



Faculty of Economics and Business

The Moderating Role of CEO's Education on the effect of Corporate Governance Mechanism and Firm's Performance in Saudi Arabia's Non-Financial Sector

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The Moderating Role of CEO's Education on the effect of Corporate
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Financial Sector

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DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Malaysia Sarawak. Except where due acknowledgements have been made, the work is that of the author alone. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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ABSTRACT

Recent scandals at Wells Fargo and Equifax-the financial crisis of 2008 and the new millennium scandals in Enron, WorldCom, Tyco, and Qwest have put back on the policy agenda and intensified debate on the efficacy of corporate governance mechanisms as means of increasing firm performance. At the backdrop of this scenario, Saudi Arabia has lately revamped its codes for corporate governance. Empirical work in corporate governance has undergone a remarkable growth, however despite the volume of empirical evidence, there has been no consensus as to which corporate governance mechanism resolves the agent principal conflict and increase performance. Therefore, this study has addressed this problem by creating and validating corporate governance mechanisms model on 114 non-financial firms listed on the Saudi stock Exchange Tadawul spanning the period of 2015–2018. This thesis offers novel evidence detailing the impact of corporate governance mechanisms measured by board size, audit quality, and ownership concentration as the independent variable and CEO education as the moderator variable on the performance of Saudi listed firms using a contingent theoretical-based framework drawing on agency theory and upper echelon theory. Numerous alternative specifications and estimation techniques are used for analysis purpose, including system generalized methods of moments, which effectively overcomes the problem of endogeneity and pre-estimation, and post-estimation tests were conducted for the validity of the model. This thesis used positivist approach where the longitudinal/panel data is secondary and quantitative in nature which was collected from 2015-2018 that was analyzed using STATA 14. The thesis employed the balanced panel data of 114 listed non-financial firms and analyzed after controlling for potential endogeneity using a more robust methodology-a two-step system Generalized Method of Moments (GMM) framework. The results show that there is a significant impact of board size,

ownership concentration on firm performance measured by ROE and ROA, however audit quality illustrated significant impact on firm performance when measured with ROE and no significant impact when measured by ROA. This research expands the upper echelon theory in strategic management literature by confirming that CEO's education significantly influences governance mechanisms and firm performance. Moreover, it extends the agency theory in finance literature by recommending and validating proxies to select and measure corporate governance mechanisms (board size, ownership concentration, audit quality) that significantly mitigate the problem of agency in the contemporary business environment in 114 non-financial firms in Saudi Arabia from 2014-2018. The results show that firm performance deteriorates with board size, while performance improves with ownership concentration and audit quality. The results also indicated that CEO education moderates the relationship between board size, audit quality, ownership concentration on firm performance. The implications of this research are manifold. 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 concentrated ownership in enhancing corporate performance. Third, stakeholders should apply pressure on investee firms to maintain smaller boards and maintain audit quality by employing services of big four audit firms. And lastly the board must prefer hiring CEO with good level of education preferably graduates and above. Furthermore, 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 modeling, 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, firm performance, audit quality, ownership concentration, CEO education

Mekanisma Tadbir Urus Korporat dan Prestasi Firma di Sektor Bukan Kewangan Arab Saudi: Peranan Moderasi Pendidikan CEO

ABSTRAK

Isu skandal terbaharu di Wells Fargo dan Equifax-krisis kewangan 2008 dan skandal alaf baharu di Enron, WorldCom, Tyco dan Qwest telah meletakkan kembali agenda dasar dan memperhebat perbahasan tentang keberkesanan mekanisme tadbir urus korporat sebagai cara meningkatkan prestasi firma. Berlatarbelakangkan senario ini, Arab Saudi baru-baru ini telah merombak kod tadbir urus korporat. Kerja empirikal dalam tadbir urus korporat telah mengalami pertumbuhan yang luar biasa, namun di sebalik jumlah bukti empirikal, tidak ada konsensus mengenai mekanisme tadbir urus korporat yang mana menyelesaikan konflik prinsipal ejen dan meningkatkan prestasi. Oleh itu, kajian ini telah menangani masalah ini dengan mencipta dan mengesahkan model mekanisme tadbir urus korporat pada 114 firma bukan kewangan yang disenaraikan di Bursa Saham Saudi Tadawul merangkumi tahun 2015–2018. Tesis ini menawarkan bukti baharu yang memperincikan kesan mekanisme tadbir urus korporat yang diukur mengikut saiz lembaga, kualiti audit, dan kepekatan pemilikan sebagai pembolehubah bebas dan pendidikan CEO sebagai pembolehubah moderator ke atas prestasi firma tersenarai Saudi menggunakan rangka kerja berasaskan teori kontingen yang bersandarkan pada teori agensi dan teori eselon atasan. Banyak spesifikasi alternatif dan teknik anggaran digunakan untuk tujuan analisis, termasuk kaedah umum sistem momen, yang berkesan mengatasi masalah endogeneiti dan pra-anggaran, dan ujian pasca anggaran telah dijalankan untuk kesahihan model. Tesis ini menggunakan pendekatan positivis di mana data membujur/panel adalah sekunder dan bersifat kuantitatif yang dikumpul dari tahun 2015-2018 yang dianalisis menggunakan STATA 14. Tesis ini menggunakan data panel seimbang daripada 114 firma bukan

kewangan tersenarai dan dianalisis selepas mengawal potensi endogen melalui penggunaan metodologi yang lebih teguh iaitu sistem dua langkah rangka kerja *Generalized Method of Moments (GMM)*. Keputusan menunjukkan terdapat kesan ketara saiz lembaga, penumpuan pemilikan ke atas prestasi firma yang diukur oleh ROE dan ROA, walau bagaimanapun kualiti audit menggambarkan kesan ketara ke atas prestasi firma apabila diukur dengan ROE dan tiada kesan ketara apabila diukur dengan ROA. Penyelidikan ini memperluaskan teori eselon atas dalam literatur pengurusan strategik dengan mengesahkan bahawa pendidikan CEO mempengaruhi mekanisme tadbir urus dan prestasi firma dengan ketara. Selain itu, ia memperluaskan teori agensi dalam literatur kewangan dengan mengesyorkan dan mengesahkan proksi untuk memilih dan mengukur mekanisme tadbir urus korporat (saiz lembaga, penumpuan pemilikan, kualiti audit) yang mengurangkan dengan ketara masalah agensi dalam persekitaran perniagaan kontemporari di 114 firma bukan kewangan di Arab Saudi dari 2014-2018. Keputusan menunjukkan bahawa prestasi firma merosot dengan saiz lembaga, manakala prestasi bertambah baik dengan penumpuan pemilikan dan kualiti audit. Keputusan juga menunjukkan bahawa pendidikan CEO menyederhanakan hubungan antara saiz lembaga, kualiti audit, penumpuan pemilikan terhadap prestasi firma. Implikasi kajian ini adalah pelbagai. Pertama, pelaksanaan peraturan tadbir urus korporat terkini dan penerimaan IFRS oleh Arab Saudi hampir pasti memberi kesan kepada prestasi firma dengan ketara. Kedua, peraturan tadbir urus korporat harus mengiktiraf peranan pemilikan yang lebih tertumpu dalam meningkatkan prestasi korporat. Ketiga, pihak berkepentingan harus memberikan tekanan kepada firma penerima pelaburan untuk mengekalkan lembaga yang lebih kecil dan mengekalkan kualiti audit dengan menggunakan perkhidmatan firma audit Big four. Dan akhir sekali lembaga mesti memilih untuk mengambil CEO dengan tahap pendidikan yang baik sebaik-baiknya mempunyai tahap pendidikan ijazah dan ke atas.

Tambahan pula, kajian itu harus memberikan penggubal dasar pemahaman yang lebih baik tentang struktur tadbir urus korporat yang diperlukan untuk menggalakkan prestasi yang lebih baik dengan menggunakan teori sedia ada dan pemodelan empirikal, dalam suasana ekonomi sedang pesat membangun seperti Arab Saudi, set data baharu dan lebih luas, dengan itu, memaklumkan dasar masa depan yang lebih baik dan melindungi kepentingan pemegang saham.

Kata kunci: *Tadbir urus korporat, prestasi firma, kualiti audit, tumpuan pemilikan, pendidikan CEO*

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LIST OF ABBREVIATIONS

AFS	Audit Firm Size
AQ	Audit Quality
ASE	Amman Stock Exchange
BSIZE	Board Size
CEO	Chief Executive Officer
CEOE	CEO Education
CG	Corporate Governance
CGS	Centre for Graduate Studies
CMA	Capital Market Authority
CML	Commercial Mortgages Law
DW	Durbin-Watson Test
EPS	Earnings Per Share
FEM	Fixed-Effect Model
FP	Firm Performance
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GICS	Global Industry Classification Standard
GMM	Generalized Method of Moments
HCSE	Heteroscedasticity Consistent - Standard Error
IPO	Initial Public Offerings
KSA	Kingdom of Saudi Arabia
LROA	Lagged Return on Assets

LROE	Lagged Return on Equity
MENA	Middle East and North Africa
Nomu	Saudi Parallel Market
OCN	Ownership Concentration
OECD	Organization for Economic Co-Operation and Development
OLS	Ordinary Least Square
REM	Random Effects Model
ROA	Return on Assets
ROE	Return on Equity
ROSC	Report on the Observance of Standards and Codes,
SAMA	Saudi Arabian Monetary Agency
SRCG	Saudi Arabia Regulations on Corporate Governance
TMT	Top Management Team
TQ	Tobin's Q
UET	Upper Echelon Theory
UNIMAS	Universiti Malaysia Sarawak
UK	United Kingdom
VIF	Variance Inflation Factor
2SLS	Two Stages Least Square

CHAPTER 1

INTRODUCTION

This opening chapter introduces the topic under investigation and provides a general discussion on the theories and variables to be used in this thesis. It discusses the background and context of the research problem. It offers a problem statement which outlines the research gaps along with presenting research questions and objectives of the study. Furthermore, it also describes the scope of the study along with highlighting the potential contributions and significance of this study. It goes on to include the conceptual definitions of the constructs to be used in this study. Finally, it outlines the structure of this PhD thesis. The details of each section are as follows; Section 1.1 discusses the background of the thesis, Section 1.2 elaborates the problem statement, Section 1.3 presents the significance of the thesis, Section 1.4 discusses the research questions, Section 1.5 elaborates the research objectives, Section 1.6 explains brief review of the underpinning theories, Section 1.7 highlights the scope of the thesis, Section 1.8 discusses the structure of the thesis, Section 1.9 discusses the definitions of the conceptual definitions of the key terms.

1.1 Study Background

Corporate governance gained substantial attention from the scholars and has recently come to the forefront of policy debates around the globe. It refers to the way all stakeholders including managers, stockholders, employees, creditors, consumers, and societies, interact with each other to form the strategy of the corporation. Under weak governance framework opaque corporations are more likely to bypass law and the efficacy of government, making and enduring a vicious circle of corruption, enticement, and mismanagement. At present corporate governance is a staple of discussion in academia, corporate meetings, and policy

makers. The scandals such as Man Financial Global, Royal Dutch Shell, Royal Bank of Scotland, Bear Stearns, Countrywide Financials, WorldCom, Enron, Siemens, and Satyam in the last decade have positioned the corporate governance mechanisms under scrutiny (Almoneef & Samontaray, 2019). Russia, Asia, and Brazil financial crises in 1998, followed by scandals in the United States and Europe-inadequacies in corporate governance have jeopardized the global financial system stability (AlRuthia et al., 2018).

The crises are indicators of various structural elements and underline as to why corporate governance has become even more significant for economic development and society's well-being. As the firms expand the task of financial intermediaries and institutional investor's increases, the mobilization of capital progressively develops; the distribution of investment also becomes more intricate. Structural reforms, including price deregulation and increased competition, have extended corporations' exposure to market forces. These advances have made the monitoring investment usage more complex in numerous aspects, augmenting the necessity for good corporate governance (Krane & Majid, 2018).

Theoretically, Corporate Governance (CG) is believed to increase firm's performance and secure stockholder's interest. In addition, good governance practice can build an encouraging investment opportunity. Compliance with CG systems improves corporate performance and promotes effective internal governance and management control. Undoubtedly external and internal governance mechanisms help to oversee agent's daily activities, on behalf of the principals (Babatunde et al., 2009). Corporate governance has become more pertinent in existing times as corporations expand both in advanced and emerging economies (Freeman, 1983, 2010). Its significance has been emphasized by

substantial body of research as it supports capital market development, attracts foreign investments, develops market efficacy, and reduces susceptibility to financial catastrophe (Shank et al., 2013).

In emerging markets, the necessity for corporate governance is more pressing than developed countries, since there is a paucity of regulation by professional agencies, petite, or no awareness of the criticality of corporate governance, weak guidelines, insignificant transparency, and non-observance to corporate governance standards. Emerging markets have strengthened their position in the global economy during the last two decades. From 2010 till 2015 emerging economies accounted for more than a quarter of global output when compared with just about 1/10th and 1/5th respectively in the 1990s (Huidrom et al., 2019) Giving credit where due, emerging market economies have made momentous corporate governance strides lately, as the implementations and amendments of governance codes and pertinent guidelines have led to improved disclosure standards, higher levels of board independence, and more stockholder protections (Mishra, 2019) Generally preceding literature was driven by the principal-agent problems in emerging markets-that differs from the developed markets on many facets including ownership structure' identity, size (La Porta et al., 1999), direct ownership – known as cash flow rights, and control rights – of those who has de facto power over the business (Claessens et al., 2000).

Governance improvements across emerging markets have been uneven. However, the overall progress observed in several areas is encouraging. Regulators have also taken measures to empower minority stockholders by providing them more say. According to the report by the World Bank, it was noted that emerging economies came very far and have successfully adapted standards and regulations practiced in developed countries in order to

improve their corporate governance framework over the last decade. (World Bank, 2019). However, there is still a room for lot of improvements as argued by critics. Though some economies have strengthened their public sector, others seem to have done not much as indicated in Worldwide Governance Indicators research, emerging economies as a group continued to lag developed countries considerably in terms of regulatory quality (Kaufmann et al., 2017).

1.2 Problem Statement

As an emerging economy, Saudi Arabia has experienced enormous developments and has witnessed several reforms in corporate governance. The Saudi market occupies a competitive position regionally and globally, which makes it a destination for new local and foreign investors, but there are concerns about its corporate governance practices (Boshnak, 2020). This section has discussed major events that are markers of weak corporate governance system- which led the regulatory authorities to take rigorous steps to outline systems and procedures for improved corporate governance. Recent corporate scandals globally and Saudi Arabia particularly has evoked many factors that substantially explain the financial performance. The collapse of the Saudi exchange triggered the regulators to take rigorous steps to guard the securities market and investors as an additional precautionary step in anticipation of likely future economic slump (AlMatari et al., 2012). However, despite extensive measures taken by the country since the adoption of corporate governance codes in 2006, it is facing tremendous governance failures. Recent wide-ranging crackdown targeted at rooting out corruption in which almost 200 members were summoned, almost \$100 billion were reclaimed by the authorities- misused all through systematic corruption (Faisal, 2019). This is an example of one of the efforts by Saudi Arabian regulatory forces to combat irregularities in the corporate governance infrastructure.

The government implemented a comprehensive privatization program (Vision-2030) in an attempt to diversify and develop its economy away from its oil dependency and has embarked on economic openness to develop and revolutionise its own infrastructure, corporate laws, and corporate governance mechanisms (Piesse et al., 2012; Hamdan, 2018). Recent adoption of International Financial Reporting Standards (IFRS) – 2017 to improve corporate governance mechanism is evidence that country is eager to ensure that better processes are put in place so it can attract foreign investment which is projected at almost \$530 billion (Lakhani & Petroff, 2014).

Alhowaish (2014) stated that the early assumptions by the Saudi government on oil dependency revenues did not actually work. Oil glut globally during the mid-1980s followed by sharp decline in oil prices of more than one third in 1997 and again in 2008 put the Saudi economy in dilemma. Saudi Arabia petroleum export-oriented policy remains a key factor in improving the national economy, contributing about 92% of total GDP, which is 55% of its GDP and 90% of its export income (Saudi Arabian Monetary Authority [SAMA], 2012). However, lately the trends in its revenues from exports exhibited a decline that majorly influenced the shift of dependency from oil to other sectors. The data exhibits the trends of imports and exports, for instance total imports increased from only 2.5 billion SR in 1968 to more than 118.7 billion in 1984 and then dropped to 85.5 billion in 1985 before growing again to 105.1 billion in 1995 and almost 495 billion in 2011. Comparatively, exports have fluctuated, and it increased from only 9 billion SR in 1968 to 405 billion in 1981 and then dropped to 74.6 billion in 1986 before growing again to 472 billion in 2004 and continuing to escalate to nearly 1,367 billion SR in 2011. Oil contributed to the volume of total exports largely which explicates the enormous fluctuations in total exports. Instabilities in oil returns impact the entire Saudi economy in numerous ways, comprising effects on government

profits, expansion projects, program funds, and the overall stability of the national economy. The government faced many internal and external global challenges. Along with oil price uncertainty, economic globalization and the subsequent inclination toward freer trade flows, the vast developments in information technology and data processing, the volatility of world financial and exchange markets were few of them. This was an era where the government took extensive measures towards developing proper codes of regulation in the public sector to attract the interest of investors.

It was only after 2005 that corporate governance concepts were deployed in Saudi Arabia, early 2006 and soon post market capitalisation of USD950 billion, the stock market crashed and lost roughly half of its worth in less than a quarter of a year - its general index tumbled to 25% due to this and other leading circumstance resulted in a loss of shareholder's confidence- thereby kicking in an intense demand for suitable CG standards in the region of Saudi Arabia (AlZahrani, 2013). In 2010, it became compulsory for listed companies in Saudi Stock Market to adopt corporate governance regulation (AlZahrani, 2013) which were voluntary until the beginning of 2009. All these incidents implied grave concerns about corporate governance practices in Saudi Arabia and exposed a dearth of corporate governance mechanism (IMF, 2016). In Saudi Arabia, most corporations' exhibit inconsistencies and nonalignment of their practices with codes of corporate governance and therefore stock market trends show a plunge in their performance (Ashikh, 2012, Buallay, 2017). There are no effective corporate governance practices in the Saudi Arabian market, since it lacks well-established and mature business institutions, a strong legal system, and reliable infrastructure to manage the challenges of corporate governance (Robertson et al., 2013; World Bank, 2014).

Corporate governance framework is based on both internal and external mechanisms (Banks, 2004) which is further subdivided into three major clusters namely, regulatory, market and internal governance mechanism (Agarwal & Knoeber, 1996). Saudi Arabia has witnessed several reforms in corporate governance mechanism, and it started with special consideration being given to internal control systems initiated by the Securities Exchange Commission (SEC) in year 2000. According to the codes issued by SEC firms, Sec Securities Exchange Commission and all the listed firms in Tadawul were obligated to design their internal control system established on these internal control standards, followed by the Saudi Corporate Governance Codes (SGCRS) issued in year 2006, which became mandatory in 2010 for all Saudi listed corporations (AlJanadi et al., 2016). Corporate governance is supposed to impact the performance of firm and it matters to the investors and stakeholders as it helps them to recognize the factors linked to firm's success or failure. Despite the significance placed upon the implementation of better corporate governance practices, there are numerous internal and external factors, including board size, ownership structures, audit quality, CEO characteristics which impede the effectiveness of such practices.

Saudi Arabia recent corporate scandals came to light in late 2014 where authorities imposed about \$83 million in penalties on Etihad Etisalat (Mobily) as reported by Reuters on February 26, 2018. The reiterations cut 1.76 billion SR off profit made by the corporation, triggering its stocks to tumble. The shareholders suffered and one of the many reasons was a weak monitoring and control by the board of directors as they are the internal monitors as voted by the shareholders. The board of director acts a cornerstone in the governance mechanism and has a control, strategic, decision-making and resource provision roles (Isik & Ince, 2016). The board of directors are elected to work on behalf of the shareholders who are required to monitor the agents/managers' performance. The board is an internal

monitoring device however once again the latest corporate catastrophe has put corporate governance system of the country in jeopardy. The board should work effective however how many members should be elected to work in a board is still a dilemma. To-date there is still a debate about the optimal size of the board, as there is no specific formula that should be adopted to specify the number of members in the board. There is a dearth of literature as to which size of the board is effective as internal governance mechanism (Martin et al., 2018). From the view of agency theory, large board size is better as it offers the board of directors with more experience and opportunities for discussion (Pearce & Zahra, 1992; Akhtaruddin et al., 2009). Thus, they effectively tackle the agency problem (Hussainey & AlNajjar, 2012). The second view claims that the problem of agency will increase as that large boards will have less coherence and more communication gap which in turn hinder their ability to monitor and manage the corporation effectively (Yermack, 1996; Dimitropoulos et al., 2010). On the contrary, corporate governance literature argues that smaller board is suitable and deemed efficient than a larger board board is more effective in decision-making, thereby increasing efficiency and leads firms to a higher level (Moez, 2018). However, there is another view that if the board is small, the powerful position of the CEO supersede decisions made by the board in harmony with their own interests, increasing agency problems and correspondingly undermining the performance of the firm (Miller, 2003). The third view proposes that board size is a function of the business attributes and business environment, implying that the impact of board size on firm performance varies (Ali, 2018). It is evident that there is no consensus among scholars about the influence of board size and firm performance. On the same pursuit empirical literature on the effectiveness of board as internal governance mechanism that impacts the performance of the corporations exhibited mixed results (Lipton & Lorsch, 1992; Yermack, 1996;

Sonnenfeld, 2002). It was argued that larger boards exhibit low firm's performance (Ahmadu et al., 2005; Mustafa, 2006; Chan & Li, 2008). On the contrary, Bhagat and Black (2002); Beiner et al. (2004); Limpaphayom and Connelly (2006) argued that the company's board size and performance are not significantly related to each other. Besides Jensen (1993) supported the idea of smaller boards, and the same was endorsed by (Velnampy, 2013; AlMatari et al., 2014). It was also stated that larger boards are better as when faced with the greater complexity of the decision of business, more advice is needed which is reflected in a larger board (Farag & Mallin, 2017) Though, this outcome is not unanimous, as there are findings in which the relationship is not observed. Donnelly and Mulcahy (2008) found a significant negative relationship between the firm performance and board size.

To attract foreign investment and move the economy assuredly forward to achieve the desired economic transformation and development goals-the country need to create a vigorous and robust corporate governance framework. For any investor, the fundamental desire of good financial returns and stockholder's rights remain the core value of his pursuit. Ownership structures can be separated into two groups: dispersed and concentrated. Neither is better; they each suit different contexts. Soliman (2013) argued that Saudi Arabia is characterized by a high concentrated ownership. Does this concentrated ownership make a better corporate governance infrastructure, can it stimulate or hamper corporate governance systems, and it is mitigating the relationship between agency and principal in the firms listed in Saudi Arabia stock exchange? Literature exhibits that concentrated ownership resolves agency problems through more effective control and supervision of firm activities, traditionally, concentrated ownership should mitigate the agency problems (Banks, 2004). Nevertheless, despite the significance placed upon it the empirical evidence presents mixed results (Short, 1994; Shleifer & Vishny, 1997; Gugler, 2001). Siala et al. (2009) argued that

the agency's theory intends ownership concentration as a pivot for better governance. Ownership structure is an efficient mechanism for decreasing the agency costs linked with the separation of ownership and management, which can be utilized to safeguard property rights of the corporation (Barbosa & Louri, 2002). Major stockholders engage in a primary monitoring role since they have control acquired from holding substantial stocks and voting rights, and they are more likely to take part at different levels of operations and decision and policy making in the corporations (Bava & Devalle, 2012a). Alimehmeti and Paletta (2012) stated that ownership concentration refers to large block of shareholders that are more active in monitoring firms, thus impacting bottom line firm's performance. On the contrary other empirical investigation indicates that it has no significant relationship between the two (Holderness & Sheehan, 1988; Stulz, 1988). Soliman (2013) argued concentration of ownership may lead to the expropriation of minor stockholder interests by larger controlling stockholder thus escalating the conflict of interest between both. However opposite to this view other scholars found a negative relationship between ownership concentration and performance of firms (Foroughi & Fooladi, 2012).

Another problem in corporate governance mechanisms that surfaced in the country recently was in 2014. Numerous Saudi corporate scandals that happened due to auditor's negligence for example Saudi Telecom in 2014 that was hit by an accounting scandal (Smith, 2015). "Mobily" Etihad Etisalat Company, November 2014 reported accounting errors that wiped out 380 million dollars of past profits and Mohammad Al-Mojil Group in 2014 (Warmoll, 2014). In response, the Saudi Ministry of Commerce and Investment mandated the company law and required that financial statements of corporations should be audited by independent auditors. The auditor has a main role in limiting accounting manipulation, the owner and management are also less involved in conflicts of interest and less asymmetry of

information (Jensen & Meckling, 1976). According to Fan et al. (2011) one way to control the agency problem is to hire an external auditor to audit the company's financial statements. The impact of corporate governance and external audit quality is still ambiguous within the scope of the emerging markets, specifically, the Saudi market as there exists lack of auditors' independence, accounting scandals, the limitations and complexity of corporate governance (Sioufi et al., 2017). As a result, the external auditor plays a key role in limiting accounting manipulation, thus reducing conflicts of interest, and minimizing asymmetric information between the owner and the management (Jensen & Meckling, 1976). So, hiring external auditor is based on their reputation for reliability, and higher the quality of audit higher shall be the reputation of the external auditor (Alhaji et al., 2013). The significance of audit quality on firm performance exhibits mixed results as numerous scholars argue that big audit firms provide high quality audit (Almatari et al., 2014). On the contrary, the literature debates an inverse view (Yasser et al., 2011) and found no significance differences between the audit quality of big four and non-big four firms and its impact on firm performance (Tsipouridou & Spathis, 2012).

Saudi Arabia stock exchange has been erratic and fluctuating. 25% of listed firms were deemed to be negative performers in 2010, based on their Return On Equity (ROE), 20% were deemed to be negative performers based on their Return On Assets (ROA), There were many reasons for these failures like weak corporate governance mechanisms and regressive execution of corporation stratagems (Peng et al., 2003). Saudi Arabia as the biggest Arab economy has been the most dynamic in the Gulf region in advocating for consolidation in numerous divisions lately. However, recent financial catastrophes have raised the issue of corporate governance effectiveness and particularly upper echelons conduct in the corporation (Borgi et al., 2021). Moreover, in the recent past many CEOs

positions have been reshuffled (Othman, 2020). The success or failure of the corporation is credited to their CEO (Bandiera et al., 2020; Fernández & Tejerina, 2020). The Chief Executive Officer CEO is the leader and is responsible for the day-to-day management of the corporation. The characteristics of CEO and performance of the firm have been a subject of increased attention in literature both academically and generally (Ayaba, 2012). Though upper echelons contribute towards the achievement of firm's objectives through team participation and individual task, the Chief Executive Officer (CEO) is still a final decision maker and strategist who directs the firm (Calori et al., 1994). The CEO behaves as the mirror image by which their own value system impacts their perceptions and data interpretation (Daellenbach et al., 1999). The same idea was endorsed by Hambrick and Mason (1984) who argue that the CEO's value system, cognitive conduct and bias is determined by many characteristics including education. Despite of a consensus that CEOs characteristics impact the performance of the firm in certain way because of their diverse abilities and skills (Bennedsen et al., 2008; Gabaix et al., 2008) academic and researchers remain split and have provided little proof to endorse which specific characteristics contributes to bottom line results of firm. This gap in the literature leaves the scholars with the dilemma as to which attributes in CEOs characteristics explicitly adds value and enhance firm's performance. Hambrick and Mason (1984) argued that having qualified executives will support the corporation to improve its performance. Moreover, Wallace and Cooke (1990) state that improving education in any state play a critical role in corporate accountability. Xiaowei and Zhang (2010) argued that highly educated CEOs have more capability to analyse information effectively and make strategic choices. Moreover, there was a positive significant relationship found between CEO education and firm performance (Xiaowei & Zhang, 2010). Maximilian (2012) argued that when an executive is educated

and informed, it is likely that they will make the right decisions. According to the upper echelon theory as described by Hambrick and Mason (1984), the higher educational level is associated with open-mindedness, capacity to process knowledge and tolerance for change. The upper echelon theory implies that educational level of the CEO is displayed in the characteristics of their firms (Orens & Reheul, 2013). Furthermore, the theory states that higher educated CEOs are risk takers, creative, open minded and flexible to changes and investment prospects (Barker et al., 2002). Moreover, there was an investigation that endorsed the notion that higher education levels are significantly positive related to performance of the firm (Rakhmayil et al., 2011). On the contrary Jalbert et al. (2010) indicates that CEOs without a college degree can earn more profits than those CEO's holding degrees. Gottesman and Morey (2010) observed no relationship between education of CEO and performance of the firm. The firm's exceptional performance is a contemplation of its position and not the CEO's education (Beber et al., 2012; Gottesman & Morey, 2015).

