An Institutional Perspective of Corporate Governance Mechanisms in the Middle East and North Africa

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The President:

Prof. Dr. Bernhard Ehrenzeller

… to my mother Shamma, my father Fadi, my brother Marc, my aunt Alia,
and my husband Tony, the *noor* of my eyes.

And to my beloved Beirut, the *Phoenix* will rise again.

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St. Gallen, August 2021 Julia F Barbar

Abstract

This Ph.D. thesis is a cumulative dissertation of three studies that aim to contribute to the reevaluation of corporate governance mechanisms in the Middle East and North Africa (MENA), which is a relatively unexplored region in the literature despite the prevalence of unique taxonomies and institutional configurations in its markets. Following an institutional logic, this thesis underlines the substantial impact of weak institutional configurations on corporate governance mechanisms and provides a detailed understanding of the implications of government ownership on performance outcomes and internationalization strategies. It likewise highlights the effect of various institutional constellations on the appointment of females to corporate boards and the impact of the public's conservative perceptions on their actual roles.

The first study examines the impact of government ownership on performance outcomes and finds that state-owned enterprises (SOEs) arise as a response to market failures and enhance firm performance by essentially overcoming and filling institutional voids in financial and legal markets. As various ownership configurations present different implications on firms' outcomes, complex and lengthy ownership structures as well as foreign ownership were found to impair firms' financial performance, particularly in underdeveloped institutional settings. Institutional distance, however, was found to have a crucial role in overcoming legitimacy concerns of foreign investors from within the MENA region and positively influence their impact on firm performance.

The second study investigates the impact of government ownership on internationalization strategies from the MENA amid the region's perilous and hazardous institutional setting and finds that government ownership overall positively impacts internationalization prospects from the region and that this effect is particularly stronger when financial and legal markets are weak as the state's capabilities in addressing institutional failures become particularly evident. High levels of corruption, political instability, and political constraints were, however, found to impair internationalization prospects by essentially increasing host countries' perceptions of risk and uncertainty. The study likewise underlines the prevalence of regional institutional development and finds that firms from the MENA are more likely to internationalize within the region's boundaries due to the decreased legitimacy concerns and normative pressures that the regional isomorphism presents.

The third paper explores the predictors of female board directorship and their consequent role and value to corporate boards in the MENA. Amid the region's conservative view regarding the role of females in society, the study finds that various layers of institutional conditions – from firm size, state ownership, family ownership, foreign ownership, female representation at the industry level, and gender parity – impact the appointment of women to corporate boards. The societal attitudes that impact female directorship likewise affect their actual performance. While women are generally valued by firms, they are subject to a biased market evaluation.

Zusammenfassung

Diese Doktorarbeit ist eine kumulative Dissertation von drei Forschungsarbeiten, die es sich zum Ziel gesetzt hat, zu einer Neubewertung von Corporate-Governance-Mechanismen in Nahost/Nordafrika (MENA) beizutragen; eine Region, die in der Literatur vergleichsweise wenig erforscht ist, trotz der einzigartigen Taxonomien und institutionellen Strukturen, die in ihren Märkten vorherrschen. Ausgehend von einer institutionellen Logik beleuchtet diese Arbeit die bedeutenden Auswirkungen schwacher institutioneller Strukturen auf Corporate-Governance-Mechanismen und vermittelt sie ein detailliertes Verständnis der Implikationen, die staatliche Beteiligung für Performance-Ergebnisse und Internationalisierungsstrategien hat. Sie hebt ausserdem die Folgen unterschiedlicher institutioneller Konstellationen für die Berufung von Frauen in Führungsgremien hervor sowie die Auswirkungen der konservativen öffentlichen Wahrnehmung auf ihre tatsächliche Rolle.

Die erste Studie widmet sich der Auswirkung von staatlicher Beteiligung auf Performance-Ergebnisse und stellt fest, dass staatliche Unternehmen (SOE) als Reaktion auf Marktversagen entstehen und die Unternehmensleistung verbessern, indem sie vornehmlich institutionelle Lücken in Finanz- und Rechtsmärkten überwinden und schliessen. Angesichts der unterschiedlichen Auswirkungen, die verschiedene Besitzverhältnisse auf die Unternehmensergebnisse haben, wurde deutlich, dass komplexe und umständliche Eigentumsverhältnisse sowie ausländische Beteiligung die finanzielle Leistungsfähigkeit der Unternehmen beeinträchtigen, insbesondere bei unterentwickelten institutionellen Rahmenbedingungen. Es zeigte sich jedoch auch, dass institutionelle Distanz eine entscheidende Rolle dabei spielt, Bedenken zur Legitimation bei ausländischen Investoren aus der MENA Region zu zerstreuen, und ihre Auswirkungen auf die Unternehmens-Performance positiv beeinflusst.

Die zweite Studie untersucht die Auswirkung von staatlicher Beteiligung auf die Internationalisierungsstrategien der MENA angesichts der gefährlichen und unsicheren institutionellen Rahmenbedingungen dieser Region. Sie stellt fest, dass eine staatliche Beteiligung die Internationalisierungsaussichten der Region insgesamt positiv beeinflusst, und dass dieser Effekt bei schwachen Finanz- und Rechtsmärken noch verstärkt wird, da hier die Fähigkeit des Staates, institutionelle Missstände anzugehen, besonders deutlich zum Tragen kommt. Ein hohes Mass an Korruption, politische Instabilität und politische Zwänge, so zeigt sich, beeinträchtigen jedoch die Internationalisierungsaussichten, da sie den Eindruck von Risiko und Unsicherheit bei den Gastländern verstärken. Die Studie hebt auch die institutionelle Entwicklung auf regionaler Ebene hervor und stellt fest, dass Firmen der MENA eher dazu neigen, innerhalb ihrer Region zu internationalisieren, aufgrund geringerer Bedenken zu Legitimation und weniger normativem Druck, für die der regionale Isomorphismus steht.

Die dritte Arbeit erforscht die Prädikatoren weiblicher Aufsichtsratsmandate sowie ihre daraus resultierende Rolle und Bedeutung in Aufsichtsgremien der MENA. Vor dem Hintergrund der konservativen Ansichten dieser Region zur Rolle von Frauen in der Gesellschaft stellt die Studie fest, dass verschiedene Ebenen institutioneller Rahmenbedingungen – von Unternehmensgrösse, staatlicher Beteiligung, Familienbesitz, ausländischer Beteiligung, dem Anteil von Frauen auf Industrieebene sowie Genderparität – sich auf die Berufung von Frauen in Aufsichtsgremien auswirken. Die gesellschaftliche Haltung, die weibliche Führungsmandate beeinflusst, hat auch Auswirkungen auf ihre tatsächliche Performance. Während Frauen von Unternehmen allgemein geschätzt werden, unterliegen sie doch einer nachteiligen Marktbewertung.

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على قدر أهل العزم تأتي العزائم وتأتي على قدر الكرام المكارم

وتعظم في عين الصغير صغارها وتصغر في عين العظيم العظائم

المتنبي

Resolutions are measured according to those who take them,
And so much its true for generosity and its givers.

Trifle matters are magnified in the eyes of little people,
While grandeur is belittled in the eyes of the great.

Al-Mutanabbi

1. Chapter 1: Introduction

1. Introduction

Corporate governance research has been ascending over the past few decades and has taken various theoretical perspectives in the management literature. It involves "the structure of rights and responsibilities among the parties with a stake in the firm" (Aoki, 2000:11). A substantial body of the comparative corporate governance literature contrasts two dichotomous corporate governance models, the Anglo-American and the Continental European (Becht & Röel, 1999; Hall & Soskice, 2001; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998). The former model entails dispersed ownership, financing through equity, active markets for corporate control, and flexible labor markets, whereas the latter entails concentrated ownership, long-term debt financing, weak markets for corporate controls, and rigid labor markets (Aguilera & Jackson, 2003). Yet these two classifications partially fit the variations within Continental Europe (Barca & Becht, 2001; Rhodes & van Apeldoorn, 1998; Weimer & Pape, 1999; Whittington & Mayer, 2000), Eastern Europe (Martin, 1999; Wright, Filatotchev, & Buck, 1997), East Asian countries (Dore, 2000; Gerlach, 1992; Orru, Biggart, & Hamilton, 1997; Whitley, 1992), emerging economies (Aguilera & Haxhi, 2019; Estrin & Prevezer, 2010), and multinational corporations (Fukao, 1995). The diversity of practices and mechanisms around the world thus nearly defies a common governance definition. Despite the extensive descriptions found in the literature, the challenge, *nevertheless*, remains to conceptualize cross-national diversity and identify key factors explaining corporate governance differences around the world.

The separation of ownership and control has been considered to be an essential condition for the field of corporate governance (Berle & Means, 1932). This separation implicates the specialization of economic functions across the different parties involved in the firm. As such, the bulk of everyday decision-making is centralized in the hands of professional managers (Arrow, 1974), while the residual risk is borne by dispersed shareholders due to their ability to diversify their equity holdings

across different firms (Demsetz & Lehn, 1985). Dispersed shareholders holding relatively small portions of shares across firms bear risk more efficiently and are usually uninvolved in the firms they invest in due to higher transaction costs and collective action problems that mitigate effective decision-making or monitoring activities (Black, 1990; Hansmann, 1996). Nevertheless, the necessity to centralize the firm's everyday decision-making in the hands of professional managers, combined with an efficient allocation of ownership rights to shareholders, creates a problem because professional managers' interests might not necessarily be in line with those of shareholders and they might, therefore, use their decision-making power to serve their own interests rather than those of the firms they manage (Dalton, Hitt, Certo, & Dalton, 2007). These so-called agency problems between professional managers and shareholders that emerge from the separation of ownership and control of publicly listed firms (Fama & Jensen, 1983) shift the attention from the central problem of corporate governance to "the ways in which suppliers of finance to corporations assure themselves of getting a return to their investment" (Shleifer & Vishny, 1997). Consequently, most corporate governance research and theory building has concentrated primarily on the numerous mechanisms – whether internal or external – that alleviate the agency costs from the separation of ownership and the control of publicly listed firms (Jensen & Meckling, 1976).

In line with the predominant agency-theoretical perspective (Dalton et al., 2007), ownership structure represents a central issue for corporate governance scholars. The function of concentrated ownership in the hands of a single or a few large shareholders emerges as a disciplinary mechanism to alleviate manager-owner problems and a well-established research field of corporate governance (Holderness, 2003). However, the general idea of shareholders' value maximization may also depend on factors other than strictly on ownership concentration (Thomsen & Pedersen, 2000). Various owners from individuals and families, institutional investors, banks, other companies,

governments, etc. act as intermediary agents for the final investor and can only attain profit maximization when markets are efficiently complete (Pedersen & Thomsen, 2003). Nonetheless, when markets are incomplete and risk is not resourcefully diversifiable, different preferences regarding risk may deviate owners' corporate strategies (Hansmann, 1988; 1996; Pedersen & Thomsen, 1999). As such, owner type appears to be an equally important dimension of ownership structure, presenting significant implications on firm strategy and performance (Demsetz,1988; Mascarenhas, 1989; Morck, 2005). The dynamics of whether concentrated ownership and owner type alleviate or aggravate agency costs and risk exposure continue to be a function of the institutional setting in which the firm operates.

In addition to ownership structure, the strategic management literature recognizes the important implications of board structure on firm outcomes and generally supports the prediction of agency theory that the separation of ownership and control incites managerial incentives for diversification (Jensen & Meckling, 1976). The theoretical literature has therefore established board structure as an important corporate governance mechanism that affects firm outcomes (Adams, Hermalin, & Weisbach, 2010; Bozec, 2005; Denis & McConnell, 2003). Accordingly, the general consensus in the literature is that effective boards are those comprised of a diversity of members (Carter, Simkins, & Simpsons, 2003) and that diverse corporate boards enrich the decision-making quality of the board (Hillman, Cannella, & Harris, 2002). A preference for outsider-dominated boards is largely grounded in agency theory and is thought to promote corporate strategy by increasing monitoring and endorsing managerial expertise and firm-specific knowledge (Mizruchi, 1988). This diversity inherent to the board, however, extends beyond board independence and is conceptualized as having several dimensions such as age, ethnicity, nationality, educational background, industrial experience, and organizational membership.

Among them, gender diversity has been at the heart of the corporate governance debate and was found to have important effects on the board of directors through numerous channels (Hillman, Shropshire, & Cannella Jr, 2007). The topic of gender diversity, however, remains one that is deeply-rooted in social and cultural norms.

1.1. Research Problem and Motivation

Empirical research found considerable evidence but reached inconsistent inferences regarding the impact of both ownership and board structures on firm outcomes (Dalton, Daily, Certo, & Roengpitya, 2003; Dalton, Daily, Ellstrand, & Johnson, 1998; Dalton et al., 2007; Daily, Dalton, & Cannella Jr, 2003). However, the theoretical reasoning behind the conventional understanding of ownership structure and board diversity appears to be context-driven (Aguilera & Jackson, 2003; Doidge, Karolyi, & Stulz, 2007). Recent research also questions the universality of the previously dominant corporate governance models and their applicability worldwide (Aguilera & Jackson, 2003; 2010; Aguilera, Marano, & Haxhi, 2019a). Most regions, countries, and markets are distinguished with their own unique characteristics and accordingly adopt corporate governance models and practices compatible with their national and institutional contexts (Fainshmidt, Judge, Aguilera, & Smith, 2018), demanding a more contextualized examination of corporate governance mechanisms cross-nationally. The divergence between the theoretical perspectives used in examining the role of internal corporate governance mechanisms on the one hand, and the currently available empirical evidence on the other, suggests that the field of corporate governance can benefit from a substantial reevaluation of the role of corporate governance mechanisms. Since firms must adapt to the numerous features of their institutional environments, their behavior is unlikely to be explained by a single force such as agency costs (Aguilera & Jackson, 2003). Corporate governance mechanisms hence need to be understood in the context of a wider range of institutional domains (Aoki, 2001).

