NATIONAL GOVERNANCE, CORPORATE GOVERNANCE AND FIRM PERFORMANCE:

EMPIRICAL EVIDENCE FROM TWO MENA COUNTRIES –JORDAN AND UAE.

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DECLARATION

"I confirm that the whole work presented in this thesis is my own work and that all other work attributed to others has been fully acknowledged and referred to its original sources, and it has not been submitted for any degree at any educational institution before. I also agree that the university has the right to submit my work to plagiarism detection service for originality checks."

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ABSTRACT

Experts' analysis of the report conducted by The Financial Crisis Inquiry Commission (FCIC) in 2011 shows that weak governance practices have been among the key causes, or at least exacerbate, the recent financial crisis and the severe corporate failures in the US market and elsewhere around the world. Therefore, governments and other regulatory bodies have been convinced to impose strict regulatory requirements and implement effective plans to ensure sound corporate governance practices.

By reviewing extant literature, I find a clear gap in studying the effect of governance variables on firm performance in emerging markets in general and in the Middle East & North Africa (MENA) capital markets in particular, where the existence of majority (controlling) shareholders is predominant, and institutional framework is less developed. This research aims to examine the effect of country- and firm-level corporate governance mechanisms on the performance of non-financial firms listed in Jordan and in the United Arab Emirates (UAE).

This study uses the Two-Step Dynamic System Generalised Method of Moments (GMM) estimator to examine this relationship over a seven-year period from 2008 to 2014. The empirical analyses include three studies. The first study examines the effect of firm-level corporate governance variables (e.g., ownership and board of director's structures) on firm performance using the panel dataset of 113 nonfinancial listed firms on the Amman Stock Exchange (ASE) in Jordan. The second study examines the impact of the selected firm-level governance variables on firm performance using a panel dataset of 40 non-financial listed firms on the Emirates Securities Market (ESM) in the United Arab Emirates (UAE). Finally, I use the combined panel dataset of the nonfinancial firms (153) listed in both markets to examine the impact of a series of country- and firm-level governance variables on firm performance.

This study provides evidence that governance of listed firms in Jordan and in the UAE, is characterised by the presence of strong blockholders (including; institutional and family investors). Importantly, in line with recent advances in corporate governance research (i.e., Wintoki et al., 2012; Nguyen et al., 2014, 2015), this research provides evidence that the one-year lagged firm performance is significantly positively correlated with current firm performance and governance practices. This support the notion presented by recent advances in corporate governance research that dynamic framework should be applied when examining the relationship between governance

and performance. Moreover, the results in general suggest that the effect of ownership structure on firm performance persists in both markets.

For the Jordanian market, the results indicate that the three ownership structure variables (family ownership, institutional ownership, and ownership concentration) appear to have statistically positive significant effects on firm performance. On the other hand, board of directors' variables –board size, duality and independence– seem to have no significant implications on firm performance using Jordanian dataset. This may imply that strong presence of controlling shareholders may substitute the implications of board of directors' variables.

For the UAE's market, the results show that only ownership concentration has a positive effect on firm performance. The type of the dominant shareholder has no implications in this context. Furthermore, similar to the Jordanian case, board of director variables –board size and independence– have no implications on firm performance in this country. These results remain robust even after using alternative firm performance indicators i.e., ROA and ROE.

The results of the third study, using the combined sample of 153 nonfinancial listed firms in Jordan and UAE, indicate that only ownership structure variables –family ownership, institutional ownership and ownership concentration– are significantly positively related to firm performance. Board of directors' variables –size, duality and independence– still showing no important implications on firm performance. These results highlighting the importance of ownership structure (concentration) as the most important at firm-level governance mechanisms in such small emerging markets. The main findings remain robust even after using alternative governance and performance metrics. These results are in line with the efficient monitoring hypothesis of blockholders as suggested by agency theory.

At the country-level governance, the empirical analyses executed in the third study show that higher national governance quality levels –such as legal protection of shareholders, the rule of law, government effectiveness and regulatory quality– are associated with higher firm performance. These results are in line with the institutional theory predictions about the ability of external (country-level) governance instruments in improving firm performance and reducing its variability by encouraging low-risky investments.

This study is one of the first studies to examine the relationships between a suite of country- and firm-level corporate governance mechanisms and firm performance using a dynamic modelling approach for the Jordanian and the UAE's capital markets. The findings of this thesis

significantly contribute toward a better understanding of how the country-level governance and firm-level governance influence operational and market performance of the firms operating in the emerging markets of the MENA region – a context has been ignored in the prior governance literature. The practical potential of this research in terms of policy is to inform decisions relating to institutional infrastructure and functions as well as pointing to possible effects of financing consequences as well as corporate control, ownership and governance decisions connected shaping a firm's market and operational outcomes.

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AB AR(1), AR(2)	The Arellano-Bond test for first and second-order serial correlation.
ADX	Abu Dhabi Security Exchange
AMF	Arab monetary funds
ASE	Amman Stock Exchange Market
Bdual	A dummy variable that takes the value of 1 if the board chairman is serving as the CEO at the same time, and 0 otherwise.
Bind	The ratio of the nonexecutive (or independent) directors to the total number of directors serving on the board.
Bsize	The total number of directors serving on the board
CBJ	Central bank of Jordan
CG	Corporate governance.
DFM	Dubai Financial Market
ESM	Emirates Securities Market
FamOwn	The fraction of the outstanding shares owned by families or individual investors who holds at least 5% of the outstanding stocks.
FCIC	The financial crisis inquiry commission report
ForOwn	The fraction of the outstanding shares owned by foreign investors who hold at least 5% of the outstanding stocks.
Fsize	The market capitalization of the firm.
GDP	Gross Domestic Product
GMM	Generalised method of moments
IFC	International finance company
IMF	International monetary funds
InstOwn	The fraction of the outstanding shares owned by institutional investors (i.e. banks and other large financial institutions, large holding companies and mutual funds, who hold at least 5% of the outstanding stocks.
IPI	Investors Protection Index
ITO	International transparency organisation
Leverage	The ratio of total debt to total assets.
lnBsize	The natural logarithms of the (total number of directors serving on the board)
lnFage	The natural logarithms of (a firm years of incorporation).
lnFsize	The natural logarithms of (the market capitalization of the firm).
lnQ	The natural logarithms of the Tobin's Q Ratio.
MENA	Middle East and North Africa
NGI	National Governance Index
OLS	Ordinary least square
OwnTotal	The fraction of the outstanding shares owned by blockholders (i.e. families, institutional, government, and foreign investors) who hold at least 5% of the outstanding stocks.
Q	Tobin's Q Ratio (the ratio of the (market value of equity plus (the book value of assets - the book value of equity)) scaled by total assets book value).
ROA	Return on Assets measured as the ratio of net income to total assets.
ROE	Return on Equity measured as the ratio of net income to total equity.
UAE	United Arab Emirates
WGI	World Governance Indicators

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CHAPTER 1: AN OVERVIEW OF THE RESEARCH

1.1 Introduction

Corporate governance is a dynamic process, and it has witnessed major development during the past decades throughout the world[1]. However, corporate failures continue to proliferate. One example of such sever corporate failures was shown recently during the (2007-12) financial crisis. According to the U.S. Financial Crisis Inquiry Commission report (FCIC, 2011) the crisis was avoidable and was subsequently caused by "widespread failures in financial regulation, including the Federal Reserve's failure to stem the tide of toxic mortgages; dramatic breakdowns in corporate governance including too many financial firms acting recklessly and taking on too much risk; an explosive mix of excessive borrowing and risk by households and Wall Street that put the financial system on a collision course with crisis; key policy makers ill prepared for the crisis, lacking a full understanding of the financial system they oversaw; and systemic breaches in accountability and ethics at all levels"[2]. This has put policy legislators and corporate decision makers under pressure to develop and to ensure the effectiveness of corporate governance practices to prevent such corporate failures in future. Thus, investigations into the corporate governance issues came to the fore following these failures and financial crisis.

The main purpose of corporate governance is to solve or minimise any potential agency problems (Jensen and Meckling, 1976). In other words, corporate governance is all about the defence of shareholder's interests. The Main agency problem in corporations refers to the conflict of interests between a firm's shareholders and its managers. Agency theory argues that managers may have their own interests which they differ from those of the firm's shareholders, accordingly, they would involve in certain actions i.e., self-opportunistic activities, that may not lead to the main goal of corporations which is to maximise the shareholders' wealth. In consequences, Jensen & Meckling (1976, p.310) stated that, "The principal can limit divergences from his interest by establishing appropriate incentives for the agent and by incurring monitoring costs designed to

[1] For example, there are many corporate governance reforms and developments noticed around the world, such as; Cadbury (1992), Greenbury (1995), Higgs (2003), the combined code (2006, 08), Davies report (2011), Stewardship code (2012) in the UK and many others around the world.

[2] The Financial Crisis Inquiry Commission is a research committee contains 11 academic staff from the University of Stanford and other government organizations to examine the main causes of the recent financial crisis that started in the US market in 2007 and extended elsewhere around the world.

limit the aberrant activities of the agent. In addition, in some situations it will pay the agent to expend resources (bonding costs) to guarantee that he will not take certain actions which would harm the principal or to ensure that the principal will be compensated if he does take such actions". Thus, corporate governance practices seem to be a controlling and monitoring mechanisms over the managerial behaviour to assure maximum corporate financial performance.

This type of agency conflict (i.e., P-A conflict) mainly arise as a result of separation of ownership and control, and usually happening in capital markets characterised by a wide dispersion of ownership i.e., USA and UK capital markets (Berle and Means, 1932). On the other hand, in emerging markets, such as Jordan and the UAE, the ownership is highly concentrated in the hand of controlling shareholders i.e., families, institutional investors and managerial positions held by majority shareholders or their representatives (Alnajjar, 2010). In such cases, a part from the traditional agency conflict (P-A conflict), other form of agency conflict may arise i.e., the conflict of interests between majority (controlling) shareholders and other minority shareholders (Young et al., 2008). Moreover, in such countries, country-level corporate governance instruments (i.e., the market for corporate control) may be inactive or even absent, and the legal and institutional environment is entirely weak, which may exacerbate this conflict, and leads to negative implications on firm performance in general (La Porta et al., 1997; Dharwadkar et al., 2000; Morck et al., 2005).

Given these major corporate governance issues, corporate governance research has grown rapidly in recent times (Millan, 2016). While the vast majority of this research was mainly concerned with the traditional agency conflict (i.e., P-A conflict) which is exclusively related to large emerging markets of the developing countries i.e. China, Japan, and India, or the developed countries i.e., USA and UK, the relationship between corporate governance and firm performance in small emerging markets i.e., the MENA region countries have been uncovered by prior literature (Al-Najjar & Clark, 2017). Moreover, prior academic literature has failed to provide consensus evidence with regards to this relationship in general. There are several reasons that stood behind the inconsistency status of the extant corporate governance research which will be explained in the next section.

Concurrently, recent advances provided by corporate governance literature have focused on how the national governance quality differences may affect and shape firm-level governance mechanisms, and consequently, firm performance (Anderson & Gupta, 2009; Klapper & Love,

2004; Love, 2010; Nguyen, Locke, & Reddy, 2015; and Aslan & Kumar, 2014). These arguments give support to those presented in this research, that, a corporate governance research must be executed at both country- and firm-level issues.

Indeed, regarding these calls and shortcomings in prior literature, this research will examine role of country- and firm-level governance mechanisms on firm performance in the MENA region; mainly, Jordan and the UAE. Specifically, this research will take a look at the effect of ownership structure –the type of majority shareholders and ownership concentration– and board of directors' structure –board size, duality and independence– on firm performance; two important dimensions of firm-level governance mechanisms. Moreover, this research will examine the direct effect of the national governance quality indicators on firm performance. Accordingly, this research will take a look at the issues of corporate governance in small emerging markets and the effectiveness of such governance mechanisms in controlling, reducing, or mitigating agency problem between majority (controlling) shareholders and other minority shareholders, using a complementary-multi-theoretical (i.e., agency, stewardship, resource dependency, and institutional) framework.

The next sections of this chapter present the research's background, problems, research questions and objectives, additionally, it includes the significance of the study, scope of the study, research approach and finally the thesis outline.

1.2 Extant of Knowledge and Research Gaps

Despite that "corporate governance" as a term is relatively new one both in the public and academic debates, the issues it addresses have been around for much longer, at least since Berle and Means, (1932), and even earlier, Smith, (1776). This has led to develop several theoretical assumptions that concerning with corporate governance issues. For example; Jensen & Meckling, (1976) develop a modern corporate governance theory based on the agency problem. According to Jensen & Meckling, (1976, p.308) agency relationship is "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent".

Similarly, Freeman in (1984) broadens and develops the agency concepts to include any parties that could affect or be affected by the interrelationships inside the corporations, to more generalist view called stakeholder theory. The stakeholder theory of Freeman's (1984) identifies and models groups of stakeholders and recommends methods by which management can deal to

satisfy the interests of these different groups of stakeholders of corporations. It should be noted that, this research will not use the stockholders' approach, but it will focus on shareholders' approach in examining the relationship between corporate governance and firm performance. Other theories have evolved in the prior corporate governance literature including; resource dependency theory of Pfeffer and Salancik, (1978) or even stewardship theory of Donaldson & Davis, (1991).

Concurrently, recent thinking about corporate governance and firm's financial performance relationship has been influenced by institutional theory. This holds that firm-level governance and performance may be affected by institutional characteristics and legal system of the hosting country (Filatotchev et al., 2013). Nevertheless, corporate governance issues seem to be hard to be fully explained using sole-theoretical background. Each theory has advanced the knowledge using different angel of research. Thus, this research allows for potential complementary role of these theories by examining the impact of country- and firm-level governance mechanisms on firm performance.

With regards to its definition, prior literature has defined corporate governance in different ways. One of the influential definitions that has been the basics of the recent research agendas provided by Shleifer & Vishny, (1997), define corporate governance mechanism as "economic and legal institutions that can be altered through the political process-sometimes for the better" (p.738), whereas these mechanisms vary across countries and within firms (Doidge et al., 2007; and La Porta et al., 1999). Also, corporate governance mechanisms can be under two main classifications; namely, internal and external governance mechanisms. According to Jensen, (1993), internal governance mechanism include many variables related to the firms structure such as board of directors or ownership structure, while external governance mechanism refers to the market for corporate control or legal system of the hosting country (Shleifer & Vishny, 1997).

A full review and syntheses of extant corporate governance research and the extent to which corporate governance mechanisms affect a firm performance is presented CHAPTER 2: of this thesis (literature review chapter). In the process of this review, three major avenues that deserve further research have been identified at a general view of the relationship between governance and performance, and one important aspect at the specific context of this research i.e., MENA region corporate governance issues. First, extant related literature was found to be extensively relied on one theoretical assumptions; mainly agency theory, to understand how to control managers and to

align their interests with the shareholders' ones. While the potential complementary and supportive views of other theories i.e., institutional theory has been ignored. Secondly, extant researches ignored the important role of the external governance mechanisms i.e., national governance system in mitigating the agency conflicts, and hence, improving firm performance. Thirdly, in terms of methodological approach, most of extant related researches ignores the fact that governance mechanisms are decisions and activities –that certainly depend on how firms perform– to influence future outcomes. In other words, the relationship between corporate governance structures and firm performance is dynamic in its nature (Hermalin & Weisbach, 1998; Wintoki et al., 2012). Thus, large body of prior empirical research plagued with endogeneity issues, which leads to biased and inconsistent parameter estimates, and in some cases, reverse the inference and make it unreliable. Finally, the majority of extant corporate governance research was basically developed by investigating governance issues in developed and large developing economies such as USA, UK, European countries, and China, other small emerging markets i.e., Jordan and UAE as a part of the MENA region have been ignored from prior empirical analysis. Each of these points is now explained in turn.

Prior academic literature was found to be over reliant upon a common approach that is about to examine the impact of isolated corporate governance mechanisms on a firm's financial performance using single theoretical assumptions. For example; Cui & Mak, (2002) and Hamadi & Heinen, (2015) relied on agency theory's assumption of need for controlling owners to lead the business, they conclude that managerial ownership creates countervailing interest alignment and entrenchment effects, leading to a nonlinear relationship between managerial ownership and firm performance. Farrell & Hersch, (2005), Kim, Pantzalis, & Park, (2013), and Millstein & MacAvoy, (1998) neglected to consider the agency theoretical standpoints about control and motivation and instead of using a sole resource dependence theory conjectures to understand the value added by board of directors characteristics and diversity. Similarly, Miller et al., (2014) and Andres, (2008) neglected to consider resource dependency role and evaluate the effect of controlling family shareholders upon firm's financial performance from agency perspectives.

Although, all the above mentioned researches and publications are well executed and thorough, the general results failed to explain the impact that a wider definition of corporate governance, e.g., one that simultaneously encompasses all three theories, would have upon firm performance. The issue is perhaps best summed up by Nicholson & Kiel, (2007, p. 585) who utilize the three main theories in investigating the corporate governance-performance link, concluded that

"while each theory can explain a particular case, no single theory explains the general pattern of results". Indeed, this highlights the importance of using multi-theoretical approach in examining the corporate governance issues, which is a point covered in this thesis.

The second shortcoming that was found to exist centred on an apparent research failing to consider how the association between internal corporate governance mechanisms and firm's financial performance would differ in line with the context of the overall national governance quality under which the firms operate in hosting country. Especially, in one such recent academic publications of Filatotchev et al., (2013) and Kumar & Zattoni, (2013) who call for investigating the impact of combining country-level and firm-level governance variables in studies on corporate governance issues. Also, Black et al., (2014) and Aguilera & Jackson, (2010) observed that integrating cross-disciplinary paradigms is important to understand corporate governance issues in depth and to make generalization more reliable. Subsequent recent evidence provided by Nguyen et al., (2015) that indicates the national governance quality matter for the impact of ownership concentration upon firm's financial performance in emerging markets, moreover, they report positive impact of national governance indicators on firm performance.

On the other hand, recent academic publications (e.g., Wang & Shailer, 2015) stated that how and to what extent governance mechanisms affect firm's financial performance operating in emerging markets is still a controversial question. This is not only because of the confliction of theoretical predications but also due to the inconsistence of empirical finding. Moreover, Wang & Shailer, (2015) call to further examine the impact of corporate governance mechanisms on firm performance by using data from markets that share similar corporate governance characteristics. While very recently, Al-Najjar & Clark, (2017, p. 6) highlight the importance of investigating the relationship between corporate governance and firm performance in the MENA region's context, and observe that the impact of external and internal governance in MENA region has not been explored yet. This proposal can be seen limitless, and consequently, there is a need to investigate the impact of corporate governance mechanisms upon firm performance in MENA context, and to explore whether national governance quality has direct impact on firm performance in this region.

Moreover, it should be noted that, the most of Arab countries have undertaken privatisation plans since the early 90s. These plans tend to transform the majority of state-owned enterprises SOEs into private equites. However, governments in some of the Arab markets still holding large stakes of portfolios. Jordan's experience during 1998 – 2008 seems to be different. The

Government of Jordan (GOJ) privatised fourteen SOEs –in telecommunications, electricity, air transport, mining and other sectors– with technical assistance program financing from the U.S. Agency for International Development (USAID) demonstrates both how privatisation can provide a wide range of benefits to society and how to implement a privatization program (Mako, 2012). Given these ownership structure transformations, this research provides significant chance to examine the ownership concentrations and the type of majority shareholders' effects on firm performance as a key firm-level governance mechanisms.

The third shortcoming that was identified in prior research is related to the methodological approaches that has been used to examine the corporate governance–performance relationship. Prior empirical literature which examines the relationship between corporate governance and firm performance deals with different aspects of corporate governance mechanisms. Some papers find that board size may influence corporate financial performance negatively (Guest, 2009; Eisenberg, Sundgren, & Wells, 1998; Kang, Cheng, & Gray, 2007). Other papers reflect the importance of board independence in mitigating agency conflict, and thus enhancing firm's financial performance (Boone et al., 2007; Jameson, Prevost, & Puthenpurackal, 2014; Li et al., 2015). Also, there is another research strand that shows the importance of ownership structure i.e. concentration and large-shareholders in imposing efficient mentoring on managerial behaviour to promote financial performance (Filatotchev & Nakajima, 2010; Shleifer & Vishny, 1997; Demsetz & Villalonga, 2001; Alipour, 2013; Dalton et al., 2003; McIntyre et al., 2007; Welch, 2003; Maury & Pajuste, 2005; Maury, 2006; Andres, 2008).

In spite of thorough and methodologically sound, these papers failed to provide consensus evidence and conclusive empirical results. Nevertheless, these studies utilised different databases in different time frames or even in different countries, they failed to provide consensus evidence to explain how corporate financial performance would be affected by a firm's corporate governance mechanisms i.e. ownership structure and board structure[3]. Wintoki, Linck, & Netter, (2012) justified the inconsistencies in the empirical evidence of corporate governance–performance research to the inappropriate endogeneity treatment, and argue that extant governance research neglects one source of endogeneity that often rises from the possibility that current values of governance variables are a function of past firm performance, this is often referred as a "dynamic relationship" between governance and performance. Thus, they proposed a well-

[3]For more details about extant literature associated with the relationship between corporate governance and firm performance, please refer to **Error! Reference source not found.**.

developed Dynamic Panel Generalized Method of Moments GMM that alleviate endogeneity concerns thoroughly.

Indeed, considering these research shortcoming, and consequently, this research will examine the relationship between corporate governance –internal and external– mechanisms and firm performance in Jordan and in the United Arab Emirates (UAE) as representative markets of the MENA region using a dynamic modelling approach (System GMM).

1.3 Research Objectives & Questions

This research aims:

First, to examine to what extent that corporate governance mechanisms explain corporate financial performance in MENA region represented by Jordan and United Arab Emirates (UAE) as a form of emerging markets, using an integrated theoretical framework that encompasses four main theoretical assumptions including; agency theory, resource dependency theory, stewardship theory, and finally institutional theory. Secondly, to determine whether the national governance quality variables have significant effect on firm performance. Thirdly, the author is seeking to identify the most relevant country- and firm-level corporate governance mechanism(s) in reducing and mitigating agency conflict in these two different countries. And finally, to provide consequent recommendations to managerial bodies and policy makers on a wider set of factors to consider when constructing corporate governance variables based on aggregate circumstances that most accurately reflect the national governance system that the firms operate into enhance firm performance levels.

According to the described research shortcomings in the previous section, and given that corporate governance issues that prevails these days, the author states the below questions as the main issues in corporate governance research that must be addressed in the two-selected capital markets as they share the similar governance and capital market characteristics:

Main research question: In what way, will the corporate governance monitoring mechanisms affect the firm's financial performance in Jordan and in the UAE as a form of small emerging markets of the MENA region?

It is worthy to mention that; this research will investigate the above-mentioned research question indifferent manner. For example, unlike most of extant governance research, the focus

will not be placed only on the relationship between the internal governance variables (i.e., ownership and board structures), but also the direct influence and the possible correlations between the national governance quality variables and firm performance. By doing so, a deeper understanding of the issues involved may be obtained, and enrich the academic overwhelming debate regarding the relationship between governance and performance.

The above aforementioned research question can now be broken into more specific research questions as follow:

1. *In what way (for example, likely or unlikely) will the attributes of the ownership concentration (ownership structure) affect firm's financial performance in Jordan and in the UAE?*

It should be noted that, the term "ownership concentration" here refers to both 'intensity' and 'identity' of stock ownership. In other words, this research will have a look at the type of majority (controlling) shareholders and the aggregate ownership concentration effects on firm performance.

2. *Will the firm's activities and other governance practices (i.e., board of directors' independence, duality, and size) be beneficial or harmful to the firm's financial performance in Jordan and in the UAE?*
3. *What will be the effect of the external country-level governance mechanisms (national governance quality) on firm's financial performance in Jordan and in the UAE?*

Accordingly, by investigating the above questions, the research will further advance academic understanding of how a wider set of governance constructs (e.g., those that emerge from simultaneous application of agency, resource dependency, stewardship, and institutional theoretical standpoints) contribute to firm performance and valuation, and provide managers, owners, and policy makers on how to align their governance structure and design to best standards under the specific circumstances in which their firms operate (e.g., national governance system quality).

Table 1-1 below provides a summary of some of the prior empirical investigations together and theoretical basis that is used to help justify and formulate the above-mentioned research questions. Additionally, it provides the reasons that carried the researcher to conduct this study in these two specific emerging markets context. Also, it provides a brief explanation about the importance of the study and the possible contributions and significance that the study's results may

contribute to the current body of literature in corporate finance and especially in governance field, which may help improve governance quality and firm performance levels.

Table 1-1 Research questions and its justifications

Main research question	Sub-research questions	Theoretical bases of the study	Some of the previous studies associated with t research questions	Why is this study being conducted?
In what way, will the corporate governance monitoring mechanisms (internal and external) affect firm performance in Jordan and UAE as a form of emerging markets of MENA region?	**RQ1:** In what way, will the attributes of the ownership structure (share ownership identity and concentration) affect firm performance in Jordan and UAE?	**Main theoretical lens:** Agency theory: Principal-Agent and Principal-Principal conflicts (also known as agency problem type II)	(Anderson et al., 2001; Anderson & Reeb, 2003; La Porta et al., 1999; Connelly et al, 2012; Shleifer & Vishny, 1997; Knyazeva et al., 2013; Zeckhauser & Pound, 1990; Connelly et al., 2010; Richter & Weiss, 2013; Byun et al., 2011; Gul, Kim, & Qiu, 2010; Demsetatz & Lehn, 1985) among others.	Corporate governance issues have been rarely considered in the emerging markets of the MENA region. Jordan and UAE represent an interesting platform to examine corporate governance effect on firm performance, as capital markets in these two countries are characterised with high ownership concentration, and weak external (market) forces. Moreover, these two countries are most representatives in terms of governance practices among other countries in the MENA region. To best of the researcher's knowledge the direct impact of national governance quality on firm performance has never been examined in the MENA region before.
	RQ2: Will the firm's activities and other governance practices (i.e., Board size, independence, and duality) affect firm performance in Jordan and UAE?	**Complementary:** Resource dependence theory, Stewardship theory,	(Sur, Lvina, & Magnan, 2013; Sanjai Bhagat & Black, 2001; Chen, Barry Lin, & Yi, 2008; Elsayed, 2007; Harris & Helfat, 1998; Linck, Netter, & Yang, 2008; Zona, 2014; Hendry & Kiel, 2004; Liu, Miletkov, Wei, & Yang, 2015; Chen, 2014) among others.	
	RQ3: What will be the effect of the external (country-level) governance mechanisms on firm performance in Jordan and UAE?	And Institutional theory	(Kim & Ozdemir, 2014; Richter & Weiss 2013; Ernstberger & Grüning 2013; Essen et al., 2013; Schiehll et al. 2014; Donadelli et al., 2014; Beck et al., 2003; Klapper & Love 2004; Nguyen et al. 2015; Ngobo & Fouda 2012) among others.	

Note: This table has been formulated based on author's considerations from extant literature (self-compiled). RQ denote research question.

1.4 Research Significance and Contribution

This study has a significant practical and theoretical importance, as the findings of this research should contribute to the academic research and other policy-makers on corporate governance issues in several ways. First, it can be considered as one of the first studies to examine the joint impact of external (country-level) and internal (firm-level) corporate governance mechanisms on firm performance in the MENA context (see for example; Al-Najjar & Clark, 2017). While prior corporate governance literature has paid extensive attention to the role of internal (firm-level) governance mechanisms in mitigating the agency conflict, the role of national (country-level) governance in this context has been under researched (Schiehll & Martins, 2016). Specifically, recent advances in corporate governance literature i.e., Aslan & Kumar, (2014); Van Essen et al., (2013); Globerman, Peng, and Shapiro (2011); Aguilera & Jackson, (2010) among others, suggest that every corporate governance research must take into account the national governance environment that firms are embedded in. Thus, this research responds to these calls and provide new evidence on the relationship between corporate governance and firm performance using an integrated framework of national (country-level) and internal (firm-level) governance factors.

Second, in terms of methodological applications, this research employs a well-developed suitable and rigorous method for testing the relationships between corporate governance variables and firm performance. By using the dynamic modelling –Dynamic System GMM– approach, a technique has been introduced and recommended recently by corporate governance advances i.e., Wintoki et al., (2012). This research stands in the best modelling choice, which has the ability in controlling potential endogeneity issues inherent in corporate governance research (Wintoki et al., (2012). Moreover, findings obtained in this research confirm the notions that have been suggested recently by corporate governance scholars that the relationship between corporate governance structures and firm performance must be examined in a dynamic framework rather than traditional static (Nguyen et al.,2014, 2015; Wintoki et al., 2012). Indeed, this will gain the research much importance in terms of the methodological standpoint.

Third, this research explores the corporate governance–performance relationship based on the application of the new corporate governance codes that has been issued and released lately in MENA countries, basically in the year 2007 in UAE and in the year 2008 in Jordan. The limited

literature on this topic in these two small emerging markets has been executed in a pre-governance codes era. For example; Al-Khouri, (2005) relied on a set of data covering the period between 1998 and 2001 to examine the corporate governance–performance relationship in Jordan. Zeitun & Tian, (2007) and Zeitun, (2009) examine ownership effect on firm's performance in Jordan based on longitudinal data set covering the period between 1989 and 2002. Similarly, in the UAE Hassan & Halbouni, (2013) relied on data published in 2008 only to perform cross-sectional analysis to examine the impact of corporate governance on firm's financial performance. Moustafa, (2005) relied on a longitudinal set of data covering the period between 1998 and 2002 to examine the effect of separation between ownership and control on UAE firms' performance. Consequently, this research will provide comprehensive comments about the effectiveness of these corporate governance codes in these two MENA markets.

Fourth, the majority of prior corporate governance investigations utilizes one underlying theoretical assumptions mainly agency theory through an approach that has been criticized recently by many scholars because of the limitations that may impose on the research (Moore, 2015). For example, agency theory suggests a positive relationship between board independence and firm's financial performance however, it never addresses if board of directors characteristics may endogenously be related to firm's financial performance (Arthurs & Busenitz, 2003). As noted earlier, recent advances in corporate governance research highlight the importance of other theoretical standpoints in explaining the governance: performance relationship. For example; Filatotchev et al., (2013) argues that national governance mechanisms, such as legal system, rule of law, or investor protection levels, may influence the effectiveness of corporate governance practices, and hence firm performance. This implies that institutional theory may provide more complete representation of the process of governance, and consequently a greater explanation of corporate performance.

Using a complementary-multi-theoretical perspective to include institutional theory as a vehicle through which to understand the effect of context specific variables (e.g., national governance quality) will add to the academic practical understanding of the macro-level critical effects on corporate performance. Specifically, this research seeks for contributing to understanding how the institutional and legal system differ among countries, and how these differences affect the corporate financial performance. This will provide academics, shareholders, managers, and policy makers in these two specific emerging markets, and other similar markets in

the MENA region with guidelines on how best to govern firms in circumstances represented by the national governance system quality in which firms operate.

Finally, this research is tending to provide the best bundle or the optimal options of corporate governance i.e., country- and firm-level mechanisms, which could be used to mitigate agency conflicts, and consequently, increasing firm financial performance levels in MENA context in general, and in the Jordanian and UAE's capital markets in particular. Most of the prior studies have tried to relate to the substitutability and complementarity effects between individual firm-level governance mechanisms[4]. However, one important argument presented in this research is that, it would be difficult for companies to rely on the internal firm-level governance practices only to solve agency conflicts. Thus, this research suggests that country- and firm-level corporate governance mechanisms must combine to mitigate agency problems and enhance firm performance levels. This should alert shareholders, managers, and practitioners alike to the choice or the methods of structuring governing business entities in MENA context under the national governance system and legal differences.

1.5 Scope of the Research

It is worth noting that this study will utilize the shareholding perspectives rather than stakeholding in investigating the governance-performance relationship. This is not to undervalue the role of the stakeholders in the business life, but just to make the research manageable as stakeholders include; employees, lenders, suppliers, and even customers. The important role of stakeholders in shaping the relationship between corporate governance and performance may be considered in postdoctoral work in future. The next three subsections respectively describe the justifications of choosing Jordan and UAE as a platform to execute this study, choosing publicly-listed firms, and why investigating firm performance in such small emerging market context, where ownership is concentrated and external legal environment is weak, is important.

[4] For more analysis about the complementary and substitutory evidence of the corporate governance mechanisms, please refer to publications provided by (Aguilera et al., 2008; Schepker & Oh, 2012; Ward, Brown, & Rodriguez, 2009; Kim & Ozdemir, 2014) among others.

1.5.1 Why Jordan and the UAE?

Recent meta-analysis provided by Wang & Shailer, (2015) shows that there are major differences in the relationship between governance variables i.e., ownership concentration, and firm performance across countries. These differences are directly driven by the country's institutional farmworker. This accordingly, highlights the need for comparative studies of the relationship between corporate governance and firm performance. Comparative corporate governance studies overcome the prior solo-country analysis in terms of generalization. However, given the lack of corporate governance data, executing wide comparative analysis on the relationship between corporate governance and firm performance seem to be challengeable. In fact, corporate governance data collection in multi-country analysis is time-consuming, difficult and costly. Recent advances in cross-national corporate governance research have proposed potential solution to overcome these difficulties through the utilization of well-constructed research sample that highly represents the selected countries.[5]

Following these recommendations, the empirical analysis which was executed in this research is based on an aggregate sample of nonfinancial listed firms in two typical developing countries with high emerging capital markets; Jordan and United Arab Emirates (UAE). These two markets are chosen to be the study platform to conduct the required analysis because they are the most representative markets in terms of corporate governance practices and development of national governance quality in the MENA region.[6]

Indeed, compared with other MENA countries, the Jordanian and UAE's corporate sectors represent an intriguing research laboratory that presents an opportunity to expand prior limited investigations and to make several contributions to the existing knowledge that we already have. At the first place, due to the different ownership form than the prevailing "diffused" ownership structure in the most countries around the world, Jordan's and UAE's corporate sector is highly concentrated which will enable us to understand the influence of concentrated ownership on the underlying firm's financial performance. Additionally, firms listed in these two capital markets are mostly held and/or controlled by multiple blockholders, including families and institutional investors (mutual funds, pension funds, banks and other large financial institutions). In a situation

[5] See for example; Black et al., (2014).

[6] Chapter two of this introductory part provides more details about the institutional settings and other related backgrounds on this research about the MENA region in general and about Jordan and the UAE in particular.

where there is frequently no difference between management and board of directors as the board members usually hold the chairman role, especially in listed firms in Jordan.

Secondly, most of prior research executed regarding the concentrated ownership effects and other underlying firm's governance activities and practices was mainly done in large emerging markets such as china and India. As noted earlier, corporate governance research in small emerging markets such as those of the MENA region is still very limited (Al-Najjar & Clark, 2017). Therefore, the findings of this research will contribute to other similar-size emerging economies in the entire region.

Thirdly, Jordan offers a unique institutional setting for the corporate governance research. This is because Jordanian government has implemented a privatisation plan since the late 1990s that covers most of the public large corporations in Jordan. This ownership transformation supposed to raise the efficiency, productivity, and competitiveness of the corporations in the public sector. Thus, the finding of this research will examine the effectiveness of this privatization plan indirectly by investigating the effect of the concentrated ownership and other firm's activities on the financial performance of the nonfinancial listed firms in Jordan. Additionally, Jordanian and UAE's corporate governance experience is relatively new one. In 2008 the Jordanian government has proposed the first corporate governance code to encourage listed firms to imply with the international governance mechanisms. While in the UAE corporate governance code for listed companies was launched in 2007. Due to its importance to the transitional economies, corporate governance has witnessed several developments since that time in these two countries. Thus, it's very important to examine these implications on listed firm's financial performance in these two emerging markets.

Finally, compared with other countries in the MENA region, these two economies are typical in terms of national governance quality. While UAE is the most representative economy for the relatively high minority protection (60.10) and high rule of law cluster, Jordanian economy represents relatively law minority protection (42.00) and low rule of law group (World Bank, 2016). Given that these two economies are highly representatives for two different groups of national governance systems (well-developing vs. under-developing) in the same MENA region, the generalization of the research findings is commonly achievable. According to Mallin, Melis, & Gaia, (2014) comparing diverse institutional settings should improve the findings'

generalization. This together, provides an opportunity to conduct a rigorous empirical investigation using firm-level and country-level governance and financial data.

1.5.2 Why Publicly-listed Firms?

As noted earlier, the main purpose of this research is to examine the relationship between corporate governance and firm performance. Accordingly, we rely on nonfinancial listed firms to execute the empirical analysis. There are several reasons that clarify the choice of publicly listed corporations in this study. First, data availability and reliability. Publicly-traded firms usually have more trustworthy sources of data, mainly- annual reports- which are available to the public at any point of time through the firm's website or through capital market portals. Indeed, as the shares of listed firms are usually publicly traded, this will give the research the advantage of using market-based financial performance, specifically *Tobin's Q*, and will avoid limiting the performance analysis to the accounting-based measures of financial performance if private firms were only used.

Secondly, it is well-documented that corporate governance codes are usually issued to regulate the business environment. In particular, governments and other regulatory bodies usually show especial interests to those firms that are publicly listed and markedly traded, as these firms represent the main economic growth drivers for any country. Thirdly, publicly-listed firms have more possibilities of minority shareholders' wealth expropriation. Unlike SMEs, listed firms may have several blockholders rather than main controlling shareholders. This may raise the possibilities that controlling shareholders which may execute activities that account for their own private benefits on minority shareholder accounts. In terms, this may have several implications on firm's financial health. Under these perspectives, publicly-listed firms provide an excellent framework to examine the relationship between corporate governance and firm performance relative to other form of business i.e., SMEs.

1.5.3 Why Investigating Firm Performance?

The determinants of firm performance have been a subject of wide interests among academics, regulatory and professional bodies. A one important concern is that business financial health and firm profitability is a key driver of a country's economic growth and its financial developments. Thus, as noted in literature review section, the relationship between corporate

governance mechanisms and firm performance has been one of the most studied areas in corporate finance research. In some cases, corporate governance activities may help in protecting minority shareholders' wealth from controlling shareholders' expropriations activities, which in turns may reflects weak financial performance of public firms.

In most of the emerging markets where capital markets are usually characterised by highly concentrated ownership, managerial control is much weaker than in those capital markets with widely dispersed ownership. In such market, blockholders are the true owners and the key controllers in most cases. As noted earlier, this may lead to the conflict of interests between controlling blockholders and other minority shareholders. Usually referred as Principal-Principal PP conflict in prior corporate governance literature.

According to ROSC, (2004) around 70 firms out of 161 were supermajority owned, and family ownership is one of the key blockholders in most sectors in the Jordanian capital market. Thus, it could be argued that, main corporate decisions can be taken without referral to other minor investors. In these perspectives, it would be exceptionally difficult to directly quantify the effects of minority investors' wealth expropriations activities in such economies in real life. However, such wealth expropriation activities conducted by controlling blockholders might be manifested in reduction in the firm's financial performance. It is worth noting that this view has been widely-documented in prior corporate governance literature. See for example (Claessens et al., 1999; Qian et al., 2011; and De Cesari, 2012) among others. Indeed, taking in mind other possible factors, firms with minority shareholder wealth expropriation effects will underperform other firms (La Porta et al., 1999; Meoli et al., 2008). This reflects the importance of examining firm performance issues in emerging markets such as the selected countries of this analysis; Jordan and the UAE.

1.6 Research Approach

This research examines the role of country-and firm-level governance on firm performance using a secondary panel data set for the period from 2008 to 2014. It utilises the dynamic two-step System GMM to examine the relationship between governance variables and financial performance of the nonfinancial listed firms in Jordan and in the UAE. The Jordan and the UAE as MENA region emerging capital markets were defined as the research population, as they seem to be most representatives of governance activities among the region's other countries, and data was collected via a combination of secondary databases providers e.g., DataStream, capital

markets web-portals, and company's annual reports. In all, the sample ultimately contains a total of 153 nonfinancial listed companies from the two capital markets, 113 of which operate in Amman Stock Exchange ASE (Jordan), and 40 in Emirates Security Exchange market ESM (UAE) (section 4.3, Chapter 4).

Having identified, on ground to its ability to analyse path dependent constructs, and to alleviate any potential endogeneity issues in corporate governance research, the two-step Dynamic System Generalized Method of Moments GMM, proposed by Blundell & Bond, (1998) was selected as the most appropriate analytical tool in this thesis.[7] This is a well-developed econometric technique that employs suitable and rigorous methods for testing the relationship between corporate governance variables and firm performance (Wintoki et al., 2012).

1.7 Structure of the Thesis

In addition to this introductory chapter, the rest of this thesis is structured and organised as follows:

Chapter two – Corporate governance and firm performance: a review of extant literature; following the first two introductory chapters, the thesis proceeds with a detailed review of prior literature associated with the relationship between corporate governance and firm performance. The review starts by discussing the main definitions and models of corporate governance that seems dominants in prior literature. It then presents the theoretical and conceptual foundations of the corporate governance research. It also provides a wide range of analysis of the previous empirical studies carried out in the developed countries and emerging markets that gives a review about the relationship between corporate governance and firm's financial performance. Given that the perceived gap in knowledge is identified and is directly relating to the specific variables, the final part of the review has been devoted to reviewing literature relating to "national governance quality" in the context of corporate governance and debates the extent to which such institutional differences represent a set of relevant variables to firm-level governance mechanisms and to its financial performance. The focus is on panel-data studies on publicly listed firms. At this point, the research hypotheses were eventually built based on the theoretical and empirical analysis.

[7] It should be noted that, for specification and comparison purposes, other econometric estimators such as FE and traditional OLS were employed.

Chapter three – Institutional framework: an overview about Jordan and UAE; this chapter introduces the corporate governance status and other institutional setting including national governance system differences in the MENA region in general, and in Jordan and UAE in particular. Specifically, in this chapter we provide details about the Jordanian and the UAE's capital markets characteristics and governance and regulations reforms in these two emerging markets.

Chapter four – Governance variables and firm performance: methodological issues; after reviewing the extant literature, identifying the perceived gap of knowledge, and building the research hypotheses, the next step is to provide a clear process and design to perform the research methodology. A full description of the research design to test the research hypotheses is given. This covers the research philosophy, and the general research approach, selecting the sample and data sources, variables metrics and construction, and finally exploring the nature of the selected data and the research methodological issues and treatments to identify the best model specifications, and the most appropriate analysis techniques.

Chapter five – Corporate governance and firm performance: evidence from Jordan; this chapter examines the relationship between corporate governance variables and firm performance in Jordan. Specifically, this chapter discusses the descriptive analysis of the date, correlation matrices, multiple regression analysis, and the robustness analysis of the main findings.

Chapter six – Corporate governance and firm performance: evidence from UAE; this chapter presents the empirical findings of examining the relationship between corporate governance variables and firm performance in UAE. Specifically, this chapter discusses the descriptive analysis of the main variables of interests, correlation matrices, multiple regression analysis, and the robustness analysis of the main findings.

Chapter seven – Governance variables and firm performance: evidence from the combined sample of Jordan and UAE; the main purpose of this chapter is to examine the relationship between a suite of internal (firm-level) and external (country-level) governance variables and firm performance using the aggregate sample of Jordan and UAE. Specifically, this chapter discusses the descriptive analysis of the used variables, correlation matrices, multiple regression analysis, and the robustness analysis of the main results of the effects of governance (country- and firm-level) mechanism on firm performance using the combined sample of the two countries.

Chapter eight – Research conclusions; equipped with the empirical results obtained in (Chapter 5, 6 and 7) respectively, the final chapter of this thesis provides a conclusion of the results and consideration of the potential implications and the / contributions of the main findings to academia and policy makers. Furthermore, it synthesis limitations, and signposts future research recommendations.

1.8 Chapter Summary

At this point of the thesis, the author has outlined the importance of examining corporate governance issues these days for business life and policy making disciplines in general and in emerging markets of the MENA region in particular, where the national governance standards are relatively low and the market control mechanisms are absent. The early concluded comments obtained in this section are that prior corporate governance research has found to be plagued by different issues that prevent the consistency in research findings. It has failed to consider the extent to which firms hosting governance environment might alter and affect the efficiency of its internal corporate governance system and, hence, firm performance levels–leaving a significant gap and leading to conclude that researching these areas will make significant contribution in understanding the traditional governance: performance relationship– it will also provide important implications to academia, shareholders, management, and policy makers. In the next chapter presented is the discussion about corporate governance and institutional settings in MENA context in general, and it explores further the specific governance and regulation reforms and characteristics of the Jordanian and the UAE's capital markets in particular.

The next chapter of the thesis is the literature review and hypothesis developments; it begins by discussing the corporate governance definitions and its prevailing models. Furthermore, it provides theoretical justifications of why country- and firm-level corporate governance mechanisms may affect firm's financial performance. The chapter then proceeds to synthesise the extent empirical evidence that is associated with each identified element of corporate governance i.e., firm- and country- level governance mechanisms in affecting firm's financial performance. Finally, chapter summary is concluded.

CHAPTER 2: CORPORATE GOVERNANCE AND FIRM PERFORMANCE – A REVIEW OF EXTANT LITERATURE

2.1 Introduction

Corporate governance has been a hot topic in the business world for centuries, even though the term itself is quite new. It is wide and vast subject, in fact, it is one of the topics that is becoming increasingly important in recent times. As noted earlier, the recent financial crisis has promoted the importance of corporate governance in preventing such corporate familiars to happen in future. Prior corporate governance literature provides a wealth of insights on the relationship between governance variables and firm performance under many research disciplinarians. Despite this wide variety in corporate governance research, prior literature yielded equivocal findings that seem to divert little attention to corporate governance issues in the emerging markets of the MENA region in particular, where firm-level corporate governance system is characterised by the prevalence of ownership concentration, with weak country-level governance instruments.

Employing the differences in the institutional context (i.e., a country's national governance quality that the firms operate in) may offer a chance to advance the corporate governance-performance relationship arguments in current literature. Drawing on the traditional corporate governance theoretical basis, it is too difficult to find or justify corporate governance under general theory, definition, mechanisms or a sole-type of corporate governance practices. It is complicated. In fact, there are many reasons for this complexity:

First of all, due to the combined social and economic characteristics of organizations, corporate governance practices cannot be explained using one theoretical assumption. This may hold that value maximization which is the main target of the business. Thus, agency theory is built and based on this idea, which managers must make their efforts to attain this for firm's shareholders. Others may have different view about the goal of the business entities. As stated before, stakeholders' theory is built to extend the agency theory view to include other parties in the firm's nexus of contract, and each part may have different target to be achieved. Moreover, the new economic thinking of corporations today is how these public entities may contribute with the

social welfare in general. In these perspectives, institutional theory may provide good explanations for corporate governance practices.

Second, corporate governance practices vary across countries based on economic, political, and legal backgrounds. Also, it varies across firms within a country based on the capital and the way of accessing capital in these firms. According to Denis & McConnell, (2003, p.30) firms in Anglo-Saxon countries e.g., USA and UK depend on strong legal protection for shareholders. In contrast, other countries characterised by a weak legal protection e.g., developing countries of emerging markets like Jordan and UAE, public firms may depend on ownership concentration as a substitute for the lack of legal environment for shareholders' property protection.

Finally, fuelled by the recent corporate scandals, most countries around the world are now trying to issue and develop robust corporate governance codes. These codes are expected to contribute to improve corporate governance in the business life of these countries. All of these points have added to the complex nature of corporate governance making it one of the most important topics in corporate finance research.

The extant literature review presented within this chapter defines the concepts and the distinguished models of corporate governance, and explores the potentials of the context specific variables (i.e., ownership structure and board of directors) importance in determining the relationship with firm performance in general. The review then proceeds to consider the theoretical debate that formulates the bases for why an association between governance and firm performance may exist. In particular, the review explores the potential implications of four complementary governance theories; Agency, Stewardship, Resource, and finally Institutional theory.

Finally, it should be noted that this chapter considers the empirical literature associated with the role of both country- and firm-level governance mechanisms, which will be used together with theoretical assumptions to build the formal research hypotheses eventually.

2.2 Corporate Governance Definitions

Before proceeding to the extent corporate governance literature and empirical findings, it is important to explain corporate governance definitions and main models presented in literature. According to prior literature, there is no agreed way to define corporate governance. Aguilera & Jackson (2010, p.487) argue that "scholars have approached the subject of corporate governance

from a variety of disciplinary perspectives, including economics, management, law, political science, culture, and sociology. Likewise, corporate governance has emerged as a key term in public policy debates around the world, refracting academic concepts through the lens of diverse institutions and cultures of discourse". Given that there are several definitions of corporate governance, the author divides them according to the paradigm which the definitions serve, mainly the macro and micro-level aspects of corporate governance system.