1.3 Significance of the Study

This thesis provides several contributions both scholarly and practically. First, this thesis provides supporting evidence for the theoretical literature by examining the relationship between corporate governance mechanisms and firm performance. Even though a growing body of literature employs this integration approach to expansively study the impact of corporate governance mechanisms such as board of directors, audit, ownership structure, number of meetings by board on the firm performance in emerging markets, yet empirical evidence remains comparatively scarce in Saudi Arabia (Buallay et al., 2017). The good governance has become in its all dichotomies a main condition to adopt Saudi Arabia's Strategic vision 2030 and therefore the findings of this thesis would help the policy makers

and practitioner to devise the corporate governance mechanism and consider the suggested model.

The current study bridges the gaps in literature in several ways. Numerous accounting scandals, the limitations and complexity of corporate governance, and foreign investment (Sioufi et al., 2017) are the motivators behind this study and thus it contributes to the literature of corporate governance mechanisms specifically contributing to the literature of board of director's role, agency theory and the corporate governance literature by proposing and validating which size is significant and explains the firm performance. Corporate governance mechanisms include ownership concentration in which block shareholders who own majority of the shares and thus acts as internal monitoring device. There are two kinds of dispersed and concentrated ownership structures that exist and neither is better; they each suit different contexts, so this thesis contributes to ownership concentration literature, agency theory and the corporate governance in emerging economies by proposing and validating that ownership concentration explains firm performance. This thesis extends the literature of corporate governance mechanisms of external audit under agency theory by focusing and empirically validating significance of audit quality when measured by big four audit firms on firm performance in emerging market specifically Saudi Arabia. Agency theory argues that the higher audit quality may control opportunistic behaviours of the agents, thus reduces agency costs and, consequently, increase the firm performance. In consistent with this conjunction the current study validates this notion and found a significant positive relationship between auditor type and firm performance when measured by ROE. It also contributes to the strategic management and upper echelon theory literature by proposing and validating the role of CEO education level that moderates the relationship between corporate governance mechanisms and firm performance. The results

of this study contribute to the theoretical perspective by providing an insight into the influencing role of CEO education in the relationship between CG mechanism and firm performance in an emerging markets economy.

It has implication for firms that are seeking to device controlling and monitoring mechanism to achieve firm performance by employing superior corporate governance practices. It extends former findings by investigating this relationship in the case of an emerging country like Saudi Arabia as the issues of corporate governance in developing countries remain ambiguous or uncovered. The results should help corporate boards when deciding on the best corporate governance mechanisms to enhance firm performance. The country has implemented the latest corporate governance regulations and is trying to improve the overall corporate governance mechanisms framework. Therefore, the policy makers and decision makers should recognize the role of more concentrated ownership and should consider hiring audit firms with recognized names preferably from big four audit firms. The stakeholders should apply pressure on investee firms to maintain smaller boards and hire a CEO with good level of education. Additionally, the result of this study supports 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 Saudi Arabia, a new and broader data set of all non-financial listed firm in Saudi Arabian stock exchange Tadawul, thereby informing better future policy and protecting shareholders' interests.

Moreover, prior literature has limitations in terms of sample sizes, as mostly existing investigations of corporate governance in Saudi Arabia study a small sample of firms and a single year period, which limits the generalizability of their findings (AlNodel & Hussainey, 2010; Alsahafi, 2017). However, current study espouses all the non-financial firms from

(2015-2018) listed in Tadawul that would aid to generalize the finding to make judgments about the effectiveness of corporate governance practices.

1.4 Research Questions

Based on the arguments made in problem statement, following questions arises that needs to be answered in this study:

- i. Does board size impact firm performance?
- ii. Does audit quality impact the performance of the firm performance?
- iii. Does ownership concentration impact the firm performance?
- iv. Does CEO education moderate the impact between board size, audit quality, ownership concentration and firm performance?

1.5 Research Objectives

Based on the research questions this thesis attempts to answer the following objectives:

- i. To examine the impact of board size on firm performance.
- ii. To determine the impact of audit quality on firm performance
- iii. To evaluate the impact of ownership concentration on firm performance
- iv. To measure the moderating role of CEO education on the relationship between board size, audit quality, ownership concentration and firm performance.

1.6 Theoretical Framework

1.6.1 Agency Theory

The theoretical framework is an integral element, and it is essential to understand the theoretical stances of every part of study so that its perceptible contribution to the field of

literature can be emphasized explicitly. The theoretical underpinning of this thesis is grounded on agency theory followed by upper echelon theory. Corporate governance structure stipulates the distribution of rights and duties between the various members of the corporation, such as the board of directors, managers, shareholders, and other economic agents holding the same interest in the corporation (OECD, 2005, p.11). The three players within the corporation-agents, principals and the board of directors were called tripod (Peng, 2015). He argued that it is extremely vital to outline and delimit each element's role and responsibility. Corporations are owned by shareholders who are called principal. These principals employ workers and delegate the tasks of running the business daily affairs to them; these employees are known as agents/managers who are thus expected to work while acting in the best interest of the corporation. The third player is the board of directors who are elected by the owners/stockholders to oversee agents' activities.

Given agents are human; therefore, they may succumb to self-interest, self-serving, short-termism behaviour at the cost of principal. The opportunistic behaviours of the managers who are hired as agents, is contrary to the best interests of the owners of the corporation. These results in agency cost as the agent acts in his own interest at principal's expense hence creating agent-principal conflict. The separation of power and control brings in numerous conflicts, for instance conflict between agent and principles interest occurs due to the information asymmetries because overall agents have more information than owners. Another conflict is due to self-serving nature of the agents where they try to build empires and free ride on shareholder's wealth (Nerantzidis et al., 2012). Agency theory is based on fundamental assumptions arguing that agents are self-interested who do not want to take high risk and may not share full information with the principal to secure their positions. As a component of the principal-agent relationship, the assumption of agent-principal conflict

is assumed to be inevitable and therefore provides foundation to test alternatives to this conflict (Baker, 2019). Since agency theory proposes the mitigating mechanisms to reduce the agency cost is minimized therefore it helps corporations to increase financial performance. Table 1.1 outlines the main ideas and assumptions underlying agency theory.

Table 1.1: Key Agency theory assumptions

Agency theory assumptions	
Key Idea	Principal-agent should reflect efficient organization of information and risk bearing cost
Unit of analysis	Self-interest, bounded rationality, risk aversion
Organizational Assumptions	Partial goal conflict among participants Efficiency as the effectiveness criterion Information asymmetry between principal and agent
Informational Assumptions	Information as purchasable commodity
Contracting Problem	Agency moral hazard and adverse reaction) Risk sharing
Main Problem	Relationship in which principal and agent have partly differing goals and risk preferences

Source: Eisenhard (1989) Agency theory

Agency theory proposes that the interests of agents and principal should align with monitoring mechanisms to mitigate the conflict of interests and any other opportunistic behaviour resulting there from (Mallin, 2019). The theory describes and explains how costs incurred based on problems linked with the separation of ownership and management can be mitigated in different business settings. Drawing substantially on agency theory literature, the thesis outlines how corporate governance monitoring mechanisms may mitigate the agent principal conflict and increases firm performance by reducing agency cost. Monitoring mechanisms can be categorized into three types: Internal, market and regulatory. Monitoring by market incorporates the shareholders with majority stocks, capital market and the

managerial labour market. The second category is internal monitoring which is sub categorized into managerial compensation and board of directors and third category is regulatory that is further divided into external auditors and legal systems (Azim, 2012). As an internal monitoring mechanism, this current study focuses on internal monitoring mechanism players that are board of directors and insider shareholders and boards of directors and external auditor as external monitoring mechanisms under agency theory lens.

Agency theory presumes the segregation of ownership and control that indicates a conflict between the owners and manager's interests. The theoretical part of the board of directors in controlling and disciplining agents is resolutely grounded in the agency structure established by Fama and Jensen (1983). The main role of the board of directors in origin is to monitor managers and bring into line their interests with those of the stockholders in principle; it is the fiduciary responsibility of the board of directors to guard the interest of the stockholders (Adams et al., 2010). Monitoring is a mechanism that can be espoused by the board to bring into line the incentives of the stockholders and the managers. Within the problem of agency, the problem is selecting the suitable monitoring and bonding mechanisms of control to align interests and enhance performance (Jones & Butler, 1992). Organizations seek to arrange their boards of directors to confirm sufficient monitoring of agents (Randolph & Edward, 1994). The idea is to protect the stockholders from losses and any financial and market scandal. The monitoring is the only possible solution that comes up while exploring the problem of agency. This is accurate; however, the cost related to this monitoring has to be noticed. No stockholder wants to be accountable for these costs so these stockholders as a group elect board of directors for monitoring role (Berk & DeMarzo, 2007). Board of directors helps the corporations by monitoring the agents thus minimizing the cost of agency and increasing firms' performance. Fama and Jensen (1983) explained the board's

role as an info system that the shareholders within large companies might use to observe the opportunism of top managers. Looking at the general tasks of the board, it fulfils two main roles according to Kuma and Sivaramakrisnan (2008) that are controlling and monitoring.

Agency theory discusses the role of board of director's role as internal monitors, who are appointed by the shareholders to oversee agents' activities and they are expected to channel their efforts towards fulfilling the stakeholders' interest (Alqatan, 2019). They are apex of hierarchical monitoring and control systems thereby exercising more power and control over agents by board decreases agency cost. The board can increase the firm's performance by strictly monitoring and controlling agent's overall activities and devising incentives to minimize agent's self-serving conduct. There are numerous characteristics of board that helps in monitoring thereby increasing firm performance and size of board is one of them (Gaur et al., 2015). Haniffa and Hudaib (2006) indicate that board size is the vital element influencing the firm performance. The literature highlights that the board size can impact firm performance since it is involved in the decision-making process along with monitoring management.

Ownership concentration is the accumulated percentage of shareholdings by all large stockholders. Agency theory attempts to resolve the agent principal problem proposing concentrated ownership as an internal monitoring devise as it controls and influence the management of the firm to protect their interests (Madhani, 2016). Agency theory advocate large shareholdings influence the performance through controlling the decision-making process (Jensen & Meckling, 1979; Jensen, 1993).

Agency theory attempted to resolve the principal-agent conflict to minimize agency cost by suggesting external monitoring by hiring external auditors. It is argued that quality

audit increases financial reporting liability, and external auditors serve a monitoring role to ensure the quality of financial reporting (Iatridis, 2012). External auditors are expected to play a monitoring role to ensure the quality of financial reporting by curbing manager's opportunistic behaviour (Lai et.al., 2017). Large audit firms (Big four Audit quality firms) render reliable and dependable reports since they have "more to lose" if they fail to report fraud and misstatements in client's records (DeAngelo, 1981). Agency theory propagates that agency conflict is mitigated by hiring quality audit services as it enhances accounting reports credibility, reliability that in return increases investor's confidence (Houque et al., 2017).

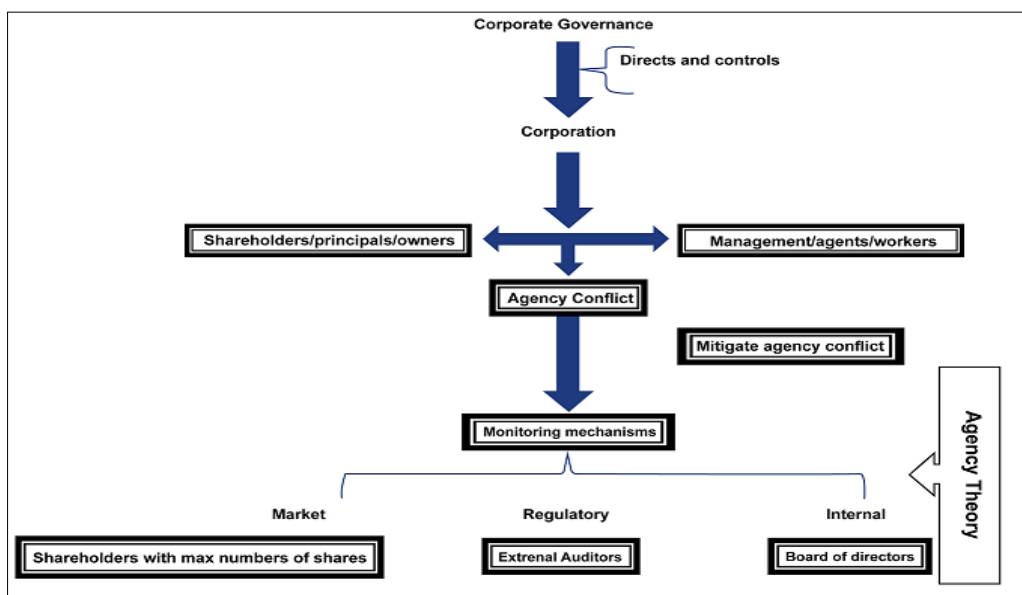


Figure 1.1: Corporate Governance Framework and Agency Theory

Source: Adapted from Azim 2012

In the business literature, agency theory has been employed to a broad variety of fields beyond finance for instance strategic management (Kim & Mahoney, 2005). Since agency theory is unidimensional its perspective and explanation provide solid foundation to

study, explore, and investigate the relationship between agent and principal by proposing remedial measures to mitigate the conflict by reducing agency cost (Tricker, 2019). Firm's performance depends on many characteristics however it is vital for the owners to reduce agency cost and make sure that their managers are motivated and are working in the best interest of the firm (Liu & Fong, 2010). Agency theory has been widely accepted and tested by management scholars recently who are expanding the knowledge base by extending the research on seminal work on agency theory by Eisenhardt (1989). In Management literature the agency theory has been cited in more than 14,100 publications till April 2019 publications-providing solutions to principal agent conflicts of information asymmetry (Bergh et al., 2018), risk taking (Buyl et al., 2017), governance (Cumming et al, 2019).

1.6.2 Upper echelon theory

Recent corporate scandals Enron, Tyco, Adelphia, ImClone, World Com & Global Crossing have shaken the investor's confidence. From the ruins of these scandals emerged a need to investigate the reasons behind such catastrophe, thus putting most of the burden squarely on the shoulders of top management teams mainly the chief executive office CEO. Lately, financial and accounting statement fraud, scandals and CEO participation had been extensively documented (Troy et al., 2011). Upper echelon theory has been widely accepted in literature to measure the impact the chief executive officer CEO characteristics and their impact on performance of the firm (Carpenter et al., 2004; Peterson, 2012). Upper echelon theory deals with the top management team TMT, and their role in managing the organization. The financial and non-financial performance of the firm reflects the strategic choices by its top decision makers also known as top management team TMT or upper echelons. These upper echelons play a vital role in setting firm's direction. The central premise of upper echelons theory is that executives' characteristics and their personalities

considerably impact their interpretations of the situations they face and, in turn, influence their choices. Increased organizational complexity and the need of gaining insights into the decision-making of top executives have motivated a growing body of research on the relationship between upper echelons and firm performance. A growing body of literature on the impact of upper echelons on firm's performance is driven by an increased need of gaining insights into the decision-making of top executives (Röttger et al., 2019).

Upper echelon theory reflects counterweight to more deterministic views of organizational performance-it proposes that to comprehend how the company behaves and performs it is mandatory to consider its leader's characteristics (Hambrick, 2018).

Corporate governance incorporates series of relationships between numerous stakeholders in the corporation-it is intended to increase shareholder wealth and improve investor's confidence by reducing principal agent conflict. The role of the top management is crucial to implement the monitoring mechanism to reduce problems between owners and managers in the corporation. Since the board of directors is unable to oversee day to day activities of the corporation therefore, they delegate that responsibility to the CEO-member of top management team, appointed by the board of directors. The board is responsible to hire and fire the CEO therefore it is vital for the board to understand the CEO's characteristics role in firm's governance. The board of directors then takes the suggestion and recommendation along with the information from the CEO who is being appointed to oversee the firms' daily activities on their behalf. Therefore, it is expected that board of directors will try to hire a CEO who will conform to organizational good practices.

Moreover, based on existing literature, the CEO's behaviour could differ among various education levels due to different skill sets and knowledge learned (Hambrick &

Mason, 1984). Upper echelon theory advocates that CEO education is displayed in the characteristics of the organizations they lead and direct (Orens & Reheul, 2013). It was emphasized that higher educated CEOs are less risk averse, more open to innovative ideas, changes, and investment opportunities. Higher educational level of the CEO impact firm' profits (Rakhmayil & Yuce, 2011).

The position of a CEO is a critical element of corporate governance of a company as he is the point of contact for both the board and employees of the organization. Since the board will take maximum insights of the corporation through CEO lens since he has an upper hand while running the corporation daily tasks. CEO has broad range of duties under his umbrella and suggesting auditor's appointment and terminations is one of them. (Cohen, 2010). Moreover, it has been observed that principal agent problem can be reduced if the corporation exhibits concentrated ownership structures, since the decisions of the CEO will be influenced by major stockholders in the company (Choi et al., 2013; Dam & Scholtens, 2013; Dias et al., 2017).

1.7 Scope of the Research

This research examines the relationship between corporate governance mechanisms through the variables of board size, auditor quality, ownership concentration and firm performance through accounting base measurement of return on assets and return on equity, and moderating impact of CEO characteristics measured by education level on the relationship between corporate governance and firm performance in non-financial sector of listed firms in Saudi Arabia from 2015-2018.

1.8 Structure of the Thesis

This PhD thesis consists of five chapters.

Chapter 1 - Introduces the topic and variables, discusses context and background of the study, articulates a problem statement, formulate research questions and research objectives, and also entails the justification of carrying out this research by identifying gaps in the current literature and body of knowledge. The scope and significance of the study is described along with presenting the conceptual definitions of the variables used in this study.

Chapter 2 - Presents the review of the literature and broadly discuss the relevant issues of the study and elaborate the different writer's views about the topic. Reviewing previous studies or theories the writer would be able to identify the gap within the existing body of knowledge.

Chapter 3 - Presents the theoretical framework that presents the direction of theorization by using deductive and inductive approaches. It discusses the cause-and-effect relationships between dependent and independent variables. Based on these causal relationships the testable hypotheses are developed to answer the central research question of the study.

It discusses the research methodology and different research techniques and discusses in detail which alternative techniques are suitable for that kind of research. This section defines the unit of analysis and target population of the study. It explains the sampling frame and data collection and analysis techniques and presents the operational definitions of dependent and independent variables in the context of study.

Chapter 4 - Presents the findings of the research and would analyse the studied data etc. This chapter presents some brief justification why different analytical techniques have been used and will answer the main research questions etc. In the last section of this chapter, the major contribution of the research will be presented.

Chapter 5 - Presents the conclusion of the study and will suggest some refinements in terms of discovery and advocacy of the main argument, the direction of theorization, methodological (unit of analysis, operationalization of study variables, measurement scales of key constructs, data collection and analytical techniques, sampling frame and target population). This section also discusses the key contribution of the study in three kinds of knowledge, i.e. research, theory, and policy and practice. This part also presents some applications, suggestions, and limitations that would help to suggest some further research.

1.9 Definitions of the Key terms

The following are definitions that can be used to get an idea of what the variables used in this study mean. The operationalization of these variables according to this study is discussed in detail in the measures section of chapter on research methodology (For details, refer to of Chapter 3).

1.9.1 Corporate Governance

"Corporate governance "involves a set of relationships between a company's management, its board, its shareholders and other stakeholders" (OECD 2001).

1.9.2 ROE

The return on the equity ratio or ROE is a performance ratio that measures the ability of the firm to make the investment profits of its shareholders. The formula for return on equity, ROE, is a firm's net income divided by its average stockholder's equity (Adjaoud et al., 2007).

1.9.3 ROA

The return on assets or ROA is calculated as the ratio of operating profits after depreciation divided by total assets (Scholten, 2014).

1.9.4 Board Size

Board size implies to the total number of directors on the board of each sample corporation which includes chairman, for each accounting year (Fama & Jensen, 1983).

1.9.5 Ownership Concentration

The ownership concentration refers to the total percentage of shares held by an owner relative to the total shares of the shareholding of the firm (Alimehmeti & Paletta, 2012).

1.9.6 Audit Quality

It is reviewing capability of detecting distortions in bookkeeping, and auditor autonomy in reporting substantial distortion exposed by the market (Alhaji et al., 2013).

1.9.7 CEO Education

The education of the CEO measured by the level of his degree such as post-graduate, graduate, and undergraduate level (Phan & Hoon, 1995; Amran et al., 2014).

CHAPTER 2

LITERATURE REVIEW

The aim of this chapter is to review the relevant studies and to explore and report the previous research, to set the framework for the study. This chapter essentially reviews the preceding literature on the relationship between corporate governance mechanism and performance of firms. The overview of each section in this chapter is as follows; Section 2.1 discusses Corporate Governance- Overview, Section 2.2 reviews the literature of Regulatory framework-Saudi Arabia, Section 2.3 explains main laws governing the corporations-Corporate Governance Saudi Arabia, Section 2.4 discusses Corporate Governance theories, Section 2.5 reviews Firm's Performance, Section 2.6 different models of Corporate governance. Section 2.7 presents Upper Echelon Theory. Section 2.8 presents Conceptual Framework followed by Section 2.9 that presents summary of the chapter.

2.1 Corporate Governance- Overview

Over the last 30 years corporate governance literature has received substantial recognition and attention from scholars. In a search for better and improved Corporate Governance the academicians are digging deep to investigate what set of mechanisms can be devised to improve it. This is reflected in numerous published investigations on the corporate governance topic annually not only in finance and economics but also in law, management and accounting hence signifying the nature of investigation on Corporate Governance (Ararat et al., 2020). Corporate governance is presently a point of open discussion in every meeting room, address lobbies and online networking (Giroud & Mueller, 2011). The corporate catastrophe in the 17th century that referred to as south sea bubble failure; has changed the way corporations are regulated in England (Atakisi et al.,

2010). All the corporations that failed had one thing in common and that was appalling corporate governance (Bushee et al., 2014). Armstrong et al. (2010) stated that great corporate governance increases the profitability of investments done by the principals and decreases the principal deficit that helps to expand access to more capital, reduces calamities, supports speculation procurements, and diminishes abuse.

The conception of “Corporate Governance” is subjected to both narrow and broad definitions, pertaining to the two viewpoints of stakeholder and shareholder orientation. Corporate governance, if defined narrowly, is related to associations between the board of directors of the company, corporate managers, and shareholders. In contrast, defining broadly, corporate governance can include the combination of laws, listing rules, private sector regulations and voluntary practices that allow the company to encourage capital, maximize revenues, perform effectively and efficiently to achieve both general and legal expectations of the corporation (Claessens & Yurtoglu, 2013). It is not possible to provide one definition for corporate governance due to varying viewpoints. Because of their multifaceted nature, there is not truly universally accepted concept of corporate governance (Alzahrani, 2013). In terms of degree of development of a country, the concept of CG differs in the region in which it is applied-it is argued that the narrow view of the CG definition is mainly espoused in UK, USA as it accrues shareholders interest as the main priority by making sure that firm operate in their best interest with standardized procedures. In contrast, the broader view of CG definitions encompasses in it the concerns for larger spectrum including all stakeholders, and is stressed in countries like Germany, Japan, and France (Claessens, 2006).

Before choosing any one definition to incorporate in the thesis the following paragraph critically reviews different ways to explain corporate governance meaning. Cadbury Committee (1992) advocated that CG is the arrangement by which corporations are directed and controlled. Monks and Minow (2004, p.1) defined CG as “relationship among various participants in determining the direction and performance of corporations”. World Bank (2006) defines it as the structures and processes for the direction and control of companies, while it is being defined by the International Finance Corporation (IFC) as the structures and processes by which companies are directed and controlled. International Finance Corporation (IFC, 2015). Moreover, Report on the Observance of Standards and Codes (ROSC) has defined corporate governance as a link among the board, executives, controlling stockholders, minority shareholders, the top team (Report on the Observance of Standards and Codes [ROSC], 2009). Organization for Economic Cooperation and Development (OECD, 2001) describes CG as a compendium of bonds between the management, board of directors, shareholders, and other investors of an enterprise. A concept which can clarify all aspects of corporate governance can be difficult to find, however all definitions agree on a key subject, which is business and management control and supervision (Law & Wong, 2005). While the literature above defining the corporate governance took only shareholders, board and agents relationship an expanded OECD description encompasses more details, and it has defined corporate governance as “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” (Organisation for Economic Co-operation and Development (OECD, 2001, p.13). Lowry and Reisberg (2012) defined CG as relationships reinforcing

the alignment amongst the interest of manager and the shareholders. Firms must employ a perfect corporate governance monitoring system to oversee managers/agents, so they operate in the best interests of stakeholders (Solomon, 2016; Millan, 2016; Tricker, 2019). Aldamen et al. (2012) argued that agents should work in the best interest of the shareholders thereby increasing shareholder's wealth and decreasing agency cost. Keasey et al. (2005, p.251) defined corporate governance as "The set of mechanisms – both institutional and market-based – that induce the self-interested controllers of a company (those that make decisions regarding how the company will be operated) to make decisions that maximise the value of the company to its owners (the suppliers of capital)."

Both internal and external monitoring mechanisms are vital in explaining firm performance (Siddiqui, 2014). Shleifer and Vishny (1997) argue that efficient controlling mechanism is a must for all circumstances to encourage management/agent/manager to work for the best interest of the stockholders as it increases firm's performance (Solomon, 2014). Monitoring mechanisms are of different types (internal and external) that are classified mainly into three major clusters which are as follows: regulatory, market and internal monitoring (Agarwal & Knoeber, 1996). Gillan in 2006 also explains corporate governance systems by segregating them into the internal corporate governance and the external corporate governance. Internal governance means that corporate governance structures and processes are within the control of the firm's shareholders and the board of directors (Brown et al., 2011). This thesis has adopted CG definition given by OECD stated above that broadly incorporates and defines the relationships of the acting players in corporations.

2.1.1 The issues of corporate governance in developing markets

Emerging markets have been in the spotlight mostly because of their corporate governance shortfalls. Over the years, some countries have moved faster than others to plug their governance gaps. However, despite this progress, a lot is required to be done in order to meet governance yardsticks of international standards, since the practice of corporate governance in these markets are weak (Borochin & Cu, 2018; Nahuelhual et al., 2018; Nakpodia & Adegbite, 2018; Ciftci et al., 2019). Scholars and academicians view the CG Literature from two perspectives: country level and company level. At the country level, regulatory framework, rules and policies mainly shapes the governance quality for corporations to operate in, meanwhile on the level of company there are many internal factors that shapes the governance mechanisms- ownership concentration structure, in franchise that helps the board of directors to function effectively and incentive plans for managers to keep them aligned with company interest, and minority shareholder's rights (Claessens & Yurtoglu, 2013).

Emerging market indeed requires improvement in their corporate governance practices. However, the main reason for its significance is its global market capitalization which has almost doubled in last two decades (IMF, 2016). The mind fulinvestors endeavour to explore numerous factors including corporation's financial performance, country legal and social issues before making investment decision. Both country and company level analysis for governance risks must be considered while looking at stock portfolio to invest in. therefore before making an investment decisions the investor may go through reports to check country level governance risk for example a Protecting Minority Investors or Worldwide Governance Indicators report developed by world bank (Ararat et al., 2020). Emerging markets are continuously improving their corporate governance framework to

cater governance shortfall-therefore periodic revisions in codes, social risks, listing rules, board practices to improve the level of confidence in capital markets have been done by numerous countries. Below are some of the many emerging markets that have been on the front in addressing their corporate governance codes.

Table 2.1: List of Corporate Governance Codes in Select Emerging Markets

Name of country	Last updated year	Name Corporate governance code
Turkey	2014	Corporate Governance Principles-Capital Market Board of Turkey
Russia	2014	Russian Corporate Governance Code
Taiwan	2016	Corporate governance Best Practices for TWSE/GTSM listed companies
South Korea	2016	Code of best practices corporate governance
South Africa	2016	King IV Report on corporate governance for south Africa 2016 (known as king IV)
Malaysia	2017	Malaysian code on corporate governance
Thailand	2017	Corporate governance code
India	2018	Report of the committee on corporate governance
China	2018	Code of corporate governance for listed companies in China (in Chinese)

Adopted from Mishra (2019)

This recent activity of these fifteen markets indicates corporate governance has become a policy priority for them, and it is evident that Saudi Arabia is one of them. Since the main setting of this thesis is Saudi Arabia therefore it is vital to discuss review of the literature starting from the country's corporate governance framework.

2.1.2 Historic Trends- Corporate governance in Saudi Arabia

The transition of corporate governance in the country from the lens of historic events is discussed below. The country has taken rigorous steps to adapt Anglo-American model of corporate governance that is in alignment with its business environment -In pursuit of attracting foreign investment.

Saudi Arabia had no structured equity market and in 1975 there were only handful of 14 listed firms. Until early 1980s- due to the absence of a formal market, smooth and efficient operations were a challenge for the country. In 1985, the government took a step and formed the Saudi Arabian Monetary Authority (SAMA), with an aim to establish structured stock market. SAMA had been developing the stock market known as TADAWUL since then and was committed to bring the stock market up to international standards. However, the economy of Saudi Arabia failed to get international exposure (Alfaryan et al., 2020).

Saudi Arabia attempts to introduce corporate governance infrastructure started in 1985 with an introduction of SAMA. However, even in year 2000s there were still very few numbers of firms that went public and got registered with TADAWUL. Therefore, to strengthen its governance framework, reforms were established through newly formed regulatory bodies-the Supreme Economic Council (SEC), Saudi Arabian General Investment Authority (SAGIA), and the Saudi Arabian Stock Exchange. Subsequently in 2003 Capital Market Authority (CMA) with an aim to regulate the stock market was established and to issue rules for both private and public sector firms (Capital Market Authority, 2016). Fortunately, the country efforts were fruitful and from 2004-2006 the stock market profits were remarkable (Naif et al., 2019).