Corporate governance in the Middle East and North Africa, known as the MENA region, remains significantly understudied. While corporate governance practices and research in the region are lagging behind, they are starting to attract more scholarly interest (Fainshmidt et al., 2018). Inferences with regard to the impact of corporate governance mechanisms on firm performance and strategies, however, remain inconclusive. In a region where state- and family-owned firms dominate the corporate scene, and small- and medium-enterprises thrive in the private sector, corporate governance principles play a major role in shaping the interaction between businesses and society, where values such as transparency, accountability, and equality are fundamental for sustainable business activities and strategies (Sarhan & Ntim, 2018).

State ownership is one of the most common ownership structures in the MENA, where governments hold large shares of public firms in the region (Al-Janadi, Abdul Rahman, & Alazzani, 2016). Research on state capitalism worldwide in general, and in the MENA region in particular, reached inconclusive findings and largely disregarded the impact of macro level effects on the state's involvement in firms. State ownership, compared to other types of ownership, represents distinctive institutional logics that drive its influence differently (Bruton, Ahlstrom, & Li, 2010) and is widely considered to largely exist in weak institutional settings (La Porta, Lopez-de-Silanes, & Shleifer, 2002; Inoue, Lazzarini, & Musacchio, 2013; Musacchio, Lazzarini, & Aguilera, 2015). State-owned enterprises (SOEs) in the MENA operate amidst a variety of institutional configurations that can differently influence their performance and strategic outcomes, demanding a closer examination of their roles and their interactions with the institutional setting in which they are embedded.

Moreover, as gender diversity on corporate boards and in leadership is becoming an essential corporate governance goal for modern corporations around the world (Carter et al., 2003),

MENA firms have also been encouraging the inclusion of more women at corporate decision-making levels (Bokhari & Hashmi, 2016). The region's overall societal and cultural pressures, however, discourage female participation in the workplace and women's succession to managerial roles, and bias the assessment of their actual value in firms. The absence of empirical research on gender diversity in the MENA, on the one hand, and the region's institutional and social barriers on the other, raise the need for further investigation of this matter.

1.2. Research Contributions

This Ph.D. thesis is a cumulative dissertation of three studies and aims to contribute to the reevaluation of corporate governance mechanisms in a relatively unexplored context in two rather broad directions. First, two studies that comprise this thesis aim to contribute to the development of an institution-based view of state ownership (e.g., Peng & Khoury, 2008; Peng, Sun, Pinkham, & Chen, 2009; Peng, Wang, & Jiang, 2008). Accordingly, they look at the influence that different institutional configurations may have on the role and effectiveness of state owners in the governance of publicly listed firms in the MENA region and their role in firm performance and internationalization strategies respectively. SOEs are among the region's most salient market players where the state's involvement in firms has been subject to a controversial debate. To date, most research continues to focus on the United States, Western European, East Asian, or BRIC economies, which differ in a number of important aspects from the institutional context that countries in the MENA offer for corporate governance (Zahra, 2011). While the MENA's underdeveloped institutions emphasize the role of SOEs in overcoming and filling institutional voids, the region's perilous and hazardous institutional setting accentuates the dynamics of various institutional configurations on firm behavior and outcomes. As the region started attracting scholarly attention in the strategic management and international business literatures,

a comprehensive understanding of the role of SOEs amid the region's severe market conditions and turbulent institutional setting is yet to be presented. Second, the third study in this thesis aims to contribute to the institutional view (e.g., Grosvold, Brammer, & Rayton, 2007; Hillman et al., 2007; Terjesen, Aguilera, & Lorenz, 2015) and the upper echelons view (e.g., Hambrick, 2007; Post & Byron, 2015) of female board directorship of publicly listed firms in comparative corporate governance. The study will accordingly explore the extent to which the appointment of women to corporate boards of public firms and their subsequent impact on performance outcomes are influenced by the MENA's social and cultural norms that are generally unfavorable to such appointments. Existing studies predominantly explore the impact of gender on firm outcomes but only marginally explore the institutional conditions that influence female directorship. Additionally, empirical findings are limited to developed economies (Abdullah, Ismail, & Nachum, 2016) where institutional configurations and societal expectations differ greatly from those in developing countries, specifically, the MENA region. The MENA remains empirically unexplored with regard to the predictors of female directors and their subsequent impact on firm value, despite the region's unique setting, with its prevalence of weak institutional configurations and corporate governance structures and the conservative view of the role of women in society. The examination of the rare and valuable female board directorship in the region presents itself as an important, interesting, and timely study.

The goal of this Ph.D. dissertation is, therefore, to provide a detailed understanding of some of the MENA region's most prominent internal corporate governance mechanisms. Given the region's distinctive institutional configurations and societal expectations, severe institutional voids, and perilous and hazardous institutional environment, taking an institutional perspective would be the most accurate way to capture the region's complex structures and to explain their

effects on firms (e.g., Aguilera, Filatotchev, Gospel, & Jackson, 2008; Aguilera & Jackson, 2003; Doidge et al., 2007; Jackson & Deeg, 2008). Corporate governance, in its basic form, is a set of relationships between a company's management, its board of directors, and its shareholders. These relationships are shaped not only by corporate governance codes but are also influenced by the institutional environment in which companies operate and thrive.

1.3. The Middle East and North Africa (MENA) Region

The Middle East and North Africa (MENA) region is characterized by its complex and unstable political and economic structure. Socio-economic discrepancies are also strongly apparent in the region and are largely due to the geography of oil ownership. According to the World Bank, the region is comprised of nineteen countries (see Table 1) and accounts for over 460 million people, which is about 6% of the total world population. Six countries in the region, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates, believing that they share common and strong political, economic, and cultural values, established a sub-regional union known as the Gulf Cooperation Council (GCC) in 1981, which controls almost the entire oil industry in the region. Accordingly, the MENA retains abundant natural resources and accounts for a large share of the world's total oil production and exports. The region possesses over 50% of the confirmed crude oil reserves in the world, with the six GCC countries ranking among the top 10 oil-rich countries worldwide (Central Intelligence Agency, 2018). Countries in the region, however, differ considerably in terms of economic size, population, standard of living, public/private sector balance, natural resource endowment, foreign indebtedness, trade and financial links with the rest of the world, and even cultural and political systems (International Monetary Fund, 2018). Despite the shared history and common language among the countries, the MENA region is economically diverse with gross domestic product (GDP) per capita varying substantially from one country to

another. The GCC countries with their wealth of natural resources have relatively smaller populations compared to other countries in the region and present the highest levels of GDP per capita by a significant margin. Cultural differences are also apparent and are noticeable primarily between the GCC countries and the rest of the region. Tables 2 and 3 summarize some of the region's socio-cultural and economic characteristics as per the United Nations Development Program (UNDP) Human Development Report (United Nations Development, 2019), the world rank of the countries' crude oil reserves, including countries considered as potentially oil rich countries as of 2019 (Central Intelligence Agency, 2018), and the rating of the countries' cultural dimensions according to Hofstede (Hofstede Insights, 2020). Data availability remains an essential constraint in the region, limiting an in-depth understanding of the region's various aspects.

Insert Tables 1, 2 & 3 about here

The World Bank categorizes the MENA as an emerging economy but recognizes the various developments the region has witnessed over the past decade, despite the geographical and political tensions and the underdeveloped institutions (World Bank, 2018). Particular to the reforms that the region is undergoing are the corporate governance ones. The main stimulator of such improvements is strongly believed to be the recent turmoil known as the "Arab Spring" that began in late 2010 and under which countries including Algeria, Bahrain, Egypt, Morocco, Libya, Syria, Yemen, and others called on their governments for accountability, economic and political reforms, and the implementation of strong policies and governance. While the series of pro-democracy uprisings that enveloped several countries, among them Bahrain, Egypt, Libya, Morocco, Syria, and Tunisia, led to substantial corporate governance reforms, political and socio-economic pressures remain significant and the region has been marked by increased instability and

oppression. As a result, despite all the developments, the MENA continues to suffer from deep institutional voids that seem to indicate country-level governance vacuums in terms of law quality and enforcement, generating higher rates of corruption, political repression, and economic instability (Aguilera, Marano, & Haxhi, 2019b). Table 4 shows the World Bank's six Worldwide Governance Indicators (WGI): Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. These figures highlight the discrepancies between MENA countries and their underperformance worldwide and suggest that the region's governance systems require significant improvements and reforms.

Insert Table 4 about here

The MENA region is also essentially characterized by ethnic and demographic diversity, where the presence of several minority groups within each country is an important direct and indirect cause of many of the conflicts in the region (Inglehart et al., 2014). As presented in Table 5, almost all MENA countries follow Civil law, and many countries in the region follow a mixture of Civil law and Shariah law. Corporate Governance models range between Anglo-American, Continental European, and Hybrid examples. Most countries in the region adopt an Authoritarian regime with the very few exceptions of those adopting a Hybrid regime such as Algeria, Lebanon, and Morocco, leaving Tunisia as the only country to have adopted a Flawed Democracy regime in the region (see Table 5).

Insert Table 5 about here

The MENA, therefore, includes a mix of formal and informal institutions heavily grounded in religious, political, cultural, socio-economic, and geographical characteristics. However, it remains an understudied area with unique taxonomies (Fainshmidt et al., 2018) to be taken into consideration in order to better understand and improve corporate governance practices in a region that has some of the highest oil reserves in the world yet has been politically unstable since the outbreak of the Arab Spring and its consequent upheavals. The MENA is one of the emerging markets in which corporate governance is seen as a relatively new concept. However, despite its infancy, corporate governance has been making significant improvements in recent years. Countries in the region were accordingly ranked among the top reformers between the years 2008 and 2013 (World Bank, 2014), shedding light on the "trickle down" effect of the Arab Spring and on prospects for improvement in the region.

1.4. An Overview of Corporate Governance in the MENA

A robust corporate governance framework is vital for sustainable growth, economic efficiency, and financial stability in the MENA (OECD, 2015). The major corporate challenges in the region, however, consist of the following: concentrated ownership dominated by families and governments, underdeveloped capital markets, the need for a more transparent business culture, and the need for more active participation by women in corporate leadership (OECD, 2019).

As an economy dependent on a single commodity, oil accounts for over 60% of the exports in oil-exporting countries (International Monetary Fund, 2016a). The rise of oil prices over the past decade boosted the region's economy and paved the way for the modernization of its infrastructure and employment creation (Fasano-Filho & Iqbal, 2003). The economic relations within the MENA also benefited non-oil-exporting countries with oil revenues. However, the precipitous fall of oil prices at the end of 2014 undermined the economic conditions in the region

and exacerbated fiscal deficits. From then on, the ongoing political and religious tensions and conflicts have further deteriorated the region's difficult economic conditions and diminished investors' confidence (UNCTADstat, 2017).

Despite the economic and political challenges and changes that the region is undergoing and based on the conviction that the MENA has a substantial potential for growth, governments and private entities in the region teamed with the Organization for Economic Co-Operation and Development (OECD) in order to discuss the MENA-OECD initiative on Governance and Competitiveness Development aimed at supporting governance reforms (OECD, 2019). The relevance and interest in corporate governance improvements in the region has thus been reflected in the establishment of institutes of corporate governance and directors, signaling the growing need for corporate governance information, training, and best practices in the MENA (CIPE, 2011) and underlining the necessity of corporate governance policies and practices in the region to be more aligned with international standards in order to attract investment and ensure economic development.

1.4.1. Capital Markets, Disclosure, and Transparency in the MENA

Capital market development is vital for MENA economies as it not only increases opportunities for firms to access the financing required to support their growth and expansion, but also contributes to the region's overall economic stability and development (Naceur, Ghazouani, & Omran, 2008). Good corporate governance practices improve access to financing, help reduce the cost of capital, enhance firms' financial performance (Maher & Andersson, 2002; Haque, Arun, & Kirkpatrick, 2008; OECD, 2015; International Monetary Fund, 2016b), and increase market valuation (Cheung, Connelly, Estanislao, Limpaphayom, Lu, & Utama, 2014). Accordingly, the need to comply with international corporate governance practices has emerged recently in the MENA, especially after the region's Arab Spring in late 2010. Nevertheless, problems associated

with the region's inadequacy and lack of corporate governance practices seem to vary relative to the sophistication of firms' markets and cultures.

Despite the various capital market development stages in MENA economies, countries in the region share a common feature: access to capital markets is the most prevalent constraint for the development and growth of private firms, or more specifically, small and medium-sized enterprises (SMEs) in the region (Stein, Ardic, & Hommes, 2013). This is essentially due to the substantial ownership concentration in the form of sovereign shareholders or families, heavy dependence on banking intermediation, a small institutional investor base, high equity shares of big firms in capital markets relative to the MENA's small market size, high collateral obligations, poor sectoral diversification in equity markets, limits on foreign investment, the predominance of retail investors, and Islamic religious beliefs prohibiting interest payments (OECD, 2019). Given the underdeveloped equity and bond markets in the region and the scarcity of alternative financing channels, banks remain the most important and main source of external financing for the majority of firms (Ghosh, 2017).

