

# Corporate Governance Mechanisms and Firm Performance in Saudi Arabia

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## Abstract

This paper examines the impact of corporate governance mechanisms including board size, independence, and meeting frequency, audit committee size and meeting frequency, CEO duality and ownership concentration on the operational, financial and market performance of Saudi listed firms using a contingent theoretical-based framework drawing on agency theory, stewardship theory and resource dependence theory. This study examines 210 listed Saudi Stock Exchange firms over the timeframe 2017 to 2019. The paper applies both a manual content and regression analysis approach. The results show that firm performance deteriorates with board size and independence, audit committee and meeting frequency, and the presence of CEO role duality, while performance improves with board meeting frequency and ownership concentration. Thus, Saudi firms should respond by maintaining smaller boards and more frequent meetings, keeping the Chair and CEO roles separate, and maintaining smaller audit committees with more focused meetings. Further, the appointment of independent directors only makes a meaningful contribution to firm performance where they are truly independent. Finally, more concentrated ownership tends to encourage better firm performance due to the regime of monitoring and discipline concomitant with more powerful shareholders. The implications of this paper are threefold. First, the implementation by Saudi Arabia of the latest corporate governance regulations and IFRS adoption almost certainly impact firm performance markedly. Second, corporate governance regulations should recognize the role of more frequent board meetings and more concentrated ownership in enhancing corporate performance. Third, stakeholders should apply pressure on investee firms to maintain smaller boards, engage genuinely independent directors, separate the role of Chairman and CEO, and maintain smaller audit committees with fewer and more effective meetings. The results should help corporate boards when deciding on the best corporate governance mechanisms to enhance firm performance. Further, the study should provide policy makers with a better understanding of the corporate governance structures required to promote better performance by drawing on existing theories and the empirical modelling, in an emerging economy setting such as Saudi Arabia, a new and broader data set, thereby informing better future policy and protecting shareholders' interests.

**Keywords:** corporate governance mechanisms, firm performance, agency theory, stewardship theory, resource dependence theory, Saudi Arabia

## 1. Introduction

Corporate governance is a framework of laws, policies, rules and instructions that affects the manner in which a firm is controlled and managed with the objective of conferring fairness and transparency in its relationship with its shareholders. This framework, which consists of both internal and external contracts between employees and shareholders, governs the distribution of responsibilities, conditions and rewards to avoid conflicting interests. The Organisation for Economic Co-operation and Development (OECD) promoted a more encompassing characterisation in 2001, such that "corporate governance refers to the private and public institutions, including laws, regulations and accepted business practices, which together govern the relationship, in a market economy, between corporate managers and entrepreneurs (corporate insiders) on one hand, and those who invest resources in corporations, on the other" (OECD, 2004). Thus, corporate governance requires a set of measures and rules that simplify the decision processes for shareholders. The attention on corporate governance has strengthened over recent decades due to an increase in high-profile bankruptcies caused by financial accounting errors or fraud, exacerbated by the absence of

good corporate governance practice. This in turn resulted in the implementation of different accounting practices, biased reporting and the pursuit of personal managerial rather than shareholder interests (Ioana, 2014).

Saudi Arabia has seen significant developments in corporate governance over the last two decades, commencing with the issue of internal control standards by Saudi standard setters in 2000, followed by a corporate governance code in 2006, the latter becoming mandatory for every Saudi listed firm from 2010 (Al-Janadi et al., 2016). The objective of the Corporate Governance Regulations was to provide a general guide to regulations, rules and practice for Saudi Stock Exchange (Tadawul) firms, along with their investors. The focus here was to increase level of protection that applies to all investors, and in particular minority stockholders, and to establish legal means to aid investors in exercising their rights and counter unjust majority stockholder practices. The broader pursuit of good corporate governance in Saudi dates back to the Companies Law of 1965 which set out the rules relating to the setting up of public and private firms. Following the Saudi stock market crash of 2006, when the general index dropped by 60% as a result of poor governance amongst other factors, the Capital Market Authority (CMA) published regulations and rules to protect against future systemic events, culminating in a governance code which was voluntary for firms until the beginning of 2009 (Al-Abbas, 2009).

145 firms were voluntarily listed on the Tadawul in December 2009, and in 2010, Corporate Governance reporting became compulsory for listed firms. The role established for the CMA was to operate the stock market, oversee the adoption of Corporate Governance Regulations, and monitor compliance with the specific provisions required of all listed Saudi firms, in line with those of the OECD (OECD, 2004). In 2017, the Code of Corporate Governance was issued with the purpose of harmonizing Saudi standards with international standards including the OECD principles. The Code addressed transparency and disclosure, shareholders' rights, the General Assembly, and the operation of the board of directors. In addition, since 2017, Saudi has adopted IFRSs such that listed companies are required to report using national standards that are fully consistent with IFRSs (IASPlus, 2020). This leads to improved quality of transparency and disclosure, increased comparison of statements, and potentially a reduced cost of capital for adopting firms. The new Code and IFRS adoption are expected to impact firm performance, and so stakeholders will benefit from identifying governance factors and other factors that affect performance most significantly. The Code introduced several accounting reforms to underpin new laws on securities exchanges alongside improved corporate governance practices. Many studies examine the impact of corporate governance on firm performance globally and in the countries of the Gulf Cooperation Council (GCC) (Abidin et al., 2009; Adusei, 2011; Fallatah and Dickins, 2012; Gupta and Sharma, 2014; Ahmed and Hamdan, 2015; Al-Ghamdi and Rhodes, 2015; Naushad and Malik, 2015; Baullay et al., 2017; Alqatamin, 2018; Zhou et al., 2018; Rahman et al., 2019; Khalifa et al., 2020). For instance, Fallatah and Dickins (2012) observe that governance and corporate performance are not associated among Saudi listed firms, while Gupta and Sharma (2014) find that such governance has a weak effect on both performance and company stock prices in South Korean and Indian firms. Further, Ahmed and Hamdan (2015) find a significant relation for Bahrain listed firms.