Though system improved, investors' confidence was increased after great leaps towards implementing regulations that were trying to be in line OECD countries (AlJanadi et al., 2013) the stock market with 76 listed firms crashed on 25 February 2006. According to Saudi Stock Exchange "Tadawul", 2006 Annual Report a market capitalization dropped to US\$326.9 billion by the end of 2006, falling 49.72% from 2005 and recorded losses worth 480 billion USD. This catastrophe raised questions over the functioning of the corporate governance system regulating the stock market and therefore in 2006 Saudi Corporate Governance Code (SCGC) was developed. Some of the confluence factors resulting in 2005 crash included weak stockholder knowledge, lack of transparency and disclosure by the firms, insider trading, manipulating prices, and making false statements, Regulatory bodies like CMA's lack of experience, weak leadership from government authorities (Alkhaldi, 2015).

In 2016 vision 2030 was launched by Saudi Arabia, in a pursuit to diversify the country's economy from mere oil dependence. The plans were aimed at attracting foreign direct investment FDI and make it 5.7% of the country's total GDP. Council of Economic and Development Affairs was given the main responsibility of forming the mechanisms and actions required to achieve Saudi Vision 2030. The Council of Economic and Development Affairs established a broad governance model aimed to strengthen corporate governance framework to ease investment opportunities for foreign investors as The obligation to apply corporate governance' principles is considered as one of the essential methods that provide the foreign investor with a high level of trust (Alasiri, 2020). In 4 years', time the country was able to get almost 348 new foreign investments by dispersing international licences to these firms. In 2019 the country achieved 50% of its total target of ten billion\$ and all these

were the results of continuous efforts to improve governance and reduce administrative obstacles for the operations of these corporations (Whiteaker, 2020).

Although the country went through a major catastrophe however it can be said that it was a perfect storm and an eye opener. Since then, Saudi Arabia is developing and improving corporate governance infrastructure and at the backdrop of the scenario on 11/2006 Capital Market Authority issued corporate governance codes which again were improved and reissued recently in 2017. These codes are designed to emulate international best practices and are also in line with country Vision-2030 (Capital Market Authority, 2017, p. 9).

Corporate governance infrastructure is dependent on the following pillars of regulatory framework, therefore complete but succinct review of the literature is presented below to understand the setting of the study.

2.2 Regulatory framework- Saudi Arabia

There are four major bodies responsible to regulate, supervise and monitor firms in Saudi Arabia.

2.2.1 The Ministry of Commerce and Industry

This body is mainly responsible to oversee the other three regulatory bodies Capital Market Authority, the Saudi Stock Exchange, and the Saudi Organization for Certified Public Accountants. All the firms must register with The Ministry of Commerce and Industry (MCI), and it also authorized the firms to establish as public listed company. Moreover, MCI makes sure that companies are abiding with all the listed rules of company law and related authorities (MCI, 2014).

2.2.2 The Capital Market Authority (CMA)

It was established in 2004 with the main function of overseeing and regulating the Saudi stock exchange known as Tadawul. There are five members in its board of directors who are solely answerable to the prime minister. Some of the many objectives of Capital Market Authority (CMA) Develop and regulate Tadawul, stockholder's rights protection against any unfair and unjust practices, improve fairness and transparency practices of the listed firms.

2.2.3 The Saudi Stock Exchange (Tadawul)

The stock exchange market started and was in its early stage during the 1930s (Alajlan, 2004). It was formally established in 1985 under the supervision of the Saudi Arabian Monetary Agency (SAMA, the central bank); Initially Saudi Arabian Monetary Agency SAMA was solely overseeing and regulating market activities followed by the capital market authority CMA in 2004. After approval from the Council of Ministers in 2007 under Article 20 of the CMA formed Saudi Arabia stock exchange known as TADAWUL with nine board member under one chairman was formed (Tadawul, 2007).

2.2.4 The Saudi Organization for Certified Public Accountants (SOCPA)

This body was formed to review develop, and enhance, approve accounting and auditing standards and practices. It was formed under the ministry of commerce and industry MCIs supervision (SOCPA, 2014). This regulatory body is authorized to oversee broad spectrum of auditing and accounting related standards. It also equips all related parties with the required resources to achieve the economic capabilities that enable their facilities to proceed in the long term (Bahrawe, 2016).

2.3 Main laws governing the corporations-Corporate Governance Saudi Arabia

2.3.1 Laws and Regulations in the Saudi Business Environment

The corporate legal framework in Saudi Arabia consists of several laws and regulations that cover the business environment. These laws and regulations play a vital role in regulating and governing Saudi firms' structures and operations. This section sheds light on the important laws and regulations that are related to corporate governance.

2.3.2 The Companies Law

Companies Law has been derived from British companies' law and was adapted according to Saudi Arabia context in 1965 (MCI, 2014). However, these laws do not effectively protect minority shareholder's rights, and were found to empower majority shareholders with unrestricted control while abusing their powers (Almandine, 2011). Under this backdrop the company law 1965 was revamped to tackle the shortcomings of the obsolete law and to meet the contemporary needs of the public sector and create a motivating environment for investors. The amended Company law was published in the Official Gazette on (4/12/2015) that was enforced on 2 May 2016 (Alkahtani, 2016; Naif et al., 2019).

2.3.3 Corporate Governance Regulations (CGR)

The transition happened in 2003, with the formation of CMA followed by the transfer of all duties from SAMA in pursuit to establish an integrated approach to corporate governance. Consequently, the Corporate Governance Regulations (CGR) was formed in 2006 that encapsulated all the features to ensure that the listed corporations abide by all the laws to ensure best governance practices (CGR, 2006). However, even after the CGR was published about 57.1% of the number of listed corporations sufficiently applies corporate governance policy as these regulations are distinguished as nonbinding, and some scholars

argue that only 25 corporations, out of 150 corporations listed in the stock exchange are applying Corporate Governance Regulations (CGR) (Faleh, 2013).

2.3.4 Listing Rules (LR)

Another effort to streamline the corporate governance practice according to international standards by CMA was to issue the listing rules on 3-11-2004. These rules were decreed as guidelines to monitor listed companies' activities in TADAWUL behaviours. The listing laws were made obligatory for all the firms listed, noncompliance to them needed explanation for the deviation (Steven, 2008). The Listing Rules LR aimed to affirm shareholders' rights protection, and is intended to ensure full disclosure of financial material and other information and giving voting rights to stockholders (Padraig et al., 2012).

Agency theory can be traced back to the research work of Adam Smith who initiated the debate relating to the separation of ownership and control in a corporation (1776/1952). Despite this early finding, agency concept in business management contexts did not significantly develop until Berle and Means 1932 insights on separation of ownership and control in the corporation. They argued that "ownership by few stockholders becomes challenging, as it becomes difficult to control power abuse by concentrated ownership" (McCraw, 1990, p. 582). In 1972 theory of agency was studied and was linked to the old theory of economic developed by Alchian and Demsetzin (1972). Jensen and Meckling in 1976 aggregated the concerns agent and principal into the 'agency conflict' in governing the corporation- They argued that agents who are hired by the principal/owner to work on their behalf are selfish and commits 'moral hazards' just to increase their personal wealth at the cost of stockholders (Jensen & Meckling, 1976).

2.4 Corporate Governance Theories

Corporate governance is frequently explored across most conventional theories that are agency theory, stewardship theory, resource-dependence theory, and stakeholder theory. Corporate governance which has become an important agenda for listed companies worldwide comprises interacted parties such as shareholders, board of directors (BOD), Chief Executive Officers (CEOs) and stakeholders. A corporate governance issue seems to appear when agents and managers of top management teams (TMT) like chief executive officer CEOs pursues their own agendas on shareholders and principal's behalf. Corporate Governance Dynamics have been explained by numerous schools of thoughts and agency theory tops the list, however other theories like stewardship theory and stakeholder theory are also espoused to explain the relationship between different players in the firm (Melis, 2014). These theories are not mutually exclusive or collectively exhaustive, but they provide basic justifications to numerous findings into corporate governance and performance.

2.4.1 Agency theory

Extensive literature validates agency theory predictions in different contexts under different disciplines. Economic agency theory was given by Ross in (1973) and henceforth the researchers in management adopted this approach to study more specific agency concerns in the contexts of corporations and corporate governance. At the beginning of 21 century, agency theory gained popularity and became main theoretical perspective, perhaps most persuading the strategic management area, since it was applicable to executives working as manager-agents (Bergh et al., 2018). Agency theory is tested on conventional theoretical arguments and assumptions that have been in place for decades, however recently it has seen some theoretical development and have been tested on contemporary corporate

governance structures as well (Drover et al., 2014; Pepper & Gore, 2015; Bosse & Phillips, 2016).

To understand different corporate governance mechanisms considering agency theory two important terms are vital to comprehend-Agency cost and principal-agent conflict. Since all the mechanism are designed to reduce the principal agent conflict by reducing the overall agency cost, therefore before discussing literature on different mechanisms under the agency theory, insights on principal-agent main conflicts are reviewed. The division of ownership in existing companies provides the basis for the functioning of agency theory. Shareholders select directors to oversee the firm's activities, the directors then hire agents to run day to day routine tasks (Wahab et al., 2011). This separation of ownership and rights to control ends up in the conflicts of agent and principal's interest. Principals delegate authority to agents but unfortunately agents' goals often differ from their principal goals as they indulge in activities for perianal gains. Carausu (2015) outlined seven agent's activities that are contrary to what is expected of them by principals of the firm - The agent:

1. Misuse their position. They not only try to misuse the power of their position but also use the firm's money in their own favour.
2. Form empires. The manager tends to build huge empires since they want to control huge corporations, not minor ones.
3. Utilize entrenchment reserves these managers uses the reserves in areas where the manager has familiarity and experience, but the possible benefit is lower than the anticipated risk.

4. Illogical conduct towards risk. Managers try to act irrationally by getting in uncertain investments if their rewards and pay is linked to performance or take no risk when their pay or reward is not linked to company's performance
5. Conflicts of earning retention. The manager tries not to distribute dividends by retaining profits at firm disposal and not allocating it to shareholders
6. Differences in time horizon. Most managers need short performance since their reimbursement is subjected to it and shareholder needs long-term expansion.
7. Offensive conduct. The managers try to manipulate the accounting facts, deficiency of transparency and may consume severance agreements options

Agents/manager- hired by the owners/principals, basically do not own the firm but because of their capabilities and competence holds a better position to control the corporation. However due to their selfish nature mostly agents are enjoying personal benefits at the expense of shareholders or principals of the firms (Jensen & Meckling, 1976). Therefore, superior monitoring and controlling measures must be devised, to curb agency cost and make sure that stockholder's interests are taken care of (Jensen & Meckling, 1976). Agents are opportunists and thus exhibits free riding behaviors which were initially described as "soldiering" by Frederick Taylor in (1911). Agents/managers conceal information (information asymmetry) from principals/owners to secure their jobs, and is interested in achieving results by putting in minimum effort, on the contrary the principal is concerned in maximizing his wealth by assigning stringent job requirements (Bergh et al., 2018). Thus, there exist an issue of principal-agent conflict.

Conceptualization provided by agency theory helps to concentrate on only two parties and its one-dimensional perspective aids to carry out analysis quite easily (Watson &

Head, 2016). Narrow definition of corporate governance provided by (Organization for Economic Co-operation and Development (OECD, 2001) -that contemplates the role of corporate managers, entrepreneurs (corporate insiders) and shareholders and the agency theory that directly connects external and internal governance mechanisms and performance of the firm (Nguyen, 2015) - are appropriate and consistent with the aim of this thesis to examine the impact of corporate governance mechanisms on firm performance.

Agency theory provides robust foundation to test hypotheses for explaining principal agent relationships and suggest remedial measures to mitigate agency conflicts and enhance shareholder returns, resulting in better firm performance (Fama & Jensen, 1983; Jensen & Meckling, 1976). A set of proposals has been recommended by many scholars in agency theory, to control and direct agents through incentives (Sridharan et al., 2007). Pre agreement mechanisms refer to all the actions and procedures taken to minimize wrong hiring of the agent. These include selection procedures interviews, background checks, and other information-gathering procedures. The second one is known as post-agreement mechanism that is another monitoring method after the agent is hired and is on board. Bonuses, stock options and other same types of incentives are one of the post agreement mechanism aimed at reducing principal agent conflict (Bosse & Phillips, 2016).

2.4.1.1 Board of Directors

Agency theory proposes that the board of directors' acts as representatives of the various shareholders and stakeholders of the company for monitoring the performance and controlling the activities of the managers. The board size and its influence on the firm's performance attracted much attention by corporate governance scholars. Board of directors is elected by the stockholders to oversee and monitor the agents-and board in togetherness impacts the bottom-line results in firms (Vaidya, 2019). Firm's performance is influenced

by corporate governance mechanism when measured by board size (Qasim, 2014; Badu, 2017).

Agency theory (Jensen & Meckling, 1976; Eisenhardt, 1989) presumes the segregation of ownership and control that indicates a conflict between the owners and manager's interests. The theoretical part of the board of directors in controlling and disciplining agents is resolutely grounded in the agency structure established by Fama and Jensen (1983). The main role of the board of directors in origin is to monitor managers and bring into line their interests with those of the stockholders. In principle, it is the fiduciary responsibility of the board of directors to guard the interest of the stockholders (Adams et al., 2010). Looking at the general tasks of the board, it fulfils two main roles according to Kuma and Sivaramakrisnan (2008) that are controlling and monitoring. Monitoring is a mechanism that can be espoused by the board to bring into line the incentives of the stockholders and the managers. The idea is to protect the stockholders from losses and any financial and market catastrophe. The monitoring is the only possible solution that comes up with an agency cost. Board of directors helps the corporations by monitoring the agents thus minimizing the cost of agency and increasing firms' performance.

The systematic review of the literature related to the topic is divided into mixed opinions by the scholars. Fama and Jensen (1983) argued that the main duty of board is to oversee day to day tasks of agents, to track managers activities (Su et al., 2008) In principle, it is the contractual responsibility of the board of directors to protect the interests of the shareholders (Adams et al., 2010). The two main roles of board members are controlling and monitoring (Fama & Jensen, 1983). Monitoring is a mechanism that can be espoused by the board to bringing incentives into line of the managers and the stockholders. Organizations

seek to arrange their boards of directors to confirm enough monitoring of agents. The idea is to protect the stockholders from losses and any financial and market scandal. The monitoring is the only possible solution that comes up while exploring the problem of agency. This is accurate, however; the cost related to this monitoring has to be noticed. No stockholder wants to be accountable for these costs so these stockholders as a group elect board of directors for monitoring role (Berk & DeMarzo, 2006).

2.4.1.2 Board Size

Board of directors helps the corporations by monitoring the agents thus minimizing the cost of agency and increasing firm's performance. However, the question remains that how many members should be there on the board to perform effectively. There exists mixed empirical literature on the board size and firm performance. Some scholars opined that larger board size is ineffectual, whereas small boards are efficient and effective in increasing financial performance of firm (Lipton & Lorsch, 1992; Sonnenfeld, 2002). Whereas some argue that the board should be of an optimum size (Jensen, 1993). Some scholars (Lipton & Lorsch, 1992; Yermack, 1996) concluded mixed results between board size and firm performance. Larger boards are ineffective as per Sonnenfeld (2002) and this is due to the reason that large board utilizes more resources of the firm in the form of salaries, remuneration, compensation, and prerequisites. That is also known as the "ceteris paribus" which means bigger boards spend more monetary and non-monetary corporation funds. Secondly, in addition to being difficult to handle, the larger boards are comparatively easier to handle by a powerful CEO due to the shirking and free riding associated directors (Jensen, 1993). Some researchers suggest that large boards are less likely to work effectively, which may result in a decreased sense of personal responsibility and may give in to bureaucratic

issues. Jensen 1993 idea of smaller boards was also supported by different studies (Velnampy, 2013; AlMatari et al., 2014).

Agency theory believes that larger board size enhances the firm performance by better monitoring by a large group of people (Kalsie et al., 2016). Prior literature advocates that there is the positive link between board size and bottom-line performance of the corporation (Khanchel, 2007). Accordingly, the effective composition of the board consists of 7 to 8 members. Lipton and Lorsch (1992) further argued that an appropriate size is 8 or 9 board members. The size of the board should be between 8 and 9, as when they go beyond maximum sum of 10 extra expense of having bigger boards usually linked with reaching a decision at a slower pace higher than any marginal gains from extreme monitoring of agent's day to day activities (Lipton & Lorsch, 1992). Ultimately, the larger boards have higher agency costs and are far less successful than smaller boards, which mean that restricting board size can improve competence (Yawson, 2006). Hackman (1990) also supported in his organizational behavior research, and he argued that larger board size reduces firm's performance. Berger et al. (2012) advocated that the board size and firm results are linked negatively insignificantly to the use of panel samples data from 328 US banks. They stated that large corporate boards face challenges related to effective communication and efficient decision making due to lack of coordination between too many board members. In-between 1988 to 1996 Dahya et al. (2008) used a survey of 400 UK businesses that found negative correlations between the top management turnover and board size in terms of results. Staikouras et al. (2008) argued that the board size is negatively impacting the firm performance when it was tested using the sample of 58 great European corporations over the period 2002-2004 since large board face challenges of communication, decision making and coordination between members. Guest (2008) argued that large boards impact negatively on

performance of the firm when he studied large sample of 2746 UK corporations from 1981-2002. O'Connell and Crammer (2010) investigated board size impact on firm performance and found inverse relationship between the two amongst 44 public listed companies in Republic. Lawal (2012) argued that it was preferable for small boards to promote relevant, honest, and insightful conversations and members' participation that would appear to result in successful corporate decision-making, monitoring and performance improvement.

Another argument that many scholars have put forward in the agency theory is that large boards are successful (Coles et al., 2008; Kayola, 2008; Sanda et al., 2010; Adaams & Mehran, 2012; Sheikh et al., 2012). It was indicated that when the size of the board increases the market responds favourably and these large boards are better monitors for the firms with poor performance. They further stated that these boards bring in with them diversity, experience, and different communication skills (Sheikh & Wang, 2011). Javed et al. (2014) have stated that a large size of the board is more effective in observing agents. The same idea was supported by Psaros (2009) who argued that larger boards help corporations by:

- providing a larger pool of knowledge and experience,
- providing a larger managerial overview, and
- providing access to a wide range of contact details and sources.

2.4.1.3 Ownership Concentration

As discussed above in corporate governance literature section- one of the agent principal conflicts occurs mainly due to an issue of information asymmetry. The agent tends to hide most of the information to secure his own position. Agency theory parades this issue and suggests that shareholders with large block of shares forms a concentrated ownership impact the performance through controlling the decision-making process while mitigating

the agent principal conflict. Jensen (1993) and Jensen and Meckling (1979) thus enhances firm performance by making the owners more willing or able to monitor agents (Yasser & Mamun, 2017). Shleifer and Vishny (1986) argued that shareholders can control the performance of agents either internally owned by shareholders or boards and directors, or externally such as concentration ownership and regulators. Alimehmeti and Paletta (2012) stated that there is ample evidence that supports the notion that concentrated ownership referring to large block of shareholders are more active in monitoring firms thus resulting in a boost to the firm's performance.

Omran (2009) and Siala et al. (2009) argued that the agency's theory intends a concentration of ownership as a key factor favouring better corporate governance. Preliminary studies by Shleifer and Vishny (1986) found that large shareholders had strong incentives to monitor management performance, mitigating the agency's conflicts. Prowse (1994) furthermore backs former studies by affirming that focused ownership referring to large block ownership in businesses will lessen the problem of agency and agency costs.

Literature proposed different measurement for ownership concentration. Some of the earlier researchers considered the percentage of the stock owned by the top five investors, while others considered stocks percentage owned by top 20 investors as a proxy for ownership concentration. Companies are known to have concentration of ownership when a single block of shares greater than 5 or 10 percent is available and may be considered block holders (Alimehmeti & Paletta, 2012), 5% or more ownership of a company is another example to take account of block ownership (New Zealand Securities Commission, 2006). Considering this, the ownership concentration which is taken as an instrument of an external monitoring mechanism in this thesis is analysed in detail. One of the essential aspects of CG

structures is the ownership framework. The block shareholders which mean the largest block of shareholders are taken as a proxy of ownership concentration. Azam et al. (2011) argued that ownership concentration can be described as the percentage of corporation's shares held by the majority stockholders. Likewise, as stated by Sanda et al. (2010) and Karaca and Ekşil (2012), block shareholders are the ratios of stocks retained by the 5 major shareholders.

Agency theory contemplates that Ownership concentration mitigates agent-principal conflict; however empirical investigation exhibits mixed results. Concentrated ownership tends to enforce and control the management which leads to negatively influenced firm's performance, because the independent decision-making is conceded (Khan et al., 2013). Pedersen and Thomsen (1999) argued that there was no impact of ownership concentration on firm performance when 12 European firms were investigated. In addition, some studies in the Arab world examined the relationship between the concentration of ownership and company performance. AlShiab and AbuTappanjeh (2005) investigated ownership concentration impact on firm's performance from 1996 to 2002 for 50 publicly listed firms in Jordan and found inverse relationship between both.

On the contrary, Farooque et al. (2010) argued that there is positive relationship between ownership concentration and firm performance in developed as well as developing countries. Similar outcome was reported by Soliman (2013) who claimed that a strong relationship existed among large stakeholders and worth of firm. Grosfeld (2006) argued that the ownership concentration and firm performance has a significant relationship. Berle and Means (2012) stated that the ownership concentration is positively associated with the company's performance. Certainly, large shareholders cannot use ample authority to oversee agent's performance. Therefore, agents exercise more advantage in the utilization of

resources in case of the single shareholder as compared to a concentrated group of shareholders or high ownership concentration. Thomsen and Pedersen analysed in (2000) the impact of ownership on firm performance on a sample of 435 listed European enterprises over a period of five years. They found out that ownership concentration significantly impacts the overall firm's performance. Similarly Leech and Leahy (1991) also investigated 470 public listed companies in the United Kingdom from 1983 and 1985 and found a positive significant relationship between ownership concentration and firm performance. However, they found that there was a negative significant relationship here between firm's performance and the concentration of ownership.

Empirical studies of governance issues in Saudi Arabia, including ownership structure, are limited to a few areas. Among the recent studies that have investigated governance issues include Eljelly (2009), Al-Hussain and Johnson (2009), Soliman (2013), AlSahafi et al. (2015), AlGhamadi and Rhodes (2015), Alhumoudi (2016), and Buallay et al. (2017). Of these studies, AlGhamadi and Rhodes (2015) examined shareholders holding above 10 per cent equity stake in family and non-family-owned Saudi firms and show that while shareholder ownership was positive, its overall effect on firm performance was insignificant. Meanwhile, Alhumoudi (2016) examined Saudi ownership structure focusing, in particular, on managerial and shareholder ownership concentration above five percent and report that managerial ownership had a positive effect on firm performance, while Buallay et al. (2017) in examining the impact of corporate governance on firm performance found a significant and negative effect of the three largest shareholder grouping on firm value. What all these studies impart is that any empirical study covering ownership structures should include a sample that takes the corporate landscape of Saudi Arabia into consideration, which is what the present study seeks to address.

2.4.1.4 Audit Quality

Agency theory stipulates that one way to control the agent principal problem is to hire an external auditor to check the correctness of the company's financial statements (Wahab et al., 2011). Scandals of Enron and WorldCom have brought the auditing and financial reporting into scrutiny especially the external auditors whose role is to ensure the correctness and quality of reports (Iatridis, 2012). Tsipouridou and Spathis (2012) argued that financial statements users consider the external audit report if they are not sure about firm's published reports. These external audit firms are basically issuing the audit report that is a tool to be used while making an investment decision in company's capital. This scenario generates the need for an independent third party, which adds reliability to the financial statements that are published through auditing and giving an opinion on this financial information. As a result, the external auditor plays a key role in limiting accounting manipulation, thus reducing conflicts of interest, and minimizing asymmetric information between the owner/stockholders/principals and the management/agents/ managers (Jensen & Meckling, 1976).

Audit quality is referred to as one of the combined possibility that the auditor will identify variances, errors and make them public in the form of a report. The quality of the audit relies on the professional competence and independence of the auditor. The ability to find fraudulent activities in the reports is a function of auditor professionalism, while the propensity to reveal them is a function of auditor's independence. Audit quality is known as the cumulative likelihood of the auditor discovering and reporting variances and errors. The role of auditor competency is the capacity to identify material abuses in reports, while the requirement for their disclosure is the role of auditor independence. The quality of audited reports by big four audit firm offer higher quality of audit since they have better monitoring

strength than the non-big four audit firms to result in higher quality and credibility of financial information (Ardiana, 2014).

Numerous audit quality theories and the reputation of auditors (substituted by accounting firm size or name of brand) validates that 4 Big four audit firms ensures better information quality and reliability (Alhaji et al., 2013). Empirical literature by (Avison et al., 2012; Abid et al., 2018) provides a strong view that large audit firms deliver better quality audits related to specific firms.

Most of the previous literature analyses that the quality requirements of the audit have been inspired by the need to deal with the conflict between agencies. Information irregularity between shareholders and executives poses a challenge to moral hazards. Thus, these investigations suggested that inventors and managers should consider an auditor of high quality. Big four Audit firms offer auditing services of great value, argued Francis (2006), Choi and Wong (2007) and DeFond et al. (2014). DeAngelo (1981a) contributed towards audit quality literature by defining audit quality. His studies of independence and the competence of auditors of large audit firms hold a significant position in audit quality literature. DeAngelo argued that checking the quality of audit is costly since the capability of the consumers to observe the procedures of audit are quite limited (1981b). Author argued that audit firm size should be used as a proxy to measure the quality of audit. Yaşar (2013) examines the audit quality impact by using the survey for the years 2003-2007 for publicly listed companies in Istanbul Stock Exchange (ISE). The size of the audit company was used as an audit rating agent for this report. The audit quality of the Big Four and non-Big four audit firms in Turkey was concluded to be unchanged. Audit quality has been proxied by

Big four auditors in the accounting literature (DeAngelo, 1981; Becker et al., 1998; Francis & Krishnan, 1999; Francis et al., 1999).

On the contrary, the proponents of Big four audit firms strongly argued that non-Big four audit firms do not disclose material misstatements as they fear losing their customers. Audit quality literature empirically testifies the impact of hiring big four audit firms and its impact on better quality audit reports and error free results (Avison et al., 2012; Alhaji et al., 2013; Mohammad et al., 2018) provide a solid view that large audit firms implement higher quality audits specifically for small firms. Almatari et al. (2014) argued that large audit firms have stronger incentives to protect their reputation in the market because they lose customers if they perform low-quality audit process. Besides, motivations for larger audit firms to reduce audit quality will be lower since they do not want to compromise on their reputation. Carcello et al. (1995) discussed that big audit companies have better quality than the smaller firms due to many reasons. Firstly, big audit firms are capable to provide thorough training for their staff, which leads to the development of their competence. Secondly, it is also discussed that more developed and structured audit method practiced by them increases their capacity to issue precise audit judgments through superior detection of miscalculations and omissions. Big audit firms are more careful in reporting because they have more inducements to decrease litigation loss to uphold their reputation (DeAngelo, 1981a; DeFond et al., 2002) and are less likely to be dependent on a single customer (Stice et al., 2017).

Audit quality advocates that hiring Big four audit firms impact the quality of audit that in turn helps to mitigate the problem of agency however scholars yet there is no consensus. Most of the literature in the audit quality related studies concluded that Big four auditors are superior to the non-Big four auditors. AlShammari et al. (2008) stated that firms

that hire Big four audit companies comply more with the international accounting standards. They investigated the extent of compliance for firms operating in GCC Gulf Co-Operation Council Countries region. Weiner (2012) examines the reasons for replacing auditors and moving to Big four audit firms and concludes that if the company chooses to move to one of the Big four firms, it is searching for a larger "name brand" auditor. The relationship between numerous factors including the audit qualities associated with higher performance in Malaysian ACE public companies (Access, Certainty, and Effectiveness) was investigated by Sulong et al. (2013). The survey showed that the quality of the audit has a statistically significant adverse effect on the company's performance.

Many scholars argued that big audit firms give high quality level of audited financial statements after audit. They stated that the size of the firm will impact the quality of audit. DeFonds et al. (2014) argued, for example, that large auditing companies have a positive impact on the quality of the audit services because they employ more experts and have superior financial and technical skills to provide big business. In comparison, the number of staff, clients and financial resources at the small audit companies are extremely limited (Sawan & AlSaqqqa, 2013). Jusoh and Ahmed (2014), who used the data of 730 listed companies in Malaysia, investigated the impact of audit quality on the company's results. It was argued that when measured by ROA and the Tobins Q, audit quality has a positive effect on firm performance. Sawan and AlSaqqqa (2013) studied the association amongst the audit firm size between size and audit quality by using the questionnaire. The study concluded that the sampled firms in Libya agreed that the Big four companies are superior to their non-Big four companies. In terms of the resources and audit techniques, such superiority is observed, and the subsequent drive to operate as confidently as necessary.

