women, had higher sales, higher profit margins and, consequently, higher revenues (Adams & Ferreira, 2009). A firm’s culture is mirrored by the link between gender diversity and performance (Julizaerma & Sori, 2012). A diverse workforce has a more significant breadth of views and, hence, it appears to be well placed to deal with any given circumstance (Carter et al., 2007). Carter’s et al. (2007) conclusion seems to contradict his earlier view that there is a positive relationship between gender diversity and company performance. According to Liu et al. (2014), in the ideal setting and particularly in managerial positions, gender diversity encourages a firm to perform better. Besides, women are useful in solving problems by listening more than their male counterparts. Also, Alshammari, and Alsaidi (2014) tested Kuwait women and firm performance in 121 firms in the period from 2009 to 2011. Their findings show that Kuwaiti women directors have a positive relationship with firm performance. Joecks et al. (2013) reiterate that women can handle work stress while, at the same time, driving a firm to its desired position. Moreover, because women establish good relationship networks, gender diversity improves a firm’s successfulness and performance (Martín-Ugedo & Minguez-Vera, 2014). Having different management is essential because women create more business-to-business links and, thereby, they make the firm perform better.
Women are good at mentoring employees and, thus, boosting their career growth and, consequently, job satisfaction. Ultimately, these improve the firm’s performance (Wahid, 2018).

Gender diversity and, particularly, having more women can reduce a firm’s performance as a result of demographic demerits, interpersonal conflicts and their related effects (Jurkus et al., 2011). Gender diversity provides room for more battles because of divergent views and stereotypical behaviour. Conflicts cause lack of cohesion among members of a group (Ferreira, 2015). When conflict exists within a team, the firm’s operational functions become compromised and this results in poor performance (Low et al., 2015). Conflicts can slow down the decision-making process and, thus, have an adverse effect on the firm’s performance (Dwyer et al., 2003). According to Dutta and Bose (2007), stereotypical views, especially in countries where men are perceived to be at the top in every setting, affect cooperation among the team. However, Croson and Gneezy’s (2009) findings show that women are at greater risk than men because of their emotions, characteristics and overconfidence. Also, women display lower performance in both a bargaining setting and a purely competitive situation (Croson & Gneezy, 2009).

In their study of gender diversity, Carter et al. (2010) and Rose, (2007) reported that they did not find a significant relationship between gender diversity and firm performance. Besides, she asserts that, although women have a very high representation on American and United Kingdom firms’ boards, they have an extremely low representation on Danish firms’ boards (Rose, 2007). Alowaihan’s (2004), findings show that Kuwaiti women are better educated than men, but they do not have as much experience as men in the workplace. In addition, his findings show no significant differences between men and women in family firms. This is because of several reasons such as being married and having children; this means that women have more responsibility than men (Alowaihan, 2004).

The relationship between age diversity and firm performance has suffered from an absence of detailed analysis. Moreover, because of sharing experiences and acquiring skills age diversity is an essential factor of a firm’s performance. Also, young board members include female directors because, compared to older board directors, they are more able to think in a new creative way (Carter et al., 2003). According to Choi and Rainey (2010) there is a positive relationship in American firms between age diversity and performance. Also, Darmadi’s (2011) findings show a similar positive result in that young directors increase a firm’s financial performance. Pitts (2005) noted that in a firm with age diversity employees were likely to increase their confidence because they believed that they had an opportunity to grow their careers within its ranks. Interestingly, Dagsson and Larsson (2011) demonstrate that, while there is a positive relationship between age diversity and Return on Assets (ROA), there is a negative relationship in Swedish firms with Tobin’s Q because ROA does not measure the market’s performance.
value but measures the firm’s performance.

However, Tanikawa et al. (2017) demonstrate that older board members are more motivated than younger directors. Additionally, most of the directors in Malaysian firms are aged between 50 and 59 years old and the average age is 58. Consequently, there is a lack of age diversity on such firms’ boards (Abdullah, Ismail & Izah, 2017). Furthermore, Kunze et al. (2013) and Shahata et al. (2017) findings show that there is a negative relationship between age diversity and firm performance. According to Diepen (2015) findings, the ages of directors between 41 to 50 years have a negative correlation between age diversity and performance. The findings of research by Ali et al. (2014), Ali and Kulik (2014) and Abdullah et al. (2017) findings show that, measured by ROA, there is a negative relationship between age diversity and firm performance. In Germany, their findings show that, because of choosing the board’s age according to the age discrimination environment within firms, there is a negative correlation between age diversity and firm performance (Kunze et al., 2011). In the United Kingdom, Shehata’s et al. (2017) findings show that there is a significant negative relationship between age diversity and firm performance. Eulerich et al. (2014) findings show that there is a negative correlation between age diversity and firm performance, and they explain that considerable board diversity may reduce the decision-making process and communication between board members. On the other hand, Tanikawa et al. (2017) findings show that, when the board members are relatively older, there is a significant negative relationship between age diversity and ROE. However, this is not the case in terms of ROA.