In the context of Saudi Arabia, little research investigates the link between governance and corporate performance. This study aims to address this gap in literature, and it should be of particular interest following the new corporate governance development Code as well as IFRS adoption. The paper examines Saudi listed firms over the period 2017 to 2019 and determines the impact on performance of corporate governance mechanisms associated with: board size, independence, and meeting frequency, the size of the audit committee and its meeting frequency, CEO duality and ownership concentration. Firm performance is characterised in terms of operational, financial, and market performance.

## 2. Theoretical Framework

The paper modifies the comprehensive theory context developed by Gaur et al. (2015). The theories employed therein vary in their explanation of the function of governance mechanisms at work. The following section summarises the seminal theories employed.

### 2.1 Agency Theory

Agency theory (agent and principal) explains that the ultimate owners and management may be separated. It is imperative that agents act in the interests of the ultimate principals. The theory explains that the conflict of interest between the two is natural (Fama and Jensen, 1983). Issues arise where manager's act in their own interests, costing the shareholder increased expenses (Jensen and Meckling, 1976; Fama and Jensen 1983). Whilst monitoring agents will make sure that they behave in the best interests of the principals, the cost to the firm (agency costs) will increase, which will affect the interests of the shareholders. Managers are more expected to stray from protecting the interests of shareholders in an atmosphere without controlling tools and efficient market regulations. (Turley and Zaman 2004;

Al-Matari et al. 2012). In order to reduce such conflicts and to achieve good performance, the existence of effective corporate governance practices is therefore essential (RamCharan 1998; Ainuddin and Abdullah 2001; Al-Matari 2013).

Corporate governance mechanisms are thus needed to mitigate agency problems. Agency theory provides the foundation for good corporate governance by using channels both within and outside the firm (Weir et al, 2002; Roberts et al, 2005). Anderson et al. (2004), Yunas (2011) and Rasmussen and Schmidt (2012) argue that corporate governance mechanisms, including greater board size and independence, a reduction in CEO dual roles, and audit related variables, should decrease the agency problems within organization. The purpose of corporate governance structures is to “*protect shareholder interests, minimize agency cost and ensure agent-principals interest alignment*” (Davis et al, 1997, p.23). Mallin (2004) explains that good governance decreases agency problems and works for the benefit of shareholders.

### 2.2 Stewardship Theory

Stewardship theory proposes that managers are not driven by their own interests, rather that they are driven by the principal's goals (Davis et al., 1997). It suggests that firm managers are trustworthy (Siebels and Knyphausen-Aufseb, 2012). The theory has several assumptions. First, there is an alignment of interests between managers and owners (Davis et al., 1997). Second, CEO duality could be the best system of governance as long as managers are reliable (Siebels and Knyphausen-Aufseb, 2012). In particular, agents are able to use to firm information that makes them quite capable of working for its welfare (Nicholson and Kiel, 2007). Finally, firm managers aim to make the best possible use of the firm's resources to maximize the firm's value (Davis *et al.*, 1997; Nicholson and Kiel, 2007). Donaldson (1990) recommended that greater CEO duality and executives on the board should both strengthen it and lead to greater understanding of the business process. Thus, stewardship theory endows trust and autonomy in managers in their decision making, thereby reducing monitoring costs and increasing shareholder return on equity (Daily et al., 2003) and enhancing general firm financial performance.

### 2.3 Resource Dependence Theory

The theory of resource dependence indicates that the directors provide an important connection between a company and valuable external resources that are essential for growing the firm (Pearce and Zahra, 1992). “Organizations are not self-contained or self-sufficient, they rely on their environment for existence, and the core of the [resource dependence] theory focuses on how organizations gain access to vital resources for survival and growth” (Chen and Roberts, 2010, p. 653). Therefore, the theory expounds that the board of directors conducts both a controlling role and offers essential tools needed, such as firm connections and contracts, skills, experience and expertise (Nicholson and Kiel, 2007; Chen, 2011). The latter enhance firm performance and maximize stockholder wealth (Pearce and Zahra, 1992). In general, a corporate board with varied members with diverse connections to outside sources should enhance both value and firm performance.

## 3. Literature Review

The relationship between firm performance and selected corporate governance measures is examined in a fairly well-developed literature, including board size and independence, the presence of the duality of CEOs, insider–outsider ownership, and board duties (Bhagat and Bolton, 2002; Elsayed, 2007; Abidin et al., 2009; Adusei, 2011; Fallatah and Dickins, 2012; Gupta and Sharma, 2014; Al-Ghamdi and Rhodes, 2015; Al-Sahafi et al., 2015; Ahmed and Hamdan, 2015; Naushad and Malik, 2015; Buallay et al., 2017; Alqatamin, 2018; Zhou et al., 2018; Rahman et al., 2019; Khalifa et al., 2020).

The impact on firms of board size is the focus of many studies (Hermalin and Weisbach, 2003; Haniffa and Hudaib, 2006; Sunday, 2008; Shakir, 2008; Neville, 2011; Al-Ghamdi and Rhodes, 2015; Zhou et al., 2018; Khalifa et al., 2020). While some studies advocate smaller boards (Lipton and Lorsch, 1992; Jensen, 1993; Yermack, 1996), others advocate larger boards to underpin greater scrutiny and better decision processes (Adams and Mehran, 2003; Anderson and Reeb, 2003a, b; Coles et al., 2008). Lipton and Lorsch, for example, argue that free riding increases and board efficiency is reduced as board size increases, while Jensen argues that smaller boards lead to improved decision-making due to greater coordination and fewer problems with communication. There is evidence that more focused boards lead to better performance (Yermack 1996; Eisenberg et al., 1998).

A notable trend over recent decades has been the increased contribution of outside directors to corporate boards. Agency theory argues that the use of external directors increases board independence and firm performance (Fama and Jensen 1983). However, the empirical literature has not reached conclusive results. Shakir (2008), Abidin et al. (2009), Neville (2011), Ahmed and Hamdan (2015), Buallay et al. (2017) and Khalifa et al. (2020) all find that more

outside directors improves firm performance. However, Yermack (1996), Bhagat and Bolton (2002) and Zhou et al. (2018) find no such relation.