Moreover, a crucial element of the framework needed for corporate governance improvements in the MENA region is adequate transparency and disclosure in listed companies. Accurate, timely, and relevant transparency and disclosure promote strong capital markets and efficient capital allocation by reducing the cost of capital (Barth, Konchitchki, & Landsman, 2013), reducing monitoring costs, increasing investor confidence, and reinforcing market competitiveness (Leuz & Wysocki, 2016). A solid corporate governance framework denoted by credible and reliable disclosure endorses a trustworthy, transparent, and accountable environment, attracts domestic and foreign investment, fosters the region's capital markets, and overall, enhances firms' growth.

Key national corporate governance codes and principles are presented in Table 6. Corporate governance is a relatively nascent concept in the MENA, where codes have only been developed since 2002. Egypt and Oman were the region's first two countries to adopt corporate governance codes, followed by eleven MENA countries in 2009 (Algeria, Jordan, Kuwait, Lebanon, Morocco, Palestine, Qatar, Saudi Arabia, Tunisia, and the United Arab Emirates), and lastly by Bahrain and Yemen in 2010 (Koldertsova, 2011). Acknowledging the momentous role of disclosure and transparency in attracting investors and developing capital markets, eight jurisdictions in the MENA (Bahrain, Egypt, Jordan, Kuwait, Morocco, Qatar, Saudi Arabia, and the United Arab Emirates) have been revising and updating their national corporate laws and corporate governance codes since 2015 (OECD, 2019). The execution of corporate governance practices, however, varies across the region (see Table 6). For instance, countries like Jordan, Oman, and Qatar impose mandatory requirements for disclosure. Bahrain and Egypt adopt a comply-or-explain approach which grants firms the flexibility to decide which reports to disclose. Palestine, Kuwait, Saudi Arabia, and the United Arab Emirates adopt a mixed approach between binding and comply-or-explain requirements. Disclosure of corporate governance reports, however, is not mandatory in Algeria, Lebanon, Morocco, Tunisia, and Yemen.

Insert Table 6 about here

Two main factors affect adequate corporate governance mechanisms in the MENA region. First, the region's concentrated ownership structures belonging to either families or governments is one of the main factors holding back proper corporate governance practices in the MENA (Amico, 2014; GOVERN, 2016). Ownership concentration is commonly linked to a lower quality of transparency and disclosure and raises concerns about related party transactions and minority

investor protection (Daily et al., 2003). Governments and families are reluctant to disclose their information publicly in the region (Piesse, Strange, & Toonsi, 2012). Moreover, large firms, particularly SOEs, are channeled with most of the bank lending, meaning that SMEs and growth companies are denied bank credit to support their expansion (International Finance Corporation, 2019). Family firms on the other hand are reluctant to dilute their shares by going public (OECD, 2019). And second, most MENA jurisdictions follow a mixture of Civil law and Shariah law (see Table 5) and are accordingly distinguished by lower disclosure levels compared to countries following Common law (Othman & Zeghal, 2010). The legal system is known to affect governance quality greatly (Aguilera & Jackson, 2003; La Porta, Lopez-de-Silanes, Schleifer, & Vishny, 2000), as investors commonly engage in good governance practices in countries with legal systems supporting shareholders' rights (i.e., Common law) (Aggarwal, Erel, Ferreira, & Matos 2011).

Many countries in the MENA have been continuously implementing a series of reforms aimed at reforming their financial and regulatory systems (Naceur et al., 2008) and improving access to capital and level of financial development. Channels of financing are largely dependent on governance systems (Maher & Andersson, 2002). Improving corporate governance policies and practices promotes deeper, more liquid, and more efficient capital markets (International Monetary Fund, 2016b). As such, strong corporate governance frameworks supporting capital market development help advance access to financing, lower default probabilities, enable firms to hold more long-term debt (Awartani, Belkhir, Boubaker, & Maghyereh, 2016), and decrease cost of capital (Claessens & Yurtoglu, 2012). Studies of capital market development in the region indicate that financial stability is linked to sustainable growth and economic development but is contingent on proficient jurisdictions and institutions (Bhattacharya & Wolde, 2010; Naceur, Blotevogel, Fischer, & Shi, 2017). While firms issuing equity, bonds, and syndicated loans continue to grow larger

and faster in the region compared to non-issuing companies (Ismail, Lorente, & Schmukler, 2017), market imperfections are widely evident in the MENA, indicating that capital markets in the region may be underperforming their potentials.

Additionally, listed firms in the MENA region have continuously undergone significant transparency and disclosure improvements since 2007 (Hawkamah, 2017). Most MENA economies are now required to adopt the International Financial Reporting Standards (IFRS) (IFRS Foundation, 2017) and eight jurisdictions (Bahrain, Jordan, Kuwait, Lebanon, Palestine, Tunisia, Saudi Arabia, and the United Arab Emirates) are either already using or are in the process of adopting the International Standards on Auditing (ISA) (IAASB, 2018). Qatar and Bahrain ranked globally as 25th and 29th respectively according to the Strength of Auditing and Accounting Standards Index for 2017-2018. Nevertheless, insufficient disclosure and transparency is still largely seen in the region. Corporate governance codes in most MENA economies are supervised by the same bodies issuing corporate governance codes (see Table 6), which are security regulators and stock exchanges (OECD, 2019). International evaluation of monitoring and enforcement of corporate governance practices in the region indicate that there is room for improvement, as most disclosure practices are often misleading and misjudged by investors, despite the growing monitoring and enforcement capacity of MENA's security regulators and stock exchanges (Amico, 2014). However, persistent challenges in the region remain and essentially include compliance with international corporate governance best practices and difficulties in gathering adequate information regarding ownership, related party transactions, and non-financial information, unless directly released by the firm's board of directors. Thus, the quality of information transparency and disclosure remains one of the main concerns and setbacks

for foreign investors as they cannot adequately evaluate investment opportunities and risks (Crescent Enterprises, 2016).

1.4.2. Government Ownership in the MENA

As highlighted by the eruption of the Arab Spring in late 2010 and the series of demonstrations and revolutions against government corruption, tyranny, and the absence of good governance, the legacy of deep government involvement dominates MENA economies (Nadal, 2013). Although broad conclusions can be drawn about SOEs in the MENA region, their landscape is largely characterized by data scarcity and minimal information on ownership and regulatory arrangements. The importance of well-regulated and well-governed SOEs in the region therefore cannot be overstated. Elucidating the landscape of state ownership could advance knowledge on improvements in SOEs practices and ultimately help ensure that they operate efficiently, transparently, and on a level playing field with private firms.

As in many regions of the world, SOEs are fundamental and strategic components of the economic structure in the MENA. They operate across a wide range of sectors – specifically the finance, transportation, primary, manufacturing, electricity and gas, telecoms, and real estate sectors – in the region and provide their citizens with significant public services (Raballand, Veuillot, Habhab, & Meneval, 2015; OECD, 2019). Most SOEs in the region, however, have mixed commercial and political goals, which are not always well-defined or disclosed. Among the region's 100 largest companies listed on stock exchanges, the state exercises majority ownership or an equivalent degree of control of 36% and minority ownership of 34% of the firms (OECD, 2019). However, because minority-owned firms are only partially listed and because information about non-listed shares are oftentimes not disclosed, it is hard to determine if the state actually holds more than a minority of the shares or if it exercises effective control. For example, when the state

is the largest individual shareholder in the firm, it can exercise control despite being only a minority investor (Inoue at al., 2013).

SOEs can make significant economic and societal contributions and can operate efficiently if they transparently disclose their objectives and if they are well-regulated. State ownership, however, introduces unique governance and regulatory risks in which decisions can be taken in order to serve a single interest group or political and diplomatic ambitions at the expense of firms' success or market efficiency and competitiveness (Borisova, Brockman, Salas, & Zagorchev, 2012; Goldeng, Grünfeld, & Benito, 2008; Peng, Bruton, Stan, & Huang, 2016). Government ownership in the region is therefore commonly linked to inefficiencies, weak governance arrangements, conflicting objectives with those of firms', straining public resources, mitigating private sector activities, and in extreme cases, being a means for political cronyism and patronage, which can destroy the trust of citizens, firms, and investors in public institutions and markets (Hertog, 2019; Lassoued, Sassi, & Attia, 2016). Consequently, poorly governed and regulated SOEs can discourage both private domestic and foreign investments, which are both crucial sources of capital for firms' development and growth (Globerman & Shapiro, 2003). Indeed, the heavy state involvement in firms in the MENA leads to conflicting goals that threaten firms' value maximization, profitability, and competitive landscape (Amico & Hertog, 2013). As markets liberalize and competition increases among private firms in the region, SOEs are expanding their international investment, presenting critical concerns about the ways in which their competitive setting in their home countries can impact their presence and dynamism abroad (Cuervo-Cazurra, 2011). Given the lack of transparency and disclosure, coupled with the scarcity of data and information on SOEs operations, it is problematic to hold the state accountable for its performance.

State ownership arrangements are predominantly decentralized and dispersed across various institutions in the MENA. State responsibilities are accordingly distributed across the state administration without decision making or policy coordination, financial targets, or performance monitoring, where most SOEs' responsibilities in the region are primarily undertaken by line ministries (OECD, 2018; 2019). The latter are concurrently jointly responsible for market regulations and/or sectoral development policies. These decentralized arrangements lead to conflicts of interests and inefficiencies due to uncoordinated activities and goals, weak monitoring of ownership ministries and SOEs management, as well as limited transparency and disclosure of corporate operations (OECD, 2018; 2019; Vagliasindi, 2008). Additionally, although market regulations and sectoral development policies are essentially the responsibility of line ministries, independent sectoral regulators are largely missing in the region, with the exception of the telecoms, transportation, and electricity sectors, which have taken steps towards enhancing competition in monopolized markets, with the banking sector being subject to the most sector-specific regulation in the region (OECD, 2013). Morocco in the only country in the region with a central coordination body, the Ministry of Economy and Finance. In addition to Morocco, other countries in the region such as Egypt, Tunisia, and Saudi Arabia are undergoing state ownership reforms by essentially establishing SOEs' corporate governance guidelines and by conducting institutional changes and improvements (OECD, 2018). Moreover, several MENA economies, including the GCC countries and Egypt, have taken steps in recent years towards centralization and coordination of state ownership and governance practices across ministries by transferring portfolios of strategically important or large SOEs to sovereign wealth funds or to state holding companies (OECD, 2018; 2019). Accordingly, SOEs are subject to more rigorous performance expectations, focus their activities primarily on commercial activities, and improve their corporate governance practices by essentially separating

ownership from management functions, enhancing monitoring, and improving transparency and disclosure. The use of state holding companies in the region as a means to improving corporate governance practices and SOEs' performance is, however, not necessarily the most suitable or feasible option for firms in the MENA, particularly given the region's weak investor protection (Claessens, Djankov, Fan, & Lang, 2002; Filatotchev, Kapelyushnikov, Dyomina, & Aukutsionek, 2001; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008).

Overall, as of 2014, SOEs across Algeria, Egypt, Morocco, Saudi Arabia, Tunisia, and the United Arab Emirates have been undergoing – to varying degrees – ownership and governance reforms and developments aimed towards updating SOEs' corporate governance codes and listing SOEs' shares on national stock exchanges in order to reinforce commercial orientation and develop local capital markets (OECD, 2014). Consequently, state ownership among listed companies in the region is expected to change with the future planned partial listing of SOEs and improvements in SOEs' corporate governance practices and disclosure. Additionally, state auditing institutions have begun to play a more prominent role in endorsing the accountability landscape of SOEs by essentially undertaking financial audits and – although less frequently – undergoing in-depth reviews of SOEs' performance and governance aimed at monitoring SOEs' governance practices (OECD, 2018; 2019).

Nevertheless, given the actual degree of decentralization of state ownership arrangements in the region, most MENA economies do not gather or publish centralized data about SOEs' performance, objectives, governance, regulations, and characteristics in individual economies. For instance, the lack of centralized data on the sectoral distribution, number, and size of SOEs is one of the reasons for the region's dispersed state ownership arrangements, highlighting the need to release commercial and public policy objectives in order to improve the scope of monitoring and

ultimately to enhance SOEs' performance and strategies (OECD, 2018; 2019). Lack of transparency about the goals, objectives, governance, regulations, and planning of SOEs is an essential limitation standing in the way of effective monitoring and, ultimately, performance and strategy enhancement (Piesse et al., 2012). However, there is a vast scope for advancement and professionalism of government ownership practices and accountability through the establishment of strong ownership policies, unification of corporate governance standards across SOEs, and the improvement of financial audits and the amplification of the role of auditing institutions in monitoring SOEs' governance practices. A focus on transparency reinforced by accountability serves as a natural form of ongoing and effective monitoring and evaluation of SOEs' outcomes. The real impact on SOEs on firm performance and strategies remains, however, a subject for further investigation.