Denis & McConnell, (2003, p.2) 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 maximize the value of the company to its owners (the suppliers of capital)". This definition is very much tied to the idea of how macro level (constitutional) and micro level (firm practices) aspects of corporate governance will help shareholders to minimise the cost of conflict of interests. Shleifer & Vishny, (1997, p.738) define corporate governance mechanisms as "economic and legal institutions that can be altered through the political process-sometimes for the better". In the same vein, Blair, (1995, p3) defines corporate governance as "the whole set of legal, cultural and institutional arrangements that determine what publicly traded corporations can do, who controls them, how control is exercised, and how the risk and returns from the activities they undertake is allocated". According to the last definition, corporate governance practices must go beyond firm-level contractual agreements to include other constitutional factors of the hosting country.

Other corporate governance definitions are directly linked to the firm-level practices. Gillan & Starks, (1998, p.14) define corporate governance "as the system of laws, rules, and factors that control operations at a company". Also, Berger, Ofek, & Yermack, (1997) identify corporate governance as internal firm-level mechanisms and practices that determine the capital structure decisions of firms. Boubakri, Cosset, & Guedhami, (2005, p.370) argue that corporate governance "is defined as a response to the agency problems that arise from the separation of ownership and control in a corporation". Many more definitions of corporate governance abound in prior related literature.

According to these two groups of definitions of corporate governance, it's clear that scholars define corporate governance based on the paradigms which they support or interesting in. However, all of these definitions talking about the mechanisms either internal or external that help organizations to maintain lower level of agency problem as a result of the conflict of interest

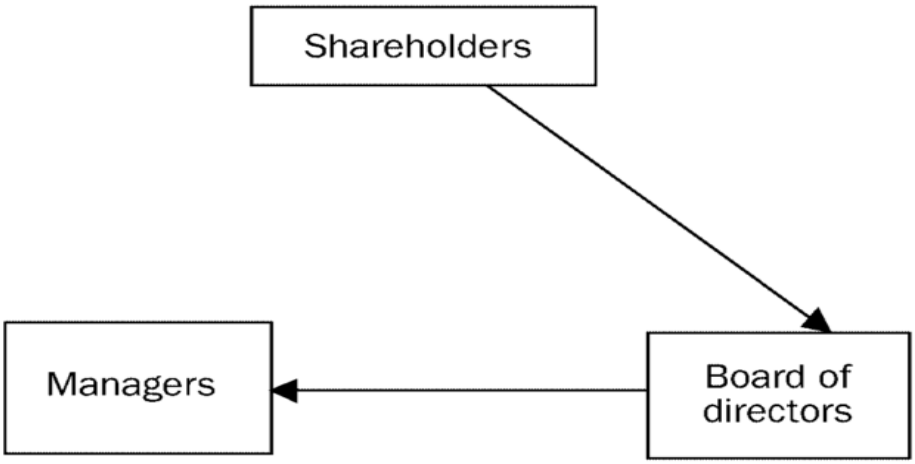
between shareholders and managers. At the micro-level, internal corporate governance includes ownership concentration and board of directors, while at the macro-level it includes formal institutions and regimes designed to enforce the legislative frameworks at the national environment level. The following section presents and discusses the main models of corporate governance that often cited in prior related literature, and showing each model's implications.

2.3 Corporate Governance Models

Corporate governance systems vary around the world. This is because in some cases, corporate governance focus on the link between the company and the shareholders, other models of corporate governance focus on role of the board of directors and board practices, while in some cases the focus would be on the social responsibilities of the company. There are two main models that are often cited in prior literature related to the concept of corporate governance, namely *outsider and insider governance models*. These basic models usually identified as Anglo-Saxon and Continental European models in prior governance literature (Ahmad & Omar, 2016). Each model reflects the environment in which companies operate and the system of corporate governance that is in place.

Under the *Outsider model* hypothesis of corporate governance, the market represents the most efficient monitoring mechanism of corporations due to the separation of ownership from control in large publicly traded firms. This form of governance system is predominating in countries characterised with large listed corporations, wide-dispersed ownership, independent board of directors, active takeover activities, transparent disclosures, liquid capital markets, and well-developed legal system and financial structures such as UK and USA (Cernat, 2004; Ahmad & Omar, 2016). Figure 3-1 below show the power and authority flow from shareholders toward management through the board of directors under the Anglo-Saxon "outsider model" of corporate governance.

Figure 2-1 Outsider corporate governance model



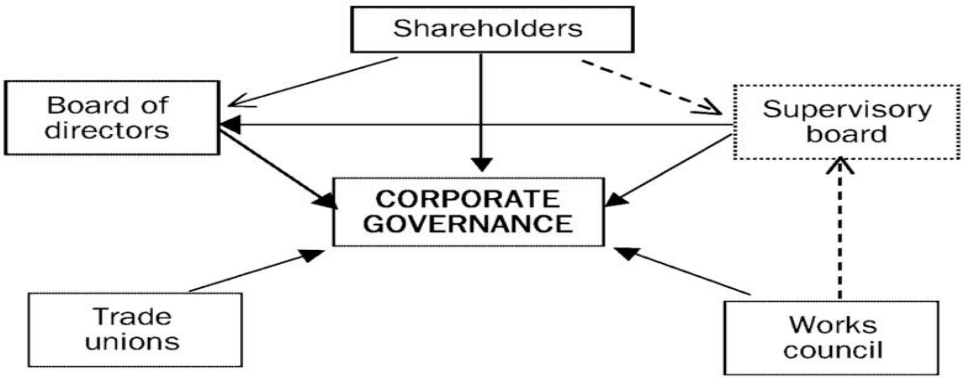
Note: This figure is adopted from (Cernat, 2004, P. 153)

On the other hand, the *insider model* of corporate governance relies more on managerial control. The insider model of corporate governance is based on broader perspectives i.e., stakeholder theory, which suggest that managers are the most important tools in safeguarding not only shareholders' interests but, other internal and external stakeholder (Freeman, 2010).

Countries following this pattern of governance have relatively small listed companies, higher levels of financial leverage, vigilant boards, concentrated ownership, illiquid capital markets, and limited disclosures (Hasan, 2009). However, it should be noted that, some of the prior related literature shows that some concentration of ownership even exists in countries following the outsider pattern of corporate governance including USA and UK[8]. The insider model of governance is predominant in most of European countries and some of the Asian countries like Japan. Unlike outsider pattern of corporate governance that mostly depends on equity finance, insiders are more likely to depend on family and bank financings (Cernat, 2004). Figure 2-2 below show the interrelations between the participants of the insider model of corporate governance "the Continental European Model". The next section is in turn moves to discuss theoretical debate on corporate governance issues presented by prior literature.

[8] See for example; Shleifer, A., and R. Vishny. 1986. Large Shareholders and Corporate Control. Journal of Political Economy 94:461–88. And, Morck, R., A. Shleifer, and R. W. Vishny, 1988, Management ownership and market valuation: an empirical analysis, Journal of Financial Economics 20, 293–315.

Figure 2-2 Insider corporate governance model



Note: This figure is adopted from (Cernat, 2004, P. 154)

2.4 Corporate Governance Theoretical Debate

As noted before, corporate governance is a system of practices and rules used to control and direct an organization as a defence of shareholders' interests. Accordingly, it essentially to maintain balance between the different stakeholders of an organization, including shareholder, managers, creditors, suppliers, customers, government and the whole community (Cadbury, 1992). Today, corporate governance has become a fertile area of interests and research among scholars and practitioners from different disciplines. The empirical work associated with corporate governance issues has been developed mainly based on four corporate governance theories; *(i) Agency theory (ii) Stakeholders theory (iii) Stewardship theory and (iiii) Recourse dependence theory*.

These theories have evolved from different perspectives. For example, while agency theory was developed from finance and economic views, resource dependence theory was evolved from organizational context. However, prior academic literature has go further to demonstrate the use of other form of theories in investigating the impact of corporate governance on firm's financial performance to include *life-cycle theory* (Filatotchev et al., 2006) and *institutional theory* (Filatotchev et al., 2013) or even *transaction cost economic theory* (Williamson, 1988). Thus, this research will depend on these four theoretical assumptions that justify the relationship between

corporate governance and firm performance if it exists. Below subsections describe each theory in details and its viewpoint on the aforementioned relationship, these are as follows;

2.4.1 The Theory of Agency

It is obvious that the below quoted statement proposed by Adam Smith (1776) in his well-known book titled *"The wealth of nations"* was the most influential in developing agency theory:

> "The directors of such [joint-stock] companies, however, being the managers rather of other people's money than of their own, it cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own. Like the stewards of a rich man, they are apt to consider attention to small matters as not for their master's honour, and very easily give themselves a dispensation from having it. Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company."
>
> — Adam Smith, (1776)

Accordingly, agency theory was developed by Jensen & Meckling, (1976) in their influential study titled "Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure," where they addressed the agency relationship as "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent" (p. 318). In the legal sense, Milgram and Roberts, (1992, p. 170) defined agency relationship as "a situation in which one individual (the agent) acts on be-half of another (the principal) and is supposed to advance the principal's goals". Rungtusanatham et al., (2007, p. 118) assert that "an agency relationship exists whenever two parties cooperate and engage in an association wherein one party (i.e., the principal) delegates work to be performed by another party (i.e., the agent)".

Thus, these scholars among others argue that decision-making delegation from principal to agent can be problematic. According to Fama & Jensen, (1983) several crucial assumptions underline this problem, including divergence of interests between principals and agents in terms of value maximization, conflicting goals and self-opportunistic behaviour, risk aversion preferences, and information asymmetry. These assumptions form what so called the agency problem. Rungtusanatham et al., (2007, p. 118) stated that "The agency problem arises because

the principal is unable to efficiently verify (a) what the agent did in performing the work delegated by the principal (i.e., moral hazard) and/or (b) what expertise the agent claims to have in order to perform the delegated work (i.e., adverse selection)". Also, Huang & Chang, (2010, p. 597) argue that "prior literature has consistently supported the position that the presence of an agency problem invariably leads to discontinuing a possibly failing project".

In consequence, agency theory deals with problem that can arise from the agency relationship between different parties in corporations. As mentioned before, agency problem can arise from: first, the wide divergence of interests from the firm interests to self or own interests; and second, the existence of information asymmetry between agents and principals (Huang & Chang, 2010). According to Klein et al. (2002, p. 318) asymmetric information in corporate finance refers to the "notion that firm insiders, typically the managers, have better information than do market participants on the value of their firm's assets and investment opportunities". As noted earlier under the agency framework, we may expect a divergence of the economic interest of the agent (manager of the firm) from those of the principal (investor in the firm) in whose interest the agent is supposed to act; and this leads to the existence of information asymmetry between the agent and the principle. So, asymmetric information is a main cause of the agency problem, which in turn requires mechanisms of corporate governance to solve this information differential problem.

There are two main contracting issues that asymmetric information can cause in corporations, which are; adverse selection and moral hazard. Adverse selection occurs when there is a lack of symmetric information prior to a transaction between a buyer and a seller, whereas moral hazard occurs when there is asymmetric information between two parties and change in behaviour of one party after the transaction (Jensen & Meckling, 1976). In the context of the agency problem, since the agent's interests are not completely aligned with the shareholder's interests, we conclude that, the issue of adverse selection and moral hazard may happen, and extremely affect the firm's performance eventually.

Also, it is important to highlight the potential costs that these informational divergence problems may impose on firm's shareholders. According to Jensen & Meckling, (1976), controlling an agent's behaviour to make them less likely to behave in ways that are not aligned with the principal's interest will not be at zero cost, this is what frequently called the agency cost.

Jensen & Meckling, (1976) define the agency cost as the sum of: monitoring costs (when agents' actions are restricted or monitored by principals), bonding costs (when agents enter into contracts that limit their mobility), and residual loss (when costs remain even after the execution of the monitoring and bonding elements). McColgan, (2001, p. 5) define monitoring cost as "expenditures paid by the principal to measure, observe and control an agent's behaviour". In this case monitoring agents' behaviour can be by establishing suitable compensation scheme, and this may include the audit costs, writing executives compensation contracts, and the ultimate cost of firing managers (Jensen & Meckling, 1976).

Bonding costs "are costs borne by the agent, they are likely to set up structures that will see them act in shareholder's best interests, or compensate them accordingly if they don't" (McColgan, 2001, p. 6). In some situations, an agent may commit to contractual obligations that limit or restrict the agent's activity. For example, a manager may agree to stay with a company even if the company is acquired. The manager must forego other potential employment opportunities. That implicit cost would be considered an agency bonding cost. Bonding costs are not always financial; they may include costs of disclosing additional information to investors. Also, agents will usually hinder incurring bonding costs when marginal increase in bonding equals to marginal decrease in monitoring (Jensen & Meckling, 1976).

Residual loss are the losses incurred because the conflict of interests between shareholders and management despite monitoring and bonding activities (McColgan, 2001, p. 7). Also, Jensen & Meckling, (1976, p. 308) define the residual loss as: "The dollar equivalent of the reduction in welfare experienced by the principal as a result to divergence of interests". The main reasons that incur residual losses in corporations are to be the ownership dilution and the managerial discretion levels. Williamson, (1988, p. 572) stated that "Residual loss is the reduction in the value of the firm that obtains when the entrepreneur dilutes his ownership".

Accordingly, agency theory is associated with agency problem and agency costs that form the agency relationship between principal and agent in corporation based on different interests and benefits. Agency theorists have called this relationship to be the Principal-Agent model. Briefly, principal-agent problem refers to the value appropriation from shareholders by agents or managerial behaviour, often by the conflict of interests and risk-sharing activities. This problem can be sever in developed capital markets where the diffused ownership structure and separation between ownership and control is a prominent feature (La Porta et al., 1999). According to survey

conducted by Lewellen, only 15% of non-financial institutions in the US owned only by their managers in 1969. Thus, managers are the ones who would be blamed first for poor corporate performance, but over time, as managers became increasingly involved as a separate class of agents, they came to recognize that compensation schemes could work to their benefit (Dobbin & Jung, 2010).

However, the case in emerging markets is different. A small number of owners still own the majority of many companies' stock shares (concentrated ownership) and exert extensive control over firm's investing activities. Thus, a second form of agency model was developed. In particular, there has been research strand pointing that the Principal-Principal (PP) problem seems to be manifest in emerging markets (Su et al., 2008). Principal-principal conflict refers to the value expropriation from minority shareholders by majority shareholders, usually by major assets sales and purchase. Thus, in order to alleviate the conflict of interests and minimize agency costs, agency theorists prescribed different governance mechanisms and practices to control agents actions and protect shareholders wealth from any kind of expropriation (Berle & Means, 1932; Mitnick, 1975; Jensen & Meckling, 1976; Fama & Jensen, 1983; Jensen, 1994).

According to Shleifer & Vishny, (1997) these governance and control mechanisms vary around the world. For example, in continental Europe and Japan, there is less reliance on legal protection and more reliance on blockholders, while in the UK & USA, firms rely on legal protections to alleviate the agency conflict. Due to these governance differences across countries, we can expect to see that different organizations display different relationships between ownership and firm values. Recent studies of corporate governance suggest that geographical position, the tax system, industrial development, and cultural characteristics, along with other factors, affect ownership structure. In turn, localized differences in ownership structures impact corporate performance (Pedersen & Thomsen, 1997).

Accordingly, in line with prior related literature, we conclude that the agency theory is the most influential theory in understanding the complex relations inside corporations based on different interests, risk sharing, and private benefits circumstances. At the same time the main goal of the theory of agency is to find the most effective governance mechanism to solve or mitigate existing or potential agency problems including principal-agent and/or principal-principal conflicts.

2.4.2 The Theory of Stewardship

> "Agency theory argues that shareholder interests require protection by separation of incumbency of roles of board chair and CEO. Stewardship theory argues shareholder interests are maximized by shared incumbency of these roles." (Donaldson & Davis, 1991, p. 49)

According to the above-mentioned statement, stewardship theory is an alternative to agency theory, it has its pedigree in organizational psychology and sociology rather than finance and economic perspectives. It has been widely accepted by many professional associations including governments and large organizations. Unlike agency theory, the theory of stewardship argue that managers should be left on their own, indeed they will act as responsible stewards of the assets they control (Davis et al., 1997). Donaldson & Davis, (1991, p. 51) argue that "organizational role-holders are conceived as being motivated by a need to achieve, to gain intrinsic satisfaction through successfully performing inherently challenging work, to exercise responsibility and authority, and thereby to gain recognition from peers and bosses". This indicate that beside financial motives, managers have non-financial motivators to maximize shareholders' wealth. In particular, to gain intrinsic satisfaction through successfully performing inherently challenging work, to exercise responsibility and authority, and thereby to gain recognition from peers and superiors to improve their market reputation (Donaldson & Davis, 1991).

Agency theoretical assumptions based on economic and finance perspectives, and highlighting only self-interested behaviour and ignoring other human nature behaviours that may exist (Muth & Donaldson, 1998). Accordingly, the theory of stewardship was initially introduced to define organizational context relations based on other human behaviour premises (Donaldson & Davis, 1991). Muth & Donaldson, (1998, p. 6) argue that "stewardship theory recognizes a range of non-financial motives for managerial behaviour. These include: the need for achievement and recognition, the intrinsic satisfaction of successful performance, respect for authority and the work ethics". In other words, under stewardship theoretical perspectives managers are viewed as interested in achieving higher level of performance and to act at the best of interests of firm's shareholders (Donaldson & Davis, 1991).

Stewardship theory predict that a firm success and shareholders' wealth maximization can be only achieved when organization structure facilitates effective control by management. Thus, insider board members are favoured more than outsiders due to their technical expertise, depth of

knowledge, and access to firm's operating information (Muth & Donaldson, 1998). Also, stewardship theory argues that combining CEO with board chairman under one-person authority (board-duality) would be favoured in terms of investment decision-making and organizational strategy. Thus, firm's financial performance and shareholders wealth can be adhesively maximized (Donaldson & Davis, 1991).

Accordingly, we conclude that stewardship theory is an attempt to compromise between agency theory on the one hand with the board of directors is responsible for governance and management theory, and on the other hand where management is what stewardship theory argues that board and management are single collective stewardship team at the top of the corporations, and the board roles are not to direct and control the corporation but to support and assist the CEOs and management in accomplishing their tasks. The weaknesses of the stewardship theory are that because there is no bright line between the boards and management responsibilities when things go wrong, people just start finger-pointing, and it is very difficult to hold the CEOs accountable for the results. Thus, a key feature of the theory of stewardship can summarized in the following points: (i) no inherent conflict, (ii) the key is the coordination rather than control, and (iii) managerial autonomy rather than hegemony.

2.4.3 The Theory of Resource Dependencies

Resource dependence theory is primary focus on the relations with the external environment rather than ones within the firm. The theory of resource dependencies highlights the role of external resources in shaping organizational behaviour. Wernerfelt, (1984, p. 172) stated that "a resource is meant anything which could be thought of as a strength or weakness of a given firm". Hillman & Dalziel, (2003) argue that firm's resources provision is a function directly related to the board of directors. Also, Muth & Donaldson, (1998) boards are important boundary mechanisms that they form links with the external environments.

The theoretical underpinnings of these assumptions refer directly to the work titled "The External Control of Organizations: A Resource Dependence Perspective" for Pfeffer & Salancik, (1978). Pfeffer and Salancik note that "when an organization appoints an individual to a board, it expects the individual will come to support the organization, will concern himself with its problems, will variably present it to others, and will try to aid it" (1978: 163). Consequently, this assistance is viewed to enhance firm's financial performance and increase shareholders returns

(Muth & Donaldson, 1998). In this context, resource dependence theory suggests that the board of directors is not only the most important governance mechanism but also a source of different resources for the firm. Thus, the experience, qualification, gender, and other characteristics of members of the board become increasingly important (Peters & Bagshaw, 2014).

Additionally, resource dependence theory suggests that establishing a connection between a firm and its external environmental has consequences that may reduce the transaction cost associated with environmental interdependencies. This improves a firm's survival and enhances its financial performance (Hillman & Dalziel, 2003). In terms of the interdependencies between governance mechanisms, Daily et al., (2002) have stated that utilizing resource-dependence theory in explaining the governance effects on firm performance facilitates the understanding of the relationships between these governance mechanisms.

Although agency theory has been extensively relied on as a basis for examining corporate governance issues, it has been argued recently that resource-dependence theory could be in a better position to operate as a base for governance knowledge systems. Agency theory concentrates on the controlling and monitoring role of the board of the directors, while as resource dependence theory concentrates on the counselling and advisory role of the board of directors (Peters & Bagshaw, 2014). According to resource dependence theory, board of directors can be best mechanisms to provide help and assistance to firm's management.

Accordingly, we conclude that resource dependence theory is associated with resources involved and how they establish dependencies in corporation, and who control these resources. Resources coming from verity forms and their value depending on their importance and their availability. There are various types of resources that firms depend on, such as a physical materials or technical resources like information and knowledge as well. Also, firms in general may depend on social resources like prestige and reputation that enable them to survive. Resources have different values, the value of each resource can be determined by different factors such as demand and supply, or even the availability of the resources. Discretion over a resource also defines relation of the resource dependence. The theory of the resource dependencies arguing that board of directors is the most effective mechanisms in controlling firm's resources and find new links to get resources from external environment. Therefore, it is highlighting the role of boards in determining the firm's value in general.

2.4.4 The Theory of Institutions

"Institutional Theory is Policy-making that emphasizes the formal and legal aspects of government structures." (Kraft's Public Policy, 2007, p. 2). Thus, institutional theory of corporate governance suggest that corporate governance arrangements always reflect social and political process. Also, Judge, Douglas, & Kutan, (2008, p. 766) assert that "Institutional theory emphasizes that organizations, organizational fields, and nations are more than a means to produce goods and services-they are also social and cultural systems". Accordingly, institutional theory extend the traditional agency framework further by suggesting that the effectiveness of the internal corporate governance mechanisms is shaped by a set of complex institutional factors that tend to differ across countries (Filatotchev et al., 2013). Interestingly, recent advances in corporate governance literature shows empirically that institutional theory complement agency theory in terms of the governance mechanisms offered by each theory i.e., country- and firm-level corporate governance mechanisms (see e.g., Nguyen et al., 2015).

Moreover, recent cross-national comparative research has highlighted the effect of institutional difference between countries in modifying the basic principal-agent conflict (Filatotchev et al., 2013). La Porta et al., (2000) have argue that legal systems offer different investor protection level among countries, which in terms affect the level of agency conflict faced by shareholders. According to Aguilera & Jackson, (2010) institutional theories have moved beyond the focus on how the law shapes agency conflicts, and looks now at how wider cultural, social, and political factors shape the cross-national diversity of actors and settings in corporate governance. Warren, (2003) argue that these political and social forces can become more influential than economic forces in shaping corporate destiny.

Filatotchev et al., (2012, p. 970) stated that "This new approach is aimed at a better understanding of the interdependence between governance mechanisms and the organizational and institutional environments in which these practices are conducted. This view implies that corporate governance practices do not have a direct and linear effect on performance. Rather, performance effects are contingent on a number of firm-level and macro institutional factors that are not accounted for in the vast majority of studies". Also, Misangyi & Acharya, (2014, P. 1703) have suggested that "…to truly understand governance effectiveness, we must stop thinking about the mechanisms in isolation, giving up a search for the end all mechanism(s), and instead direct attention to how the various governance mechanisms effectively combine with each other for the

particular outcomes desired". This could be a good indication to support the argument proposed in this thesis, institutional theory and country-level governance framework may have the ability to complement the agency theory and firm-level corporate governance mechanisms in reducing agency conflict and increasing firm's performance. Below table provides main characteristics agency-based and institutional-based corporate governance approaches.

Table 2-1 Main characteristics of the agency-based approach and institutional-based approach of corporate governance

	Principal–agent model	Institutional CG framework
Research focus	• Managers • Shareholders	• Managers • Shareholders • Stakeholders • Institutional environment
Organizational context	• Focus on universalistic conflict of interests between managers and shareholders	• Recognition of differences between the extent and nature of agency conflicts in various institutional environments
Organizational solutions	• A set of universal corporate governance remedies, including: - board monitoring - concentrated ownership - executive incentives - market for corporate control	• Recognition that national institutions may impact upon the effectiveness of corporate governance solutions; some of them may have unintended consequences
Account for national institutions	• Context-free approach •Focus on the US/UK environment	• "Contextualization" of agency conflicts • Focus on moderating effects of national institutions
Policy implications	• Convergence of institutional frameworks • Universal effectiveness • Law and codes shape markets	• Diversity of institutional frameworks • Functional equivalence, unintended consequences • Law and codes shape networks, associations, and professional orientations

Note: This table has been sourced from Filatotchev et al., (2013, p. 969)

After this short analysis of the four main theories of corporate governance, we conclude that regardless of the theory which the corporations hold, every theory must try to find cost effective solutions, or ways or mechanisms to solve conflicts which occur between management and stockholders or stakeholders. These varieties in corporate governance theories and mechanisms complement each other, which in turn suggest that corporate governance variables at both country- and firm-levels could be used as collaborative tools in reducing agency and information asymmetry issues. Below section reviews empirical literature associated with the relationship between firm- and country-level corporate governance and firm performance which allows to

formulate the research hypotheses jointly with the theoretical reviews presented in previous sections in this chapter.

2.5 Empirical Evidence and Hypotheses Development

In the previous section (2.2), details have been provided regarding the major corporate governance definitions that has been discussed in prior literature. These definitions describe the corporate governance functions, which in terms highlight its importance to business succession in general. However, it has been argued that the most challengeable issue in corporate governance researches since its inception is the definition of "*good corporate governors*" (Schnyder, 2012). Shleifer & Vishny, (1997, p. 738) argue that "Corporate governance mechanisms are economic and legal institutions that can be altered through the political process-sometimes for the better". Denis & McConnell, (2003) argue that the most important internal corporate governance mechanisms are the firm's board of directors and the ownership concentration patterns. According to Jensen, (1993) there are two main form of corporate governance mechanisms, internal and external. While internal governance mechanisms can be in form of boards and ownership concentration, external corporate governance mechanisms are the market for corporate control (takeover market). However, it is worth noting that prior related literature has failed to demonstrate a common way to define the best governance mechanisms that may lead to better financial efficiency, social legitimacy, or even for more general goals attainment (Judge, 2012; Aguilera et al., 2008).

As noted earlier, this research will focus on the role of internal (firm-level) and external (country-level) governance mechanisms on firm performance. Therefore, we classify the extant related empirical literature into three main sections. First, it will provide reviews related to firm-level governance mechanisms i.e., the role of ownership structure on firm performance. Second, this section provides more revision on firm-level governance mechanisms by presenting prior empirical evidence on the role of board of directors related variables on firm performance. Finally, this section present theoretical and empirical reviews about the role of national (country-level) governance mechanisms on firm performance. These empirical analyses presented by prior corporate governance literature, subsequently, will allow to formulate the research hypotheses.

2.5.1 Ownership Structure and Corporate Performance

Prior corporate governance research recognizes the essential role performed by shareholders in monitoring management. For example, Douma, George, & Kabir, (2006, p. 637) argue that "A firm's ownership structure influences its performance for several reasons. Firstly, differences in identity, concentration and resource endowments among owners determine their relative power, incentives and ability to monitor managers' shareholdings by corporations, individuals, banks, mutual funds, and governments are well-known examples of this phenomenon. Secondly, as owners have divergent goals, they have different influences on firm performance". Similarly, Li, (1994) argue that corporate ownership structure seems to be the most influential part in the dynamics of corporate governance mechanisms in different countries around the world.

According to Fraile & Fradejas, (2014) there are two main classifications of ownership structure; the first type of share ownership is dispersed ownership. Under this ownership structure, firms usually owned by large number of investors with small shares and cross-holdings are rare and infrequent. This type of ownership is often noticed mostly in the UK and USA capital markets. The second type is the concentrated ownership, where a small number of investors i.e., individuals, banks, pension funds, families, and other large blockholders own the majority of a firm's shares and hold the most control rights with other minority investors. Such type of ownership is prevailing in the Continental Europe and Asia, and especially in emerging markets (Parigi & Pelizzon, 2008).

In these perspectives, the problem of corporate governance that a company may face in each of these contexts is different. For example, Jensen & Meckling, (1976) stated that in countries where the predominant structure of ownership is the dispersed ownership such as UK, the agency problem that a firm face in this case is the traditional conflict of interests between shareholders (principals) and managers (agents). This type of agency problem called in literature Agency Problem Type I. On the other hand, in contexts such as Jordan and UAE, where equity ownership is highly concentrated, the main corporate governance problem that a firm could face, aside of the traditional principal-agent conflict, is the possible conflict of interests between large shareholders themselves and/or other small shareholders, this usually referred in literature as Agency Problem Type II (Demsetz & Villalonga, 2001; Shleifer & Vishny, 1997).

Consequently, firms in emerging markets still maintain their traditional governance mechanisms such as large-controlling shareholders, government or family connections in the management of the business (Yoo & Jung, 2015). Therefore, corporate governance scholars trying

to investigate the effectiveness of these traditional governance mechanisms in enhancing the firm's value and its financial performance, conducting investigations in different economic backgrounds, see for example;(Demsetz & Villalonga, 2001; Himmelberg et al., 1999; Nguyen et al., 2015; Fraile & Fradejas, 2014) among others. It is worth noting that, most of this prior empirical work on ownership structure has been aimed at answering questions related to share ownership identity, and share ownership intensity (concentration). Therefore, this research classifies the literature review related to ownership structure into the type of the controlling shareholders and the aggregate ownership concentration. Below subsections provide more details on the relationship between the type of the shareholders and firm performance, by bringing the most up-to-date international evidence.

2.5.1.1 Share Ownership Identity and Corporate Performance

As noted earlier, the impact of the type of the controlling shareholder on firm performance is an often-studied topic in corporate finance literature. Past studies have focused on different dimensions of this relationship. For example; Pagano & Röell, (1998) highlighted the importance of the existence of other blockholders in reducing the potential wealth expropriation that may run-through controlling shareholders. Ng, (2015) explored the role of identity of a firm's ownership structure in determining corporate financial performance. Furthermore, the importance of the shareholding identity in determining corporate strategy and, hence, its performance has been highlighted by (Thomsen & Pedersen, 2000). Moreover, Ferreira & Matos, (2008, p. 500) posit that professional investors as a large shareholder groups in corporations credited worldwide with more active actions and incentives to offer vigilant monitoring mechanisms over managerial investment decisions towards maximising shareholders value.

Many of the previous studies examine the influence of such dominant shareholders' type i.e., executive, institutional, family and other venture capitalists on firm performance. Kim & Patel, (2017, p. 248) argue that "Different types of ownerships elicit variegated organizational strategies and behaviours, that in turn, influence firm performance". Consequently, we follow this verity in prior literature and aim to examine the impact of two major types of the dominant shareholders in the selected capital markets i.e., ASE and ESM. Specifically, the aim is to examine the impact of the family and institutional ownership on firm performance in these capital markets. Next

subsection is therefore, provides discussions about the relationship between family investors as a dominant shareholders and firm performance.

2.5.1.1.1 Family Investors Ownership Effects

Family ownership is increasingly prevalent in emerging markets around the world (La Porta et al., 1999). The existence of such big percentage of share-ownership and rights on hand of such majority shareholders may lead to the exacerbate and extend the traditional conflict between principals and agents to more complicated and severe conflict between majority (controlling) and minority shareholders (Silva & Majluf, 2008). In particular, the ability of expropriating minority shareholders' wealth depends on the national governance quality that those firms are embedded in i.e., the strength of minority investors indices and the rule of law enforcement levels. It is worthy to note that, emerging markets are generally characterised by weak legal protection and absent of external governance forces i.e., market for corporate control. This in turns make the situation much worse than in developed countries.

In fact, prior literature suggests that family control has two-main controversial effects on firm performance in general i.e., negative and/or positive. However, most of prior related literature states that family control can have several important beneficial advantages and implications on firm performance supporting the agency theoretical arguments on ownership concentration-performance relationship. For example, Aguilera & Jackson, (2003) argue that, families as a controlling shareholders in corporations will have the highest incentives to increase their firm performance as they will gain much benefits from doing so. Beside financial benefits, families will gain other intangible important benefits such as reputation, and other competitive sustainable advantages.

Huang et al., (2015, p. 108) stated that "family control affects firm value through capital investment, debt financing, M&A activities, and governance structure". Accordingly, most of the empirical literature regarding family firm's performance document superior family firm's financial performance compared to other counterparts. For example; Anderson & Reeb, (2003) examine the influence of family ownership on corporate financial performance using US firms data. Their results indicate that family business outperform the non-family business in the US capital market. However, they highlighted the potential cost of family ownership in corporations, which centred about the potential profit exchange with private benefits. Also, Miralles-Marcelo et al., (2013)

examined the stock performance of the Portuguese family firms. The results indicate that family business outperform non-family business.

Martínez et al., (2007) argue that family business is better in aligning business objectives between owner and manager –as usually being the same person or have kin relationship− that non-family business which may justifies the performance "superiority" of family business. However, they argue that such kind of business may suffer from weak governance system or have lower level of professionalism. Similarly, Erbetta et al., (2013) examined family ownership effect on firm's financial performance measured by Data Envelopment Analysis (DEA). Interestingly, they report that family business outperforms the non-family counterpart in Italia. Furthermore, they argue that family business has lower systematic efficiency in overuse labour and capital in investments which in terms impose benefits and justifies higher levels of financial performance and efficiency.

Shyu, (2011) utilize a Taiwanese panel data of five years to examine the influence of family ownership on corporate financial performance measured by both accounting and market value measures. The results indicate positive significant relationship. Also, they argue that firm performance increases as family ownership increase to max of 30% only, then it falls suggesting an inverted U-shaped relationship. Moreover, Walker et al., (2013) report a superior financial performance to family firms compared to other non-family firms in the Canadian capital market. Additionally, they argue that the existence of family ownership may help in reducing and solving the traditional agency conflict between managers and owners by presenting a unique leadership style. However, they showed that corporate financial performance decreases when a family descendant acting as CEO rather than the founder himself.

Other scholars such as Burkart, Panunzi, & Shleifer, (2003) have argue that sometimes and in some cases, family extensive control over corporations has perceived as undesirable. Family founder and their heir managers can spoil other shareholders' wealth by taking private benefits investment decisions. Additionally, Fama & Jensen, (1983) noted that combining ownership and control will allow shareholders to extract private benefits. This view has been supported by different scholars[9]. Furthermore, there is much debate in corporate finance literature that families as a controlling shareholders usually tie executive managerial positions to same family members,

[9]Demsetz (1983) argue that in some cases the controlling blockholders may choose nonfinancial consumptions, and thus, draw scarce resources away from profitable investment projects. In a similar vein, Byun et al. (2011) stated that the divergence between cash flow rights and voting rights provides controlling blockholders (families) with opportunistically advantages to retain control in managerial decisions, especially in emerging markets where the external market for corporate control and the rule of law is weak.

which in terms may question the capabilities of those candidates compared to highly skilled talents in other non-family business, this may reduce the competitive advantage of these firms in the market (Anderson & Reeb, 2003).

Given the above-presented empirical and theoretical discussion, family ownership as a majority shareholders (blockholders) variable could be an endogenous variable from econometrics' point view, as family member-owner may have more internal information than any other minority shareholder (Shyu, 2011). In other words, the presence of family control may signal positive prospects for the firm and enable easier decision-making regarding company holdings. Thus, the willingness of a family to exercise control over a firm may be affected by firm performance itself. Accordingly, most of the prior empirical studies which fail to address the endogeneity issues that inherent in the relationship between family ownership and firm performance may plague with statistical bias.

Furthermore, it should be noted that in most of the MENA emerging markets i.e., Jordan and UAE, most of the publicly listed firms are controlled by their founders, or the founder's family and heirs. Even the financial institutions including (banks) are dominated by families and/or individual investors. Thus, it could be argued that due to the lack of regulatory environment and weak investors' protection shield, families as a majority (controlling) shareholders keep control the firm's resources and may use it for their private benefits in these capital markets, which implies that expropriating minority shareholder's wealth may exist in these capital markets, and hence, firm performance of such listed firms may be harmfully affected (la Porta et al., 2002). This research is the first to examine the relationship between family ownership and firm performance in the Jordanian and the UAE's nonfinancial listed firms, while simultaneously controlling the issue of endogeneity by applying the dynamic system GMM. According to the aforementioned theoretical and empirical discussion, the below hypothesis is formulated pretending that:

Hypothesis$_1$: *There is a negative relationship between family ownership and firm performance.*

2.5.1.1.2 Institutional Investors Ownership Effects

As noted earlier, both past and recent corporate governance literature increasingly establish the importance of controlling shareholders in monitoring managerial self-opportunistic behaviour, or even in enhancing the managerial efficiency. Generally, the presence of professional,

experienced and strong "financially" capable investors may have several advantages and positive implications to the business life. Burkart, (1995) argue that the presence of large shareholders in a firm can challenge increase the takeover premium by challenging the outsider riders. In other words, theoretically, "Large investors have the potential to perform an important monitoring function in corporate governance systems that serves as protection for smaller investors for whom monitoring costs are prohibitive" (Pergola & Verreault, 2009, p. 551). These investors can influence management's behaviour directly through their power as large owners, as board members, or indirectly through threat of liquidation. Moreover, such type of large shareholders has more incentives than others i.e., minority investors to monitor their sizeable investments (Pergola & Verreault, 2009).

One of the most other influential large investors in capital markets in these days is the institutional investors (Fich et al., 2015). Boubakri & Cosset, (2011, p. 4) defined institutional investors as "large entities with considerable amounts of money to invest, and are thus more likely to buy sizeable blocks of a target firm's common stock". According to Ferreira & Matos, (2008, p. 501) institutional investors can be "divided into two groups: independent institutions (mutual fund managers and investment advisers) and grey institutions (bank trusts, insurance companies, and other institutions)".

Accordingly, corporate governance literature has documented that institutional investors' ownership has several implications on firm performance in general. For example, Hutchinson, Seamer, & Chapple, (2015) show that institutional investor is an important driver of financial health, and found that firm-specific risk, risk-management policy, and firm's financial performance are positively associated with institutional investors' ownership. Also, they argue that the significance of this relationship depends on the institutional investors' ability on exert vigilant monitoring on managerial activities. This implies that institutional investors are not equally-incentivised to monitor. Moreover, they argue that, institutional investors tend to promote short-term performance activities or exit in financial crisis times rather than supporting long-term investment activities.

Consistent with monitoring hypotheses, Hutchinson et al., (2015) note positive influence of institutional investors' equity ownership on firm risk, performance, and corporate governance policies. Nagel et al., (2015) agree about the vigilant monitoring activities of institutional investors, and report positive relation between institutional investors and firm's operating

performance and pay-out ratios. Similarly, Cornett et al., (2007) report that higher institutional ownership associated with higher firm's performance. Fung & Tsai, (2012) assert that institutional investors are a key determinant of firm performance in the US capital market. Additionally, they argue that different types of institutional investors have different performance implications. Similarly, Cornett et al., (2007) examined the relationship between institutional investors involvement and firm's operating performance. They find that the percentage of institutional stock ownership and the number of institutional stockholders are significantly related to firm's operating performance measurements. Additionally, they argue that, this relationship is dependent on the institutional investors' business relationship with the firms they invest their money in. Elyasiani & Jia, (2010) show that firm performance is positively associated with institutional ownership stability over time. These results account for the importance of institutional investors working as a vigilant monitoring mechanisms on firm's management. These studies suggest that simply by having an institutional investor type as a controlling shareholder, this may affect the firm performance positively, due to incentives and monitoring efficiency that such type of investors may characterised with.

In contrast to the above arguments and consistent with the negative effect hypotheses, recently, some scholars have argued that institutional investors has played negative role (behaviour) and exacerbate the recent financial crisis by putting more pressures on the financial services providers to focus on short-term profit investments and increase the risk-taking activities (Callen & Fang, 2013). In fact, prior corporate finance literature has made distinguish between two controversial behaviours of institutional investors in financial markets; 'monitoring' and 'short-termism'. Indeed, monitoring behaviour leads to positive implications on firm performance in general, while short-termism may lead to negative implications. For example; Cheng et al., (2015, p. 840) assert that "There is anecdotal evidence, which we confirm in our analysis below, that savvy institutional investors such as Bill Miller of Legg Mason, one of the largest mutual fund companies in the United States, over-weighted and supported the most risky companies like Bear Stearns in their portfolios".

Empirical studies examining the implications of institutional investors −despite their presence− on firm performance in MENA countries are limited and marginally exist. Institutional investors in Jordan (for example) has become beneficial in strengthening corporate governance practices and hence make decisions towards achieving long-term value maximization target. According to Report on the Observance of Standards and Codes (ROSC, 2004), 70 public firms

out of 161 in Jordan were considered to be supermajority owned by institutional investors. Additionally Al-Najjar, (2010) stated that average institutional share ownership was about 68.18 and other firms were totally owned by institutional investors in 86 nonfinancial listed firm in ASE market. Moreover, Al-Najjar, (2010) argue that a key driver of these structural ownership transformation was the privatisation plan that the Jordanian government adopted in the late 90s.

Al-Khouri, (2005) examined the internal (firm-level) corporate governance mechanisms effects on firm's financial performance in Jordan, and report that institutional investors ownership is significantly positively associated with firm performance. To the best of the author's knowledge, there is no study examining the effect of blockholders including institutional investors on firm performance in the UAE. Generally, the direct influence of institutional investors on corporate financial performance has been under-investigated (Cornett et al., 2007). There are limited number of studies associated with this relationship in corporate finance literature, additionally the research results are mixed and lacks consistency in evidence. Thus, this research contributes to the understanding of how institutional investors may affect firm performance in the MENA emerging markets context.

Indeed, the discussion presented above shows that the vast majority of prior empirical literature reports a positive effect of such investors on firm performance. For example ;prior literature indicates that institutional investor monitoring can influence firm performance (Han & Suk, (1998), increase management turnover in poorly performing firms (Kang and Shivadasani, 1995), and enhance firm R&D investments among other effects (Hansen and Hill, 1991; see also Kane and Veluri. 2004; Veluri and Jenkins, 2006). According to Hoskisson, Johnson and Moesel, (2002) ownership concentration is crucial in curtailing managers' opportunistic behaviour. However, some investors may have stronger incentives to monitor than others. Given the aforementioned arguments, below hypothesis pretending that:

Hypothesis$_2$: *There is a positive relationship between institutional ownership and firm performance.*

2.5.1.2 Share Ownership Concentration and Corporate Performance

First of all, it should be noted that, the above two-subsections were associated with the type of majority (controlling) shareholders effect on firm performance. In this section, we present

reviews of prior literature associated with the block-ownership concentration without any special link to its identity. In order to avoid any overlapping with the previous subsections, we will present most important arguments and summarise those that directly related to the relationship between ownership concentration and firm performance.

As noted earlier, ownership concentration can play an important monitoring role as a form of traditional governance mechanism in emerging markets. For many years, research has tried to examine the implications of such internal governance mechanism on firm performance. The focus of such research has been on minimizing the agency conflicts, and hence, improving firm performance. The dominance of the effectiveness of 'ownership concentration' in monitoring managerial behaviour and enhancing firm's profitability is a subject of much debate in recent times, especially in transitional economies context. Empirical literature on emerging markets seems to demonstrate negative relationship between ownership concentration and firm performance.

One theoretical explanation for this negative effect, especially in emerging markets, is that when ownership concentration is coexisting with weak corporate governance mechanisms, underdeveloped capital markets and non-existing market instruments, the traditional agency conflict between principals and managers is replaced by another type agency conflict between majority shareholders and minority investors (Young et al., 2008). Moreover, Kalezić, (2015) note that, the negative impact of ownership concentration on firm performance in emerging markets may considerably presents due to the insufficient incentives for the largest owners to attempt timely efficient firm restructuring to maximise the firm's long-run valuation. Dharwadkar et al., (2000) argue that principal-principal agency problem is a concern in institutional environments which lack minority shareholder protection and enforcement mechanisms.

Consequently, empirical literature associated with the ownership concentration-performance relationship in emerging markets does not face the problem of interconnecting theoretical arguments with its empirical findings. A comprehensive meta-analysis by Wang & Shailer, (2015) based on the experience of 18 emerging markets, suggests that ownership concentration has negative implications on firm performance across these countries. Moreover, Jiang et al., (2011) provide evidence that ownership concentration is positively associated with the level of information asymmetry. This may support the detriments effect of ownership concentration on

firm performance. Similarly, Bednarek & Moszoro, (2014) argue that greater ownership dispersion is positively associated with firm performance.

Notwithstanding the above mentioned critical determinants, ownership concentration has some positive consequences. For example, Shleifer & Vishny, (1986) stated that majority shareholders may have more incentives to monitor and discipline managers by their threatening power of voting rights. Lemmon & Lins, (2003, p. 1445) argue that "ownership structure is a primary determinant of the extent of agency problems between controlling insiders and outside investors, which has important implications for the valuation of the firm". Also, Li, (1994) argue that large shareholders can have ultimate power and effective level of monitoring by the ability of facilitating a third-party takeover by splitting their own shares gains with external bidder. These arguments confirmed by international evidence in Finland by Maury & Pajuste, (2005) show that ownership concentration has positive effects on firm performance. Additionally, they argue that the results indicate that the identity of shareholder matters significantly when it comes to the concertation. Similarly, in Germany, Lehmann & Weigand, (2000) report that large shareholders enhance corporate performance.

In Korea, Joh, (2003) report that firms with smaller level of ownership concentration tends to have lower profitability which implies that ownership concentration may have positive implications on firm performance. In China, Isaac & Ke, (2007) show that ownership concentration is positively associated with corporate performance. In addition, the relationship between ownership concentrations is affected by the identity of owners. For example, they argue that government ownership contributes positively to firm's financial performance. Connelly et al., (2012) examined the relationship between ownership structure and other corporate governance practices on firm's value using Thai firm's data. They show that there is a direct positive effect between corporate governance and firm performance. Similarly, Isakov & Weisskopf, (2014) report positive relationship between ownership structure and firm performance.

Taking in mind this variety in the international evidence associated with the relationship between ownership concentration and firm performance, recent advances in corporate governance literature suggest that, the relationship between governance and performance may depend on several factors. For example, Fan et al., (2011) argued that it is conceptually difficult to attribute the persistence of certain ownership structures solely to expropriation i.e., negative impact, other factors may influence this relationship. Gedajlovic & Shapiro, (1998, p. 533) posit that the

relationship between ownership concentration and firm performance differs across countries and may depends on the national system of corporate governance. Most recently, Nguyen et al., (2015) provide evidence that a country's national governance system moderate the relationship between ownership concentration and firm performance. This implies that, the institutional environment is a key determinant of this relationship, and as a result, the prior international empirical findings are inconsistent.

It is worth noting that, the institutional environment for economic activities is under-developed in the MENA region in general. Thus, ownership concertation in the context of this thesis may possibly lead to the second type (principal - principal) agency conflict. As agency problem increases, majority (controlling) shareholders make strategic decisions which are in the best of their interests rather than the firm interests, and hence, firm performance decreases and minority shareholders' wealth expropriated. Moreover, in emerging market case, investors may suffer from sever information asymmetry problem, due to the weak institutional and legal framework (La porta et al., 2000). In fact, prior empirical literature suggests that the effect of ownership concentration may be viewed in two directions; positive and negative. Positive impact is hypothesised based on interests' alignment effect, substitution of weak legal and institutional environments, and substantial shareholdings commitment to bailout and to avoid firm's resources expropriation. On the other hand, corporate governance theorists hypothesised negative impact based on cost of capital, principal-principal agency problem, and negative potential impact on other corporate governance mechanisms (Wang & Shailer, 2015).

By juxtaposing the aforementioned arguments, and drawing on empirical evidence in emerging markets, where ownership is highly concentrated, and national governance quality is weak, the below hypotheses can be drawn regarding the ownership concentration-performance relationship in this context:

Hypothesis$_3$: *Firm performance is negatively dependent on share-ownership concentration.*

All in all, after analysing the literature related to ownership concentration effects on firm's financial performance –which is summarized in Table 2-2– the main following results can be concluded:

First, in general, ownership concentration is an important determinant of both firm's financial performance and value. Second, ownership concentration is negatively related to firm

performance and value, especially, in emerging markets, where the legal and constitutional environment less effective that in developed countries. Third, these differences in research findings suggest that reforms in corporate governance principles should go beyond adopting the best practices from developed markets and take into account the macro institutional differences and firm-specific characteristics in each separate market.