Board processes will clearly exert a huge effect on firm performance (Zahra and Pearce, 1989). Frequent board meetings, for example, enable timelier tackling of important issues, more effective management monitoring, greater coordination, and greater focus on the interests of stockholders (Lipton and Lorsch, 1992). The time available to boards for meetings is argued to be a vital resource for enhancing board efficiency and decision-making (Conger et al., 1998). However, the cost of such meetings may be high in terms of management commitment, expenses and director costs (Vafeas, 1999). Empirically, Vafeas (1999) and Mangena and Tauringana (2008) find that board meetings improve corporate performance, though El Mehdi (2007) find some evidence to the contrary.

There is also continuous debate on the correlation between CEO duality (where the CEO also acts as Chair) and firm performance, and the empirical evidence is mixed (Boyd, 1995; Daily and Dalton, 1997; Dalton et al., 1998; Bhagat and Bolton, 2002; Elsayed, 2007; Abidin et al., 2009; Krause and Semadeni, 2013; Al-Faryan, 2017). For example, Bhagat and Bolton (2002) find that role separation improves firm operating performance, Boyd (1995) finds that CEO duality enhances performance, while other studies find no relation (Daily and Dalton, 1997; Dalton et al., 1998).

Audit committee size can exert a significant impact on firm performance in its role to guard against fraud and adhere to best practice. The argument is that such committees are rendered inefficient when too large or diminutive (Dalton et al., 1999). Larger committees lack focus and involvement compared to smaller ones. However, smaller committees may lack a variety of knowledge and experience, thereby reducing their effectiveness. An optimal audit committee size facilitates the application of member knowledge and capabilities in the best interests of the stockholders. Aldamen et al. (2012) argue that the members of an audit committee must be properly qualified and have accounting and auditing experience. They find that smaller audit committees consisting of experienced members with financial expertise tend to outperform.

Audit committee meeting frequency should also impact performance, with frequent meetings argued to reduce the number of problems with financial reporting (Yatim et al., 2006). The diligence of the audit committee demonstrates the willingness of members to work together and provide a high level of activity in their interactions with auditors inside and outside the firm, company managers and others (Rizzotti and Greco, 2013). Frequent meetings should increase awareness of any issues and enable them to be brought to the attention of the auditor where they require attention and care (Raghunandan et al., 1998). Further, an increase in independent director representation tends to lead to greater meeting frequency (Thiruvadi, 2012).

Ownership concentration can also impact firm performance. Concentrated ownership is presumed to possess private information, which leads to information asymmetry, and as a result, increases unfavourable selection costs. Therefore, ownership concentration seems to be more important issue in the field of corporate governance. Shleifer and Vishny (1986) find a positive relation between the two variables, and argue that more concentrated ownership resolves agency problems through more effective control and supervision of firm activities. Javid and Iqbal (2007), Soykan (2013), Reddy et al. (2014), Rajput and Bharti (2015) and Yasser and Al Mamun (2017) also find a positive relation, while Wiwattanakantang (2001) find that ownership concentration facilitates agency issue resolution between managers and owners of a firm.

In general, evidence linking governance and company performance is inconclusive. Some studies find that better governance significantly improves firm performance (Ahmed and Hamdan, 2015; Baullay et al., 2017; Alqatamin, 2018; Rahman et al., 2019; Khalifa et al., 2020), while others find a negative relation (Hutchinson, 2002; Bauer et al., 2004). Further, a number of studies find no relation (Prevost et al., 2002; Park and Shin, 2003; Fallatah and Dickins, 2012; Gupta and Sharma, 2014).

There are a few studies that examine the association in the case of Saudi Arabia, though they also generate mixed results. For instance, Ghabayen (2012) examines how board attributes impact performance for Saudi listed firms in 2011 and determines that board size, audit committee size and audit committee composition have no impact, while board composition has a negative impact on firm performance. Al-Ghamdi and Rhodes (2015) study Saudi non-financial firms over the period 2006 to 2013, finding that ownership concentration for family-owned firms has no association with firm performance measured by ROA, but is has a significant positive association with Tobin's Q. Baullay et al. (2017) examine Saudi listed firms for the period 2012 to 2014 and find no significant effect of corporate governance factors on firm financial and operational performance. Further, they observe that ownership concentration and board independence do not impact market performance (Tobin's Q), while ownership and board size do.

The extant literature therefore illustrates the theoretical debate and inconclusive evidence linking corporate performance and governance structures. With regard to the empirical evidence, this could be due to the use of varied data sources or the application of differing performance metrics (Gani and Jermias, 2006).

#### 4. Hypothesis Development

This section sets out hypotheses for the model variables that potentially explain firm performance. It explores the relationship between specific corporate governance characteristics and firm performance. These characteristics are board size independence, and meeting frequency, audit committee size and meeting frequency, CEO role duality and ownership concentration.

##### 4.1 Board Size

Theoretically, the board of directors safeguards all stockholders' interests. There are functions that the corporate board performs that are expounded by two theories: agency theory and resource dependence theory (Ntim et al., 2012). First, agency theory proposes that the board engages in practices that force managers to meet the needs of stockholders (Jensen and Meckling, 1976). Furthermore, the board offers its expertise and supervision to management, and seeks their responsibility in return (Al-Najjar, 2013). Second, resource dependency theory assumes that the function of the board is to connect the firm to its external environment, increase revenue (Calabrò et al., 2013), manage risk, and enable it to acquire essential services, such as finance, information, and so on (Ntim et al., 2012). Research suggests that more expansive boards are inefficient and more prone to CEO manipulation, thereby increasing coordination costs and processing problems, and causing decision-making difficulties (Anderson and Reeb, 2003a, b; Coles et al., 2008). Moreover, smaller boards reduce free-riding and thereby should enhance performance (Lipton and Lorsch, 1992; Yermack, 1996; Eisenberg et al., 1998). The empirical evidence on size and firm performance is somewhat mixed. Some studies find a positive association (Haniffa and Hudaib, 2006; Sunday, 2008; Shakir, 2008; Al-Ghamdi and Rhodes, 2015; Zhou et al., 2018; Khalifa et al., 2020) while others observe that larger boards reduce performance (Mak and Li, 2001; Adams and Mehran, 2005; Coles et al., 2008). Guest (2009) investigates the effect of board size on firm performance (Tobin's Q) for listed UK firms and finds the relationship to be negative, explaining that large boards promote poor communication and decision making. The theory underpins the following hypothesis:

H1: Board size is negatively associated with firm performance.