1.4.3. Gender Diversity in Corporate Leadership in the MENA

Abiding by conventional societal norms, more MENA countries have been adopting a more conservative view about women roles in society and their involvement in business activities. Given the region's institutional heterogeneity, firms are nevertheless likely to differ in terms of their flexibility and progressiveness regarding such institutional pressures. Improving gender diversity is essential in order to boost the MENA's economic growth and competitiveness. Various studies in this regard have evidenced the positive impact of gender-balanced leadership as it provides diversity in thinking, enhances decision-making, contributes to better conflict resolution, mitigates risks and governance-related controversies (Bernardi, Bosco, & Columb, 2009; Lee, Marshall, Rallis, & Moscardi, 2015; Thwing-Eastman, Rallis, & Mazzucchelli, 2016), improves employee retention and company reputation, effectively utilizes the firm's talent pool (Catalyst, 2017; Hunt,

Layton, & Prince, 2015), and overall, enhances the firm's financial performance (PwC, 2019) and organizational effectiveness (McKinsey, 2014).

The MENA region continues to undergo a series of transformations characterized by economic diversification and governance reforms aimed towards an inclusive society with social and economic opportunities for all and achieving gender balance in corporate leadership (OECD, 2019; World Bank, 2013a). Closing the gender diversity gap in corporate roles remains another critical challenge in the region. The MENA's legal system, social and cultural norms, and family codes significantly impact the appointment of women to top-level executive positions (OECD, 2017b). Amidst the conservative societal customs, the region requires sustainable measures in order to alter the predominant negative attitude towards the ability of women to successfully occupy leadership roles (World Bank, 2010). The region's lack of disclosure and reliable data and the scarcity of research on gender diversity also obstructs the assessment of women's participation in business activities and hinders efforts to implement and improve policies for increasing their access to corporate leadership roles. Nevertheless, substantial progress has been noticeable in the region, especially in the past few years, although to varying degrees depending on the countries (World Economic Forum, 2019). Algeria, Morocco, and the United Arab Emirates issued policies mandating equal pay, and countries like Bahrain, Lebanon, Morocco, Tunisia, and the United Arab Emirates, passed laws preventing gender-based discrimination in hiring (OECD, 2019). Despite these progressive measures, the main challenge remains in their actual implementation instead of simply having them on the books.

Legal frameworks and social norms underpinning women's rights in the MENA greatly drive the gender gap in the region's labor market. A report by the OECD (2017b) on women's economic empowerment in the MENA region describes the rates of women's labor force

participation as among the lowest in the world, with only 24% on average compared to 60% in OECD countries, and where women receive inferior wages for equal work, with discrepancies particularly high in rural areas and in the private sector, where non-wage social benefits are allocated strictly to men. The report also explains that labor codes in some MENA countries, specifically the ones following Shariah law, restrict women's activities at night and in work environments deemed to be hazardous, and that these countries also impose restrictions on the freedom of movement, such as women's ability to travel for business without the consent and the accompaniment of a male. The lack of a family-friendly environment and work/life balance policies such as part-time or flex-time arrangements also exacerbates the gender gap in the MENA's labor force (OECD, 2019). Moreover, restrictive family law provisions also influence women's job choices and employers' behavior in hiring and promoting women: Most women in the MENA tend to work in traditional female roles such as teaching, nursing, and social services (Hawkamah, 2016). Their career choices are mainly based on "societal pressures of what are deemed to be respectable occupations" (Momani, 2016). These factors have led a large percentage of well-educated women to work in low-wage jobs without benefiting from social protection and pension provisions (OECD, 2019). Remarkably, the female labor force is higher in the public sector than it is in the private sector due to better working conditions (OECD, 2014; 2017a; World Bank, 2013b). Moreover, women's participation in the labor force is higher in the GCC countries in particular, due in large part to the employment of foreign workers (OECD, 2017a; Young, 2016). Generally, however, women rarely reach senior positions in the region due to their high drop-out rate from the labor force and their early retirement (OECD, 2017b).

Reviewing women's actual participation in corporate leadership in the MENA region is challenging as statistics tend to be limited to the public disclosure of information to stock

exchanges and company websites, and so, relevant data from private firms is generally unavailable. A study conducted by Shareholders Rights (2016) on the representation of women on boards of directors in the MENA reveals that around 21% of firms with full disclosure that were examined have women on their boards. A more detailed survey by the OECD (2018) reveals that 31% of firms have at least one female as a board member; 7% have three or more; and only 4.8% of the total have women with voting board seats. Overall, only 16% of women participate in the labor force in Algeria and Jordan, and between 25% and 32% of women participate in Egypt, Morocco, Libya, and Tunisia (WDI, 2017). Women in the region are also underrepresented in politics and public-sector management and hold only 17% of the seats in national parliaments (OECD, 2019).

Recent reports on the MENA region indicate that gender-balanced leadership improves the implementation of good corporate governance practices, enhances financial results and performance (International Finance Corporation, 2015; 2020), and has a significant impact on firms' strategies and decision-making as it provides diversity in thinking, mitigates risks and unethical ventures, brings in a transformational leadership style, enhances teamwork, reduces aggressive culture, and pursues steady growth and improvements (Hawkamah, 2013). As a result, gender diversity has started to increase slowly in recent years in MENA economies, especially in the GCC countries, as a means of enhancing organizational effectiveness (McKinsey, 2014; 2015). Despite this progress, women's participation in corporate leadership remains modest as the region faces keys challenges to increasing women's representation in corporate leadership due to several factors, leading to progress being slower than in other regions. First, customary laws continue to exist in parallel with statutory laws in the region, discouraging gender equality and women's empowerment, where women are expected to take on domestic responsibilities primarily instead of working (OECD, 2017b). The region's restrictive legal framework, combined with conservative

social and cultural norms, notably family codes and traditions, play a vital role in driving the gender gap in the labor market and in limiting women's activities (Hayo & Caris, 2013). Thus, their participation in corporate leadership remains modest as no constitutional measures on non-discrimination against women in the MENA have been implemented in company practices. Second, corporate governance codes in the MENA rarely and only broadly endorse gender diversity[1]. The region generally lacks targeted measures and quotas to encourage women's participation in corporate leadership. Moreover, company and security laws neither acknowledge the benefits of gender diversity nor mandate disclosure of gender information about board members and senior management. Third, women in the region are not granted enough support from colleagues, have limited interaction with firms' senior managers, and lack female role models, networking opportunities, and targeted leadership programs (McKinsey, 2020). Conscious and unconscious biases against women in leadership are hence evident across the region. And lastly, the lack of reliable data and limited disclosure and transparency hinder the possibility of accurately assessing women's participation in corporate leadership (OECD, 2019).

Enhancing women's participation in corporate leadership is crucial for the comprehensive economic growth needed to improve the MENA's competitiveness and global integration. Gender diversity in corporate leadership has been proven to benefit both firms and economies. Failing to implement policies and undertake measures ensuring a sustainable gender-balanced leadership in the region would be a missed opportunity.

[1] Inferences drawn after reviewing national corporate governance codes in the MENA region.

1.5. Towards an Institution-Based View of State-Owned Enterprises

After a decade of privatization and a noticeable cutback on state involvement in the corporate sector (Filatotchev, Buck, & Zhukov, 2000; Vaaler & Schrage, 2009), SOEs are once again on the rise (Bruton, Peng, Ahlstrom, Stan, & Xu, 2015; Guillén & Capron, 2016; Inoue et al., 2013; Wood & Wright, 2015) and are becoming more actively involved in corporations (Musacchio & Lazzarini, 2014). The debate on government ownership presents profound political, social, and economic implications on millions of firms (Peng et al., 2016) but remains an unresolved one. SOEs have been examined based on numerous theoretical perspectives lending mixed results about the government's role and impact on firm performance and strategies (Musacchio et al., 2015).

Numerous ownership studies have therefore identified the prominence of the institutional environment and suggested that differences in ownership structures across the world and the different effects that ownership structures have on firms are essentially the result of firms' distinct institutional environments (Estrin & Prevezer, 2010; La Porta, Lopez-de-Silanes, & Shleifer, 1999; Steier, 2009). As such, the institution-based view became a fast-growing paradigm in organizational research, emphasizing the importance of the institutional context of businesses in understanding firm strategies and outcomes (Fiss, 2008; Peng, 2002; Peng & Khoury, 2008; Peng et al., 2008; 2009). In this regard, scholars have identified the various ways in which institutions affect state ownership and control (Bruton et al., 2015) and acknowledged that state ownership may arise as a response to institutional underdevelopment (La Porta et al., 2002; Inoue et al., 2013; Musacchio et al., 2015). "SOEs are, by definition, assets of home-country governments, which makes them a part of their home-country institutions" (Cui & Jiang, 2012:265). Because of their affiliation with the local governments, SOEs display more distinct interactions with institutional processes than other firms. A central premise of the institution-based view of international business

strategy (Carney, Gedajlovic, Heugens, van Essen, & van Oosterhout, 2011; Peng, 2002; Peng & Khoury, 2008; Peng et al., 2008; 2009) is that firm strategies, practices, and outcomes are conditioned on country-level institutional factors (van Essen, Heugens, Otten, & van Oosterhout, 2012). Different countries are known to have rather diverse economic systems (Hall & Soskice, 2001) that have been established within distinctive institutional contexts (Jackson & Deeg, 2008; North, 1990) and which are bound to impact both the prevalence and effectiveness of any particular corporate governance practice or strategy (Denis & McConnell, 2003). In line with these general observations, we expect that the impact of government ownership on both firm performance and strategy, and hence its prevalence as a generic corporate governance strategy available to shareholders, to be institutionally driven.

The rise of SOEs over the past decade has led to a notably renewed attention on state capitalism in the comparative corporate governance literature (e.g., Bruton et al., 2015; Cuervo-Cazurra & Li, 2020; Cuervo-Cazurra, Inkpen, Musacchio, & Ramaswamy, 2014; Heugens, Sauerwald, Turturea, & van Essen, 2019; Musacchio & Lazzarini, 2014; Musacchio et al., 2015; Peng et al., 2016; Tihanyi et al., 2019). Despite the conflicting results presented by existing research, a common inference stands out in the literature: capitalist institutions vary from one country to another according to the relevant institutional setting in which they operate (Jackson & Deeg, 2008; Hall & Soskice, 2001). As SOEs appear to be more prevalent in underdeveloped institutional settings manifesting serious institutional voids (La Porta et al., 2002; Inoue et al., 2013; Musacchio et al., 2015), scholars essentially focus on emerging economies when investigating the role and involvement of the government in firms (Cui & Jiang, 2012; Dharwadkar, George, & Brandes, 2000; Peng, Tan, & Tong, 2004; Song, Wang, & Cavusgil, 2015). The MENA region, however, remains an underexamined area in the world (Cuervo-Cazurra, 2011), despite substantial

government ownership and the unique institutional configurations that prevail its economies. The region's severe market failures underline the substantive role of the government in addressing institutional deficiencies. Yet government ownership remains notorious in the region, as invoked by the eruption of the Arab Spring against governments' cronyism and exploitation. The region thus offers an interesting setting for a deeper understanding of the role of the government in institutionally unstable and conflict-afflicted economies (Henry & Springborg, 2010; Hertog, 2019).

1.5.1. Government Ownership and Firm Performance in the MENA

A well-established body of research in the literature explores the impact of state ownership on firm performance using a range of theoretical approaches but presents mixed findings. For example, one research stream argues that governments prioritize their own political and social goals over those of the firm (Bai & Xu, 2015; Borisova et al., 2012; Frydman, Gray, Hessel, & Rapaczynski, 1999; Li, Yi, & Cui, 2017; Megginson, Nash, & van Randenborgh, 1994; Tihanyi et al., 2019) and links government ownership to inefficiencies (Dharwadkar et al., 2000), agency problems (Peng et al., 2016), and poor performance (La Porta et al., 2002; Zou & Adams, 2008). The opposing research stream, however, argues that governments get involved in political activities linked to their investments when such involvements strategically benefit firms' objectives (Dong, Putterman, & Unel, 2006; Hadani & Schuler, 2013; Hillman & Hitt, 1999; Mutlu, van Essen, Peng, Saleh, & Duran, 2018) and strengthen firms' financial performance (Lester, Hillman, Zardkoohi, & Cannella Jr, 2008) by playing a powerful role in monitoring firm behavior, providing support through policy enforcement, granting access to financing channels and scarce resources, and expanding firms' networks and connections (Musacchio & Lazzarini, 2014; Musacchio et al., 2015; Cuervo-Cazurra & Li, 2020; Wei, Clegg, & Ma, 2015; Borisova & Megginson, 2011; Zhou, Gao & Zhao, 2017; Wu, Xu, & Yuan 2009).

Nevertheless, as performance implications of SOEs appear to be institutionally driven (Bruton et al., 2015; Ralston, Terpstra-Tong, Terpstra, Wang, & Egri, 2006), recent research has focused on outlining the institutional conditions that lead to successful performance outcomes of SOEs (Musacchio et al., 2015). It has therefore been commonly held that government ownership in weak institutional contexts enhances firm performance and presents substantial advantages, primarily in terms of facilitating credit access (Grosman, Wright, & Okhmatovskiy, 2016; Inoue et al., 2013; Musacchio & Lazzarini, 2014; Song, Storesletten, & Zilibotti, 2011). Yet in economies with a prevalence of severe institutional vacuums essentially marked by poor capital markets and weak legal enforcement, government ownership not only presents vital advantages in procuring financing, (La Porta et al., 2002; Inoue et al., 2013; Musacchio & Lazzarini, 2014), but also in accelerating economic activities (Pan, Teng, Supapol, Lu, Huang, & Wang, 2014), governing firm relationships, and resolving contractual disputes (Cuervo-Cazurra & Li, 2020). This overview that the impact of SOEs on firm performance is contingent primarily on institutional development is, however, overly crude, as it does not account for the fact that although government ownership is an endemic feature of practically all MENA economies, various ownership configurations amid the region's weak institutional setting might differently impact the role of SOEs. The broad assumption that SOEs perform better in emerging economies by essentially subsidizing institutional voids seemingly demands a more profound and comprehensive examination of the interaction between institutional configurations and firms' various governance structures. Additionally, corporate governance is a relatively nascent concept in the region, which was essentially initiated following the outbreak of the Arab Spring, inducing calls for governance and policy reforms. Foreign investors have consequently presented various governance dynamics warranting a more comprehensive and contextualized examination of government identity

(Douma, George, & Kabir, 2006) amidst the different institutional and ownership configurations seen in the MENA.