Table 2-2 Prior related studies' findings summary

Study	Sample	Methodology	Results
Houmes & Chira, (2015)	S&P 500, the S&P Midcap 400, and the S&P Small cap 600 Index, 1995–2012	Univariate tests and linear regression	Ownership concentration perpetuate financial performance.
Hu & Zhou, (2008)	World Bank survey, 1500 Chinese firms, 1998-2000	Base regression	Nonlinear relationship between managerial ownership and financial performance.
Perrini, Rossi, & Rovetta, (2008)	297 Italian firms, 2000-2003	Pooled OLS, 2SLS	Ownership concentration is beneficial.
Bhaumik & Selarka, (2012)	228 Indian firms, 1995-2004	Regression	Ownership concentration may reduce traditional agency cost; however, it may increase principal-principal conflict.
Mikkelson, Partch, & Shah, (1997)	US 283 IPOs, 1980-1983	Univariate comparison, regression	Financial performance is not related to insider ownership.
Villalonga & Amit, (2006)	US Fortune-500 firms, 1994–2000	Regression, sensitive analysis	Family ownership creates value only when it's combined with CEO family membership.
Omran, (2009)	52 privatized Egyptian firms, 1995-2005	Regression	Ownership concentration and identity have positive impact on financial performance.
Nguyen, Locke, & Reddy, (2015)	Listed firms from SGX Mainboard (for Singapore), or the HOSE and the HNX (for Vietnam)	Regression, dynamic modelling	Ownership concentration has positive impact on financial performance.
Chung & Pruitt, (1996)	1000 US firms in 1987	Regression OLS, and 3SLS	Both ownership structure and financial performance are jointly determined.

2.5.2 Board of Directors and Firm Performance

Board of directors as an internal governance instrument has received a wide attention in the mainstream of academic literature. With a particular focus on the board of directors' relationship to firm performance, board composition and characteristics have become a hot topic, especially, in recent days and attracted substantial interests (Kim & Ozdemir, 2014; Iwasaki, 2008). The importance of the board of directors referred to the arguments proposed by Jensen, (1993) who posit that, in modern form of corporate system, where managers are not shareholders or own few shares, board of directors can supervise and advice management on behalf of the shareholders. Similarly, Jensen & Meckling, (1976) stated that in the real world there are many factors would force managers to perform opportunistically in order to maximize their best interest at the expense of the business owners. One of these factors called information asymmetry. Asymmetric information is the power imbalance in the transactions. In these perspectives, managers may have better information and may take decisions at the expense of the shareholders. Thus, board of directors playing an important role in aligning managers' interests to those of the shareholders.

Board of directors is an important instrument in solving the traditional agency problem. Prior literature i.e., Kim et al., (2010) has, therefore, identified four-main duties of the board of directors; (1) Fiduciary duty where they have to control shareholder's money and ensure firm's profitability, (2) Loyalty and fair dealing duty where they have to support faithfully the shareholders' interests, (3) duty of care and interests where they have to be vigilantly informed about the activities around them in the business, and (4) Supervisory duty where the directors must be responsible to create ethics and rules and to implicitly ensure the discloser of these rules.

Nevertheless, prior research basically examines the effect of governance mechanisms on firm performance through specific characteristics of the board of directors. For example, the composition of the board of directors is one aspect of the relevance of this topic in corporate finance literature (Jensen & Meckling, 1976; Fama, 1980; Fama & Jensen, 1983). It has been generally argued that board's member's ability and willingness to perform efficient monitoring role depending on 'board independence' and 'board size' (Coles et al., 2008). Several studies show

how outside directors may affect different aspects of board tasks, including CEO's enforced tenure, anti-takeover defence, and takeover premiums negotiation.[10]

On the other hand, theoretical assumptions and empirical investigations associated with the board of directors' attributes have been recognized in real world. In fact, recent surveys show that board of directors has undergone major changes around the world. For example, Faleye, (2015, P.1) and stated that "According to the 2012 Spencer Stuart Board Index, 86% of the boards of Standard and Poor's (S&P) 500 companies in the US market had 12 or fewer directors in 2012, compared with 68% in 2002. Similarly, the percentage of independent directors increased from 79% in 2002 to 84% in 2012, while the proportion of chief executive officers (CEOs) who also chaired their boards declined from 75% to 57% during the same period. Perhaps the most significant of these trends is the exclusion of all employees but the CEO from serving on the board of directors. In 1998, only 36% of S&P 1500 firms had no other employee directors besides the CEO. The proportion of such firms has increased steadily each year since then, reaching 70% in 2011."

These statistics may show how important the board of directors' composition and leadership structure to corporations' financial health. However, the recent financial crisis and corporate failures around the world have raised a serious doubt about the effectiveness of this board on safeguarding the shareholders wealth and holding the interests of other stakeholders (Erkens et al., 2012; Pathan & Faff, 2013). Therefore, corporate finance recent literature highlighted the importance of different levels of rules and regulations inside the firms and outside at the country-level in enhancing board of directors monitoring ability (Dalton & Dalton, 2011). This also, implies that the effectiveness of structuring boards toward shareholders' wealth maximization may depend on the institutional environment where the business embedded in (Kim & Ozdemir, 2014).

Taking the importance of the board of directors in mind, in this thesis, we aim to examine three important governance variables related to the board of directors. These board governance variables are size, duality and independence, which are most frequently pointed in international corporate governance literature, but less examined the MENA context. Below subsections show

[10]Borokhovich et al. (1996) provides more analysis and details about how independent directors influence hiring and firing the CEOs in the US corporations. Cotter et al. (1997) highlighted the importance of the independent directors in negotiating takeover premiums.

reviews of prior corporate finance literature associated with the relationship between board of directors −size, duality and independence−and firm performance.[11]

2.5.2.1 Board Size and Firm Performance

As noted earlier, many of the prior empirical research has highlighted the importance of the internal corporate governance instruments, especially after the recent financial crisis. Many research studies have been interested in examining board composition implications on firm performance. Consequently, an enormous mainstream of academic literature has been conducted on the relationship between the size of the board and firm performance. However, academic literature has not yet reached to answer the question regarding should the board of directors be smaller or larger. Theoretical research seems to have contradictory viewpoints.

For example; Lipton and Lorsch, (1992) argue that large number of directors in the board room would make the board dysfunctional in monitoring management as large number would rarely review firms important polices. Additionally, Jensen, (1993) criticize large number of board members and stated that in order to get more effectiveness and less cost the optimal board members should be around eight. Agency theory argue that large number of board members may become symbolic governance mechanism and eventually a part of the management. Thus, since large board members in board room may question its effectiveness in performing the monitoring role, board characterised with large number may negatively affect corporate financial performance (El-Faitouri, 2014).

On the other hand, there is another school of thought which support the view that large boards may have the ability to put pressure on the firm's management to pursue lower cost of debt and hence, improves corporate financial performance (Anderson et al., 2004). Furthermore, Klein, (2002) argue that in order to maintain effective monitoring, firms may have to increase their board size. However, Coles et al., (2008) stated that the relationship between board size and corporate financial performance is U-shape relationship implying that the optimal board size is either very small or very large. In consequences, much of the empirical research dedicated to examine this issue, see for example; (Jameson et al., 2014; Elsayed, 2010; Al-Malkawi et al., 2014; Francis et al., 2013; Hillman, 2014; Sun & Shin, 2014; Fraile & Fradejas, 2014) among others. However,

[11] It is worth noting that board –duality and CEO–duality is used interchangeably in this research. Both terms refer to the situation where the board chairman is holding a CEO position of the company at the same time.

prior empirical results associated with the relationship between board size and corporate financial performance were inconclusive and limited to developing economies (Ehikioya, 2009).

It's a worthy of note that, the vast majority of these studies that have examined the effect of board size on corporate financial performance report negative association. For example; Yermack, (1996) was among the first who provide empirical evidence consistent with the assumption that smaller board of director is more effective monitoring device. In the same vein, Eisenberg et al., (1998) report significant negative correlation. Cheng, (2008) assert that corporate board size is negatively associated with corporate financial performance. This implies that board of directors may have weak monitoring role and it perform advisory role instead (Guest, 2009). Similarly, Kumar, (2013) report negative association. However, other scholars have found positive relationship. In terms of risk taking and performance variability, Nakano & Nguyen, (2012) indicate that firms with large board members in the board room have lower performance volatility and lower bankruptcy risk. Recently, Johl et al., (2015) provide evidence that board size is positively associated with corporate financial performance in Malaysia. In the MENA context, governance research is limited and scarce. Thus, this research will add to the current debate on the relationship between board size and firm performance using MENA context −Jordan and UAE− data as a form of small emerging markets.

However, the effect of board size on firm performance seems to be contingent on external governance mechanisms i.e., market for corporate control. There are two competing hypotheses on this matter; the Complement and the Substitute Hypotheses. According to the Complement Hypothesis, board size will have negative relationship on firm performance under an active market for corporate control framework (John & Senbet, 1998). On the other hand, the Substitute Hypothesis predict that the importance of the board will be substitutory depending on the existence of the external governance mechanisms, and hence, expecting positive impact of board size on firm performance in such environments (Williamson, 1983). Cheng, (2008) provide evidence that board size matter for firm performance before the passage of antitakeover laws in the US in the mid-to-late 1980s. In contrast to developed countries and some other large emerging markets i.e., China, the MENA region's emerging markets has poor and weak external governance mechanisms. The market for corporate control instruments are absent, capital markets are mostly illiquid and equity ownership is concentrated. In this context, the importance of internal corporate governance mechanisms i.e., board size is more valuable. Thus, positive relationship between board size and firm performance might be observed.

However, empirical evidence seems to be inconclusive and incontinent when it comes to the relationship between board size and firm performance in general. Moreover, the effect of board size on firm performance seems to be contingent on external governance mechanisms i.e., market for corporate control. There are two competing hypotheses on this matter; the Complement and the Substitute Hypotheses. According to the Complement Hypothesis, board size will have negative relationship on firm performance under an active market for corporate control framework (John & Senbet, 1998). On the other hand, the Substitute Hypothesis predicts that the importance of the board will be substitutory depending on the active existence of the external governance mechanisms, and hence, expecting positive impact of board size on firm performance in such environments (Williamson, 1983). Cheng, (2008) provide evidence that board size matter for firm performance before the passage of antitakeover laws in the US in the mid-to-late 1980s.

In contrast to developed countries and some other large emerging markets i.e., China, the MENA region's emerging markets have poor and weak external governance mechanisms. The market for corporate control instruments is absent, capital markets are mostly illiquid and equity ownership which is concentrated. In this context, the importance of internal corporate governance mechanisms i.e., board size is more valuable. Thus, positive relationship between board size and firm performance might be observed. Drawing on this debate in prior theoretical and empirical literature, the below hypothesis can be formulated regarding the effect of board size on firm performance in this research context:

Hypothesis$_4$: *There is a positive relationship between board size and firm performance.*

2.5.2.2 Board-Duality and Firm Performance

Similar to other board composition variables i.e., size and independence, CEO-duality and its impact on firm performance has attracted intensive attention of the mainstream academic literature in the previous years. The term Board-duality refers to the situation where the board's chairman is performing as the CEO at the same time in firms.

In fact, board-duality seems to be a wide phenomenon in business life in the old days. For example, during the 1980s and beyond, the global economy appears to have caught up in what is described as "board-duality". Brickley et al., (1997) report that in 1988 the percentage of firms in Forbes executives' compensation survey that had one person filling both posits was 80.9%.

Moreover, Dahya et al., (2009) assert that board-duality was the dominant leadership structure theme in firms around the world until the 1990s. 74.4% of American firms were having the same person holding both positions, where in the Continental Europe the percentage was nearly 60% of firms having board-duality. However, recent surveys showing that the CEO/Chairman convergence has been dropped significantly. For example Favaro et al., (2010) stated that in 2009 the percentage of firms holding the term board-duality fallen to 16.5% in north America, and to 7.1% in Europe as stated in (Byrd et al., 2012).

It is arguably that these significant changes were driven by the corporate governance recommendations posits by the Cadbury report in 1992in the UK, and/or the Sarbanes-Oxley Act of 2002, and other seminal empirical findings on its negative effect on performance (Duru et al., 2016). The Cadbury report recommend that the positions of the CEO and chairman must be held by two different individuals. An underlying theoretical justifications of this recommendations is that, board with different candidates holding both posits separately will help in improving the quality of monitoring and hence, enhance corporate financial performance (Dahya et al., 2009). Other scholars have has come to a conclusion that having board-duality is similar to the function of "CEO grading his own homework" (Brickley et al., 1997: 190).

Theoretically, there are two-main dominant perspectives on duality's performance effect. The effect of board-duality on firm performance is expected to be negative under the agency theory. When the CEO has extensive power i.e., dominate the firm board by having chairman positon, this will reduce the board effectiveness and ability in controlling managerial self-opportunistic behaviours, which in terms may reduce firm performance (Jensen & Meckling, 1979; Fama & Jensen, 1983; Jenson, 1993). On the other hand, stewardship and resource dependence theory argue that duality promotes more focused and flexible leadership which facilitates organizational effectiveness in a potentially dynamic business environment, which in terms may increase firm performance (Donaldson & Davis, 1991; Pfeffer & Salancik, 1978).

The empirical literature examining the effect of board-duality on firm performance yields mixed results and inconsistent findings (Byrd et al., 2012; Dalton & Dalton, 2011; Dahya et al., 2009). One reason could refer to the mixed evidence in corporate financial literature is that board of directors' structure may be endogenously related to corporate financial performance (Brickley et al., 1997). Wintoki et al., (2012) provide evidence that board-duality variable is a subject to the past firm performance, and hence it not affecting firm performance. Yang & Zhao, (2014, p.536)

stated that "it is not theoretically obvious whether dual or separate leadership is more beneficial to firm performance. Therefore, the efficacy of CEO duality is an empirical question". However, empirical evidence on the relationship between board-duality and firm performance seemed to be mixed also.

Byrd et al., (2012) utilize the thrift crisis of the late 1980s to examine the influence of CEO-duality on corporate financial performance using US financial-companies' data. They found that, during thrift crisis firms that combine the role of the chairman and CEO were significantly more likely to survive and resist the crisis than firms that separate those roles into independent CEO and independent chairman. According to their study, one underlying assumption to these results was the restricted lending policies that those financial firms adopt during the thrift crisis in the US market at that time. Lam & Lee, (2008) argue that neither agency theory nor stewardship theory alone can explain the board-duality influence on corporate financial performance. Accordingly, they assert that relationship between board–duality and corporate financial performance is contingent on the presence of the family-control factor. Thus, their results revealed that board-duality improves corporate financial performance in non-family firms while it decreases financial performance for family-controlled firms. One explanatory factor is that in family-controlled firms the ownership structure is quite different than those of non-family firms. Concentrated ownership structure may have different implications on the board of directors' composition and firm's leadership structure.

In Egypt as a country of the MENA region, Elsayed, (2007) report that board-duality has no effects on corporate financial performance. Similarly, Dahya et al., (2009) fail to find any performance differences between firms splitting the combined Board/CEO roles with other firms adopting board-duality leadership structure. However, Elsayed, (2007) highlighted the importance of the industry classification as it seems to have significant implications on the relationship between board-duality and corporate financial performance. After controlling for industry classifications, the results were to support the agency and stewardship theoretical assumptions concluding that board-duality negatively affects corporate financial performance in Egypt. Carty & Weiss, (2012) show that no correlation between board-duality and banks' failure was found. Meta-analysis on 31 articles by Dalton et al., (1998) find that CEO duality does not affect firm performance. In fact, the empirical evidence associated with this issue seems to be inconclusive and exclusively related to developed markets experience such as USA (Elsayed, 2007; Wahba, 2015).

In fact, the empirical evidence associated with this issue seems to be inconclusive and exclusively related to developed markets experience such as USA (Elsayed, 2007; Wahba, 2015). Thus, literature associated with board-duality issue is in general limited and in emerging markets is dearth. This research adds to the literature by analysing the impact of CEO-duality on firm performance using a new framework –Dynamic System GMM− that mitigates the endogeneity problem in such relationship. Given that family ownership is prevailing in the MENA context, it is expected that CEO-duality has negative implications on firm performance under the entrenchment assumptions. Accordingly, the below hypothesis can be formulated as the following:

Hypothesis$_5$: *There is a negative link between board duality and firm performance.*

2.5.2.3 Board Independence and Firm Performance

Does board independence affect firm performance? This question has motivated considerable empirical research over the past years. Prior literature shows that; a board is likely to have high level of independence if the board includes more outside directors.[12]

Two main competing theories dominate the discussion on the relationship between board independence and firm performance. Prior corporate governance literature under the agency theory logic suggest that, more independent board members allow for more effective monitoring mechanism and hence, improves firm performance (Coles et al., 2008; Dalton & Dalton, 2011; Wu, 2004). Fama & Jensen, (1983) argue that outside directors are more capable to perform vigilant monitoring activities as they are free of any firm's management influences. Agency theory also suggest that because of the notion that outside director's 'monitoring performance' is probably the only way to evaluate them, and hence, it determines their value as human capital, they must have more incentives to develop their reputation in order to get advantage while competing in the labour's market. On the other hand, stewardship theorists argue against having outside directors in a firm board. Stewardship theory mainly suggest that outside directors have less knowledge of the firm's strengths and weaknesses which may prevent them in providing any useful services to the management and shareholders (Davis et al., 1997). Moreover, Armstrong et al., (2014, p.383) argue that "When the corporate information environment is opaque, and there are significant costs

[12]An outside director in this context is any member of a company's board of directors who is not an employee or stakeholder in the company.

to acquire and process detailed information about their firm's operating, financing, and investing activities, independent directors are less effective". These last views highlight a weakness points of independent directors.

In consequence, this issue has attracted extensive body of corporate governance literature. See for example; Muniandy & Hillier, (2014); Brickley et al., (1997); Bhagat & Black,(2001); Hermalin & Weisbach, (2008); Andreou et al., (2014); Jermias & Gani, (2014); Lefort & Urzúa (2008); Duchin et al., (2010); Wang, (2014) among others. However, this extensive empirical literature has inconclusive, and has not provide consensus regarding the precise of the relationship between board independence and firm performance (Dalton & Dalton, 2011; Erickson et al., 2005; Wahba, 2015; Cavaco et al., 2016). Moreover, the vast majority of these empirical studies were exclusively related to developed countries i.e., USA and UK and other European countries, while less attention has been paid to explore the board of directors monitoring role in emerging markets, especially those related to the MENA region, where the prevalence of concentrated ownership exist (Muniandy & Hillier, 2014).

Despite the maintained assumption that we should expect a positive relationship between board independence and firm performance, the results, however, turns to be mixed. For example, Nguyen & Lu, (2017) show that board independence has negative effect on firm performance in Vietnam. Cavaco et al., (2016) show that there is a significant negative relationship between board independence and firm performance in the French context. Bhagat & Bolton, (2009) report that board independence affecting corporate financial performance negatively significant in the US context. Moreover, Wahba, (2015) examined the effects of board composition on firm's financial performance in Egypt as one of the emerging markets and found that board independence is negatively associated with firm performance. Similarly, Agrawal & Knoeber, (1996) investigate the effect of independent directors on firm performance, and report that the proportion of outside directors has negative effect on firm performance. Similarly, Faleye, (2015) examines the relationship between board independence and firm performance in the US context, and report that there is negative relationship. These findings are consistent with many prior studies that report negative association between board independence and firm performance i.e., Bhagat & Bolton, (2013), Baysinger & Butler, (1985) among others.

Contrary to the debates presented above, Liu et al., (2015) examined the board independence impact on the firm performance using emerging markets data from China. They found that

independent directors have an overall positive impact on firm performance. Moreover, Dahya & Mcconnell, (2007) investigate the implication of the calls for more outside directors released after the Cadbury committee report during the period 1989-1996. They report that firms that increased their outsiders in the board witnessed better operating corporate performance and higher stock prices at that time in the UK. Similarly, Nguyen & Nielsen, (2010) report a positive relationship between board independence and firm performance.

Relying on different empirical strategies, recent advances in corporate governance research suggest that board independence has no effects on firm performance, since board of directors' characteristics are endogenously determined. For example, Wintoki et al., (2012) relied on Dynamic System GMM to examine the relationship between board characteristics and firm performance in the US context. They report that there is no causal relationship between board independence and another characteristics i.e., size and duality, and firm performance. Bhagat & Black, (2001) provide evidence about the reverse causality (endogeneity) between board independence and corporate financial performance. They argue that firms with low profit rates tends to increase their outside directors in an attempt to impose more vigilant monitoring in the top management decisions. Prevost et al., (2002) report that outside directors' proportion in the board is not associated with better firm's performance.

However, recent advances in corporate governance research suggest that board independence has no effects on firm performance, since board of directors' characteristics Are endogenously determined. For example, Wintoki et al., (2012) relied on Dynamic System GMM to examine the relationship between board characteristics and firm performance in the US context. They report that there is no causal relationship between board independence and another characteristics i.e., size and duality, and firm performance. Bhagat & Black, (2001) provide evidence about the reverse causality (endogeneity) between board independence and corporate financial performance. They argue that firms with low profit rates tend to increase their outside directors in an attempt to impose more vigilant monitoring in the top management decisions. Prevost et al., (2002) report that outside directors' proportion in the board is not associated with better firm's performance. Most recently, Nguyen et al., (2015) shows that board variables including independence have no significant effect on firm performance using emerging markets context –Singapore and Vietnam− using Dynamic System GMM. Accordingly, based on recent advances in econometrics research i.e., applying dynamic System GMM when modelling the

governance-performance relationship, and based on recent empirical findings, below hypothesis pretend that:

Hypothesis$_6$: *There is no relationship between the level of board independence and firm performance.*

Table 2-3 below showing more details about the prior empirical findings associated with the board composition, leadership structure, and other board characteristics influence on corporate financial performance as predicted by different theoretical assumptions.

Table 2-3 Overview of prior literature findings regarding the relationship between internal corporate governance and firm performance

Authors and countries	Relationship of firm's performance with ownership and/or governance variables
Dahya, Dimitrov, & McConnell, (2008) 22 countries	DV: Tobin's Q Board independence: +
Hu & Izumida, (2008) Japan	DV: Tobin's Q, ROA Ownership concentration with Tobin's Q: +++ Ownership concentration with ROA: +
Li et al., (2015) China	DV: Tobin's Q, ROA Board independence with ROA: +++ Board independence with Tobin's Q: ++
Hamadi & Heinen, (2015) Belgium	DV: MBV, ROA Ownership concentration with MBV: + Ownership concentration with ROA: +
McConnell & Servaes, (1990) USA	DV: Tobin's Q Insiders ownership concentration: ++
Demsetz & Lehn, (1985) USA	DV: Stock Market return Ownership concentration: NC
Agrawal & Knoeber, (1996) USA	DV: Tobin's Q Independent director -
Dalton et al., (1998) Meta-analysis	DV: Tobin's Q, ROA Board composition: NC
Bhagat & Black, (2001) USA	DV: Tobin's Q, ROA, Ratio of sales to assets, and market adjusted stock price returns Board independence: NC
Bhagat & Bolton, (2008) USA	DV: ROA, Stock Return, and Tobin's Q Board duality with ROA: - Board independence with ROA: - Corporate governance with SR and Q: NC
Yermack, (1996) USA	DV: Tobin's Q Board size: --
Baysinger and Butler, (1985) USA	DV: Relative financial performance RFP Board independence: +
Hermalin & Weisbach, (1991) USA	DV: Average Tobin's Q Board independence: NC
Palmon & Wald, (2002) USA	DV: Abnormal Returns, Accounting Profitability Ratios Board duality in small firms: ++

El-Faitouri, (2014) UK	Board duality in large firms: -- DV: Tobin's Q
Mura, (2007) UK	Board characteristics: NC DV: Tobin's Q Non-executive directors proportion: ++ Block holding ownership: -
Morck et al., (1988) USA	DV: Tobin's Q Ownership concentration (managerial)+
Weir, Laing, & McKnight, (2002) UK	DV: Tobin's Q Board independence: ++

Note: + (−), ++ (−−), and +++ (−−−) indicate positive (negative) inference at the 10%, 5%, and 1% significance level, respectively. DV= dependent variable(s), NC=no correlation.

2.5.3 National (Country-Level) Governance Effects

As noted in the earlier sections and subsections, the prior corporate governance literature shows that the effect of internal (firm-level) governance mechanisms on firm performance seems to be existent. Concurrently, recent advances in governance research suggest that the institutional context that a firm operates in may have better explanations, and may add to better understand the relationship between internal governance mechanisms and firm performance. It is worthy to note that, in this thesis we will examine the direct effect of the national (country-level) governance indicators on firm performance in the selected capital markets i.e., ASE and ESM, rather than examining the moderation effects of such indicators on the relationship between internal governance and firm performance.

One explanation is that; firm shareholders may rely on two broad categories of corporate governance in mitigating firm's agency cost; mainly internal and external governance mechanisms. While internal governance mechanisms such as ownership structure (concentration) and board of directors' variables and other firm-level governance activities are discussed in details in the above subsections (i.e., 2.5.1 and 2.5.2), below we will discuss the national (country-level) governance mechanisms effect on firm performance.

According to extant literature, external governance mechanisms can be directly linked to the rule of laws, legal system, investors protection strength and other takeover market instruments, and should be extremely treated as exogenous variables i.e., these variables are out of control of a firm's activities. These variables are formulated and classified under country-level governance activities (Gillan, 2006). On the other hand, prior corporate governance literature widely suggests that internal (firm-level) governance mechanisms are endogenous or predetermined variables which are directly related to the firm's environment such as ownership concentration i.e.,

controlling shareholders (Jensen & Meckling, 1976) and board of directors (Jensen, 1993). Thus, agency theory predicts that causal relationship should run from corporate governance mechanisms to the corporate financial performance (Lemmon & Lins, 2003).

However, as stated earlier, scholars such as Demsetz, (1983) and Demsetz & Lehn, (1985) have questioned this relationship and argue that corporate ownership structure is determined endogenously in equilibrium by corporate financial performance and other unobserved firm characteristics. Similarly, Demsetz & Villalonga, (2001) stated that when a an investors decide to buy shares they usually tend to buy shares that belong to companies characterised with higher rate of return. In these perspectives, a firms' ownership structure and corporate performance are simultaneously determined. Thus, corporate ownership structure and corporate financial performance should not be systematically correlated. This argument has been literary supported in corporate governance research recently (Wintoki et al., 2012).

Moreover, recent advances in corporate governance research considerably argue that corporate governance and corporate financial performance are dynamically related (Wintoki et al., 2012; Nguyen et al., 2015; Roberts & Whited, 2012; Chen et al., 2008). This implies that current corporate governance structure could be affected by past firm financial performance. Wintoki et al., (2012) argue that reverse causality can run from past corporate financial performance to governance structure, which can be acknowledged as another source of endogeneity, and, hence, implying that the relationship between internal corporate governance mechanisms and firm performance seems to be difficult to be observed.

Consequently, recent advances in corporate governance research i.e., Nguyen et al., 2015, Filatotchev et al., 2013, and Ngobo & Fouda, 2012 among others highlighted the importance of the national governance indicators in mitigating firm agency cost, and hence, in improving the financial health of corporations that embeded in such national governance quality environment. The role of the national governance quality on improving firm performance can be simply justified by its ability in reducing transactions and production costs, risk mitigation, and hence, increase firm profitability (Ngobo & Fouda, 2012).

A number of papers have modelled the direct impact of national governance quality on firm-level governance activities (e.g., Nguyen et al., 2015) most recently and among others, indicating important implicationsthat the national governance quality has upon firm-level governance mechanisms. Ngobo & Fouda, (2012) and Saona et al., (2016) report direct positive relationship

between national governance quality and firm performance. Moreover, other scholars argue that the naional governance quality may moderate the realtionship between internal governance mechsnisms and firm perfromance as reported by Nguyen et al., (2015). Kumar & Zattoni, (2013) highlighted the importance of the interaction between country-level and firm-level governance mechanisms in developing global theory of corporate governance. On the other hand, Rose, (2016) argue that the degree of a firm compliance with national corporate governance codes depend on the institutional environment. Richter & Weiss, (2013) state that the institutional context in which companies operate has a relatively large effect on ownership concentration. Sobel, (2003) argue that superior national governance is associated with better lending and access to capital. Hail & Leuz, (2006) provides evidence that national governance intensiveness and extensive regulatory environment has significant negative relationship with cost of capital. Furthermore, La Porta et al., (2002) argue that firms are more likely to enjoy higher valuation when they belong to stronger domestic investor protection levels and higher national governance and legal enforcement countries.

A number of papers have modelled the direct impact of country- and firm-level governance mechsnisms on firm perfromance (e.g., Nguyen et al., 2015) most recently and among others, indicating the important implications that the national governance quality has upon firm-level governance mechanisms and its perfromance. Similalry, Ngobo & Fouda, (2012) and Saona et al., (2016) report direct a positive relationship between national governance quality and firm performance.as noted eariler, The role of the national governance quality on improving firm performance that can be simply justified by its ability in reducing transactions and production costs, risk mitigation, and hence, increase firm profitability (Ngobo & Fouda, 2012). Based on this literature, national governance quality has several implications on firms activities and, hence, on its performance. Thus, this research will respond to these recent calls for further investigating the direct effect of the national (country-level) governance indicators on firm performance using two different national governance frameworks i.e., well-developing (UAE) and under-developing (Jordan).

Given the important theoretical propositions regarding the impact of country-level governance mechanisms on firm performance, and the prevalence of either benefits or costs of national governance quality, the relationship between country-level institutional governance framework and firm performance in emerging markets remain an important open question

(Nguyen et al., 2015). Based on these theoretical propositions and empirical results, the last hypothesis can be formulated stating that:

Hypothesis$_7$: *Firm performance is associated with higher national governance index.*

2.6 Chapter Summary

From the above synthases reviews of prior literature associated with the relationship between corporate governance (internal and external) and firm performance we conclude the following points:

First, corporate governance and firm performance has received a great and vast attention among researchers from several disciplines, especially, in recent years after the 2007/08 financial crisis.

Second, despite the huge number of these published articles concerning about the relationship between governance and performance in different places around the world, they fail to provide consensus evidence to explain how would corporate financial performance would have affected by a firm's corporate governance mechanisms i.e. ownership structure and board structure.

Third, there has been many reasons that contribute and stood behind this consensus status of the research in the field of corporate governance. One of the most important reasons, is that endogeneity issues has been improperly addressed in prior work of governance-performance in most cases. Furthermore, researchers tend to use econometric techniques that would produce biased results when endogeneity is exist.

Fourth, there are many theories that are related to the concept of corporate governance, but if we are talking about the "conflict of interests" that is usually arises between shareholders and managers in corporations as a fundamental element and reason for corporate governance practices, then the agency theory will be the main theory in explaining corporate governance issues. However, other theories in this research such as stewards, resource dependence theory, or even the institutional theory have been seen and employed as a complementary to agency theoretical views. Fifth, prior governance research has ignored the important role of national governance quality (country-level) in determining firm performance. More specifically, the impact of national

(country-level) governance on firm performance in Jordan and UAE as a form of the MENA region emerging markets has never been examined before.

Table 2-4 below present then predicted signs of the estimates coefficients on the explanatory variables that presented in form of research hypotheses.

Table 2-4 Predicted signs of the estimates coefficients on explanatory variables with the dependent variable (Tobin's Q)

Explanatory variables	Relevant hypothesis	Predicted relationship
Ownership structure variables		
Family ownership	$\mathbf{Hypothesis_1}$	-
Institutional ownership	$\mathbf{Hypothesis_2}$	+
Ownership concentration	$\mathbf{Hypothesis_3}$	-
Board of directors' variables		
Board size	$\mathbf{Hypothesis_4}$	+
Board-duality	$\mathbf{Hypothesis_5}$	-
Board independence	$\mathbf{Hypothesis_6}$	**Ø**
National Governance Variables		
Aggregate national governance NGI	$\mathbf{Hypothesis_7}$	+
Alternative national governance index NGI(a)	$\mathbf{Hypothesis_7}$	+
Investor protection index IPI	$\mathbf{Hypothesis_7}$	+

Note: Symbols (+), (–) and (Ø) represent positive, negative, and no significant relationships, respectively
Variables definitions are presented in Table 4-4 in the next chapter.

The next chapter of this thesis provides an overview of the corporate governance and institutional settings in the MENA region in general, specifically, in Jordan and in the UAE. The chapter proceeds to explore specific governance and capital markets characteristics of the two countries; Jordan and the United Arab Emirates UAE. Additionally, the chapter provides an overview about the importance of the corporate governance system in MENA region and context. Finally, it ended up with chapter summary.

CHAPTER 3: INSTITUTIONAL FRAMEWORK - AN OVERVIEW ABOUT JORDAN AND UAE

3.1 Introduction

As noted earlier in the previous chapter, one of the key causes of the latest financial crisis was –a systematic failure of the corporate governance and risk management practices of the big financial institutions in the US market– a statement concluded by the Financial Crisis Inquiry Commission report (FCIC, 2011). Thus, a one can conclude a message about the importance of the firm-level governance mechanisms in preventing firm distress and default. It is also emphasising a new priority enhancing disclosures transparency, stabilizing global financial markets, and strengthening regulations based on each individual countries' structural dimensions (Fukuda-Parr & McNeill, 2015). It is a worthy of note that the subject of "governance" can be used in different levels (i.e., macro and micro), capital markets as a whole (country-level) and at each firm individually (firm-level), and in different subjects of sciences disciplines i.e., law, business, management and finance.

This chapter will discuss firstly, the macro-level political, governance activities and qualities of the MENA region as a whole, and then proceeds to those of which specifically related to Jordan and UAE; second, the main characteristics of the individual selected country's capital markets, regulations developments and the issued governance codes, ownership structure, and legal preferences.

3.2 The MENA Region Background &Governance Practices

At the first place, the term MENA is an acronym referring to the Middle East and North Africa region. The MENA region is a vast geographical area comprises several countries to include all Middle Eastern Mashreq and Maghreb countries[13]. It consists of 20 countries most of them are Islamic Arab countries. The MENA region population is considered at its least extent to be around 381 million people, which represents about 6% of the total world population. Countries in this

[13] The term Mashreq referred to the region of the Arab world to the east of Egypt, while the term Maghreb is referring to the region of the Northwest Africa including the Atlas Mountains, Morocco, Algeria, Tunisia, and Libya.

region are classified under three main regime traditional classifications, Democratic Systems, Republics, and Monarchies. However, recent publications from international organizations such as Freedom House and other freedom indices put most of the MENA countries under "Not Free" or "Partly Free" classified indices.[14]

It should also be noted that the MENA region contains such of the wealthiest countries around the world. In 1981, these countries formulate what so called the Gulf Cooperation Council GCC. Countries belong to this council are: Saudi Arabic, United Arab Emirates UAE, Qatar, Kuwait, Oman, and Bahrain. The rest of the countries in the MENA region are generally classified as (higher or lower) middle income countries (World Bank, 2015).

With respect to corporate governance, the area has witnessed a wide change during the past decade, especially, after the recent financial crisis that het what supposed to be the most powerful and well governed financial institutions in the US market and then spread all over the world. Consequently, the MENA region as a form of emerging markets has seen important changes in corporate governance field lately. These changes and developments including issuing corporate governance codes or/and developing an existing one. Highlighting these developments the International Finance Corporation in its report IFC, (2008, P.10) stated that "Today, hundreds of conferences on corporate governance have been held across the region, a number of MENA countries have adopted new or amended existing corporate governance codes and regulations, institutes of corporate governance or directors have been established, and banks and companies themselves are starting to undertake corporate governance improvement plans". It should also be noted that, in some of MENA countries the requirements for corporate governance practices was initially supported by the regulatory framework, which was issued before these developments and governance codes.[15]

Furthermore, the report add "A number of events have spurred the emergence of corporate governance as a leading reform initiative, including: (i) a number of domestic reform initiatives in the region, in particular the launch of Hawkamah; (ii) the rise of international, regional, and domestic investment to the region, coupled with stock market booms (and corrections), and the emergence of investor activism; (iii) corporate governance programs and projects implemented by international development institutions; and (iv) updates to the international corporate governance

[14] https://en.wikipedia.org/wiki/Democracy_in_the_Middle_East.
[15] For example; in Jordan company laws and security exchange laws were the initial regulatory framework to enforce and recommend for best practices of corporate governance since the mid-1990s.

framework" (IFC, 2008, p. 13). These important events were initially developed to support business life and to enhance business environment in the MENA context.

However, in real life the case is more complicated and much more difficult. Most of MENA countries are currently suffering from economic, political, and social turmoil issues that certainly affecting the macroeconomic fundamentals of the entire region. All Arab transitional countries are currently facing same major issues related to maintain public economy growth rates, creating jobs, and recruiting foreign investments[16]. Subsequently, most private sector development indicators rank Arab countries behind the other regions of comparable income (Harabi, 2007). Furthermore, intensive oil prices drop, rising political conflicts, and security issues have considerably weekend the MENA region recently. According to very recent report issued by IMF in (April, 2016, p. 21), "Growth in the region overall is projected at 3.1 percent in 2016 and 3.5 percent in 2017, 0.8 percentage point and 0.7 percentage point weaker, respectively, than projected in the October 2015". This showing the extensive challenge that face business environments in this region in particular.

While the investment climate constraints to business development in the MENA region are well documented in the several Business Climate Surveys of the World Bank and other national and international organizations, much less is known on other impediments to private sector development, such as the legal and regulatory frameworks and corporate governance nature and its enforcement mechanisms. Thus, the purpose of the next section is to provide a synthesized review of the quality of the constitutional and national-level governance environment in MENA countries, which may help in predicting and understanding the governance – performance relationship of firms operating in this region. The discussion starts by approaching the region as a whole and then put emphasise on the two countries that were selected as a platform to conduct this study; Jordan and United Arab Emirates (UAE). In particular, the focus will be on the quality of national governance system, capital market developments, and corporate governance developments.

[16] MENA region countries can be classified under three major classifications: countries of the Gulf Cooperation Council (GCC) are as follows: Qatar, Bahrain, Saudi Arabia, Kuwait, Oman and United Arab Emirates. While, Egypt, Jordan, Morocco, Tunisia, Libya and Yemen are classified as Arab Countries in Transition, Algeria, Iraq, Djibouti, Lebanon, Mauritania, and the Palestinian Authority classified as other MENA countries.

3.2.1 National (Country-Level) Governance Quality

The debate on the relationship between the quality of public governance and investment has become livelier in recent years. For example, recent advances in corporate governance literature i.e., Aguilera & Jackson, (2010); Claessens & Fan, (2002); Klapper & Love, (2003) suggest that country-level governance such as the legal institutions and the rule of law may influence the internal (firm-level) governance system, and eventually its performance. The traditional interpretations is that national governance quality fosters investors' confidence through protecting their claims and property rights, including financial assets, against any kind of expropriation (La Porta et al., 2002). The strength of recent researches on this issue is the observation that, national governance mechanisms, such as legal system, rule of law, or investor protection, may influence the effectiveness of corporate governance strategies (Filatotchev et al., 2013), it also has direct impact on firm financial performance (Nguyen et al., 2015; Ngobo & Fouda, 2012). Implying its importance when examining firm-level governance effect on firm performance (Nguyen et al., 2015).

As noted before, the MENA countries have faced serious challenges and tremendous different form of issues. These issues are perhaps summed up recently by Farazmand, (2015, p. 8) when he state that "Governance in the Middle East today is experiencing a cocktail of authoritarian to marginal democratic systems". The author justified this state by arguing that "Decades of manipulating governmental apparatus in order to siphon public resources for the benefits of the ruling oligarchies and justifying prolonged family and tribal grip on power through various facades of demagogy had created a system of dysfunction that exhibits corruption, infectiveness, nepotism, lack of transparency, lack of accountability, censorship, and oppressive police state". These challenges may deteriorate the development of such legal institutions in the MENA region countries.

Furthermore, recent publications and reports by international organizations, such as World Bank and Transparency International, show that most MENA countries are lagging behind in international rankings that classify countries according to various dimensions of public governance, suggesting a great need for substantial actions to boost public governance in the region (Awartani et al., 2015). Table 3-1 below shows MENA countries worldwide rankings according to Corruption Perception Index for the last three years.

Table 3-1 MENA countries corruption perception index ranking

Country	(2015)Rank	(2014)Rank	(2013)Rank
Qatar	22	26	28
United Arab Emirates	23	25	26
Israel	32	37	36
Jordan	45	55	66
Saudi Arabia	48	55	63
Bahrain	50	55	57
Kuwait	55	67	69
Oman	60	64	61
Tunisia	76	79	77
Algeria	88	100	94
Egypt	88	94	114
Morocco	88	80	91
Djibouti	99	107	94
Mauritania	112	124	119
Lebanon	123	136	127
Yemen	154	161	167
Syria	154	159	168
Iraq	161	170	171
Libya	161	166	172
Sudan	165	173	174

Note: This table has been adopted from several annual reports published by Transparency International Organization (self-compiled).

Despite that, the majority of the MENA countries are appear to be well-positioned with corruption, it is worth noting that some other countries like Qatar, United Arab Emirates UAE, and Jordan are performing better that others in combating corruption. Farazmand, (2015, p. 9) argue that "marginal reforms, either in response to popular demands or uprisings or due to the foresight of some extra-ordinary leaders, are also emerging in various parts of the region. Although the reform remains to be slow, anaemic, and minimal, it is nevertheless a step in the right direction that may contain the pregnanting seeds for larger and more robust reforms that may yield the legal framework for true progress toward sound governance". Starting from the fact that an organization can be affected and affects the institutional environment, institutional theory may sufficiently address the dynamics which links the firm's activities to its identified institutional environment.

In terms of the ease of doing business in the MENA region, the World Bank indicators have showed that MENA countries vary dramatically (presented in Table 3-2). For example, UAE is positioned 26th in the world (out of 190) whereas Libya lags at late position 188. The regional average of doing business in the MENA region is 124, indicating that UAE and Jordan are performing well-under the regional average in total.

Table 3-2 MENA region doing business rankings 2017

Country	Rank
UAE	**26**
Bahrain	63
Oman	66
Morocco	68
Tunisia	77
Qatar	83
Saudi Arabia	94
Kuwait	102
Jordan	**118**
Egypt	122
Lebanon	126
West Bank and Gaza	140
Comoros	153
Algeria	156
Mauritania	160
Iraq	165
Sudan	168
Djibouti	171
Syria	173
Yemen	179
Libya	188
MENA region average	124

Note: This table has been sourced from Doing Business report 2017 issued by the World Bank.

According to Al-Akra et al., (2009), rules and regulations in MENA region are not supported by a code of ethics that would help in instituting moral commitment among business partners. Furthermore, MENA capital markets are characterised with lack of efficiency, insufficient development of the judiciary bodies to support strict enforcement of capital market laws and regulations, and an issuer's culture, as issuers are not yet accustomed to transparency and corporate governance sound principles. This argument implicitly highlights the importance of appreciating that internal corporate governance good practice is not only influenced by formal laws, accounting standards, and regulations, but also by their actual enforcement and most importantly, by societal values. Consequently, national governance quality operates as a significant antecedent that cannot be ignored when evaluating corporate governance practices.

As noted earlier, national governance quality may influence the efficiency of the internal (firm-level) governance system, and its performance (Nguyen et al., 2015). This implies that national governance differences between countries may contribute to the inconsistencies in prior

empirical findings of the relationship between internal (firm-level) governance mechanisms and firm performance. According to Kaufmann, Kraay, and Mastruzzi (2011), a country's national governance quality can be measured by six main indicators; *Voice and Accountability; Political Stability and Absence of Violence; Government Effectiveness; Regulatory Quality; Rule of Law;* and C*ontrol of Corruption*. These indicators used in prior literature individually or as summed index. However, it should be noted that these factors showing high correlations, and thus, having them summed in a one index may be better in terms of econometric efficacy (Schiehll & Martins, 2016). Table 3-3 below shows the national governance indicators for Jordan, UAE, MENA region's average, and OECD country's average in 2015 respectively. It is observed that UAE maintain higher national governance indicators making it comparable to those obtained for higher-income OECD countries. Moreover, Jordan's national governance rankings is lower than UAE, however, still higher than the MENA region's average in general.

Below section provides more details about MENA capital markets characteristics, and then turns to describe Jordan's and UAE's capital markets and corporate governance practices.

Table 3-3 National governance indicators 2015

	Percentile Rank (0-100)			
Governance indicator 2015	**Jordan**	**UAE**	**MENA average**	**OECD average**
voice and accountability	26.6	19.70	25.00	87.00
political stability	26.67	71.43	27.00	74.00
government effectiveness	59.13	91.83	45.00	88.00
regulatory quality	55.29	82.69	44.00	87.00
Rule of law	68.27	75.00	44.00	88.00
control of corruption	64.42	82.69	43.00	85.00

Note: This table has been sourced from: http://info.worldbank.org/governance/wgi/index.aspx#home. The higher the values the higher the national governance indicators.

3.2.2 MENA Region's Capital Markets

Recently, the demand for investment opportunities in the MENA region has been challenged by the lower oil prices. Subsequently, regional exchanges of the trading volumes have declined, and volatility increased. However, there are still some opportunities that may have big impact in shaping regional markets. MENA countries are economically diverse while sharing a common culture, heritage, language, and religion. The region accounts for about 400 (million) total population which represent about 5% of the total world's population. It also had an aggregate GDP

close to $3.1 (trillion), or around 3% of the global total GDP (World Bank 2015). The MENA region has one of the most source of power and economic tool in the world; it's the Oil. On ground of its economic status, MENA countries can be classified into three main categories; the first category to include the six oil-exporting countries which form the Gulf Cooperation Council GCC. These countries are Saudi Arabia, United Arab Emirates UAE, Oman, Kuwait, Bahrain, and Qatar. Massive quantities of crude oil reserves and the continuous rise in oil prices for decades has facilitated macroeconomic stability in these countries as their governments have undergone major development programs to improve infrastructure and other public sectors. International organizations classified these countries in top of the world's highest income levels and as net capital exporters.

The second category includes countries that are oil-importer countries to include Jordan, Egypt, Lebanon, Morocco, Mauritania, Tunisia, Djibouti, and Sudan. These countries are net capital importers that have been engaged in several economic reform projects funded by the IMF and World Bank since decades. The third category consists of eight countries that are either economically vulnerable due to political instability, or in the very early stages of economic development, or both. This includes Iran, Iraq, Lebanon, Syria, Algeria, Sudan, Libya and Yemen, as well as the West Bank and Gaza (Piesse et al., 2012).

In general, The MENA countries have witnessed significant economic and financial development in the last decade. Alkulaib, Najand, & Mashayekh, (2009, p. 43) stated that "The relaxation of security laws and regulations in emerging markets in the Middle East and North Africa (MENA) provides abundant opportunities for foreign investors. These markets exhibit high-expected returns and substantial volatility". However, Despite their praise of efforts made by MENA countries to develop their financial sectors, reports issued by most international organizations – IMF, World Bank, OECD, etc. – tend to agree that, on average, this region's financial systems remain among the least developed in the world (Awartani et al., 2015).

In terms of capital markets, the region comprises some of the ancient stock markets in the world that were active since the 19th century, such as the one of Egypt created in 1890 and Morocco in 1929. Similarly, Amman Stock Exchange market was among the firsts to be established in the region. It was officially launched in 1976, and since that time has seen major developments and reforms. The next section will turn to provide more specific details about the

two MENA countries which have been selected to be the research platform; namely Jordan and UAE.

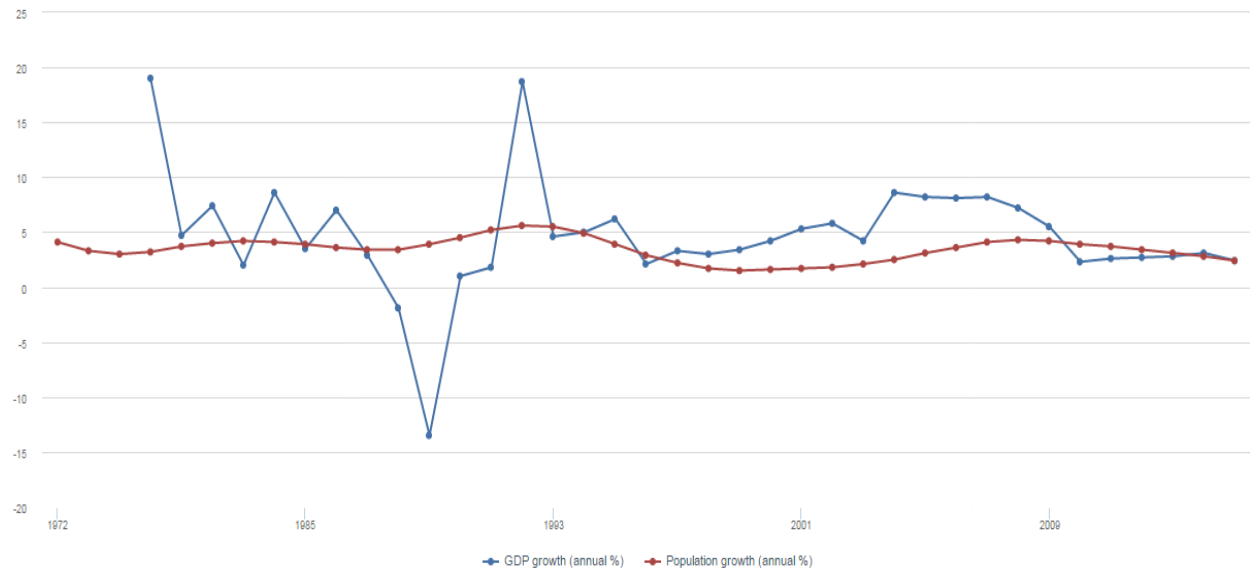
3.3 The Hashemite Kingdom of Jordan Profile

Jordan is a relatively new and small country, with limited resources and majority of desert landscape[17]. After the Arab revolt against Ottoman Empire in 1916, Jordan has been officially emerged under the British mandate as Transjordan in 1921[18]. Jordan's strategic geographical location has gained the country its significance in different disciplines including political and economic patterns. The country is located in the crossroads of what Christians, Jews and Muslims call the Holy Land[19]. Knowles, (2005, p.1) stated that "The Hashemite Kingdom of Jordan (HKJ) has proved to be one of the world's most vulnerable countries to external political, economic and security events". However, the regional longitudinal instability since the occupation of the coastal parts of Palestine in 1940, and the occupation of Iraq in 2003, and even the recent Arab spring in 2011 and what is going now days in Syria, has put the country under huge pressure. Accordingly, the country's population has been subject to political issues and crisis in the region. Jordan's population has been nearly doubled since 2000 to be 9.53m in the year 2015 (World Bank, 2016).