2.5 Firm's Performance

Corporate governance mechanisms are expected to increase the performance of the firm, and the firm's success is essentially explained by its profits. Gompers et al. (2003) argues that the firm's profitability is a marker of good corporate governance. The literature of the firm performance validates that good corporate governance will result a positive impact on the firm's financial performance (Bozec et al., 2010; O'Connor & Rafferty, 2012; Entebang & Mansor, 2015; Kyere et al., 2021) yet empirical evidence in the literature is mixed. As many scholars argues that there is an inverse relationship between corporate governance mechanisms and firms' performance (Bathala & Rao, 1995; Hutchinson, 2002) or there is no significant relationship between the two as few scholars could not established any relationship (Park & Shin, 2003; Singh & Davidson, 2003). These inconsistencies in the literature also call for further investigations to test if corporate governance mechanism helps to increase the performance of the firms.

Scholars have identified several ways to measure the firm's performance over a certain period. Two-accounting based, and market-based measures are indicators of the firm's performance- however scholars have taken certain assumptions while using both or one of them Accounting based measures are utilized to measures the profits of the business though marketing-based measures are utilized while considering the investor perceptions of the potential performance of the firms (Shahar & Shahar, 2015). Accounting based measures are backwards looking measures (Shan & McIver, 2011), and exhibits the results based on the evidence effected by firm's strategies and policies in the past. From shareholders/principals' point of view. For example, two ways to measures the accounting-based measures is ROE and ROA. ROE return on equity is most critical as it shows the return of the stockholders; similarly, ROA reveals as to how much profit the firms in relation to the

money invested. Both ROA and ROE are significant indicators of firm's performance for instance higher ROA and ROE indicates an effective use of the firm assets and equities in enhancing the shareholders' stock value. Moreover, another advantage of using ROA and ROE is that they exclude the problem of the company size or type (Haddad et al., 2011; Almatari, 2014; Al Tufa & Teslu, 2014).

Another way to measure firm performance is through market-based indicator also known as Tobin Q. Tobin Q reflects the stock market's insights of the firm's future profits projections and growth opportunities. Market measures give a reflection of current and long-term financial performance. However, market-based measures are criticized by scholars as deceiving indicators as they are mainly based on future predictions (Kingsley et al., 2012). Dybvig and Warachka (2015) argue Tobin's Q does not determine financial performance and reflects the stock market's perception of the firm's future earnings prospects and growth opportunities.

Accounting-based performance measures present the management actions outcome and are hence preferred over market-based measures when the relationship between corporate governance and firm performance is investigated (Hutchinson & Gul 2004; Mashayekhi & Bazazb, 2008). Essentially, market-based indicators are effective indicators of firm performance only if the market information is efficient; however on the contrary the market is not always efficient in practice (Hax, 2003). Moreover, Dybvig and Warachka (2010) argued that Tobin q does not measure firm performance he further insists that there is an endogeneity problem when Tobin's Q is used to measure the economic implications for corporate governance (Dybvig & Warachka, 2015).

Therefore, scholars prefer accounting-based measures over market-based indicators to comprehensively understand firms performance (RaedMasadeh et al., 2015). Bearing in mind the above literature this study will incorporate accounting based measures (ROA, ROE) for current study as the dependent variables. This is one of the reasons for selecting only accounting based measures as a predictor of an organization's performance.

2.5.1 Stewardship Theory

Stewardship theoreticians believe that offered a preference between the two behaviours that is self-serving- pro behaviours, a steward will exhibit conduct aiming to increase corporate wealth through cooperation and moral conduct (Aydemir, 2012).

Donaldson and Davis (1989) who advocated the stewardship theory, argued that manager is not opportunistic shirker, rather they are honest and stewards of the company they are employed at. These stewards who are agents and working on behalf of the owners of the firms, exhibit moral conduct towards the corporation, and thus holds intrinsic motivation and organizational commitment towards the firm (Davis et al., 2007). Unlike the agency theory, stewardship tends to give a distinctive perspective of governance, where supervisors are regarded as great stewards that work for the interests of owners (Madison, 2014). Steward's activities are adjusted to the interests of the organization as the steward lives up to expectations for the achievement of firm's objectives (Nicholson & Kiel, 2007).

This theory concentrates on the enabling structure preferably than a structure that controls and monitor. Thus, stewardship theory does not stress over the differentiated position of CEO and Chairman rather designates a single individual for both positions and different specialist executive directors. Moreover, stewardship theory is embedded in psychology and sociology (Abdullah & Valentine, 2009). It recommends that managers and

executives are excellent stewards whose inspirations are associated with the shareholder's interest. The stewardship theory ignores the majority of economic rationality (Madison, 2014) and rather emphasizes the behavioural aspects of the agent (Aydemir, 2012). Moreover, despite the fame it is empirically difficult to test it, as it lacks specificity. Hence, it is impossible to operationalize it in a way that enables scientific assessment (Key, 1999).

2.5.2 Resource Dependence Theory

Pfeffer and Salancik (1978)'s presented this theory in his book "The external control of organizations: A resource dependence perspective". The main idea advocated in this theory was that organisations try to control their environment by co-opting the resources required to survive. Resource dependence theory explains the corporate governance mechanisms and how they can impact firm performance (Hillman et al., 2009). The board of the directors are responsible to gain the resources from the external sources of environment to make corporation's survival possible. Due to this very reason the investigation of the salient characteristics for uncertainty of environment remains important for the board of directors. The literature argues that networking can reduce the cost linked with environmental interdependency (Kiel & Nicholson, 2003).

The corporation needs resources that is taken from the external environment, and for that reason these corporations creates the interdependence in the organizational leadership that can get their part of resources from unequal distribution of resources. Interdependency intensity is reliant on many characteristics like resources significance, resources availability and the concentration of them in the environment.

To cope up with the uncertainty so that the firms can survive- the board of directors of the corporation may link their firms with the resources they need from the external

environment. The firm decision makers are responsible for the resources procurement to make sure the survival of the corporation. McKerlich et al. (2013); Yoshikawa et al. (2014) argued that the directors help the firms through their strong networks buyers, suppliers, information's, social groups, public policy, and regulatory decision makers that help to acquire the required resources needed for firm's operations.

Hillman et al. (2000) argued because of their ability and social networks directors or top management's supports the enterprise in handling troublesome situations (Johnson et al., 2013). This theory has been established in advanced economies and developed countries context, thereby little or almost no consideration in emerging economies (Fan et al., 2011).

More notably, earlier literature has essentially overlooked bundling circumstantial concerns of developing markets by theory, and instead have adopted in similar with it (Xu & Meyer, 2013). The dearth of assimilation between theory and context suggests a precise analysis of a phenomenon in developing countries would not be attained.

2.5.3 Stakeholder Theory

Stakeholder Theory is a view of capitalism that emphasizes the relationship amongst a firm and its all stakeholders that incorporates (customers, investors, workers suppliers and others) who are influenced by the decision of the organization (Friedman & Miles, 2006). Stakeholder theory was first established by R. Edward Freeman (1984). He defined the term stakeholder as "any group or individual who can affect or is affected by achievement of the organization's objectives" (Freeman 1984, p. 46; Mitchell et al., 1997, p. 856). The theory argues that a firm should create value for all stakeholders, not just shareholders. Anyone whose objectives are directly or indirectly related and affected by the company, or who has an impact on the objective achievement of the company, are called stakeholders, Stakeholder

theory incorporated the accountability of management to a broad range of stakeholders (Adnan & Tandigalla, 2017).

The stakeholder's theory establishes that a promising environment can be generated by all stakeholders who incorporate the comprehension of corporate social responsibility. Kyereboah and Biekpe (2006) argued that corporation gather investment from stockholders, They rely on staff / agents to carry out the business purpose (Wakaisuka, 2016). The theory stipulates that the outstanding corporations are ones with devoted dealers, consumers, and personnel and stakeholders to deliver on their promise.

Islam (2011) argued that CEOs perform an essential task for all stakeholders to manage relationships; the objective is to improve capital by way of these union members. This will, nonetheless, be achieved through a social commitment and environmental commitment of a firm that reveals the difference to agency theory, in which only the shareholders play the major role. CG in this setting is the system that protects the responsibility of the corporation to direct its activities in the way of a just system for all factions engaged. However, this theory has not been subjected too much rational and empirical analysis. The usual criticisms are that how to bring into line the stakeholder's contradictory benefits because the challenges stem from how to manage different shareholders with various requirements and desires. It is impractical to manage all shareholders likewise (Velamuri & Venkataraman, 2005).

Table 2.2: Corporate governance theories briefly

Aspect	Agency Theory Adam Smith (1776) and Berle and Means (1932)	Stakeholder Theory R. Edward Freeman (1984)	Stewardship Theory Donaldson and Davis (1989– 1991)	Resource Dependency Theory Pfeffer and Salancik's (1978)
The main problem	Conflict of interest between agent and principal	Stockholders and managers should be responsible and how accountability is achieved. - How managers can fulfill the different interests of all stakeholders.	Stewardship theory seeks to enhance cooperative behaviour and investigates how organizational objectives can be met along with personal requirements	Corporation will respond to and become dependent on those organizations or entities in its environment that control resources which are both crucial to its operations and over which it has limited control
Focus	Monitor and control	Corporate social responsibilities	Facilitate and empower	Resources
Critiques	Agency theory's pessimistic assumptions of human behaviour as opportunistic would seem to preclude trust and cooperation between the principal and agent (Wiseman et al., 2012)	Ignores most of the economic rationality. lacks specificity puts more emphasis on managers weak in addressing the "conflict of interest" between the principal and the manager incorporate organizations (Jensen, 1976)	It is impractical to manage all shareholders equally (Velamuri & Venkataraman, 2005). Stakeholder theory also neglects the role of other important players in a company. (Al anazi, 2019)	Overlooked bundling circumstantial concerns of emerging markets (Xu & Meyer, 2013).

The thesis underpinning agency theory helps to explain the effective implementation of corporate governance for mainly these reasons

- To begin with, agency theory focuses the contractual relationship between the principal and agent. It is vital to point out that it is the contractual agreement that makes a corporation exists, since it lays down the main foundation of laws and procedures that are directing any corporation's overall operations. Agency theory extensively explains the relationship in the contractual agreement that brings people together and suggests remedial measures to avoid the conflict of interest between this relationship (Mallin, 2019).
- Additionally, agency theory is appropriate in explaining corporate governance because it focuses to checkmate the agent's activities and ensures that they do not misuse their power against the principals and stockholders and lastly the theory also addresses power and accountability—not only between principals and managers but also between the board of directors, shareholders, and the community Most important problems that this theory deals are about “how to grant managers enormous discretionary power over the conduct of business while holding them accountable for the use of the power”. This is critical in keeping the smooth and successful running of a corporation (Alanazi, 2020).
- Agency theory is one of the dominant theories of organizations and management due to its specific focus on the relationship between principal (e.g., owner) and agent (e.g., management) (Payne, 2019).
- Agency theory provides robust foundation to test hypotheses for explaining principal agent relationships and suggest remedial measures to mitigate agency conflicts and enhance shareholder returns, resulting in better firm performance (Jensen & Meckling, 1976; Fama & Jensen, 1983).

- Since agency theory is unidimensional its perspective and explanation provide solid foundation to study, explore, and investigate corporate governance mechanisms impact on firm performance (Tricker, 2019).

2.6 Model of Corporate Governance

Different countries adopt different mechanisms that are aligned with their socio-economic cultures as the socio-economic culture helps to comprehend the fundamental concerns of the citizens of the country and their investment approach (AlMalkawi & Pillai, 2018). This section will briefly shed light on different models of corporate governance across the globe. Moreover, this section will also discuss as to why Saudi Arabia is closer to the specific model.

2.6.1 Anglo-US Model

The Anglo-American or Anglo-Saxon model is based on a triangle known as corporate governance triangle. This triangle comprises of three key performers: directors, management, and stockholders. This model is called unitary model in which there is a single board that is being appointed by the shareholders. The legal and regulatory environment has most broad guidelines also safeguarding the shareholder's right (Masroor & Hassan, 2018).

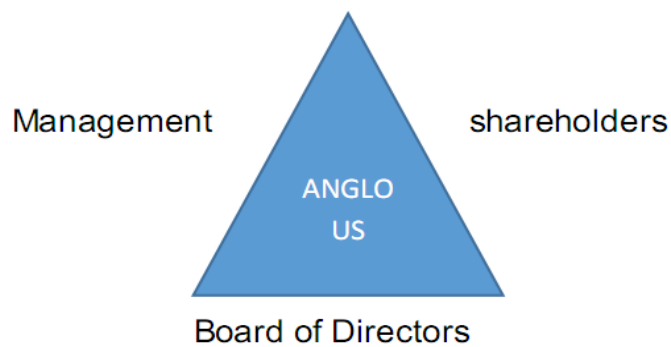


Figure 2.1: Key players of Anglo-US model

Adapted the Anglo-US Model from Christel Lane, (2003)

There exists a well-established and a proper arrangement for collaboration as well as communication between corporations and stockholders in the Anglo-American Model. Stockholders are not bound to attend the annual general meeting and they are given a right to choose even if they do not want to attend the meeting in person. This model presents that primary authority is with board of directors and shareholders as they are the controlling parties followed by the appointed agents and top management teams called CEO have secondary authority.

2.6.2 The Japanese Model

The Japanese model which is also known as the business network model is based on the cultural linked philosophy called “Keiretsu”. This model is a conglomeration of businesses that are associated with each other by cross-shareholdings to form a robust corporate structure. In the Japanese model of corporate governance, the corporations are owned by big families or financed by big banks. The Japanese model is different from Anglo American model as the governance patterns take shape in light of two dominant legal associations: one between stockholders, customers, suppliers, creditors, and employee

unions; the other between administrators, managers, and shareholders. The pattern of ownership is as follows Banks + insurance companies 43% other companies 25% foreign investors 3% (Lessambo, 2014).

2.6.3 The German Model

German organizations have a two-layered board structure involving an organization board (made overall out of insiders, i.e. executives of the firm) and administrative board (made from work/delegate specialists and shareholder delegates). The two boards are separate: firstly, individual cannot be a part of both authoritative board and administrative board at one time. Secondly, the extent of the administrative board is created by law and cannot be changed by stockholders. Thirdly, in Germany and different countries implementing this model, surveying right confinements are legitimate; constraining the rights of stockholder to cast their votes according to the fixed percentage of total share of company, irrespective of stock ownership position (Lane, 2003). The strong separation of ownership that is peculiar to public listed companies on the ruled financial market Fortuna 2001 created a corporation like the Public Company categorized by a capital fraction. The German model is close to one like Japanese model since it adopts the insider-system, known also as “relationship based” that is a network-oriented corporate system (Merendino, 2012). In this case, the existence of financial markets has petite effect while the financial intermediation that concerns the risk investment is very significant. This model practices a bank-oriented viewpoint. This model is also known as the continental model or European model.

The corporate governance in Saudi Arabia is fundamentally shaped by the Anglo-American model, as it is aimed at maximizing stockholders' wealth. Moreover, another

reason is the country's Saudi Arabian Corporate Governance Codes which are extremely comparable to United States established corporate governance practices that are founded on agency theory principles. (Fallatah & Dickens, 2012). Saudi Arabia corporate governance model is closer and best fits in shareholder-oriented model known as Anglo-Saxon/American model because board is rarely independent of management, the firms are run by agents who are appointed by owners and there is clear separation of ownership and management. Furthermore, Institution investors sell their shares in market and quit if they are not happy with the firm's performance and lastly minority shareholders rights are well protected (Alfaryan et al., 2020).

2.7 Upper Echelon Theory

Guided by numerous concerns- firm's financial performance has always been a recurring research theme in corporate governance literature. One of the biggest concerns for corporations nowadays is the creation of value for evaluating companies in an increasingly financialized economy. The prerequisites in terms of value creation start with questioning the way in which firms manage or transfer their risks. Hence, an abundant literature has emerged to investigate the determinants of firms' performance (Boadi & Osarfo, 2019). Between these factors, Chief Executive Officer (CEO) characteristics perform a vital role (Bandiera et al., 2020; Fernández & Tejerina, 2020). Likewise, the firms' success or failure is attributed to their managers since they are the decision makers and strategists in the organization. The CEO's role is to give direction and to drive growth, handle complexity and improve firm's performance and shareholder's value while decreasing and controlling costs. Recent corporate failures have added more pressure by raising the concerns of corporate governance efficiency and predominantly top management teams' behaviour. (Borgi et al., 2021).

Corporate governance mechanisms of monitoring and controlling the agent's day to day activities is impossible without CEO support. Numerous decisions starting from hiring agent or firing agents, taking risk, providing required quality information to board of directors before their meeting, searching, and hiring external auditors and many more to list are all under CEOs job description. The CEO is responsible to liaise in close collaboration with chairman of the firm and the board of directors along with numerous committees to make sure the firm operations are smooth (Barclift, 2011).

During the era of 1970s of Cambrian upsurge, the role of upper echelons was underestimated, which is reflected in the theoretical literature of those times (Davis, 2006). However, the scenario changed in 1984 after the empirical work of Hambrick and Mason, that established a robust paradigm in strategic leadership developed upon "upper echelons viewpoint". Empirical investigations by many scholars acknowledged the significance of CEO characteristics for firm's performance (Hayes, 2017).

The demographics characteristics are responsible mainly for forming the values systems of individuals, and they subsequently are perceived as valid substitutes for the individual's cognitive roles, influencing their strategic decision-making behavior at the workplace (Hambrick & Mason, 1984). Empirical literature espoused different constructs to measure CEO characteristics impact on firm performance for example; education level (Wiersema & Bantel, 1992), functional background, tenure (Hambrick et al., 1993), global experience, social status (Finkelstein et al., 2008), narcissism (Chatterjee & Hambrick, 2011).

As stated by the upper echelons' theory, Chief Executive Officer is the utmost significant, key decision maker, and the organization they lead is intensely influenced by

their personality, predilections and leadership style (Hambrick, 2007). The UET implies that upper echelons impact the bottom line performance of the corporation resiliently through their value system, cognition and personality. It is argued that when top executives anticipate a tactical situation, which produces many, difficult and vague stimuli, they don't have the ability and time to comprehend the whole state therefore they choose the specks of information and understand them as per their own field of vision, which is indeed limited (Hayes, 2017). Hambrick and Mason (1984) advocates that corporation reflects the CEO's characteristics. The proponents of UET in line with the early organizational theorists strongly support the notion that upper echelons really matter and strongly impact the corporation's fortune and bottom-line performance (Hambrick & Mason, 1984). Population Ecologists (Hannan & Freeman, 1977) and New Institutionalists theories that are predominant from 1940 till 1960 opposed the UET viewpoint since they paid a little consideration to the top managers (Meyer & Rowan, 1977; DiMaggio & Powell, 1983).

The empirical literature exhibits mixed opinion about the impact of the CEO's characteristics on performance of the firm. Lieberman and O'Connor (1972) and Salancik and Pfeffer's (1977), recognized top management accounts for less than 15 percent of the companies' performance whereas Weiner and Mahoney (1981) argued that top managers accounted for 44 percent to the firm's performance. Advocates of the echelon theory include Lawrence et al. (1967); Child (1972), who all agrees that CEOs are, involved in strategic decision-making process and choices that impact directly on the performance of the firm.

After Hambrick and Mason's seminal publication, the UET established tremendous empirical support demonstrating unequivocally that top echelons do impact the firm performance (Hambrick & Finkelstein, 1987). In the urge to test the upper echelon theory

management theorists have approached the question of whether top managers affect their firm in two ways. First, they measure the demographics of the top executives and relate them to the metrics of a firm's performance. Second, they gauge the primary psychological personalities of top executives and determine whether they relate to the performance of organizations. Though, the majority of the Upper Echelon Theory (UET) investigation took the 'demographic' method rather than the 'psychographic' one with a handful of analyses considering both demographic and psychographic variables. Based on the original and modified versions of the theory, it can be implied that top managers' personal characteristics can directly affect the performance of the firm (Carpenter et al., 2004). Abundant Literature have examined the CEO's – or Top Executive - Experience and CEO- or Top Executive- Personality traits' impact on the performance of the companies and found empirical evidence (Hayes, 2017).

2.7.1 CEO Education

Management literature encompasses many studies focusing on the impact of education backgrounds of upper echelons on their behaviour (Hambrick & Mason, 1984). Chief Executive Officers (CEOs) are on the top of firm's organizational hierarchy. Normally, they are accountable and responsible to make efforts for increasing the performance of firms. According to Hambrick and Mason's (1984) upper echelon theory- higher education relates to open consciousness, ability to inform and tolerance of change. The same was supported by scholars through their empirical work like Bantel and Jackson (1989) who argued that more educated upper echelons are more proactive and innovative. Top echelons /managers with higher level of education make productive strategic changes in strategy (Wiersema & Bantel, 1992). Smith et al. (1994) argued that educational heterogeneity positively effects firm performance measured by Return on Investments

(ROI), and there is a significant impact of level of education on firm performance when measured by share growth of a firm. Cheng et al. (2010) while advocating that CEO education has a significant impact on firm performance, used graduate and undergraduate as a proxy for CEO education level and used many proxies for firm performance Earnings Per Share (EPS), ROA, cumulative returns, cumulative abnormal returns, change in EPS, change in ROA, and market-to - book ratio).

Despite previous literature arguing a link between the education of CEO and performance of firms (Hambrick & Mason, 1984; Finkelstein et al., 1996), empirical literature argues that results vary by type and quality of education. Managers with undergraduate generate high risk returns as compared to managers with master's degree who achieve higher returns. Chevalier and Ellison (1999) argued that there is a significant impact of CEO education level on firm performance. Education is a vital element of CEO characteristics and CEO with higher education has better capability to process information, take rational decision thus impacting firm performance (Bhagat et al., 2010).

Both academic scholars and experts have considered the influence of Chief Executive Officer (CEO) potentials on performance of the firm. CEO undoubtedly plays a strategically critical role in marking the company's performance, since he / she has significant power in decision-making and key operations control. Fligstein (1990) concluded that the education of the CEO can influence their views of how they would face challenges within the organization.

Gottesman and Morey (2010) argued that there is no evidence to support that CEO with Post graduate degree outperforms the ones with graduate or undergraduate degree. Ayaba (2012) analyses the effect of educational background of CEOs on Stockholm stock

exchange performance of publicly listed firm. The study revealed there is no confirmation that CEOs with a higher education level are performing better than CEOs with an undergraduate degree. Moreover, learning one more aspect of CEO education Maximilian (2012) argued that when an individual is well educated, they are likely to take accurate decision. But, on either side, education may give itself an illusion of "being safe" and an inclination to overstate their actual capabilities. Mayhew and Simpson (2002) also endorsed the second study. They concluded that, by presenting an example of driving safety, safety education did not mitigate but rather increased the likelihood of an accident. Elsaid and Ursel (2012) investigated CEO successions and find no substantiation that changing the educational level of the successor CEO helps to increase the financial performance of the firm. While Zhang and Rajagopalan (2010) study the relationship between level of education and performance of the firm and concluded no significant impact between the two. Graduates and undergraduates were taken as a proxy of CEO education level when compared against firm performance (Zhang & Rajagopalan, 2010). Jalbert et al. (2010) find mixed results for the impact of CEO education on corporate performance, even though the results showed mainly no statistically significant link between the corporate performance and CEO education. Another study by Darmadi (2010) argued that there is no relationship between high qualified upper echelons and performance of the firms since fast-growing and high-performing firms were established and are survived by upper echelons who are not highly educated.

The empirical literature on corporate governance and firm performance identified several characteristics of corporate governance which influence firm performance. Following is the discussion of some of these characteristics for hypotheses derivation and testing.

2.8 Conceptual Framework

Conceptual Framework is a process of pre-planning to specify what the study will incorporate, it exhibits how variables are interwove, how analysis will be carried out and how the subsequent model will look like. Conceptual framework positioning within qualitative and quantitative research varies as cited in the by (Chetty, 2015). Quantitative research deals with the research problem and then the key variables which are utilized to resolve the problem under investigation (Ajzen, 2002; Chetty, 2015). Conceptual framework is the written presentation which offers descriptions for the variables, either through graphic illustrations or narrative manner followed by hypothesised relationships among the variables used (Wooldridge, 2002). Conceptual frameworks generate hypotheses to be tested and recommends how the data collection instruments should look like (Akpabio, 2015). Conceptual framework encompasses concepts that are developed into constructs and given values which then become dependent, independent, mediating, moderating and extraneous variables. Diagrammatical connecting of variables shows the kind of relationship between the variables and the analysis that shall be performed (Wilson & Mugizi, 2019).

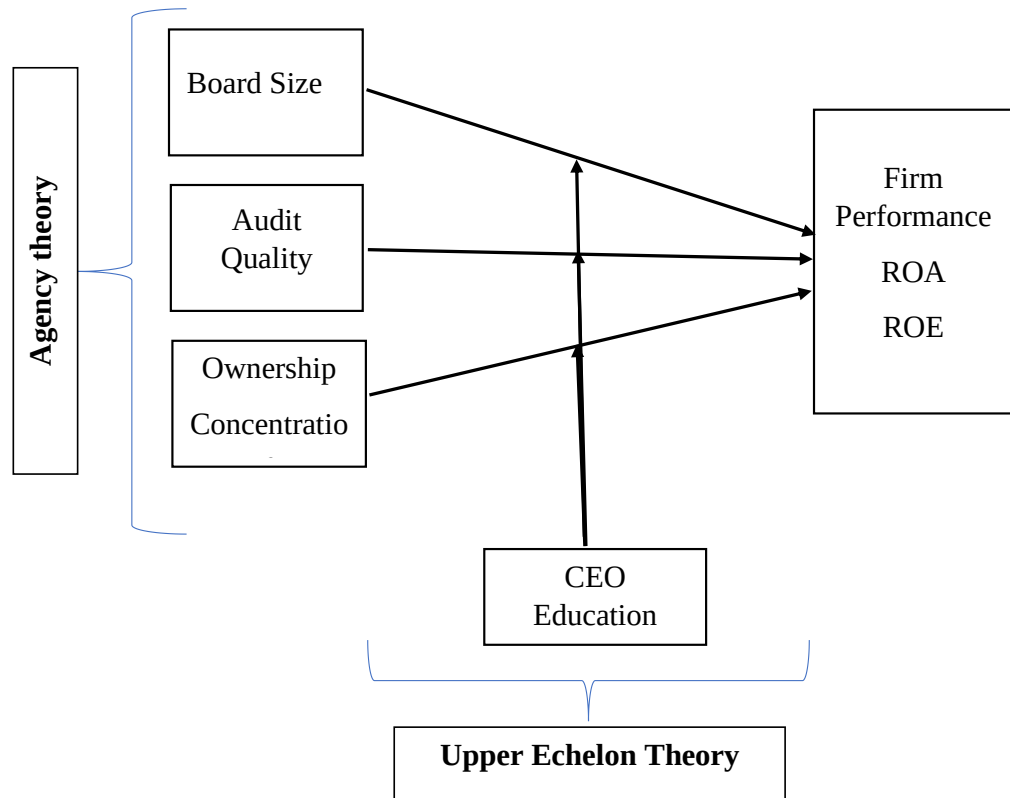


Figure 2.2: Conceptual Framework Of Corporate Governance Mechanism

2.8.1 Hypothesis Development

The direct relationship between corporate governance mechanism and firm performance is mainly drawn upon the agency theory followed by upper echelon theory that is used to test the moderating role of CEO characterises on the relationship. Agency lens will be used to examine if board size, audit quality and ownership concentration to the performance of the firms they govern and upper echelon theory lens is used to investigate if the CEO education level moderated the relationship between the corporate governance mechanism measured by board size, audit quality and ownership concentration and firm performance measured by return on asset. A review of prior literature within the context of

the agency and upper echelon theoretic lens helps formulate the foundation for the development of the hypotheses presented in this section.

Drawing substantially on agency theory literature and previous empirical research results, this research maps how corporate governance internal monitoring mechanism measured by board size, audit quality and ownership concentration and external corporate governance measured by external audit impacts firm performance measured by return on assets and return on equity.

As there is petite literature for guidance in the selection of the most vital internal governance characteristics from the large set of possible characteristics (Adams & Mehran, 2005). Therefore, ad hoc selection of groups of variables has been emphasized in the current study. It is argued that monitoring mechanisms can be divided into internal and external which further can be classified into three wide categories. 1-Market mechanisms which is classified into ownership concentration, capital market and labor market. 2-internal monitoring mechanism which are classified as inside shareholders, board of directors and managerial compensation 3-regulatory which incorporates the legal system and external auditors However, it is tough to gather the itemization of managerial compensation for all the corporations (Azim, 2012). Therefore, this study shall investigate the board characteristics as an internal monitoring mechanism. This study has incorporated board size as a predictor of internal monitor mechanism only.