Chapter 2 of this dissertation, therefore, focuses on firm-level implications of government ownership on firm performance amid the MENA region's underdeveloped institutions. As such, the chapter aims to address the following research questions: How does state ownership affect firm performance in the MENA region? How does foreign government ownership, especially from outside the MENA, affect firm performance? How does the region's institutional environment impact the effect of government ownership and government identity on firm performance?

Based on a sample of 1215 firms in eleven MENA countries between 2010 and 2017 and using regression modelling analysis, this chapter develops and tests hypotheses in order to examine the relationship between government ownership and firm performance in the MENA and further unpacks this relationship by scrutinizing the moderating roles of ownership chain length and owner identity (domestic vs. foreign and foreign from within vs. outside the MENA). As part of our robustness checks, we empirically examine the role of the MENA context where underdeveloped institutions are prevalent and test the moderating effect of institutional voids in financial and legal markets on our initial models. The results presented in this chapter offer both theoretical and policy implications.

We find that while government ownership enhances firm performance overall, this effect diminishes if SOEs have lengthy control chains or foreign ownership identities. As we examine the impact of SOEs on firm performance in view of the region's underdeveloped institutional environment, SOEs were treated as a response to market failures and institutional vacuums that facilitate credit access amid the region's significant capital constraints and act as a political power in the absence of adequate legal enforcement. Acknowledging that within certain ownership configurations, institutional voids can also foster disadvantaged behaviors, we further consider the

region's weak institutional setting threatening investor protection, enabling expropriation, and constraining market liquidity, particularly within pyramid ownership structures. Weighing the costs and benefits of pyramid government ownership in the MENA, we contend that while government ownership enhances performance, this effect is reversed when ownership and control rights are separated, and that this effect is particularly exacerbated in weak institutional settings.

Lastly, we examine the impact of the owner's identity and find that foreign government owners are detrimental to firm performance as they suffer from a third agency conflict between the home and the host country that is particularly inflated by the region's weak financial and legal institutions, while foreign government owners from within the MENA region enhance firm performance as they overcome the liability of foreignness and legitimacy pressures given the institutional similarities captured by the relatively small institutional distance between the home and the host country.

This chapter relies on the institution-based view and the literature on institutional voids and contributes to the ongoing scholarly debate on the relationship between government ownership and firm performance in a relatively unexplored and distinct context worldwide. The MENA is a peculiar region renowned for its fragile and conflict-afflicted markets as well as for its institutional dynamics that significantly impact business activities. Severe institutional voids can constrain and depress firm performance, and state ownership is valuable in the midst of such conditions since it possesses the capacity to overcome and fill such voids. As we confirm the influence of institutional voids on the state's involvement and control in firms, we follow an institutional logic and further emphasize that different configurations of government ownership affect performance differently. The state's impact on firms is not uniform as weak institutions can endorse the state's political and social agenda within certain ownership configurations, specifically within pyramid and foreign

government ownerships. Our findings also donate to the neo-institutional view as we differentiate between domestic and foreign government owners and emphasize the role of legitimacy on the performance outcomes of different owners' origins. Additionally, we unpack the notion of institutional voids and underline the importance of distinguishing between institutional voids and examining their various effects on different ownership configurations, rather than simply identifying the region's institutional setting as an underdeveloped one marked by severe market failures.

We likewise offer insights to policymakers in the MENA towards exploring the competitive potentials of SOEs rather than leveraging them for their political agenda. Our findings underscore the importance of considering the institutional setting of the region and its impact on corporate governance practices as countries continue to undergo reforms and comply with international standards. Efforts could focus on the importance of adopting less complex ownership structures and the implementation of policies that attract foreign governments from outside the MENA region and eliminate institutional barriers for them through the establishment of a corporate code of best practices for SOEs in the MENA.

1.5.2. Government Ownership and Internationalization Strategies from the MENA

The recent re-emergence of SOEs has induced a pursuit of a rapid internationalization growth (Cuervo-Cazurra et al., 2014) and introduced the concept of state-owned multinational companies (SOMNCs) (Carney & Child, 2012; Cuervo-Cazurra, 2017). In response to this trend, scholars studied the impact of government ownership on the degree and performance of internationalization (Benito, Rygh, & Lunnan, 2016; Buckley, Clegg, Cross, Liu, Voss, & Zheng, 2007) and drew on a range of theoretical approaches (Mariotti & Marzano, 2019). Scholars likewise shed light on the expansion of SOMNCs, particularly from emerging economies, after undergoing substantial reforms and achieving levels of international competitiveness (Cuervo-Cazurra et al., 2014; Cui &

Jiang, 2012; Rodrigues & Dieleman, 2018; Wang, Deng, Kafouros, & Chen, 2012). The literature, however, advanced in various directions, generating conflicting theoretical and empirical findings regarding the role of state ownership in internationalization strategies (Cuervo-Cazurra & Li, 2020; Mariotti & Marzano, 2019). While the "liability of stateness" negative view argues that SOEs are politically biased, focused on domestic projects, bureaucratic, inflexible, and consequently impair internationalization strategies (Cui & Jiang, 2012; Oesterle, Richta, & Fisch, 2013), the "government as a strategist" positive view underlines government-related resources, policies, connections, and capabilities that grant SOEs a competitive advantage for international expansion (Benito et al., 2016; Luo, Sun, & Wang, 2011; Ramasamy, Yeung, & Laforet, 2012; Wang et al., 2012). The impact of various institutional domains, however, presents a reconciled perspective to these contradicting views (Colli, Mariotti, & Piscitello, 2014; Estrin, Meyer, Nielsen, & Nielsen, 2016; Hoskisson, Wright, Filatotchev, & Peng, 2013; Liang Ren, & Sun, 2015) in which the uprising internationalization operations across the world highlight that differences in national institutions determine the goals, means, and policies of governments by equipping them with various abilities and intervention devices for the firms in which they invest (Berning & Holtbrügge, 2012; Mariotti & Marzano, 2019).

Traditionally associated with political turbulence and violence, the MENA region lags behind in terms of foreign direct investment (FDI), integration in the global economy (Demirbag, Apaydin, & Tatoglu, 2011), and academic attention in this regard (Cuervo-Cazurra, 2011). Given the region's unfulfilled potential for trade and severe institutional voids, government ownership can play a crucial role in supporting firms' international diversification through the state's support via financing and regulations (Wei et al., 2015). However, the region's perilous and hazardous institutional environment, with the prevalence of high levels of corruption, political instability, and political constraints, raises risk and uncertainty concerns as perceived by the host country that can

undermine firms' internationalization prospects. The variety of institutions in the MENA context forms a paradoxical setting that distinguishes the region from the rest of the world and underlines the importance of examining institutional dynamics on internationalization outflow from the region. Moreover, as important as country-level institutions are for investment outflow, region-level institutional development is equally important (Chan, Isobe, & Makino, 2008). The literature investigates these two dimensions separately, calling for an inclusive examination of the impact of both country- and region-level institutional development on outward FDI from the region. As geographic and institutional proximity are essential aspects of isomorphism that enable firms to overcome the liability of foreignness (Arregle, Miller, Hitt, & Beamish, 2013), the region offers investment opportunities for countries within its borders that emphasize the need for a comprehensive examination at both country- and region-level.

Chapter 3 of this dissertation therefore focuses on the impact of government ownership on internationalization strategies from the MENA region as well as on the implications of country- and region-level institutional development for this relationship. As such, the chapter aims to address the following research questions: How does state ownership affect firm internationalization from the MENA region? How do country-level institutions impact the effect of government ownership on the extent of firm internationalization from the MENA? How does the region-relative institutional development impact the effect of government ownership on the internationalization scope of firms within the MENA region?

Based on a sample of 1215 firms in eleven MENA countries between 2010 to 2017 and using regression modelling analysis, this chapter develops and tests hypotheses in order to examine the relationship between government ownership and firm internationalization from the MENA. The chapter is divided into two parts: First, we examine the impact of government ownership on

outward FDI from the MENA and test the moderating effects of financial and legal institutional voids as well as corruption, political stability, and political constraints at the country-level on the focal relationship. Next, we examine the impact of government ownership on the location of outward FDI, which we define as internationalization scope within the MENA region. Focusing on the similarities between the institutional development of a country and that of the MENA region, we test the impact of region-relative institutional development variables which capture the similarities between a country and a regional institutional environment on the latter relationship. The results presented in this chapter offer both theoretical and policy implications.

We find that government ownership overall enhances firm internationalization, and that this effect becomes stronger amid weak financial and legal markets, but weaker amid high levels of corruption, political instability, and political constraints. While SOEs offer valuable resources and compensate for the institutional vacuums, the poor governance practices and the ongoing political disorder and constrictions that predominantly characterize the region increase legitimacy concerns as well as perceptions of risk and uncertainty of the host country, and consequently impair internationalization prospects from the region. Next, recognizing that regional aspects matter significantly in internationalization strategies, we show that SOEs are more likely to internationalize within the boundaries of the MENA region due to geographic and institutional proximity that alleviates the liability of foreignness. In order to further scrutinize this relationship, we calculate region-relative variables for financial and legal institutions as well as for corruption, political stability, and political constraints. We find that the similarities in institutional development, governance infrastructure, and political setting create an isomorphic environment across the MENA that reduces legitimacy concerns and normative institutional pressures on investors from within the region.

Building on the premises of the institution-based view and the institutional voids thesis, this chapter investigates an underexamined region of the world that displays an unfulfilled potential for international trade, a wide range of institutional configurations, and unique taxonomies that distinguish it worldwide. We also focus on the home country rather than following the predominant approach in the literature that focuses on the host country and underline the prominent influence of national institutional conditions on outward internationalization prospects. As such, we emphasize the importance of institutional factors at the home country-level and highlight that various institutions have different implications on SOEs' strategies. We therefore present an inclusive analysis that examines various aspects and effects of the institutional environment and underlines the prevalence of a fine-grained distinction across institutional domains. Lastly, we follow an institutional logic and underline the role of institutional isomorphism in overcoming normative and legitimacy pressures on foreign investors. As such, we provide a comprehensive understanding of the influence of institutions on internationalization decisions at both the national and regional levels and highlight the importance of both aspects for a more accurate and more refined understanding.

Our findings also offer insights for managers towards considering the governance infrastructure and political environment that impact risk exposure in their international expansion. SOEs' managers need to engage in consistent and coordinated image-building processes in order to subsidize the host country's perception of risk and illegitimacy and to maximize the benefits of individual firm efforts. We thus underscore the crucial role of the government in improving foreign perception of MENA firms' risk and legitimacy by acting as a coordinator with the host country. As for policymakers, we highlight the importance of implementing policies that eliminate

institutional barriers and align institutional and governance mechanisms with international standards through the establishment of a corporate code of best practices for SOEs in the MENA.

1.6. The Predictors and Role of Female Board Directorship from an Institutional View and an Upper Echelons View in the MENA

"The concept of diversity relates to the board composition and the varied combination of attributes, characteristics, and expertise contributed by individual board members" (Walt & Ingley, 2003: 219). As such, diversity is increasingly becoming an essential aspect of corporate board structure (Zhu, Shen, & Hillman, 2014) as it entails a greater variety of talents and resources that enhance the overall quality of firms' decision-making processes (Hillman et al., 2002). A growing body of the literature examines issues related to corporate board diversity and asserts that boards are somewhat homogeneous relative to the societies in which they operate, arguing that this is both an indication of poor corporate governance and a missed opportunity (Bilimoria & Piderit, 1994; Burke, 2000; Carter et al., 2003; Conyon & Mallin, 1997; Daily & Dalton, 2003a; b; Singh & Vinnicombe, 2004; Singh, Vinnicombe, & Johnson, 2001). The inclusion of women on corporate boards amends the premises of major theories that define the antecedents and performance implications of board diversity for two main reasons. First, women's perceptions of themselves influence their career choices and aspirations and determine the extent and quality of female candidates for board nominations (Barbulescu & Bidwell, 2013). Second, cultural and social norms affect the public's perceptions of women differently than their perceptions of men, and thus, stimulate different reactions to their presence on corporate boards (Lee & James, 2007; Ryan & Haslam, 2007). These aspects impact the appointment of women to corporate boards as well as their impact on firm performance (Ding, Murray, & Stuart, 2013). As such, the same conditions and characteristics that influence the appointment of females to corporate boards can likewise affect females' actual roles

on these boards. Both perceptions, however, are shaped by the institutional environment in which they take place (Abdullah et al., 2016). It is hence crucial to make distinctions among the types of levers within the overall institutional context that impacts female board participation and their performance consequences, and to delineate the various ways board gender diversity is affected by different institutional layers (Terjesen & Singh, 2008). The institutional theory would be the most appropriate in capturing the dynamics of the institutional setting in which a firm exists and is embedded (Grosvold et al., 2007; Hillman et al., 2007).