Despite the challenges that emigration and refugees pose to the counters of the country's economy, straining public services and labour market conditions in Jordan, the Jordanian economy has been successfully maintaining steady conditions of economic growth. According to World Bank, (2015) economic monitoring report, the Jordanian real GDP growth rate is 3.5 percent, and it's expected to reach 3.9 percent in the year 2016. Since, the beginning of the Syrian crisis, the Jordanian governance has received more than 707 million of Jordanian dinners from different organizations and countries including United Nations[20], in assistance to refugees and vulnerable community in Jordan. Figure 3-1 below provides details about annual growth rates of GDP alongside population growth rates over the period 1972 to 2015in Jordan.

[17] 89,341 sq. KM
[18] The British mandatory period on Jordan last from 1921 to 1946.
[19] BBC country profile/ Jordan.
[20] Jordanian dinar equals 1.41 of US dollar.

Figure 3-1 GDP and population annual growth rates during the period 1972-2015.



Note: This figure has been adopted from world development indicators provided by the World Bank.

Despite the current events in the neighbouring countries and the fact that Jordan is limited resources country, its services and goods exports records contribute more than 40 percent of the country's GDP in 2014. Additionally, external transfers of the workers' remittances and gulf subsidiaries and development grants reflect 19 percent of the GDP. Making Jordanian economy one of the highest in these ratios around the world[21]. Below figure showing the country's economic activities contribution of the GDP.

As noted in Table 3-2 previously, MENA region doing business ranking varies dramatically. Table 3-4 below show comparative analysis between Jordan and other world's indicators of doing business rankings as provided by the World Bank Doing Business 2016 report.

[21] The Central Bank of Jordan.

Table 3-4 Doing Business Main Indicators international comparative data for Jordan in 2016.

Indicator (rank)	Jordan	MENA lowest	MENA best	Regional average	Global best
Starting a Business	106	173 (Kuwait)	32 (Oman)	119.05	1 (New Zealand)
Dealing with construction permits	109	157 (West Bank and Gaza)	4 (UAE)	91.48	1 (New Zealand)
Getting Electricity	48	172 (Djibouti)	4 (UAE)	97.19	1 (Korea, Rep.)
Registering Property	96	168 (Djibouti)	11(UAE)	91.71	1 (New Zealand)
Getting Credit	185	185 (Jordan)	82 (Saudi Arabia)	138.14	1 (New Zealand)
Protecting Minority investors	165	187 (Sudan)	9 (UAE)	127.62	1 (New Zealand*)
Paying Taxes	79	186 (Mauritania)	1 (UAE)	83.48	1 (UAE)
Trading across borders	50	184 (Sudan)	50 (Jordan)	128.67	1 (10 Economies*)
Enforcing Contracts	124	184 (Djibouti)	25 (UAE)	115.76	1 (Korea, Rep.)
Resolving Insolvency	142	161 (Syria)	58 (Tunisia)	129.43	1 (Finland)

Note: This table has been sourced from Doing Business 2017 report (self-compiled). * Two or more economies share the top ranking on this indicator.

3.3.1 The Jordanian Capital Market

Amman Financial Market AFM was established in 1976 officially[22]. In 1994 the Jordanian government restructure the market in order to increase its size and liquidity and in order to enhance information reliability and disclosers transparency. Accordingly, AFM was replaced by three main entities namely; the Amman stock exchange ASE, the Jordan security commission JSC, and the securities depository centre SDC. For almost a decade, the Amman Stock Exchange market (ASE) was one of the world's examples of a well-developed and credible regulated market. Having a market capitalization close to US$ 5 billion, ASE is one of the largest Arab stock markets in the MENA region that is open to foreign investors[23]. Today ASE, ranks among the leaders of emerging markets of developing countries (CBJ, 2015).

Following these major development, the number of listed companies in ASE market has increased from 152 listed firm in 1999 to 228 in 2015, while there were only 66 companies in 1978. Also, market capitalization experience growth in the same period for example, it has increased from 286 million Jordanian dinars (JOD) to 17.984 billion in 2015, while it accounts for

[22] Amman is the capital city of Jordan, and the ASE is Jordan's only stock market.
[23]For example; Morocco's stock market has a market capitalization of US$ 4.5 billion, Tunisia US$ 1.5 billion and Oman US$ 1.5 billion.

4.1 billion in 1999. Similarly, the ratio of market capitalization to GDP has grown from 37 percent in 1978 to 326.6 in 2005, however, it has been dramatically decreased to 70.7 in 2015.

Nevertheless, the 70.7% ratio of market capitalization to GDP is considered one of the higher ratios among other emerging markets, indicating both a well-established stock market and a relatively high level of securities trading[24]. On average basis during the period of 1990-2012, Jordan's market capitalization percentage of the GDP showing higher level among Middle-East & North-Africa (MENA) countries. For example; the average market capitalization of listed companies as a percentage of GDP during 1990-2012 for similar regional countries was as follow; in Egypt was 34.34, Israel was 60.85, morocco was 38.82, Oman was 26.87, and United Arab Emeritus UAE was 25.64, while in Jordan the percentage was to 109 (Bayraktar, 2014).

One of the most important factors for economic growth and developments both in developed and emerging markets are the existence of effective financial markets (Bayraktar, 2014). The Jordanian capital market has contributed positively to the national economy. The banking and finance sector leads the market with a capitalization of 50% of total market capitalization. The industrial sector ranks second with a 41% capitalization. The service and insurance sectors represent 8% and 2% respectively. By end of 1995, the average price/earnings ratio of all 97 listed companies reached 21.3, high enough to convince potential investors that large capital gains are available in Jordan. ASE's trading system is based on open-outcry on the trading floor.

The visibility of the ASE market is superior to many other markets in the MENA region. In Jordan, the market capitalization has undergone accelerated growth, increasing by 158% over the last five years. Jordan is the only Middle Eastern market to be represented on the board of International Accounting Standards (IASC). ASE statistics indicate that about 30% of the market value is owned by non-Jordanians. In addition, the government of Jordan through the Jordan Investment Corporation (JIC), owns approximately 18% of the total market capitalization.

Foreign investors can own up to 50% of any listed public shareholding company, with a minimum investment capital of US$ 1,428. Annual dividends and capital gains are tax-exempt for both Jordanians and foreigners investing in Jordan. This has contributed significantly to ASE's competitive edge at an international level. Table 3-5 below showing historical financial data about ASE market.

[24] Various annual reports/ the central bank of Jordan.

Table 3-5 ASE market performance from 2005-2015

Year	No. of listed Co.	Market Cap. (JD Million)	Market Cap. as a% of the GDP	General Weighted Price Index (point)	Value Traded (JD million)
2005	201	26,667.10	326.6	8191.5	16,871.00
2006	227	21,078.20	233.9	5518.1	14,209.90
2007	245	29,214.20	289	7519.3	12,348.10
2008	262	25,406.30	216.7	6243.1	20,318.00
2009	272	22,526.90	149.6	5520.1	9,665.30
2010	277	21,858.20	122.7	5318	6,690.00
2011	247	19,272.70	102.7	4648.4	2,850.20
2012	243	19,141.50	93.5	4593.6	1,978.80
2013	240	18,233.49	83	4336.7	3,027.30
2014	236	18,082.62	75.8	4237.6	2,263.40
2015	228	17,984.67	70.7	4229.9	3,417.10

Note: This table has been adopted from Amman Stock Exchange ASE market several annual reports (self-compiled). 1 JD = 1.41 USD.

3.3.2 Overview of the Jordanian Corporate Governance

Jordan is representative of the mixed system developed from codes instituted by the Ottoman Empire (based on French law), British common law, and Islamic law[25]. With respect to corporate governance, Jordan corporate governance experience is developed based on 'insider-oriented' corporate governance system. With the absence of market for corporate control, the Jordanian government keep revising and developing the country's legal and organizational structures. Among the key economic legislations that the Jordanian government has introduced was the issuance of The Company Law, (1997) and The New Securities Law, (2002)[26]. Accordingly, corporate governance roles and concepts are embedded in these laws and legislations to improve the country's investment climate.

Within the last decade, tremendous changes took place around the world to increase liberalization and globalization. Consequently, Jordan as a form of emerging markets was one of the few countries that realize the importance of coping up with the new trends of changes in the MENA region[27]. According to the Heritage Foundation report of Economic Freedom, Jordan has

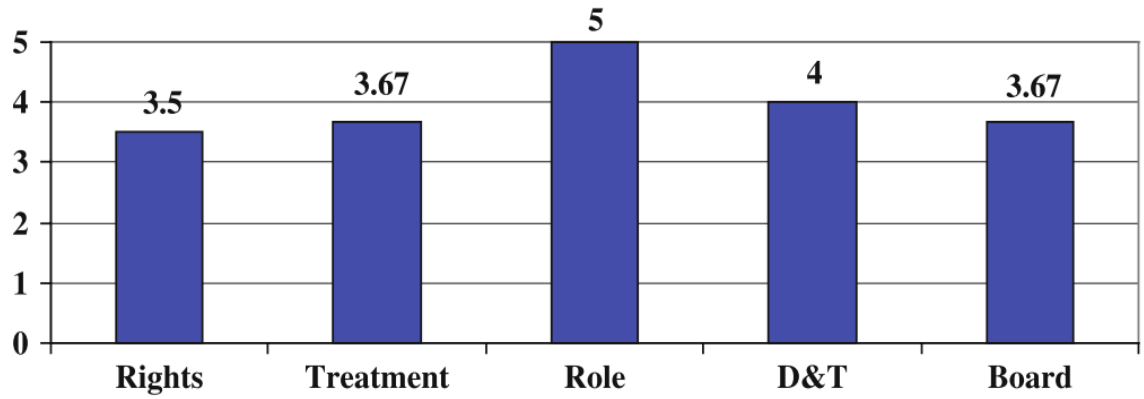
[25] The world factbook, https://www.cia.gov/library/publications/the-world-factbook/fields/2100.html.
[26] The New Securities Law 2002 is superseding the initial Securities Law no. 23 issued in 1993.
[27] The MENA region covers Afghanistan, Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, the Syria, Tunisia, the United Arab Emirates, West Bank and Gaza, and Yemen.

a steady state of improvements and it its economic freedom index was 69.3 percent. Interestingly, this is considered above the world's average making the country's economy 38thamong the freest around the world. Additionally, Jordan's economy has been ranked the 5th in the Middle East region in 2015 by Heritage Foundation recent report.

There are many entities in the Jordanian business community that contribute to these economic reforms and developments. For example; Corporate Compliance Authority plays an important role by enforcing many basic corporate governance provisions of the Company Law. Another key player is the Central Bank of Jordan. Further to issuing the bank Director's Handbook of Corporate Governance in 2004, the Central Bank of Jordan is continuing its efforts to enhance corporate governance in the Jordanian banking system by preparing the Corporate Governance Code, which is intended to promote international best practice in the corporate governance of Jordanian banks (Al-Amarneh, 2014).

The important aspects of these reforms of corporate governance are directly related to shareholders' rights. In Jordan, shareholders enjoy a considerable right in terms of access to secure methods of registering a property, the strength of legal rights and legislation enforcement, getting credit from local banks and financial institutions, sell or transfer shares, obtaining relevant information or actions on a timely basis, and other firm activities like voting and board elections (World Bank, 2014). McGee, (2009) provide assessment of the Jordanian corporate governance experience based on the World Bank's ROSC Report measuring the extent of compliance with the OECD's Principles of Corporate Governance (OECD, 2004). Accordingly, the weighted average score of compliance in Jordan was 3.91. This score is a composition of different subcategories relevant scores, for example; Jordan highest score was in the role category, while its lowest score was in the rights category (3.5). Table 3-6 below showing scores of each subcategory including; rights of shareholders, equitable treatment of shareholders, role of stakeholders in corporate governance, disclosure and transparency, and the board responsibility.

Table 3-6 Jordan's corporate governance compliance with OECD's governance principals



Note: This figure has been sourced from (McGee 2009, P. 276-277). Rights is composed based on different categories that measure the shareholders' rights in the Jordanian corporate sector. Treatment refer to various indicators that measure the level of equitable treatment among shareholders in Jordan. Role is a composite score that combine different factors that measure the stakeholders' role and intervention in a firm corporate governance system. D&T refer to different factors that measure the level of disclosure and transparency. And finally, Board in this figure refer to various factors that capture the responsibilities of the board of directors.

Similarly, Shanikat & Abbadi, (2011) assessed Jordanian corporate governance based on compliance with OECD principles, and comes to an overall conclusion that can be summarized to the following points:

- Shareholder have active rights in decision-making, except in major cases including major asset sales.
- In practice, shareholders were not treated equitably, though controllers sometimes took action and prohibited insider trading.
- Stakeholders have active roles and rights in corporate governance, they are practically protected by the Jordan's company laws and regulations.
- Disclosure and transparency were observed to a large extent, although limited to quantity rather than quality, because Jordan has fully adopted IFRS and ISA, and.
- Boards largely fulfilled their responsibilities, as these are extensively defined by law and regulation.

In general, Jordan has high level of financial development compared to other countries in MENA region, see below table. Creane et al., (2007, p.505) stated that Jordan has very low government restrictiveness on property rights, and well-developed, profitable, and efficient banking sector compared to majority of other countries in the region. Jordanian government has strengthened the banking sector regulations and supervisions during the past years. Additionally,

the first corporate governance code was initially issued for banking sector in Jordan in 2007. As a part of the continuous efforts to enhance transparency and efficiency, the Central Bank of Jordan (CBJ) has supersede the old banks governance code recently to the new corporate governance code for banks in Jordan in 2014.[28]

Despite these financial development, however, corporate governance code or best practices has been implemented recently in the Jordanian market. Corporate governance code of shareholding companies listed on the Amman Stock Exchange ASE was issued in 2008. The main objectives of this code were to help increase Jordan's economic attraction and to ensure the rights and benefits of the business sector. The code provides recommendations for listed shareholding companies with regards to board size and composition and leadership structure to ensure the effectiveness of the Jordanian listed firm's board of directors. In a step to cover most of the market participants, the Jordanian government represented by the ministry of industry and trade through the department of companies control issue new code nominated as the Jordanian Corporate Governance Code in 2012[29]. It specifies the distributions of rights and responsibilities among the different parties in companies including stakeholders, shareholders, board of directors, and firm's management, and lays down rules and procedures of decision-making process in organizations. Table 3-7 below describes the ownership and board of director's structure and framework of the nonfinancial listed firms in Jordan during the research sampling time 2008-2014.

[28] Deloitte & Touché/Jordan/MENA region head quarter various annual reports.
[29] B. Tricker, 2015. Corporate governance; Principles, Policies, and Practices. Third edition, Oxford University press, UK.

Table 3-7 Ownership and board of directors' structures alongside the sampling period (2008-2014) in Jordanian listed nonfinancial firms

	Obs	Mean	Median	SD	Min	Max
Government ownership	790	0.01	0.00	0.07	0.00	0.60
Family ownership	790	0.24	0.13	0.27	0.00	0.99
Foreign ownership	790	0.03	0.00	0.13	0.00	0.99
Institutional ownership	790	0.36	0.33	0.27	0.00	0.99
Concentration (Total)	790	0.61	0.64	0.23	0.06	0.99
Board size	790	8.22	8.00	2.38	3.00	14.00
Board independence	790	0.56	0.57	0.16	0.14	0.91
CEO-duality	790	0.20	0.00	0.40	0.00	1.00

Note: This table reports the identity of the largest shareholders (who own at least 5% of the firm's shares), and board characteristics of the nonfinancial listed firm in Jordan during the sampling period (2008-2014). Institutional ownership in this context includes banks, Insurance, Pension fund, Financial and Brokerage Firms. For more details about the measurement of governance variables see

3.3.3 Overview of the Ownership Transitions in Jordan

It would be useful to examine in details ownership characteristics for listed Jordanian firms. Especially, after the Jordanian privatization experience 1998-2008, when the government of Jordan privatize fourteen large state-owned companies in electricity, telecommunications, hotels & tourism, transportations, mining, tobacco & cigarettes, and other sectors. Consequently, direct state ownership is relatively small in the public firms in Jordan except in the mining sector (phosphates and potash) and other few companies in other sectors[30]. It could be arguable that privatization is a key factor of structural reforms in both developing and developed countries to achieve market efficiency and to enhance the general economy (Estrin et al., 2009).

For Jordanian economy, privatization has strengthened the Jordan's fiscal position. According to Mako, (2012, p.1) the Jordanian privatization experience has helped the country's economy in different aspects; for example it helped Jordan to reduce its public debt from 100 percent of the GDP in 2000 to 60 percent of GDP in 2008 by generating $2.3 billion in sales proceeds. Additionally, it also enhances the productivity of these firms which can be reflected by the large amount of sales that these firms generate. Accordingly, privatization contributes to macroeconomic stability in Jordan by providing the treasury of annual cash inflows i.e. taxes from these privatized firms. Interestingly, Jordan's privatization experience can be shown as an excellent model for other MENA countries in terms of efficiencies and commitment in completing

[30] Amman stock exchange various annual reports.

privatization program (Mako, 2012). However, OECD, (2013) report stated that "The government of Jordan also retains minority stakes in strategic assets like Arab Potash, Jordan Phosphate Mines, Jordan Cement Factories and Jordan Petroleum Refinery". Table 3-8 below provide information about state ownership status in the Jordanian market during period of study 2008-2014.

Table 3-8 Average percentage of ordinary shares held by state in Jordan.

	2008	2009	2010	2011	2012	2013	2014	Total	Max	Min
State ownership	0.012	0.012	0.012	0.011	0.010	0.010	0.010	0.0115	0.24	0
No. of Obs	791	791	791	791	791	791	791	791	791	791

Note: This table has been adopted from several annual reports of firms listed in Amman Stock exchange ASE market (self-compiled).

According to Table 3-8 above, the Jordanian government has transformed the ownership structure of the market by minimizing its holdings and keep it in decreasing patters. Accordingly, other forms of ownership evolved in the Jordanian market. For example; one of the important features of the Jordanian listed firms is that considerable share of the market is held by families, and showing increasing patters from 21.1 percent in 2008 to 25.1 percent in 2014. Another key player in the Jordanian market is the institutional investors. Institutional investors including pension funds, banks and other financial firms, and large holding companies. Table 3-9 below showing average percentage of ordinary shares held by different investors in listed firm in Jordan.

Table 3-9 Average ownership structure alongside the sampling period of Jordan

	2008	2009	2010	2011	2012	2013	2014	Min	Max
Family ownership	0.21	0.22	0.23	0.24	0.25	0.26	0.25	0.00	0.99
Institutional ownership	0.14	0.15	0.15	0.15	0.16	0.15	0.16	0.00	0.99
Insider ownership	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.00	0.71
Foreign ownership	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.98
No. of observations	791	791	791	791	791	791	791	791	791

Note: This table has been adopted from several annual reports of firms listed in Amman Stock exchange ASE market (self-compiled). Insider ownership refer to the sum of all shares held by board of directors including executive and non-executive except those classified as large owners with at least 5% shareholdings.

3.4 The United Arab Emirates (UAE) Profile

The United Arab Emirates (UAE) is a new country, it has been formally formed as a confederation of seven independent emirates in December 1971. It occupies a strategic geographical location long boarders of the Arabian Gulf, with huge natural resources of crude Oil,

Gas, and Cement. However, Grant et al., (2007, p.507) argue that "The United Arab Emirates is quickly making its presence known on the world stage; the country is shifting away from its dependence on oil and diversifying into new business sectors such as real estate, tourism, world-class sporting events, finance, and construction". Since formulation, the UAE has lead other countries in the same MENA region in terms of maintaining legal environment, developed infrastructure, regulate and improve investor and consumers protection, provide the society with the best service, and develop the country's economy and business environment to emerge as a part of the developed international community (Zoubir, 1999).

Consequently, the UAE has emerged as a leader in global business and financial trade across the MENA region. These developments have created large opportunities for the expansion of work and the trade environment which is something incomparable with other countries in the same region. Beside economic contributions, these rapid developments have contributed to the country's demographical distribution. Large job opportunities have been created for migrant workers to settle and work in the UAE. According to recent publications, the country has a total population of (5,927,482), with majority percentage of migrants account for nearly 85% of the UAE's population[31]. It is a worthy of note that most of these migrants are from South East Asian countries i.e. India, Pakistan, Bangladesh, and Siri Lankan[32].

The official language of the country is Arabic and the predominant religious belief is Islam. Nearly (96%) of the UAE's population are Muslims with a Sunni majority. The UAE is governed basically through a federation of hereditary absolute monarchies, which is a federal council made up of the seven Emirs of the united emirates (Abu Dhabi, Dubai, Ajman, Sharjah, Fujairah, Ras Al-Khaimah, and Umm al-Qaiwain)[33]. With respect to the legal system, the UAE constitution has been basically developed based on the French, Roman and Egyptian law. It should be noted also, that the laws in the UAE has been naturally influenced by the Shariah law jurisdiction[34].

Table 3-10 below show comparative analysis of doing business main indicators between UAE and the rest of the world rankings. It is worth noting that UAE economy is ranked in the 26th position out of 190 countries around the world.

[31]According to UN data (2016).
[32]https://en.wikipedia.org/wiki/United_Arab_Emirates. Accessed on 03/03/2017.
[33] See Rabi, U. (2006), *Oil Politics and Tribal Rulers in Eastern Arabia: The Reign of Shakhbut (1928-1966)*, British Journal of Middle Eastern Studies, Vol. 33, No. 1, pp 37-50.
[34] See Tarbuck, A. and Lester, C. (2009), Dubai Legal System 'creating a legal and regulatory framework for a modern society', Motivate Publishing, pp 7-8.

Table 3-10 Doing Business Main Indicators international comparative data for UAE in 2016.

Indicator (rank)	UAE	MENA lowest	MENA best	Regional average	Global best
Starting a Business	53	173 (Kuwait)	32 (Oman)	119.05	1 (New Zealand)
Dealing with construction permits	4	157 (West Bank and Gaza)	4 (UAE)	91.48	1 (New Zealand)
Getting Electricity	4	172 (Djibouti)	4 (UAE)	97.19	1 (Korea, Rep.)
Registering Property	11	168 (Djibouti)	11(UAE)	91.71	1 (New Zealand)
Getting Credit	101	185 (Jordan)	82 (Saudi Arabia)	138.14	1 (New Zealand)
Protecting Minority investors	9	187 (Sudan)	9 (UAE)	127.62	1 (New Zealand*)
Paying Taxes	1	186 (Mauritania)	1 (UAE)	83.48	1 (UAE)
Trading across borders	85	184 (Sudan)	50 (Jordan)	128.67	1 (10 Economies*)
Enforcing Contracts	25	184 (Djibouti)	25 (UAE)	115.76	1 (Korea, Rep.)
Resolving Insolvency	104	161 (Syria)	58 (Tunisia)	129.43	1 (Finland)

Note: This table has been sourced from Doing Business 2017 report (self-compiled). * Two or more economies share the top ranking on this indicator.

3.4.1 The UAE Capital Markets

Following the approval of the stock exchange law in 1999, two financial markets were created in the UAE: Abu Dhabi Securities Exchange (ADX) and Dubai Financial Market (DFM). Both markets were established in the year 2000. The ADX market is the larger of the two in the UAE, which begins its operations in November 2000. As of 2005, there were 50 companies listed in the ADX, the number of firms has been increased to 66 in 2015. Concurrently, the DFM has begun its operations in March 2000 with the intention of becoming a world-class regional market place. Furthermore, it tended to operate as a secondary market for trading securities issued by the public joint-stock companies, bonds issued by local and federal governments and other local or foreign financial instruments (Squalli, 2005). As of 2005, there were only 28 firms listed in the DFM, where the number of listed companies increased to 66 by the end of 2015.

Both the ADX and the DFM have been electronically linked by The Emirates Securities Market ESM which was established by the Securities and Commodities Authority. It has its own index which covers the trading on stocks for all listed companies in both markets. The index is called The Emirates Securities Market Index. The number of listed companies in the ESM has grown steadily over the past ten years, going from 89 in 2005 to 125 in 2014. This substantial increase in market listings has resulted in a significant increase in market capitalization, it should be noted that, these trends had been affected and limited by the 2007 financial crisis (see Table 3-11 below).

Table 3-11 ESM performance from 2005-2014

Year	No. of listed Co.	ESM Index	Market Cap. (AED Million)	Traded volume (shares millions)	Traded value (AED millions)	No. of trades
2005	89	6,839.97	839,683.1	33,811.9	509,868.0	2,300,452
2006	106	4,031.01	514,697.5	50,939.9	418,149.3	3,138,749
2007	120	6,016.21	824,629.2	157,318.1	554,333.6	3,354,617
2008	130	2,552.23	363,872.0	126,439.3	537,134.4	3,257,450
2009	133	2,771.56	404,702.5	148,297.4	243,489.9	2,728,964
2010	129	2,655.32	385,429.9	56,003.4	103,804.9	1,158,505
2011	128	2,341.42	346,135.8	40,995.9	56,819.2	728,097
2012	123	2,561.21	379,062.0	56,858.4	70,705.5	880,087
2013	120	4,313.56	646,270.8	178,682.4	244,504.7	1,894,030
2014	125	4,580.13	728,367.0	217,895.2	525,955.3	3,272,329

Note: This table has been adopted from the UAE Securities and Commodities Authority ESCA. 1 AED = 0.227 USD.

3.4.2 Corporate Governance and Ownership Trends in the UAE

As noted before, recent high-profile corporate failures in the US market and in other countries has highlighted the importance of corporate governance for business survival. Indeed, investors have become more convinced about how to impose efficient controlling mechanisms on their business entities. Also, enhancing firm corporate governance and compliance levels may have important potentials to attract investors, which in turn provide access to equity capital. Accordingly, corporate governance has received substantial support from the UAE government since the recent financial crisis (2007/08). In the year 2007, the Securities and Commodities Authority (SCA) introduced the UAE Code of Corporate Governance for the first time[35]. The published corporate governance code aims to enhance corporate governance rules and discipline standards for UAE's listed companies on Abu Dhabi Security Exchange (ADX), and Dubai Financial Market (DFM).

In fact, this corporate governance code has been established based on common international norms and practices, mainly; the OECD Principles of Corporate Governance. It is a stringent code and listed companies have been given a three-year period to comply with this rule (Pierce, 2008). The consequential effect of implementing corporate governance code is driven by particular emphasize on main areas of governance, to include board of directors' major characteristics and

[35] The Securities and Commodities Authority (SCA) is a market regulatory entity that regulate both Abu Dhabi Security exchange (ADX) and Dubai Financial market (DFM).

composition such as; size, duality, independence; committees; remuneration; internal control; audit committee; external auditor; management authorization; shareholder right; professional conduct rules; governance report; penalties; and implementation (SCA, 2009). The elements of the corporate governance code should be comprehensively consistent with the UAE Corporation Act of Transparency and Disclosure. These governance points should be reflected as an integral part of the companies' annual reports (Hussainey & Aljifri, 2012).

In a further step of the development of corporate governance in the country, the UAE's government has issued a new corporate governance code in 2009. Shehata , (2015, p. 320) stated that "The new code, entitled "Governance Rules and Corporate Discipline Standards", covers new issues of board structure and directors' duties and responsibilities, and it stipulates that the chairman and CEO role must be separated; board committees must appoint nomination and remuneration committees; internal controls must be implemented; external auditors must follow restrictions; and companies must provide governance reporting to shareholders and to the Emirates SCA".

According to the 2009 UAE corporate governance code, "a corporate governance report must be disclosed by companies, and cover all information and details in the code, in particular: (i) the requirements and principles of completion of the corporate governance system; (ii) violations committed during the financial year, including their causes and the methods of remedy and avoidance of future occurrences; and (iii) method of formation of the board of directors in terms of member classes, terms of membership, means of remuneration fixation and remuneration of the general manager, executive director or chief executive" (Shehata , 2015, p. 320).

The UAE's institutional setting is relatively strong, which increases the need for companies there to improve corporate governance and compliance levels. As noted earlier, the UAE's corporate governance code covers many aspects of the compliance. However, it has been observed recently that companies listed on Emirates Security Market ESM fails to show enough stringent compliance to the standards of corporate governance recommendations. According to a survey conducted by The Red Flag group in 2013[36] "UAE companies have adopted compliance to some degree, appointing compliance officers, but there is a lack of clarity on their roles, and they are not

[36] The Red Flag Group is an international compliance consultancy interested in international business and economic development (https://www.redflaggroup.com/).

very senior," says Scott Lane, chief executive of Red Flag Group. "Compliance is still about ticking the boxes." Quoted in an article published by the Financial Times.[37]

In fact, compliance can be seen as a competitive advantage for corporations seeking reputation and global capital access. Also, corporate governance comply and compliance has been seen as an important determinant of firm valuation and performance (Rose, 2016). Thus, this study illustrates that compliance in the form of "best practice" character of the corporate governance recommendations among listed firms in the UAE, by examining the relationship between a set of the internal (firm-level) corporate governance mechanisms and firm performance.

As noted earlier, corporate governance in the MENA region in general has received support from international organisations such as Hawkamah, The Institute for Corporate Governance, which was established in 2005 to help the MENA region overcome the corporate governance issues, by developing and implementing well-integrated corporate governance frameworks in MENA's countries. The main objective of Hawkamah is to "shape corporate governance practices and framework throughout the region by promoting the core values of transparency, accountability, fairness, disclosure and responsibility".[38]

Table 3-12 below shows ownership and board of director's structures of the UAE's nonfinancial listed firms during the research sampling timeframe 2008-2014.

Table 3-12 Ownership and board of directors' structures alongside the sampling period (2008-2014) in UAE nonfinancial listed firms

	Obs	Mean	Median	SD	Min	Max
Government ownership	279	0.09	0.00	0.17	0.00	0.55
Family ownership	279	0.14	0.08	0.18	0.00	0.70
Foreign ownership	279	0.10	0.06	0.13	0.00	0.50
Institutional ownership	279	0.30	0.25	0.21	0.00	0.85
Concentration (Total)	279	0.53	0.58	0.20	0.06	0.88
Board size	279	8.12	8.00	2.06	5.00	16.00
Board independence	279	0.70	0.73	0.19	0.22	100.00
CEO-duality	279	0.00	0.00	0.00	0.00	0.00

Note: This table reports the identity of the largest shareholders (who own at least 5% of the firm's shares), and board characteristics of the nonfinancial listed firm in UAE during the sampling period (2008-2014). Institutional ownership in this context includes banks, Insurance, Pension fund, Financial and Brokerage Firms. Board (CEO) duality does not exist in the UAE's capital market. For more details about the measurement of governance variables see

[37] https://www.ft.com/content/53b79214-a5ab-11e2-9b77-00144feabdc0 accessed on 03/3/2017.

[38] Hawkamah (2011), "Hawkamah vision, mission and objectives", available at: www.hawkamah.org/about_hawkamah/vision_mission_values/index.html (accessed 24 July 2017).

3.5 Chapter Summary

This chapter provides institutional background on corporate governance characteristics in MENA region in general and in the selected countries of analysis –Jordan and UAE. Specifically, it shows corporate governance practices at the firm level, and regulatory (country-level) framework of each capital market. After reviewing this chapter, the following main points can be concluded:

First, in terms of country-level variation in governance, it is observed that while Jordan is characterised by a less-developed national governance system, UAE has a well-developed governance system and shows better enforcement of the rule of law, and higher national governance scores, see Table 3-3. Both Jordan and the UAE are a part of the MENA region, which is one of the most growing regions around the world. The pervasiveness of corporate governance best practices in capital markets and its impact on economic growth and firm's outcomes has received a great deal of attention in recent years in MENA region in general and in Jordan and UAE in particular. Thus, investigating the issue of corporate governance and firm performance in this specific region would make several contributions to country-level and firm-level policy-makers.

Second, there are many codes or doctrines that formulate the best practices of corporate governance around the world, but the content of these codes is in general quite similar across countries, holding in mind the common characteristics of countries and markets related to the same region or culture. For example; USA and UK have common market characteristics that made the best practices of corporate governance nearly the same or quite similar, while continental Europe and Japan have shared similar corporate governance codes. Similarly, emerging countries of the MENA region, where financial markets are highly concentrated, they tend to have similar best practices of corporate governance in general. For example, board of directors mainly share the common characteristics regarding, size, independence, duality and committees in both corporate governance codes issued in these two countries. However, it should be noted that the only apparent difference is in term of the enforcement of such governance practices. It is observed that while in Jordan the compliance with the stated recommendations of the corporate governance code is voluntary to the choice of the firm, in the UAE's capital market firms must comply with the recommendations of the best practises of governance mechanisms.

Given the differences in national (country-level) governance and the similarities in internal (firm-level) governance in Jordan and in the UAE, it would be interesting to test that impact of such corporate governance (internal and external) mechanisms on firm performance. This may imply potentials to offer insights and to advance empirical literature associated with corporate governance and firm performance relationship within the context of small emerging markets of the MENA region.

The next chapter of this thesis is the research design and methodology. It first describes the research philosophical stands, then it moves to the research sampling process. The chapter then proceeds to variables construction, measurement. Also, it explains the research methods of analysis, issues and treatments of panel data analysis, model specification, and estimation techniques, ended by chapter summary.

CHAPTER 4: GOVERNANCE VARIABLES AND FIRM PERFORMANCE - METHODOLOGICAL ISSUES

4.1 Introduction

In chapter three, it presented the review of the literature which was associated with investigating the relationship between corporate governance mechanisms (internal and external) and firm performance. The results showed that despite these tremendous years of study, there is a clear gap in the literature in studying the effect of corporate governance on firm's financial performance, especially in the non-US markets like MENA region capital markets that has newer experience with implementing corporate governance codes. How does the quality of the different governance mechanisms –which is applied in these small emerging capital markets– control, reduce, or mitigate agency problems? Wither internal corporate governance (i.e., ownership structure and board of directors) align interests and, hence increase firm performance is an important question in finance literature. According to the literature review presented in the previous chapter, these questions must be addressed within framework that best controls for endogeneity sources in such field of research.

Thus, the main purpose of this chapter is to build a methodological foundation to derive and test the governance-performance empirical model. The basics of the methodological foundations will be inspired from readings of different research methodological publications, and mainly from Rayan et al, (2002) and Saunders et al., (2009). These publications have been very helpful in providing useful analysis of the methods and methodologies for business and finance studies. Thus, they had been very helpful in shaping and constructing the empirical model used in this research to test the research hypotheses and examine the effects of the different governance monitoring mechanisms on corporate financial performance in the framework of analysis– the selected two capital markets of Jordan and the UAE.

This chapter started with a brief discussion about the ethical approval issues (if any) involved in this research followed by explanations on its philosophical stance. The process of sampling and data collection methods and brief discussion about the panel data advantages and disadvantages and why it has been chosen as a data analysis method in this research. In the next section, construction explanation of the variables of interests in this thesis including; dependent variables

i.e., corporate performance measures, independent variables i.e., corporate governance variables and other country-level governance mechanisms (World Bank), followed by control variables provided. This is followed by research methods of analysis and discussion of the model specification.

4.2 Research Philosophy

Consistent with prior literature, in terms of philosophical stand, this research adopts the "positivist approach" to examine the relationship between governance and performance. Certainly, the research hypotheses are developed and built based on the notion that the relationship between corporate governance and firm performance exist, and can be justified theoretically and examined empirically. According to Burrell & Morgan, (1979, p. 5) positivists "seek to explain and predict what happens in the social world by searching for regularities and causal relationships between its constituent elements". Thus, we apply the deductive approach where the pre-existing theoretical basis is identified and relied upon in developing the research hypotheses.

In consequence, the empirical findings will then confirm whether the hypotheses developed based on the theoretical and extant empirical arguments are supported or not. To achieve this objective, we run a set of regressions as the main tools of analysis in this research in which the researcher pursues the positivists' understanding of the conduct of methodological process which is "unaffected by individual perceptual differences" (Bettner et al., 1994, p. 3).

4.3 Sample Selection and Data Collection

In any empirical research work, sample selection and data collection are a vital process to reflect the research reliability and validity. According to Ryan et al, (2002) it is very essential to clearly define the research population, and to ensure that the selected sample is really represent that population. In these perspectives, the target population in this research is defined as the non-financial firms listed in Jordan and UAE. We relied on a non-probability sampling technique to build the research sample. Consequently, we choose only firms with the required information of our interests.

More specifically, we choose nonfinancial firms that are locally incorporated and listed on Amman Stock exchange market *ASE Mainboard* (for Jordan), and the Abu Dhabi Securities

Exchange market *ADX* and Dubai Financial Market *DFM* (both for UAE) for the period from 2008 to 2014.In line with previous studies, we exclude financial companies and banks from the sample[39]. The year 2008 is selected because it is one year after the new corporate governance guidelines and regulations which have been promulgated in 2007/08 in both countries. Indeed, 2008 is an appropriate point of time to examine corporate governance impact on firm's financial performance as the new guidelines of governance proposed on 2007 would have their effects on company's annual report in the next financial year. The sample ends in 2014 since it is the most recent year for which data was available at the time this study was conducted.

In November 2015, Jordanian capital market had (228) listed firms in Amman Stock Exchange, and there were (133) listed firms in Emirates Security Market, making a total of (361) listed firms in both capital markets. According to their main business activities, the selected capital markets classify all listed companies under specific 'sectors'. These sector classifications allow us to consider the effect of the industry on the regression analysis later. Table 4-1 below describes the firms' classification details under each sector in Amman Stock Exchange and in Emirates Securities markets in Jordan as showed in Nov, 2015.

Table 4-1 Firms classifications as in ASE & ESM capital markets of Jordan and UAE respectively.

Sector	Number of listed firms	
	Jordan	UAE
	Financial	
Banks	15	25
Insurance	24	30
Diversified financial services	36	12
Real estates	34	12
	Services	
Health care services	4	1
Educational services	6	0
Hotels and tourism	11	2
Transportations	12	5
Technology and communication	2	3
Media	2	0
Utilities and energy	4	2
Commercial services	13	9
	Industrial	
Pharmaceutical and medical industries	6	2
Chemical industries	9	3
Paper and cardboard industries	3	0

[39] Excluding financial firms from the sample selection in this research is consistent with the extant related literature, see for example; (Anderson & Reeb, 2003; Maury, 2006; Perrini et al., 2008; Pergola & Joseph, 2011; Nguyen et al., 2015; Black et al., 2014) among others. Moreover, the governments and the regulatory bodies usually issue a separate form of governance code to regulate the financial sector differently.

Printing and packaging	1	0
Food and beverages	11	4
Tobacco and cigarettes	2	0
Mining and extraction industries	16	4
Engineering and construction	6	6
Electrical industries	4	2
Textiles, leathers and clothing	6	0
Glass and ceramic industries	1	1
Total	228	133

Note:Data in this table are extracted from the selected capital markets annual reports.

As shown in Table 4-1 above, financial firms listed in these two capital markets are classified under four main sectors, namely; banks, insurance, diversified financial services, and real estates. The total number of these firms is (109) in ASE and (79) in ESM. By extracting these firms from the main sample on board, the remaining (173) firms were from two main sectors namely industry and services in both markets. Additionally, there were (20) firms excluded from the sample due to missing data and/or their shares not been traded actively in ASE& ESM markets during the study period which is 2008-2014. Thus, this determines the sample final number as a total of (153) non-financial listed firms in the both markets of Amman Stock Exchange & Emirates Security Market. Table 4-2 below summarises the research sample selection process:

Table 4-2 Sampling process

	ASE	ADX	DFM
Total number of listed firms in capital market as in November 2015	228	66	67
Less financial firms	109	39	40
Remaining firms in the sample	119	27	27
Less firms with missing data to cover the study period 2008-2014	6	8	6
Final sample	113	19	21

Note: Amman Stock Exchange (ASE) market located in Jordan, while both Abu Dhabi Security exchange (ADX) market and Dubai Financial Market (DFM) are located in United Arab Emirates and the jointly comprise the Emirates Securities Market (ESM).

It should be noted that such type of data analysis is common in prior international and local governance literature. For example, Al-Shiab & Abu-tapanjeh, (2005) employ data from 1996-2002 for (46) industrial firms out of (180) firms listed in ASE at 2002 to examine the effect of ownership structure on corporate performance. Zeitun & Tian, (2007) use data for 59 firms out of (180) listed in ASE from 1989-2002 to investigate the effect of ownership structure on corporate

performance and default risk. Similarly, Al-Khouri, (2005) utilizes data from 1998-2001 for (89) industrial firms out of (185) listed in ASE market to examine the relationship between ownership identity and concentration on firm's value.

There are three main sources for the data used in this research. First of all, national governance quality data such as (government effectiveness, regulatory quality, the rule of law), and (Investor Protection Index) are sourced from the World Governance Indicators WGIs (Kaufmann et al., 2011), and Doing Business reports (the World Bank) consecutively. Secondly, we use DataStream and Osiris database to extract firm-level financial information such as (market capitalization, book value of firm's ordinary shares, total sales, total assets, total shareholders' equity, total liabilities, net income, earnings before interests and taxes (EBIT), current liabilities, current assets, cash dividends, and firm age). Finally, Internal (firm-level) governance data was extracted manually from firm's annual reports, where they report ownership and board of directors' detailed information. It is worth noting that, a cross-checking to ensure the accuracy of the data provided by the electronic data base sources performed randomly with company annual reports to ensure the data accuracy and reliability.

Firm's annual reports must disclose ownership structure and board of directors' composition. Since the data of this study was collected during the period (Nov, 2015 – Feb, 2016) the company annual reports for the year (2015) were unavailable at that time, as annual reports disclosed by the end of first quarter of the fiscal year. Thus, using data from annual reports of 2008 till 2014 reflect the latest data available at the data collection time. Table 4-3 below shows the statistical breakdown of the selected listed-firms in each sector and their weights from the overall population.

Table 4-3 Comparisons based on each sector of the aggregate sample of Jordan and UAE

Sector	Number of firms in each sector		Share of population		Number of firms in sample	
	Jordan	UAE	Jordan	UAE	Jordan	UAE
Financial						
Banks	15	25	0.066	0.187	0	0
Insurance	24	30	0.105	0.225	0	0
Diversified financial services	36	12	0.158	0.090	0	0
Real estates	34	12	0.149	0.090	0	0
Services						

Health care services	4	1	0.018	0.007	4	1
Educational services	6	0	0.026	0.000	6	0
Hotels and tourism	11	2	0.048	0.015	9	2
Transportations	12	5	0.053	0.037	10	4
Technology and communication	2	3	0.009	0.022	2	2
Media	2	0	0.009	0.000	1	0
Utilities and energy	4	2	0.018	0.015	3	2
Commercial services	13	9	0.057	0.067	13	9
Industrial						
Pharmaceutical and medical industries	6	2	0.026	0.015	6	2
Chemical industries	9	3	0.039	0.022	9	2
Paper and cardboard industries	3	0	0.013	0.000	3	0
Printing and packaging	1	0	0.004	0.000	1	0
Food and beverages	11	4	0.048	0.030	11	3
Tobacco and cigarettes	2	0	0.009	0.000	2	0
Mining and extraction industries	16	4	0.07	0.030	16	4
Engineering and construction	6	6	0.026	0.045	6	6
Electrical industries	4	2	0.018	0.015	4	2
Textiles, leathers and clothing	6	0	0.026	0.000	6	0
Glass and ceramic industries	1	1	0.004	0.007	1	1
Total	228	133	100 %	100%	113	40

Note: Data in this table is self-compiled from ASE and ESM web-portals.

Table 4-3 above shows that the final sample 153 listed companies in both capital markets. Most of this sample is concentrated in industrial sectors (55.6%), while service providers' firms are jointly representing (44.4%) of our sample. We will account for all of the industrial and service sub-classifications in the regression analysis to examine the effect of each industry on firm performance. Next section proceeds to provide brief discussion about the panel data analysis as a methodology choice to execute this research.

4.3.1 Introduction to Panel Data Analysis

As stated above, panel data is frequently used in prior corporate finance literature. In fact, panel data estimation is often considered to be an efficient analytical method in handling econometric data (Asteriou & Hall, 2011). In consequence, the advantages of panel data analytical methods have made the use of panel data analysis to become popular in social sciences researches, and particularly in corporate finance researches. According to Asteriou & Hall, (2011) the main advantage of the panel data is that it allows the researcher to include data for *N* cross-sections (i.e., individuals, households, firms, countries, and so on) and *T* time periods (i.e., yearly, quarterly, monthly, and so on). The combined matrix of the time series for each cross-sectional member in the data set, including the development over time will increase the number of observations and offer a wide variety of estimation methods.

Another important reason for the increasing interests in panel data is that, the potential use of panel data can radically reduce the underlying serious impact of omitted variables on the statistical inference by allowing the researcher to control over any omitted variable, unobservable, and/or hard to measure firm-specific effects that may have direct or indirect effects on the selected variables in a research (Dougherty, 2011). For example, O'Connell, (2007: P: 372) stated that "In a study of the determinants of corporate failure, appropriate panel data modelling and estimation permits the researcher to control for unobservable firm-specific effects which can have a major impact on the probability that an individual firm will fail but are nevertheless difficult to measure". This implies that utilizing panel data will allow to control for any unobservable individual specific effects, which in turns enhance the reliability of the estimator and increase the robustness and validity of the findings.

Another attraction of panel data sets is that it gives more informative data, more variability, less collinearity among the selected variables, more degrees of freedom and more efficiency (Baltagi & Chang, 1994). Contrary to time series analysis that are usually plugged with multicollinearity, a panel data estimation that will allow researchers to test hypotheses using a large number of observations on a range of cross-sections i.e., firms, individuals, or countries giving more informative data that can produce more reliable parameters estimates (O'Connell, 2007). It's worth noting that, analysing small sample of observation through time-series analysis would be confounded with multiple issues like difficulties in obtaining *t*-ratios or *f*-statistics from regressions. Panel data sets can solve this problem by pooling the data into a 'panel' of time-series

from different cross-sectional units that will allow to include dummy variables to capture the systematic differences among panel observations which is known as fixed-effect model (Asteriou & Hall, 2011).

In terms of classifications, a panel can be described as a 'balanced panel' if the panel has the same number of time observations for each unit of variable and every individual. On the other hand, if some observations are missing or there are different numbers of time observations for some of the variables or individuals, this can be described as an 'unbalanced panel' (Dougherty, 2011; Asteriou & Hall, 2011). On the other hand, despite all of the mentioned advantages in the above analysis, panel data models may have confounded with different issues. One of the serious issues may face panel data analysis as determined in prior empirical investigations is called multicollinearity.

In practice, multicollinearity refers to the high degree of correlation between the model's explanatory variables. According to Wooldridge, (2010) there are two main types of multicollinearity; perfect and near multicollinearity. While perfect-multicollinearity occurs when there is a certain correlation between explanatory variables, near-multicollinearity happens when there is a small statistical, albeit economically significant correlation between exploratory variables. In fact, the latent type of multicollinearity is likely to occur in real life practice. Multicollinearity issue can be serious sometimes and may reduce the research's results validity and reliability (Hsiao, 2007). High degree of multicollinearity can lead to large standard error and thus imprecise estimates of coefficients.