Agency theorists such as Berle and Means (1932), Jensen and Meckling (1976) and Eisenhardt (1989) stated that ownership and control should be separate to decrease agency problems and to increase firm performance (Marashdeh, 2014). The agency theory supports the notion of separation between the CEO and the chairman, to maximize board

independence, which (theoretically) effects in better performance due to enhanced monitoring (Jensen, 1993). Corporate governance in Saudi Arabia is still in infancy. Capital Market Authority issued first Corporate Governance Regulations in the end of 2006 and revised in 2009 to invite more financiers to the country and it was an effort to resolve the problem of agency problem (Ihsan, 2012). One of the strong points of the codes in Saudi Arabia is that it concerns the stockholders' rights in relations of giving transparent information. In addition, the chairman is not allowed to occupy CEO position at the same time. In the other words, there is no CEO duality in Saudi Arabia (Ghabayen, 2012). Therefore, this was not incorporated as board feature while selecting the constructs for internal monitoring mechanism. The case of Saudi Arabia where the corporate governance is still in infancy the corporate culture is enveloped in strong cultural values. Their culture is highly influenced by tribal system therefore wishes of a tribal leader may outweigh official rules (Alshetwi, 2017). Due to this, it can be stated that the business environment in the country is highly effected by the tribal system (Haniffa & Hudaib, 2007). Haniffa and Hudaib (2006) also added that independent directors, in less developed countries, are regularly selected based on considerations such as political association or agreements and not because their educations, experience or capability. According to this, mostly independent directors are selected from among those people who have a solid tribal association with the CEOs (Alshewti, 2017). This condition also effects in choosing directors with unrelated experience about the firm's performance and therefore they will be not able to evaluate CEO activities or reveal the errors of management. One more problem when the power is concerted in one or a few persons is that data is closely controlled; in this regard, the CEOs control the kind and amount of information accessible to board member (Jensen, 1983). In few cases, they inhibit independent directors from access to info that might disclose flaws in firm

performance (Alshetwi, 2017). Moreover, in Saudi Arabia the corporate governance code recognizes the independent director as the director who has no first relatives on the board, and they recognize the family member as father, wife or husband, and children. On the other hand, it eliminates brothers, sisters, uncles, and cousins. In a country like Saudi Arabia, the relations amongst families are so solid, and the businesses look like family businesses. Because of many one family that are serving in the board or in the sub-committees of the board, the decision making is affected (Ghabayen, 2012). Therefore, taking board composition as an internal monitoring device will hardly add much of significance to the current literature. Considering this, board size has been adopted by this thesis as a predictor of internal monitoring mechanism only. Agency theory (Eisenhardt, 1989; Jensen and Meckling, 1976) presumes the segregation of ownership and control that indicates a conflict between the owners and manager's interests. The theoretical part of the board of directors in controlling and disciplining agents is resolutely grounded in the agency structure established by Fama and Jensen (1983).

2.8.1.1 Independent Variables

2.8.1.2 Board Size

Agency theory advocates that board of directors plays a significant role in monitoring agent's activities thus reducing agency cost. Agency theory proposes that internal and external control mechanisms are necessary to help check the excesses of the agents and therefore proposes the role of board of directors as internal monitoring mechanism to control the agency conflict by governing management's decisions and evaluating their impact on the wealth of stockholders/principals (Fama & Jensen, 1983; Alqatan et al., 2019).

Agency theory advocates the role of board of directors however the empirical findings failed to come to single consensus about the size of board that is effective internal

monitoring device to improve corporate governance mechanism increases the firms' performance.

Based on agency theory, agency cost includes but not restructured to communication costs, coordination costs and free-riding costs. The empirical findings in previous literature exhibits mixed results concerning the link among size of the board and performance of the firm. Several studies showed that the size of board had a significant impact on the firm performance (Anderson et al., 2004; Chiang & Chia, 2005; Williams et al., 2005; Haniffa & Hudaib, 2006). Some argue that 8 or 9 members of the board are an effective size (Abdifatah, 2014). Unda et al. (2017) stated that a larger board is more efficient tool of corporate governance in monitoring agents. The same idea has been supported by Psaros (2009) who argued that larger board help corporations by (1) giving a greater pool of expertise; (2) having bigger management overview and (3) giving access to broad range of contacts and sources.

Opponents for large board size indicated that that smaller board size is more effective (Rodríguez, 2015). Juran and Loudon (1966), Mak et al. (2005), Haniffa and Hudaib (2006), Limpaphayom and Connelly (2006), Yawson (2006), Dahya et al. (2008), Guest (2008), Staikouras et al. (2008), O'Connell and Crammer (2010) and Lawal (2012) argue that small boards were chosen to encourage critical, genuine and intellectual discussions and involvement among members, apparently leading to effective business decision making, supervision and performance improvement in companies. A smaller board of directors can reduce agency costs, better weigh the pros and cons of agency issues, and ultimately achieve the goal of improving the efficiency of the board.

The literature on board size impact and firm performance is divided. Moreover, the empirical evidence also indicates that there is no link between the size of the board and firm performance. Juran and Loudon (1966) stated that there is no relationship between the size of the board and performance of the corporation. It was argued that large boards have no significant relationship with large board size (Mak et al., 2005; Yawson, 2006; Riaz et al., 2017). Scholars argued larger boards have not been linked to lower performance (Bhagat & Black, 2002; Beiner et al., 2004; Limpaphayom & Connelly, 2006). Berger et al. (2012) implied that there is adverse insignificant relationship among the board size and performance of firm. Dahya et al. (2008) found a performance-related negative relationship of top management turnover and board size. Staikouras et al. (2008) argued that the board size is negatively related to firm performance since large board face challenges of communication, decision making and coordination between members. Guest (2008) argued that large boards impact negatively on performance of the firm when he studied large sample of 2746 UK corporations from 1981-2002. Also, in the analysis of 44 Republic of Ireland corporations for the period 2001-2002 O'Connell and Crammer (2010) reported a negative link between the large boards and companies' results.

Thus, from the mixed results, there is no consensus as to whether larger or smaller boards are better or if they are significant governance mechanisms for mitigating agency problems. Hence, this research will explore the link among the size of the board size and the firm performance under agency theory. The size of board is taken as internal monitoring corporate governance mechanism and is defined as the number of board members serving in the board (Lipton & Lorsch, 1992; Bennedsen et al., 2008). Keeping these different perspectives by the scholars in the literature the following hypothesis has been postulated.

H1a: Size of Board has a significant effect on the return on assets

H1b: Size of Board has a significant effect on the return on equity

2.8.1.3 Audit Quality

Agency theory argued the role of external auditors as corporate governance controlling and monitoring mechanism (Azim, 2012) one way to control the problem of agency is to employ an external auditor, for checking the correctness of the corporation's financial reports. DeAngelo (1981) primarily identified audit quality as the joint possibility that auditors will uncover and report an infringement in their clients' accounting structure. The external audit has a pivotal role in limiting accounting manipulation, thus decreasing conflict of interest, and decreasing information irregularity between the agent and the principal.

Agency theory advocates that there is a link between auditor type and performance of the firms (Fama & Jensen, 1983; Elewa et al., 2019). High quality audit might regulate the agent opportunistic conduct by lessening the agency cost (Grayson, 1999). DeAngelo (1981a) contributed towards audit quality literature by defining audit quality. DeAngelo argued that checking the quality of audit is costly since the capability of the consumers to observe the procedures of audit are quite limited (1981b). In consistent with this conjunction, scholars like (Aljifiri & Moustafa, 2007) discover empirically a significant positive relationship between quality of audit substituted by audit firm size and its impact on the performance of the listed companies (AlHussaini et al., 2008).

DeAngelo (1981b) indicated that the size of the auditing company could be used as an audit quality proxy. Brand name auditors probably have superior monitoring power that can provide more trustworthy and accurate results. The size of the audit firm is used as a

proxy to identify the performance of the audit quality initially by DeAngelo(1981b) further followed by many studies like (Francis & Wilson, 1988; Palmorse, 1988; DeFond, 1992; Simunic & Stein, 1996; Yasar, 2013). Therefore, the size of audit firm known as big four audit firm, (the big four audit company details are presented Appendix B) has been used as a proxy to analyse the impact of audit quality on firm performance measured through return on equity and return on asset.

Whether the quality of audit mitigates the agency problem, or it plays a significant impact as corporate governance mechanisms on firm performance or not exhibits a mixed empirical result. For instance, studies by Almatar et al. (2017) reveals big audit firms significantly impact firm performance, however opponents argue that there is adverse impact of audit firm size and performance of firm (Sulong et al., 2013). In order to investigate if the audit firm size used as a proxy for audit quality mitigates the agency problem as corporate governance mechanism and if it has an impact on the performance of the firm when measured by return on assets and return on equity the testable hypothesis is postulated as:

H2a: Audit quality has a significant effect on the return on assets

H2b: Audit quality has a significant effect on the return on equity

2.8.1.4 Ownership Concentration

Monitoring by shareholders is classified into three categories that are marker, regulatory and internal (Azim, 2012). Agency theory argues that monitoring by the internal mechanisms -board of directors and by the major outside shareholders also known as block holders with concentrated ownership helps to mitigate principal agency conflict thus by reducing agency cost. The theory argues that owners with higher percentages of shares have an incentive to monitor managers therefore ownership concentration plays a pivotal role in

monitoring and controlling agents (Omran, 2009; Siala et al., 2009). Proponents of this theory states that shareholders can control the performance of agents either internally owned by shareholders or boards and directors, or externally through concentrated ownership and regulators (Shelleifer & Vishny, 1986).

Ownership concentration can be defined as the percentage of corporation's shares held by the majority stockholders (Azam et al., 2011). Likewise, ownership concentration refers to the ratios of stocks retained by the 5 major shareholders as stated by (Karaca & Ekşi, 2012). Many scholars have espoused the top five shareholders in the firm as a proxy for ownership concentration (Oluyemisi et al., 2017).

There is theoretical evidence that ownership concentration impacts the firm performance as corporate governance mechanism however there is a dearth of empirical literature as it shows mixed results. Jensen and Meckling (1976) argued that the presence of managers that own shares in a company would put the interests of agents and directors into line thus impacts the performance of the firm significantly same was endorsed by Shleifer and Vishny (1986) who argued that large shareholders had strong incentives to monitor management performance, mitigating the agency's conflicts. Prowse (1994) furthermore backs former studies by affirming that focused ownership referring to large block ownership in businesses will lessen the problem of agency. However, AlShiab and AbuTappanjeh (2005) stated that there is an adverse impact of ownership concentration and company performance from 1996 to 2002 and examined 50 publicly listed companies in Jordan., Omran et al. (2008) found no impact of ownership concentration on the performance of the firm. In order to investigate if the top five shareholders used as a proxy for ownership concentration mitigates the agency problem as corporate governance mechanism and if it

has an impact on the performance of the firm when measured by return on assets and return on equity the testable hypothesis is postulated as:

H3a: Ownership Concentration has a significant effect on the return on assets

H3b: Ownership Concentration has a significant effect on the return on equity

2.8.2 Moderator Variable

2.8.2.1 CEO Education

Effective corporate governance begins with a shared concept of corporate purpose- basic guidebook of corporate governance principles are drafted by the board of directors but executed and successfully implemented by the CEO of the firm. Corporate governance CEO controls the firm's direction and its biggest moves and thus accounts for 45 percent of a firm's performance (Chris et al., 2018). Though there is internal and external monitoring mechanism which plays a significant role in enhancing firm performance however the CEO who is hired by the board of directors is in charge of the overall business operations including strategic, operating, and financial matters, taking a major role in the control and assurance of the firm's operations (Amran et al., 2014). The CEO thus strongly influences major decisions, policies, strategies, and performance outcomes (AlDhamari et al., 2020). CEOs influence firms due to their overt legal authority and "soft" power in controlling the firm's behaviour (Li et al., 2019). Therefore, CEO characteristics measured by his educational level is said to moderate the relationship between corporate governance mechanisms and firm performance as it strengthens the relationship between both. Moderator variables commonly affect the strength of the relationship between independent variable that are board size, audit quality and ownership concentration and dependent variable that is firm performance (King, 2013).

With the support of upper echelon theory this thesis defines CEO characteristics in terms of his education level that enhances CEO effectiveness. Although previous literature argues that CEO educational and performance of the firms and significantly linked to each other (Hambrick & Mason, 1984; Finkelstein et al., 1996), empirical studies argue that outcomes vary depending on the type and quality of education (Chevalier & Ellison, 1999).

The education of the CEO was operationalized by the level of degree attained by him for example undergraduate, graduate, and postgraduate. Literature supporting the notion that CEOs with high level of education when measured by undergraduate, graduate and post graduate degrees influences firm performance exhibits mixed results. Gottesman and Morey (2015) argued that there is no evidence to support that CEO with graduate degree outperforms the ones with graduate or undergraduate degree. Ayaba (2012) advocates that CEO educational level when compared by using degree levels as a proxy, exhibited no association and thus there is no confirmation that CEOs with a higher education level are performing better than CEOs with an undergraduate degree. Elsaid and Ursel (2012) investigated CEO successions and find no substantiation that changing the educational level of the CEO helps to increase the financial performance of the firm.

On the contrary many scholars found a significant relationship between CEO education and firm performance (Chevalier & Ellison, 1999; Bhagat et al., 2010). Cheng et al. (2010) argued that graduate degrees held in the upper echelons are positively correlated with the firm's performance when measured by earnings per share (EPS), ROA, cumulative returns, cumulative abnormal returns, EPS change, ROA change, and market-to - book ratio. There was a positive link between education level of CEO (upper echelons) and firm performance (Chevalier & Ellison, 1999). To investigate the moderating impact of CEO

education on governance mechanisms and firm performance the following hypotheses were postulated.

H4a: CEO education moderates the relationship between board size, audit quality, ownership concentration and on firm performance measured by return on assets and return on equity

H4b: CEO education moderates the relationship between board size, audit quality, ownership concentration and return on firm performance measured by return on assets and return on equity

2.8.3 Dependent Variables

Previously, various measurements have been applied to investigate firm performance in literature (Katick, 2019) Mostly scholars have investigated the firm performance using a variety of financial measures for example Tobin's Q (Yermack, 1996; Owusu & Weir, 2016), ROA (Kiel & Nicholson, 2003), ROE (Bhagat et al., 1999; Adjaoud et al., 2007), ROI (Boyd, 1995; Adjaoud et al., 2007) and net profit margin (Bauer et al., 2004). All these mentioned measures can be differentiated into two main categories. Market based category and accounting-based category. Market based measures reflects the perception of investor of the firm potential performance, whereas accounting-based measure reflects on the current firm's financial performance.

Both the measures have been validated empirically by many studies in literature however there is still disagreement between the scholars as to which is the best measure of firm performance (Haniffa & Hudaib, 2006). Market-based measures of firm performance are mainly challenging in the context of emerging markets, where most companies are described by debt-financing instead equity financing. Hence, market-based measures are

misleading of real investor revenues in emerging market (Kumar, 2004). Therefore, this study shall be incorporating accounting based measured as market based measured may not be suitable. Accounting-based performance measures represent the management action result and are therefore favoured over market-based measures when the link among corporate governance and firm performance is considered (Hutchinson & Gul, 2004). Ultimately firm exhibiting profits and promising returns through ROA means its accomplishment of preceding planned high performance (Nuryanah & Islam, 2011). Contrastingly, a bad performance implies failure of the planned high performance which necessitates reconsideration of policies to improve short-term performance. The firms thus must revisit its aims occasionally if it is eager of competing in the market.

Accounting based measured is mostly believed as an efficient marker of the corporation's viability. There are many accounting-based measurements indicators in recent past for example Return on Assets. Return on Sales. Return on Equity, Earning Per Share etc. All these financial ratios reveal how good a corporation is doing and whether company resources are controlled efficiently. To ascertain the overall efficacy of a company's governance and management, return on assets (ROA) and return-on-equity (ROE) are the most often utilized in emerging market (Kangarlouei et al., 2012).

2.8.3.1 Return on Equity (ROE)

The return on the equity ratio (ROE) is a performance ratio that measures the ability of the firm to make the investment profits of its shareholders. The formula for return on equity, ROE, is a firm's net income divided by its average stockholder's equity (Velnampy et al., 2014) used ROA and ROE. Both the ratios are similar however Return on equity measures profitability using resources provided by investors and company earnings. ROE is farther than a profit gauge since it is calculating business efficiency as well which interprets

that if the ROE is high, it suggests corporation is improving its income generation without requiring as much investment. It also suggests how well a corporation's management uses stockholder capital (Javed et al., 2014). High value of it is generally better whilst a declining ROE may imply a less effective management of shareholder's capital. Firm performance was measured using return on equity (Adjaoud et al., 2007).

$$\text{ROE} = \text{Net Income} / \text{Shareholder's Equity}$$

2.8.3.2 Return on Assets (ROA)

ROA is calculated as the ratio of operating profits after depreciation divided by total assets. Based on literature review, accounting-based ROA performance indicators are widely used by investors as financial ratio for measuring firm performance. ROA shows the amount of profit earned on each dollar of assets. Therefore, the higher value of return on assets indicates the greater performance of the company (Scholten, 2014). ROA demonstrates firms' efficiency in using total assets. It is seen as an indicator of the performance of the firm as well as the indicator of overall firm performance.

$$\text{ROA} = \text{Operating Profit} / \text{Total Profit}$$

The research conducts a time-series cross-sectional analysis using accounting measures of firm performance. This analysis also examines the association between CEO education and firm performance. For investigation, this research uses public listed firms in Tadawul that is the stock exchange in Saudi Arabia from 2015 to 2018 as study sample. Since it is difficult to calculate firm performance indicators financial institutions and banks, and due to the government regulations, which potentially influence firm performance, this research follows Ghazali and Weetman (2006) to exclude financial industries.

Based on the above discussion, it can be inferred from the existing literature that Board of directors, ownership concentration, and audit quality are the main factors that influence performance of firm. Literature that has been reviewed in previous sections also shed light on the inclusion of CEO education as a moderator in the relationship between various variables including the relationship between corporate governance mechanisms (size of board, Audit Quality, Ownership Concentration) and Firm Performance (Return on Assets and Return on Equity).

Figure 2.2 shows the conceptual framework of corporate governance mechanism, CEO education, and firm performance of Saudi Arabian listed companies. This thesis will use the variables as stated in the framework to determine whether corporate governance mechanisms (board size, ownership concentration, audit quality) influences performance of firms in Saudi Arabia. Besides, this thesis would also like to find out whether CEO education affects firm performance of Saudi Arabian listed firms. Based on this research model, this thesis would like to investigate the relationship between board size, ownership concentration, audit quality and firm performance.

2.9 Summary of Chapter

This chapter provides the brief review on corporate governance mechanisms established by various scholars. It reviewed literature that started from a general overview of the main topic followed by definitions of corporate governance in general, to give an overview of corporate governance procedures. It stated major theories pertaining to the topic concluded with their critical analysis. The variables were defined as in view of the agency theory. The advantage of these historical analyses is to facilitate a context for the subsequent part of the thesis and improve further analyses. Moreover, conceptual framework has been

developed along with the hypothesis development. In the following chapter, the research methodology will be discussed.

CHAPTER 3

METHODOLOGY

This chapter outlines the methodology of research that addresses the study objectives. The aim of this research is to investigate the impact of governance mechanisms on the performance of the non-financial firms in public listed sector of Saudi Arabia. Moreover, this thesis will also study the moderating impact of CEO education on corporate governance mechanisms (board size, audit quality, ownership concentration) the firm performance of publicly listed non-financial companies in Saudi Arabia. To attain the objectives, the methodology of this research is defined in this chapter. The overview of each section is as follows; Section 3.1 covers introduction to research onion, Section 3.2 covers Research Philosophy, Section 3.3 explains Research Approaches, Section 3.4 explains research strategy, Section 3.5 discusses Time Horizon, Section 3.6 presents Techniques and Procedures, Section 3.7 presents data Analysis Tools and Techniques, Section 3.8 discusses Statistical Analysis followed by Section 3.9 that summaries the chapter

3.1 Introduction to Research Onion

While investigating the objectives the study has utilized the framework for research methodology condensed and captured in “Research Onion”.

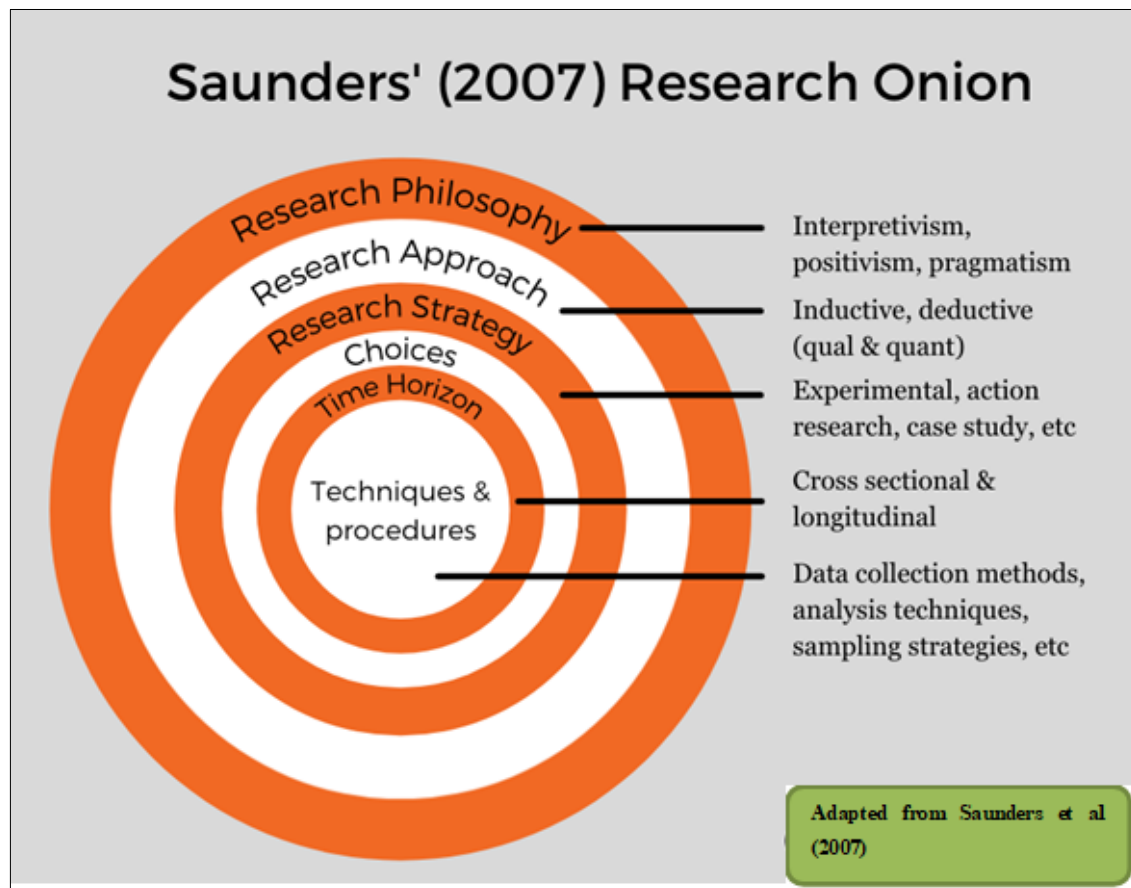


Figure 3.1: Research Onion

Adapted from Saunders et al. (2007)

3.2 Research Philosophy

The research philosophy is defined as a paradigm of a broad framework based on beliefs, understanding and perceptions regarding the practices of conducting a study. It is important to select and develop the appropriate framework for their studies (Locke et al., 2010). The research philosophy can be categorized in relations of their epistemological positioning to two categories “Positivism” and “interpretivism” –these two philosophies are extensively used in the social sciences (Collis & Hussey, 2014).

3.2.1 Epistemology

Bryman and Bell (2003) stated that fundamentally, investigators can be categorized in relations of their epistemological positioning. Social researchers that see realism in relations of concrete fact and favour the “scientific” approach to investigation are generally termed as Positivists, since they implement the “natural scientist” technique of examination which is characterized by stating their investigation objectives in the state of hypotheses and expressing suitable comparisons to check the validity of the hypothesized phenomena. Data gathering methods will also reveal this technique of analysis. These investigators will possibly be more motivated to gather quantitative figures that provide themselves well to demanding scientific, mathematical and statistical investigation to respond their investigation query (Remenyi et al., 1998). Their method differs with those that perceive realism in relationship of its descriptive qualities. They see business and administration as being unmistakable from the common sciences and contemplate the essential concern of the sociologies to be people who can't be subjected to the research facility trial method for investigation utilized in main or natural sciences. Their opinions of what creates correct knowledge and how to collect evidences about this fact are formed by this orientation and the acceptance that scientific investigation and approaches are for the natural sciences and should not be used and concluded in social sciences whose centre is people. These kinds of studies are stated to as Interpretivist (Saunders et al., 2007).

Two chief research philosophies most regularly used to perform research and obtain knowledge in social sciences are ‘positivism’ and ‘interpretivism’ (Collis & Hussey, 2009). These two philosophies characterize two extremes of a range and along with this range many other philosophies are present with dissimilar theoretical assumptions (Collis & Hussey, 2009).

3.2.1.1 Interpretivism

Interpretivism believes that it is significant for the investigator to recognize variances between people and entities of the natural sciences, which involves the investigator to grasp the particular kind of social action (Bryman & Bell, 2007; Saunders et al., 2009). Interpretivism is highlighted by the supposition of the independent societal realism formed by the investigator's observation (Collis & Hussey, 2009). Dissimilar to positivists, interpretivists deal with that the societal world of business is too multifarious to permit theorizing consuming fixed 'laws', as in the situation of physical sciences (Saunders et al., 2009). So, receiving beneficial understandings into this difficult world can be surrendered if this complication is condensed to a series of law-like generalizations (Saunders et al., 2009). Unlike positivism, which focuses on determining social occurrences, interpretivism emphasises discovering the density of societal occurrences to increase interpretative understanding. Hence, instead of using quantitative procedures utilized by positivists to categorize the existence regularity of phenomena in the social world, interpretivists tend to practice a set of techniques to define and deduce these occurrences (Collis & Hussey, 2009). It can be deduced that interpretivism is generally associated to the utilization of the inductive approach, where data are gathered and utilized in constituting theory (Saunders et al., 2009). Theory is the product of investigation and the methods of induction that include depicting general assumptions from specific observations (Bryman & Bell, 2007). Nonetheless, it is noted that, in general, there is no model better than another and choosing one model depends, to an enormous degree, on the study problem and purposes, or even the customs in a discipline. Interpretivism is highlighted by the supposition of the independent societal realism formed by the investigator's observation (Collis & Hussey, 2013).

3.2.1.2 Positivism

It is associated to the utilization of deductive strategy, where theory and hypothesis are established before and information is gathered to test it (Saunders et al., 2009). Positivists are likely to utilize extremely organized procedure to support duplication and confirmation of their investigations (Gill & Johnson, 2002). The hypothesis to be tested in a study based on positivism is also derived from real facts, existing theories, and measurable social realities (Taylor & Medina, 2013). Dissimilar to positivists, interpretivists deal with that the societal world of business is too multifarious to permit theorizing consuming fixed “laws”, as in the situation of physical sciences. Interpretivism claims that understanding of discrepancies in the nature of science between human beings and entities is essential for researchers, which means they can understand the form of social action (Saunders et al., 2009). It has been reasoned that the positivist paradigm is a suitable and frequently used framework in agency theory investigation (Otley, 2001; Saunders et al., 2009).

Table 3.1: Summarises the Assumptions of Both the Positivist and Interpretivist Paradigms

Philosophical Assumption	Positivism	Interpretivism
Ontological Assumption (Natural reality)	Actuality is objective and singular, isolated from the investigator	Actuality is subjective and numerous, as understood by applicants
Epistemological Assumption	The study is independent of that being researched	Investigator interrelates with that being investigated
Axiological Assumption	value-free and fair research	Researcher acknowledges that research is value-laden, and biases are present
Rhetorical Assumption	Definitions are formed and the investigator composes in an official way and utilizes the passive voice recognized quantitative words .	Investigator composes in a casual style and uses the voice, established qualitative terms and narrow descriptions

Table 3.1 continued

Methodological Assumption	Procedure is deductive. Study of cause and effect. Investigation is free of context. Prediction, explanation and understanding is result of generalization Outcomes are correct and dependable through validity and reliability	Procedure is inductive. Investigation of shared concurrent affecting of influences with an emerging design Investigation is context bound. Theories are established for understanding. Results are precise and consistent through confirmation.
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Source: Adopted from Collis and Hussey (2009, p. 58)

This thesis incorporated positivist approach since it utilized empirical knowledge based on principles of objectivity and verificationism (Bryman, 2012). The positivist paradigm is utilized in study which is devised utilizing the standards of the natural science paradigm of investigation which comprise research questions, predefined hypotheses, measured observations, measured inferences, duplication, and generalizability (Carson et al., 2001).

3.3 Research Approach

A research approach is linked to the implementation, confirmation and building of theories (Ghauri & Grønhaug, 2010). Inductive and deductive are two key approaches universally applied in research. While inductive study intends to create a new theory, deductive research seeks to test an existing concept/theory. It is generally utilized to describe and comprehend causal links among variables. Moreover, this approach is linked with quantitative data with an extremely structured methodology to test the hypotheses.