Existing studies explore the predictors of female board directorship at the industrial and organizational levels (Brammer, Millington, & Pavelin, 2007; Hillman et al., 2007) but do not sufficiently scrutinize the influence of social institutions at national levels. An inclusive analysis exploring the impact of social institutions on micro and macro level factors is yet to be presented. Additionally, a substantial body of research examining corporate board gender heterogeneity focus on the performance imperative as a justification for an increased concern with and interest in women board directorship (Post & Bryon, 2015). On balance, the literature established the "value-in-diversity" proposition but focused predominantly on high-income economies when reaching such inferences and rarely examined emerging economies (Abdullah et al., 2016). Underdeveloped settings present institutional aspects that challenge the universality of such propositions and entail the need for a systematic understanding of the actual role of females on corporate boards relative to the institutional setting. The upper echelons view on board gender diversity provides a clear theoretical foundation for linking board diversity with firm outcomes (Hambrick, 2007; Post & Byron, 2015). Yet institutional environments involving a conservative view on female roles in society reflect a market bias against female representation in corporate positions and should be critically considered when assessing the impact of female directorship on firm performance.

Whereas developed economies continue to attract the most scholarly attention, gender diversity remains significantly understudied in emerging economies, with the MENA left completely unexplored. The region, however, presents a distinctive institutional context for the exploration of the antecedents and value of gender diversity in corporate directorship. The region's legal frameworks, social and cultural norms, and religious beliefs greatly restrict women's participation in economic and political activities and encourage familial duties over career goals (Hayo & Caris, 2013). The recent efforts in closing gender gaps underlines the paradoxical setting of the region as females' access to education advances but their prevalence in corporate careers remains limited (World Bank, 2013a; 2020). The MENA's peculiar, challenging, and unfavorable institutional setting that differs significantly from developing and even from developed economies and holds a conservative view about women's role in society thus offers an interesting opportunity to investigate the impact of multiple layers of conditions that affect female's appointment to corporate boards as well as their roles on these boards and their consequent impact on firm performance.

Chapter 4 of this dissertation therefore focuses on the antecedents of female directors in the MENA region and on their impact on firm performance. Accordingly, the chapter aims to address the following research questions: How do institutional norms at the micro and macro levels affect female board directorship in the MENA? What is the value of female directors on corporate boards in the MENA? How do social institutions affect the prevalence of female assignment to corporate boards and their impact on firm performance in the MENA region?

Based on a unique hand-collected sample of 1197 firms in eleven MENA countries for the year 2016 and using regression modelling analysis, this chapter develops and tests hypotheses in order to examine the antecedents of female appointment to corporate boards as well as the impact of female directors on firm performance. The chapter is divided into two parts: First we examine

the predictors of female board assignment at the firm, industry, and country level. Second, we examine the impact of female directors on accounting and market performance measures. The results presented in this chapter offer both theoretical and policy implications.

We rely on the institutional logic and legitimacy concerns in assessing the predictors of female directorship. Our claims suggest that larger firms are more likely to conform to societal expectations and are hence less likely to assign females to their corporate boards than smaller firms. While we hypothesize that state- and family-owned firms are more likely to have female directors on their boards, as state-owned firms are further encouraged to abide by good corporate governance practices and family firms prioritize the retention of control, we only find partial support for our claims regarding firm size, family, and state ownership. We also argue that foreign investors follow a home-bias in their institutional logic; industries with larger female employment base regard female directors as qualified; and gender parity promotes the overall legitimacy of females in economic activities, and accordingly favor the appointment of females to board seats. Our results indeed indicate that firms with foreign ownership, in industries with larger female employment bases, and in countries with higher gender parity appoint more females to their corporate boards. Next, we assess the value of women's contribution on corporate boards and find that as MENA countries slowly start to acknowledge their valuable input in corporate directorship, female directors positively impact firms' accounting performance. While the overall social and cultural norms in the region remain relatively rigid, conservative, and unfavorable of females in managerial roles, their impact on firms' market performance was found to be negative.

The MENA's conflicting institutional setting and conservative social and cultural norms, the lack of adequate corporate governance structures, the absence of academic research and empirical evidence in the region in this regard, and the reforms and progress that the MENA continues to

undergo in order to decrease gender gaps reinforce the necessity for and the timeliness of our research. The study contributes to the ongoing scholarly debate on the antecedents and value of female directors on corporate boards. Our findings demonstrate that the predictors of female appointment to corporate boards and the consequent value that they offer are better understood when the impact of social institutions on these relationships is considered. Our findings thus show that context plays a vital role in the nomination of females to corporate boards and in their impact on firm performance. Our study underscores the importance of comprehensively examining multiple layers of conditions at the micro and macro levels that impact female board directorship. Accordingly, we follow an institutional logic in a relatively different context and confirm that the general inference that larger firms appoint more females to their boards does not necessarily hold in the MENA's setting, where firms experience greater public scrutiny and institutional pressures. Our findings from ownership identities imply that while family- and state-owned firms might not necessarily appoint females to managerial positions, they may nevertheless employ them in lower-level roles since institutional pressures on firms might increase when more women are seen on corporate boards. Foreign investors, however, are relatively less compelled by the region's social and cultural norms and would rather follow their home countries' approach to this matter. Additionally, our industry findings underline the importance of underlying normative forces within an industry that can shift the general perceptions of women in leadership positions. At the macro level, our results emphasize the crucial role of inclusive institutions in altering societal norms regarding females' participation in the workplace and ascending to corporate leadership roles. Lastly, our findings indicate that while female directors' various skills and qualities are appreciated by the firm, they are subject to a biased evaluation in the market, which oftentimes impairs their actual performance.

Our findings offer implications for policymakers, specifically MENA governments. As the region continues to undergo reforms and to make progress in reducing gender gaps, the actual translation of these improvements remains insufficient, necessitating greater implementations of reforms that promote more inclusive institutions and enhance gender parity, which entails increasing the capacity and resources for female education and improving the compliance or incentive structures to regulate firms' human resource practices that include hiring, pay, and succession rules. We also offer managerial insights for firms in the region. As we emphasize the value of females on corporate boards, we suggest that firms can accelerate the process of institutional change by altering their organizational practices that limit the hiring and succession of females.

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1.8. Tables

Table 1 – List of MENA Countries	Gulf Cooperation Council (GCC)
Algeria	
Bahrain	Bahrain
Djibouti	
Egypt	
Iran	
Iraq	
Jordan	
Kuwait	Kuwait
Lebanon	
Libya	
Morocco	
Oman	Oman
Palestine	
Qatar	Qatar
Saudi Arabia	Saudi Arabia
Syria	
Tunisia	
United Arab Emirates (UAE)	United Arab Emirates (UAE)
Yemen	
Source: World Bank	

Table 2 – Socio-Economic Characteristics of MENA Countries

Country	Gross Domestic Product (GDP) per Capital – Rank[1]	Gross Domestic Product (GDP) per Capital – Value[1]	Total Population[1]	World Rank for Crude Oil Reserves[2]
Algeria	118	3,948	43.05M	15
Bahrain	38	23,504	1.64M	67
Djibouti	127	3,409	973.56K	No Oil
Egypt	132	3,020	100.39M	24
Iran	100	5,520	82.91M	4
Iraq	98	5,955	39.31M	5
Jordan	112	4,330	10.10M	96
Kuwait	30	32,032	4.21M	6
Lebanon	83	7,784	6.86M	Potential
Libya	84	7,684	6.78M	9
Morocco	130	3,204	36.47M	97
Oman	57	15,474	4.97M	21
Palestine	Unranked	Unranked	4.69M	No Oil
Qatar	10	64,782	2.83M	13
Saudi Arabia	40	23,140	34.27M	2
Syria	143	2,033	17.07M	30
Tunisia	128	3,318	11.69M	48
United Arab Emirates	22	43,103	9.77M	7
Yemen	167	968	29.16M	29

[1]Source: https://data.worldbank.org/indicator
[2]Source: https://www.cia.gov/library/publications/resources/the-world-factbook/fields/264rank.html

Table 2 – Socio-Economic Characteristics of MENA Countries, *continued*

Country	Human Development Index (HDI) – Rank[3]	Human Development Index (HDI) – Value[3]	Gross National Income (GNI) per Capita – Rank[3]	Gross National Income (GNI) per Capita – Value[3]
Algeria	82	0.759	82	13,639
Bahrain	45	0.838	27	40,399
Djibouti	171	0.495	147	3,601
Egypt	116	0.700	100	10,744
Iran	65	0.797	63	18,166
Iraq	120	0.689	76	15,365
Jordan	102	0.723	112	8,268
Kuwait	57	0.808	5	71,164
Lebanon	93	0.730	98	11,136
Libya	110	0.708	94	11,685
Morocco	121	0.676	118	7,480
Oman	47	0.834	29	37,039
Palestine	119	0.690	134	5,314
Qatar	41	0.848	1	110,489
Saudi Arabia	36	0.857	14	49,338
Syria	154	0.549	161	2,725
Tunisia	91	0.739	101	10,677
United Arab Emirates	35	0.866	7	66,912
Yemen	177	0.463	180	1,433

[3]Source: http://hdr.undp.org/en/content/2019-human-development-index-ranking

Table 3 - Cultural Characteristics of MENA Countries

Country	National Culture Dimensions					
	Power Distance	Individualism vs. Collectivism	Masculinity vs. Femininity	Uncertainty Avoidance	Long vs. Short-Term Orientation	Indulgence vs. Restraint
Algeria	-	-	-	-	-	-
Bahrain	-	-	-	-	-	-
Djibouti	-	-	-	-	-	-
Egypt	70	25	45	80	7	4
Iran	58	41	43	59	14	40
Iraq	95	30	70	85	25	17
Jordan	70	30	45	65	16	43
Kuwait	80	25	40	80	-	-
Lebanon	75	40	65	50	14	25
Libya	80	38	52	68	23	34
Morocco	70	46	53	68	14	25
Oman	-	-	-	-	-	-
Palestine	-	-	-	-	-	-
Qatar	93	25	55	80	-	-
Saudi Arabia	95	25	60	80	36	52
Syria	80	35	52	60	30	-
Tunisia	-	-	-	-	-	-
United Arab Emirates	90	25	50	80	-	-
Yemen	-	-	-	-	-	-

Estimates range between 0 and 100, with 50 as a mid-level.
Source: https://www.hofstede-insights.com

Table 4 – Worldwide Governance Indicators for MENA Countries for the year 2018

	Voice and Accountability	Political Stability	Government Effectiveness	Regulatory Quality	Rule of Law	Control of Corruption
United Arab Emirates	-1.109	0.743	1.431	0.932	0.806	1.152
Bahrain	-1.406	-0.840	0.180	0.446	0.413	-0.147
Djibouti	-1.352	-0.134	-0.899	-0.706	-0.923	-0.717
Algeria	-0.981	-0.794	-0.444	-1.264	-0.775	-0.636
Egypt, Arab Rep.	-1.284	-1.165	-0.585	-0.867	-0.412	-0.587
Iran, Islamic Rep.	-1.318	-1.307	-0.430	-1.296	-0.694	-0.959
Iraq	-0.987	-2.556	-1.321	-1.219	-1.759	-1.399
Jordan	-0.702	-0.379	0.113	0.083	0.234	0.150
Kuwait	-0.589	0.110	-0.088	-0.036	0.211	-0.289
Lebanon	-0.499	-1.645	-0.640	-0.342	-0.764	-1.109
Libya	-1.521	-2.441	-1.847	-2.279	-1.786	-1.553
Morocco	-0.663	-0.332	-0.209	-0.243	-0.138	-0.216
Oman	-1.026	0.655	0.187	0.310	0.465	0.246
Qatar	-1.195	0.678	0.631	0.515	0.735	0.725
Saudi Arabia	-1.644	-0.518	0.323	-0.046	0.142	0.360
Syrian Arab Republic	-1.958	-2.740	-1.671	-1.796	-2.048	-1.627
Tunisia	0.211	-0.902	-0.105	-0.411	0.039	-0.053
West Bank and Gaza	-0.902	-1.736	-0.761	0.052	-0.484	-0.195
Yemen, Rep.	-1.751	-3.002	-2.244	-1.536	-1.790	-1.638
MENA Average	-1.088	-0.963	-0.441	-0.511	-0.449	-0.447
World Average	0.117	0.095	0.044	0.051	0.045	0.045

Estimates range between -2.5 (weak) and 2.5 (strong) governance performance.
Source: www.govindicators.org

Table 5 – Main Elements of the Regulatory Framework in the MENA			
Country	Corporate Governance Model[1]	Legal National Laws[2]	Regime Type[3]
Algeria	Hybrid (Anglo-American & Continental)	Civil Law & Shariah Law	Hybrid
Bahrain	Hybrid (Anglo-American & Islamic Shariah)	Civil Law & Shariah Law	Authoritarian
Djibouti	N/A	Civil Law & Shariah Law	Authoritarian
Egypt	Anglo-American	Civil Law & Shariah Law	Authoritarian
Iran	Hybrid (Anglo-American & Continental)	Shariah Law	Authoritarian
Iraq	Continental	Civil Law & Shariah Law	Authoritarian
Jordan	Hybrid (Anglo-American & Continental)	Civil Law & Shariah Law	Authoritarian
Kuwait	Hybrid (Anglo-American & Islamic Shariah)	Civil Law & Shariah Law	Authoritarian
Lebanon	Hybrid (Anglo-American & Continental)	Civil Law	Hybrid
Libya	N/A	Shariah Law	Authoritarian
Morocco	Hybrid (Anglo-American & Continental)	Civil Law & Shariah Law	Hybrid
Oman	Anglo-American	Civil Law & Shariah Law	Authoritarian
Palestine	N/A	Civil Law & Shariah Law	Authoritarian
Qatar	Anglo-American	Civil Law & Shariah Law	Authoritarian
Saudi Arabia	Hybrid (Anglo-American & Islamic Shariah)	Shariah Law	Authoritarian
Syria	N/A	Civil Law & Shariah Law	Authoritarian
Tunisia	Continental	Civil Law	Flawed Democracy
United Arab Emirates	Hybrid (Anglo-American & Continental)	Common Law, Civil Law & Shariah Law	Authoritarian
Yemen	Hybrid (Anglo-American & Islamic Shariah)	Shariah Law	Authoritarian