##### 4.2 Board Independence

Both practitioners and academicians are concerned with the formation of a firm's governing body, the board of directors. In general, a board consists of directors in executive and non-executive roles, and there are varied views on the ideal ratio of the two and the degree of independence. There is a stewardship argument against more independent directors as those external to the firm are far less aware of its weaknesses and strengths and are therefore less able to offer helpful support (Davis et al., 1997). An institutional argument proposes that independent directors are appointed merely to comply with institutional pressure and that their presence does not guarantee the firm's superior performance. Gaur et al. (2015) find that a higher proportion of independent directors increases conflict and leads to more inefficient decisions.

In contrast, some argue that the appointment of non-executive (independent) directors is an efficient method for reducing the potential conflict between shareholders and management (John and Senbet, 1998), and should thereby improve firm performance. Empirical evidence suggests that performance increases with the degree of independence (Shakir, 2008; Abidin et al., 2009; Neville, 2011; Ahmed and Hamdan, 2015; Buallay et al., 2017; Khalifa et al., 2020). Some argue that board power emanates from a strong group of non-executive directors not associated with firm management (Kyereboah-Coleman and Biekpe, 2006). However, several studies find that greater independence damages performance (Bhagat and Bolton, 2002; Haniffa and Hudaib, 2006; Bhagat and Bolton, 2013; Vintila et al., 2015). In the case of high ownership concentration, non-executive directors become powerless in board discussions which may explain this negative relation. In developed markets with diffused share ownership, firms hire professional managers many of whom do not have ownership interests, whereas in contrast, in many emerging economies, family owners, their representatives or their friends are appointed to the board and to management. Families will often seek to minimize the engagement of independent directors who have a powerful incentive to consume firm resources while bearing only a fraction of the cost of doing so (Anderson and Reeb, 2004). Thus, many independent directors may not be truly independent, particularly in certain emerging economies, and monitoring may be weak. In this case, and consistent with stewardship theory, board independence may not add

value to the firm and a negative relationship is expected between board independence and firm performance. Therefore, the following hypothesis is stated:

H2: There is a negative association between board independence and firm performance.

#### *4.3 Board Meeting Frequency*

Firms are motivated to have regular board meetings to discharge their duties and responsibilities, as required by the Revised 2017 Saudi Code on Corporate Governance. Further, the board is required to report meeting frequency during the year along with director attendance records. Board meetings and director attendance and input are fundamental to information acquisition to support directors in their monitoring role. Conger et al. (1998) argue that, when boards meet regularly, directors have more opportunity to enhance firm performance and pursue shareholders' interests, and Vafeas (1999), Mangena and Tauringana (2008) and Rizzotti and Greco (2013) find that performance improves as a result. Francis et al. (2012) illustrate that during the financial crisis, board attendance and performance were strongly positively linked. In addition, Ntim and Oser (2011) find that more frequent board attendance in South African firms leads to improved performance. However, Vafeas (1999) argues that the limited time available to non-executive directors undermines the usefulness of board meetings with regard to the meaningful exchange of thoughts between themselves or with management. Further, such meetings are costly in terms of management time, director fees, and so on. The empirical evidence on the effect of meeting frequency is somewhat mixed. For example, Arora and Sharma (2016) find a positive impact of meeting frequency while Arora (2012) find a negative impact. Therefore, the hypothesis is stated as follows on the basis of theory arguments:

H3: Board meeting frequency is positively associated to firm performance.

#### *4.4 CEO Role Duality*

There is a comparatively large body of research on the contentious subject of role duality and its impact on firm performance, though the evidence is mixed. Stewardship theory sees management as motivated to pursue both firm and investor interests; duality allows a CEO to direct the firm more easily in pursuit of corporate objectives and reduce interference (Haniffa and Cooke, 2002). However, agency theory proposes that duality strengthens the CEO power, increasing agency problems and hitting firm performance. Fama and Jensen (1983) argue for separate roles of the CEO (decision management) and Chairman (decision control), warning that a dominant CEO could make the board ineffective. Some studies find that CEO duality exerts a negative impact on the basis of agency theory (Simpson and Gleason, 1999; Kula, 2005; Cornett et al., 2008; Rashid, 2010; Rashid, 2018). However, other studies find that CEO duality positively effects firm performance, drawing on stewardship theory (Lin, 2005; Krause and Semadeni, 2013; Al-Faryan, 2017). Further, additional studies find no relation (Elsayed, 2007; Lam and Lee, 2008; Iyengar and Zampelli, 2009). Consistent with agency theory, it is argued in this paper that CEO duality is likely to reduce firm performance as the dual role holder may be driven by self-interest. Therefore, the following hypothesis is stated:

H4: There is a negative association between CEO duality and firm performance.

#### *4.5 Audit Committee Size*

The main role of the audit committee is to enhance financial reporting quality (Pincus et al., 1989; Beasley, 1996), thereby leading to an improvement in corporate performance (Wild, 1996). Sunday (2008) argues that larger audit committees provide more skilled members and support improved reporting. Proponents of agency theory argue that excessive committee size leads to poor performance. Vafeas (1999) argues that more expansive committees can lead to ineffective governance, as they tend to yield more frequent meetings and increased expenses. Therefore, larger audit committees can negatively influence firm performance. However, resource dependency theory suggests that the larger audit committees lead to enhanced firm performance. For example, a narrower committee may lack the diversity of talent and expertise of its more expansive counterparts, rendering it ineffective. Thus, an audit committee with a proper size should leverage the capability of members to meet stockholder interests (Pfeffer, 1987; Pearce and Zahra, 1992). However, the empirical evidence here is mixed. Yasser et al. (2011), Detthamrong et al. (2017) and Alqatamin (2018) find a positive relationship while other studies find that smaller audit committees leads to better firm performance as larger committees may inhibit cooperation (Lin et al., 2008; Aldamen et al., 2012). Yermack, (1996), Kalbers and Fogarty, (1996) find that larger audit committees can lead to unnecessary debates and a delay in decision making. Agency theory underpins the following hypothesis:

H5: Audit committee size is negatively associated with firm performance.