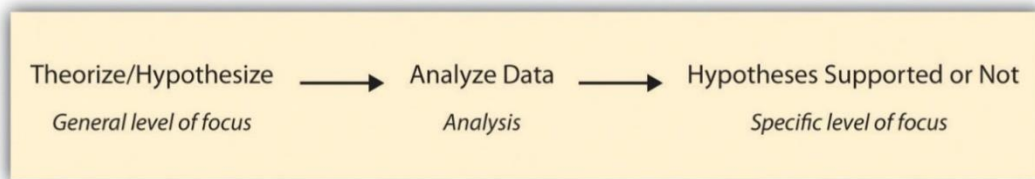


Figure 3.2: Quantitative Data Analysis Flow

The current thesis is based on deductive approach, on as it begins with a theory and intends to build on it through investigation.

Research studies are separated into two approaches which are further divided into two categories of quantitative approach and qualitative approach (Sekaran & Bougie, 2013).

3.3.1 Qualitative data

Qualitative data facilitates in collecting more in-depth and detailed information for the study. This type of information is more suitable for exploratory studies, where the researcher intends to explain the factors or the reasons that influence anything to occur or any particular behaviour. Qualitative research is important for researchers in understanding the problem and getting insights into the matter under study (Matthews & Ross, 2014).

Qualitative research provides an overview of the behaviour and perceptions of people and can study their views on a particular topic in more depth in a survey. It generates ideas and hypotheses that can help the researcher to understand how an issue is perceived by the target population and to define or identify options related to this issue (Matthews & Ross, 2014). Group discussions and individual interviews are the most frequently used tools by the researcher. Qualitative research is based on semi-structured or an unstructured approach methodology under which the interviewer follows a discussion guide or an interview guide

which is developed by researchers to conduct a study of the target. Qualitative research produces descriptive data and allows carrying out detailed data analysis (Crowther & Lancaster, 2012). Qualitative research can be defined as an approach that aims to describe and analyse the culture and behaviour of humans and their groups (Bryman & Bell, 2015).

It enables to uncover trends in thoughts and opinions, and how the behaviour of individual changes over time. It helps in digging deeper into the problem being studies. Researchers collect detailed qualitative information can include mainly interviews and group discussion. The sample size for qualitative research is usually small, as the information collected is detailed (Bryman & Bell, 2015). It is often difficult to analyse the in-depth information collected in a qualitative study; therefore, it is more feasible to have a small sample size that represents the sample population. Qualitative data is presented in the form of responses of the interviewees that can facilitate in understanding their perceptions regarding the matter under study. Nonetheless, the process of collecting and analysing this detailed information is time consuming (Frels & Onwuegbuzie, 2013).

3.3.2 Quantitative data

The other type of data that can be obtained by conducting research is quantitative data. Quantitative data can be defined as the information presented in numerical or statistical form. Creswell (2003) defines quantitative research as a type of research that is ‘explaining phenomena by gathering quantitative data in a numerical form that are analysed using mathematically based methods (statistics)’. Quantitative research can be defined as the study of measuring accurate knowledge, and/or opinions (Cooper & Schindler, 2003). It can also be described as a study in which researchers addresses the objectives of the research during empirical evaluations that requires measurement and analysis of data to be numeric in nature

(Zikmund et al., 2010). It provides the data to the researchers in statistical form and produces the information in a more structured manner than qualitative information. Furthermore, the information available through quantitative research is more objective in nature as compared to the one that is received through qualitative study (Maxwell, 2012). It becomes easier for the researcher to analyse the information presented in numerical form, as it is structured. Furthermore, it facilitates in restructuring the research problem to a limited number of variables. Quantitative research can be defined as an approach that gathers information in the form of models, correlations, and numerical forms and make it predictable (Almeida et al., 2017). This generally entails a survey or observation of as large and representative random sample, using methods such as the written survey questionnaire or the quantitative interview. Along with qualitative research, the researcher can also be benefited by using quantitative research methods.

Quantitative research helps to gather data that has precisely quantifiable results and can determine statistical analysis to check the possible relationships. It gives significant opportunities to examine a large sample and thus to obtain significant representative results, as compared to qualitative methods quantitative research methods can be conducted in less time and with lower costs (Almeida et al., 2017). This technique can assess the relationship between variables and evaluate the causal association between these variables under more controlled circumstances. It is specifically suitable for studies that are aimed at testing hypotheses or the theories that have been developed. Moreover, it is important to note that it is less detailed and therefore, the researcher may not receive the responses that are important for the study. For this study, the main aim is to evaluate the association between the two main variables that are innovation in corporate governance and firm performance.

The researcher intends to test the hypotheses that have been developed to investigate the relation between these two variables.

The current thesis approach is deductive as it seeks to investigate an existing theory and is explaining causal associations between its variables, moreover concepts are measured quantitatively, and research findings can be generalized to a certain extent (Ghauri & Grønhaug, 2010). The present study is quantitative in nature, and it tends to examine the relationship of corporate governance mechanisms (board size, audit quality, ownership concentration) with firm performance (return on assets and return on equity) of non-financial firms in Saudi Arabian while taking into account the moderating effects of CEO education on the relationship. The data which was collected from non-financial sector from Saudi Arabian listed firm in Tadawul is quantitative in nature.

3.4 Research Strategy

Research purpose are like research questions; though, they emphasis on overall research aim instead of research questions. The research strategy can be categorized into Explanation, description and exploration research according to the purpose it serves (Casula et al., 2021).

3.4.1 Explanatory research

The main aim of this kind of research is to identify any causal relationship among the variables that is relevant to the research problem and this study is structured in nature. Overall, this type of research design is aimed to evaluate the relationships between the study constructs (Saunders et al., 2005). It starts with theory, goes from general to specific argument and reasoning, formulate a hypothesis that gives foundation to connect the research aim to other components like data choice, statistical analysis (Hyde, 2000). Explanatory

research offer alignment through phases in the research process and give ways to evaluate the study. The hypothesis is grounded in arguments and evidence in the literature, then hypothesis is measured and tested to answer the research question (Shields & Rangarajan, 2013). The main aim of this kind of research is to identify any causal relationship among the variables that is relevant to the research problem and this kind of study is structured in nature. Overall, this type of research design is aimed to evaluate the relationships between the study constructs (Saunders et al., 2005).

3.4.2 Descriptive research

It focuses the “What” question and is not mainly concerned with causes. (Shields & Tajalli, 2006; Strydom, 2013). A descriptive study is mainly focused on explaining different trends that exist and deals with defining certain phenomenon that is under discussion. The main question that this type of study tends to answer is “what”, for example “what are the characteristics of consumers” or “what are the different current trends in fashion is used to explain any phenomena as they exist by identifying and obtaining information on any issue of feature like community, group or people. Descriptive research fundamentally explains social events, social structure, social situations by, answering the questions in the current situation. This kind of design is used and broadly accepted in physical and natural science, but more common in the social sciences, as in socioeconomic survey (Akhtar, 2016).

3.4.3 Exploratory Research

It is applied when there are few studies that can be utilized as a reference for information, and they do not lend themselves to a hypothesizing and developing upon prior bodies of knowledge and usually considered to be inductive and qualitative (Reiter, 2013). Compared against quantitative analyses that utilize deductive confirmatory approaches, this

type of research is often criticized for dearth of methodological rigor and diffidence in outcomes (Thomas & Magilvy, 2011).

The current thesis is explanatory in nature since it provides a causal investigation into the dimensions of corporate governance mechanisms and how does it impact on the performance of the firm (Roy, 2016). The current purpose of the study is to test the hypotheses and confirm the propositions of agency theory and Upper echelons. This thesis has focused on a positivist theoretical paradigm, and the deductive approach is espoused. Under the deductive approach, a quantitative analysis is often used in the empirical investigation.

3.5 Time Horizon

Literature has categorized the studies into cross-sectional studies and longitudinal studies based on time horizons Saunders et al. (2009). In Longitudinal research the investigator collect data from the sample on same on more than one occasion by employing the same method mostly over time. On the contrary, a cross-sectional study is a type of observational study design that includes data collection from a population at one specific point in time. There is no prospective or retrospective follow-up. Once the samples are selected, the researchers will collect the data and evaluate the relationships (Payne & Payne, 2004).

Panel data, also known as longitudinal data, since it encompasses observations about different cross sections across time therefore this study is longitudinal in nature since it collects the panel data from 2015-2018 of the same non-financial firm listed in Tadawul.

3.6 Techniques and Procedures

3.6.1 Data Collection

Data for the research can be collected through primary or secondary research or conducting mixed research.

3.6.1 Primary Research

Primary research, also known as field research, is the one that facilitates in collecting first-hand information. The researcher can get the most recent data directly from the study participants. In general, most researchers prefer to use primary data in exploratory or descriptive studies (Yin, 2013). It enables them to understand and explore the phenomenon in more detail. Moreover, primary research is often time consuming and involves a much higher cost. On the contrary it facilitates in getting more detailed information about the study participants. There are different sources of collecting primary data that are discussed below:

3.6.1.1 Interviews

Interviews can be defined as a more personal form of research than any other research method. The interviewer can get more detailed answer from the interviewee. It enables the researcher to work directly with the interviewee to get response. There are different ways in which an interview is conducted (Ying & Pheng, 2014). A researcher may decide to conduct interview one-to-one or via telephone. It is better to choose a personal interview than conducting telephonic interviews. Personal interviews facilitate researcher in analysing the facial expressions of the respondents. While, in a telephonic interview the researcher is unable to do so. However, often it not possible to reach the participants, and therefore, conducting interviews via telephone is more feasible. Furthermore, an interview may be categorized as structured or unstructured. In a structured interview, the researcher formulates

a questionnaire and similar questions are asked to all the interviewees. On the other hand, an unstructured interview does not require the researcher to prepare the questionnaire but asks different questions according to their responses (Frels & Onwuegbuzie, 2013). Nevertheless, conducting interviews is more feasible for studies that require the perception of participants regarding certain phenomenon.

3.6.1.2 Focus Groups

Focus groups can be defined as a type of qualitative research. In this type of study, a group of people are asked about their preferences and choices. Their attitudes towards a product, service or a concept may be analysed. The participants of a focus group may provide their views about an idea or packaging, whether they find it appealing. Participants are asked different questions related to the matter under study and being researched. All the respondents participate in an interactive group setting (Saunders et al., 2011). They are allowed to discuss their perceptions and views with other group members. Moreover, this may result in providing bias answers, as respondents may be influenced by the answers of other group members.

3.6.1.3 Surveys

In a survey research researcher selects certain respondents who have sufficient understanding and knowledge about the matter under study. A questionnaire is provided to these participants to fill in. Researcher administers a standardized questionnaire for obtaining the responses of the participants (Almeida et al., 2017). A survey may take form of an interview, which can be conducted face-to-face or via telephone. Furthermore, a more common method today in research is conducting online surveys. Questionnaires are sent to the respondents via email, and they are requested to fill in. More often the response rate of

such surveys is considerably low, but it is less time consuming and does not involve the cost of printing and delivering questionnaires to the participants (Fowler, 2013).

3.6.1.4 Observation

Observation in research can be defined as a systematic data collection approach. Researchers rely, particularly on all their senses, to analyse the occurring in the environment that is being observed. It requires prolonged engagement in a setting and deals with examining people in a natural setting. The environment cannot be changed or modified as per the requirement of the observer or researcher (Creswell, 2013). Moreover, it is important that researcher must take care of the ethical consideration of this method. Many of the participants do not like being observed and this method is carried out without their consent. In addition to this, the data obtained through observations is often difficult to analyse and involves bias of the researcher.

3.6.2 Secondary Research

The other form of research that facilitates researcher in collecting data is secondary research. Secondary research is concerned with collecting information that is available from different sources. The sources from which the researcher can obtain information includes news, online libraries, financial statements, annual reports of the firm and reports published by governmental departments and so on (Creswell, 2013). The process of collection of secondary data does not involve significant cost or time. It can be obtained in less time than primary research; moreover, it is essential for researcher to ensure that the data obtained meet the objectives of the research (Bryman & Bell, 2015). For this study, the focus has remained on collecting secondary information. The main sources through which the researcher has collected data include the Saudi Stock Exchange (Tadawul) and the annual

reports of the firm. Since the corporations included in the samples are publicly listed, it is possible to obtain their information. Publicly listed companies are required to publish their data that is included in their financial statements. Therefore, researcher has collected information from the financial reports of the company. The data of return on assets and return on investment is collected from the Saudi Stock Exchange and the information related to board of directors and the audit committee of the firms is gathered from the annual reports of the company. It helped in analysing the number of outside and inside auditors in the company, which is one the independent variables for this study that explains the effectiveness of corporate governance of a firm.

Secondary research has been commenced through accessing information available in existing literature. Internet is the basic source which was used to extract secondary information or data. In addition to internet, other secondary sources were also accessed (Zikmund et al., 2012). According to the research, conducted by Bryman and Bell (2015), it is revealed that the secondary method of collecting data and information is able to provide valuable and accurate information and data related to the research topic. It is due to the fact that it assists in providing academic as well as theoretical knowledge and data related to the research topic. It is further revealed that the secondary research technique is also considered as the desk study. It is due to the fact that desk study also uses information and data from previously conducted research from different secondary resources (Silverman, 2010).

There is a great significance of incorporating adequate and effective data sources. It is since the results and conclusions of the research are all dependent on the sources of data from where data is being gathered (Bryman & Bell, 2015). Thus, data sources must be credible and reliable in order to ensure the provision of reliable and authentic results of the

research. In this research, sources of data are chosen according to the ease of access, reliability, authenticity, and relevancy (Bryman, 2012).

Data for secondary research is extracted from accessed journal articles, publications and other pertinent similar research so as to form a detailed and thorough section of research findings. Several different authentic and reliable data sources were accessed over which the researchers could lay hands on (Tracy, 2012). The process of secondary data collection is organized and systematic (O'Leary, 2013). For carrying out this research work, the most dominant and prominent secondary source for gathering data was annual reports, articles and published reports on Tadawul. In doing so, different business and management journals as well as online databases were accessed to gather effective and reliable research data (Bryman, 2012).

There were some important points which were needed to keep in mind while searching secondary data over the internet. These important points were necessary to be considered in order to circumvent disadvantages and limitations associated with the secondary research technique. The following are those key points:

- Vague and general secondary data was avoided in order to determine the impact of innovations in corporate governance on return on assets, specifically in Saudi Arabia.
- Maximum possible efforts were made to gather accurate and reliable secondary data for conducting this research.
- Year of publishing the searched article was noted in order to gather only latest data available on the research topic.

- Reputation of the publishing company was also a major concern which was taken into account while carrying out secondary research over internet.
- Reliability and authenticity of reports, articles and conference papers were ensured.

The choice of the investigation method including data gathering techniques depends principally on the type of the study, the investigator's resource accessibility and expertise (Saunders et al., 2009). To answer the research questions, the data was extracted by secondary resources as it not only serves to attain data needed to answer research aim but it is reliable, easily accessible, cost and time saving, and used for problem solving (Naoum, 2013).

The current study has chosen to utilize secondary information (data) existing in the Tadawul Saudi Arabia stock exchange website www.tadawul.com.sa, annual reports of 114 firms publicly non-financial companies for the four-year period from 2015 to 2018. The data was taken from the total of 114 firms out of total 124 firms, and the data was extracted from the annual reports along from Tadawul website. Details of the industries and number of firms from each industry are listed in Table 3.2.

The industry classification of the sample in Table 3.2 comprises of 13 industries listed as non-financial sector. 51% of the sample included industries of agriculture and food, building and construction, petrochemical industries and industrial investment. The other industries of hotel and tourism, and energy and utilities comprised only 4% of the sample.

Table 3.2: Total Industries

Type of Industries	# of Firms
1. Petrochemical Industries	12
2. Industrial Investment	12
3. Real Estate Development	6
4. Hotel & Tourism Industries	3
5. Media and Publishing Transport	3
6. Retail	4
7. Multi-investment	13
8. Cement Industry	7
9. Energy & Utilities Industries	13
10. Building & Construction	2
11. Agriculture & Food Industries	16
12. Telecommunication & Information Tech	16
Total	114

3.6.3 Population and Sample

While carrying out research, selection of observations or subjects and the number are used for characterizing high quality sampling. Acquiring an appropriate and suitable sample size, in the form of number or subject selection, appears to be significant for several different reasons (Tracy, 2012). Most significantly, the population can be efficiently represented through large sample size since it helps in limiting the impact of extreme observations or outliers. An amply large size of sample appears to be essential for producing results between variables which are considerably different (Tracy, 2012). It is revealed that the selection of large sample size increases the possibility of gathering maximum possible data. There are some ethical as well as economic reasons based on which adequate sample size is selected. According to the research of Lietz (2010), it is found that with the increment in the sample size, results and estimates of the study become more precise and accurate.

The sample used to examine the relationship between corporate governance and firm performance is selected from listed firms in Saudi Arabia. Purposive sampling method is a non-probability sampling method in which samples are chosen by the judgment of the researcher. This is centred on the purpose of investigation. Only those elements will be selected from the population which suits the best for the purpose of our study. The main reason for choosing this method is to deliberately select data, units that are best suited to enable investigators to address their study questions (Black, 2010). This study has espoused purposive sampling with panel data analysis (Lavrakas, 2008). This study has taken all the non-financial listed firms listed in Tadawul after making judgment and a total number of 114 out of 124 firm non-financial corporations were selected for the study (Ratnatunga et al., 2005). Data is manually collected from individual firm's annual report retrieved from Tadawul or company's website, ranging from 2015 to 2018 on 114 non-financial firms, yielding 2,736 observations (number of years 4 x total firms 114 x total variables 6).

The duration of this thesis covers four years from 2015 to 2018, which is considered as the most recent period. Therefore, the interpreted result will be useful and applicable to the current phenomenon. The data was taken from the total of 114 firms out of total 124 firms, and the data was extracted from the annual reports along from Tadawul website. Financial and insurance firms were excluded from the sample since they have different corporate governance practices and operations compared with other firms. In addition, the capital structures of financial and insurance firms are significantly different from other firms. This study is in parallel with previous studies which also exclude financial firms (Amran, 2012; El-Faitouri, 2014). In addition, 10 firms were excluded from the sample due to missing data.

3.6.4 Data Analysis -Variables and their operationalization

3.6.5 Dependent Variable

3.6.5.1 Return on Assets (ROA)

ROA is measured in the ratio form, and it is net income over total assets (Mersland, & Strøm, 2014). Return on Assets is the amount of dollar that is earned as a profit. Positive ROA shows the corporation competence in consuming total assets. ROA shows the amount of profit earned on each dollar of assets. Thus, the higher value of return on assets indicates the greater profitability of the corporation. It is perceived as an indicator of profitability of the corporation as well as the gauge of overall performance of the firm. This measure can be used by the investor in order to check current performance of any company, the efficiency of its leadership and the profits the firm has made over the past years. This way of measuring is well recognized by many scholars and valid criteria for measuring the firm's profitability (Malik & Makhdoom, 2016),

$$\text{Return on Assets} = \text{Net Income} / \text{Total Assets}$$

3.6.5.2 Return on Equity (ROE)

Another way to gauge the performance of the corporation in accounting base measure is to check the ratio of net income over equity which is also known as Return on Equity ratio. It measures the capability of a business to utilize its money to make incomes for the stockholders

$$\text{Return on Equity} = \text{Net Income} / \text{Equity}$$

3.6.6 Independent Variables

3.6.6.1 Board Size

Board size has been espoused by many scholars in the literature of CG as proxy for board characteristics, for example (Staikouras et al., 2008; Rodríguez, 2015; Unda et al., 2017).

3.6.6.2 Audit Quality

Audit firm size has been used as a proxy by many scholars in the related literature. Basically, to check the quality of the audit firm it has been implied by the researchers that big four audit firms can be taken as a proxy for audit quality (DeAngelo, 1981b; Yasar, 2013). Boubaker et al. (2018) provided evidence that corporations which hire Big four auditors to verify their financial statements are more likely to attract more investors and increase shareholder's wealth. This finding indicates that audit quality improves investment decision and adds value to the firms. Alzoubi (2018) found that earnings management practices are diminished with higher audit quality which improves financial reporting quality. The big audit firms have an excellent track record when it comes to deliver a product since for these big firms their name reputation and recognition is all what matters (Bae & Jae, 2013; Svanström, 2013; Pham et al., 2014; Pardi & Molina, 2015). If the listed firm is being audited by any of the big four audit firm then it was represented as a dummy variable "1" and companies of "0" was used if the corporation listed in Tadawul is not taking services from big audit firms (Alzharani et al., 2012).

3.6.6.3 Ownership Concentration

The concentration of ownership is also characterized by most shareholders in the company (Azam et al., 2011). Likewise, ownership density is calculated by the ratio of shares held by the 5 major shareholders (Karaca & Eksi, 2012).

3.6.7 Moderator Variable

3.6.7.1 CEO Education

CEOs who are highly educated are more knowledgeable with better cognitive capability that positively impacts their decision-making approach (Bantel & Jackson, 1989). Smith et al. (1994) argued that educational heterogeneity positively effects firm performance measured by Return on Investments (ROI). CEO education impact on firm performance is measured by education level (Kokeno & Muturi, 2016). The level of education is measured by dummy variables “0” and “1” (Matvieiets, 2012). “0” means undergraduates that included individuals holding associate diploma (30 credit hours), associate degree (60-90 credit hours), or diploma (60-90 credit hours) post-secondary education that is after 12 years of education. “1” refers to the graduate levels (Level 6 and above) that included Bachelors (120 credit hours) Higher Diploma/Graduate Diploma (24 credit hours) master’s degree (24 of coursework and 8 credits of a thesis, or 39 for coursework and a research project) doctor /PhD (three years) Level 7 and above (WES, 2020). Moreover, in the graduates and undergraduates have been classified as follows:

Saudi Arabian Qualifications Framework				
LEVEL		GENERAL EDUCATION	TECHNICAL, VOCATIONAL, AND EDUCATIONAL TRAINING	HIGHER EDUCATION
Post-Secondary Levels	10	-	-	PhD
	9	-	Technical Master's Degree	Master's Degree
	8	-	-	Higher Diploma
	7	-	Technical Bachelor's Degree	Bachelor's Degree
	6	-	Diploma	Diploma / Associate Degree
	5	-	Associate Diploma	Associate Diploma / Higher Education Certificate
	4	-	Certificate 4	-
General Education	3	General Education Certificate	Certificate 3	-
	2	Intermediate Education Certificate	Certificate 2	-
	1	Elementary Education Certificate	Certificate 1	-

Source: UNESCO

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Figure 3.3: Saudi Arabia educational level framework

Source: Adopted from AllahMorad (2020)

The classification of the education system is illustrated in Table 3.3. Level 1 and 2 are undergraduates with not more than 90 credit hours in their course. Level 3 and above are called graduates as mentioned in Table 3.3.

Table 3.3: Education Classification Table

Level	Name	Credit Hours	Number of Years	Undergraduate/Graduate
1	Associate Diploma	30	1 year	UNDERGRADUTE
2	Diploma	60-90	2-3	UNDERGRADUTE
2	Associate degree	60-90	2-3	UNDERGRADUTE
3	Bachelor's degree	(120 credits or more without the preparatory year)	4	GRADUATE
4	Higher Diploma/Graduate Diploma	24	1	GRADUATE

Table 3.3 continued

5	Postgraduate Studies/ Master's Degree	a minimum of 24 credit hours for course work plus a thesis," while other programs can be completed with "39 credit hours for course work plus a significant project."	2	GRADUATE
6	Doctorate/PhD	12 to 30 credits of coursework, followed by the preparation and defense of a dissertation	3	GRADUATE

Source: Adapted from AllahMorad, (2020)

The description of each variable and its type along with the abbreviation is mentioned in Table 3.4. This table is summarized information of the data collection source, the type of data and the abbreviation given to each data set.

Table 3.4: Description of each Variable

Corporate governance mechanisms	Item	Type	Variable	Abbreviation	Source
	Board Characteristics	Size of Board	independent variable	BSIZE	Annual reports
	Audit quality	Size of audit firm	independent variable	AQ	Annual reports
	Ownership concentration	Top 5 owners of the firm	independent variable	OC	Annual reports
	Moderating Variable				
	CEO	CEO Education	Moderating variable	CEOE	Annual reports

Table 3.4 continued

Firm Performance	Accounting Based Measures	Return on Assets	Dependent variable	ROA	https://www.tadawul.com.sa
		Return on Equity	Dependent variable	ROE	https://www.tadawul.com.sa

3.7 Data Analysis Tools and Techniques

This section of the study provides the details of tools and techniques used in the study to test hypotheses and analyse the collected data. The study has used the latest available tools and applied reliable and widely used statistical techniques to test unidimensional, reliability, validity and hypotheses. The details about the techniques and procedures used for data analysis are discussed in the following sections.

3.7.1 Estimation Model

The estimation model of this thesis is based on the commonly used model of firm performance. Following the research by (Agarwal & Knoeber, 1996; Imam & Malik, 2007; Azim, 2012), the current research uses board size, ownership concentration and audit quality as independent variables, CEO education as moderating variable and firm performance measured by ROA and ROE as dependent variable.

3.7.2 Corporate Governance Mechanism / General Model

Literature shows that corporate governance mechanism impacts firm performance and many variables have been studied to exhibit the impact of monitoring mechanism on firm performance (Agarwal & Knoeber, 1996; Imam & Malik, 2007; Azim, 2012). The current study seeks to create a model that can be used to test the relationship among both the

independent variable and the dependent variable. The dependent variable is measured by return on assets and return on equity has been illustrated in the following regression model:

$$ROA_{it} = a_0 + a_1ROA_{i,t-1} + \beta_1BSIZE_{it} + \beta_2AQ_{it} + \beta_3OC_{it} + \mu_i + \eta_t + \varepsilon_{it} \quad (\text{Equation: 3.1})$$

$$ROE_{it} = a_0 + a_1ROE_{i,t-1} + \beta_1BSIZE_{it} + \beta_2AQ + \beta_3OC_{it} + \mu_i + \eta_t + \varepsilon_{it} \quad (\text{Equation: 3.2})$$

Where ROA =return on assets, ROE =return on equity, $BSIZE$ =board size, AQ is audit quality, OC = Ownership concentration.

3.7.3 Specific Model

This thesis proposes that CEO education is moderating the relationship between corporate governance mechanisms and firm performance. Prior studies on CEO education reveal that CEOs education can significantly influence bottom line performance of the firm (Fligstein, 1987; Abebe & Alvarado, 2013)

$$CEO_{i,t} = \alpha + \beta_1 SIZE_{it} + \beta_2 OC_t + \beta_3 AQ_{it} + \varepsilon_{it} \quad (\text{Equation 3.3})$$

Therefore, the full model to test the relationship of corporate governance mechanisms, CEO education, and firm performance is shown below:

$$ROA_{it} = a_0 + a_1ROA_{i,t-1} + \beta_1BSIZE_{it} + \beta_2AQ_{it} + \beta_3OC_{it} + \mu_i + \eta_t + \varepsilon_{it} \quad (\text{Equation: 3.1})$$

$$ROE_{it} = a_0 + a_1ROE_{i,t-1} + \beta_1BSIZE_{it} + \beta_2AQ + \beta_3OC_{it} + \mu_i + \eta_t + \varepsilon_{it} \quad (\text{Equation: 3.2})$$

$$CEO_{i,t} = \alpha + \beta_1 SIZE_{it} + \beta_2 OC_t + \beta_3 AQ_{it} + \varepsilon_{it} \quad (\text{Equation 3.3})$$

The multiple regression models use symbols of “ i ” and “ t ” to indicate the cross-sectional and time series data, respectively. This research combines and develops the cross-sectional data and time series data into the panel data. Meanwhile, a symbol of “ α ” indicates the expected y-intercept when all independent variables are equal to zero. The symbols of “ β_1 ”, “ β_2 ”, “ β_3 ”, are the coefficient of the independent variables. These symbols indicate the slope or the coefficient of correlation between all the independent variable to the dependent variable, respectively. The magnitude of the correlation between the independent and dependent variables are depending on the value of the coefficient. Thus, “ β_1 ”, “ β_2 ”, “ β_3 ,” set as the parameter to measure the change in the value of the dependent variable (y), as to the changes in the independent variables (x). Lastly, the symbol of epsilon “ ε ” indicates all other possible variables that might affect the firm performance of listed non-financial sectors in Tadawul in Saudi Arabia.

3.8 Statistical Analysis

The thesis intends to analyse the relationship between corporate governance mechanisms and CEO education and firm performance. Bryman (2012) says the content analysis is an approach where at first, data of the sample is acquired and then the data is changed into useful information by classifying the data into a systematic structure based about study. In this thesis, the data is obtained from companies’ annual reports. This research relies on a content analysis approach. Retrieved data is recorded in a systematic way and the information proceeds with statistical tests through STATA 14.

To measure the link between all the lists of variables in the thesis few tests were applied so check and verify the link. Diagnostics tests, autocorrelation test, test of multicollinearity, heteroscedasticity test, Breusch-Pagan LM and Hausman test, and the data

is analysed by panel data regression, Moderation analysis by Baron and Kenny (1986) method.

3.8.1 Normality Test

The normality test is to establish if a data set is normally distributed. The use of normality test in descriptive statistics is to measure the goodness of fit of the model. The null hypothesis and alternative hypothesis for this thesis is as below:

H₀: The error term is normally distributed

H₁: The error term is not normally distributed

In the case of rejection of the null hypothesis under the significance level, it shows that the random variable is not normally distributed and thus may result in biasness. Additionally, normality test can be utilized to determine if the sample size is enough to explain the population. Larger sample size can accomplish significance normality just as in the presence of small deviation; thus, the results of parametric test will not be influenced by the small deviation. A significant outcome would be obtained for large sample sizes even in the case of a small deviation from normality since the results for parametric test will not be affected by the small deviation.