[1]Source: Based on countries' national governance mechanisms
[2]Source: Legal Systems of the World
[3]Srouce: Democracy Index

Table 6 - Corporate Governance Codes in the MENA				
Country	Key National Corporate Governance Codes and Principles and Year Updated[1]	Approach[2]	Disclosure Requirement[2]	Custodians/Regulators[3]
Algeria	Code Algérian de Gouvernance d'Entreprise (2008)	Voluntary	No	Algerian Institute for Corporate Governance (Hawkama El Djazair)
Bahrain	Corporate Governance Code Kingdom of Bahrain (2018; 2010)	Comply-or-Explain	Yes	Central Bank of Bahrain
Djibouti	N/A	N/A	N/A	N/A
Egypt	Egyptian Code of Corporate Governance (2016) / Guide to Corporate Governance Regulations and Standards in Egypt (2016) / Code of Corporate Governance for Listed Companies (2011) / Code of Governance for Private sector in Egypt (2006) / Code of Corporate Governance for State-Owned Enterprises in Egypt (2006)	Comply-or-Explain	Yes	Financial Regulatory Authority
Iran	Iranian Code of Corporate Governance (2nd Edition Draft, 2005)	N/A	N/A	N/A
Iraq	Corporate Governance Guide for Banks (2018)	N/A	N/A	N/A
Jordan	Jordanian Corporate Governance Code (2011) / Corporate Governance for Shareholding Companies Listed on the Amman Stock Exchange (2007) / Corporate Governance Code for Banks in Jordan (2006)	Binding	Yes	Jordan Securities Commission
Kuwait	Issuance Rules of Corporate Governance Regulated by Capital Markets Authority (2013)	Binding & Comply-or-Explain	Yes	Capital Market Authority
Lebanon	Corporate Governance Guidelines for Listed Companies (2009) / The Lebanese Corporate Governance Code (2006)	Voluntary	No	Capital Market Authority / Banque de Liban
Libya	N/A	N/A	N/A	N/A
Morocco	Code Marocain de Bonnes Pratiques de Gouvernance des Etablissements et Entreprises Publics (2011) / Code Spécifique de Bonnes Pratiques des Etablissements de Crédit (2010) / Code Spécifique des Bonnes Pratiques d Gouvernance des PME et Entreprises Familiales (2008) / Moroccan Code of Good Corporate Governance Practices (2008)	Voluntary	Yes	National Corporate Governance Commission

Oman	Code of Corporate Governance for Public Listed Companies (2016; 2010) / Questions on the Code of Corporate Governance Oman (2016)	Binding	Yes	Capital Market Authority
Palestine	N/A	N/A	N/A	Palestine Capital Market Authority
Qatar	Governance Code for Companies and Legal Entities Listed on the Main Market (2016) / Corporate Governance Code for Companies Listed in Markets Regulated by the Qatar Financial Markets Authority (2009) / Corporate Governance Guidelines for Banks and Financial Institutions (2008)	Binding	Yes	Qatar Financial Markets Authority
Saudi Arabia	Corporate Governance Regulations (2019) / Corporate Governance Regulations in the Kingdom of Saudi Arabia (2017; 2010; 2006)	Binding & Comply-or-Explain	Yes	Capital Market Authority / Saudi Stock Exchange
Syria	N/A	N/A	N/A	N/A
Tunisia	Guide de Bonnes Pratiques de Gouvernance des Entreprises Tunisiennes (2008)	Voluntary	No	Conseil du Marché Financier / Tunisian Corporate Governance Center
United Arab Emirates	The Chairman of Authority's Board of Directors' Decision No. (3R.M) of 2016 Concerning the Standards of Institutional Discipline and Governance of Public Shareholding Companies (2016) / Corporate Governance Code of Small and Medium Enterprises Dubai (2011) / Ministerial Resolution No. (518) of 1009 Concerning Governance Rules and Corporate Discipline Standards (2009) / Corporate Governance Code of Joint-Stock Companies (2007)			
UAE DIFC		Binding & Comply-or-Explain	Yes	Dubai Financial Services Authority
UAE Federal		Binding	Yes	Emirates Securities and Commodities Authority
Yemen	Corporate Governance Code for the Banking Sector (2012) / Guidelines on Corporate Governance (2010)	Voluntary	No	Yemeni Business Club

[1]Source: The European Corporate Governance Institute
[2]Source: Countries' National Corporate Governance Codes and Principles
[3]Source: OECD (2019, p.19)

2. Chapter 2: Government Ownership and Firm Performance in the Middle East and North Africa: The Role of Ownership Structure, Owner Identity, and Institutional Voids

Government Ownership and Firm Performance in the Middle East and North Africa: The Role of Ownership Structure, Owner Identity, and Institutional Voids

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Abstract

Manuscript Type: Empirical
Research Questions: How does state ownership affect firm performance in the MENA region? How does foreign government ownership, especially from outside the MENA, affect firm performance? How does the region's institutional environment impact the effect of government ownership and government identity on firm performance?
Research Findings/Insights: Based on a sample of 1215 MENA firms from 2010 to 2017, we examine the relationship between government ownership and firm performance in the MENA region. We further unpack this relationship by scrutinizing the moderating roles of pyramid ownership structures, government identity (domestic vs. foreign and foreign within vs. outside MENA), and institutional voids. We find that while overall, government ownership enhances firm performance, this effect diminishes if SOEs have lengthy control chains or foreign government ownership but strengthens if foreign government ownership is from within the MENA region. We likewise find that the positive effect of governments on firm performance is particularly manifest amid financial and legal institutional voids; that the negative effects of pyramid and foreign government ownership are greater when institutions are weak; and that foreign government ownership from within the MENA is advantageous given the institutional distance and similarities between countries.
Theoretical/Academic Implications: Our study contributes to the ongoing scholarly debate on the relationship between government ownership and performance outcomes in a relatively unexplored context that is highly different not only from developed countries but also from other developing countries. Our findings further highlight that the institutional legitimacy of domestic government owners from within the MENA enables them to offer more benefits to firms compared to government owners from outside the MENA. Our findings likewise underline the importance of distinguishing between institutional voids instead of simply identifying the region's institutional setting as an underdeveloped one marked by severe market failures.
Practitioner/Policy Implications: We offer insights to policymakers in the MENA towards exploring the competitive potentials of SOEs rather than leveraging them for their political agendas. Our findings underscore the importance of considering the institutional setting of the region and its impact on corporate governance practices as countries continue to undergo reforms and comply with international standards. Efforts could focus on the importance of adopting less complex ownership structures and the implementation of policies that attract foreign governments from outside the MENA region and eliminate institutional barriers for them through the establishment of a corporate code of best practices for SOEs in the MENA.

Keywords: Corporate Governance; Government Ownership; Firm Performance; Foreign Government Ownership; Pyramid Ownership Structure; Institutional Voids; MENA Region

2.1. Introduction

State capitalism is significantly evident in certain countries, including China and Russia, where large numbers of firms are state-owned (Bruton, Peng, Ahlstrom, Stan, & Xu, 2015; Musacchio, Lazzarini, & Aguilera, 2015; Tihanyi et al., 2019). State-owned enterprises (SOEs) account for approximately 20% of investment and 5% of employment on a global scale, and even represent 40% of the output in some countries (International Finance Corporation, 2018). While the literature sheds a momentous focus on the role of SOEs around the world, the Middle East and North Africa (MENA) region has received little attention, despite the substantial presence of SOEs and its unique configuration of institutional factors.

The MENA is specifically characterized by liberation and socio-economic discrepancies (Abramowitz, 2018; Alvaredo, Chancel, Piketty, Saez, & Zucman, 2018) as well as by unique cultural, ethnic, and demographic diversity supplemented by political, social, and religious tensions and conflicts (Inglehart et al., 2014). The region also suffers from underdeveloped judicial institutions and financial markets and ranks low in protecting minority shareholders and in indicators such as starting a business, securing credit, trading across borders, enforcing contracts, and resolving insolvency (World Bank, 2019). Scholars essentially focus on emerging economies when examining state ownership (Peng, Tan, & Tong, 2004; Dharwadkar, George, & Brandes, 2000; Song, Wang, & Cavusgil, 2015; Cui & Jiang, 2012), as SOEs appear to be more prevalent in underdeveloped institutional contexts and arise as a response to market failures and institutional vacuums (La Porta, Lopez-de-Silanes, & Shleifer, 2002; Inoue, Lazzarini, & Musacchio, 2013; Musacchio et al., 2015). Given the MENA's institutional underdevelopment and discrepancies, state ownership can help firms thrive in the region primarily by overcoming and filling market voids.

While SOEs have been widely studied in existing literature, there is limited research conducted in the MENA with inconsistent inferences. The research done in the region on the effect of government ownership on firm performance focuses either on the banking sector (Farazi, Feyen, & Rocha, 2011; Kobeissi & Sun, 2010; Omran, 2007), on a single country (Aljifri & Moustafa, 2007; Omran, 2007), or on firms' ownership structure from multiple countries without a specific focus on SOEs (Omran, Bolbol, & Fatheldin, 2008; Pillai & Al-Malkawi, 2018), and generally overlooks the dynamics of the region's various institutional configurations and their implications on firm outcomes, despite their prominence. The MENA offers a distinctive context for understanding the role of state ownership on firm performance for two important reasons. First, despite the efforts to reform underlying institutions, the region is depicted by its inadequate governance practices, its complex and unstable political and economic structures, its poor capital markets, its weak investor protection, and overall, its poorly formulated and implemented institutions. As a result, it includes a mix of institutions that regulate firm outcomes (Henry & Springborg, 2010; Hertog, 2019). This unique configuration of institutional factors exacerbates the capacity of governments to enforce corporate governance provisions and address market deficiencies yet overstates the political motives of its investments in firms. Second, corporate governance was a nascent concept in the MENA region until the recent waves of corporate governance reforms that aimed at revitalizing local markets and attracting foreign investors (Koldertsova, 2011). Foreign investors from different origins introduced different corporate governance dynamics, requiring a closer understanding of their implications on firm outcomes. Overall, the fragile and conflict-afflicted economies combined with the institutional dynamism that continues to attract foreign investment distinguish the MENA from other developing economies.

To develop a closer examination of the implications of government ownership under institutional turbulence and deficiencies, we examine the relationship between state ownership and firm performance in the MENA region. We argue that the historical turmoil and the unstable political and economic foundations of the region led governments to respond to market failures by facilitating economic activities, securing firm financing, and protecting contracts (Musacchio & Lazzarini, 2014; Zhou, Gao, & Zhao, 2017; Wu, Xu, & Yuan 2009). Our findings show that state ownership overall plays a positive role on firm performance in the MENA. State investors often have incentives that are quite different from those of private investors (Cui & Jiang, 2012). The influence of the state is, however, not uniform for firms in the region as the state's social and political agenda cannot be undermined, especially when institutions are poorly developed. First, the complexity of government ownership – and, by extension, the level of control – shows significant variation across firms. We therefore examine the moderating role of pyramid ownership structure as more complex ownership structures may convolute the positive influence of government involvement (Sauerwald & Peng, 2013; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008). Our findings support this view, that the positive impact of the state on firm performance reverses as the benefits of ownership are outweighed by the costs of control. Second, since the nature of different investors' identity and their motivations is fundamentally different, their aggregation into one ownership type hinders some important findings that can otherwise be reached if they are examined separately (Douma, George, & Kabir, 2006). We therefore distinguish between foreign and domestic ownership and explore the moderating role of the identity of governments (domestic vs. foreign). We further differentiate between foreign government investors as those from within and those from outside the MENA region. We argue that foreign governments face additional agency conflicts between home and host country operations and thus might be considered as

illegitimate owners due to ideological and political conflicts between the home and the host countries (Cuervo-Cazurra, Inkpen, Musacchio, & Ramaswamy, 2014). However, the legitimacy concerns might be relatively less for foreign government owners from within the MENA region as they share common institutional origins (Meyer, Ding, Li, & Zhang, 2014). Accordingly, we generally find that while foreign government ownership is detrimental to firm performance, foreign government investors from within the MENA region have a positive effect. Our empirical analysis across eleven MENA countries provides support for our hypotheses.