In addition, their findings show that in Dutch firms there is no relationship between the directors’ age group and firm performance (Diepen, 2015). Rahman’s et al. (2015) findings show that age diversity can overcome the board’s problems and encourage creative thinking. On the other hand, similarly aged board members reduce the firm’s performance. However, if there is some age diversity within the board, it can improve the firm’s performance (Rahman et al., 2015). In addition, in Australia, the findings show that in Australian firms age diversity has no significant effect on employee productivity (Ali & Kulik, 2014). There are various conclusions about the effect of age diversity on a firm’s performance (Carter et al., 2003).

Also, there is a lack of information in the literature about national diversity and firm performance. Nationality diversity affects, also, both in a positive and negative manner, a firm’s economic performance. By using the available literature, many authors, such as Alesina and La Ferrara (2005), Hart (2004), Kaczmarek (2009) and Diepen (2015), examined the relationship between national diversity and firm performance. Their main focus was to determine the pros and cons of national diversity and firm performance by considering the employees’ perceptions of employees and by not investigating only one country. These research studies show a positive relationship between national
diversity and firm performance. Further, Harjoto et al. (2015) conclusions show that boards of management with international diversity are more likely to perform better because of their different knowledge, perspectives and the board’s experiences in problem-solving. Similarly, Delis’s et al. (2016) findings show that an internationally diverse board of directors is more likely to have a positive influence on the firm’s performance. This is because employees seek to work diligently within the parameters of international standards. Also, Hart (2004) and Diepen’s (2015) findings show that immigrant entrepreneurs have a negative effect on the firm’s performance organization and, more particularly, when only international board directors occupy the top management positions. Such a firm creates an environment whereby the employees have little or no confidence about working in the firm because all the top managers are of the same nationality. Also, Kaczmarek (2009) conducted similar research about nationality diversity and firm performance. His findings show that, when the firm’s directors work with international diversity in the subordinate staff, they tend to have faith in the firm’s policies organization and, thus, this leads to the firm performing better. Besides, in his study, Darmadi (2011) argues that international diversity has no influence in in both a firm’s marketing performance measured by Tobin’s Q and accounting measured by ROA performance. This means that national diversity has nothing to do with firm performance.

2.3. Description of gaps in the research literature

There were several studies have not been addressed in the literature. Reviewing the previous literature, it can be considered that there is a lack Kuwait’s 2013 CG code. In addition, there had been a lack of significant research into board diversity and earnings management, gender diversity on board including CEO, and nationality diversity and firm performance in GCC countries and, more particularly, in Kuwait. Besides, there is no research found on age diversity and earnings management. Also, more generally in the literature, there were few references to board diversity and earnings management. Also, there is no GCC and more particularly in Kuwait use oil price and percentage change in oil price as a control variable. More specifically, there is no Kuwaiti research with a large sample and time period that measures and there are no Kuwaiti research studies that used the model modified by Jones (1995) and Kothari et al. (2005) to measure earnings management, beside total shareholder return to measure firm performance.

2.4. Importance and contribution of the proposed research

This study is the first Kuwaiti study and represents a significant contribution to Kuwaiti literature and empirical studies. In particular, this study evaluates whether or not the 2013 Kuwait CG code has been successful in promoting effective board diversity. Also, no previous study
has tested board diversity and earnings management in GCC countries and, more particularly, in Kuwait. Moreover, the only research in the literature that test age diversity and EM. Besides, this is the only study that has applied both the modified Jones and Kothari model to GCC countries and, more particularly, to Kuwait. In addition, the literature shows that few studies have investigated the relationship between board diversity and performance in GCC countries and, more particularly, in Kuwait. Furthermore, this is the only Kuwaiti study that has tested gender diversity on board members including the CEO. It is the only study that has measured performance by total shareholder return in GCC countries and, more particularly, in Kuwait. This study uses the largest sample of Kuwait non-financial listed companies and the most up to date data. Also, it is the only research that used oil price and the percentage change of oil price as a control variable in Kuwait. In addition, it is the only research that used gold price and the percentage change of oil price as a control variable in literature. This study will be important for companies to be aware of how gender, age and national diversity may affect the earnings management in Kuwait.