3.8.2 Jarque-Bera (JB) Test

Large samples are encouraged to use JB test (Gujarati et al., 2013). Computation of kurtosis and skewness that identifies the allocation of ordinary least squares (OLS) residuals is the first move to perform JB test. Kurtosis implies to measure the thickness or heaviness of the tail of the distribution while skewness measures symmetrical of a distribution. The rule of thumb is normally distributed of random error terms have index of 3 kurtosis and 0 for skewness.

The computation of kurtosis and skewness of distribution is used in forming test statistic to interpret the result.

$$JB = n \left[\frac{S^2}{6} + \frac{(K-3)^2}{24} \right]$$

Based on the above formula, “n” is the sample size,

“S” is the coefficient of skewness, and

“K” refers to coefficient of kurtosis (Gujarati et al.,2013).

This test is using 5% significance level and to test the normality distribution of study, the null and alternative hypothesis are used in the study as follows:

H₀ : The error term is normally distributed.

H_a : The error term is not normally distributed

3.8.3 Multicollinearity Test

There are no perfect multicollinearity in-between explanatory variables is one of the Classical Linear Regression Model (CLRM) suppositions. It was argued that one way to detect multicollinearity problems is simple correlation coefficient test. Simple correlation coefficient (r) between two explanatory variables shows severity of multicollinearity problem in the study stated that VIF measures the inflated variance of estimator when multicollinearity problem arouses. High VIF shows seriousness of multicollinearity problem. Rule of thumb under VIF states that when VIF is more than 10, multicollinearity problem is seriously faced in study (Gujarati et al., 2013).

VIF formula is as follows:

$$VIF_i = \frac{1}{1 - R_i^2}$$

The presence of the precise or inexact linear relationship among explanatory variables is stated by multicollinearity. Highly correlation between two or more predictor variables in a multiple regression model is also identified as multicollinearity. This also implies that one predictor variables can be linearly predicted from the others with a considerable degree of accuracy. There are 2 kinds of multicollinearity which are perfect multicollinearity and the imperfect multicollinearity. Increasing of standard errors of the coefficients can be caused by the multicollinearity. Multicollinearity tends to make some predictor variables statistically insignificant when the standard error should be hugely inflated. If the multicollinearity exists among the explanatory variables, the OLS estimation procedure will not be able to distinguish one variable from the others. Thus, the regression coefficients are indeterminate. Multicollinearity is caused by improper use of dummy variables such as failure to exclude one category of data. The greater the multicollinearity, the greater will be the standard errors. When high multicollinearity exists, confidence intervals for coefficients will become wider and t-statistics will be smaller. The larger the coefficients represent the statistically significant of value. Thus, rejecting the null hypothesis tend to be harder as the present of the multicollinearity. According to Grewal et al. (2004), a good measurement of reliability is a model which has a strong explanatory power and a large sample size. These two characteristics will be effective in protection against the effect of multicollinearity unless the case of multicollinearity is severe. Normally, it will not be too problematic if there is an existence of multicollinearity but having several multicollinearities between variables will cause a bias in the regression and causes huge problem in analysis. High level of multicollinearity between variables will cause the regression coefficients to be

unstable and the variance to be widely dispersed. Higher variance in the model causes the interpretation of coefficients to be more difficult. If multicollinearity problem provokes in a study, there is a need to reduce multicollinearity in the coefficient of the regression. Remedies such as doing nothing, dropping repeating variable and increasing sample size of study can be used in a study (Gujarati & Porter, 2009). Besides, one of the methods is to remove the highly correlated predictors from the model. This can be done by comparing the Variance Inflation Factor (VIF) and remove one factor that has high VIF.

3.8.4 Autocorrelation Test

Broadly, it is believed in the relevant literature that whatever occurred in the past is the main indicator of what will occur in the future or statistically, whatever will occur in time 't' would predict what would possibly happen in time $t+1$. Even so, no serial correlation or autocorrelation is one of its principal assumptions for applying a regression model (Wooldridge, 2010). This definition assumes that 'x' is conditional on the errors being highly correlated in two different times. It does not distort the coefficient estimates in the existence of autocorrelation, but the standard error appears to be overlooked. Thus, the results produced are less efficient if this assertion is breached, the mistakes are believed to suffer serial correlation, as they are connected over time (Drukker, 2003).

This study will be used to identify a serial correlation using the Wooldridge test derived from Wooldridge (2002). Such tests are recommended because they are easy to conduct and operate under current circumstances (Drukker, 2003). It needs to be reshaped to the regression model with the problem of autocorrelation; thus, the term of error in the transformed model is serially independent.

3.8.5 Heteroscedasticity Test

Wooldridge (2010) states that for multiple regressions, the assumption of homoscedasticity states that the variance of the explanatory variable, unobservable error is constant. This supposition that is violated at whatever point the fluctuation of error is not steady over the example of observation. On the off chance that the heteroscedasticity issue isn't tended to appropriately, it might likewise bring about higher 't' and 'F' values, which may prompt the dismissal of the invalid speculation even though else it ought to have occurred (Cheng, 2008). There are a few strategies to test the nearness of heteroscedasticities, for example, White General Heteroscedasticity, Breuch-Pagan Godfrey Test, Part Test or Glejser Test (Gujarati, 2003; Wooldridge, 2010; Greene, 2012). The invalid speculation that the fluctuation of the remaining is homogeneous will be dismissed if the estimation of $p < 0.05$.

Where the presence of heteroscedasticity is demonstrated, there are four normal redresses proposed: i) see logged information, ii) utilize an alternate particular for the model, iii) apply a weighted least squares estimation strategy, and iv) utilize the Heteroscedasticity Consistent - Standard Error (HCSE) method (Gujarati, 2003).

3.8.6 Hausman Test

It is tested to signify the appropriateness of the Random Effects Model (REM) in panel Gujarati and Porter (2009), Hausman. This test regulates the suitability of REM by comparing this model with the fixed-effect model (FEM). It is also the Durbin-Wu-Hausman test. This test is a statistical hypothesis test in which the consistency of an estimator is evaluated when compared to an alternative which is known to be less efficient but consistent. This test is espoused to check for the endogeneity of variable, in which the independent

variable estimates to the ordinary least squares (OLS) estimates. Thus, Hausman test is an important test to determine whether a loss in efficiency will be worth to remove the bias and inconsistency of OLS estimators. In other words, the Hausman test is used to check for a more efficient model against a consistent but less efficient model to ensure that consistent results can be produced by the more efficient model.

3.8.7 Breusch-Pagan LM Test

Baltagi (2008) argues that Lagrange Multiplier (LM) test is an assessment given by the study of Breusch and Pagan's and applied to recognize random 2-way error constituent in model. It is apprehensive to compute since it is only required in the OLS residuals besides that, this also support in the clarification for the same. The alternative hypothesis of this test can be -ve or +ve but must not equivalent to 0. The supposition of it works fine in state when approximation of the variance features is less <0 . It performs well since the values of σ_{μ}^2 and σ_{λ}^2 is larger than zero (Baltagi, 2008). Throughout the processing of this test easily appear the -ve estimates of the variance features. When the variance features are +ve, supposition for this test for the alternative hypothesis still in 2-sided which is become the issue of the test. This is since the alternative hypotheses must be in 1-sided as the variance features are +ve. Through the 1-sided test, it might happen a weak statistic for the large samples. This is since the greater of the amount of regressors and the advanced of intraclass correlation in numerous regressors.

The Breusch Pagan LM test is utilized in this proposal to comprehend which model is more appropriate for this theory. Since board information will be received in this proposal, it is imperative to choose the proper model for examination. Breusch Pagan LM test is pertinent to decide regardless of whether a Pooled Ordinary Least Square (OLS) model or a

Fixed Effect (FE) model will be progressively proper. As indicated by Gujarati and Porter (2009), this test can be utilized to show that there are no irregular impacts in the model

The hypothesis for this test shall be:

H0: The model will run under Pooled OLS regression

H1: The model will run under panel regression

If the H0 of this BPLM is rejected, the model will be led under panel regression. In the meantime, if H0 can't be excluded, thus the model will be running under pooled OLS technique.

3.8.8 Panel Data Regression

Panel data permits to control for factors that cannot be watched or estimated like social elements or distinction in strategic approaches across firms; or factors that shift after some time yet not across units. This is, it accounts for individual heterogeneity. It can contain variables at dissimilar stages of investigation fit for hierarchical modelling or multilevel. Among the few disadvantages is information gathering problems (e.g. Design of sample, reporting), non-reply in the circumstance of cross country or micro panels reliance in the event of macro panels. It is also called as longitudinal or cross-sectional time-series data, which means that the data is detected across time. There are 2 methods used to examine panel data:

– FE

– RE

Fixed Effects

Fixed effects (FE) are suitable for examining the influence of variables that differ over period. Fixed effects discover the link amongst forecaster and result variables inside an object. Each object has its own separate physiognomies that might or might not impact the predictor variables though consuming fixed effects it is supposed that somewhat within the individual might influence or prejudice the forecaster or result variables and it is essential to gauge for this. This is the foundation behindhand the supposition of the correlation among an entity's error term and predictor variables.

$$\text{FE equation: } Y_{it} = \beta_1 X_{it} + \alpha_i + U_{it}$$

Where

– α_i ($i=1 \dots n$) is the unknown intercept for each entity (n entity-specific intercepts).

– Y_{it} represent for the dependent variable

i = entity and t = time.

– X_{it} means the independent variable

– β_1 is the Independent variable coefficient.

– U_{it} term of error

Random effects

The premise slows the arbitrary impacts model is that, not normal for the fixed impacts model, the variety across elements is thought to be irregular and uncorrelated with the indicator or free. On the off chance that you be motivated to accept that distinctions across elements have some impact on your needy variable, at that point you should utilize irregular impacts. A bit of leeway of irregular impacts is that you can incorporate time-invariant factors The RE model is:

$$Y_{it} = \beta X_{it} + \alpha + U_{it} + E_{it}$$

3.9 Summary

This chapter discussed the research methodology of the thesis to understand the relationship between Board size, audit quality, ownership concentration, as corporate governance mechanisms and firm performance, moreover CEO education is also studied as a moderator variable. Moreover, in Figure 3.4 this study has incorporated the diagrammatic representation of the research design to exhibit what research philosophy, approach, strategy and procedures have been adopted to investigate the relationship

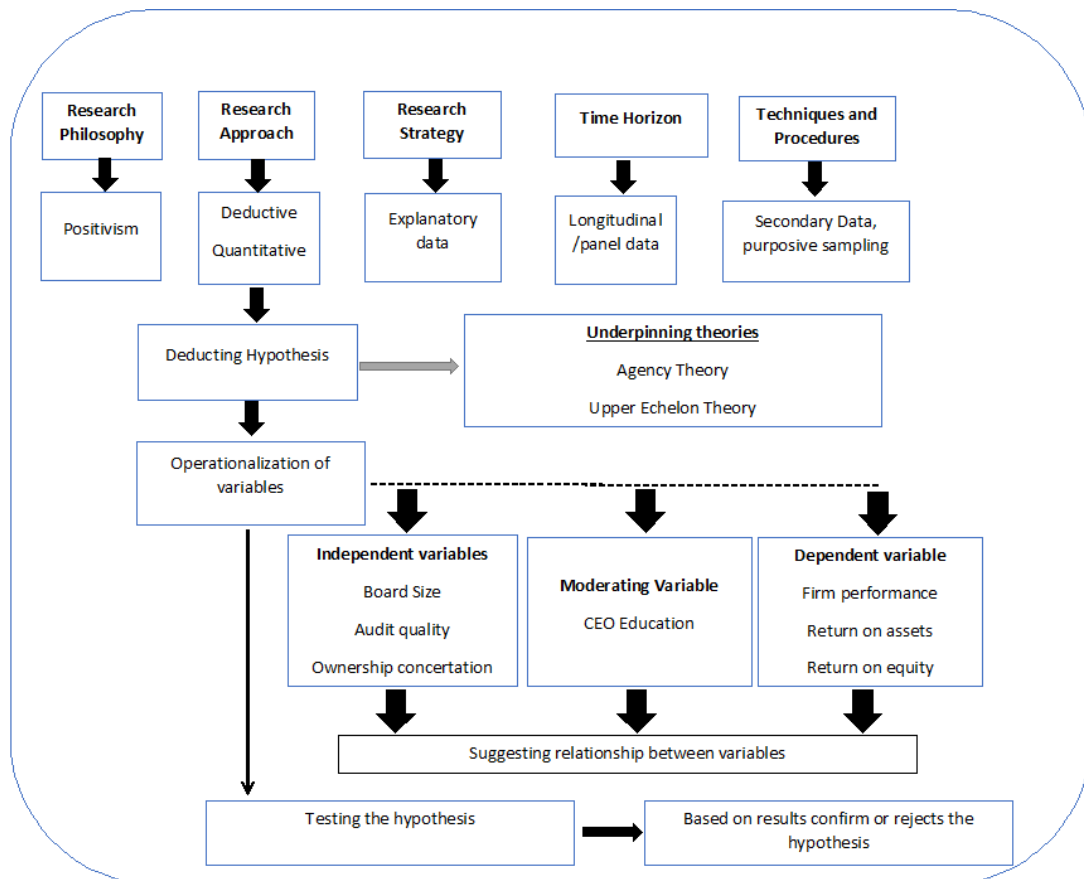


Figure 3.4: Research Design Framework

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Overview

This chapter presents the results of data analysis and discussing the findings to achieve the stated objectives of the study. The analysis of this study was based on balanced panel data consisting of the sample of 114 publicly non-financial companies in KSA for the 4 years period from 2015 to 2018. Initially, the target was 124 firms however due to the unavailability of complete annual reports only 114 firms were selected. It first presented the descriptive statistics of the dependent, independent and control variables of the study, by discussing central tendencies and spread to gain an initial view of the variables. This chapter is organized into different subsections that help us to achieve the specific objective of the study. The overview of each section is as follows: Section 4.1 presents chapter overview. Section 4.2 highlights the descriptive statistics of the study. Furthermore, Section 4.3 presents the Pearson correlation analysis to address the relationship between various independent and dependent variables. Section 4.4 presents the diagnostics checks before the multiple regression analysis. Section 4.5 presents the multiple regression analysis models and the relationship between independent and dependent variables by taking both the proxies for firm performance, i.e., ROA and ROE. Section 4.6 presents Baron & Kenny Method for moderating effect. Section 4.7 outlines the overall chapter summary.

4.2 Descriptive Statistics

Table 4.1 presents descriptive analysis and shows return on assets (ROA) results with a mean of 2% and with standard deviation of 15%. Return on equity (ROE) has scored mean of 3% with standard deviation of 19.80%. Negative value of ROE and ROA are reflection of impact due to global financial crisis and volatility of Saudi Arabia economy (Rehman et al., 2014).

Average number of board members in the non-financial listed firms in Tadawul is 7, and maximum numbers of members the firms have are 10 and minimum is three. This confirms that the listed firms in Tadawul, are following the Capital Market Authority Laws of 2017, where the minimum board of directors should not be less than 3 and more than eleven members (Article 17, part 3, Chapter 1). Moreover, the average board size is 7 which are in consistent with the findings by Jensen (1993), Lipton and Lorsch (1992). Audit Quality and CEO education are dummy variables.

The variability in data regarding ownership concentration is measured by standard deviation which is 24.81% the value of ownership concentration fluctuates between 2.3% and 96%. The statistics show that the average share stakes of the firms in the sample held by large shareholders comprise average 34% at the 5% ownership threshold which is in line with the existing studies by Valued and Susan (2012); AlNodel and Hussainey (2010).

Table 4.1 exhibits that the skewness values that are between -0.5 and 0.5 it can be said that the data is symmetrical. The rule of thumb is that if the skewness is between -0.5 and 0.5, the data are symmetrical (McNeese, 2016).

Table 4.1: Descriptive Statistics of the Dependent and Independent Variables

	ROA	ROE	BSIZE	AQ	OC	CEOE
Mean	0.0219374	0.0349502	7.149123	0.4451754	0.3471381	0.4692982
Maximum	0.301571	0.5648949	10	1	0.960904	1
Minimum	-2.296242	-2.768593	3	0	0.00233	0
Std. Dev.	0.1577142	0.1980128	1.435698	0.497531	0.2481826	0.4996046
Obs	456	456	456	456	456	456
Skewness	0.0000	0.0000	0.0062	0.0534	0.0000	0.2776
Kurtosis	3.396505	40.88402	3.013166	1.007917	4.015124	1.428650

Table 4.1 reports the descriptive statistics of the study, based on the selected sample from the Saudi Arabia Stock exchange for the total 456 observations for 4 years. This table is totally based on data directly provided by the online-DataStream and collected from annual reports.

4.3 Correlation Analysis

This study first analysed the correlation analysis between the independent and dependent variables of this study to examine the relationship between various variables used in this study. Table 4.2 documented the Pearson correlation matrix of the study concerning all independent and dependent variables, based on 456 observations of 114 Non- financial listed firms in KSA for the period from 2015 to 2018. The various pairs of variables were found to be somewhat less than 0.70. According to Gujarati (2004), multi-collinearity is not a serious issue until and unless the correlation coefficients between the variables exceed 0.70 in multiple regression analyses. Correlation measures the degree or strength of relationship among the variables. It ranges from -1 to +1. -1 show the strong negative correlation, while +1 shows strong positive correlation. Correlation up to 0.25 is considered as weak, whereas,

if the degree of correlation between independent variables is 0.80 or more, there will be the problem of multi-collinearity in the data. It is clear from correlation matrix that there is no problem of multi-collinearity found in independent and dependent variables. All the variables correlation is less than 80%. Furthermore, the linear association between independent and dependent variables are conducted through multiple linear regression analysis which show better results as the regression analysis is more flexible as well as realistic than the correlation.

Table 4.2: Pearson Correlation

	ROA	ROE	AQ	OC	BSIZE	CEOE
ROA	1.0000					
ROE	0.6207	1.0000				
AQ	0.0957	0.1647	1.0000			
OC	0.1226	0.1563	0.4166	1.0000		
BSIZE	0.1124	0.1014	0.2053	0.2130	1.0000	
CEOE	-0.0189	0.0891	-0.0684	-0.0220	-0.0794	1.0000

Note: The correlation between the independent variable and dependent variables are exhibited. The data shows that not a single pair of variables has the value above the threshold (0.70). This table is totally based on data directly provided by the online-DataStream and collected from annual reports.

Variance inflation factors (VIFs) were espoused to properly identify the multi-collinearity issue amongst independent variables utilized in the estimation models. Multi-collinearity checks for that if there is a high correlation amongst two or more independent variables, which might create a threat to the estimation of the regression results. The results of the VIF test are reported in Table 4.3 for the 456 observations of the study.

Table 4.3: Variance Inflation Factor Coefficients

Coefficients		
Variable	VIF	1/VIF
BSIZE	1.07	0.930791
AQ	1.24	0.804684
OC	1.24	0.808046
CEOE	1.02	0.984423
Mean VIF	1.14	

Note: In above table, the mean VIF is less than 5, which means that there is no problem of multi-collinearity. If the mean VIF is greater than 10 (sometimes 5) than it considers having the problem of multi-collinearity. In this case, there is no multi-collinearity (consistent with the advantage of using panel data)

All the values of the VIFs are below the acceptable cut-off point of 10 and do not exceed the threshold (Chatterjee & Hadi, 2012). Moreover, to determine the construction of the regression models, a proper (VIF) was utilized to gauge the multi-collinearity issue between the independent variables.

4.4 Diagnostic Tests

To perform multiple regression analysis, few diagnostic tests were performed to observe if the fundamental statistical suppositions have been satisfied or not. The sequences of diagnostic tests essential are in Chapter 3. This section determines the right estimator and analyses the problems by using several tests. Two basic tests are used in this thesis to choose the right decision. The basic tests are Breusch and Pagan LM test and sargan test. After obtaining an appropriate model, various diagnostic checks are performed. Problems that may exist include multicollinearity, heteroscedasticity, and autocorrelation. In this thesis, the

results would suggest whether the underlying assumptions of system GMM regression have been followed or violated.

4.4.1 Test for Heteroskedasticity

The Breusch-Pagan test for heteroscedasticity was used to test the presence of heteroscedasticity. The null hypothesis of the test suggests the homoscedasticity that refers to the constant variance while the alternate hypothesis states the heteroscedasticity that means that the variance is not constant. The results of this study show that the null hypothesis (H_0) was rejected when the p-value was significant ($p < 0.05$) for the test. This rejection refers to the presence of heteroscedasticity, which explains that the variances are not constant. The result of the test was generated in STATA by using “xttest3 and hettest” command.

The Breusch-Pagan test produces a chi-2 test statistic, at 8 degrees of freedom, when the null hypothesis states that there was no heteroscedasticity exists. The test statistics in this particular case was 25.44 for ROA and 90.48 for ROE (Table 4.4) and STATA automatically computes the p-value for this particular test, which was less than 0.01, strongly significant, so we can very soundly reject the null hypothesis H_0 of the having homoscedasticity. Thus, we have the problem of heteroscedasticity in data. To solve the issue of heteroscedasticity, this study used two-step system GMM estimation for multiple regression analysis that is suggested by previous studies such as Wintoki et al. (2012) and Nguyen (2015) among others.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Table 4.4: Test for Heteroscedasticity

Variables: Fitted Values	Chi2(1)	Prob >Chi2
ROA	chi2(1) = 25.44	Prob > chi2 = 0.0000
ROE	chi2(1) = 90.48	Prob > chi2 = 0.0000

4.4.2 DWH Durbin-Wu-Hausman Test

Earlier literature testified that the CG variables are endogenous by nature (Akbar et al., 2016). To check the same among regressor this thesis used DWH test. Davidson and MacKinnon (1993) argued that the main reason to assess if there is a problem of endogeneity. It is espoused to choose independent variable analysis related to a standard OLS analysis; the independent variable analysis has lesser bias when the involved probably endogenous variable in the Independent variable regression is truly endogenous whereas the standard OLS analysis has smaller variance. Test was conducted by taking SIZE, AQ, OC, CEO as variables. The results reject the null hypothesis (**H0**) of the test, meaning that the regressor is not exogenous. Therefore, signifying that independent variable in this thesis cannot be treated as exogenous variables

Table 4.5: Durbin Watson test

Tests of Endogeneity	
Durbin (score) chi2(1)	= .080687 (p = 0.7764)
Wu-Hausman F (1,451)	= .079817 (p = 0.7777)
Ho: variables are exogenous	

Note: Endogeneity -P value is more than 5% therefore there lies the problem of endogeneity.

The significant results from DWH test confirm the endogeneity between the regressor which leads to employ the two-step System GMM panel estimation approach, which handles the problem of endogeneity, heterogeneity, serial correlation, and simultaneity (Wintoki et al., 2012).

4.4.3 Validity of the Two-Step System GMM

It is significant that the selected statistical technique is suitable with the data that has been collected. Generally, time limitations obscure by the economic theory take the arrangement of the population moment condition. The primary condition to take into deliberation is the level of significance for the lagged DV which is significantly +_{ve} in the current thesis. Moreover, there were two significant comparative assessments to be completed after GMM estimation: The Residual autocorrelation test and Sargan J-test. Efficient estimates were obtained with the system GMM estimator, whereas unexplained pattern, complementarity, and vibrant connection were obtained for time-invariant control.

4.4.4 Sargan Test for Over-Identifying Restrictions

Table 4.6: Sargan Test for Over-Identifying Restrictions

Sargan Test for Over-Identifying Restrictions ROA	Sargan Test for Over-Identifying Restrictions ROE
H_0 : Over Identifying Restrictions are valid	H_0 : Over Identifying Restrictions are valid
Chi 2 (18) = 24.76449	Chi 2 (18) = 25.59082
Prob > Chi 2 = 0.1315	Prob > Chi 2 = 0.1095
H_0 = Not Rejected	H_0 = Not Rejected

Note: Sargan test is the post-estimation test for GMM for the validity of the instruments. The rule of thumb is that the Null hypothesis should not be rejected, which means that p-value should be more than 0.05 for the validity of instruments. The results are generated by the STATA software.

The null hypothesis of the Sargan test was carried out and followed by the Arellano-Bond test proposes that over-identifying constraints are legitimate. The results reported in Table 4.6 were 0.1095, which indicates that the null hypothesis is not neglected. This indicates that the moment restrictions are valid for this analysis as per required for the validity of the model by GMM theory.

The second test, the Arellano-Bond Test, was conducted to estimate whether an autocorrelation of the second order is 0. Arellano-Bond test proves acceptance of the null hypothesis. Arellano-Bond test that there is no serial correlation in the first-differenced disturbances as the null hypothesis cannot be rejected, thus validating the instruments as appropriate.

4.4.5 Arellano–Bond Test for Zero Autocorrelation ROA

Table 4.7: Arellano–Bond Test for Autocorrelation ROA

Arellano–bond test for zero autocorrelation in first–difference errors		
ROA		
Order	Z	Prob > z
1	-1.0986	0.2720
2	0.94662	0.3438
Ho		no autocorrelation

The null hypothesis cannot be ejected, thus validating the instruments as appropriate.

4.4.6 Arellano–Bond Test for Autocorrelation ROE

Table 4.8: Arellano–Bond Test for Autocorrelation ROE

Arellano–bond test for zero autocorrelation in first–difference errors		
ROE		
Order	Z	Prob > z
1	-1.2033	0.2289
2	-.81609	0.4145
Ho		no autocorrelation

The null hypothesis cannot be rejected, thus validating the instruments as appropriate. The second post-estimation test is the Arellano-Bond test to test the first-order correlation and second-order correlation in the GMM model

One of the main tasks in corporate governance empirical literature is manage the issue of endogeneity. Flannery and Hankins (2013) argue that this issue happens because of 2 main reasons: (i) time-invariant unobserved features across firms, and (ii) simultaneity. Wintoki et al. (2012) argued that though, current literature has documented that the CG and performance of the firm association is dynamic in nature and facing additional cause of

endogeneity, called dynamic endogeneity. Wintoki et al. (2012) states that the dynamic nature of this association recommends that performance of the firm and CG association is impacted by their previous performance.

4.5 Results Regression Analysis using Dynamic GMM (generalized method of moments estimation)

This section will discuss the relationship between independent variables that includes BSIZE, AQ, OC, with dependent variables ROA and ROE below on the following equations:

$$ROE_{it} = a_0 + a_1ROA_{i,t-1} + \beta_1BSIZE_{it} + \beta_2AQ_{it} + \beta_3OC_{it} + \mu_i + \eta_t + \varepsilon_{it} \quad (\text{Equation: 4.1})$$

$$ROA_{it} = a_0 + a_1ROA_{i,t-1} + \beta_1BSIZE_{it} + \beta_2AQ_{it} + \beta_3OC_{it} + \mu_i + \eta_t + \varepsilon_{it} \quad (\text{Equation: 4.2})$$

Dependent Variable: ROE

Table 4.9: Results of Regression Analysis using Dynamic

Variable	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
BSIZE	-1.882923	0.5387668	-3.49	0.000	-2.938887	-.8269599
AQ	0.1307226	0.0478415	2.73	0.006	.0369551	.2244902
OC	2.21967	0.5816369	3.82	0.000	1.079683	3.359657
_cons	12.72383	3.672573	3.46	0.001	5.525722	19.92194
Wald chi2(4) = 19.06 Prob > chi2 = 0.0008						

GMM-Number of obs = 456, Group variable: CODE, Number of groups = 114, Time variable: Years, Obs per group: min = 4, avg = 4, max = 4, Number of instruments = 23

4.5.1 Summary of the Regression (ROE)

This study takes a return on equity (ROE) as the second dependent variable in this study to examine its relationship with corporate governance mechanism in the context of KSA listed firms. This section reviewed the results obtained from regression analysis of the dynamic relationship between corporate governance variables and firm performance using ROE as the dependent variable along with the discussion of acceptance/rejection of the hypothesis of the study. This study used two-step system generalized method of moment's estimation generalized method of moments estimation GMM as the main estimation approach for regression analysis. This study used dynamic model approach, that has lagged dependent variable (LROE) as an explanatory variable to address the effect of past firm performance on current performance while ignoring it can have serious consequences for inference similar with (Wintoki et al., 2012). Harris and Raviv (2008) argued that past firm performance has a direct effect on current firm performance.

Hypothesis (**H_{1b}**) of this study predicted that board size has significant negative effect on performance of firm when measured through return on equity.

Hypothesis (**H_{2b}**) of this study predicted that audit firm size has significant effect on performance of firm when measured through return on equity.

The significant relationship between ownership concentration and firm performance was predicted in this study under hypothesis(**H_{3b}**). The result reported significant positive association between ownership concentration and performance of firm when measured through return on equity.

Hypothesis (**H_{4b}**) of the study reported that CEOE is moderating the relationship between board size, audit quality, ownership concentration and performance of firm when measured through return on equity.

The B coefficient values basically imply how much the mean of the dependent variable alters given a one-unit shift in the independent variable while holding other variables in the model constant. A negative coefficient suggests that there is an inverse impact of independent variable on dependent variable where positive coefficient indicates that the relationship between independent and dependent variable is linear. Moreover, basis of visual examination of the B coefficients values in regression analysis. It is possible to conclude that a beta value with high weights contributes more to the prediction of the dependent variable in contrast to those with small values (Cohen et al., 2003).