In consequence, prior empirical literature suggests few methods to assess the degree of multicollinearity among the model's exploratory variables. One of the most widely-used techniques is called Variance Inflation Factor (VIF). VIF illustrates the degree for every independent variable that has been explained by other independent variable to eliminate collinear variables. In other word, the change in one variable will change the coefficient. According to Hair et al., (2010)if VIF is more than 10 this indicates that the model is confounded with serious multicollinearity issue. Others were very simple in determining multicollinearity in empirical work. For example; Gujarati and Porter, (2009) suggest that if the correlation between the independent variables is less than 0.80, then there is no need to consider any serious multicollinearity issue. The variance inflation factor (VIF) is defined as:

$$VIF\ (\beta_j)\ =\ 1/\ (1 - R^2{}_j) \qquad \text{Eq. (1)}$$

Where,R^2_j is the coefficient of determination from a regression of the explanatory variable, X_j, on a constant and the rest of the explanatory variables. The VIF represents the ratio of the actual variance of the estimated coefficient, $\beta_{j,}$ to what it would have been in the absence of multicollinearity, where R^2_j is equal to zero. Hence the higher is the VIF value, the higher the degree of multicollinearity.

Despite the fact that multicollinearity can lead to unreliable and unstable estimates of regression coefficients, there are several situations in which multicollinearity issue can be safely ignored (Allison, 2012). Further, Brooks, (2014) stated that multicollinearity can be ignored if the model is otherwise adequate and robust, whereas the presence of multicollinearity does not affect the best linear unbiased estimator properties of the utilized regression. Additionally, Brooks, (2014) argue that in order to control multicollinearity issue in research, a one can simply remove highly correlated variables from the model.

4.4 Research Framework

As noted earlier, this research aims to investigate the relationship between country- and firm-level governance variables and firm performance in Jordan and UAE. Accordingly, the type of investigation that will adopted must be able to determine the ways in which the constructs of governance (the independent variables) related to firm performance (the dependent variable). Thus, the investigation must reflect the theoretical assumptions that determine the ways of any potential correlations between the variables of interests.

The extensive literature review in this thesis (Chapter 2) has identified that extant corporate governance research has mainly developed and grounded based on one theoretical assumptions; the Agency Theory. Although there are other important theories e.g., stewardship and resource dependency theories, they have been considered and applied in isolation rather than complements to the agency theoretical assumptions in governance research. Secondly, prior corporate governance research was found to have neglected to consider the effect of firm's hosting country's national governance system on the relationship between the internal firm-level governance mechanisms and firm's financial performance, which implies to consider the institutional theoretical standpoints in understanding corporate governance research.

Thus, in order to overcome these research shortcomings, the author proposes the conceptual framework that encompasses and allows the simultaneous considerations of the four main theoretical assumptions employed in this thesis; Agency, Stewardship, Resource dependency, and Institutional Theory, whilst defining and providing the national governance system as a potential influential indicator to firm performance.

Exploring extant corporate governance research allowed to identifying five main constructs of internal firm-level governance system that represents the three governance traditional theories (agency, stewardship, and resource dependency). The five main constructs are described as: share ownership concentration (relating to agency theory), share ownership identity i.e., family and institutional share-ownership (also relating to agency theory), board of directors' independence (relating to agency theory and resource dependence theory), board of directors' size (relating to agency, stewardship theory, and resource dependence theory), and finally board of directors' duality (relating to agency and stewardship theory). The prior related literature has also discussed the extent to which the institutional theory represents a relevant and justifiable lens through which to observe a firm's hosting country's governance system impact on firm performance.

4.5 Constructing Research Variables

As discussed previously, this research is aiming at investigating the relationship between corporate governance variables (internal and external) and firm performance in Jordan and the UAE as form of the MENA small emerging markets context. Accordingly, there are four types of measures that have been identified as relevant to prior governance research, and have been included in the research hypotheses and the empirical model. First of all, the measures refer to those constructions of firm performance. Second, individual indicators of corporate governance (firm-level) based on the relevant extant corporate governance literature. Third, a set of national (country-level) governance indicators. Finally, a bundle of control variables to capture any unobservable individual effects on the model. Hence, this section describes and justifies an appropriate measurement for each element (dependent and independent/ explanatory) variables used in this research, and develop a set of hypotheses about the effect of these governance variables on firm performance. Next section describes measurements of the main dependent variable (firm performance) i.e., Tobin's Q, and other alternative performance indicators that will be used for robustness and sensitivity checks later on.

4.5.1 Firm Performance

Corporate financial performance can be measured by different methods. However, prior corporate finance literature has not provided a consensus way with regard to the choice of corporate financial performance measure. For example, prior empirical literature can be classified for three main streams. First, there are empirical studies that based only on accounting profitability measures, see for example; (Morck et al., 1988; Cao, Pan, & Tian, 2011; Hu & Zhou, 2008). Another strand of literature uses both accounting profitability and market based performance measures including (Anderson & Reeb, 2003; Guest, 2009; Li et al., 2015; Wahba, 2015; García-Meca et al., 2015; Carter et al., 2010; King & Santor, 2008;Jalbert, Rao, & Jalbert, 2011; Maury, 2006). Other studies have relied only on market based performance measures including (Himmelberg et al., 1999; Berthelot et al., 2010;Nguyen et al., 2015;Jermias & Gani, 2014; Shan & McIver, 2011; Yang & Zhao, 2014).

It is a worthy noting that prior literature has demonstrated advantages and disadvantages for all performance metrics. For example, accounting profitability measures i.e., *ROA* and *ROE* are backward-looking measures, and can be easily affected by accountability and managerial transparency (Demsetz & Villalonga, 2001). However, *Return on Assets (ROA)* can provide business owners and top-level management with effective tool to measure the effectiveness of their predetermined goals. Additionally, accounting profitability measures can provide banker, investors, and financial analysts with an overall picture about a firm's financial resources utilization and financial strength (Corinna et al., 2013).

On the other hand, market-based performance measures i.e., *Tobin's Q* is one of the most frequent measure that prior empirical literature has relied on to assess a company performance. According to Demsetz & Villalonga, (2001) *Tobin's Q* is a forward-looking performance measure, and it reflects the market growth and expectations, which in terms has been the most favoured methods for economists, who have better understanding of the market rather than accounting constraints to assess a firm's financial performance. However, *Tobin's Q* has been criticized recently by scholars arguing that it can be confounded by certain practices that may lower the *Average Q*, these practices are directly to the managerial behaviour of underinvestment.[40]

[40] For example Dybvig & Warachka,(2012) claim that Tobin's Q doesn't measure corporate financial performance, and they proposed a new approach to evaluate managerial efficiency based on revenue and cost analysis.

Nonetheless, this research will mainly depend on *Tobin's Q ratio* to capture a firm performance in this analysis. However, it should be noted that for robustness checks and sensitivity analysis of the main findings, an alternative performance (*ROA & ROE)* indicators will be employed as dependent variables instead of the main indicator (*Tobin's Q*). As stated above, these measures are the most frequent used performance metrics in prior related empirical literature. According to Haniffa & Hudaib, (2006) the use of alternative performance measures can enhance the research results robustness. Below discussion is more analysis about the performance indicators used in this research and methods applied to calculate each one of them.

4.5.1.1 Tobin's Q Ratio

As stated above, *Tobin's Q* is one of the dominant form of evaluation methods that has been widely used in corporate governance literature. According to Abraham, (2013) the use of *Tobin's Q* in literature which is motivated by the insights that firms generated rate of return greater than the required rate of return and will usually command market valuation premium relative to its book value or replacement cost. *Tobin's Q* usually defined as the market value of equity divided by replacement cost. Contemporaneously, firms with higher *Tobin's Q* can be considered to be more favourably viewed by the market. In some cases, market replacement costs are not provided and are very difficult to obtain. To overcome this problem (Chung & Pruitt, 1994) proposed a simple estimator that requires a basic accounting ratios to estimate *Tobin's Q* for a performance measurement.

Thus, due to the difficulties and lack of required information to calculate replacement costs in the Jordanian context, following Nguyen et al., (2015), Doidge et al., (2001) among others, this study will adopt the below formula to execute *Tobin's Q* calculations:

$$Q_{it} = \frac{MVEit + (TAit - TEit)}{TAit} \qquad \text{Eq. (2)}$$

Where Q_{it} = Tobin's q for the *i*th firm at *t* period of time. $MVE\ it$ = the market value of equity of the *i*th firm at *t* period of time, calculated as the firm's year-end closing stock price times the firm's number of common stock outstanding. $TE\ it$ = total shareholders' equity for the *i*th firm at *t* point of time. And finally, $TA\ it$ = is the book value of total assets for the *i*th firm at *t* point of time.

This performance indicator (i.e., Tobin's Q) is employed in this research to better explain the diverse country- and firm-level corporate governance mechanisms impact on market value of the firms listed in small emerging markets such as Jordan and the UAE, which may gain comparative insights on the effectiveness of variant corporate governance mechanisms adopted by nonfinancial firms listed in these two different emerging markets.

4.5.1.2 ROA and ROE

It's indeed that, the researcher is fully aware of corporate financial performance that can be measured from different perspectives. The above method provides market expectations perspectives, whereas, the accounting profitability ratios provide historical perspectives. The *Return on Assets (ROA)* and the *Return on Equity (ROE)* are the methods that will be used in this research to capture the historical perspectives of the non-financial firms' performance in Jordan. While the *ROA* shows how efficient a firm's management is to generate earnings from its assets, the *ROE* illustrates how much profit a firm can be generated from the shareholder's equity that has been invested in the firm.

The *ROA* can be simply calculated by dividing a firm's net income by the book value of its total assets. On the other hand, *Return on Equity (ROE)* is another popular way to measure corporate financial performance. It can be calculated by dividing a firm's net income by its shareholders' equity. Corporate finance literature has highlighted *ROE* as one of the best methods to test financial performance as long as debt levels which are rational. Accordingly, the *ROE* can be inflated by increasing the leverage level in a firm as *ROE* can be an output of the *(ROA * leverage multiplier)* (Corinna et al., 2013).

It is worth noting that, each study examines financial performance that may suffers from issues. One common issue that is identified in prior corporate finance literature is the presence of outliers. Outliers can be described as an extreme values (abnormal observations) that might be positive or negative which may affect results robustness and may distort the research analysis (Black et al., 2012; Gupta et al., 2013). Prior academic literature has suggested two main methods to deal with this issue. One way is to exclude these extreme values from the analysis[41].

[41] In statistics, this method is known as data trimming or truncating.

Nonetheless, removing these extreme figures may reduce the total number of the observations which in terms affect the research sample and hence, loss of information (Liu et al., 2012).

Another way to eliminate the potential effect of the outliers is called winsorizing. This is an alternative method that would be applied in this research instead of excluding abnormal observations in the corporate performance data. Data winsorization means replacing the abnormal observations in a data set with a certain percentile value from each end. In this research, corporate financial performance variables *(Tobin's Q, ROA and ROE)* will be censored at the 1st and the 99th percentiles.[42] Next section, sets the corporate governance and firm performance variables measurements.

4.5.2 Corporate Governance Variables

Since this research has investigated the impact of corporate governance practices on corporate financial performance using a sample of publicly-listed nonfinancial firms in Jordan and UAE, further clarification of research variables is essential. Unlike the independent (performance) variables used in this research, data related to corporate governance variables are hand-collected data from 2008 annual reports. As per the substantial shareholder disclosure requirements of companies Act 2004 and Act 2002, Jordanian and UAE's public companies must comply with this Act and provide major shareholders ownership data available throughout annual reports respectively. These Acts stipulate the mandatory disclosure of substantial shareholders who own at least 5% of the listed firm's common stocks.

In addition to substantial ownership information, annual reports provide data related to the firm's board of directors' composition and leadership structure. Names of the directors and their direct and indirect shareholdings should be reported annually. Thus, board of directors' size, independence, managerial shareholdings, and insider (non-substantial shareholder board member) ownership must be disclosed in annual reports. As a part of the Amman Stock Exchange (ASE) and Emirates Security Market (ESM) listing requirements family relationships and family member's shareholdings should be disclosed clearly under the board of directors' shareholding section.

[42] The most frequently used level of winsorization in prior corporate finance literature is seems to be at the 1st and the 99th percentiles, see for example; Liu, N.Y., Bredin, D., Wang, L.M., Yi, Z.H., 2012. Domestic and foreign institutional investor behaviour in China. European Journal of Finance, 1–24, among others.

In consequence, all of the corporate governance required data will be extracted from listed firms' annual reports published by both capital markets[43]. This web-sources provide the annual reports of the publicly listed firms in the Jordanian market and UAE's capital markets exclusively. Hence, the below sections provide measurement methods and definitions of the independent variables, and other control variables used in this research, and draw hypotheses based on empirical and theoretical extant work.

4.5.2.1 Family Ownership

As discussed in subsection 2.5.1.1.1 of chapter 2, family control in business is a prevailing form of ownership around the world (La Porta et al., 1999; Anderson et al., 2001; Miller et al., 2014). This form of business has been largely seen as a superior business model to other counterparts in any market. Especially, when families are active rather than passive in controlling public firms (Maury, 2006). In the Jordanian market, most of the publicly-listed firms are owned by families[44]. However, the Jordanian corporate sector knows little about how family ownership may affect corporate financial performance. Despite that family ownership is a prevailing form of ownership around the world, prior related literature is still not clear about whether family ownership or ownership concentration is the key determinant of corporate financial performance (Singal & Singal, 2011).

In addition, there is some empirical evidence that supports the notion that family ownership may exacerbate agency problem and harm firm's financial performance. For example; Erbetta et al., (2013) argue that family firms have systematic lower efficiency and higher tendency to overuse capital and labour. This evidence supports the idea that family firms may expropriate other minor shareholders' wealth which in terms may reduce corporate financial performance. Moreover, this

[43] Companies' annual reports in Jordan and the UAE can be accessed and downloaded by visiting the below web-portals:
http://www.exchange.jo/en/disclosures

https://www.adx.ae/English/Pages/default.aspx

http://www.dfm.ae/market-data/market-data-overview

http://www.sca.gov.ae/english/Pages/Home.aspx

[44] For example; Zara investment Holding is owned and controlled by Almasri family, Arab International Hotels PLC dominated by Alm'sher family, Arab International Co for Education & Investment is dominated by Abu-Khadejeh family, Jordan Hotels and Tourism Co is dominated by Al-Salfeti family, Arab Chemical Industries is dominated by Al-Taher family, and etc.

case may get worse in emerging markets of the developing countries where the market for corporate control is inactive, and other external governance mechanisms are weak or absent (La Porta et al., 2000).

Family business literature has grown rapidly in recent times (Zahra, 2016). Prior international literature on family business governance shows the advantages of such type of dominant shareholders in capital markets. For example; Pindado & Requejo, (2014) highlight the importance of family ownership and control in corporate sector, by suggesting that family ownership affect corporate financial performance through three main business dimensions; (i) ownership structure choice, (ii) corporate strategic decisions, and (iii) succession process. Moreover, empirical evidence over the last years shows that family business is enjoying higher performance on most cases around the world (Brenes, Madrigal & Requena, 2011). However, as noted earlier in the empirical literature review section (2.5) of chapter 2, the empirical evidence on the relationship between family ownership and firm performance has yielded mixed results, and family business research has reached adolescence status (Van Essen et al., 2014). Prior literature suggests explanations for this inconclusive results, which is that prior literature has used different family business "definitions" to examine the relationship of family ownership and firm performance.

According to recent review of prior literature , associated with family ownership, governance and firm performance conducted by Pindado & Requejo, (2014), (57.3%) of the prior literature relied on having a family in the largest shareholders as a most common feature to define family business. The second common definition of family business was the involvement of several family members in the business, and takes (22.0%) from the related literature in total. In the same vein, other scholars use cut-off point to define family business. For example; La Porta et al., (1999) and Claessens et al., (2000) use a (10%) cut-off level to define family ownership and to discriminate family control on business from other form of investors. La Porta et al., (1999) justify this cut-off point as it is provide a significant threshold of the votes, and most of firms around the world are mandated to disclose the investors who own at least 10% of the firm's common stocks by law. However, there is another strand of literature that did not set any specific cut-off points. For example, Anderson & Reeb, (2003) and Villalonga & Amit, (2006) define family ownership as being one of the largest shareholders who own at least (5%) of a firm's common stocks.

These varieties in defining a family business or family ownership was key reason adding to the mixed results obtained in prior literature. Other scholars i.e., Zahra, (2016) argue corporate governance literature associated with family business tended to use different theoretical assumptions from different backgrounds i.e. anthropology, economics, sociology, psychology, organizational theory, organization behaviour, entrepreneurship, and strategic management, which in terms allow to have different perspectives of such implications of family ownership and governance on firm performance.

As stated earlier, Jordanian and UAE's corporate sector is mandated by law to disclose the names of the largest shareholders who own at least (5%) of a firm's common stocks. Additionally, firms should disclose the percentage of shares held by any of the owners' relatives. In terms of "definition" and measurements, this research will follow Anderson & Reeb, (2003) and Villalonga & Amit, (2006) among others and define family ownership as the sum of all percentage of shares held by founding family and their relatives who own at least (5%).

4.5.2.2 Institutional Ownership

Subsection **Error! Reference source not found.** of the literature review in chapter 2 explores how institutional investor's ownership may affect firm performance. In short, agency theory states that dominant shareholders may have better incentives to increase firm performance by imposing vigilant monitoring activities. However, finance theory did not distinguish between the types of the dominant shareholders, but empirical literature suggests that corporate value is a function of the equity ownership structure and shareholders' identity. Thus, a related set of empirical literature has focused on the potential effect and role that large institutional investors can play to push the firms toward the value maximization target (McConnell & Servaes, 1990). The key point here is that, institutional investors as dominant shareholders have greater incentives and can perform the costly-monitoring activities on firm's managerial behaviour efficiently, which in terms may eventually increase firm performance (Shleifer & Vishny, 1986).

There is a large theoretical literature on dominant shareholder implications on publicly-listed firm in general. Pound, (1988) develops a theoretical framework to analyse the potential effect of the institutional investors as a form of concentrated ownership on corporate financial performance. According to Pound's theoretical framework, the role of institutional investors can be under three main hypothetical arguments. The first argument is *the efficient monitoring hypothesis*, which

indicates that institutional investors have the right credentials, capabilities, and expertise to monitor managerial behaviour efficiently at lower cost. This in terms may apply positive effect on firm's value. The second argument is *the conflict of interests' hypothesis*. This hypothesis is based on the traditional agency conflict between investors and management as institutional investors are only investors and will be reluctant to voice with managerial decisions. Therefore, negative impact is expected on firm's value. On the same hand, institutional investors and management may have specific mutual advantage, which require the cooperation between institutional investors and firm's management. This type of cooperation will eventually deprive any monitoring activities that may enhance corporate financial performance, thus a negative effect also is expected here. This proposition is *the strategic alignment hypothesis*.

In terms of measurements, this research applies the 5% role of ownership measurement, by taking the percentage shares owned by institutional investors –including mutual funds, pension funds, insurance companies, banks and other large financial institutions– who own at least 5 % to the total number of common shares. These investors are the key institutional investors in the selected two capital markets of this analysis –Jordan and the UAE.

4.5.2.3 Ownership Concentration

Given that prior literature divided the impact of ownership concentration as a key internal governance instrument into; the type of the dominant shareholders, and the concentrated ownership, this research will examine the impact of the aggregate ownership concentration on firm performance. As noted in section **Error! Reference source not found.** of Chapter 2, ownership concentration (structure) is one of the most influential corporate governance practices in business life that attracted much of the debate among the different academic disciplines. In general, a firm ownership structure determines whether firms are closely or widely held (OECD, 2004). Thus, unlike traditional Principal-Agent conflict that stems in developed countries, Principal-Principal conflict seems to be a major corporate governance issue in emerging markets (Young et al., 2008).

In terms of measurements, prior corporate governance literature provides empirical scales for these elements of ownership structure dynamics. Following Munisi, Hermes, & Randøy, (2014); Ameer, (2012); Rubin, (2007); Nguyen et al., (2015, 2014) among others, ownership concentration is defined as the percentage of firm's common stock held by shareholders who own at least 5% of the total firm's common shares in this research. The (5%) rule has been dominant

in prior related literature. According to their recent meta-analysis Wang & Shailer, (2015) emphasize that 77% of the studies included in their analysis use ownership concentration ratio (5%) as a main measurement method. In addition to the ownership structure variables, this research employs other important governance instruments i.e., board of director's variables –size, duality and independence– suggested by prior theoretical and empirical evidence as determinant of corporate financial performance.

4.5.2.4 Board Size

The optimal number of directors is an important question in corporate governance literature. Resource dependence theory (Pfeffer and Salancik, 1978) suggests that larger boards are more favourable when there is wider reliance on external source. However, agency theory argues that, the smaller is the board of the effective productivity of its function (Jensen, 1983). Subsection 2.5.2.1 of **Error! Reference source not found.** reviews prior empirical evidence associated with the effect of board size on firm performance. Moreover, it shows implications of board of director's size in terms of monitoring managerial behaviour effectively. For example; Lipton & Lorsch, (1992) stated that, due to the coordination difficulties and free-riding problem, larger boards could be less effective than smaller in supervising a firm's management. This gives rise to hypothesis concerning the effect of board size on firm performance. Cheng, (2008) provide evidence that larger boards are negatively related to corporate performance measured by Tobin's q and accounting profitability ratios. Other scholars argue that board size-performance relationship is a component of the firm's complexity degree. Coles et al., (2008) stated that either small or large boards are optimal, providing U-shape evidence between board size and corporate financial performance.

In terms of measurements, following prior literature, board of directors' size is measured simply by taking the absolute total number of board member for each publicly listed-firm in both capital markets of Jordan and the UAE.

4.5.2.5 CEO-Duality

Subsection 2.5.2.2 of the literature review in Chapter 2 explores the potential effects of CEO-duality on firm performance in general. Moreover, it shows that, the term *CEO-duality* has been

less common recently in the business life of the developed countries[45]. However, the critical analysis and the synthetic review of the data in this research, suggest that board-duality is frequently existing in the Jordanian capital market. This gives a rise to the hypothesis related to CEO-duality and firm performance.

Agency theory assumes that board-duality may destroy firm value and defoliate its performance by promoting entrenchment (Fama & Jensen, 1983). Duru et al., (2016) provides evidence that board duality has significant a negative impact on firm performance. Baliga et al., (1996) stated that board duality has been blamed, in many cases, for the poor performance, and failure of firms to adapt to a changing environment. However, there has been differences in findings regarding board duality and firm performance in prior literature. For example, Yang & Zhao, (2014) highlight the benefits of board duality in reducing information costs and making decisions more faster , hence, they conclude that firms with board duality outperform other non-duality firms. Accordingly, Krause et al., (2014) conclude that corporate governance literature lacks evidence of a substantive relation between the board leadership structure and firm performance.

Following prior literature, in order to examine the impact of CEO-duality on firm performance in this context, we construct a dummy variable that takes the value of 1 if the board chairman is holding the CEO position at the same time, and otherwise zero.

4.5.2.6 Board Independence

As discussed in subsection **Error! Reference source not found.** of Chapter 2, agency theory supports the idea of outside directors, to increase independencies between board and management. Moreover, international corporate governance codes i.e., Cadbury, recommends and highlights the need to have independent directors. Moreover, resource dependence theory predicts that independent directors may have strong links with external environment resources, and hence, they may have positive implications on firm performance. Prior empirical studies of publicly-listed firms have shown a significant positive relationship between boards' independence and corporate financial performance in general. Liu et al., (2015) provide significant evidence that board member independence is positively related to corporate financial performance. However, it should be noted

[45]For more analysis about CEO-duality trends and statistics, please refer to Byrd, J. et al., 2012. Are two heads better than one? Evidence from the thrift crisis. Journal of Banking and Finance, 36(4), pp.957–967.

that stewardship theory suggest that independent board members can add value to a firm only when they are minority (Donaldson & Davis, 1991).

In terms of variable measurements, following prior governance literature, board independence is measured by taking the relative percentage of non-executive directors scaled by the total number of board members.

4.5.3 Control Variables

As stated before, the main purpose of this research is to investigate the impact of governance mechanisms on corporate financial performance. While corporate governance mechanisms refer here to ownership structure (concentration and identity), corporate financial performance is measured by market valuation (*Tobin's Q*) and firm profitability (*ROA and ROE*). It's worth noting that, ownership structure and board of directors' variables are extremely treated as endogenous variables in this research (Wintoki et al., 2012; Nguyen et al., 2015; Wang & Shailer, 2015). Thus, it's important to alleviate any potential bias caused by other firm-level specific omitted variables.

Consequently, it is necessary to account for any unobservable factors that by using other observables or empirical measure indicators. With these variables in mind, Bennedsen et al., (2008, p. 1099) stated that "Board size, in particular, is known to be correlated with observable firm characteristics (e.g. firm size, firm age, industry affiliation) as well as unobserved factors that are potentially correlated with firm performance. This makes a causal interpretation of any observed correlation between board size and performance highly contestable even when it is possible to control for observable determinants of board size". In these perspectives, prior corporate finance literature has identified empirical constructs and variables that may potentially effect corporate governance and its financial performance. The most important and frequently used variables are as follows: *firm size, firm age, financial leverage, and year and industry dummies*. With respect to *firm size* its documented that larger firms would have better capabilities and more diversification opportunities thus, it's expected to have better financial position than smaller firms (Black et al., 2014; Al-Najjar, 2015). In this research, *Firm size* is measured by the natural logarithm transformation of the absolute book value of firm market capitalization (Caprio et al., 2011).[46]

[46]Log transformation was applied in this context in order to correct any potential skewness in the data distributions and to enhance the normality of the variables of interests.

Furthermore, and in order to control for market value differences among firms in the sample, we consider *Firm age* as the natural logarithm of the total number of incorporation for each firm since listed in the capital market. Prior literature shows that *Firm age* is associated with 'life-cycle effect'. Black et al., (2014, p.235) assert that age could impair firm's financial performance, because older firms are more likely to be slower-growing and less likely to be intangible assets-intensive compared to younger firms. Additionally, Hansen, (1992) argues that *firm size* and *firm age* are both inversely related to firm's innovative outputs. Thus, firm age is a potential determinant of corporate financial performance, and its governance structure (Mishra et al., 2001).

Financial leverage usually assess the potential control that creditors may impose to reduce agency cost (King & Santor, 2008). It is also documented in corporate finance literature that debt helps firms increasing their financial performance (Morck et al., 1988). However, according to the peaking order theory, high level of leverage might be a bad sign, and it could indicate default or even bankruptcy signals. Therefore, it is also excepted that leverage may inversely impact corporate financial performance (Myers, 1983). In consequence, prior academic literature documents this relationship. For example; Grove et al., (2011) report significant negative relationship between financial leverage and corporate financial performance. *Financial leverage* in this research is measured by total debt scaled by total assets (Nguyen et al., 2014, 2015).

Consistent with prior corporate finance literature, this research includes also *industry dummies and year dummies* to hold for any other potential effect on the research variables. Terjesen, Sealy, & Singh, (2009) argue that corporate governance practices depend on different environmental factors including industry type. Additionally, Millar, (2014, p.195) stated that the design of the efficient corporate governance mechanisms for individual enterprises may systematically vary by industry or firm's size. On the other hand, corporate financial performance may vary by time. For example; it's documented that boom and recession times may affect corporate financial performance systematically (Liu et al., 2012). Accordingly, Mitton, (2002, p.239) argue that, during financial crisis, we may not expect relative poor financial performance for enterprises, this is because investors at recession times may pay high attention to any wealth expropriation problem and behave more consciously. Thus, industry and time dummies will be added to the empirical model.

In addition to the above-mentioned control variables, we use one-year lagged dependent variable (firm performance indicator i.e., Tobin's Q) as another explanatory variable in the

empirical model to control for the dynamic nature of the relationship between corporate governance and firm performance, and dynamic panel bias as suggested by recent advances in prior literature (i.e., Wintoki et al., 2012). Furthermore, including the lagged dependent variable in the empirical model would allow for better specifications and accounts of effect of the omitted and /or unobservable factors on other parameters (Wooldridge, 2010).

4.5.4 National (Country-Level) Governance Variables

This research mainly depends on three indicators to capture the national governance quality effect in this research. First, we use the World Governance Indicators WGIs (Kaufmann et al., 2011). These macro-level indicators assess the national governance quality using a composite score computed by six dimensions. These dimensions include; *Voice and Accountability (VA), Political Stability and Absence of Violence (PV), Government Effectiveness (GE), Regulatory Quality (RQ), Rule of Law (RL), and Control of Corruption (CC).* This indicator has been frequently used in recent successions of the literature.

It should be noted that, WGIs has been used in a narrowed-format by different researchers recently. For example; (Nguyen et al., 2015; Knudsen, 2011; Van Essen et al., 2013, among others) extracted only country-level governance variables that are directly related to business life and firm's operations, to limit the choice to include only *Government Effectiveness (GE), Regulatory Quality (RQ), Rule of Law (RL)* as proxies of national governance quality. However, other scholars use the full version of this indicators, such as Seifert & Gonenc, (2016) who use the average of these six dimensions to define the country-level governance quality in their analysis.

In order to capture the constitutional context of the Jordanian and UAE markets, we make use of three categories out of the six indicators in this research. However, due to expected high correlation between these three variables, using them all in a single regression would be problematic in terms of empirical estimation (Nguyen et al., 2015; Knudsen, 2011). Thus, these three individual indices are combined to form an aggregate National Governance Index (denoted as *NGI*), i.e., *NGI = Rule of law + limited Government + Regulatory Efficiency + Open Markets*. Furthermore, we follow Nguyen et al., (2015) and applied factor analysis technique to construct alternative national governance indicator by extracting the first principal component of the analysis.

Prior literature has also demonstrated the use of other indicators when examining the national governance effect. One of the most frequent indicators that has been utilized in prior literature is the Investor Protection Index (Schiehll & Martins, 2016). La Porta et al., (1997) and Djankov et al., (2008) develop a shareholder protection variable that measure legal protection afforded to minority shareholders against wealth expropriation. This index has been used in different empirical previous studies[47]. Other scholars have utilize another proxies for investors protection levels by adopting the work developed by doing business surveys (World Bank), this including (Nguyen et al., 2015) and (Van Essen et al., 2013). Accordingly, the Investors Protection Index provided by the World banks for the sampling period of this research (i.e. 2008-2014) will be used. Employing these three indicators in the empirical analysis will enhance the research findings robustness and increase the general results reliability.

Table 4-4 below provide detailed summary about the dependent and independent variables definitions and acronyms used in this research.

Table 4-4 Variables description

Variables	Acronyms	Definitions
Performance		
Tobin's Q ratio	LnQ	The natural logarithms of (the ratio of the (market value of equity plus (the book value of assets - the book value of equity)) scaled by total assets book value).
Ownership structure		
Family ownership %	FamOwn	Cumulated percentage of shares held by individuals/families.
Institutional ownership %	InstOwn	Cumulated percentage of shares held by institutional investors including mutual funds, banks, and large financial institutions.
Concentration %	OwnTotal	Percentage of shares held by the largest blockholders (5% rule)
Board of directors		
Board size	lnBsize	The natural logarithm of total number of directors in a firm's board.
Board duality	Bdual	Dummy = 1 if board's chairman is also the firm's CEO.
Board independence %	Bind	The number of non-executives / independent directors scaled by the total number of directors.
National governance		
National governance index	NGI	NGI = (Rule of law + Government effectiveness + Regulatory quality). These indicators are developed by (Kaufmann et al., 2011).
Alternative national governance index	NGI(a)	NGI(a) is constructed by extracting the first principal component of Government Effectiveness, Regulatory Quality, and Rule of Law using factor analysis technique.
Investors protection index	IPI	IPI is developed by doing business project (world bank, 2008, 2009, 2010, 2011, 2012, 2013, and 2014).

[47]See for example; Seifert, B., & Gonenc, H. (2016). Creditor Rights, Country Governance, and Corporate Cash Holdings. Journal of International Financial Management & Accounting, 27, 65–90.

Control variables		
Firm age	lnFage	The natural logarithm of number of year's incorporation.
Firm size	FSize	The natural logarithm of firm's market capitalization.
Financial leverage %	Leverage	Total debt scaled by total assets.
Lagged dependent variable	laglnQ	One-year lagged Tobin's Q ratio.
Industry dummy variables	Industry dummies	A dummy variable for two main industry classifications; services and manufacturing.
year dummy variables	Year dummies	Seven year dummies for each of the seven years from 2008-2014.

4.6 Endogeneity in Corporate Finance Research

The purpose of this section is to bring attention to some serious problems that exist in econometric application of governance-performance empirical models. These problems in application are serious to the point of reversing even qualitative inference, which in term impeding the ability to make reliable inference virtually possible. Accordingly, the focus will be on the most frequent harmful problem called endogeneity and its sources, to include two main areas of econometric applications; first, the violation of the fundamental exogeneity condition for OLS estimators $E(\varepsilon|X) = 0$, where ε is the error term in a regression and X is a matrix of explanatory variables. Secondly, the inappropriate use of models that is available for data analysis. The relevance of the corporate governance research depends on both theory assumptions and the empirical work that tests these theoretical perspectives. Thus, the rightness of model specification would determine this relevance.

4.6.1 Endogeneity Defined

Reviewing extant governance research shows that endogeneity is a common issue in this field. Thus, it is necessary to clarify and discuss the exact meaning of the term. *Endogeneity* can be simply defined as a correlation between the explanatory variable and the error term in a regression (Roberts & Whited, 2012). To understand this, it would be helpful to illustrate endogeneity practically in the context of ordinary least squares (OLS) regression:

$$yi = \alpha + \beta xi + \varepsilon i \qquad \text{Eq. (3)}$$

As an example, consider that, the important issue in this case is the corporate governance impact on firm's financial performance. Let yi be the dependent variable (e.g., financial performance proxy measures), $\alpha$and βrepresent the intercept and slope of this simple linear

relationship between y and$x$, they are unknown and to be estimated from the observed data,xi represent the independent variable (e.g., governance practices), and εi represent the error term. According to Baltagi, (2011, p. 49) This error should vary randomly, and it may exist because of (i) the omission of relevant factors that could influenceyi, other than xi, (ii) measurement error, or (iii) wrong choice of a linear relationship between y andx, when the true relationship may be nonlinear.

If there is a correlation between the error term εi and any of the independent variablesxi in the regression, the OLS will be biased. Similarly, if we examining equations resembling the autoregressive (dynamic) form of the infinite distributed lag e.g., lagged dependent variables $y_{\mathrm{i}-1}$, and there was no correlation between the lagged dependent variable and the current error term εi, e.g., $E(y_{i-1}\varepsilon i) = 0$, but correlated with lagged error term $\varepsilon i - 1$, e.g., $E(y_{i-1}\varepsilon i_{i-1}) \neq 0$. In this case, as long as the error terms are not serially correlated, OLS will be biased, but remains consistent and asymptotically efficient. Alternatively, if the εi's are serially correlated, then the OLS is biased and inconsistent. Concurrently, this means that one of the regressors, $y_{\mathrm{i}-1}$, is correlated with εi and we have the problem of endogeneity (for a review see Baltagi, 2011).

According to Roberts & Whited, (2012) endogeneity concerns in OLS regression estimators could rise by different issues to include; omitted variables, simultaneity bias, errors-in-variables (e.g., measurement error), and autoregression. In each of these scenarios, OLS regression reports biased coefficients. Instead of estimating the "true" relationship between the independent variable and the dependent variable, OLS regression mistakenly includes the correlation between the independent variable and the error term in the estimation of the independent variable's coefficient (Semadeni et al., 2014).

4.6.2 The Endogeneity of Corporate Governance

Demsetz, (1983) and Demsetz & Lehn, (1985) work on the structure of the corporate ownership represent perhaps the most influential study highlighting endogeneity issues in corporate governance research. While, Demsetz, (1983) was among the first to argue that a firm's ownership structure should be thought of as an endogenous outcome of decisions that reflect the influence of shareholders and of trading on the market for shares, Demsetz & Lehn, (1985) provide empirical evidence of the endogeneity of a firm's ownership structure. Similarly, Gugler & Weigand, (2003, p.483) stated that "ownership may be determined by the characteristics of the

firm, e.g. its contracting environment, the inherent riskiness of its assets, or its performance, that is ownership may be endogenous". This idea has caused scholars to consider the potential endogeneity of other corporate governance variables to include board of directors is more relevant. Most recently, Wintoki et al., (2012, p. 585) summarised these perspectives by stating that "board structure is a choice variable that arises through a process of bargaining between the various actors in a firm's nexus of contracts, where the bargaining process is influenced by past performance and the actors' beliefs about the costs and benefits of particular board structures". Accordingly, almost all firm-level governance variables can be considered as decisions made by shareholders based on past performance to influence firm's future outcomes.

As discussed above, it has been widely acknowledged that corporate governance mechanisms e.g., ownership structure and board of directors are (econometrically) endogenous. That corporate governance mechanisms are endogenous to value seems to be a fact nowadays, but it is still unclear that whether the individual heterogeneity or simultaneity that exists between the variables are the source of this endogeneity. To answer this question, Pindado & De La Torre, (2004) use a panel of 135 Spanish companies' data to examine the source of endogeneity in the relationship between ownership structure and firm's value. They report that ownership structure is endogenous because of its simultaneity with firm's value, while they do not find evidence on individual heterogeneity being the cause of the endogeneity of ownership structure.

Accordingly, the endogeneity of ownership structure has given rise to increasing controversy in the prior literature (Pindado & De La Torre, 2004). Statistically, endogeneity leads to biased and inconsistent parameter estimates that make reliable inference virtually impossible. Furthermore, endogeneity can be severe enough to reverse even qualitative inference (Wintoki et al., 2012). A large empirical literature has examined the impact of corporate governance on firm's financial performance. However, in a recent published paper, Wintoki et al., (2012) argue that most of the prior empirical literature ignore one source of endogeneity in corporate finance research which is the possibility that current corporate governance mechanisms are function of the firm's pervious value or performance. Indeed, this could be true, as corporate financial performance may depend on the governance mechanisms i.e., ownership structure and leadership structure, but these internal governance mechanisms are not exogenously given since they are determined in part by past corporate financial performance.

According to Wintoki et al., (2012) ignoring this important fact can have serious consequences for inference. Most prior empirical research related to this idea has mainly depend on the exogeneity assumption of the governance variables, thus they rely on panel data and fixed-effects estimates for inference. In these perspectives, employing traditional OLS and fixed- effects FE estimators can potentially ameliorate the bias arising from unobservable heterogeneity. Recently, Dang, Kim, & Shin, (2015) stated that another serious issue can face empirical corporate finance research is the likely presence of residual autocorrelation, which violates one of the most important assumptions of the IV/GMM estimators, and renders their instruments invalid. All of these methodological issues have raised the controversy status of the corporate governance research. Thus, the below section highlights recent advances in econometric literature's recommendations and evaluations regarding the panel models estimating methods that most suitable corporate governance-performance research.

4.6.3 Potential Endogeneity Treatment

Corporate finance researchers rely on different methods to alleviate continuous endogenous independent variables effects. One of the traditional econometric techniques to correct short panel bias caused by endogeneity that is often used in prior literature is the instrumental variable (IV) approach. According to Roberts & Whited, (2012) perfect instrumental variable IV must satisfy two main conditions; the relevance and exclusion (exogeneity). While the relevance condition is testable based on F-statistics, it refers to the degree to which the IV corresponds with the endogenous variable (e.g., strong vs. weak). The exclusion condition is untestable due to the fact that the regression error term is unobservable, and it refers to refer the degree to which an IV is uncorrelated with the error term in the second stage. Accordingly, one of the most challengeable issues in this context is to find suitable instrument that correlate strongly with the endogenous variable not with the error disturbance term, given that they can be used properly to alleviate endogeneity concerns as it is from an asymptotic efficiency perspective, more instruments is better, while from a finite sample perspective, more instruments is not necessarily better and can even exacerbate the bias inherent in 2SLS (Roberts & Whited, 2012).

Recent advances in econometric literature suggest that the instrumental variable estimators are unreliable, and sensitive to the presence of unobserved heterogeneity, residual serial correlation, and changes in control parameters, additionally, this approach suffers from the lack of efficiency by ignoring additional valid instruments (Dang et al., 2015). To overcome this issue,

scholars have turned to employ the generalized method of moments (GMM). Accordingly, three types of GMM estimators developed; (i) first-difference GMM estimator (FD-GMM) proposed by Arellano et al., (1991), (ii) the system GMM estimator (SYS-GMM) developed by Blundell & Bond, (1998), and (iii) the long-difference estimator (LD-GMM) proposed by Hahn, Hausman, & Kuersteiner, (2007). However, it's worthy of note that these estimators are statistically based on the assumption that there is no residual autocorrelation.

As noted earlier, and based on recent advances in corporate finance literature (i.e., Wintoki et al., 2012), the following issues may explain the lack of consensus on the effects of corporate governance on firm performance in the empirical literature: (i) an endogeneity problem, particularly unobservable firm characteristics that affect firm-level governance mechanisms and firm performance; (ii) heterogeneity in the relation between corporate governance mechanisms and firm performance across different firms or industry settings; and (iii) identification of the specific mechanism underlying the effect of corporate governance mechanisms on firm performance.

Accordingly, to alleviate such endogeneity concerns, we follow the recommendation by Wintoki et al., (2012) and examine the relation between corporate governance mechanisms and firm performance using dynamic system GMM estimator. Applying system GMM in this context will allow to have estimations with lower bias and higher efficiency. To examine the causal effect of firm-level governance mechanisms on firm performance, we examine whether the observed firm performance persists after controlling for firm differences other than governance. System GMM allow to have lagged dependent and independent variables as instruments to control the endogenous variables. To do this, we have first to perform the Durbin–Wu–Hausman (DWH) test for endogeneity, which allow to specify the endogenous variables. Thus, this research will mainly depend on System GMM to examine the relationship between governance and firm performance. However, to get the best specifications for System GMM, alternative traditional estimators i.e., OLS and FE/RE will be used as suggested by (Roodman, 2009b).

4.7 Model Specification

In order to examine the effect of corporate governance mechanisms on firm's value and profitability, the author analyses the data through many stages:

First of all, the descriptive statistics, the Pair-wise correlation matrix and the variance inflation coefficients between the research dependent and independent variables were executed and reported to determine if all of these variables are equally good indicators and free from any multicollinearity issues that may limit the research findings. This in terms reflects the preliminary data analysis section.

Secondly, Multivariate Data Analysis will be applied. According to Larcker, Richardson, & Tuna, (2005), The methodological approach used in most prior work examining the impact of corporate governance on various dependent variables utilizes a multiple regression of the following general form:

$$\text{Dependent Variable}_{\,t} = \alpha + \Sigma\beta\text{Governance Factors}_{\,t} + \Sigma\beta\text{controls} + \varepsilon_t \qquad \text{Eq.(4)}$$

However, Bebchuk & Roe, (1999, p. 127) stated that "The corporate structures that an economy has at any point in time depend in part on those that it had at earlier time". This implies that a corporate financial performance is path-dependent, in other words, a current firm's financial performance may depend in part on an earlier performance that the firm had at any previous time. Thus, recent advances in corporate governance literature examine the relationship between corporate governance and firm's financial performance using first/second-order *AR(1) or AR(2)* autoregressive panel models[48]. Zhou, Faff, & Alpert, (2014) argue that *AR(1)* seems to be unavoidable in most empirical corporate finance studies du the time frame limitations. Additionally, Nguyen et al., (2015, p. 153) stated that "how many lags of dependent variable should be used on the right-hand side of the model is an empirical question". Interestingly, they examine this issue empirically, and they report that one-year lag of firm's financial performance seems to be adequate to capture all of historical influence on current financial performance.

Accordingly, the context of Eq.(4) is applied in this case and reformulated to examine the relationship between corporate governance and firm's financial performance using the following equation:

$$Y_{it} = \alpha_0 + \alpha_1 Y_{it-1} + \sum \beta X_{it} + \mu_i + \eta_t + \epsilon_{it} \qquad \text{Eq. (5)}$$

[48] Prior corporate governance studies employed AR(1) like (Nguyen et al., 2015; Munisi & Randoy, 2013; Adams, Almeida, & Ferreira, 2009). For studies employed AR(2) see for example (Wintoki et al., 2012; Pham, Suchard, & Zein, 2011).

Where Y_{it} is: ln (Tobin's Q) as a proxy measure of firm's financial performance. α_0 is constant, α_1 and β are unknown estimated coefficients;, μ_i represent unobserved firm fixed-effect, η_t represents time-specific effects that are time-variant and common to aggregate sample companies, such as the effects of GDP per capital, its growth, and inflation rates as a differing macroeconomic conditions, X_{it} is column vector of governance variables at the country / firm-level, and control variables for firm i at time t, this vector is made up of the selected corporate governance variables and other control specifications. Eq. (5) is rewritten as follows:

$$\begin{aligned} lnQ_{it} = \alpha_0 + \alpha_1 lnQ_{it-1} + \beta_1 FamOwn_{it} + \beta_2 InstOwn_{it} + \beta_3 OwnTotal_{it} \\ + \beta_4 lnBsize_{it} + \beta_5 Bdual_{it} + \beta_6 Bind_{it} + \beta_7 lnFsize_{it} \\ + \beta_8 Leverage_{it} + \beta_9 lnFage_{it} + industrydummies_i + \mu_i + \eta_t \\ + \epsilon_{it} \end{aligned} \qquad \text{Eq. (6)}$$

It should be noting that, it would be difficult to incorporate lagged independent variables in all specifications due to reduction effect in the sample size hence limiting the analyses. As stated earlier, another important objective of this research is to check whether national governance variables have direct influence on firm performance. Therefore, the second empirical model includes some explanatory variables for national governance indicators (country-level) beside the rest of internal governance mechanisms (firm-level) variables. A country dummy variable that takes the value of 1 for Jordan and 0 for UAE will be added, to initially account for country-specific characteristics. Consequently, Eq. (6) is rewritten as follows:

$$\begin{aligned} lnQ_{it} = \alpha_0 + \alpha_1 lnQ_{it-1} + \beta_1 FamOwn_{it} + \beta_2 InstOwn_{it} + \beta_3 OwnTotal_{it} \\ + \beta_4 lnBsize_{it} + \beta_5 Bdual_{it} + \beta_6 Bind_{it} + \beta_7 lnFsize_{it} \\ + \beta_8 Leverage_{it} + \beta_9 lnFage_{it} + \delta NGindex_{jt} \\ + Country\ dummies + \mu_i + \eta_t + \epsilon_{it} \end{aligned} \qquad \text{Eq. (7)}$$

4.8 Estimation Technique

As mentioned in the previous discussions, it is widely acknowledged in prior literature that corporate finance empirical researches are often face different form of methodological issues. One of the most problematic issues in corporate governance research is the endogeneity concerns. The term endogeneity refers to a situation where the error term is correlated with any of the explanatory variables (Roberts & Whited, 2012). Additionally, recent advances in corporate governance research documented that ownership structure and board of directors are considered to be

endogenously and dynamically determined by past firm's financial performance (e.g., Wintoki et al., 2012). This implies that corporate governance-performance model should be examined in a dynamic framework (Nguyen et al., 2015), see Eq.(4).

Hence, dynamic panel models plays prominent part in corporate finance research (Dang et al., 2015). Empirical test of corporate finance studies including corporate governance topics require the use of firm fixed-effects to control any unobserved time-invariant across firms in research sample (Flannery & Hankins, 2013). However, Nickell, (1981) observes that OLS estimates of lagged dependent variables ($Y_{i,t-1}$) are biased because of the correlation between these lagged dependent variables and firms fixed-effects. On the other hand, estimating Eq.(4) through AR(1) structure and the presence of the endogenous explanatory variables may introduce serious estimation biases (Flannery & Hankins, 2013). Furthermore, Dang, Kim, & Shin, (2015, p. 86) stated that "The pooled OLS (POLS) and fixed-effects (FE) estimators are not appropriate for estimating the dynamic model. Applying POLS to dynamic model produces biased and inconsistent estimates because the lagged dependent variable, $Y_{i,t-1}$, is correlated with the firm fixed effect, η, i.e., $E[Y_{i,t-1}\eta] \neq 0$. It is well established that POLS tends to overestimate the autoregressive coefficient, Y, and underestimate the SOA". With regards to FE, Nickell, (1981) it is to observe that FE estimator wipe-out μ_i, but it also produces inconsistent parameters if T is fixed, regardless of the size of N because it still does not deal with the endogeneity of $[Y_{i,t-1}]$.

Accordingly, estimating the corporate governance-performance model using OLS or FE would lead to be biased and inconsistent parameter estimates that make reliable inference virtually impossible (Lozano et al., 2016). It's worth noting that, this study employs a panel dataset that has the following characteristics: (i) moderate length (T = 8); (ii) low variation of corporate governance within all firms in the sample; (iii) internal firm-level corporate governance mechanisms i.e., ownership structure and board of directors are considered to be totally endogenous; (iv) external country-level governance mechanisms, firm age, and year dummies are considered exogenous variables[49]; (v) firm's corporate governance structure is dynamically correlated with its past financial performance; (vi) research dependent variables i.e., Tobin's Q may be driven by unobservable individual fixed-effects. According to the above-mentioned characteristics of the selected panel sample in this research, System GMM is the most efficient

[49] Prior academic literature has showed that, there is a weak empirical evidence that firm characteristics would predict country level governance mechanisms. See for example (Balasubramanian, Black, & Khanna, 2010; Ararat, Black, & Yurtoglu, 2014).

estimator that has the ability to produce lower-bias estimations than all the other estimators analysed previously, including first-differences GMM technique.