3. RESEARCH OUTLINE

3.1. Research design

All the data is collected from secondary sources such as Capital IQ, Boursa Kuwait and Bloomberg databases and the companies’ annual reports. The proposed analysis method is quantitative analysis “Regression type”. The reason for proposing a quantitative analysis method and mainly regression analysis is that almost all previous empirical studies about board diversity and earnings management and performance have used quantitative methods. Therefore, this study is consistent with them.

3.2. Data description

The data will be from 103 listed Kuwaiti non-financial companies. The exclusion of the country’s 67 financial enterprises from the sample is mainly due to the complex structure of financial institutions and the way, on the one hand, that they are governed and operate and, on the other hand, because their corporate governance structure and practices are different to those in non-financial companies. Furthermore, most previous studies such as Peni and Vahamma (2010), and Gull et al. (2018), which have examined the impact of board diversity and earnings management in addition to performance, have excluded financial companies. Therefore, it is essential to apply the same process for consistent analysis.

The data, which relates to the board of directors, earnings management and firm performance, is collected manually from Boursa Kuwait, capital IQ and the Bloomberg database. The period of study is
from 2010 to 2017 inclusive. The reason for choosing this period is, firstly, because it provides data from the latest available period. Secondly, this period follows the major development of various corporate governance practices in 2010 and, therefore, the data related to the latest practices of corporate governance. Thirdly, this period is before and after the introduction of the Kuwaiti Corporate Governance Code in June 2013.

The data, related to the board structure, is data relevant to board size, gender diversity on the board, age diversity, nationality diversity, board independence, company age, company size, total number of departments, total revenue, industry type, rule duality & CEO diversity. The data, related to firm performance, includes both accounting based performances and market-based performance. Earnings management is measured by the model modified by Jones (1995) and Kothari (2005). The variables, used to represent or measure these data, are as follows:

Table 1. The measured variables

<table>
<thead>
<tr>
<th>The variables</th>
<th>Represent or measure</th>
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<tr>
<td>- Board size</td>
<td>The board size is measured simply by the total number of board members (both executive and non-executive directors).</td>
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<tr>
<td>- Board independence</td>
<td>The board independence is measured by the percentage of independent non-executive directors out of the total number of directors (i.e. the ratio of independent directors to total board size).</td>
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<tr>
<td>- Gender diversity</td>
<td>The gender diversity is measured simply by the percentage of women on the board out of the total number of directors, beside the CEO (i.e. the ratio of women directors to total board size).</td>
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<tr>
<td>- Age diversity</td>
<td>The director age to the average age of the directors of each board is first determined (i.e. the ratio of director age to average age the directors on board).</td>
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<tr>
<td>- Nationality diversity</td>
<td>The nationality diversity is measured simply by the percentage of non-Kuwaiti director on the board out of the total number of Kuwaiti directors (i.e. the ratio of non-Kuwaiti directors to total Kuwaiti directors on board).</td>
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<tr>
<td>- Other data “Control variables”</td>
<td>In addition to the main two types of data (i.e. board diversity and earnings management, board diversity and firm performance) additional data are used to identify whether or not the non-corporate governance variable has an impact on EM &amp; FP. These data are company size, company age, total revenue, total debt, leverage, oil price, the percentage change in oil price, gold price and percentage change of gold price, and industry type. This research uses correlation analysis to examine a linear relationship between two variables and multi-regression analysis to examine the dependent variable with many independent variables.</td>
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**Earnings management**: the following two models are used to test the impact of board diversity and earnings management. The first one is the modified Jones model (1995).

\[
TA_{it} = a_0 + a_1 \left( \frac{1}{A_{it-1}} \right) + a_2 (\Delta REV_{it} - \Delta AR_{it}) + a_3 PPE_{it} + \text{Year Fixed Effects} + \text{Industry Fixed Effect} + e_{it}
\]  

(1)
Where $TA_{it}$ is total accruals of company $i$, $AT$ is total assets in the beginning of the year, $\Delta REV$ is revenues in year $t$ minus revenues in year $t-1$, $\Delta AR_t$ is net receivables in year $t$ less net receivables in year $t-1$ and $PPET_t$ is the gross property, plant and equipment in year $t$. $a_1$, $a_2$ and $a_3$ are obtained by estimating the equation using each firm in industry.