#### 4.6 Audit Committee Meeting Frequency

Al-Matari (2013) argues that greater audit committee meeting frequency allows directors to better keep abreast of the firm's operations and environment and provides a more efficient mechanism for financial monitoring and control in corporate financial reporting. Further, some studies argue that greater audit committee meeting frequency should decrease the number of financial reporting problems (Yatim et al., 2006) and contribute to greater diligence and willingness of the director to cooperate and maintain a high level of activity in dealing with external and internal auditors (Rizzotti and Greco, 2013). In addition, more frequent meetings should lead to greater awareness of critical auditing concerns (Raghunandan et al., 1998). Empirical evidence shows that more frequent meetings of the audit committee are pivotal in alleviating problems such as agency issues and thus drive better performance (Xie et al., 2003; Rashidah, 2006; Anthony, 2007; Wiwanya and Aim, 2008). Most empirical studies observe meeting frequency and firm performance to be positively related (Adel and Maissa, 2013; Sultana, 2015; Rahman et al., 2019; Khalifa et al., 2020). Alzeban and Sawan (2015) find that more proficient and frequent audit committees drive better performance. Therefore, the hypothesis is stated as follows:

H6: Audit committee meeting frequency is positively associated with firm performance.

#### 4.7 Ownership Concentration

Ownership concentration can influence managers' activities and therefore firm performance (Javid and Iqbal, 2010; Wu et al., 2011; Tsao and Chen, 2012). Concentrated ownership offers expertise, experience and tools not only to improve the firm's resource base but also to create motivation to discipline managers (Carney and Gedajlovic, 2001). From an agency theory perspective, owners exercise some control over managers to reach their goal of maximizing capital. Although top managers tend to follow diversification strategies due to aversion to employment risk, cost preference and empire building (Thomsen and Pedersen, 2000), concentrated ownership may reduce such activity to increase shareholder wealth. Many studies find concentration and performance to be positively related (Warokka, 2008; Alimehmeti and Paletta, 2012; Isik and Soykan, 2013; Reddy et al., 2014; Rajput and Bharti, 2015; Yasser and Al Mamun, 2017; Waheed and Malik 2019). For example, Warokka and Reddy et al. argue that large shareholders are better able to monitor and control managers, thereby improving firm performance. However, other studies find a negative impact for ownership concentration (Shahab-u-Din and Javid, 2011; Ongore, 2011; Fauzi and Locke, 2012; Al-Saidi and Al-Shammari, 2014; Dwaikat and Queiri, 2014; Wang and Shailer, 2015; Buallay et al., 2017). For example, Ongore suggests that excessive large shareholder control can stifle managers' creativity, while Fauzi and Locke argue that increasing block holder ownership can interfere with managers' decisions, leading to greater agency problems. On balance, the following hypothesis may be stated:

H7: There is a positive association between ownership concentration and firm performance.

#### 4.8 Control Variables

To control firm effects, the empirical models also include firm-specific characteristics as control variables such as firm size, leverage, and firm age (length of establishment).

### 5. Research Methodology

This paper examines how corporate governance mechanisms impact the performance of Saudi listed firms. Descriptive and multivariate regression analyses are applied to test the correlation between corporate governance mechanisms and firm performance, consistent with the extant literature (Al-Sahafi et al., 2015; Naushad and Malik, 2015; Farhan et al., 2017; Almoneef and Samontaray, 2019).

#### 5.1 Data Sample

The leading 70 Saudi non-financial listed firms (Tadawul) by stock market weighting are selected over the period 2017 to 2019, thereby providing data for 210 annual reports spanning various industries, and constituting 52 percent of population firms. The source of the manually collected data is firm annual reports which are typically divided into the financial statements and the directors' report. Banks, Insurance and Real Estate Investment Traded Funds (REITs) sector firms are excluded as they are subject to regulations and characteristics that are different from other industrial sectors. The selected sample is shown in detail in Table 1.

Table 1. Sample selection

	2017	2018	2019	Total
Preliminary sample	188	200	204	592
<i>Less:</i> Firms in financial sector	(12)	(12)	(12)	(36)
<i>Less:</i> Firms in insurance sector	(33)	(33)	(33)	(99)
<i>Less:</i> Real estate investment sector	(17)	(17)	(17)	(51)
Final sample	126	138	142	406
Total firms selected	70	70	70	210
Percentage of selected firms to population	56%	51%	49%	52%

### 5.2 Variable Measurement

Following Roudaki and Bhuiyan (2015), this paper investigates the effect of corporate governance on three different types of firm performance: (i) 'operational' using return on assets (ROA); (ii) 'financial' using return on equity (ROE); and (iii) 'market' using Tobin's Q. The independent variables in the study models include: (i) corporate governance mechanism factors: board size (*BS*) independence (*BI*), and meeting frequency (*BM*), audit committee size (*ACS*) and meeting frequency (*ACM*), CEO duality (*CEODUAL*) and ownership concentration (*OWNCON*); and (ii) control variables: firm size (*SIZE*), leverage (*LEV*) and age (*AGE*). The variable labels and definitions are given in Table 2.