Thus, this research will use Dynamic System GMM as primary econometric technique to examine the relationship between governance variables and firm performance in Jordan and UAE. In system GMM two-step estimation, the standard covariance matrix is robust to panel-specific autocorrelation and heteroskedasticity, but the standard errors are downward biased. Two-step system GMM Use twostep robust to get the finite-sample corrected two-step covariance matrix. In terms of system GMM specification tests, system GMM estimations report Sargan test, AR(1) and AR(2) tests. The Sargan test has a null hypothesis of "the instruments as a group are exogenous". Therefore, the higher the p-value of the Sargan statistic the better. In robust estimations system GMM reports the Hansen J statistic instead of the Sargan with the same null hypothesis. It should be noted that, in this research we report Hansen J statistic instead of the Sargan test. The Arellano – Bond test for autocorrelation has a null hypothesis of no autocorrelation and is applied to the differenced residuals. The test for AR (1) process in first differences usually rejects the null hypothesis (the lower the p-value the better). The test for AR (2) in first differences is more important, because it will detect autocorrelation in levels, the higher the p-value the better.

Moreover, for better specifications and diagnostics tests and comparisons basis between estimators, OLS and FE/RE traditional estimators will be employed in the data analysis chapters. Table 4-5 below provides summary of prior empirical research methodological approaches used to examine governance-performance relationship.

Table 4-5 Some of the methodologies used in prior literature

Publication	Performance measure	Independent variable(s)	Estimation approach	Interface
Li et al., (2007)	ROA, ROS	Managerial Ownership	OLS	+
Maury (2006)	ROA	Family share ownership	OLS	+
Mizuno (2010)	ROE	Institutional investors share ownership	OLS	None
Yabei Hu & Izumida, (2008)	Q, ROA	Ownership concentration	Granger Causality Tests, GMM	U-shape
Nguyen et al., (2015)	Q	Governance variables and ownership concentration	System GMM	+
Akbar et al., (2016)	Q, ROA	CGI	GMM	None
Cui & Mak, (2002)	Q	Managerial ownership	2SLS	W-shape
Yifan Hu & Zhou (2008)	ROA, VA	Managerial ownership	OLS	+

Oxelheim & Randøy (2003)	Q	Board characteristics	OLS, 2SLS	+
Wintoki et al., (2012)	Q, ROS	Board structure	GMM	None

Note: Data in this table is self-compiled from extant governance research.

4.9 Chapter Summary

By reviewing corporate governance literature, it was found that there is a clear gap in studying the effect of governance variables on firm's financial performance in developing countries of emerging markets, especially, in MENA region, where external institutional environment is weak and corporate governance codes have been released recently to organize business life. Therefore, this research responds to recent advances from novel scholars to examine the aggregate effect of national governance quality on firm financial performance i.e., Aslan & Kumar, (2014); Kumar & Zattoni, (2013); Van Essen et al., (2013) among others.

This thesis identifies corporate financial performance variable (Tobin's Q) ratio as dependent variable, and corporate governance variables both internal and external as independent variables. To examine this relationship, this empirical analysis mainly relied on some secondary data sources like the DataStream database, and the company's annual reports from two capital markets. All financial companies and banks and any other company that has not published its report or has missing financial values during the study timeframe has been excluded. Additionally, all companies are not quoted on the ASE, ADX, or DFM, and companies with gaps and missing data are excluded from the research sample.

For estimation approach, this thesis depends mainly on Two-Steps Dynamic System GMM technique to study the effect of governance variables (internal and external) on firm performance in Jordan and UAE. In addition, the pair-wise correlation matrix was applied to explore the correlation coefficients between the dependent and independent variables used in this research, also, this thesis uses simple and multiple regressions i.e., OLS and FE/RE estimation techniques for specification and comparisons basis. Having concluded the design of the research methodology and selected the suitable econometric estimation technique to be applied, the following part of this thesis presents the detailed analysis of the data and discusses the major findings.

Thus, data analysis and research findings are presented in the next three chapters. Chapter 5 below provide empirical examination on the relationship between firm-level governance and firm

performance using the Jordanian dataset. This includes the preliminary data analysis which describes major statistics and tests, also it was carried out on the variables of interests for multicollinearity. Finally, the chapter describes the multivariate regression analysis that carried out to test the meaningfulness and significance of the hypothesised pathways that comprise the governance-performance model.

CHAPTER 5: CORPORATE GOVERNANCE AND FIRM PERFORMANCE – EVIDENCE FROM JORDAN

5.1 Introduction

This chapter presents the structured process of empirical analysis that was applied to the collected data set by estimating Eq. (6) for the Jordanian market only. In particular, it provides data analysis and empirical findings for the set of hypotheses and conjectures presented in section 2.5 of Chapter 2. The findings presented in this chapter adds to the academic and practical debates on the relationship between firm-level governance variables and firm performance in emerging markets in general, and in the Jordanian market in particular. It should also be noted that the Jordanian corporate governance framework is considered as an underdeveloped case which in terms provides an exceptional chance to examine the relationship between corporate governance and firm performance within this context using a dynamic framework for the first time. This chapter and the following one (Chapter 6) address the first and the second questions of this thesis; (1). In what way (for example, likely or unlikely) will the attributes of the ownership concentration (ownership structure) affect firm's financial performance in Jordan and in UAE? (2). Will the firm's activities and other governance practices (i.e., board of directors' independence, duality, and size) be beneficial or harmful to the firm's financial performance in Jordan and in UAE? Respectively.

Given the choice of the Dynamic System GMM as the method for analysing the collected data set, the author has drown upon the work of Wintoki et al., (2012) as a basis for this process. Zhou et al., (2014, p. 494) stated that "Dynamic panel bias, endogeneity issues, empirical model misspecification, and other potential corporate data issues (both separately and in combination) can introduce severe biases into existing baseline estimations, which cast serious doubt over the credibility of the inferences drawn regarding corporate decision making". In these perspectives, Wintoki et al., (2012) argue that application of System GMM in a governance research context is relevant to three sets of methodological issues and considerations, they state "panel GMM estimator can be used to control for the dynamic nature of the performance– governance relationship suggested by theorists, while accounting for other sources of endogeneity in corporate finance research". These arguments justify the use of System GMM in this research, which

particularly aims to examine the relationship between governance variables and firm performance. However, I also employed other techniques i.e., Dynamic OLS and Dynamic FE for specification and comparative purposes.

The remainder of this chapter proceeds as follows. Section 5.2 provide initial descriptive statistics of the collected data. Section 5.3 presents multivariate regression analysis to include; endogeneity tests executed in subsection 5.3.1, empirical results of estimating the relationship between corporate governance variables and firm performance using three main estimators (OLS, FE and System GMM in dynamic forms) are presented in subsection 5.3.3, subsection (5.3.4) presents robustness checks of the main findings obtained from the Dynamic System GMM. Finally, section 5.4 summarises the empirical analysis and the chapter findings.

5.2 Descriptive Statistics

Table 5-1 below reports the firm-year observations, the average, the median, and the standard deviation statistics of the series, the minimum, and the maximum of the formative are dependent and independent variables. Initially, the mean (median) of *Tobin's Q Ratio* in the sample is 1.22 (1.04), indicating that firms on average in Jordan are enjoying higher market valuation and, hence, creating value for shareholders during the sampling period. With respect to individual firm governance characteristics, the average number of directors on board in Jordan is around eight, which is in line with the average board size of companies operating in the MENA region (IFC, 2008). Approximately 20% of the chairpersons concurrently hold the CEO positions, indicating that, the role duality is quite uncommon in the Jordanian market.

Considerably, there is a wide variation in the percentage of independent (non-executive) directors across the sample firms in Jordan. While the minimum is 14%, the maximum is 91%. With respect to ownership structure, the variables of interests, denotes that ownership concentration is relatively high in Jordan. The mean (median) percentage of stock held by shareholders who own at least 5% of the common stock (ownership concentration) is around 61% (64%). The mean (median) values for identities of major shareholders is as follows; the percentage of shares held by families is 24% (13%), the percentage of shares held by institutional investors is 36% (33%), and finally, the average percentage of shares held by foreign investors is 3% due to the high variations between the maximum (99%) and the minimum (0%). This implies that family and institutional ownership are key and important blockholders in the Jordanian capital market.

Table 5-1 Descriptive statistics.

	Obs.	Mean	Median	SD	Min	Max
Tobin's Q Ratio	790	1.22	1.04	0.57	0.61	2.70
Family Ownership (%)	790	0.24	0.13	0.27	0.00	0.99
Institutional Ownership (%)	790	0.36	0.33	0.27	0.00	0.99
Foreign Ownership (%)	790	0.03	0.00	0.13	0.00	0.99
Ownership Concentration (%)	790	0.61	0.64	0.23	0.06	0.99
Board Size	790	8.22	8.00	2.38	3.00	14.00
Board Duality	790	0.20	0.00	0.40	0.00	1.00
Board Independence (%)	790	0.56	0.57	0.16	0.14	0.91
Firm Size [ln (Makt.Cap)]	790	16.90	16.78	1.52	13.36	22.42
leverage %	790	0.34	0.30	0.25	0.00	2.28
Firm Age (years)	790	21.03	17.00	15.48	1.00	77.00

Note: This table presents the summary of descriptive statistics of the research key variables in its original form except where it is specified as a logarithms form. The sample comprises 113 non-financial firms listed in Amman Stock Exchange ASE market of Jordan. The variables are as described in Table 4-4.

Table 5-2 below represents the pairwise correlation matrix and Collinearity diagnostics for the key variables used in the empirical analysis. First of all, most of the variables of interests have correlations with the dependent variable (*Tobin's Q*) below the 0.80 threshold. It is also noticeably that all regressors in the model are free from collinearity, as the variance inflation factor is less than 10, the threshold suggested by prior econometrics literature (see for example; Hsiao, (2014); Damodar, (2004); Wooldridge, (2010); and Chatterjee and Hadi (2012) among others). The initial analysis of the correlations between the variables reveals that, board independence is positively correlated with firm performance. Also, firm size (*lnFsize*) and firm age (*lnFage*) are positively correlated (0.42 and 0.14 respectively), and statistically significant at 1% with firm performance (*Tobin's Q*). Furthermore, board size (*lnBsize*) and firm size (*lnFsize*) are statistically significantly correlated. This supports the notion that larger firms tend to have larger number of directors in their boards. These results are in line with (Nguyen et al., 2014; Chen & Al-Najjar, 2012).

Similar to results obtained by Wintoki et al., (2012) and Nguyen et al., (2014, 2015), the correlation matrix below shows that past firm performance measured by one-year lagged dependent variable (*laglnQ*) is positively correlated with current firm performance (*lnQ*) with 0.68 coefficient significant at 1%, confirming the dynamic nature of the relationship between governance and performance. Furthermore, ownership concentration (*OwnTotal*) is positively correlated with firm performance. This initially supports the monitoring hypothesis of the agency theory, about the capabilities of large shareholders in imposing vigilant role in public corporations.

Table 5-2 Pair-wise correlation coefficients and variance inflation factor coefficients using Jordanian database

	lnQ	FamOwn	InstOwn	ForOwn	OwnTotal	lnBsize	Bdual	Bind	lnFsize	leverage	lnFage	laglnQ	*VIFs*
lnQ	1.00												
FamOwn	0.12***	1.00											*4.49*
InstOwn	0.07**	-0.64***	1.00										*4.41*
ForOwn	-0.07*	-0.14***	0.31***	1.00									*4.25*
OwnTotal	0.28***	0.39***	0.43***	0.18***	1.00								*3.81*
lnBsize	0.01	-0.34***	0.12***	-0.14***	-0.21***	1.00							*1.70*
Bdual	0.07**	0.13***	-0.15***	-0.09**	-0.04	0.02	1.00						*1.05*
Bind	0.01	-0.18***	0.07*	0.03	-0.12***	0.44***	0.03	1.00					*1.28*
lnFsize	0.42***	-0.16***	0.20***	0.08**	0.17***	0.43***	0.04	0.15***	1.00				*1.75*
leverage	0.02	-0.16***	0.06	-0.00	-0.11***	-0.03	-0.03	-0.14***	0.03	1.00			*1.11*
lnFage	0.14***	-0.31***	0.20***	0.09**	-0.06	0.18***	-0.03	-0.02	0.26***	0.23***	1.00		*1.27*
laglnQ	0.68***	0.11***	0.10**	-0.07*	0.30***	0.03	0.07*	0.02	0.39***	0.01	0.16***	1.00	*1.32*

Note: Asterisks indicate significance at 10% (*) 5% (**) and 1% (***). The notations are as defined in Table 4-4.

5.3 Multivariate Regression Analysis

The previous section discusses the primarily data analysis for the bivariate associations between the variables of interests. These approaches initially represent the basic correlations between the variables. However, it is difficult to draw empirical conclusions based on the results revealed from these initial correlations. Therefore, this section presents the multivariate regression analysis by including endogeneity tests and other diagnostics tests, to properly examine the relationship between the corporate governance variables and firm performance. Accordingly, Dynamic System GMM is the main method of data analysis in this research.

5.3.1 Endogeneity Tests

Prior corporate governance research has been widely suffering from endogeneity issues. These issues can arise from three main sources; (i) simultaneity, (ii) omitted variables, (iii) and measurement errors (Coles et al., 2012; Wintoki et al., 2012). Therefore, recent advances in corporate finance research has showed that when the independent variables are endogenous, system GMM can obtain more efficient estimations than those of OLS and Fixed Effects (Wintoki et al., 2012). Therefore, it is crucial to test if endogeneity exists among the research variables. Accordingly, I follow Nguyen et al., (2014, 2015), and conduct Durbin–Wu–Hausman (DWH) test for endogeneity of all regressors as a group based on the levels equation of firm performance and corporate governance variables (Schultz et al., 2010). The instrumental variables are one-year lagged differences of the below independent variables; ΔlnQ_{it-1}; $\Delta FamOwn_{it-1}$; $\Delta InstOwn_{it-1}$; $\Delta OwnTotal_{it-1}$; $\Delta lnBsize_{it-1}$; $\Delta Bdual_{it-1}$; $\Delta Bind_{it-1}$; $\Delta lnFsize_{it-1}$; $\Delta leverage_{it-1}$. In addition to these lagged instrumental variables, I further include *lnFage, year dummies and industry dummies* as the only exogenous variables in the GMM specifications.

The results of the DWH test of the endogeneity indicate that the null hypothesis cannot be accepted at any conventional levels of significance (*Chi-sq(9) = 19.633; p = 0.002*). These results indicate that the relationship between firm-level corporate governance variables and firm performance in the Jordanian context is also subject to endogeneity issues. This also implies that prior corporate governance research executed in Jordan using traditional OLS and / or FE/RE estimations techniques may have biased and inconsistent results and, therefore highlighting the importance of applying system GMM in this context.

5.3.2 System GMM Estimation Validity

One important assumption to successfully execute efficient estimations using System GMM is to have valid instrumental variables. Accordingly, I mainly relied on Hansen-J test of over-identification and the difference-in-Hansen tests of the exogeneity of instrument subsets as suggested by Roodman, (2009b). This section is, therefore, presents examination of the exogeneity of the instrumental variables used in the System GMM estimations.

Table 5-3 below provides evidence that the null hypothesis that the subsets of instruments used in the System GMM modelling are econometrically exogenous and must be accepted. Moreover, the results, thus, implies that *year dummies* and *lnFage* are exogenous variables, while the endogenous variables (i.e. governance and other explanatory variables) are successfully instrumented by their one-year lagged independent variables i.e. ΔlnQ_{it-1}; $\Delta FamOwn_{it-1}$; $\Delta InstOwn_{it-1}$; $\Delta OwnTotal_{it-1}$; $\Delta lnBsize_{it-1}$; $Bdual_{it-1}$; $\Delta Bind_{it-1}$; $\Delta lnFsize_{it-1}$; $\Delta leverage_{it-1}$. The estimation results are reported in the next section.

Table 5-3 Difference-in-Hansen test for exogeneity of instruments subsets

Tested instrument subsets	Test statistics	Degree of freedom	P-Value
Panel A: System GMM-type instruments			
All instruments for equation in levels	10.54	9	0.309
$\ln Q_{it-3}$ *up to* $\ln Q_{it-6}$ (for equation in differences)	6.10	4	0.192
$\Delta \ln Q_{it-2}$ (for equation in levels)	0.24	1	0.624
Instruments for ownership structure variables	14.38	12	0.277
Instruments for board structure and control variables	22.44	20	0.317
Panel B: Standard instruments			
2009, 2011, 2012, 2013, 2014 year dummies, and lnFage	8.94	6	0.177

Note: This table represent Difference-in-Hansen test for exogeneity of instrument subsets used in this research. GMM instrument subset used for the equation in levels includes two-year lagged differences of firm performance variable; four-year lagged differences of ownership structure, board structure and other control variables. GMM instrument subset used for ownership structure variables includes four-year lagged differences and lags 4 in levels of these variables. GMM instrument subset used for board structure and the other control variables includes four-year lagged differences and lags 4 in levels of these variables. The subset of standard instruments for the equation in levels includes 2009, 2011, 2012, 2013, 2014 year dummies, and lnFage. 2008 (constant), 2010-year dummy dropped due to collinearity.

5.3.3 Empirical Results

The governance-performance estimation results are reported in Table 5-4 below using three different econometric techniques. First of all, Eq. (6) is estimated by the Ordinary Least Squares

(OLS) estimator with clustered standard errors equals to the number of firms in the research sample reported in column (2). The estimated coefficient on the one-year lagged dependent variable (*laglnQ*) is significantly positive and still persistent using other estimation techniques i.e., FE and System GMM. This implies that, past firm performance has significant impact on current firm performance for Jordanian listed companies, which in turns confirms the dynamic nature of the relationship between governance and performance (Wintoki et al., 2012).

With respect to ownership structure, it was found that, there is no relationship between ownership structure (identity and concentration) variables (*FamOwn, InstOwn, and OwnTotal*) and firm performance using OLS estimator as reported in column (2). However, once a part of endogeneity concerns i.e., time-invariant unobserved heterogeneity across firms is controlled by using fixed-effects model, the relationship turns to be significant and positive. It is interesting to note that the significant positive relationship between ownership structure and firm performance remain unchanged when applying the two-step System GMM estimator (reported in column (4)) of Table 5-4. These findings are consistent with agency theoretical assumptions and in line with other recent findings obtained by Nguyen et al., (2014, 2015). Similarly, Gaur et al., (2015) argues that ownership concentration is an important tool to minimise agency problems and hence, increase firm performance in emerging markets context. It should be noted that, these findings are also contradicting the previously-stated hypotheses $-\text{Hypothesis}_1$ and Hypothesis_3- regarding the effect of family ownership and ownership concentration, which is supposed to be negative on firm performance in such market characterised by weak legal framework and absent market for corporate control instruments. Accordingly, these findings support the substitute hypothesis regarding the notion that ownership concentration may play important role when external governance and other market alignment forces are absent (Wang & Shailer, 2017).

To test the board hypothesis, each of the board variables were regressed on the Tobin's Q ratio. Initially, the relationship between board size (*lnBsize*) and firm performance (*lnQ*) is negative, consistent with prior literature and agency theoretical expectations, and statistically significant at 1% level in OLS and FE estimation models. However, once system GMM applied, this relationship vanishes. This may suggest that the significant relationship between board size and firm performance reported in column (2) and (3) is driven by endogeneity issues. Taking into account the concerns of simultaneity and dynamic endogeneity, the results reported in column (4) of Table 5-4 below show that board size has no impact on firm performance in Jordan. Board duality (*Bdual*) and board independence (*Bind*) are found to be negatively correlated with firm

performance (*lnQ*) but are not significant across the three estimators. These results are in line with Wintoki et al., (2012); Nguyen et al., (2015); Schultz et al., (2010). Accordingly, these results show consistency only with Hypothesis_6, where it was expected that there is no significant relationship between board independence and firm performance.

With regards to control variables, firm size (*lnFsize*) and financial leverage (*leverage*) have a significant positive impact on firm value, while firm age (*lnFage*) tend to have no significant effect on firm value in Jordan.

Table 5-4 The relationship between corporate governance and firm performance (dynamic framework).

	Pooled OLS	Fixed Effects	Sys. GMM
DV**:** Tobin's Q Ratio [ln (Tobin's Q)]	lnQ	lnQ	lnQ
	(2)	(3)	(4)
	b/(t)	b/(t)	b/(t)
laglnQ	0.833***	0.272***	0.502***
	(33.312)	(4.383)	(4.632)
FamOwn	0.225	8.710***	2.388**
	(1.523)	(4.623)	(2.194)
InstOwn	0.162	8.634***	1.899**
	(1.083)	(4.908)	(2.384)
OwnTotal	-0.211	9.041***	2.117**
	(-1.385)	(5.040)	(2.249)
lnBsize	-0.118***	-0.325***	0.143
	(-2.961)	(-3.388)	(0.536)
Bdual	-0.015	-0.052	-0.018
	(-0.660)	(-1.111)	(-0.082)
Bind	0.064	0.012	0.174
	(1.136)	(0.103)	(0.576)
lnFsize	0.039***	0.345***	0.169**
	(4.744)	(6.799)	(2.195)
leverage	0.070*	0.483***	0.731***
	(1.712)	(5.845)	(3.168)
lnFage	-0.011	0.030	-0.055
	(-0.684)	(0.324)	(-1.003)
Intercept	-0.416***	-5.015***	-3.263***
	(-2.884)	(-5.238)	(-2.600)
Industry dummies	Yes	No	No
Year dummies	Yes	Yes	Yes
Firm fixed effects	No	Yes	Yes
Number of observations	677	677	677
R-squared	0.798	0.620	
F statistic	97.068***	28.096***	
Wald chi2 statistic			191.530***

Number of instruments			44
Number of clusters	113	113	113
Arellano-Bond test for AR(1) (p-value)			0.000
Arellano-Bond test for AR(2) (p-value)			0.291
Hansen-J test (p-value)			0.279

Note: This table presents empirical analysis of examining Eq. (6) using three different estimation techniques; Pooled OLS, Fixed Effects, and dynamic (two-step system) GMM. Asterisks indicate significance at 10% (*) 5% (**) and 1% (***). P-values and t-statistics and z-statistics are based on robust standard errors and presented in brackets and parentheses. For the two-steps system GMM estimates reported in column (4) Iuse lag 4, lag 5, and lag 6 of the levels of *Tobin's Q, FamOwn, InstOwn, OwnTotal, lnBsize, Bdual, Bind, lnFsize, leverage* as GMM-type instruments for the first-differenced equation. Whereas, four lags of the first differences of these variables is used as GMM-type instruments for the levels equation. Year dummies are unreported. 2014-year dummy dropped in Pooled OLS and FE model estimations. 2010-year dummy dropped in system GMM. The notations are as defined in Table 4-4.

5.3.4 Robustness Checks and Sensitivity Analysis

The previous section provides empirical examination of the relationship between firm-level corporate governance mechanisms and firm performance. The main results suggest that only ownership structure (concentration) and the controlling shareholder's type matter for nonfinancial publicly-listed firm in Jordan. However, these results must be confirmed by robustness and sensitivity analysis. For this reason, I employ two methods; first, must check if the relationship between the suit of the governance variables and firm performance would change if we alternate the governance variables and reduce the number of instruments used in the System GMM specification. These results are reported in Table 5-5. Second, whether the main results changes if different performance indicators were utilised, and the number of instruments were reduced respectively, were initially checked. These results were reported in Table 5-6. In fact, the potential danger of System GMM implementation is instrument proliferation (Roodman, 2009a), therefore, it is very important to confirm the main results obtained previously, by reducing the number of instruments used in the analysis.

In System GMM (model 2) estimations reported in columns (4) and (5) of Table 5-5, I re-estimate Eq. (6) by dropping board duality as a factor variable[50], and adding another ownership structure variable; foreign ownership (*ForOwn*), to check the robustness of results to alternative proxies for corporate governance structures. The results indicate that, ownership structure still hold

[50]Roodman, (2009a) posit that dummy variable that are highly persistent across firms and time can cause bias in the parameter estimation and may pose problems during estimations.

a significant positive effect on firm performance among other governance variables. However, it should be noted that the coefficients on the ownership structure variables are generally reduced and the power of this relationship reduced from 5% significant levels in Table 5-4 to 10% significant levels in (Model 2) reported in Table 5-5. Thus, the main findings regarding (ownership structure and firm performance) are robust to alternate governance form of variables.

Table 5-5 Robustness checks of the main results sensitivity to alternate governance variables and reduced number of instruments**.**

	Sys.GMM (Model 1)		Sys.GMM (Model 2)	
	lnQ		lnQ	
Explanatory/control variables	(2)	(3)	(4)	(5)
	b	(t)	b	(t)
laglnQ	0.502***	(4.632)	0.485***	(4.287)
FamOwn	2.388**	(2.194)	2.239**	(2.239)
InstOwn	1.899**	(2.384)	1.488*	(1.818)
ForOwn			1.012*	(1.945)
OwnTotal	2.117**	(2.249)	1.820*	(1.908)
lnBsize	0.143	(0.536)	0.252	(0.793)
Bdual	-0.018	(-0.082)		
Bind	0.174	(0.576)	0.124	(0.480)
lnFsize	0.169**	(2.195)	0.145	(1.476)
leverage	0.731***	(3.168)	0.668***	(2.598)
lnFage	-0.055	(-1.003)	-0.034	(-0.539)
Intercept	-3.263***	(-2.600)	-3.106**	(-2.401)
Number of observations		677		677
Wald chi2 statistic		191.530***		142.345***
Number of instruments		44		41
Number of clusters		113		113
Arellano-Bond test for AR(1) (p-value)		0.000		0.001
Arellano-Bond test for AR(2) (p-value)		0.291		0.230
Hansen-J test of over identification (p-value)		0.279		0.368

Note: Asterisks indicate significance at 10% (*) 5% (**) and 1% (***). P-values and t-statistics and z-statistics are based on robust standard errors and presented in brackets and parentheses. In system GMM model 2 (columns 4 and 5) I use Lag 2 only of the first differences of (*Tobin's Q, FamOwn, InstOwn, ForOwn, OwnTotal, lnBsize, Bind, lnFsize, leverage)* variables as GMM-type instruments for the levels equation to reduce the instruments number, rather than all lags available as used in system GMM model 1. Year dummies are unreported. 2010-year dummy dropped in both models. The notations are as defined in Table 4-4.

As noted earlier, the main findings may change if alternate performance indicator used, thus, this issue has been empirically checked. In Table 5-6, Eq. (6) was re-estimated by replacing *Tobin's Q ratio* by *ROA* or *ROE* to check the robustness of our main results to alternative firm

performance proxies[51]. It is interesting to know that one-year lagged dependent variable (firm performance) is still significantly positively related to current firm performance despite any performance indicator used in the estimation. This implies that including lagged dependent variable is a must when modelling governance-performance relationship. I further follow Nguyen et al., (2014) and reduced the number of instruments by using only one or two lags of instrument variables rather than using all lags available, I also apply a collapsing instruments approach to reduce the instruments' count as suggested by Roodman, (2009b). Interestingly, results reported in columns (2) and (3) of Table 5-6 indicate that the coefficients on most of the corporate governance variables are similar to those reported in Table 5-4 in terms of direction and magnitude. Only ownership structure matters for firm performance operating in Jordan. This finding is robust to alternative firm performance indicators, see (model 2) in columns (4) and (5) and (model 3) in columns (6) and (7) reported in Table 5-6.

Table 5-6 Robustness checks of the main results sensitivity to reduced form of governance variables, reduced number of instruments, and alternate performance metrics.

	(Model 1)		(Model 2)		(Model 3)	
	lnQ		ROA		ROE	
	(2)	(3)	(4)	(5)	(6)	(7)
	b	(t)	b	(t)	b	(t)
l.Performance	0.434***	(3.676)	0.399***	(4.051)	0.436***	(5.512)
FamOwn	3.241**	(2.026)	0.460***	(3.643)	0.863***	(4.179)
InstOwn	2.605**	(2.221)	0.423***	(3.848)	0.782***	(4.489)
OwnTotal	3.173**	(1.968)	0.509***	(4.866)	0.945***	(5.364)
lnBsize	0.079	(0.288)	-0.054	(-1.421)	-0.017	(-0.291)
Bind	-0.215	(-0.588)	-0.056	(-0.698)	-0.162	(-1.289)
lnFsize	0.231*	(1.924)	0.018***	(3.141)	0.028***	(2.974)
leverage	0.914**	(2.514)	-0.013	(-0.253)	-0.044	(-0.665)
lnFage	-0.065	(-1.002)	0.011	(-1.406)	0.012	(-0.965)
Intercept	-4.034**	(-2.286)	-0.142	(-1.567)	-0.288	(-1.374)
Number of observations		677		677		677
Wald chi2 statistic		104.325***		353.015***		304.315***
Number of instruments		37		34		30
Number of clusters		113		113		113
AR(1) (p-value)		0.003		0.000		0.000
AR(2) (p-value)		0.305		0.702		0.821
Hansen-J test (p-value)		0.214		0.224		0.524

[51] It should be noted that, I further dropped board duality (*Bdual*) variable from Eq .(6) as per Roodman, (2009a) suggestions to have better estimation results.

Note: In these models, Board Duality (*Bdual*) variable was dropped. Asterisks indicate significance at 10% (*) 5% (**) and 1% (***). P-values and t-statistics and z-statistics are based on robust standard errors and presented in brackets and parentheses. For model 1 (columns 2 and 3) I employ lag 4, lag 5, and lag 6 of the levels of *Tobin's Q, FamOwn, InstOwn, OwnTotal, lnBsize, Bind, lnFsize, leverage* as GMM-type instruments for the first-differenced equation. I further employ, lag 3 of the first differences of these variables instruments for the equation in levels. For Model 2 (columns 4 and 5) lag 3 and lag 4 of the levels of *ROA, FamOwn, InstOwn, OwnTotal, lnBsize, Bind, lnFsize, leverage* was employed as GMM-type instruments for the first-differenced equations. Lag 2 of the first differences of these variables is used as GMM-type instruments for the levels equation. For Model 3 (columns 6 and 7) lag 3 and lag 4 of the levels of *ROE, FamOwn, InstOwn, OwnTotal, lnBsize, Bind, lnFsize, leverage* was employed as instruments for the first-differenced equation. Further, I use Lag 2 of the first differences of these variables as instruments for the equation in levels. Year dummies are unreported. 2010 and 2013 year dummies dropped in Model 1. 2009-year dummy dropped in model 2 and 3. The notations are as defined in Table 4-4.

5.4 Chapter Summary

The relationship between corporate governance and firm performance has been a focal point in the mainstream academic literature, especially after the recent financial crisis. Despite this vast literature on the international corporate governance issues, evidence on the relation between corporate governance mechanisms and firm performance is mixed due to endogeneity challenges and other institutional differences between countries. In this thesis, I follow recent advances in corporate governance literature i.e., Akbar et al., (2016), Duru et al., (2016), Wintoki et al., (2012), and Nguyen et al., (2014, 2015) among others, and modelled the governance-performance relationship in a dynamic framework, and employed System GMM that mitigates endogeneity concerns, to examine the relationship between corporate governance and performance in Jordan. Importantly, consistent with recent international evidence, specifically, those provided by Wintoki et al., (2012) and Nguyen et al., (2015), I find that board of directors' characteristics (*board size, board duality, and board independence*) are not determinants of corporate performance in Jordan. These results provide general support for Hypothesis_6, where it was argued that no relationship should be expected between board independence and firm performance due to endogeneity.

On the other hand, empirical analysis executed in this chapter shows that only ownership structure variables –type of controlling shareholder and concentration− seem to have positive implications on performance of nonfinancial listed companies in Jordan. Subsequently, the three firm-level corporate governance indicators (*FamOwn, InstOwn, and OwnTotal*) appear to have statistically a significant positive effect on firm performance. These results indicate general support of Hypothesis_2, where positive relationship between institutional ownership and firm performance was expected. Moreover, results support the view of Pound, (1988) about the

efficient-monitoring hypothesis, especially of institutional investors. Similarly, Anderson & Reeb, (2003) provide evidence that family ownership has positive implications on firm performance. These results imply that; the second type agency problem i.e., Principal-Principal PP conflicts have no severe or any harmful implications to firm performance in Jordan. The strength of the results is drowned from the notion that the main findings remain robust by re-estimating different models of governance and performance. The next chapter presents empirical evidence on estimating the relationship between firm-level corporate governance variables and firm performance in the UAE context.

CHAPTER 6: CORPORATE GOVERNANCE AND FIRM PERFORMANCE – EVIDENCE FROM UAE

6.1 Introduction

The previous chapter presents robust empirical evidence on the relationship between firm-level corporate governance mechanisms and firm performance, using Jordanian dataset. Results were consistent with recent advances provided by corporate governance literature, suggesting that ownership concentration in form of controlling shareholders is instrumental in reducing agency problems, and increasing firm performance. In this chapter, I follow recent calls and advances in corporate governance literature i.e., Wang and Shailer, (2015) and further provide comparative analysis between two countries –Jordan and UAE− that share similar firm-level corporate governance environments. Accordingly, this chapter presents precise analysis by estimating Eq. (6) of the relationship between firm-level corporate governance variables and firm performance using the UAE's dataset. This chapter is, therefore, applying the similar approach presented in the previous chapter (Chapter 5). As noted earlier the findings of this chapter are aimed also to address the first (two) questions of this thesis regarding the effect of the firm-level –ownership and board structures– corporate governance mechanisms on firm performance.

The remainder of this chapter is structured as the following. Initial descriptive statistics of the collected data is presented in section 6.2. Section 6.3 presents the multivariate regression analysis, which includes; endogeneity test (subsection 6.3.1), empirical results of estimating the governance-performance model using OLS, FE and System GMM in dynamic format (subsection 6.3.3), and robustness analysis presents in subsection 6.3.4. Finally, section 6.4 presents the chapter summary.

6.2 Descriptive Statistics

Table 6-1 below provides primary data analysis and summary statistics of the UAE's capital market dataset. The panel set used for the UAE's capital market includes a total of 279 firm-year observations, these observations represents the complete set of companies that have the required information (financial and governance) during the sampling period of this research (from 2008 to

2014). In line with prior corporate finance literature, winsorization method was applied on all financial variables at 1% level to ensure that the findings of estimating the governance-performance model which is not driven by the presence of outliers in this thesis.

The mean (median) of *Tobin's Q ratio* is 1.30 (0.99), indicating that nonfinancial firm listed in the UAE's capital market are enjoying value creation for its shareholders, at least, during the sampling period, since the greater then one Tobin's Q is favourable. However, firm performance analysis revealed in Table 6-1 below suggests that firm in the UAE market might be affected by the macroeconomic conditions i.e., the recent financial crisis, as the variation between the minimum (0.35) and the maximum (15.33) are relatively wide. Such effects of macroeconomic conditions are taken into account by introducing fixed year effects into the empirical models in the next stage.

As noted for the Jordanian capital market, ownership structure of the UAE's firms seems to be concentrated with the presence of multiple blockholders. The mean (median) of the percentage of stocks held by family investors is 0.14 (0.08), while the mean (median) of percentage of stocks held by institutional investors is 0.30 (0.25) respectively. The mean (median) of the aggregate stocks held by the multiple blockholders is 0.53 (0.58). However, this percentage is relatively lower when compared to other emerging markets (for example see Wang & Shailer 2015). This implies that family and institutional investors in the UAE's capital market have lower levels of stock ownership than those reported in the previous chapter of the Jordanian capital market. It should be noted also that there is other form of blockholders who dominant the UAE capital market which is the government (sovereign) ownership, as most of this government ownership refers to the royal families that govern these Emirates. However, to facilitate the comparisons between Jordan and the UAE, only institutional and family ownerships were selected in this context.

With respect to the board of directors' level, the number of board members sitting on the boards seems to be similar and relatively identical to this reported in the previous chapter (Chapter 5) for the Jordanian nonfinancial firms. The mean (median) of the board size is 8.12 (8.00) respectively. This is also identical to the average of the board members of the MENA region listed firms. On the other hand, board independence level seems to be relatively higher than that of the Jordanian listed firms. The mean (median) of the board independence is 0.70 (0.73) respectively. This indicates that boards in listed UAE firms appointing more independent members to ensure the vigilant monitoring role of the boards.

Table 6-1 Descriptive statistics

	Obs.	Mean	Median	SD	Min	Max
Tobin's Q Ratio	279	1.30	0.99	1.25	0.35	15.33
Family/individual ownership (%)	279	0.14	0.08	0.18	0.00	0.70
Institutional ownership (%)	279	0.30	0.25	0.21	0.00	0.85
Ownership concentration (%)	279	0.53	0.58	0.20	0.06	0.88
Board Size (members)	279	8.12	8.00	2.06	5.00	16.00
Board independence (%)	279	0.70	0.73	0.19	0.22	1.00
Firm size [ln (market capitalization)]	279	19.63	19.59	1.43	17.01	24.17
Firm age (year)	279	24.19	29.00	13.20	1.00	55.00
Financial leverage %	279	0.38	0.40	0.21	0.04	0.98

Note: This table presents the summary of descriptive statistics of the research key variables in its original form except where it was specified as a logarithms form. The research sample comprises 40 non-financial firms listed in Emirates Securities Market (ESM) of the UAE. The variables are as described in Table 4-4.

Table 6-2 presents the pair-wise correlation matrix and the collinearity diagnostics represented by the variance inflation coefficients. First of all, it is observed that there is a significant raw positive correlation between most of the internal (firm-level) governance variables and firm performance (*lnQ*). Specifically −*OwnTotal, lnBsize and Bind*− have significant positive correlations with firm performance (*lnQ*)at 1% and 5% respectively. It should be noted that larger firms seem to have larger boards. Firm size (*lnFsize*) is significantly positively correlated with board size (*lnBsize*) with 0.43 correlation coefficient significant at 1% level. This is in line with prior corporate governance literature (see for example; Nguyen et al. 2014). Similarly, board independence (*Bind*) is positively correlated with firm size (*lnFsize*) with 0.21 correlation coefficient significant at 1% level.

On the other hand, both ownership structure indicators (*FamOwn* and *OwnTotal*) are significantly negatively correlated with board size (*lnBsize*). This implies that the higher are the percentage of stocks held by blockholders the lower are the board size and the less board members appointed. This may support the entrenchment hypothesis. Furthermore, it is important to note that the dynamic effect exists when using the UAE's dataset. Table 6-2 shows that the one-year lagged dependent variable (*laglnQ*) is statistically significantly positively correlated with the current performance indicator (*lnQ*). These results are in line with the recent advances in corporate governance research, which suggest that the dynamic effect of the pervious performance must be included when modelling the relationship between corporate governance and firm performance (Wintoki et al., 2012; Nguyen et al., 2014, 2015).

The multicollinearity diagnostics presented in VIFs column in Table 6-2 below suggest that the empirical estimations in this chapter are free from any serious collinearity issues. As reported below, the higher correlation coefficient is 0.65 between *laglnQ* and *lnQ*. Prior related econometric literature suggests that any correlation coefficient exceeds the 0.80 threshold limit that may present serious issues. This implies that estimating the governance-performance relationship within the UAE's framework is, therefore, free from multicollinearity issues.

Table 6-2 Pair-wise correlation coefficients and variance inflation factor coefficients of UAE's sample

	lnQ	FamOwn	InstOwn	OwnTotal	lnBsize	Bind	lnFsize	lnFage	leverage	laglnq	*VIFs*
lnQ	1.00										
FamOwn	0.09	1.00									*2.26*
InstOwn	-0.06	-0.48***	1.00								*2.29*
OwnTotal	0.14**	0.28***	0.39***	1.00							*2.06*
lnBsize	0.14**	-0.32***	0.06	-0.32***	1.00						*1.43*
Bind	0.19***	-0.07	-0.08	-0.07	0.11*	1.00					*1.12*
lnFsize	0.18***	-0.45***	0.20***	-0.23***	0.43***	0.21***	1.00				*1.50*
lnFage	-0.01	0.37***	-0.12**	0.17***	-0.27***	-0.14**	-0.28***	1.00			*1.31*
Leverage	0.12**	-0.11*	-0.06	-0.13**	0.13**	0.15**	0.21***	-0.31***	1.00		*1.18*
laglnQ	0.65***	0.09	-0.07	0.15**	0.15**	0.18***	0.09	-0.01	0.11*	1.00	*1.17*

Note: Asterisks indicate significance at 10% (*) 5% (**) and 1% (***). The notations are as defined in Table 4-4.

6.3 Multivariate Regression Analysis

The previous section suggests that most of the governance variables in this research have significant raw correlations with firm performance. Thus, taking a further step in examining the relationship between governance and firm performance is a matter of importance in this context. Accordingly, in this section, I estimate Eq. (6) is in different forms of estimation techniques[52]. First of all, the endogeneity of the governance variables used in the governance-performance model was initially checked. Then I examine the relationship between a suite of internal (firm-level) governance variables and firm performance in the UAE's market using three main four main econometric estimation techniques. Mainly, Dynamic OLS, Dynamic FE and Dynamic System GMM were applied.[53]

6.3.1 Endogeneity Tests

As noted earlier in subsection 5.3.1 of Chapter 5, all internal (firm-level) governance variables are endogenously treated in this thesis. This is according to the recent advances in corporate governance research i.e., Wintoki et al., (2012) among others. Therefore, in this section I empirically verify the endogeneity status of the regressors used in Eq. (6) by employing the DWH test for endogeneity. Accordingly, I follow Nguyen et al., (2014, 2015) , and I conduct Durbin–Wu–Hausman (DWH) test for endogeneity of all regressors as a group based on the levels equation of firm performance and corporate governance variables (Schultz et al., 2010). The instrumental variables are one-year lagged differences of the below independent variables; ΔlnQ_{it-1}; $\Delta FamOwn_{it-1}$; $\Delta InstOwn_{it-1}$; $\Delta OwnTotal_{it-1}$; $\Delta lnBsize_{it-1}$; $\Delta Bind_{it-1}$; $\Delta lnFsize_{it-1}$; $\Delta leverage_{it-1}$. In addition to these lagged instrumental variables, I further include *lnFage, year dummies and industry dummies* as the only exogenous variables in the GMM specifications.

As aforementioned previously, the DWH endogeneity test is based on the null hypothesis that the tested regressors can be treated as exogenous variables (Baum et al., 2007). Consequently, the DWH test's result indicates that the null hypothesis cannot be accepted at any conventional levels of significance (*Chi-sq(8) = 20.692; p = 0.009*). These results indicate that the relationship between corporate governance variables and firm performance in the UAE context is also subject

[52] It should be noted that board-duality variable dropped from Eq. (6) in all our regressions due to collinearity.
[53] Fixed-Effect FE estimations has been applied based on the Hausman test to choose between FE and RE.

to endogeneity issues. This also implies that prior corporate governance research executed in international context including the UAE using OLS and / or FE/RE estimations techniques may have biased and inconsistent results and, therefore, equivocal conclusions, which in terms highlight the importance of applying System GMM in this context.

6.3.2 System GMM Estimation Validity

As noted earlier, one important assumption to successfully execute efficient estimations using System GMM is to have valid instrumental variables. Accordingly, I mainly relied on Hansen-J test of over-identification and the difference-in-Hansen tests of the exogeneity of instrument subsets as suggested by Roodman, (2009b). This section is, therefore, examining the exogeneity of the instrumental variables used in these estimations.

Table 6-3 below provides evidence that I must accept the null hypothesis that the subsets of instruments used in the System GMM modelling are econometrically exogenous. The results, thus, imply that *year dummies* and *lnFage* are exogenous variables, while the endogenous variables (i.e. governance and other explanatory variables) are successfully instrumented by their one-year lagged dependent variables i.e. ΔlnQ_{it-1}; $\Delta FamOwn_{it-1}$; $\Delta InstOwn_{it-1}$; $\Delta OwnTotal_{it-1}$; $\Delta lnBsize_{it-1}$; $\Delta Bind_{it-1}$; $\Delta lnFsize_{it-1}$; $\Delta leverage_{it-1}$. The estimation results are reported in the next section.

Table 6-3 Difference-in-Hansen test for exogeneity of instruments subsets

Tested instrument subsets	Test statistics	Degree of freedom	P-Value
Panel A: System GMM-type instruments			
All instruments for equation in levels	12.93	8	0.114
$\ln Q_{it-3}$ *up to* $\ln Q_{it-6}$ (for equation in differences)	8.02	4	0.091
$\Delta \ln Q_{it-2}$ (for equation in levels)	0.20	1	0.658
Instruments for ownership structure variables	14.13	11	0.226
Instruments for board structure and control variables	11.45	16	0.781
Panel B: Standard instruments			
2009, 2010, 2011, 2012, 2014 year dummies, and lnFage	5.05	6	0.537

Note: This table represent Difference-in-Hansen test for exogeneity of instrument subsets used in this research. GMM instrument subset used for the equation in levels includes two-year lagged differences of firm performance variable; four-year lagged differences of ownership structure, board structure and other control variables. GMM instrument subset used for ownership structure variables includes four-year lagged differences and lags 4 in levels of these variables. GMM instrument subset used for board structure and the other control variables includes four-year lagged differences and lags 4 in levels of these variables. The subset of standard instruments for the equation in levels includes 2009, 2010, 2011, 2012, 2014 year dummies, and lnFage. 2008 (constant), 2013-year dummy dropped due to collinearity.

6.3.3 Empirical Results

As noted earlier, the relationship between corporate governance and firm performance is subject to three sources of endogeneity; (i) simultaneity, (ii) omitted variables, (iii) and measurement errors (Coles et al., 2012; Wintoki et al., 2012). In the presence of such endogeneity issues, System GMM provides more reasonable, consistent and reliable estimation results. Thus, I apply the dynamic panel data model to estimate the relationship between internal governance variables and firm performance on the full sample of the UAE's data. Moreover, I use other traditional estimators i.e. OLS and FE to facilitate comparisons of those results obtained by System GMM and to ensure the specification diagnostics. In fact, the notation behind using different estimators alongside the Dynamic System GMM is based on the idea, that the correlation between lagged dependent variable and the time-invariant component of the error term will be upward biased using OLS estimations, while it is expected to be downward biased using the FE estimations (Nickell, 1981). Thus, in doing so, I will make sure that the empirical analysis executed by System GMM that is on the right scale and on the correct direction.

Table 6-4 below reports the relationship between internal (firm-level) governance mechanisms and firm performance in the UAE. At the first place, the results show that one-year lagged dependent variable (*laglnQ*) is significantly related to current performance (*lnQ*) despite the estimation technique used. This also confirms the importance of including dynamics of previous performance when modelling governance-performance relationship. For specification purposes, the results of System GMM estimation below show that one-year lagged dependent variable (*laglnQ*) is positively correlated with current performance (α_1 = 0.553) and lies between those obtained by OLS (α_1 = 0.834) and FE (α_1 = 0.263). This suggests that System GMM is reasonable and produces more efficient results.

Regarding the governance variables effect on firm performance in this context, the results reported in (column 3) of Table 6-4 shows that only ownership concentration variable (*OwnTotal*)

has a significant positive relationship with firm performance (*lnQ*) at the 10% level. These results are in line with those obtained recently by Gaur et al., (2015), Acheson et al., (2016) and Nguyen et al., (2015) among others. Moreover, these results are in contradictions to the ownership concentration-performance hypothesis −Hypothesis$_3$− regarding the negative impact of stock-ownership concentration assumed on firm performance. Empirical analysis reveals also that other ownership structure variables i.e., (*FamOwn*) and (*InstOwn*) seems to have a negative relationship with firm performance using FE estimator. However, once endogeneity issues controlled −by using System GMM approach− this relationship vanishes.

It has been evidently noticed in prior corporate governance literature that the type of the large shareholders i.e., institutional and families, have the ability to enhance firm performance through efficient monitoring activities (Laeven & Levine, 2008). However, in this section of the thesis, the author failed to find any significant impact of the types of the dominant shareholders on firm performance in the UAE context. One explanation for the absent link between the share concentration type (or identity) and firm performance is the arguments presented by Brickley et al., (1988), which distinguish between pressure sensitive and pressure resistant owners which are categorized by the owner's ability and motivation to influence firm management, and hence, its performance. According to this typology, pressure sensitive institutional owners may have business ties with their firms that impede them from monitoring firm management. Insurance companies, banks and non-bank trusts are said to be pressure sensitive. On the other hand, pressure resistant owners have no conflicts of interest and, thus, have the ability to monitor firm management. Pension funds, hedge funds, and investment funds are said to be pressure resistant and in a better position to monitor firm management.