The second one is the modified Kothari model (2005):

$$TA_{it} = a_0 + a_1 \left( \frac{1}{AT_{it-1}} \right) + a_2(\Delta REV_{it} - \Delta AR_{it}) + a_3 PPE_{it} + a_4 ROA_{it} + \text{Year Fixed Effects} + \text{Industry Fixed Effect} + e_{it}$$

Where $TA_{it}$ is total accruals of company $i$, $AT$ is total assets in the beginning of the year, $\Delta REV$ is revenues in year $t$ minus revenues in year $t-1$, $\Delta AR_t$ is net receivables in year $t$ less net receivables in year $t-1$ and $PPET_t$ is the gross property, plant and equipment in year $t$. $a_1$, $a_2$ and $a_3$ are obtained by estimating the equation using each firm in industry. In addition of $a_4$; ROA is the Return on Asset.

**Firm performance:** two types of financial performance, namely, accounting-based measures and market-based measures are used to test the impact of board diversity and their effectiveness on short-term and long-term performance. For the accounting-based measures, we use ROA and ROE and, for the market-based measure we use Tobin’s Q calculated by dividing market value of the firm by replacement value of the company’s assets. The reason for using Tobin’s Q is that it includes a long-term element in its calculation and because most it most the corporate governance and performance studies have used this measure. In addition, total shareholder return (TSR) represents a percentage of the company’s performance over a particular period of time as reflected in the values of its various stocks and shares. TSR measured by the use of the dividend adjusted share price of 1ast of January and 31 of December of the same year and takes the percentage change.

### 3.3. Methods and choice of analysis

The proposed quantitative analysis methods use correlation, multiregression and robust analysis. The author used the following models to examine the influence of independent and control variables on EM, beside firm performance:

$$EM = \beta_0 + \beta_1 GD + \beta_2 AD + \beta_3 ND + \beta_4 BSZ + \beta_5 BID + \beta_6 DUAL + \beta_7 CSZ + \beta_8 CA + \beta_9 CID + \beta_{10} TD + \beta_{11} TR + \beta_{12} L + \varepsilon$$

(3)

$$FP = \beta_0 + \beta_1 GD + \beta_2 AD + \beta_3 ND + \beta_4 BSZ + \beta_5 BID + \beta_6 DUAL + \beta_7 CSZ + \beta_8 CA + \beta_9 CID + \beta_{10} TD + \beta_{11} TR + \beta_{12} L + \varepsilon$$

(4)

where:

- $\beta_0$ is the Constant; $GD$ is Gender diversity; $AD$ is Age Diversity; $ND$ is Nationality diversity; $BSZ$ is board size; $BID$ is board independence;
**DUAL** is role duality; **CSZ** is company size; **CA** is company age; **CID** is company industry; **TD** is Total Debt; **TR** is total revenue; **L** is leverage; and ε is the error term.

The following table summarizes the main variables, which we used, and their definitions.