Table 2. Variable definitions, labels and measurement

Definition	Measurement
Dependent variables	
Operational performance ( <i>ROA</i> )	Net income to total assets ratio
Financial performance ( <i>ROE</i> )	Net income to shareholders' equity ratio
Market performance ( <i>Tobin's Q</i> )	(Market value of equity + book value of short-term liabilities) to book value of total assets
Independent variables	
Board size ( <i>BS</i> )	Number of board directors
Board independence ( <i>BI</i> )	Proportion of independent board directors
Board meeting frequency ( <i>BM</i> )	Number of annual board meetings
CEO duality ( <i>CEODUAL</i> )	Dummy variable coded 1 where the chairperson also assumes CEO role, and 0 otherwise
Audit committee size ( <i>ACS</i> )	Number of audit committee directors
Audit committee meeting frequency ( <i>ACM</i> )	Number of annual audit committee meetings
Ownership concentration ( <i>OWNCON</i> )	Proportion of total shares outstanding of largest shareholders (owning more than 10% of firm shares)
Control variables	
Firm size ( <i>SIZE</i> )	Natural logarithm of firm's total assets
Firm leverage ( <i>LEV</i> )	Total debt to total assets ratio
Firm Age ( <i>AGE</i> )	Number of years since incorporation

### 5.3 Study Models

To test the relation between corporate governance structures and performance, the following econometric models are estimated. Model I tests the relation between operational performance (ROA) and the model variables, whereas



Models II and III achieve the same for financial performance (ROE) and market performance (Tobin's Q), respectively:

Model I:

$$ROA_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BM_{it} + \beta_4 CEODUAL_{it} + \beta_5 ACS_{it} + \beta_6 ACM_{it} + \beta_7 OWNCON_{it} + \beta_8 SIZE_{it} + \beta_9 LEV_{it} + \beta_{10} AGE_{it} + \varepsilon_{it} \quad (1)$$

Model II:

$$ROE_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BM_{it} + \beta_4 CEODUAL_{it} + \beta_5 ACS_{it} + \beta_6 ACM_{it} + \beta_7 OWNCON_{it} + \beta_8 SIZE_{it} + \beta_9 LEV_{it} + \beta_{10} AGE_{it} + \varepsilon_{it} \quad (2)$$

Model III:

$$\text{Tobin's } Q_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BM_{it} + \beta_4 CEODUAL_{it} + \beta_5 ACS_{it} + \beta_6 ACM_{it} + \beta_7 OWNCON_{it} + \beta_8 SIZE_{it} + \beta_9 LEV_{it} + \beta_{10} AGE_{it} + \varepsilon_{it} \quad (3)$$

Where:  $i$  = firm identifier and  $t$  = year identifier;  $ROA$  = operational performance proxy;  $ROE$  = financial performance proxy;  $Tobin's Q$  = market performance proxy;  $BS$  = board size;  $BI$  = board independence;  $BM$  = board meeting frequency;  $ACS$  = audit committee size;  $ACM$  = audit committee meeting frequency;  $CEODUAL$  = role duality dummy;  $OWNCON$  = ownership concentration;  $SIZE$  = firm size;  $LEV$  = firm leverage;  $AGE$  = firm age;  $\varepsilon$  = error term.

## 6. Results and Discussion

### 6.1 Descriptive Statistics Analysis

Table 3 gives descriptive statistics for the model variables. Mean operational performance ( $ROA$ ) is around 6% and ranges from -13% to 31%, mean financial performance ( $ROE$ ) is around 9% and ranges from -36% to 57%, and mean market performance ( $Tobin's Q$ ) is around 158% and ranges from 33% to 734%. Mean board Size ( $BS$ ) is around nine directors, and ranges from five to 15 directors. With regard to board independence ( $BI$ ), 48% of firm board directors are independent, though the percentage ranges from 18% to 90%. Firms conduct an average of just over five board meetings ( $BM$ ) per year, though this varies widely from one to 15 meetings. 34% of firms are characterised by CEO role duality ( $CEODUAL$ ). On average, audit committee size ( $ACS$ ) is around four members, ranging from three to seven members, and such committees hold six meetings ( $ACM$ ) per year, with a range of one to 19 meetings. A large minority of shareholders (36%) own more than 10% ( $OWNCON$ ) of firm shares. Finally, the log of firm size is 6.866 and ranges from 6.097 to 9.129, firm leverage is around 42% and ranges from 3% to 88%, while firms have on average been established for around 28 years, with ages ranging from six to 63 years.

Table 3. Variable descriptive statistics

Variable	Mean	Min.	Max.	Standard Deviation
Operational performance ( $ROA$ )	0.057	-0.128	0.309	0.074
Financial performance ( $ROE$ )	0.091	-0.360	0.565	0.122
Market performance ( $Tobin's Q$ )	1.576	0.325	7.335	1.276
Board Size ( $BS$ )	8.971	5.000	15.000	1.407
Board Independence ( $BI$ )	0.475	0.182	0.900	0.139
Board Meetings ( $BM$ )	5.386	1.000	15.000	2.183
CEO Duality ( $CEODUAL$ )	0.343	0.000	1.000	0.476
Audit Committee Size ( $ACS$ )	3.919	3.000	7.000	0.901
Audit Committee Meetings ( $ACM$ )	6.033	1.000	19.000	2.234
Ownership Concentration ( $OWNCON$ )	0.362	0.000	0.980	0.253
LOG Firm Size ( $SIZE$ )	6.866	6.097	9.129	0.644
Firm Leverage ( $LEV$ )	0.417	0.026	0.875	0.207
Firm Age ( $AGE$ )	27.686	6.000	63.000	14.490
LOG Firm Age ( $AGE$ )	1.374	0.778	1.799	0.256

### 6.2 Spearman Correlation Analysis

Table 4 provides a Spearman rank correlation analysis for the model variables to identify any multicollinearity issues. The only very strong correlations are between the three performances dependent variables, as might be expected, which are in any case included in separate models. Regarding independent variables, the table shows that ROA is significantly and negatively associated with LEV (-0.514). Moreover, Tobin's Q is significantly and negatively correlated with SIZE (-0.420) and LEV (-0.419), respectively. However, BM is significantly and positively associated with ACM (0.442).