Supporting these arguments, Muller-Kahle, (2015) provides empirical evidence that the type of owner plays a large role in whether a shareholder has the inclination to engage in firm monitoring. It is worth noting that, the institutional investors of the UAE capital markets are usually found to be banks, insurance companies, and other large holdings companies. Accordingly, I argue that, the type of the dominant shareholders –of the nonfinancial firms listed in the UAE capital markets– seem to be classified as 'pressure sensitive' investors. Thus, it was difficult to observe any impact on firm performance by such types of dominant shareholders.

Moreover, compared to the empirical analysis presented in Table 5-4 in the previous chapter on the Jordanian case, results obtained in Table 6-4 suggest few implications on the substitutory

effect between externa (country-level)l and internal (firm-level) governance mechanisms. As noted earlier in subsection 3.4 of Chapter 3, UAE has stronger (than Jordan) legal and national governance environment, which in terms suggests that the relationship between firm-level governance variables and firm performance if exist might be weaker in its context according to the substitution hypothesis (Wang & Shailer, 2017). Accordingly, when comparing these results with those obtained in Table 5-4 in the previous chapter for the Jordanian context, it is evidently showing that ownership concentration has stronger relationship with firm performance in terms of magnitude and significance (significant at 5 %) compared with this for the UAE context (significant at 10%).

Similar to those results obtained in subsection 5.3.3 in the previous chapter for the Jordanian case, board of directors' variables seem to have no significant implications on the nonfinancial listed firm in the UAE capital markets. Which in terms show consistency only with the stated hypothesis $-\text{Hypothesis}_6-$ regarding the relationship between board independence and firm performance.

With regards to other firm-level explanatory variables, firm size (*lnFsize*) seems to have significant positive relationship with firm performance (*lnQ*) despite the econometric estimation approach used. Unlike results reported for the Jordanian market in Table 5-4, financial leverage (leverage) has no significant effect on firm performance in the UAE context. This results might be justified by the substitution effect between leverage and corporate governance in reducing the agency cost (Jiraporn et al., 2012). On the other hand, firm age (*lnFage*) seems to have significant positive impact on firm performance (*lnQ*). These findings are consistent with the "life-cycle" propositions that firm performance may depend on firm age and its life cycle stages.

Table 6-4 The relationship between corporate governance variables and performance in UAE (dynamic models)

	(1)	(2)	(3)
	lnQ	lnQ	lnQ
	OLS	FE	SYS. GMM
Explanatory variables	b/t	b/t	b/t
L.lnQ	0.834***	0.263***	0.553**
	(16.662)	(7.977)	(2.129)
FamOwn	0.134	-10.818***	0.630
	(0.869)	(-3.408)	(0.562)
InstOwn	-0.061	-11.036***	1.300
	(-0.376)	(-3.274)	(1.094)
OwnTotal	0.236*	10.698***	1.607*

	(1.669)	(3.581)	(1.857)
lnBosize	0.059	-0.061	-0.675
	(0.708)	(-0.388)	(-0.889)
Bind	-0.037	1.528	-0.390
	(-0.413)	(1.249)	(-0.608)
lnFsize	0.058***	0.404***	0.184**
	(3.397)	(9.642)	(2.639)
Leverage	0.202**	0.478	0.030
	(2.048)	(1.182)	(0.200)
lnFage	0.021	-0.049	0.728**
	(0.778)	(-0.548)	(2.410)
Intercept	-1.338***	-9.724***	-4.191
	(-2.909)	(-6.055)	(-1.412)
Number of observations	279	279	279
R-squared	0.814	0.686	
F statistic	42.573***	36.589***	
Wald chi2statistic			158.274***
Number of instruments			39
Number of clusters	40	40	40
Arellano-Bond test for AR(1) (p-value)			0.049
Arellano-Bond test for AR(2) (p-value)			0.640
Hansen-J test of over-identification (p-value)			0.176

Note: This table presents empirical analysis of examining Eq. (6) using three different estimation techniques; Pooled OLS, Fixed Effects, and dynamic (two-step system) GMM. Asterisks indicate significance at 10% (*) 5% (**) and 1% (***). P-values and t-statistics and z-statistics are based on robust standard errors and presented in brackets and parentheses. For the two-steps system GMM estimates reported in column (4) I use lag 4, lag 5, and lag 6 of the levels of *Tobin's Q, lnBsize, Bind, FamOwn, InstOwn, OwnTotal, lnFsize, leverage* as GMM-type instruments for the first-differenced equation. Whereas, four lags of the first differences of these variables is used as GMM-type instruments for the levels equation. Year dummies are unreported. 2011-year dummy dropped in Pooled OLS and FE model estimations. 2013-year dummy dropped in System GMM. The notations are as defined in Table 4-4.

6.3.4 Robustness Checks and Sensitivity Analysis

As noted by Roodman, (2009b) the robustness and efficiency of System GMM estimations depend on instrument number. Thus, it is very important to check the System GMM estimations sensitivity to reducing the number of instruments. Accordingly, the number of instruments was reduced from 39 to 30. It is worth noting that the lowest possible instruments number (30) was basically limited to the System GMM diagnostics and specification tests. In other words, when trying to reduce the number further than 30, the System GMM specifications and diagnostics tests violated. As reported in Table 6-5 below, the main findings regarding the relationship between

governance variables and firm performance obtained in Table 6-4 previously are generally remain unchanged. Only ownership concentration (*OwnTotal*) has significant positive relationship with firm performance (*lnQ*) despite the alternate performance metric used i.e., *ROE* and *ROA*. It is worth noting also that, the one-year lagged dependent variable is still holding significant relationship with current performance.

Table 6-5 Robustness check of the sensitivity of the results to the instrumental variables' reduction and alternative performance metrics

	Model (1) lnQ		Model (2) ROE		Model (3) ROA	
	(1)	(2)	(3)	(4)	(5)	(6)
	b	(z)	b	(z)	b	(z)
l.Performance	0.727***	(4.336)	0.271**	(2.486)	0.490***	(2.699)
FamOwn	-0.399	(-0.320)	0.973	(1.211)	0.160	(0.393)
InstOwn	-0.901	(-0.705)	1.179	(1.019)	0.162	(0.252)
OwnTotal	0.879*	(1.776)	0.873*	(1.763)	0.132**	(1.974)
lnBsize	-1.034	(-0.633)	0.016	(0.047)	-0.000	(-0.002)
Bind	0.016	(0.015)	-0.028	(-0.063)	0.017	(0.039)
lnFsize	0.260***	(2.693)	-0.033	(-0.458)	0.004	(0.129)
Leverage	-0.197	(-0.355)	0.220	(0.739)	0.085	(0.784)
lnFage	0.107	(0.696)	-0.025	(-0.297)	-0.016	(-0.528)
Intercept	-2.698	(-1.147)	(-1.002)	0.182	-0.295	(-0.337)
Observations		279		279		279
Wald chi2 statistic		180.970***		40.374***		59.855***
Number of instruments		30		30		30
Number of clusters		40		40		40
AR (1) (p-value)		0.004		0.189		0.198
AR (2) (p-value)		0.495		0.658		0.461
Hansen-J test (p-value)		0.427		0.513		0.236

Note: Asterisks indicate significance at 10% (*) 5% (**) and 1% (***). P-values and t-statistics and z-statistics are based on robust standard errors and presented in brackets and parentheses. In system GMM models I use Lag 2 only of the first differences of (*Tobin's Q, FamOwn, InstOwn, ForOwn, OwnTotal, lnBsize, Bind, lnFsize, and leverage)* variables as GMM-type instruments for the levels equation to reduce the instruments number, rather than all lags available as used in system GMM model reported in Table 5-4 . Year dummies are unreported. The notations are as defined in Table 4-4.

6.4 Chapter Summary

To address the first two-questions of this thesis, I examine the impact of internal (firm-level) governance mechanisms on firm performance using separate dataset of each country i.e., Jordan and UAE. Thus, this chapter presents the empirical analysis of examining the relationship between firm-level corporate governance and firm performance in the UAE's context, using Dynamic System GMM as main estimation technique. The main findings of this chapter obtained in Table

6-4 and the robustness analysis in Table 6-5 shows that only ownership structure matters for the performance of listed UAE's firms. More specifically, it is found that ownership concentration (*OwnTotal*) has a significant positive relationship with firm performance among other variables i.e., *FamOwn* and *InstOwn* stock ownership identify variables. These results contradict the research hypothesis -Hypothesis$_3$, where negative relationship between ownership concentration and firm performance was expected. However, these findings are consistent with mainstream academic literature on agency theory, suggesting that ownership concentration and control in the hand of large-shareholders can serve as efficient governance mechanism to solve the agency conflict, especially in the emerging markets, where the market forces and other external governance mechanisms are weak or even absent.

As noticed in the previous chapter i.e., Jordanian case, board of directors' variables –board size and independence– have no significant effect on firm performance in the UAE. these results are also in line with the recent advances in governance literature i.e., Wintoki et al., (2012) and Nguyen et al., (2015) among others. These results suggest that firms listed in the UAE capital market must pay less attention on the board composition and leadership structure, when it comes to its effects on firm performance. Overall, the empirical analysis indicates that, in the UAE context, ownership concentration is the most powerful governance tool that tends to align interests and bring financial benefits to shareholders. However, it should be noted that the type of (controlling) majority shareholders has no implications on firm performance in the UAE context. In the next chapter, I present empirical analysis of the effect of internal corporate governance mechanisms on firm performance using the combined sample of both markets i.e., Jordan and UAE. Moreover, I test the effect of differential validity of a country's national governance regimes on firm performance.

CHAPTER 7: GOVERNANCE VARIABLES AND FIRM PERFORMANCE –EVIDENCEF ROM THE COMBINED SAMPLE OF JORDAN AND UAE

7.1 Introduction

As noted earlier, the relationship between a suite of internal governance mechanisms and firm performance has been examined, using the separate dataset of Jordan and UAE in Chapter 5 and Chapter 6 respectively. Applying a similar approach, this chapter investigates the relationship between governance variables –country- and firm-level– and firm performance, using the combined sample of Jordan and UAE as a form of the MENA region capital markets. Accordingly, it further examines the direct effect of the national governance quality regimes –in which firms operate in– on firm performance. Thus, this chapter aims also at answering the third question of this thesis (What will be the effect of the external country-level governance mechanisms (national governance quality) on firm's financial performance in Jordan and in the UAE?).

The rest of this chapter is organised as following; section 7.2 below discusses the descriptive statistics of the dependent and the independent variables. Section 7.3 discusses the multiple regression analysis results which examines the relationship between governance mechanisms and firm performance using the aggregate dataset of Jordan and UAE. This analysis includes subsection 7.3.1 (the effect of internal governance mechanisms), subsection 7.3.1.1 (Pooled OLS, Dynamic OLS and Dynamic FE), subsection 7.3.1.2 (the validity of System GMM), subsection 7.3.1.3 (empirical evidence from Dynamic System GMM), and subsection 7.3.1.4 (sensitivity and robustness analysis of the main findings), and subsection 7.3.2 examines mainly the effect of national governance quality on firm performance. Subsection 7.3.2.1 presents robustness checks of the main findings generated in the previous section. Finally, subsection 7.4 provides the chapter summary.

7.2 Descriptive Statistics

Table 7-1 presents descriptive statistics of the dependent variables (firm performance) of the aggregate sample of Jordan and UAE, which includes 153 nonfinancial listed firms in Amman

Stock Exchange and Emirates Security Market, for the period from 2008 to 2014. The means of both accounting-base performance indicators (*ROA and ROE*) are the same at 0.03 level. The coefficient variation CV indicators for these two performance measures are greater than 1 (2.33 and 4.33 respectively), which imply that there are large differences between firms listed in these two capital markets in the accounting-based performance indications. However, with respect to market valuation (*Tobin's Q*), it has a (1.26) mean, and lower coefficient variation CV (0.67). This implies that firms in these two capital markets are enjoying higher equity valuation during the sampling period with lower major differences in *Tobin's Q* as a proxy measure of performance between firms. This might reflect the agency theory expectations about the efficient monitoring role of blockholders with high level of ownership and control in corporations (Fama & Jensen, 1983 and Burkart et al., 1997).

To check the normality of the dependent variables data set, I calculate Skewness and Kurtosis values. Based on these values reported in Table 7-1 below, the dependent variables (firm performance indicators) data set in its original form are not normally-distributed.

Table 7-1 Descriptive statistics of the dependent variables as a proxy measures of firm performance.

Variable	Obs	Mean	Median	SD	Min	Max	Skewness	Kurtosis	CV
Tobin's Q	1069	1.26	1.03	0.85	0.34	15.33	6.14	80.80	0.67
ROA	1069	0.03	0.04	0.07	-0.12	0.15	-0.46	3.13	2.33
ROE	1069	0.03	0.04	0.13	-0.30	0.25	-0.78	3.77	4.33

Note: Tobin's Q descriptive statistics are based on the original form of the data (no log transformation applied), while for ROA and ROE it is based on the winsorized form of data due to the presence of high outliers. CV is the Coefficient of Variation, which can be calculated by the following formula (Standard deviation/ Mean). CV is a useful measure of the relevance of the standard deviation because it is not affected by the units of measurement. The higher the CV (i.e. 1 or greater), the greater the variability of the data, and the lower the CV (i.e. approaching to zero) the less dispersion of the data (high uniformity). See (Liu, Pang, & Huang, 2006).

The normality assumptions of the dependent variables (performance metrics) used in this research has been evaluated by applying the Shapiro-Walk test of normality. This test is executed under the null hypothesis that the variables of interests are normally distributed. As shown in Table 7-2 below, the assumption of normality cannot be accepted at any level of significance. However, having this assumption violated does not seem to be a problematic, especially in a case where the sample size is large enough i.e., $N \geq 30$ (Berenson et al., 2012).[54]

[54]I executed the *t*-test to evaluate the sample size employed in this research is large enough to reasonably assume the normality across the variables of interests. The results of this test are reported in Table A1-12 in Appendix 1.

Moreover, the normality assumptions of the rest of numerical variables used in this research (i.e., *board size, board independence, family ownership, institutional ownership, ownership concentration, firm size, firm age and financial leverage*) were evaluated by employing Shapiro-Wilk test and the t-test, and results are reported in Table 7-3 below. The reported results suggest that the null hypothesis cannot be accepted at any level of significance also for the independent variables used in this research, suggesting that all variables in the analysis have no normal distributions across the sample.

Table 7-2 Shapiro-Wilk test for normality of the dependent variables before transformation

Variable	Obs	W	V	z	Prob>z
Tobin's Q	1,069	0.627	250.179	13.712	0.000
ROA	1,069	0.017	658.763	16.116	0.000
ROE	1,069	0.817	122.520	11.940	0.000

Note: This table reports the Shapiro-Walk test of normality of the dependent variables (performance alternative metrics) used in this research. The test is executed under the null hypothesis that these variables are normally distributed. ROA is the percentage ratio of the total assets scaled by the net income before tax. ROE is the percentage ratio of the total equity scaled by the net income before tax.

Table 7-3 Shapiro-Wilk test for normality of the numerical governance indicators and other control variables before data transformation

Variable	Obs	W	V	z	Prob>z
FamOwn	1,069	0.900	67.233	10.449	0.000
InstOwn	1,069	0.978	14.417	6.626	0.000
OwnTotal	1,069	0.973	18.159	7.199	0.000
Bsize	1,069	0.991	5.960	4.433	0.000
Bind	1,069	0.988	8.093	5.192	0.000
Fage	1,069	0.932	45.799	9.496	0.000
Fsize	1,069	0.168	557.311	15.701	0.000
leverage	1,069	0.924	51.155	9.771	0.000

Note: This table reports the Shapiro-Walk test of normality of the independent variables (corporate governance variables and other firm explanatory variables) used in this research across the sample of the two-countries. The test is executed under the null hypothesis that these variables are normally distributed. Variables are as defined in Table 4-4.

Furthermore, Levene's robust test for equality of variances was applied to evaluate the differences of variables' variances between the two-country samples–Jordan and the UAE. This test is executed under the null hypothesis that the variables' variances are identical across the combined sample of the two countries. The results are reported in Appendix 1.

On the other hand, Table 7-4 below shows descriptive statistics of the independent variables (corporate governance variables, and other explanatory variables) used in this research of the aggregate sample of Jordan and UAE. Overall, the mean (median) of shares held by shareholders

who own at least 5% (*ownership concentration*) during the sampling period is 0.59 (0.62) which is considered to be relatively high in line with other emerging markets (Wang & Shailer, 2015).

Moreover, it was found that *board size* of companies in these two countries has a mean (median) value of 8.20 (8.00) which is in line with the average board size of companies operating in the MENA region (IFC, 2008). Other characteristics of the board of directors show that *CEO-duality* is accounting for only 0.15 of the aggregate sample, while *board independence* is accounting for 0.60, suggesting that firms listed in Jordan and UAE in general, are adopting high independent board strategy with minimal CEO-duality in their board of directors' structure.

Table 7-4 Descriptive statistics of the corporate governance indicators and other control variables

	Obs	Mean	Median	SD	Min	Max
Family/individual ownership (%)	1069	0.21	0.11	0.25	0.00	0.99
Institutional ownership (%)	1069	0.34	0.30	0.26	0.00	0.99
Ownership concentration (%)	1069	0.59	0.62	0.22	0.06	0.99
Board Size (members)	1069	8.20	8.00	2.30	3.00	16.00
CEO duality	1069	0.15	0.00	0.36	0.00	1.00
Board independence (%)	1069	0.60	0.60	0.18	0.14	100.00
Firm age (year)	1069	21.85	17.38	14.97	1.00	77.00
Firm size [ln (market capitalization)]	1069	17.61	0.32	1.91	13.36	24.17
Financial Leverage (%)	1069	0.35	18.00	0.24	0.00	2.28

Note: This table contains descriptive statistics based on aggregate sample of 153 firm and 1069 firm-year observation from Jordan and UAE for the period (2008-2014). The variables are as defined in Table 4-4. For interpretation purposes, the descriptive statistics of board size, and firm age are calculated based on levels instead of logarithmic form. Financial data and other firms' characteristics for firms operating in Jordan and UAE capital markets downloaded from DataStream Database. Corporate governance and ownership structure data extracted manually from companies' annual reports which can be downloaded from the Amman Stock Exchange market for Jordanian listed companies, and from Abu Dhabi Security Exchange market and Dubai Financial market for UAE listed firms.

The mean (median) percentage of shares held by family members and individuals is around 0.21 (0.11), while the mean (median) for percentage of shares held by institutional investors is about 0.34 (0.30) in these two countries. The average leverage ratio is around 35% with an average firm age about 21.85 years since the initial public offering.

The significant correlation between most of the explanatory variables and the dependent variable (*lnQ*) observed in Table 7-5, indicate that, governance and other control variables may interact with firm performance in general. This implies that these variables are subject of importance, and must be included in the empirical model to avoid any potential omitted variable bias (Nguyen et al., 2015). In addition, results obtained in Table 7-5 support two important well-documented propositions in prior corporate governance research. Firstly, one-year lagged

dependent variable *(laglnQ*) is positively and statistically significantly related to *lnQ*, this implies that firm performance is path-dependent. On the other hand, one-year lagged dependent variable (*laglnQ*) is significantly correlated with most of the governance variables reveal the dynamic nature of the corporate governance–performance relationship which has an important implication for the choice of estimation method (Wintoki et al., 2012; Schultz, Tan, & Walsh, 2015; Nguyen et al., 2015).

The correlation analysis in Table 7-5 shows that most of the board of directors' variables, ownership structure and other control variables positively and significantly are related to firm's performance (*lnQ*). These findings are consistent with previous research that find a positive link between corporate governance internal mechanisms and performance to include (Maury, 2006; Al-Najjar, 2015; Bhagat & Bolton, 2008; Bruton et al., 2010; Hutchinson et al., 2015). Furthermore, it's evident from Table 7-5 below that none of the independent variables has a correlation coefficients higher than 0.80. Accordingly, this analysis will not suffer of any multi-collinearity issues as correlation coefficients is far below the 0.80 threshold as suggested by (Wooldridge, 2010). Moreover, the Variance Inflation Factors (*VIF*) for the variables to test for multicollinearity was calculated. Thus, as shown in the last column of Table 7-5, there is no indication that there is multicollinearity between the explanatory variables. None of these variables have a *VIF* value more than 10, the threshold suggested by econometrics literature, which would indicate that multicollinearity issue has no threats to the empirical estimates.

Table 7-5 Pair-wise correlation coefficients and variance inflation factor coefficients for the combined sample of Jordan and UAE.

	lnQ	FamOwn	InstOwn	OwnTotal	lnBsize	Bdual	Bind	lnFsize	leverage	lnFage	laglnQ	*VIFs*
lnQ	1.00											
FamOwn	0.11***	1.00										*7.20*
InstOwn	0.04	-0.58***	1.00									*6.92*
OwnTotal	0.25***	0.38***	0.43***	1.00								*5.52*
lnBsize	0.04	-0.34***	0.11***	-0.23***	1.00							*1.36*
Bdual	0.07**	0.16***	-0.11***	-0.00	0.02	1.00						*1.06*
Bind	0.06*	-0.19***	-0.01	-0.15***	0.34***	-0.06**	1.00					*1.23*
lnFsize	0.25***	-0.27***	0.09***	-0.03	0.34***	-0.13***	0.32***	1.00				*1.43*
leverage	0.05	-0.16***	0.03	-0.13***	0.00	-0.05	-0.04	0.10***	1.00			*1.07*
lnFage	0.09***	-0.20***	0.13***	-0.02	0.08***	-0.06*	-0.02	0.16***	0.12***	1.00		*1.09*
laglnQ	0.77***	0.10***	0.06*	0.26***	0.06*	0.06*	0.05*	0.22***	0.03	0.10***	1.00	*1.18*

Note: This table showing pair-wise correlation coefficients and the variance inflation factors (VIFs) based on the aggregate dataset of Jordan and UAE. The variables are as defined in Table 4-4. Asterisks indicate significance at 10% (*), 5% (**) and 1% (***) respectively.

7.3 Multiple Regression Analysis

This section presents the empirical evidence on the relationship between internal (firm-level) governance mechanisms using the aggregate sample of Jordan and UAE. While it discusses the effect of the national governance quality on firm performance in subsection 7.3.2.

7.3.1 The Effect of Internal (Firm-level) Corporate Governance Mechanisms on Firm Performance

This section presents examination of the impact of internal (firm-level) governance mechanisms on firm performance using the aggregate dataset of the two countries. As noted earlier internal corporate governance mechanisms in this context refer to ownership structure variables (share-ownership identity and concentration), and board of directors' variables (*board size, duality, and independence*). In line with prior corporate governance literature, this relationship was initially examined using OLS, Dynamic OLS and Dynamic FE estimators. In doing so, this will allow to get the best specifications to assign to the Dynamic System GMM later[55]. Second, I prove that the validity of the System GMM estimations by presenting the diagnostic tests. Third, I provide the evidence of the relationship between firm-level corporate governance and firm performance is based on System GMM estimations. Finally, I show the persistence of the main findings in the robustness and sensitivity analysis in subsection 7.3.1.4 below.

7.3.1.1 Pooled OLS, Dynamic OLS, and Dynamic FE Empirical Evidence

Table 7-6 below presents estimating Eq. (6) using four econometric approaches –Pooled OLS, Dynamic OLS, Dynamic FE and Dynamic System GMM– respectively. However, to facilitate comparisons between results obtained from traditional estimators and the System GMM, in this subsection, I discuss empirical analysis reported in the first three columns (2, 3, and 4) which represent the results of the Pooled OLS, Dynamic OLS and Dynamic FE regressions respectively. System GMM estimations and validity specifications will be reported in the nest subsections.

[55] See: Roodman, D.M., 2009. How to do xtabond2: an introduction to Difference and System GMM in Stata. The Stata Journal 9, 86–136.

First, column (2) in Table 7-6, presents the results of traditional Pooled OLS regression assessing the relationship between internal governance mechanisms and firm performance using the aggregate dataset of Jordan and the UAE. The results show that only board independence (*Bind*) and ownership concentration (*OwnTotal*) are positively related to financial performance. Conversely, institutional ownership (*InstOwn*) is negatively related to firm's financial performance. These results imply that corporate governance variables and ownership structure matter for financial performance. These findings are widely documented in prior related literature (see for example; (Abdallah & Ismail, 2016; Black, Carvalho, & Gorga, 2012; Munisi & Randoy, 2013). However, it should be noted that Pooled OLS regression technique does not consider that corporate governance variables are swamped with endogeneity. Thus, interpreting such results obtained by traditional estimators should be taken with caution (Schultz et al., 2015).

In a second step, and in order to account for the part of the endogeneity issues in governance-performance relationship, I follow Nguyen et al., (2015) and applied Eq. (6) in Dynamic Pooled OLS estimator which includes one-year lagged dependent variable on the right-hand side of the equation in order to account for any source of dynamic endogeneity, or the potential for unobservable factors which influence the firm's financial performance in previous periods to impact upon the contemporaneous relation of corporate governance and financial performance. Column (3) provides examinations of these results, which reveal that no support of the relationship between most of the governance variables and firm performance. These results are consistent with those obtained many scholars including (Schultz, Tan, & Walsh, 2010; Pham, Suchard, & Zein, 2011). Only family ownership variable (*FamOwn*) is positively related to firm performance at 10% significant level. However, it should be noted that Dynamic OLS does not completely account for all sources of endogeneity, and results obtained cannot be generalised in this context (Wintoki et al., 2012).

keeping in mind that, the Dynamic OLS approach does not account for the presence of other sources of endogeneity in governance research such as unobservable heterogeneity and/or simultaneity (Schultz et al., 2015), I apply the use of other common methods of panel data estimations i.e. fixed-effect (FE) and random-effects (RE). According to the Hausman test, the null hypothesis of the test cannot be accepted at any conventional levels of significance [*Chi-sq(15) = 2785.47; p-value=.000*]. Thus, I report the Fixed-Effect (FE) panel estimates in column (4). Interestingly, as in the Dynamic OLS model, I find corporate governance and ownership structure matter in the aggregate sample of these two countries. The relationship between

ownership structure variables and firm performance turns to be stronger. Moreover, I find that board size (*lnBsize*) is negatively related to firm's financial performance, while both ownership identity (*FamOwn* and *InstOwn*) and concentration (*OwnTotal*) are positively related to financial performance. However, Wintoki et al., (2012) noted that none of the three econometric approaches discussed thus far account for all the three forms of endogeneity (dynamic, heterogeneity, and simultaneity).

Thus, I follow Nguyen et al., (2015) and Schultz et al., (2015) and conduct the Durbin–Wu–Hausman (DWH) test for endogeneity on the governance, ownership structure, and control variables. The test statistic of 27.662 has 9 degrees of freedom and a p-value of 0.000, leading to reject the null hypothesis of exogenous regressions. This implies that the Pooled OLS and Fixed-Effects FE specifications exogeneity assumptions are violated, meaning their parameter estimates are biased and inconsistent (Schultz et al., 2015). As a result, only Dynamic System GMM approach will be able to produce consistent estimates as they are robust to the presence of the three endogeneity issues mentioned above in the corporate governance–performance relation (Wintoki et al., 2012). Accordingly, the next subsections (7.3.1.2 and 7.3.1.3) present System GMM specifications tests and estimation results, assessing the relationship between internal (firm-level) corporate governance mechanisms and firm performance using the combined sample of both capital markets.

Table 7-6 The relationship between internal governance mechanisms and firm's performance: evidence from the aggregate sample of Jordan and UAE

Dependent variable: Tobin's Q ratio [ln(Q)]				
Explanatory variables	Pooled Ordinary Least Squares (OLS)	Pooled Dynamic OLS	Fixed-effects Dynamic Panel	Dynamic SYS. GMM
	(2)	(3)	(4)	(5)
	b/(t)	b/(t)	b/(t)	b/(z)
LaglnQ	NA	0.840***	0.264***	0.470***
	NA	(38.223)	(6.815)	(3.392)
FamOwn	-0.033	0.148*	7.274***	3.526***
	(-0.215)	(1.667)	(2.752)	(2.782)
InstOwn	-0.303*	0.081	7.258***	2.541**
	(-1.865)	(0.864)	(2.843)	(2.068)
OwnTotal	0.711***	-0.068	7.698***	3.079**
	(4.694)	(-0.769)	(2.986)	(2.166)
lnBsize	0.014	-0.056	-0.298***	0.294
	(-0.234)	(-1.590)	(-3.503)	(0.851)
Bind	0.190**	-0.002	-0.002	0.075

	(2.234)	(-0.045)	(-0.020)	(0.133)
Bdual	0.034	0.009	-0.046	-0.215
	(1.007)	(0.407)	(-0.944)	(-0.613)
lnFsize	0.041***	0.015***	0.370***	0.235**
	(4.981)	(2.925)	(10.438)	(2.223)
Leverage	0.148**	0.075*	-0.514***	-1.073**
	(2.322)	(1.918)	(-3.500)	(-2.384)
lnFage	0.068***	-0.008	0.014	-0.032
	(4.021)	(-0.651)	(0.183)	(-0.351)
Intercept	-1.141***	-0.144	-5.565***	-4.856***
	(-6.406)	(-1.235)	(-7.752)	(-3.019)
Industry dummies	Yes	Yes	No	No
Firm-fixed effects	No	No	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
Number of observations	1069	916	916	916
R-squared	0.255	0.778	0.626	
F statistic	18.496***	96.401***	40.199***	
Wald Chi-squared statistic				132.040***
Number of instruments				44
Number of clusters			153	153
Arellano-Bond test for AR(1) (p-value)				0.002
Arellano-Bond test for AR(2) (p-value)				0.245
Hansen-J test of over-identification (p-value)				0.173

Note: This table reports empirical results from estimating Eq. (2). Specifically, column (2) reports the results obtained from pooled OLS method with clustering at the firm level. Column (3) presents the results obtained from dynamic OLS. Column (4) represent results obtained from fixed-effects (within-groups estimator) method. And finally, Estimations gained form two-step system GMM approach are reported in column (5). Asterisks indicate significance at 10% (*) 5 % (**) and 1 %(***). The explanatory variables are as defined in Table 4-4. t-Statistics of OLS, dynamic OLS, and FE estimators are reported in parentheses and based on robust standard errors corrected for potential heteroscedasticity and time-series autocorrelation within each firm. z-Statistics of system GMM model are reported in parentheses and based on Windmeijer-corrected standard errors. Year dummies and industry dummies are unreported. Year 2009 dropped in SYS GMM, year 2014 dropped in dynamic OLS and FE models.

7.3.1.2 The Validity of the System GMM Estimation

Before moving on to economic interpretations of the results which was obtained by applying the Dynamic System GMM estimator examining the relationship between firm-level corporate governance variables and firm performance, which are reported in column (5) of Table 7-6 above, it's very important to make sure that the assumptions lie behind this econometric approach are valid. According to Roodman, (2009a) the System GMM validity is crucial to the assumption that

the instruments are exogenous. Consequently, following Nguyen et al., (2015), I empirically check the validity of the system GMM estimator through the use of the Hansen-J test of over-identification and Difference-in-Hansen test of exogeneity of instrument subsets. The Hansen J-statistics reported in the last raw of Table 7-6 shows p-value of 0.173, indicating that the instruments as a (group) used in the System GMM estimator are valid and the moment conditions are well- specified for the System GMM specifications as long as the p-value lies on the threshold range (0.1-0.25) specified by (Roodman, 2009a, p. 129).

Recent advances in corporate governance research also suggests to use other tests to examine the endogeneity of the regressors. Therefore, I follow Nguyen et al., (2015) and applied the Difference-in-Hansen of exogeneity of the instruments subsets and the standard instruments to ensure the validity of the System GMM instruments. The null hypothesis of the Difference-in Hansen test is that the specified variables are proper instruments, i.e. that the set of examined instruments is exogenous. As it can be seen in Table 7-7 below, I cannot reject the null hypothesis of exogeneity of any GMM-instruments used, i.e. levels and differenced instruments, as well as the validity of standard IV instruments, indicating that both the subset and standard instruments used in the Dynamic Two-Step System GMM model are econometrically exogenous.

Additionally, Arellano & Bond, (1991) stated that the GMM estimator requires that there is first-order serial correlation AR(1) but that there is no second-order serial correlation AR(2) in the residuals. As reported in the bottom rows of Table 7-6, there is enough evidence to reject the null hypothesis of the AR(1) but not the AR(2) test, which supports the validity of the model specifications (Schultz et al., 2010). Furthermore, Roodman, (2009a) suggests additional deduction of the dynamic panel estimates' specification validity by checking if the estimated coefficient on the lagged dependent variable (*laglnQ*) lies between the values obtained from OLS and FE estimators, which is confirmed in the model (i.e., the following values are obtained: *OLS=0.840> GMM=0.470> FE=0.264*). Considering together the various diagnostic tests that have been conducted and reported in Table 7-6 and Table 7-7, respectively, there is enough evidence to confirm that, the empirical model satisfies the key validity assumptions of our Dynamic System GMM model in general, and hence, results can be officially reported in the next subsection.

Table 7-7 Difference-in-Hansen test for exogeneity of instruments subsets

Tested instrument subsets	Test statistics	Degree of freedom	P-Value
Panel A: System GMM-type instruments			
All instruments for equation in levels	14.19	9	0.116
$\ln Q_{it-3}$ *up to* $\ln Q_{it-6}$ (for equation in differences)	7.26	4	0.123
$\Delta \ln Q_{it-2}$ (for equation in levels)	0.90	1	0.343
Instruments for ownership structure variables	11.84	12	0.107
Instruments for board structure and control variables	22.45	20	0.117
Panel B: Standard instruments			
2010, 2011, 2012, 2013, 2014 year dummies, and lnFage	9.66	6	0.140

Note: This table represent Difference-in-Hansen test for exogeneity of instrument subsets used in this research. GMM instrument subset used for the equation in levels includes two-year lagged differences of firm performance variable; four-year lagged differences of board structure, ownership structure, and other control variables. GMM instrument subset used for board structure variables includes four-year lagged differences and lags 4 in levels of board structure variables. GMM instrument subset used for ownership structure and the other control variables includes four-year lagged differences and lags 4 in levels of these variables. The subset of standard instruments for the equation in levels includes 2010, 2011, 2012, 2013, 2014 year dummies, and lnFage. 2008 (constant), 2009-year dummy dropped due to collinearity.

7.3.1.3 Empirical Evidence from the Dynamic Two-Step System GMM Estimator

Given that the Dynamic Panel System GMM is the best estimation technique in this case and it is well-specified and confirmly-fitted, I examine Eq. (6) which is assessing the relationship between internal corporate governance mechanisms and firm performance by implementing the *xtabond2* –producing Two-Step System GMM– user written command in Stata 14.2 (Roodman, 2009a). The estimated model is for the period 2008-2014 and covers the aggregate sample of Jordan and UAE. The results using the Dynamic Two-Step System GMM with the Windmeijer, (2005) finite-sample correction were reported in column (5) of Table 7-6.

The variables of interests in this context are the internal (firm-level) governance mechanisms variables (i.e., *ownership structure and board of directors*). Interestingly, in line with recent findings of Pham et al., (2011); Wintoki et al., (2012); Nguyen et al., (2015); and Akbar et al., (2016), I find that board of directors variables have no statistical effects on firm's financial performance. These results show consistency with Hypothesis_6 only, where assumed that there will be no effect of board independence on firm performance. Only ownership structure variables (i.e. identity (*FamOwn and InstOwn*) and concentration (*OwnTotal*)) have significant positive influence on firm performance (*lnQ*). This is in consistent with Hypothesis_2 regarding the positive

effect of institutional investors' ownership and on firm performance. Moreover, these findings thus, support the theory of agency assumptions that ownership concentration appears to be an effective internal corporate governance strategy that helps to enhance firm performance, especially in emerging markets. Furthermore, the empirical evidence supports the substitution effect of internal corporate governance mechanisms. Rediker & Seth, (1995), Misangyi & Acharya, (2014), and Desender et al., (2013) offer support for the view that the effectiveness of internal corporate governance mechanisms must be considered conditional on the ownership structure of the firm. For example, Desender et al., (2013) argues that ownership concentration and board composition become substitutes in terms of monitoring management and that the strength of this substitution effect depends on the type of controlling shareholder as well. Intuitively speaking, the higher the ownership concentration and the lower the board's monitoring role. Under these perspectives, the substitution effect of the ownership structure in the sampled firms might be the reason that I could not find any link between board of directors' variables and firm's performance.

I also followed Park & Jang, (2010) and check for the possibility that ownership structure-financial performance relationship may be non-liner, by including a quadratic term of ownership concentration variable in Eq. (6). However, I find that the coefficient on the quadratic term of ownership concentration variable is insignificant regardless of the econometric approaches employed (i.e., OLS, FE, and/or System GMM). This implies that ownership structure does not follow the U-shaped pattern with regards to firm performance in Jordan and UAE. These results are similar to those obtained recently by Nguyen et al., (2015) and Wang & Shailer, (2015). In the next subsection, several additional tests were executed to check the robustness of the main results reported in Table 7-6 above.

7.3.1.4 Sensitivity Analysis of the Main Findings

As stated above, in this subsection I conducted few additional tests to verify the robustness of the main findings obtained in the previous subsections. First, I reduced the number of instrumented variables by dropping two governance indicators –board-duality and institutional ownership– (*Bdual and InstOwn*) from the model. It is highly that board duality (*Bdual*) as a factor variable may pose problems during estimation. Roodman, (2009a) argues that dummy variables that are high persistent across firms and may cause bias in the estimates' parameters. I also removed institutional ownership (*InstOwn*) from the model to check if ownership structure-

performance relationship would differ and change. Second, robustness checks were executed using two alternative accounting-based performance indicators i.e., ROA and ROE. The results obtained from the re-estimation using the Dynamic System GMM are provided below in Table 7-8.

Column 2 of Table 7-8 reports result nearly similar to those obtained from the initial Dynamic System GMM model presented previously in Table 7-6. Only ownership structure (*FamOwn*) still has a positive and significant influence on financial performance (*lnQ*). Moreover, these results are consistent when employing alternative financial performance metrics such *ROE* reported in column 3 and *ROA* reported in column 4 in both cases. It is also worth noting that past performance is still significant in explaining firm's current performance under the alternate performance metrics specifications (i.e. *ROE and ROA*).

Table 7-8 Internal corporate governance and financial performance: reduced form of governance and alternate performance measure.

Dependent variable:	Model (1) LnQ	Model (2) ROE	Model (3) ROA
	(2)	(3)	(4)
Explanatory variable	b/(z)	b/(z)	b/(z)
L.Performance	0.579***	0.657***	0.445***
	(5.937)	(6.466)	(4.448)
FamOwn	0.997***	1.153***	0.131*
	(3.145)	(2.904)	(1.865)
OwnTotal	0.825	1.232**	0.086
	(1.607)	(2.231)	(0.919)
lnBsize	0.096	0.383	-0.018
	(0.292)	(1.140)	(-0.299)
Bind	-0.240	-0.537	-0.160
	(-0.486)	(-0.824)	(-1.583)
lnFsize	0.190**	0.146	0.035***
	(2.275)	(1.589)	(2.589)
Leverage	0.919**	0.642*	0.029
	(2.564)	(1.660)	(0.224)
lnFage	-0.049	-0.056	-0.002
	(-0.894)	(-0.767)	(-0.230)
Number of observations	916	916	916
Wald Chi-squared statistic	156.039***	134.008***	80.200***
Number of instruments	42	41	40
Number of clusters	153	153	153
Arellano-Bond test for AR(1) (p-value)	0.000	0.000	0.000
Arellano-Bond test for AR(2) (p-value)	0.196	0.139	0.869
Hansen-J test of over-identification (p-value)	0.102	0.252	0.114

Note: This table reports empirical results from estimating Eq. (6) through the use of alternate firm performance metrics and reduced form of governance variables (variables Bdual and InstOwn are excluded from the dataset) using system GMM approach. Columns (2) and (3) present the results of robustness checks with alternative proxies for performance, including ROE and ROA respectively.2010-year dummy dropped in Model (2). In Model (3) further reduction of instrumental variables were applied by imposing restricted limits on firm performance variable to include two-lags only. The variables are as defined in Table 4-4. z-Statistics are reported in parentheses. Year dummies and intercepts are unreported. Asterisks indicate significance at 10% (*) 5 %(**) and 1 %(***) respectively.

7.3.2 The Effect of National (Country-level) Governance Quality on Firm Performance

One of the main interests in this chapter is on the role of national governance quality – external (country-level) governance mechanisms– in reducing the agency cost and hence, improving firm performance. Therefore, in Table 7-9 below the focus was on the National Governance Index (NGI) variable, and to examine its effect on firm performance using the combined sample of Jordan and the UAE. La Porta et al., (2002, p.1147) argued that "when their rights are better protected by the law, outside investors are willing to pay more for financial assets such as equity and debt. They pay more because they recognise that, with better legal protection, more of the firm's profits would come back to them as interest or dividends as opposed to being expropriated by the entrepreneur who controls the firm. By limiting expropriation, the law raises the price that securities fetch in the marketplace". As a result, $Hypothesis_7$ was formulated arguing that higher quality country-level governance mechanisms would results in greater firm performance. It should be noted that the empirical model presented in Table 7-9 below maintains, in addition to country-level governance mechanisms, the rest of firm-level governance and other specific characteristics discussed previously in Chapter 5 and 6.

The empirical analysis presented in Table 7-9, started by regressing the traditional (firm-level) governance mechanisms –ownership and board of directors' structures– on firm performance. It is evidently seen from this table that, the relationship between firm-level governance mechanisms and firm performance has not changed in its directions and magnitudes from what presented in the previous chapters (Chapter 5 and 6). Ownership structure variables load with positive and significant coefficients, suggesting that, the presence of controlling shareholders with high concentrated stock-ownership is instrumental in reducing agency costs in firms operating in such weak legal environments i.e., Jordan and UAE. Moreover, board of directors' structure variables –size, duality and independence– are still showing no significant

implications on firm performance, suggesting that the presence of multiple controlling shareholders substitute the monitoring role of the boards in this case. These results still indicate support for Hypothesis_2 and Hypothesis_6.

Next, in order to examine the effect of national (country-level) governance quality on firm performance, country-dummy variable was added to initially account for country-specific characteristic. Unlike firm-level governance mechanisms, National Governance variables are assumed to be exogenous to the choices made by firms (Nguyen et al., 2015) and Aslan & Kumar, 2014). Specifically, I run Eq. (7) in the Two-Step Dynamic System GMM estimator, and report the results in Table 7-9 below. First of all, it is found that the coefficient on country-dummy variable is statistically significant at the 5% level. Moreover, results show that the coefficient of the national governance variable (*NGI*) is positive and significant at a 10% level. Accordingly, this suggests that not only firm-level governance mechanisms are instrumental in solving agency problems, but also the institutional framework and the external governance mechanisms are instrumental in reducing firm's agency problems, and hence, increasing its performance (lnQ). This evidence is in line with the previously-stated hypothesis –Hypothesis_7– regarding the positive impact of national governance index on firm performance, and in line with recent empirical evidence provided by Nguyen et al., (2015). These results can be also justified, according to the existing literature, that good national governance is likely to encourage low-risk investments which in terms result in better profitability and lower performance variability of firms (Ngobo & Fouda, 2012). Moreover, the effective legal institutions may also reduce the risk premium demanded by investors, and hence firms' cost of capital (Hail & Leuz, 2006).

Regarding the control variables, results reported in Table 7-9 below show that firm size (lnFsize) and financial leverage (leverage) have positive coefficients and significant relationship with firm performance (lnQ) at a 1% level. These results are similar to those obtained in Chapter 5 on the Jordanian market. However, it should be noted that for the UAE's dataset, results reported previously in Table 6-4 show that only firm size (lnFsize) and firm age (lnFage) have significant positive relationship with firm performance. These results, perhaps, suggest that when the external governance mechanisms are active, internal governance mechanisms i.e., leverage become less efficient in aligning interests and reducing the agency problems. The next subsection (7.3.2.1), discusses the robustness checks and the sensitivity of the main findings presented earlier to alternative national (country-level) governance variables.

Table 7-9 The relationship between governance variables (internal and external) and firm performance

Dependent variable: Tobin's Q ratio [lnQ]		
	NGI	
	(2)	(3)
Explanatory variables	b	(z)
LaglnQ	0.438***	(3.449)
FamOwn	3.937***	(2.723)
InstOwn	3.628***	(2.742)
OwnTotal	3.762**	(2.449)
lnBsize	-0.096	(-0.306)
Bind	0.249	(0.479)
Bdual	-0.252	(-0.667)
lnFsize	0.297***	(3.379)
Leverage	1.116***	(3.043)
lnFage	-0.022	(-0.324)
NGI	0.066*	(1.91)
Number of observations		916
Wald Chi-squared statistic		217.7***
Number of instruments		43
Number of clusters		153
Arellano-Bond test for AR (1) (p-value)		0.003
Arellano-Bond test for AR (2) (p-value)		0.374
Hansen-J test of over-identification (p-value)		0.292

Note: This table reports empirical results from estimating Eq. (7), testing the relationship between governance variables (internal and external) and firm performance using the combined sample of Jordan and the UAE through System GMM approach. Variables are as reported and defined in Table 4-4 previously. Year dummies, country dummies, and the intercepts are unreported. 2009-year dummy dropped due to collinearity. Asterisks indicate significance at 10% (*) 5 % (**) and 1 % (***).

7.3.2.1 Robustness Analysis

This subsection presents the robustness checks and the sensitivity of the main findings to alternative national (country-level) governance indicators i.e., NGI(a) and Investor Protection Index IPI. In particular, the national governance variable NGI, was replaced by NGI(a) and IPI respectively, and the Eq. (7) was empirically examined though the Dynamic System GMM. Accordingly, the empirical results are reported in Table 7-10 below.

First of all, results obtained in Table 7-10 suggest that, the relationship between internal firm-level governance mechanisms and firm performance remain unabated. Ownership structure variables are still holding a significant positive relationship with firm performance, while other governance mechanisms i.e., board of directors' variables still have no significant impact on firm

performance in general. Other control variables i.e., firm size (lnFsize) and financial leverage (leverage) still have significant positive relationship with firm performance across the two models of NGI(a) and IPI.

Moreover, it is found that the estimated coefficients of the alternative national governance variables NGI(a) and IPI are qualitatively similar in both direction and magnitude to those obtained previously in Table 7-9. Specifically, column 2 and 3 presents significant effect of alternative national governance indicator (*NGI(a)*) which has been derived from (*NGI*) using factor analysis method. Column 4 and 5 present significant positive effect of investor protection index (*IPI*) is on firm's financial performance ($\beta = 1.334$). Thus, provides support for the Hypothesis_7. Moreover, these results are in line with La Porta et al., (2002) who provides evidence that firms in countries with stronger investor protection and more effective legal systems enjoy higher equity valuations. Similarly, Lskavyan & Spatareanu, (2011) argue that a country's higher legal shareholder protection may reduce monitoring costs and, hence, reduce firm's agency cost.

Table 7-10 Robustness checks and sensitivity analysis of the main findings to alternative national governance indicators

Dependent variable: Tobin's Q ratio [lnQ]				
	NGI(a)		IPI	
	(2)	(3)	(4)	(5)
Explanatory variables	b	(z)	b	(z)
LaglnQ	0.438***	(3.444)	0.357***	(2.694)
FamOwn	3.922***	(2.679)	4.478***	(3.09)
InstOwn	3.627***	(2.715)	4.119***	(3.064)
OwnTotal	3.766**	(2.416)	4.478***	(2.812)
lnBsize	-0.101	(-0.321)	-0.132	(-0.412)
Bind	0.245	(0.477)	0.067	(0.123)
Bdual	-0.253	(-0.671)	-0.268	(-0.697)
lnFsize	0.294***	(3.314)	0.357***	(3.751)
Leverage	1.115***	(3.034)	1.145***	(2.832)
lnFage	-0.021	(-0.326)	-0.024	(-0.295)
NGI(a)	0.029*	(1.907)		
IPI			1.334***	(4.246)
Number of observations		916		916
Wald Chi-squared statistic		222.3***		178.3***
Number of instruments		44		43
Number of clusters		153		153
Arellano-Bond test for AR (1) (p-value)		0.002		0.009
Arellano-Bond test for AR (2) (p-value)		0.371		0.459
Hansen-J test of over-identification (p-value)		0.297		0.133

Note: This table reports empirical results from re-estimating Eq. (7) using alternative national governance indicators through the use of System GMM approach. Columns (2 and 3) present the results of robustness checks with alternative proxies for national governance quality, mainly, NGI(a). Columns (3 and 4) present the results of robustness checks with alternative national governance quality variable (investors protection index IPI). Variables are as reported in Table 4-4. Year-dummies, country dummies, and the intercepts are unreported. 2014-year dummy dropped in IPI model due to collinearity. Asterisks indicate significance at 10% (*) 5 % (**) and 1 % (***).