**Table 2. The main variables, their definitions & source**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variables:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earnings management (EM)</td>
<td>By modified Jones model (1995) and Kothari model (2005), following (Ittonen et al. 2013).</td>
<td>Capital IQ</td>
</tr>
<tr>
<td>Return on Assets (ROA)</td>
<td>Profits divided by total assets</td>
<td>Capital IQ</td>
</tr>
<tr>
<td>Return of Equity (ROE)</td>
<td>Dividing net income by shareholders' equity.</td>
<td>Capital IQ</td>
</tr>
<tr>
<td>Tobin’s Q (TQ)</td>
<td>The ratio of the market value of a company's assets (as measured by the market value of its outstanding stock and debt) divided by the replacement cost of the business's assets (book value).</td>
<td>Capital IQ</td>
</tr>
<tr>
<td>Total shareholder return (TSR)</td>
<td>The dividend-adjusted share price of 1/1 and 31/12 of the same year and takes the percentage change.</td>
<td>Capital IQ</td>
</tr>
<tr>
<td><strong>Independent variables:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board size (BSZ)</td>
<td>Total number of directors</td>
<td>Annual report</td>
</tr>
<tr>
<td>Board independence (BID)</td>
<td>The proportion of independent directors to total board</td>
<td>Annual report</td>
</tr>
<tr>
<td>Role duality (DUAL)</td>
<td>Director also holds the CEO position</td>
<td>Annual report</td>
</tr>
<tr>
<td>Gender diversity (GD)</td>
<td>The ratio of women directors to total board size</td>
<td>Annual report</td>
</tr>
<tr>
<td>Woman Chair (WC)</td>
<td>Dummy variable coded 0 if chair is woman, and 1 otherwise.</td>
<td>Annual report</td>
</tr>
<tr>
<td>Woman Chair Assistant (WCA)</td>
<td>Dummy variable coded 0 if chair assistant is woman, and 1 otherwise.</td>
<td>Annual report</td>
</tr>
<tr>
<td>Woman CEO (WCEO)</td>
<td>Dummy variable coded 0 if CEO is woman, and 1 otherwise.</td>
<td>Annual report</td>
</tr>
<tr>
<td>Age diversity (AD)</td>
<td>The ratio of director age to average age the directors on board</td>
<td>Annual report</td>
</tr>
<tr>
<td>National diversity (ND)</td>
<td>The ratio of non-Kuwaiti directors to total Kuwaiti directors on board</td>
<td>Annual report</td>
</tr>
<tr>
<td><strong>Control Variables:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company size (CSZ)</td>
<td>Total assets</td>
<td>Capital IQ</td>
</tr>
<tr>
<td>Industry (CID)</td>
<td>Industry type</td>
<td>Annual report</td>
</tr>
<tr>
<td>Company age (CA)</td>
<td>Number of years of business operation</td>
<td>Boursa Kuwait</td>
</tr>
<tr>
<td>Total Debt (TD)</td>
<td>Total liabilities</td>
<td>Capital IQ</td>
</tr>
<tr>
<td>Total Revenue (TR)</td>
<td>Total income of the firm.</td>
<td>Capital IQ</td>
</tr>
<tr>
<td>Leverage (L)</td>
<td>Total debt divided by total equity.</td>
<td>Capital IQ</td>
</tr>
<tr>
<td>Oil Price (OP)</td>
<td>The oil price in the 31st of Dec.</td>
<td>Capital IQ</td>
</tr>
<tr>
<td>Percentage change in oil price (COP)</td>
<td>The percentage change in yearly oil price.</td>
<td>Capital IQ</td>
</tr>
<tr>
<td>Gold Price</td>
<td>The gold price in the 31st of Dec.</td>
<td>Capital IQ</td>
</tr>
<tr>
<td>Percentage change in gold price (CGP)</td>
<td>The percentage change in yearly gold price.</td>
<td>Capital IQ</td>
</tr>
</tbody>
</table>

3.4. Expected outcomes

After having regard to the literature review, the author obtains the primary results:
Table 3. Expected outcomes

<table>
<thead>
<tr>
<th>Research hypotheses</th>
<th>Relationships</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: There is a negative association between gender diversity and earnings management in Kuwait.</td>
<td>-</td>
<td>Agency theory, Resource dependent theory, Human capital theory &amp; Literature Review</td>
</tr>
<tr>
<td>H2: There is a negative association between average age and earnings management in Kuwait.</td>
<td>-</td>
<td>Resource-dependent theory, Human capital theory &amp; Social capital theory</td>
</tr>
<tr>
<td>H3: There is a negative association between nationality diversity and earnings management in Kuwait.</td>
<td>-</td>
<td>Resource-dependent theory, Human capital theory &amp; Social capital theory</td>
</tr>
<tr>
<td>H4: There is a positive association between gender diversity and firm performance in Kuwait.</td>
<td>+</td>
<td>Agency theory, Resource dependent theory &amp; Human capital theory</td>
</tr>
<tr>
<td>H5: There is a positive association between average age and firm performance in Kuwait.</td>
<td>+</td>
<td>Resource-dependent theory, Human capital theory &amp; Social capital theory</td>
</tr>
<tr>
<td>H6: There is a positive association between nationality diversity and firm performance in Kuwait.</td>
<td>+</td>
<td>Resource-dependent theory, Human capital theory &amp; Social capital theory</td>
</tr>
</tbody>
</table>

4. CONCLUSION

The main limitations of the methods which to be applied can be summarized as follow: Quantitative methods indicate whether there is a relationship between the variables. However, it does not provide an explanation for such a relationship. Also, the data was so hard to obtain. Besides, no similar research in Kuwait or GCC countries. Finally, the study will be limited to Kuwait and may not be applicable to other regions. This study will be important for companies to be aware of how gender, age and national diversity may affect the earnings management and firm performance in Kuwait.

References