Table 4. Spearman correlation analysis

	<i>ROA</i>	<i>ROE</i>	<i>Tobin's Q</i>	<i>BS</i>	<i>BI</i>	<i>BM</i>	<i>CEODUALACS</i>	<i>ACM</i>	<i>OWNCON</i>	<i>SIZE</i>	<i>LEV</i>	<i>AGE</i>	
<i>ROA</i>	1.000												
<i>ROE</i>	.947**	1.000											
<i>Tobin's Q</i>	.707**	.625**	1.000										
<i>BS</i>	-.185**	-.167*	-.228**	1.000									
<i>BI</i>	-.085	-.196**	.033	.136*	1.000								
<i>BM</i>	.019	-.008	.093	.075	-.050	1.000							
<i>CEODUALACS</i>	-.185**	-.197**	-.171*	-.051	.123	-.233**	1.000						
<i>ACS</i>	-.091	-.089	-.040	.252**	-.026	.248**	-.141*	1.000					
<i>ACM</i>	-.126	-.161*	-.032	.031	.047	.442**	.011	.072	1.000				
<i>OWNCON</i>	.036	.079	-.016	.025	-.198**	.115	-.251**	-.023	.025	1.000			
<i>SIZE</i>	-.185**	-.101	-.420**	.321**	-.280**	.182**	-.135	.158*	-.032	.253**	1.000		
<i>LEV</i>	-.514**	-.295**	-.419**	.056	-.297**	-.115	-.032	.046	-.040	.116	.255**	1.000	
<i>AGE</i>	.188**	.129	.290**	-.008	.035	.168*	.132	-.060	.207**	-.243**	-.236**	-.187**	1.000

\*\* = significant correlation at the 1% level (2-tailed)

\* = significant correlation at the 5% level (2-tailed)

### 6.3 Regression Analysis

Table 5 gives the results of the three models to gauge the relation between corporate governance and operational performance (*ROA*), financial performance (*ROE*), and market performance (*Tobin's Q*) in Saudi listed firms. The operational performance (*ROA*) model (Model I) has an adjusted  $R^2$  of 0.280 and a significant F-test ( $F = 9.139$ ,  $p < 0.001$ ), the financial performance (*ROE*) model (Model II) has an adjusted  $R^2$  of 0.147 and a significant F-test ( $F = 4.613$ ,  $p < 0.001$ ), and the market performance (*Tobin's Q*) model (Model III) has an adjusted  $R^2$  of 0.221 and a significant F-test ( $F = 6.924$ ,  $p < 0.001$ ).

The regression results evidence some interesting variation in determinants across the three models. With regard to board size (*BS*) there is a negative relationship, though only for market performance (Model III) where the relation is significant at the 5% level, providing some support for agency theory and hypothesis H1. Larger boards can lead to deterioration in firm performance due to poor communication and decision making while smaller boards decrease the risk of free-riding (Lipton and Lorsch, 1992; Yermack, 1996; Eisenberg et al., 1998). The result is consistent with the extant empirical studies (Haniffa and Hudaib, 2006; Sunday, 2008; Shakir, 2008 Al-Ghamdi and Rhodes, 2015; Zhou et al., 2018; Khalifa et al., 2020).

The degree of board independence is negatively correlated with both firm operational performance and financial performance (Models I and II) and is significant at the 10% and 5% levels, respectively, thereby providing support stewardship theory and for hypothesis H2. The negative association may be due to high block holder ownership in the case of Saudi firms which may render non-executive directors powerless in board discussions. Anderson and Reeb (2004) argue that firms controlled by families may pursue a policy to appoint directors who may not be truly independent as many are friends of the controlling family and/or inside directors, and thereby do not add any value to

the firm in an emerging market setting. The result is in accord with considerable extant research (Klein, 1998; Bhagat and Bolton, 2002; Haniffa and Hudaib, 2006; Bhagat and Bolton, 2013; Vintila et al., 2015).

The frequency of board meetings is positively related to market performance alone (Model III), though only at the 10% level, only weakly supporting hypothesis H3. Thus, when boards hold more frequent meetings, corporate performance should improve with greater director alignment of interests with shareholders (Conger et al., 1998), a result which is consistent with extant empirical studies (Vafeas, 1999; Rizzotti and Greco, 2013; Arora and Sharma, 2016).

Table 5. Regression model results

Independent variables	Definition	Hyp.	Exp. sign	Operational performance			Financial performance			Market performance		
				Model I (ROA)			Model II (ROE)			Model III (Tobin's Q)		
				Coeff	t-statistic	P> t	Coeff	t-statistic	P> t	Coeff	t-statistic	P> t
<i>Cons.</i>	Model constant	-	+	0.211	3.074	0.002***	0.288	2.313	0.022**	2.995	2.412	0.017**
Governance variables:												
<i>BS</i>	Board Size	H1	-	-0.003	-0.860	0.391	-0.004	-0.594	0.553	-0.127	-2.103	0.037**
<i>BI</i>	Board Independence	H2	-	-0.065	-1.835	0.068*	-0.137	-2.151	0.033**	-0.178	-0.280	0.780
<i>BM</i>	Board Meetings	H3	+	0.002	0.745	0.457	0.001	0.320	0.749	0.083	1.792	0.075*
<i>CEODUAL</i>	CEO Duality	H4	-	-0.032	-3.323	0.001***	-0.047	-2.680	0.008**	-0.557	-3.152	0.002***
<i>ACS</i>	Audit Committee Size	H5	-	-0.010	-1.980	0.049**	-0.015	-1.626	0.106	-0.049	-0.533	0.595
<i>ACM</i>	Audit Committee Meetings	H6	+	-0.005	-2.285	0.023**	-0.008	-1.812	0.071*	-0.111	-2.588	0.010**
<i>OWNCON</i>	Ownership Concentration	H7	+	0.035	1.782	0.076*	0.043	1.217	0.225	0.776	2.192	0.030**
Control variables:												
<i>SIZE</i>	Firm Size	-		-0.002	-0.207	0.836	0.001	0.079	0.937	-0.184	-1.194	0.234
<i>LEV</i>	Firm Leverage	-		-0.155	-6.875	0.000***	-0.173	-4.230	0.000***	-1.314	-3.227	0.001***
<i>AGE</i>	Firm Age	-		0.029	1.578	0.116	0.046	1.354	0.177	1.412	4.205	0.000***
Adjusted R <sup>2</sup>				0.280			0.147			0.221		
F-statistic				9.139			4.613			6.924		
VIF				<2			<2			<2		
Probability (F)				0.001			0.001			0.001		
Number of observations				210			210			210		

\*\*\* significant at the 1% level, \*\* significant at the 5% level, \* significant at the 10% level.