7.4 Chapter Summary

As noted earlier, prior corporate governance literature has paid extensive attention to firm-level governance mechanisms and ignored the importance of the country-level governance instruments in reducing agency problems, and increasing firm performance (Nguyen et al., 2015). Therefore, this chapter examines the effect of governance variables (both internal and external) on firm performance using the combined dataset of Jordan and UAE as a form of emerging markets of the MENA region. The univariate analysis executed in Table 7-5 suggests that most of the internal (firm-level) governance indicators have significant correlations with firm performance measured by *Tobin's Q ratio*. However, once the endogeneity issues controlled via the use of the Dynamic System GMM, only ownership structure seems to have significant impact on firm performance. Specifically, it is found that there is a significant positive relationship between family ownership, institutional ownership, ownership concentration and firm performance, showing consistency with Hypothesis_2 which argued that higher institutional ownership is associated with higher firm performance.

These results reflect new empirical evidence in the Jordanian and UAE's capital markets of the MENA region. The results imply that a firm ownership structure is the most important element in interpreting the relationship between internal governance mechanisms and firm performance. Moreover, it is found that a firm's financial performance is positively dependent on country's national governance quality. The three national governance indicators (*NGI, NGI (a), and IPI*) seem to have significant positive impact on firm performance in both capital markets. This implies that, the higher the national governance quality levels, the higher the firm financial performance. This is consistent with prior law-and-finance work i.e., La Porta et al., (2002), Shleifer & Vishny, (2002) among others. Moreover, supporting these arguments, Nguyen et al., (2015) provided empirical evidence suggesting that national (country-level) governance quality has a positive impact on firm performance. Accordingly, these country- and firm-level governance factors may

construct the optimal governance bundle in interpreting the relationship between governance mechanisms and firm performance in Jordan and UAE's capital markets.

Moreover, it is found that, the relationship between internal governance indicators i.e., ownership concentration variables and firm performance is significantly stronger in Jordan where national governance quality is poor. This implies that the relationship between internal (firm-level) governance mechanisms is dependent on the country's institutional environment. Thus, it supports the arguments of the substitute effect between the internal (firm-level) and external (country-level) governance mechanisms.

Regarding other firm-level corporate governance mechanisms i.e., board of director's structure, empirical results show that, unlike the majority of prior governance literature, it is found that board of directors' variables i.e., *board size, board duality, and board independence* do not have any effects on firm performance in Jordan and UAE's capital markets, showing consistency with $\mathrm{Hypothesis}_6$. It should be noted that these results are similar to those results obtained recently by (Wintoki et al., 2012; Nguyen et al., 2015; Pham et al., 2011). Moreover, the compliance with the corporate governance code recommendation regarding – the existence of independent board members and splitting the roles of chairman and the CEO in Jordan – has no implications in solving the agency problem in general, and enhancing firm performance specifically in the Jordanian market. These results support the substitute arguments between the internal (firm-level) governance mechanisms i.e., ownership structure and firm performance.

The results reflect a new contribution which is consistent with the recent international conclusions that ownership structure (*concentration*) in the company is more important than board of directors in reducing the problem of agency in emerging markets. Dyck & Zingales, (2004) note that controlling shareholder's private benefits such as prestige and reputation do not always reduce firm value. As noted earlier, it has been also concluded that the role of ownership structure in enhancing firm performance is clear and more effective (stronger) in an environment characterised by weak legal and less national governance quality (i.e. Jordan).

All in all, the results reflect the importance of both firm's ownership structure and country's national governance quality in mitigating the agency problem, and as a result, enhancing firm performance in Jordan and UAE as a form of the emerging markets of the MENA region in general. These results are consistent with the agency and institutional theoretical assumptions only, among other corporate governance theories i.e., stewardship or resource dependency. Table 7-11 below

provides summary of the main empirical findings on the relationship between country- and firm-level corporate governance variables and firm performance examinations executed in this thesis as compared to the previously-stated hypotheses.

Table 7-11 A summary of the empirical findings of the relationship between governance variables and firm performance

Hypotheses	Tested relationship	Expected sign	Empirical sign
Ownership Structure			
$Hypothesis_1$	Family ownership-firm performance	-	+
$Hypothesis_2$	Institutional ownership-firm performance	+	+
$Hypothesis_3$	Ownership concentration-firm performance	-	+
Board of directors' structure			
$Hypothesis_4$	Board size-firm performance	-	**Ø**
$Hypothesis_5$	Board duality-firm performance	-	**Ø**
$Hypothesis_6$	Board independence-firm performance	**Ø**	**Ø**
National governance quality			
$Hypothesis_7$	National governance quality-firm performance	+	+

Note: Symbols (+), (–) and (Ø) represent positive, negative, and no significant relationships, respectively. This table formulated based on results reported previously in Table 7-9.

The final chapter of this thesis presents a summary of the empirical findings obtained in Chapter 5; Chapter 6; and Chapter 7, respectively, regarding the relationship between country- and firm-level governance variables and firm performance in nonfinancial listed firms in Jordan and UAE as form of small emerging markets. Accordingly, the first point of Chapter 8 shows discussions and conclusions on main findings reported in the previous part of this thesis (empirical analysis). The chapter then proceeds to explain the research contribution and implications concerning the relationship between internal (firm-level) governance and firm performance and the relationship between national governance (country-level) quality and firm performance in these two emerging markets of the MENA region. The chapter also presents limitations and directions for potential future research.

CHAPTER 8: RESEARCH CONCLUSIONS

8.1 Introduction

The review of extant literature discussed in Chapter 3, leads to identify three major gaps in corporate governance research relating to the relationship between governance and firm performance in general. Firstly, said prior literature fails to explore how the simultaneous applications of the major governance theories i.e., agency, stewardship, resource dependency, and institutional theories combine to explain this relationship. Secondly, prior governance literature tended to ignore the important role of the national governance quality (country-level) in mitigating agency conflicts, and hence, determining firm performance. Finally, it also has failed to impose best endogeneity issue controls on its empirical analysis, and hence, leading to biased and inconsistent parameter estimates that question the validity and reliability of the findings. This large literature lacks the ability to generalise the empirical evidence, and fails to conclude whether governance variables have positive or negative impact on firm performance if the inference of this relationship exists. Therefore, in this thesis, the aim was mainly at addressing these identified gaps, and further advance the academic understandings and improve the corporate governance practices and policy recommendations.

This chapter provides a summary of the empirical findings reported in chapter 5, 6 and 7 respectively, regarding the relationship between a suite of corporate governance –internal and external– variables and firm performance of the nonfinancial firms listed in Jordan and in the UAE's capital markets. The remained of this chapter is organised as following; general discussion and conclusions are reported in section 8.2. Relevant research contributions are reported in section 8.3. Section 8.4 summarise relevant implications for policy makers at both i.e., country- and firm-level. Limitations and future research recommendations are reported in sections 8.5 and 8.6 respectively. Finally, this chapter ended up by summary.

8.2 Discussion and Conclusion

One objective of this study was to determine the impact of six (firm-level) governance indicators *–family ownership, institutional ownership, ownership concentration, board size, board-duality and board independence–* on firm performance. Moreover, this study was motivated

by the recent calls for additional research on the national governance effects on firm performance, especially in emerging markets where internal firm-level governance activities are characterised by the presence of dominant majority shareholders. Using a panel dataset of (153) nonfinancial firms listed in two-emerging markets in the MENA region –Jordan and UAE, this research provides evidence that corporate governance in these two capital markets is characterised by the presence of multiple large (controlling) shareholders. Moreover, these shareholders are critical determinants of firm performance in both capital markets.

On the other hand, results revealed by the Two-Steps Dynamic System GMM suggest that board of directors' variables –size, duality and independence– are not efficient monitoring governance mechanisms when the presence of multiple blockholders is predominant. Moreover, consistent with prior literature i.e., La Porta et al., (2002) that weak external governance levels negatively affect firm performance. However, as noted earlier, the presence of strong multiple blockholders is likely to mitigate the weakness of the national governance environment i.e., Jordanian case. These results are consistent with two main governance theories, mainly; agency and institutions. Accordingly, this study fails to find any implications for the other utilised –in hypotheses development– theories i.e., stewardship and resource dependency theories on the Jordanian and the UAE's capital markets. Hence, only agency and institutional theories are relevant in explaining corporate governance issues in small emerging markets.

Moreover, the review of prior literature discussed in section **Error! Reference source not found.** of Chapter 3, shows that it is necessary to include the national governance quality context when examining the relationship between internal governance mechanisms and firm performance. The effect of national governance quality is directly related to the institutional theory. Thus, this research accounts for these national governance indicators in the empirical model, and find that firm performance is positively linked to the quality of the national governance of the country that these firms are embedded in.

It is worth noting that the relationship between internal governance mechanisms i.e., ownership concentration, and firm performance seems to be stronger in firms operating within a weak national governance environment i.e. Jordan. A something consistent with prior literature. La porta et al., (1998) provide evidence that internal corporate governance i.e., ownership concentration is actively developed in emerging markets to substitute for poor investors protection and other market instruments.

As illustrated in Table 5-4 and Table 6-4 in Chapter 5 and Chapter 6 respectively, the relationship between internal governance mechanisms and firm performance might be different across countries. Specifically, the performance of the firms is less affected by the internal governance mechanisms in a context of strong national governance indicators i.e., UAE. Furthermore, it seems that only ownership structure matter across emerging markets when it comes to the relationship between internal governance and firm performance. Thus, any recommendations should be directed to the importance of such blockholders that are efficiently able to impose vigilant monitoring activities on firm's agents, especially in countries characterised by absence of market for corporate control and weak national governance indicators in general. Next subsection proceeds to explain research contributions and significance.

8.3 Research Contributions

This research has several theoretical and practical contributions. As noted earlier in section 1.4 of Chapter 1, to the best of the researcher's knowledge, this research is among the first empirical researches to examine the impact of governance variables on firm performance (including national governance quality indicators) in Jordan and in the UAE as a form of the MENA region emerging market context, using dynamic framework. Moreover, this research is among the firsts to consider the research questions based on the simultaneous considerations posed by the main governance theories. Specifically, this research makes three contributions to the theoretical understandings of the relationship between governance variables and firm performance in small emerging markets' context.

First, prior corporate governance research has explored this contextual relationship using one theoretical lens, mainly and exclusively, the (agency theory). Or even using separate other theoretical viewpoints (i.e. stewardship, stakeholder or resource dependency). This research therefore, has collectively provide broader theoretical explanations of the relationship between corporate governance and firm performance in general. Specifically, this research adds to the existing literature by providing empirical evidence showing that firm performance and the extent that internal (firm-level) governance mechanisms are dependent on the country's national governance system quality. Thus, this research suggests that only agency theory and institutional theory are the most relevant in explaining governance issues in small emerging countries like

Jordan and the UAE, where ownership concentration and the presence of multiple large controlling blockholders is predominant.

Second, recent advances in corporate governance research highlight the difficulties in testing governance-performance relationship due to the potential of multiple endogeneity sources which may leads to severe econometric issues. As stated earlier, Wintoki et al., (2012) identify three endogeneity problems that a one should account for when modelling the relationship between governance and firm performance, otherwise, the estimations can be biased. These issues are (i) simultaneity (where the flow of causality is not purely from the independent variables to the dependent variable, or corporate governance structure and its financial performance are simultaneously determined), (ii) dynamic endogeneity (when a firm's governance structure is a results of its past financial performance), and (iii) unobservable heterogeneity (when the model is miss-specified and unobservable firm characteristics that may have direct impact on its performance are unaccounted).

Accordingly, this thesis tended to overcome this issue by adopting a comprehensive empirical model using a suite of internal (firm-level) governance mechanisms which accounts for firm's ownership structure and board of directors, and estimate the relation using different econometric estimators. More specifically, following Schultz et al., (2010); Nguyen et al., (2015); and Schultz et al., (2015), the empirical analysis started with a baseline estimation using a pooled OLS technique. Then moved to dynamic OLS which uncovers any relations, and then apply dynamic FE estimators and find casual relation between the variables of interests. However, it should be noted that OLS specifications is structured on an assumption of strict exogeneity, furthermore, the fixed-effect FE estimator only account for unobservable heterogeneity and unable to account for the other two potential source of endogeneity. Thus, drawing inference on these results seems to be impossible in the presence of the three endogeneity issues.

In light of this, the empirical analysis depends on Dynamic System GMM which is robust estimate for the three endogeneity issues discussed previously that may affect the relation between firm's internal governance and its financial performance. Consistent with recent advances in corporate governance research, it has been found that firm performance is path-dependent and past firm performance is positively correlated with current levels of performance. Thus, once endogeneity is controlled for, it is found that only firm's ownership structure (*identity and concentration*) has significant positive impact on financial performance. Sensitivity analysis

confirm the results are not only robust to reduced form of governance variables but also to the use of alternate financial performance metrics. This research highlight the crucial requests for addressing endogeneity when modelling governance-performance relationship, indicating that most of prior governance research has swamped with spurious correlations. Thus, this research reflects a new contribution that the most important board of directors' variable (*size, duality and independence*) that usually referred in prior literature have no significant impact on firm performance.

Third, this research adds another new contribution to the literature of governance and firm performance, which is that a country's national governance quality variables (i.e. NGI, NGI (a) and IPI) can predict firm performance. In a second stage of this analysis, the Dynamic System GMM was adopted to generate robust estimates of the relationship between a suite of governance (country- and firm-level) mechanisms and firm's financial performance. It has been found that better external (country-level) governance plays a positive role in determining firm's financial performance in these emerging markets (Jordan and UAE). Also, it should be noted that, the relationship between internal (firm-level) governance mechanisms and financial performance remain significant. Only ownership structure is positively associated with firm's financial performance. In summary, the results suggest that the financial health of a firm in such small emerging markets depend on the quality of the national governance system of the hosting country and on the firm's ownership structure only when it comes to governance perspectives.

8.4 Research Implications

The findings reported in this study have several important implications. First of all, in countries where institutional context is less developed i.e., Jordan, a firm-level policy may aim at promoting the ownership structure –ownership concentration– to improve the internal governance practices in publicly-traded firms and hence, increase its performance. Apart from this, publicly-traded firms in Jordan may benefit from attracting active types of large shareholders like institutional (i.e., pension and mutual funds, banks and other large financial institutions) and family investors. These types of investors seem to have the ability in protecting minority shareholder interests, by maintaining a balance of power between the firm's controller and hence, promoting higher firm performance indicators. However, it is found that the type of the controlling shareholders has no significant implications on publicly-traded firms in the UAE capital market.

These results have been justified by the activity status of the controlling shareholder i.e., 'pressure sensitive' and 'pressure resistant' owners, as stated in subsection 6.3.3 in chapter 6 previously.

Noticeably, it is found that board of directors' variables –size, duality and independence– have no significant effects on nonfinancial publicly-traded firms in both capital markets. This is in line with recent findings provided by Nguyen et al., (2015), Wintoki et al., (2012) among others. These results are consistent with the argument that the presence of strong controlling shareholders –ownership concentration– can substitute for other internal governance mechanisms i.e. board of directors' variables. These findings are robust after controlling for dynamic endogeneity, simultaneity, and unobserved time-invariant heterogeneity inherent in corporate governance research. Thus, a conclusion can be drawn confidently, that these results are not driven by such endogeneity and econometrics issues.

In addition to the aforementioned points, there are few other important implications for policy formulation. All companies listed and incorporated in Jordan and UAE capital markets must take in their accounts the below points:

Ownership structure–this research concludes that only ownership structure (share-identity and concentration) among other internal governance variables has significant positive impact on firm performance. When considering these outcomes in conjunctions with the conclusions reached in prior literature regarding "*entrenchment*" and "*private benefits*" (i.e., controlling shareholder may exacerbate the conflict and extract private benefits that eventually leads to deteriorate firm performance), the author recommend that ownership structure is an important governance element for firms in small emerging markets such as Jordan and the UAE. Specifically, to consider how different types of blockholders may create incentives rather than misalignments, and substitute the weak legal environment that firms are embedded in.

Board of directors – in light of the findings of this research and the subsequent theoretical and empirical debate that have been generated, the author recommends that guidelines must move beyond board characteristics (i.e. size, duality and independence) and instead seeks more practical approach (i.e. ownership structure) that reduce the agency problem and align principals and agents' interests towards shareholders' wealth maximization (firm performance).

Country's national governance -in light of the findings of this research and the subsequent theoretical and empirical debate that have been generated, it is highly recommended that policy

makers and regulatory legislators emphasize more efforts in enhancing the national governance system as it seems to have direct positive impact on firm performance in general.

Special recommendations- the Jordan Security Commission and the UAE's Securities and Commodities Authority must promote confidence in corporate governance reporting, especially, issues related to ownership structure. The corporate governance codes issued by these two independent governance regulators in these two countries have not stated any minimum or maximum ratios of ownership. Since the results in this research shows that the higher ratios of ownership by families (or individuals) or institutional investors are associated with higher firm performance. Furthermore, the results suggest that investors must consider the differences in a country's national governance systems. National governance quality indicators seem to have significant positive impact on firm performance in general. Finally, the best bundle of governance variables can be a combination of internal (firm-level) and external (country-level) indicators when explaining the relationship between governance and firm performance.

8.5 Research Limitations

Despite the considerable efforts paid in this research in order to achieve its aims, meet the research objectives and ensure the robustness of this study's results, and to guarantee the contribution in developing the theoretical and practical debate, few limitations might be considered in this context.

First, the set of corporate governance variables, for example, are exclusively related to those that can be practically measured but does not include those governance provisions where information is not observable. It's also important to mention that I only account for board size, independence, and duality to capture the effect of board of directors on firm performance, while there are other characteristics a one may consider i.e. board committee, gender diversity, and/or board's remuneration), inclusion of further information about those dimensions would certainly add more insights.

Second, this research includes only nonfinancial firms in the empirical analysis, while it excludes the banks and other financial firms based on their different governance and individual characteristics. Examining the extent to which governance affect firm performance in the financial firms' context may provide more new details and may add new trends in this relationship as banks and other financial institutions are usually excluded in governance research.

Third, as noted previously, this research uses only measures of corporate governance that are published on firm's annual reports. Thus, any other measures of corporate governance that were not available on the company's annual reports were not been used. For example, due to time limits, I did not use CEO tenure or other non-financial motivation of the agents that needs more in depth search and subsequent interview or questionnaire work.

Fourth, this study provides evidence based on data from only two small emerging markets of the MENA region–Jordan and the UAE. Despite that, to some extent, the results can be generalised to markets that share the same characteristics in the region, future studies dealing with corporate governance-performance relation should cover more areas and capital markets, especially, those who's looking at the national governance quality impact on firm performance. Collecting firm-level governance characteristics in the emerging markets of the MENA region is time-consuming process, especially with the absence of databases that covers firm's corporate governance and ownership structure characteristics of the MENA region. Such a research design may provide additional insights to the under covered governance-performance research.

Finally, in terms of estimation method, it should be noted that system GMM may has some limitations. First, as noted in the data analysis chapters, the validity of system GMM depends on the number of instruments used in the model, therefore, the number of instruments must be reduced to obtain robust estimations (Roodman, 2009b). Second, system GMM report two-step standard error, which systematically underestimate the real standard deviation of the estimates (Blundell et al, 2000). Moreover, Bun & Windmeijer, (2009, p. 1) argue that "the covariance stationary panel data AR(1) model the expected values of the concentration parameters in the differenced and levels equations for the cross-section at time t are the same when the variances of the individual heterogeneity and idiosyncratic errors are the same, which in terms indicates a weak instrument problem also for the equation in levels". However, it should be noted that these limitations have been considered in the empirical analysis chapters of this research.

8.6 Future Research Recommendations

This research is carried out to examine the impact of governance variables on firm performance. Thus, future research should consider the limitations discussed in section 8.5 above, and use the outcomes of this study as the following:

First of all, as noted earlier that this research use nonfinancial listed firms as population to examine the relationship between governance variables and firm performance. Future research should therefore seek to examine this relationship within the context of listed banks and other financial institutions, especially, after the conclusions of the Financial Crisis Inquiry Commission, (2011) who stated that big banks and financial institutions in the US market suffered from a systematic breakdown of the corporate governance system that eventually lead to the financial crisis (2007/2008).

Second, this thesis has identified a suit of internal corporate governance mechanisms (mainly six governance indicators) through which to observe the effect of governance variables on firm performance. Thus, future research is recommended to seek and identify further governance indicators that could be used to examine the relationship between governance variables and firm performance. In doing so, this expected to progressively increase the extent to which the corporate governance dynamics affect firm performance is fully understood.

Third, the empirical analysis executed in subsection 7.3.1.4 and 6.3.3 of Chapter 7 and 6 respectively, suggest that there might be some differences in the effect of corporate governance variables on firm performance between countries. In this research, I mainly depend on data extracted from two countries of the MENA region (Jordan and UAE) as a platform to conduct this analysis. Accordingly, the relationship between corporate governance and firm performance examination reveals that ownership concentration and share-ownership identity are both positive determinants of firm performance in Jordan. While only ownership concentration has significant positive effect on firm performance in UAE. Future research therefore, should study the country effect on the relationship between governance and firm performance, or consider more markets' data in their empirical analysis.

Fourth, this research has further examine the direct impact of the national governance quality on firm performance, however, in light of the conclusions that the country's regulatory framework and environment has significant positive impact on firm performance, it is suggested that future research needs to shed the light and track the important interaction between national governance variables (country-level) and internal corporate governance variables (firm-level) and how this interaction affect firm performance eventually.

8.7 Chapter Summary

This chapter concludes the research with a summary of empirical findings, contributions, and implications. Given the limitations of this research, it provides recommendations for future research venues. The main interest of this research is twofold; (i) whether the relationship between internal (firm-level) governance mechanisms and firm performance of listed nonfinancial firms in Jordan and in the UAE, exists as small emerging markets of the MENA region, characterised by the presence of high share-ownership concentration levels; and (ii) whether the national (country-level) governance mechanisms directly affect firm performance in these two markets.

Accordingly, using a panel dataset of 1069 firm-year observations from the two countries, this thesis examines the relationship between internal and external governance mechanisms and firm performance, by applying the Dynamic System GMM as main econometric data analysis technique. The empirical analysis reveal that; (i) ownership concentration variables –family ownership, institutional ownership and ownership concentration– have significant positive impact on firm performance among other governance variables i.e., board of directors' variables; and (ii) national governance quality indicators –world governance indicators and investors protection index–are associated with higher firm performance. The findings of this research provide useful significant evidence on the relationship between corporate governance and firm performance in MENA region –a subject matter that has not been covered by prior corporate governance literature. Therefore, these significant conclusions provide new dimensions on this relationship, and provide starting point for much of future related studies.

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Appendices

Appendix 1

Data Normality Tests

Table A1-1

Shapiro-Wilk test of UAE's data normality

Variable	Obs	W	V	z	Prob>z
Q	279	0.833	31.644	8.056	0.000
Bsize	279	0.951	9.293	5.199	0.000
Bind	279	0.952	9.034	5.133	0.000
FamOwn	279	0.905	18.008	6.741	0.000
InstOwn	279	0.956	8.352	4.950	0.000
OwnTotal	279	0.942	10.936	5.578	0.000
lnFsize	279	0.970	5.714	4.064	0.000
Fage	279	0.932	12.942	5.971	0.000
Leverage	279	0.967	6.302	4.293	0.000

Note: This table represent Shapiro-Wilk normality tests of the UAE's data (dependent and independent variables). Data in this table are raw data except where it is specified as "ln". Data reported under "W" are the Shapiro-Wilk test statistics. The "V" values are indexes for to which extent data are departure from normality. The median values of V indexes are 1 for samples from normal populations. This implies that large values indicate data nonnormality. Based on this results, we cannot accept the null hypothesis that data is normally distributed. Variables are as defined in **Table 4-4**.

Table A1-2

Shapiro-Wilk test of Jordan's data normality

Variable	Obs	W	V	z	Prob>z
Q	790	0.826	87.063	10.945	0.000
Bsize	790	0.991	4.540	3.707	0.000
Bind	790	0.981	9.671	5.560	0.000
FamOwn	790	0.897	51.693	9.667	0.000
InstOwn	790	0.978	11.000	5.876	0.000
OwnTotal	790	0.969	15.700	6.747	0.000
lnFsize	790	0.974	12.794	6.246	0.000
leverage	790	0.904	47.933	9.482	0.000
Fage	790	0.896	52.042	9.684	0.000

Note: This table represent Normality test of Jordan's data (dependent and independent variables) using Shapiro-Wilk test. Data in this table are raw data except where it is specified as "ln". Data reported under "W" are the Shapiro-Wilk test statistics. The "V" values are indexes for to which extent data are departure from normality. The median values of V indexes are 1 for samples from normal populations. This implies that large values indicate data nonnormality. Based on this results, we cannot accept the null hypothesis that data is normally distributed. Variables are as defined in **Table 4-4**.

Table A1-3

Levene's robust test for equality of variances of Q across samples.

Country	Mean	Std. Dev.	Freq.
UAE	1.183	0.617	279
Jordan	1.242	0.634	790
Total	1.227	0.630	1069

W0= 0.16872142	df(1, 1035)	Pr>F=0.681336
W50= 0.04317418	df(1, 1035)	Pr>F=0.835439
W10= 0.07259195	df(1, 1035)	Pr>F=0.787653

Note: This table represent testing the homogeneity of variances assumption across samples (UAE and Jordan) using the Levene's test for the Tobin's Q Ratio in its raw form. Tobin's Q ratio is as defined in **Table 4-4**. In this context, we fail to reject the null hypothesis that the group (Tobin's Q) variances are equal, since the value of the Levene test statistic is less than the critical value.

Table A1-4

Levene's robust test for equality of variances of Bosize across samples.

Country	Mean	Std. Dev.	Freq.
UAE	8.091	2.071	279
Jordan	8.245	2.381	790
Total	8.207	2.307	1069

W0 = 11.957	df(1, 1035)	Pr>F = 0.000
W50 = 12.804	df(1, 1035)	Pr>F = 0.000
W10 = 12.990	df(1, 1035)	Pr>F = 0.000

Note: This table represent testing the homogeneity of variances assumption across samples (UAE and Jordan) using the Levene's test for the Board Size variable in its raw form. Board size variable is as defined in **Table 4-4**. In this context, we reject the null hypothesis that the group (Board size) variances are equal, since the value of the Levene test statistic is greater than the critical value.

Table A1-5

Levene's robust test for equality of variances of Bind across samples.

Country	Mean	Std. Dev.	Freq.
UAE	0.694	0.186	279
Jordan	0.567	0.159	790
Total	0.599	0.175	1069

W0 = 13.797	df(1, 1035)	Pr>F = 0.000
W50 = 11.367	df(1, 1035)	Pr>F = 0.000
W10 = 11.862	df(1, 1035)	Pr>F = 0.000

Note: This table represent testing the homogeneity of variances assumption across samples (UAE and Jordan) using the Levene's test for the Board Independence variable in its raw form. Board independence variable is as defined in **Table 4-4**. In this context, we reject the null hypothesis that the group (Board Independence) variances are equal, since the value of the Levene test statistic is greater than the critical value.

Table A1-6

Levene's robust test for equality of variances of FamOwn across samples.

Country	Mean	Std. Dev.	Freq.
UAE	0.141	0.184	279
Jordan	0.236	0.270	790
Total	0.212	0.255	1069

W0 = 50.206	df(1, 1035)	Pr>F = 0.000
W50 = 22.918	df(1, 1035)	Pr>F = 0.000
W10 = 30.011	df(1, 1035)	Pr>F = 0.000

Note: This table represent testing the homogeneity of variances assumption across samples (UAE and Jordan) using the Levene's test for the Family Ownership variable in its raw form. Family ownership is as defined in **Table 4-4**. In this context, we reject the null hypothesis that the group (Family Ownership) variances are equal, since the value of the Levene test statistic is greater than the critical value.

Table A1-7

Levene's robust test for equality of variances of InstOwn across samples.

Country	Mean	Std. Dev.	Freq.
UAE	0.306	0.211	279
Jordan	0.355	0.267	790
Total	0.343	0.255	1069

W0 = 30.678	df(1, 1035)	Pr>F = 0.000
W50 = 30.860	df(1, 1035)	Pr>F = 0.000
W10 = 28.742	df(1, 1035)	Pr>F = 0.000

Note: This table represent testing the homogeneity of variances assumption across samples (UAE and Jordan) using the Levene's test for the Institutional Ownership variable in its raw form. Institutional ownership is as defined in **Table 4-4**. In this context, we reject the null hypothesis that the group (Institutional Ownership) variances are equal, since the value of the Levene test statistic is greater than the critical value.

Table A1-8

Levene's robust test for equality of variances of OwnTotal across samples.

Country	Mean	Std. Dev.	Freq.
UAE	0.537	0.199	279
Jordan	0.603	0.230	790
Total	0.586	0.224	1069

W0 = 4.506	df(1, 1035)	Pr>F = 0.033
W50 = 5.575	df(1, 1035)	Pr>F = 0.018

W10 = 4.977	df(1, 1035)	Pr>F = 0.025

Note: This table represent testing the homogeneity of variances assumption across samples (UAE and Jordan) using the Levene's test for the Ownership Concentration variable in its raw form. Ownership concentration is as defined in **Table 4-4**. In this context, wereject the null hypothesis that the group (Ownership Concentration) variances are equal at .05 significance, since the value of the Levene test statistic is greater than the critical value.

Table A1-9

Levene's robust test for equality of variances of Fage across samples.

Country	Mean	Std. Dev.	Freq.
UAE	24.419	12.978	279
Jordan	21.171	15.546	790
Total	21.992	14.999	1069

W0 = 0.362	df(1, 1035)	Pr>F = 0.547
W50 = 0.026	df(1, 1035)	Pr>F = 0.870
W10 = 0.046	df(1, 1035)	Pr>F = 0.828

Note: This table represent testing the homogeneity of variances assumption across samples (UAE and Jordan) using the Levene's test for the Firm Age variable in its raw form. In this context, we fail to reject the null hypothesis that the group (Firm Age) variances are equal, since the value of the Levene test statistic is greater than the critical value. Firm age is as defined in **Table 4-4**.

Table A1-10

Levene's robust test for equality of variances of leverage

Country	Mean	Std. Dev.	Freq.
UAE	0.382	0.211	279
Jordan	0.346	0.249	790
Total	0.355	0.240	1069

W0 = 2.033	df(1, 1035)	Pr>F = 0.154
W50 = 1.231	df(1, 1035)	Pr>F = 0.267
W10 = 1.292	df(1, 1035)	Pr>F = 0.255

Note: This table represent testing the homogeneity of variances assumption across samples (UAE and Jordan) using the Levene's test for the financial leverage variable in its raw form. Financial leverage is as defined in **Table 4-4**. In this context, we reject the null hypothesis that the group (financial leverage) variances are equal, since the value of the Levene test statistic is greater than the critical value.

Table A1-11

Levene's robust test for equality of variances of lnFsize across samples.

Country	Mean	Std. Dev.	Freq.
UAE	19.634	1.438	279
Jordan	16.902	1.524	790
Total	17.592	1.914	1069

W0 = 2.204	df(1, 1035)	Pr>F = 0.137
W50 = 2.081	df(1, 1035)	Pr>F = 0.149

W10 = 2.099	df(1, 1035)	Pr>F = 0.147

Note: This table represent testing the homogeneity of variances assumption across samples (UAE and Jordan) using the Levene's test for the Firm Size variable in its transformed form (ln). Firm size is as defined in **Table 4-4**. In this context, we reject the null hypothesis that the group (Firm size) variances are equal, since the value of the Levene test statistic is greater than the critical value.

Table A1-12

T-test for mean values of dependent and independent variables across samples.

	Total observations	Obs. Of. UAE	Obs. Of. Jordan	Mean UAE	Mean Jordan	Mean difference	t-statistics
Q	1069	279	790	1.18	1.24	-0.06	(-1.330)
Bsize	1069	279	790	8.09	8.25	-0.15	(-1.006)
Bind	1069	279	790	0.69	0.57	0.13***	(9.893)
FamOwn	1069	279	790	0.14	0.24	-0.09***	(-6.348)
InstOwn	1069	279	790	0.31	0.36	-0.05***	(-3.059)
OwnTotal	1069	279	790	0.54	0.60	-0.07***	(-4.452)
LnFsize	1069	279	790	19.63	16.90	2.73***	(26.176)
Fage	1069	279	790	24.42	21.17	3.25***	(3.324)
Leverage	1069	279	790	0.38	0.35	0.04**	(2.301)

Note: This table presents the t tests on the equality of (dependent and independent) means across samples (UAE and Jordan). Variables are as defined in **Table 4-4**. Asterisks indicate significance at 10% (*) 5% **, and 1% *** respectively.

Table A1-3

T-test for mean values of dependent and independent variables across samples on the basis of year

	2008	2009	2010	2011	2012	2013	2014
	b (t)	b (t)	b (t)	b (t)	b (t)	b (t)	b (t)
Q	1.660	1.110	1.010	1.050	1.060	1.200	1.200
	1.310	1.290	1.300	1.220	1.180	1.170	1.220
	0.35***	-0.18*	-0.29***	-0.160	-0.120	0.030	-0.020
	-2.759	(-1.750)	(-3.051)	(-1.385)	(-1.068)	-0.207	(-0.150)
Bsize	8.240	8.270	8.210	8.030	8.000	7.970	7.920
	8.420	8.520	8.320	8.250	8.150	8.080	7.980
	0.170	-0.250	-0.110	-0.230	-0.150	-0.110	-0.060
	(-0.461)	(-0.663)	(-0.260)	(-0.544)	(-0.344)	(-0.255)	(-0.154)
Bind	0.690	0.690	0.700	0.700	0.690	0.690	0.690
	0.570	0.570	0.570	0.570	0.570	0.550	0.560
	0.12***	0.12***	0.12***	0.13***	0.12***	0.14***	0.14***
	-3.415	-3.489	-3.598	-3.856	-3.507	-4.137	-3.906
FamOwn	0.150	0.150	0.140	0.130	0.140	0.140	0.140
	0.210	0.220	0.230	0.240	0.240	0.250	0.250
	0.060	-0.07*	-0.09**	-0.11***	-0.11***	-0.11***	-0.12***
	(-1.576)	(-1.729)	(-2.284)	(-2.802)	(-2.639)	(-2.778)	(-2.814)
InstOwn	0.300	0.280	0.310	0.300	0.310	0.320	0.320
	0.360	0.350	0.360	0.350	0.350	0.360	0.360
	0.060	-0.07*	-0.050	-0.050	-0.040	-0.040	-0.040
	(-1.473)	(-1.762)	(-1.085)	(-1.034)	(-1.021)	(-0.881)	(-0.876)
OwnTotal	0.520	0.530	0.540	0.530	0.540	0.550	0.550
	0.580	0.590	0.600	0.600	0.610	0.620	0.630
	0.060	-0.060	-0.060	-0.07*	-0.07*	-0.07*	-0.08*
	(-1.441)	(-1.532)	(-1.523)	(-1.793)	(-1.683)	(-1.785)	(-1.917)
LnFsize	20.100	19.610	19.450	19.380	19.390	19.630	19.890
	17.050	17.030	16.950	16.790	16.790	16.830	16.870
	3.05***	2.58***	2.50***	2.59***	2.61***	2.80***	3.01***
	-10.924	-9.525	-9.602	-9.701	-9.512	-9.746	-10.403
Fage	21.950	22.760	23.420	24.640	25.030	26.030	27.140
	18.060	19.160	20.130	21.140	22.270	23.290	24.130
	3.880	3.590	3.290	3.500	2.750	2.730	3.000
	-1.509	-1.380	-1.278	-1.375	-1.058	-1.047	-1.153
Leverage	0.370	0.370	0.370	0.380	0.390	0.400	0.400
	0.320	0.330	0.330	0.360	0.360	0.360	0.360
	0.050	0.040	0.040	0.020	0.040	0.040	0.030
	-1.012	-0.812	-0.864	-0.385	-1.033	-1.171	-0.830
Observations	147	148	150	150	147	146	149

Note: This table presents the t test for mean values of variables used in this research across samples on the bases. Variables are as defined and described in **Table 4-4**. Asterisks indicate significance at 10% (*) 5% **, and 1% *** respectively.

Table A1-14
z-test for categorical variable (CEO-Duality)

	Obs. Total	Obs. UAE	Obs. JO	Proportion UAE	Proportion Jordan	Proportion difference	z-statistics
Bdual	1069	279	790	0.00	0.20	-0.20***	-7.849

Note: This table presents the z test for categorical variable (CEO-Duality) across samples (UAE and Jordan). Board-duality variable is as being defined in **Table 4-4**. Asterisks indicate significance at 10% (*) 5% **, and 1% *** respectively.

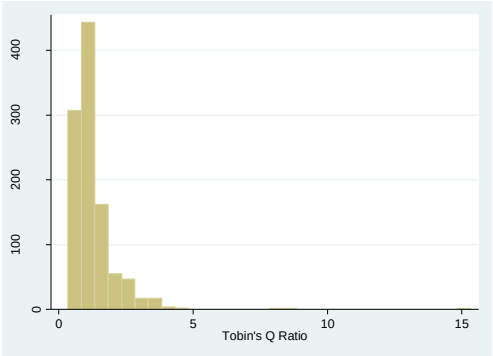
Appendix 2

Normal Distribution Curves

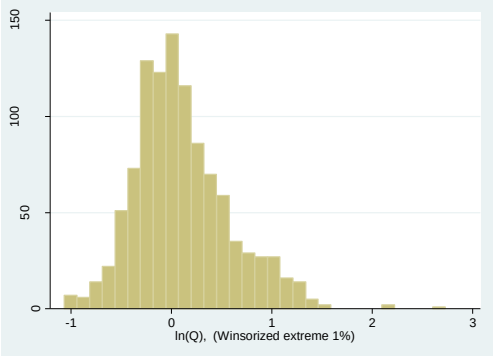
Table A2-1

Normal distribution curves for the dependent and independent variables of the combined sample (of Jordan and UAE) before and after transformation / winsorization where it was required.

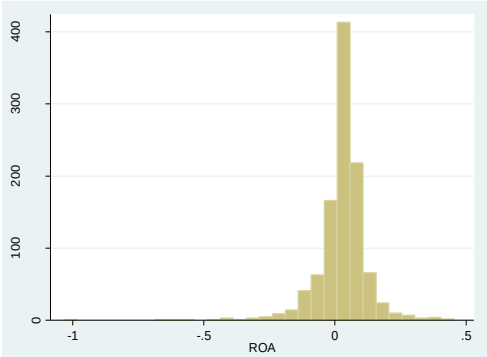
1. Untransformed Tobin's Q Ratio



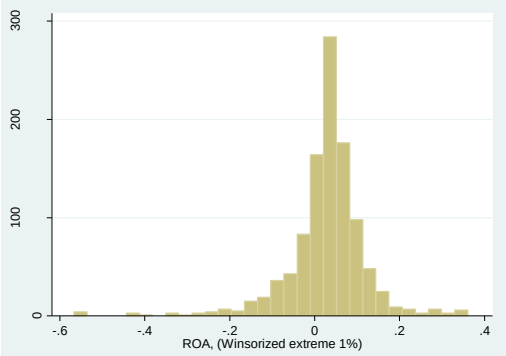
2. Transferred Tobin's Q Ratio



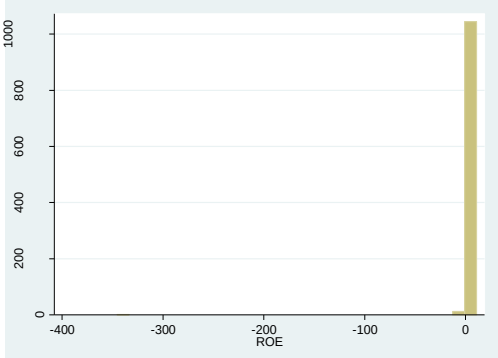
3. ROA



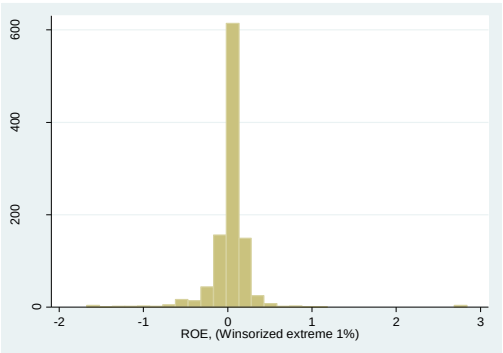
4. Winsorized ROA



5. ROE

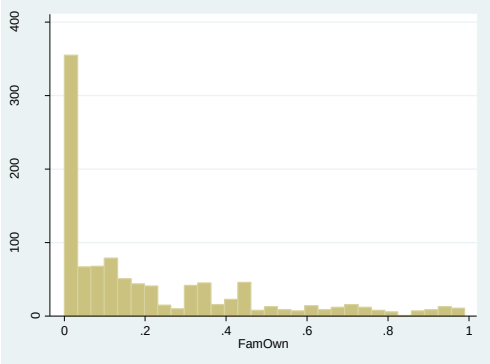


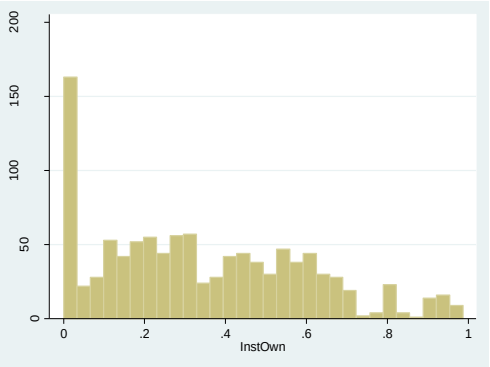
6.Winsorized ROE



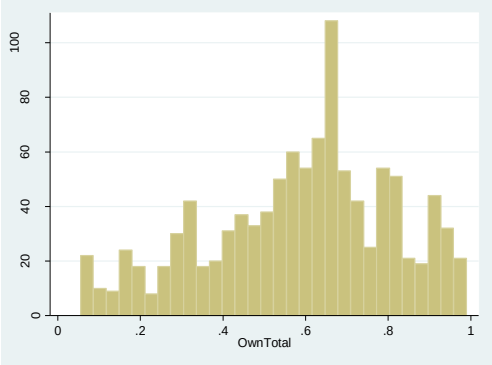
7. Family Ownership

8. Institutional Ownership

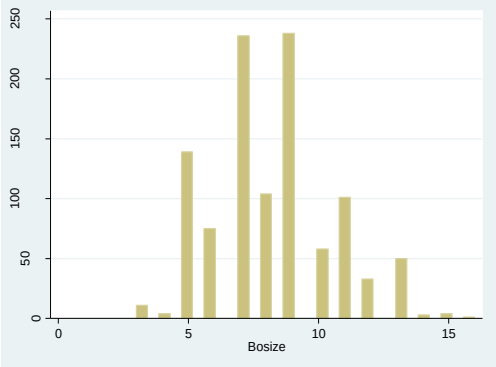




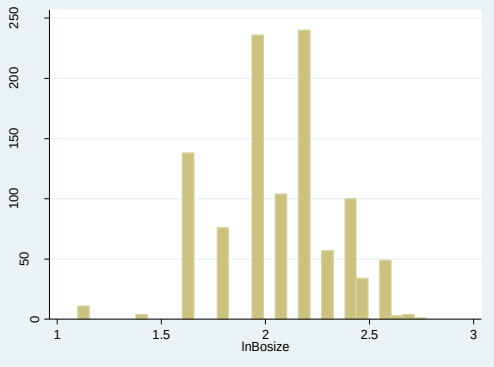
9. Ownership Concentration



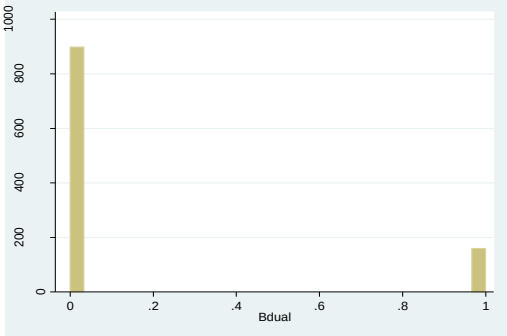
10. Untransformed Board Size



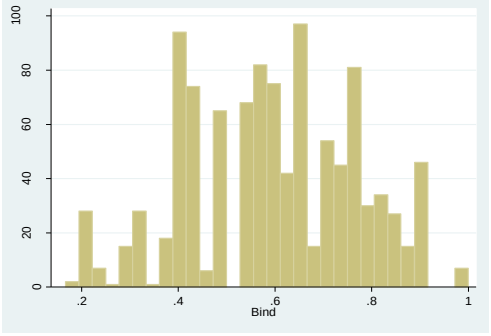
11. Transformed Board Size



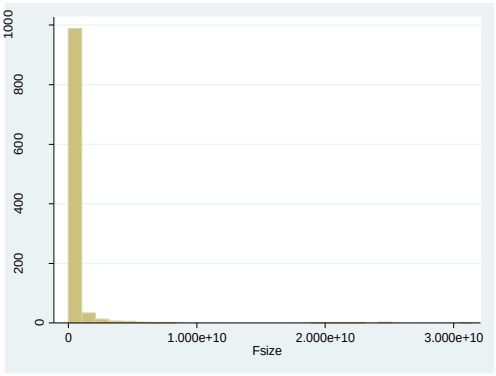
12. CEO-Duality



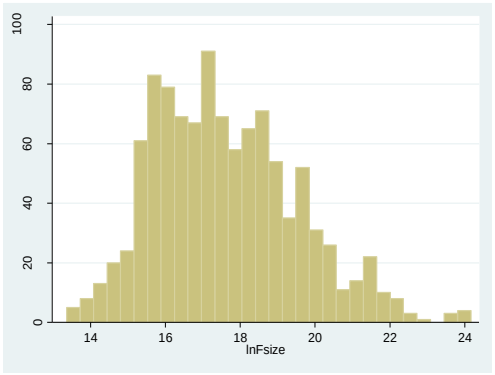
13. Board Independence



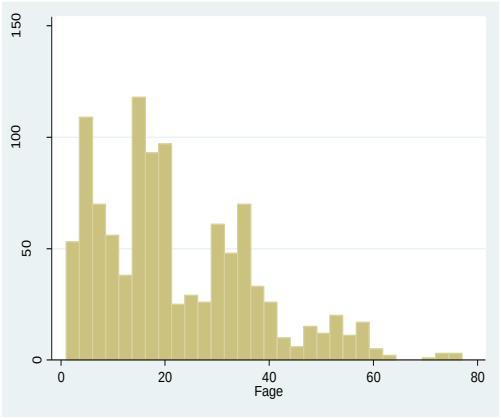
14. Untransformed Firm Size



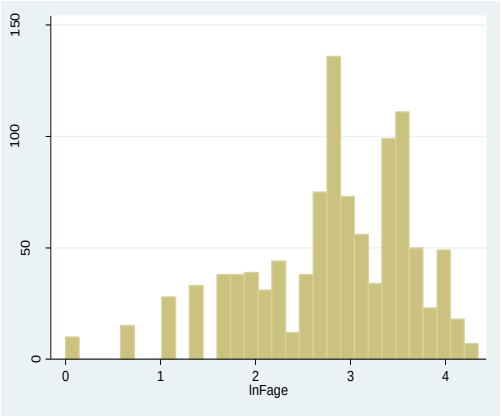
15. Transformed Firm Size



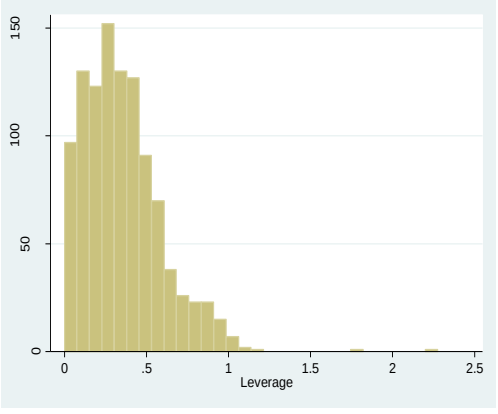
16. Untransformed Firm Age



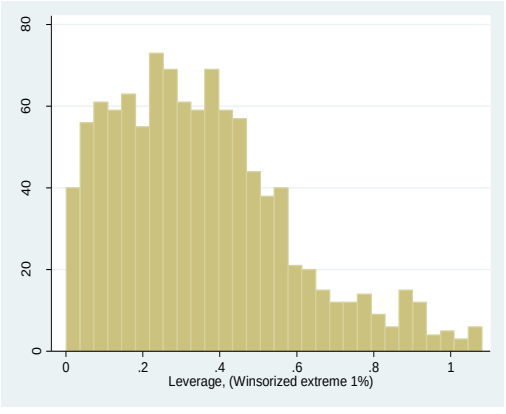
17. Transformed Firm Age



18. Financial Leverage



19. Winsorized Financial leverage



Note: Transformation in this context means applying the natural logarithms form. Financial variables are winsorized at 1%.