Ownership concentration has a positive and the strongest impact on overall firm's performance as corporate governance internal mechanism as the beta column the standardised slope takes value 2.21967 which represents the predicted change in ownership concentration in standard deviation units for an increase of 1 standard deviation in ROE return on equity (Firm performance).

4.5.2 Summary of the Hypotheses to Test the Relationship

Table 4.10: Summary of the Hypotheses to Test the Relationship

Hypothesis	Tested Relationship (ROE)	Support Hyp	Findings
H _{1b}	Board size – Firm Performance	Yes	–
H _{2b}	Audit Quality – Firm Performance	Yes	+
H _{3b}	Ownership Concentration – Firm Performance	Yes	+
H _{4b}	CEO - Firm Performance	Yes	+

Note: This table presents the summary of empirical evidence on the relationship between corporate governance mechanism and firm performance of listed companies in KSA. The table is based on the estimation results reported in Table 4.11. Symbols (+), (–) and (*) represent positive, negative, and significant relationships, respectively. An asterisk (*) indicates significance at the 10% level or better.

4.5.3 Dynamic panel-data estimation -Two-step results

Dependent Variable: ROA

4.5.4 Results of Regression Analysis using Dynamic GMM

Table 4.11: Results of Regression Analysis using Dynamic GMM

Variable	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
BSIZE	-1.067115	.2998106	-3.56	0.000	-1.654733	-.4794969
AQ	.1307226	.0478415	1.80	0.072	-.0053692	.1241855
OC	2.203455	.3645996	6.04	0.000	1.488853	2.918057
_cons	6.916291	2.036213	3.40	0.001	2.925387	10.9072
Wald chi2(4)		=	49.04	Prob > chi2	=	0.0000

Number of obs = 456, Group variable: CODE, Number of groups = 114, Time variable: Years, Obs per group: min = 4, avg = 4, max = 4, Number of instruments = 23

4.5.5 Summary of Regression Analysis (ROA)

This section summarizes the results obtained from regression analysis of the dynamic relationship between corporate governance variables and firm performance (ROA) along with the discussion of acceptance and rejection of the hypothesis. This study used Blundell-Bond two-step system GMM generalized method of moments estimation as the main

estimation approach for regression analysis which helps in controlling the issue of endogeneity, simultaneity, serial correlation, and heterogeneity.

This study used dynamic model, that has lagged dependent variable (LROA) as an explanatory variable to report that current values of the governance variables are the function of past firm performance and neglecting it can have serious consequences for inference similar with (Wintoki et al., 2012). It is argued in literature that past firm performance has a direct effect on current firm performance. And that past performance is significant in explaining current firm performance. In this study past firm performance (LROA) has significant positive effect on firm performance (ROA). The findings of this study are similar with (Schultz et al., 2010; Nguyen et al., 2014; Nguyen et al., 2015) and implies that the corporate governance mechanism and firm performance is affected by its past performance and consider as the key variable when modelling the relationship between these two (Wintoki et al., 2012; Nguyen et al., 2015b).

Hypothesis (**H_{1a}**) of this study predicted that board size has significant effect on firm performance. The findings of this study support the hypothesis by presenting the significant negative relationship with performance of firm when measured through return on assets. Coefficient of the board size is negative and statistically significant that shows that it contributes negatively to firm performance in this study, which in turn supports the hypothesis(**H₁**) of the study. The findings of this study is consistent with the findings of (Rahim et al., 2015) which pointed out that the larger number of board of directors corresponds to reduction in the firm performance.

The findings of this study do not support the hypothesis (**H_{2a}**) by presenting the insignificant relationship with firm performance of the study predicted a negative

relationship between audit firm size and performance of firm when measured through return on assets. The correlation between AQ and ROA is insignificant in this study. The results of this study implying that the audit quality has insignificant effect on the firm performance in the case of ROA.

Hypothesis (**H_{3a}**) of the study reported the positive relationship between ownership concentration and the performance of firm. The results reported the positive significant relationship between ownership concentration and performance of firm when measured through return on assets. The concentrated ownership by shareholders helps to mitigate agency problems arising from the separation of ownership and control. The relationship between ownership concentration and firm performance is positive statistically significant that accepts the hypothesis of the study.

Hypothesis (**H_{4a}**) of the study reported that CEOE is moderating the relationship between board size, audit quality, ownership concentration and performance of firm when measured through return on assets.

Ownership concentration has a positive and the strongest impact on overall firm's performance as corporate governance internal mechanism as the beta column the standardised slope takes value 2.203455 which represents the predicted change in Ownership concentration in standard deviation units for an increase of 1 standard deviation in ROA return on assets (Firm performance).

Table 4.12: Summary of the Hypotheses to Test the Relationship

Hypothesis	Tested Relationship (ROA)	Support Hypothesis	Findings
H_{1a}	Board size – Firm Performance	Yes	-
H_{2a}	Audit Quality – Firm Performance	No	+
H_{3a}	Ownership Concentration – Firm Performance	Yes	+
H_{4a}	CEO - Firm Performance	Yes	+

Note: This Table presents the summary of empirical evidence on the relationship between corporate governance mechanism and firm performance of listed companies in KSA. The Table is based on the estimation results reported in Table 4.10. Symbols (+), (–) and (*) represent positive, negative, and significant relationships, respectively. An asterisk (*) indicates significance at the 10% level or better.

4.6 Baron & Kenny Method for Moderating Effect

Baron and Kenny (1986) method is used to check the moderation impact on the equation. This tests whether a variable CEO education affects the direction and strength of the relation between ROA, ROE, BSIZE, AQ, OC, and CEOE. In other words, moderation tests for interactions that affect when relationships between variables occur. Baron & Kenny method was espoused in R to check the moderator impact of CEO Education.

Table 4.13: Baron & Kenny method

Estimation Variables	Accr.	ROA	ROE
CEO			
Board size	BSIZE	0.018* (0.010)	0.015 (0.013)
Audit Quality	AQ	-0.003 (0.030)	0.009 (0.037)
Ownership Concentration	OC	0.041 (0.060)	-0.044 (0.074)

Moderating effect of CEO education on the relationship Note: In above table *, ** and ***denote the 10%, 5% and 1% significance level, respectively. Standard errors are noted in parentheses

The results in Table 4.13 exhibits that CEO is like regular multiple regression results. Because there is a presence of significant interactions in this model, there is no requirement to infer the individual main effects of either independent or moderator variable (Blair, 2017).

4.7 Summary

The results show that Board size, ownership concentration is significantly related to firm performance through the measurement of Return on Equity (ROE) and Return on Assets (ROA). Besides, Audit Quality also indicates a positive relationship with firm performance when measured by Return on Assets while it has a positive and significant impact when measured by Return on Equity for firm performance. Moreover, CEO education has a moderating impact when compared with both firm performance constructs, Return on Equity and Return on Assets. Through the research methodology suggested, the data can provide statistical findings in answering the research questions and objectives intended for this thesis. Generally, the findings of this research show consistent results with prior studies. These findings are important in formulating policies and recommendations in the next chapter. The results presented here add to the body of evidence and indicate that, as predicted, firms with more qualified CEOs, small boards, higher ownership concentration and audited by big four audit firm generally generate better firm performance in terms of Return on Assets (ROA) and Return on Equity (ROE).

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Overview

Extensive literature investigated the impact of corporate governance mechanisms on the performance of the firm (Armstrong et al., 2010; Claessens & Yurtoglu, 2013; Bushee et al., 2014). The findings disclosed in this thesis enhance the context of evidence, and indicate that as predicted, certain corporate governance mechanisms as board size, audit quality and ownership concentration mitigate the agency problem thereby influencing the firm performance. Moreover, this study also validates the moderating impact of CEO education on the relationship between corporate governance mechanisms and firm performance. This research begins by conducting an empirical study to validate the corporate governance mechanisms variables through archival assessment and to verify its predicted association with performance of the firm. This chapter is structured into the following sections: Section 5.2 presents literature contribution; Section 5.3 discusses Practical contribution. Section 5.4 highlights study limitations. Section 5.5 elaborates the directions for the future research.

5.2 Literature Contributions

The purpose of this analysis was to examine the relationship between corporate governance mechanisms on the performance of the non-financial firms that are listed in Tadawul in Saudi Arabia starting from the period 2015 to 2018. The analysis observed the impact via board of directors, audit quality, ownership concentration; moreover, the moderator impact of the education of CEO on the relationship was also studied. The data set espoused was extracted from the annual reports and Tadawul website, which was analysed

by espousing generalized method of moments GMM approach due to the problem of endogeneity.

5.2.1 Board Size and Firm Performance

Recent literature argues that size of the board is grounded in the characteristics of the corporations, and substantial amount of literature have proven the significant impact of board size on the performance of the firm. The results of the analysis presented in the previous chapter illustrated a significant relationship between the board size and performance of the firm. However, the relationship is inverse and is consistent with the findings by (Lipton & Lorsch, 1992; Jensen, 1993; Rehman & Shah, 2013). Smaller boards are healthy for the organizations as advocated by Dahya et al. (2002) and Guest (2008) who argued that to avoid communication barriers and increase the decision making the firms should have smaller boards.

In Saudi Arabia minimum three and maximum eleven members can be appointed as board members (Capital Market Authority [CMA], 2015). Therefore, smaller boards are any numbers less than the average size between 3 to 7. Smaller boards are better because with the large board of directors, the difficulties triggered by problems of coordination and free riding would offset the possible advantages of having additional directors.

5.2.2 Ownership Concentration and Firm Performance

The findings of the current study revealed that there is a strong significant and positive relation of ownership concentration with performance of the firm when compared with both ROE and ROA. The results of this analysis are constant with the studies by Holderness (2003), Tsegba and Herbert (2011), Uwuigbe and Olusanmi (2012) and Wahla et al. (2012). Therefore, by possessing percentage of stocks, shareholders have solid

inducements to aggressively examine and control management. The results are also an indication that this dimension of ownership in the Saudi market contributes to mitigate the agency conflict and contributes as significant corporate governance mechanism. Shleifer and Vishny (1997) argued that shareholders who holds top shares can scrutinize the functioning of agents, and if these agents are not performing according to the agreement.

These findings suggested that ownership concentration plays a significant role as monitoring tool of corporate governance mechanism and helps to mitigate the problem of agency in the Saudi Arabian stock exchange listed sector.

5.2.3 Audit Quality and Firm Performance

The study investigated the relationship amongst audit quality and performance of the firm over the substitutes of audit firm size Big4& (ROA & ROE) respectively of listed non-financial firms in KSA from period of 2015 – 2018. The results of the current study revealed that audit quality that was measured by the big four audit companies, has a significant positive impact on return on equity however when measured with ROA there was insignificant impact on the firm's performance. The results are in line with the studies by (Singer & Zhang, 2018).

It is thereby implied that the higher audit quality may control opportunistic management behaviours, and mitigate the agency costs and, therefore, increase the firm performance (Farouk & Hassan, 2014; Matoke & Omwenga, 2016; Tobi et al., 2016).

Literature implies that financial statements disclose value pertinent information to investors for forecasting profitability. This is improved when corporation's financial statements are audited by one of the big four accounting firms (Elawa & Haddad, 2019). The

results of current thesis reveal that audit firm size is proxy for the audit quality. Therefore, this should be considered as this type of information is vital to key investors while taking investment decisions. Same has been supported by literature when numerous scholars have used the size of audit firms as big four to measure the quality of audit (Woodland & Reynolds, 2003; Miettinen, 2011).

One important implication of these findings relates to the issue of firm performance in Kingdom of Saudi Arabia. Saudi government, stock market, companies and accounting and auditing regulators would gain some new insights from this study in terms of the understanding the determinants influencing companies' performance.

5.2.4 CEO Education

The results indicated that CEO education moderates the relationship between corporate governance mechanisms and firm performance when measured by return on assets and return on equity. The results of the thesis are in line with the scholars (Rakhmayil & Yuce, 2011; Kokeno & Muturi, 2016). CEO with a higher educational background provide a valuable human capital to the firm.

Phan and Hoon (1995) espoused graduate and under graduated degree to define high level education for CEO education and thus advocates that high educated CEO will improve firm performance. In accordance with the upper echelon theory CEO education is manifested in the characteristics of their firms (Orens & Reheul, 2013). Moreover, it is also stated that higher educated CEOs are less risk hesitant, more receptive to new ideas, changes, and investment opportunities (Barker et al., 2002).

The findings of this thesis have also validated that CEO education plays an important role in firm's performance and firms controlled by CEOs with higher educational level (graduate) are expected to perform better than the firm CEOs with an undergraduate degree (Xiaowei & Zhang, 2010).

5.2.5 Summary of Theoretical Contribution

The contribution of this investigation envelops two fields of research, the financial literature (the "corporate governance" concept) and the strategic management (top management team (CEO) (Dhaouadi, 2018).

The findings of this study have expanded the financial literature of agency theory by examining the significance of each factor that contributes to corporate governance mechanisms impact on performance of the firm specifically on non-financial sector in Saudi Arabia. Moreover, the findings of this study have expanded the strategic management literature of upper echelon theory by examining the moderating impact of CEO characterises (education) on corporate governance mechanisms impact on performance of the firm on non-financial sector in Saudi Arabia.

This study concluded under the agency theory that board size, ownership concentration, audit quality are important indicators of CG mechanisms, and they significantly influence the performance of the firm. This study has outlined the factors that are contributing to mitigate the conflict of interest and reduce the agency cost.

It also attempts to bridge the gap by exploring the impacts of CEO characteristics (education) on financial performance (Ting, 2015). Moreover, this study has incorporated multi-theoretical approach whereby expanding the literature of upper echelon theory by

finding that CEO education does moderate the impact of CG mechanism on firm performance on non-financial sector in Saudi Arabia. This thesis offers some ideas about the assessment of firm performance attributable to the CEO. Even though several prior scholars have argued whether executives' characteristics drive the firm performance (Jensen, 1993; Skaife et al., 2007), most of them focused on top management turnover (Johnstone et al., 2010). Specifically, prior research only describes these relationships by theoretical implications due to the lack of internal control data. This research provides robust evidence to fill up this research gap, and to confirm the statement that CEO's education significantly influences governance mechanisms and firm performance. Second, this thesis offers pathways on the selection of CEO in the contemporary business environment in KSA. This research uses the most recent dataset in the analysis of the corporate governance of the firms that are listed in Tadawul Saudi Arabia. Additionally, the study period of this research may provide an appropriate background on apprehending the large economic cycle which is from 2015 till 2018 the influence of CEO's education on firm performance outcomes validates the perception by discovering CEO's individual effects. The findings further confirm the interpretation of different researchers (Boal & Hooijberg, 2000) that top management team's characteristics should be considered for a comprehensive examination of the upper echelon theory.

5.3 Practical Contribution

The study will be valuable for policy holders in Saudi Arabia to make and suggest necessary adjustments regarding corporate governance systems to achieve overall country's vision 2030. Moreover, as an emerging market Saudi Arabia is motivated by the fact that it has recently adopted international financial reporting standards (IFRS) as mentioned in the previous chapters therefore the adoption of these standards has essentially transformed the

ways corporations conduct their businesses. Hence, chief executive officers must be carefully selected by shareholders and board of directors. The decision to hire CEOs should be essentially centred on executives' characteristics such as education. Given that the findings in this study suggests that CEO education impacts the relationship between corporate governance mechanisms that includes size of the board, block shareholders or ownership concentration, hiring of big four audit firms and performance of the firm.

Moreover, the policy makers and practitioners must consider keeping the size of the board to optimum size as the findings revealed that larger the board lesser will be the firm performance and small boards are significant to avoid the dispute amongst the board of directors in formulating plan or decision making.

Additionally, this would help the company's stakeholders to reduce some of the agency issues that may arise with insiders and especially executive directors within the company. The result of this study implies that audit quality plays a significant role and when measured by big four audit firms as a proxy for audit quality it was found that there is a significant impact on the firm performance. it is also implied by the findings of the current study that big four audit firm is a successful indicator of audit quality. The findings provide evidence for policy makers in Saudi Arabian audit environment that the quality of auditors is very vital for increasing the disclosure and improving the dependability of investor and another stakeholder. Additionally, it is suggested that the management of listed firms must employ the services of big four audit firms for reliable audit quality whose character and integrity is beyond question.

Globally, this would enhance the Saudi competitive power in the global market. The findings provide evidence for policy makers in Saudi Arabian audit environment that the

quality of auditors is very vital for increasing the disclosure and improving the dependability of investor and another stakeholder. Additionally, it is suggested that the management of listed firms must employ the services of big four audit firms for reliable audit quality whose character and integrity is beyond question.

The empirical findings of this thesis shed light on the role concentrated ownership plays in firm performance, and consequently present insights to policy makers interested in improving corporate governance systems in an emerging economy such as Saudi Arabia. The findings also implicated that ownership concentration that is shares being held by top five shareholders are helpful for the corporations since this block of stockholders make sure that agents are not indulged in self-serving bias. The empirical finding is consistent with the prediction of agency theory revealing that ownership concentration has significant impact on firm performance. Ownership concentration has a disciplinary impact on agents since it is easier for large shareholders to monitor them (Shleifer & Vishny, 1986, 1997).

Corporate governance incorporates the relationships between the stakeholders engaged and the objectives for which the corporation is governed. It is meant to boost the stockholder's confidence and to mitigate the principal-agent problem. In lieu of this the board has a fiduciary duty of choosing the CEO (Dhaouadi, 2018). Therefore, considering these views and the conclusions drawn from the current thesis analysis it is recommended that board should seek to appoint the CEO with high level of education since, Barker et al. (2002) stated that higher educated CEOs welcome creative ideas, take challenges and calculated risk, they have adaptive personalities and seek investment opportunities.

The empirical outcomes of the research strongly endorse that, the CG and performance of the firm affiliation should be examined using a dynamic model such as

Dynamic generalized method of moment's estimation GMM due to the presence of endogeneity, in the existence of lagged dependent variable, traditional estimations for panel data. The system generalized method of moments estimation GMM estimator is also used because it is an appropriate reason for controlling the dynamic nature of the CG -firm performance interconnection and other endogeneity problems. To the best of the author's knowledge, this thesis is a novel contribution to document the association in a dynamic framework while measuring the impact of CEO education as a moderator.

5.4 Study Limitations

While the findings of any investigation are significant, they invariably endure from some limitations.

This thesis examined the impact of the corporate governance on firm performance just only from the accounting-based measures viewpoint. The dearth of data linked to the replacement costs prevented from exploring the impact on firm performance measured by Tobin's Q. Market-based measures of firm performance are mainly challenging in the emerging market, since mostly corporations are considered by debt-financing rather equity financing. Consequently, market-based measures are unrepresentative of actual investor profits in this context (Kumar, 2004).

Saudi Arabia as a country has its unique country-specific factors that may influence the behaviour of firms in Saudi Arabia. Furthermore, Saudi Arabia is marked with a degree of instability and variability that makes it difficult to predict a stable financing behaviour with certainty. Saudi Arabia stock market has severe market shocks where the market had plunged to its lowest, thus the confidence of the investors is low. Therefore, the discoveries of this research work are limited to firms in Saudi Arabia only.

Besides, this research also restricts its conclusions to KSA firms' CEOs, mainly because lack of data available from other nations over time. The findings of this research may not be applicable to all the firms across the world but can be seen as a reference to firms in developing countries as they are mostly fronting the identical challenges attributable to the similar prevalent economic environments as contrary to firms in developed countries. However, other developing countries may discover different effects of Corporate Governance on CEO education and firm performance.

Furthermore, it is crucial to note that this research has depended on listed companies that are publicly traded only. All the private firms and small-medium enterprises are excluded from this thesis because the available data for these firms is extremely limited, especially when a large sample size is required. While it is believed that public firms listed on Tadawul are significant, it is yet ambiguous whether corporate governance mechanism will have the same impacts on the other private firms and small-medium enterprises. Therefore, it is possible that the findings may not generalize to private companies. This thesis limits its data collection to non-financial listed companies only where the financial industry has been excluded from this research. Financial sector which is subjected to varieties of rules and conducts as well as variety types of operation is not suitable to be studied. This research excludes financial industry due to the government regulations that might potentially influence firm performance. It is hence questionably no evidence to justify considering financial industry as the same as other corporate industries that financial industry may have a different effect perceived from CEO education.

5.5 Directions for Further Research

Saudi Arabia has aimed to minimize its dependency on oil in the same pursuit Tadawul (Saudi Arabian Stock Market) is continuously implementing far-ranging reforms, some of which were technological market reforms that are aligned with the top procedures globally. This research took 4-year data set till 2018, it is therefore advised to review the CG framework with the most recent data set to see the changes it has brought to the listed firm performance, and also to review as to how many listed firms are actually adhering to the codes implemented recently.

The model developed in this thesis can be used to further examine similar issues for other GCC (Gulf Cooperation Council) economies that have advanced significantly in developing good corporate governance practices. Additionally, it is also recommended to incorporate for future investigation to add more variables board diversity such as age, status, and experience to check the relationship on the performance of the firm. Furthermore, since this thesis used ROA and ROE only to measure the performance of the firms. It is thereby suggested to espouse marketing base variables to measure the performance such as Tobin-Q (Tobins ratio), EPS (Earning per share), and ROS (Return on sales) lead to the conclusion that this is sufficient for optimum results.

In addition, research centred on the specific country does not have the capability to extend a contribution in terms of generalization to other populations in connection with the pressure of institutional environment. Therefore, by using the similar variables under multi-theoretical methodology, future research can contemplate a multi-country methodology. This sort of investigation would be able to offer an improved knowledge of country-level governance (national governance quality) alterations across countries by regulating the

country-specific constructs – like the values of culture, the political background, and the financial environment.

Finally, the focus of attention on Saudi Arabia institutional settings may be inconsistent with the specific consideration given to legal and regulatory organizations. It is important to note in a broader context that institutions are not confined to regulatory and legal institutions, since informal as well as formal considerations such as company policies, cultural and social customs are important. Therefore, further elements of the institutional characteristics will be useful in future work to enrich the findings.

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APPENDICES

Appendix A: List of Non-Financial Listed Firms

1	2330 - Advanced Petrochemical Company
2	1214 - Al Hassan Ghazi Ibrahim Shaker
3	4150 - Arriyadh Development Co.
4	2170 - Alujain Corporation
5	1213 - Al Sorayai Trading And Industrial Group Company
6	4300 - Dar Alarkan Real Estate Development Company
7	2001 - Methanol Chemicals Company
8	2340 - ALABDULLATIF INDUSTRIAL INVESTMENT CO.
9	4220 - Emaar The Economic City
10	2210 - Nama Chemicals Co.
11	1212 - Astra Industrial Group
12	4250 - Jabal Omar Development Company
13	2060 - National Industrialization Co
14	1210 - Basic Chemical Industries Co
15	4310 - Knowledge Economic City
16	2002 - National Petrochemical Company
17	2180 - Filing and Packing Materials Manufacturing Co.
18	4100 - Makkah Construction and Development Co.
19	2380 - Rabigh Refining and Petrochemical Co
20	2220 - National Metal Manufacturing and Casting Co.
21	4020 - Saudi Real Estate Co.
22	2260 - Sahara Petrochemical Co.
23	1211 - Saudi Arabian Mining Company
24	4090 - Taiba Holding Co.
25	2020 - Saudi Arabia Fertilizers Co.
26	2230 - Saudi Chemical Company
27	2010 - Saudi Basic Industries Corp
28	4140 - Saudi Industrial Export Co
29	2250 - Saudi Industrial Investment Group
30	2300 - Saudi Paper Manufacturing Co.

31	2310 - Saudi International 2070 - Saudi Pharmaceutical Indust.& Med. Appliances Corp.
32	2350 - Saudi Kayan Petrochemical Company
33	1201 - Takween Advanced Industries
34	2290 - Yanbu National Petrochemical Company
35	2150 - The National Co. for Glass Industries
36	1810 - Al-Tayyar Travel Group Holding Co.
37	4270 - Saudi Printing and Packaging Company
38	4040 - Saudi Public Transport Co.
39	4010 - Saudi Hotels & Resort Areas Co.
40	4210 - Saudi Research and Marketing Group
41	4110 - Saudi Transport and Investment Company
42	4170 - Tourism Enterprise Co.
43	4070 - Tihama Advertising & Public Relations Co.
44	4030 - The National Shipping Co. of Saudi Arabia
45	4260 - United International Transportation Company Ltd.
46	4001 - Abdullah Al Othaim Markets Company
47	3091 - AL JOUF CEMENT COMPANY
48	2080 - National Gas & Industrialization Co.
49	4200 - Aldrees Petroleum & Transport Services Co.
50	3010 - Arabian Cement Co
51	5110 - Saudi Electricity Company
52	4290 - Alkhaleej Training and Education Company
53	3003 - City Cement Co Multi-Investment
54	4004 - Dallah Healthcare Holding Company
55	3080 - Eastern Province Cement Co.
56	2140 - Al-Ahsa Development Co.
57	4240 - Fawaz AbdulazizAlHokair Company
58	3001 - Hail Cement Company
59	4130 - Al-Baha Investment and Development co
60	4180 - Fitaihi Holding Group
61	3002 - Najran Cement Company
62	4080 - Aseer Trading, Tourism & Manufacturing Co.
63	4190 - Jarir Marketing Co
64	3004 - Northern Region Cement Company
65	4280 - Kingdom Holding Company
66	4002 - Mouwasat Medical Services Company
67	3030 - Saudi Cement Company.
68	2120 - Saudi Advanced Industries Co.

69	4160 - National Agriculture Marketing Co.
70	3050 - Southern Province Cement Co.
71	2030 - Saudi Arabia Refineries Co.
72	4005 - National Medical Care Company
73	3090 - Tabuk Cement Co.
74	2190 - Saudi Industrial Services Co.
75	4050 - Saudi Automotive Services Co.
76	3040 - The Qassim Cement Co
77	4006 - Saudi Marketing Company
78	3020 - Yamama Cement Company
79	4003 - United Electronics Company
80	3060 - Yanbu Cement Co.
81	1330 - Abdullah A. M. AlKhodari Sons Company
82	6070 - Al-Jouf Agriculture Development Co.
83	7040 - Etihad Atheeb Telecommunication Company
84	2320 - AL-BABTAIN
85	2280 - Almarai Company
86	7020 - Etihad Etisalat Co
87	2200 - Arabian Pipes Company
88	4061 - Anaam International Holding Group CO.
89	7030 - Mobile Telecommunications Company Saudi Arabia
90	1302 - Bawan Company
91	6060 - Ash-Sharqiyah Development Company
92	7050 - Saudi Integrated Telecom Company
93	2370 - Middle East Specialized Cables Co
94	6080 - Bishah Agriculture Development Co.
95	7010 - Saudi Telecom
96	1310 - Mohammad Al Mojil Group Company
97	6001 - Halwani Bros Multi-Investment
98	2090 - National Gypsum Company
99	6002 - Herfy Food Services Co
100	2140 - Al-Ahsa Development Co.
101	4230 - Red Sea Housing Services Company
102	6090 - Jazan Development Co.
103	4130 - Al-Baha Investment and Development co
104	2160 - Saudi Arabian Amiantit Co.
105	6010 - National Agriculture Development Co.
106	4080 - Aseer Trading, Tourism & Manufacturing Co.
107	2110 - Saudi Cable Company

108	6020 - Qassim Agriculture Co.
109	4280 - Kingdom Holding Company
110	2040 - Saudi Ceramic Co.
111	6004 - Saudi Airlines Catering Company
112	2120 - Saudi Advanced Industries Co.
113	2130 - Saudi Industrial Development Co.
114	6050 - Saudi Fisheries Co.
115	2030 - Saudi Arabia Refineries Co.
116	1320 - Saudi Steel Pipe Company
117	2270 - Saudia Dairy and Foodstuff .Co
118	2190 - Saudi Industrial Services Co.
119	2360 - Saudi vitrified clay pipes co.
120	2050 - Savola Group
121	1301 - United Wire Factories Company
122	6040 - Tabuk Agriculture Development Co.
123	2240 - Zamil Industrial Investment Co
124	2100 - WAFRAH FOR INDUSTRY AND DEVELOPMENT

Appendix B: Big Four Audit Firms Operating in KSA

Name	Local web link	Contact or MD	Location	p.o box number	contact
Deloitte & Touche Bakr Abulkhair & Co	Deloitte Saudi Arabia Pages	Bakr Abulkhair	Riyadh - Al-Salam, Al-Salam Bldg, Main Olaya Road	Riyadh, 11660	+966 1 463 0018
Young Riyadh	E&Y Local Saudi Websit		Al Faisaliah Office Tower - Level 6, King Fahad Road, Olaya	P.O. Box 2732	+966 1 273 4740
KPMG	KPMG.com.sa	Abdullah Al Fozan	Salahuddin Street, KPMG Tower	P O Box 92876	+966 1 874 8500
Pricewaterhouse Coopers Riyadh – AlJuraid	PWC Global Site - Search for SA	Ron McMillan	King Faisal Foundation Building, 10th Floor, North Tower, King Fahad Rd	PO Box 8282	+966 1 465 4240