The presence of CEO duality is negatively related at the 1% level to operational performance (Model I) and market performance (Model III) and at the 5% level for financial performance (Model II). Thus, there is strong support for hypothesis H4, whereby under the separation of ownership and control as proposed by agency theory, a combined leadership structure (role duality) is negatively affected firm performance. The result accords with a range of extant studies (Simpson and Gleason, 1999; Kula, 2005; Cornett et al., 2008; Rashid, 2010; Rashid, 2018).

Audit committee size is negatively associated with operational performance (Model I) at the 5% level, providing some support for hypothesis H5 and agency theory. Therefore, smaller committees tend to be associated with better firm performance as larger committees lead to reduced cooperation (Lin et al., 2008) and unnecessary debates and delays in decision making (Yermack, 1996; Kalbers and Fogarty, 1996). The result is in line with that of Aldamen et al. (2012).

Audit committee meeting frequency is negatively related to all three measures of performance at the 5% level for both operational performance (Model I) and market performance (Model III) and at the 10% level for financial performance (Model II), a finding which provides no support for agency theory arguments and hypothesis H6. Thus, somewhat counterintuitively, more frequent audit committee meetings are associated with poorer firm performance, consistent with Rebeiz and Salameh (2006) who argue that greater frequency does not lead to increased firm performance as the quality of the meetings is also to be ensured, and consistent with the evidence of Hsu and Petchsakulwong (2010).

Finally, greater ownership concentration is positively associated with operational performance (Model I) at the 10% level and market performance (Model III) at the 5% level, thus providing some support for hypothesis H7 and the argument of Warokka (2008) that large shareholders are better at monitoring and controlling managers thereby enhancing firm performance. The result is consistent with a range of extant studies (Warokka, 2008; Alimehmeti and Paletta, 2012; Isik and Soykan, 2013; Reddy et al., 2014; Rajput and Bharti, 2015; Yasser and Al Mamun, 2017; Waheed and Malik 2019).

With regard to the control variables, firm size appears to have no relation with any of the measures of firm performance. However, firm leverage is strongly negatively associated with each measure of performance (across models) at the 1% level of significance, while the length of establishment of the firm is positively associated with market performance alone (Model III) at the 1% level.

To summarise, firm performance decreases with larger board size and greater board independence, the presence of CEO duality, larger audit committees and more frequent audit committee meetings, while performance increases with board meeting frequency and the degree of ownership concentration. However, there is some variation regarding which measures of performance are most affected by such corporate governance characteristics such that they impact operational and market performance more than financial performance. It appears that performance measures which take into account total assets (as a proxy for accounting scale) are more sensitive to changes in corporate governance mechanisms. This can be explained by the observation that business organizations in the Middle East, including Saudi Arabia, have a significant degree of ownership concentration, and are generally government and family controlled firms. The result supports the perspective of agency theory that greater concentration of ownership bolsters stockholder strength and facilitates the alignment of managers with stockholder interests, and therefore boosts firm value.

## 7. Conclusion

This study aimed to research the effects of corporate governance mechanisms on corporate operational, financial and market performance in Saudi listed firms. It provides broad assessment of the latest Saudi Corporate Governance Regulations and IFRS adoption in their effect on firm performance. In so doing, stakeholders may better identify the governance factors affecting performance and encourage investee firms to direct their attention to optimising those factors in pursuit of better performance. The paper employs both manual content and multiple regression analyses to data from 210 firm annual reports over the period 2017 to 2019.

This study employs an integrated theoretical framework, based on agency, stewardship and resource dependency theories. The study results show that firm performance decreases with greater board size (consistent with agency theory) and board independence (consistent with stewardship theory), the presence of CEO duality (consistent with agency theory), along with larger audit committees and more frequent audit committee meetings (consistent with agency theory), while performance increases with board meeting frequency and the degree of ownership concentration (consistent with stewardship theory). Thus, Saudi firms should respond by maintaining smaller boards and more frequent meetings, keeping the Chair and CEO roles separate, and maintaining smaller audit committees with more focused meetings. Further, the appointment of independent directors only makes a meaningful contribution to firm performance where they are truly independent. Finally, more concentrated ownership tends to encourage better firm performance due to the regime of monitoring and discipline concomitant with more powerful shareholders.

The recent Saudi Corporate Governance Regulations and adoption of IFRS adoption have brought accounting reforms, along with stronger corporate governance practices and securities exchange laws. The broad results of this study suggest that Saudi firms which take these reforms on board are more likely to improve their performance. The results may be of use to managers and corporate boards in deciding on optimal corporate governance mechanisms to achieve better performance. Furthermore, the results help inform how audit committees may be structured in a way to ensure effectiveness and contribute to overall performance. In addition, in a Saudi setting, more concentrated ownership structures may lead to superior firm performance compared to more diffused ownership. The results should provide policy makers with greater insight into the link between corporate governance mechanisms and performance, thereby informing future policy formulation, better safeguarding different shareholder groups, and to improve the flow of foreign direct investment and capital into non-financial firms and the wider economy.

The study implications are threefold. Firstly, the implementation of the latest corporate governance regulations and IFRS adoption in Saudi almost certainly impact firm performance markedly. Second, corporate governance regulations should consider the role of more frequent board meetings and more concentrated ownership in enhancing corporate performance. Third, stakeholders should apply pressure on investee firms to maintain smaller boards,

engage genuinely independent directors, separate the role of Chairman and CEO, and maintain smaller audit committees with fewer and more effective meetings.

As this study focused solely on non-financial firms, future studies may examine similar determinants of performance for the financial sector with its increasingly important role in developing economies, and in particular Saudi Arabia. Additionally, further research might consider whether corporate governance mechanisms influence firm value or earnings management practices. Finally, the impact of corporate governance mechanisms on corporate performance in family firms would be a useful avenue for future studies given that most Saudi firms are family owned.

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