Our study aims to make three contributions. First and most importantly, we rely on the institution-based view and the literature on institutional voids and explore an institutional context that is highly different not only from developed countries but also from the other developing countries where most corporate governance research has been conducted. The deficiencies in governance mechanisms and market conditions in the midst of political turmoil thus offer an interesting opportunity to examine the outcomes of state ownership in the MENA region. The mix of institutions in the region highlight both the financial and the political goals of government ownership as well as the different dynamics of various ownership configurations. In this regard, we explore the role of the government and its impact on firms' outcomes under extreme institutional conditions and severe market failures and highlight the role of institutional configurations in state control and involvement in firms. Second, based on the neo-institutional theory, we differentiate between foreign and domestic government owners and highlight the role of legitimacy on the performance outcomes of different owner origins. Our findings extend research on SOEs' cross-border investments by shedding light on the importance of legitimacy. And third, relying on the literature on institutional voids, we scrutinize the premise of the institutional voids thesis and highlight the role of institutions in enhancing or impairing the various

aspects of government ownership and their subsequent impact on firm performance. In doing so, we emphasize the importance of distinguishing between institutional voids and examining their various dynamics relative to different organizational configurations instead of simply identifying the region's institutional setting as an underdeveloped one marked by severe market failures.

2.2. Theoretical Framework and Hypotheses

2.2.1. The MENA Region

Organizations embedded in different institutional configurations develop corporate governance structures that have a better fit with their environments to increase their chances of survival and performance (Jackson & Deeg, 2008; Soskice & Hall, 2001). Although scholars apply this framework to less developed economies (Nölke & Vliegenthart, 2009; Schneider, 2013), one region that has been overlooked is the MENA.

MENA countries share a set of institutional features that set them apart from the rest of the developing world. Some key stylized facts are an interventionist, overcommitted state, low levels of cooperation and trust between the state and the private sector, and networks of privilege and crony capitalism (Hertog, 2019). These characteristics ultimately hinder the development of the private sector. As a result, private investments across the MENA region and their efficiency are among the lowest in the world (Chekir & Diwan, 2014). MENA countries, however, differ in terms of these features among themselves. For example, Arab republics Algeria, Egypt, and Syria fit these criteria better, whereas more liberal systems like Tunisia, Jordan, and Morocco fit less perfectly (Hertog, 2019). Although the degrees might differ, MENA countries are generally characterized by heavy state influence on business activities.

The historical events and upheavals in the MENA region paved the pathway for heavy state involvement in economic activities. Most MENA countries were underdeveloped and faced serious economic problems after gaining their independence in the 1950s (Diwan & Akin, 2015). Political turmoil and economic challenges have given states the ambition to create economic programs to facilitate growth. Countries including Algeria, Egypt, and Tunisia embarked on populist policies against old economic elites to redistribute the economic output to poor masses. These populist policies led to a nationalization of industries and heavy state intervention in all aspects of economic processes (Henry & Springborg, 2010; Hertog, 2019).

The imperfect economic liberalization efforts since the 1950s, coupled with state-led growth policies, led to alliances with the business elite to use them as a source of patronage (Chekir & Diwan, 2014). These privileges created heavy entry barriers for outsiders and eventually established the context for political cronies to control the private sector (Cammett & Diwan, 2016). As a reaction to the ongoing corruption and crony capitalism, the Arab Spring started in Tunisia in late 2010, spreading rapidly to Egypt, Bahrain, Yemen, Libya, Syria, and beyond. The protests produced a wave of political turmoil across MENA countries (Malik & Awadallah, 2013). Governments were overthrown in Tunisia, Egypt, and Libya, and significant reforms were implemented in other countries such as Morocco and Algeria (Bellin, 2012).

The Arab Spring stimulated calls to governments for accountability, economic and political reforms, and for the implementation of strong policies and governance (Gilley, 2006). A major implication of these reforms is their impact on political economies controlled by military social elites with interrelated interests and private benefits of control (Hearn, 2014). The streets in many Middle Eastern and North African countries where the Arab Spring reverberated were thus characterized by demographic, political, and socio-economic pressures, which eventually led to

substantial corporate governance reforms. For example, minority investor protection in the region is moving ahead in Bahrain, Egypt, Jordan, Kuwait, Morocco, Saudi Arabia, Tunisia, and the United Arab Emirates (World Bank, 2019). Despite all these progressions, the region still ranks low in terms of minority shareholder protection, government effectiveness, regulatory quality, and level of democracy, and high in terms of corruption and political instability compared to the rest of the world (OECD, 2019).

In summary, the state has become the central economic player in the MENA region as a response to political disorder and consequent market failures (Lawson, 1994; Levy, 1987). It is no surprise that state ownership is more prevalent in countries with underdeveloped financial systems and poorly protected shareholder and minority rights (La Porta et al., 2002). The MENA region is a prime example of market failures and state ownership, given the historically unstable economies and poorly formulated and enforced institutions (Nadal, 2013). The dominance of the state and the conflict-afflicted institutional configurations of the MENA call for a closer understanding of the role of government ownership on firm performance.

2.2.2. Effects of Government Ownership on Firm Performance

Existing literature on state ownership and firm performance presents mixed findings. On the one hand, the state plays a powerful role in monitoring firm behavior and providing strong resource support (e.g., debt financing) through the enforcement of policies (Inoue et al., 2013; Musacchio et al., 2015; Musacchio & Lazzarini, 2014), strategically benefits firms' objectives (Hadani & Schuler, 2013; Hillman & Hitt, 1999), and ultimately strengthens the firms' financial performance (Lester, Hillman, Zardkoohi, & Cannella Jr, 2008; Ralston, Terpstra-Tong, Terpstra, Wang, & Egri, 2006). On the other hand, the predominant convention is that the state could worsen governance practices when its political and social motives are not in line with firms' interests

(Borisova, Brockman, Salas, & Zagorchev, 2012; Goldeng, Grünfeld, & Benito, 2008; Peng, Bruton, Stan, & Huang, 2016), which will subsequently be detrimental to firm performance (Dharwadkar et al., 2000; Tian & Estrin, 2008; Zou & Adams, 2008).

A potential reason behind these conflicting findings is that context matters in understanding the implications of state ownership (Bruton et al., 2015; Ralston et al., 2006). For example, in competitive markets with strong institutions, private ownership is shown to outperform state ownership (DeWenter & Malatesta, 2001; Goldeng et al., 2008; Inoue et al., 2013). Studies focusing on emerging economies support this view by pointing out SOEs' increasing competitiveness (Musacchio & Lazzarini, 2014; Stan, Peng, & Bruton, 2014), global outreach (Bass & Chakrabarty, 2014; Cuervo-Cazurra et al., 2014), and innovativeness (Zhou et al., 2017). This is primarily because the government in emerging economies is the most salient market player in shaping regulatory policies, controlling scarce resources, and orchestrating firms' competitive environments (Nee & Opper, 2012). Being a central player in the economy provides SOEs with access to strategic information, private support, and scarce resources (Musacchio & Lazzarini, 2014; Zhou et al., 2017). State ownership thus offers certain advantages in terms of political connections and government support in contexts where non-market factors significantly shape firm outcomes (Pan, Teng, Supapol, Lu, Huang, & Wang, 2014; Yu, 2013).

2.2.3. Government Ownership in the MENA

The MENA's institutional configurations offer a favorable context for the performance of SOEs. Weak institutions are specifically associated with poor capital markets (Inoue et al., 2013). SOEs are generally more present in underdeveloped financial systems where they act as a primary source of capital (La Porta et al., 2002). When capital markets are weak, institutional voids are more evident and attracting private capital becomes challenging (Musacchio et al., 2015). In emerging economies like those in the MENA region, the cost of capital is high (La Porta, Lopez-de-Silanes,

Shleifer, & Vishny, 1998). The government might therefore be perceived as a wealthy investor with advantages in terms of credit, liquidity, and costs of capital (Thomsen & Pedersen, 2000). It can act as a strategic investor by providing firms financing and subsidized credit when needed (Musacchio & Lazzarini, 2014), and can also be a patient investor with a larger and softer budget and privileged access to financing channels (Cuervo-Cazurra et al., 2014). The government therefore gains control over firms and provides the required financing to politically and socially desired projects that foster growth and profit maximization (Grosman, Wright, & Okhmatovskiy, 2016; Inoue et al., 2013). As a result, the success of SOEs, specifically in underdeveloped economies, is due to their privileged access to credit (Song, Storesletten, & Zilibotti, 2011). The government also benefits the firms in which they invest through the implicit government guarantee and secure debt financing (Borisova & Megginson, 2011). Accordingly, it not only facilitates credit access, but also decreases the cost of debt by acting as a warrant for repayment and protection against default and bankruptcy.

Along with government ownership in the MENA region, there is a prevalence of family and block ownership, which are governance systems that correspondingly depend on banks as a source for financing their activities and their expansion. Under such conditions, alternative financing channels are not very common in the MENA, which can be considered as one explanation of the region's poor stock and bond markets (OECD, 2019). Islamic religious beliefs prohibiting such financing mode in the MENA also add to the region's capital restrictions. Islamic banking is based on two premises: the first is the principle of profit and loss sharing, and the second is the prohibition of interest payment and collection. Islamic financing is therefore based on equity participation, which entails debtors giving the bank a share in their profits rather than paying interest. The underdeveloped institutions, the extensive presence of block ownership, and the

adoption of Islamic financing in the MENA add to the capital restrictions in the region. As a result, the state plays a vital role in the MENA in overcoming market capital and institutional failures by financially supporting SOEs and promoting profit growth.

Weak institutions are also associated with poor legal enforcement and weak investor protection (Khanna & Palepu, 1997; 2000). In emerging economies, the state can act as a substitute for formal rules and regulations (Wu et al., 2009). As the largest investor in a firm and possessing political power, it can help enforce policies and contracts with other shareholders, protect the firm from expropriation, and safeguard its rights even in cases of poor investor protection (Gourevitch & Shinn, 2005). The state can likewise exercise its political power by ensuring efficient monitoring of managers, settling contractual disputes and ambiguity, and decreasing agency costs between shareholders and investors despite the lack of adequate governance policies and formal legal rules (Cuervo-Cazurra & Li, 2020; Luo, Xue, & Han, 2010; Tavares & Lehmann, 2017). Furthermore, the government is more likely to maintain its stake in the firm and would not easily walk out of its investments (Elyasiani & Jia, 2010). The transfer of state-owned shares is unlikely in the region and government ownership in firms is rather stable. Given the MENA's hazardous institutional environment and weak legal enforcement, government ownership provides the firm with more stability compared to non-state-owned firms. The latter have to rely on efficient legal systems, whereas SOEs benefit from political power that protects their interests and avoids proprietary information leakage (Clarke, Murrel, & Whiting, 2006). Additionally, the government protects investor rights through its political power by ensuring higher security to shareholders' property rights, specifically in cases of potential defaults where a bailout is required (Pistor & Xu, 2005). The support granted by the state therefore provides other shareholders with more security despite the weak legal institutional environment in which they invested.

SOEs are accordingly expected to improve the MENA's poor institutional conditions not only by safeguarding access to capital, but also by providing firms with means to protect their interests, and access strategic information, valuable resources, and political guarantees (Tihanyi et al., 2019) that are not easily accessible to non-government-owned firms (Sun, Mellahi, & Wright, 2012), and ultimately enhance performance (Faccio, 2006; Zhou et al., 2017). Hence:

Hypothesis 1: Government ownership has a positive effect on firm performance in the MENA region.

2.2.4. Pyramid Government Ownership Structure in the MENA

Despite the state's superior ability in managing economic transactions and institutions, its political and social agenda cannot be ignored. Examining government ownership without scrutinizing the various ownership structures and control patterns it can adopt might obstruct an accurate assessment of the state's role and involvement in firms. For instance, a high level of government ownership leads to significant agency problems due to the separation of control and cash-flow rights (Zou & Adams, 2008). For that, we look specifically at pyramid ownership through the ownership chain of the ultimate largest shareholder, which is the government. Through pyramid ownership, the ultimate owner has control (voting) rights greater than its ownership (cash-flow) rights (Claessens, Djankov, Fan, & Lang, 2002). Accordingly, an ultimate owner might not end up holding the majority of shares in the initial company in which he invested but is still the largest shareholder in each of the companies along the ownership chain (Faccio, Lang, & Young, 2001). This pyramid structure grants the ultimate largest owner control over the initial firm despite his decreased cash-flow rights. Such ownership structure "creates a moral hazard situation, as the financial benefits from expropriation outweigh the financial costs for the ultimate owner"

(Young et al., 2008: 208). It therefore increases the risk of minority investor expropriation through private benefits of control and mitigates performance (Dyck & Zingales, 2004; Sauerwald & Peng, 2013).

When the government ownership chain in particular is lengthy, the state can pursue its political and social goals beyond firm profitability. With greater voting rights compared to cash-flow rights, the state may push SOEs to keep prices low, decrease unemployment, or invest in less profitable customer segments and geographically distant areas (Bai & Xu, 2005). The state can also influence the appointment of top managers in the firm who do not necessarily have the required skills or backgrounds but would serve the state's non-profitable objectives (Firth, Fung, & Rui, 2007; Zou & Adams, 2008). Moreover, the separation between voting and cash-flow rights not only leads to poor managerial employment and conduct, but mitigates effective monitoring (Chen & Young, 2010).

The considerable media attention on the political upheavals of the Arab Spring in the region was primarily focused on the substantive roles of political elites using pyramidal ownership structures as a means for expropriating public and private sector wealth (Hearn, 2011a; b; 2013). The onset of the Arab Spring thus illustrated that pyramid ownership structures were the most essential and common means by which governments take control of firms and fulfill their political agendas at the expense of profit making and shareholders' rights (Hearn, 2014). The extensive expropriation primarily driven by pyramidal structures was among the highest worldwide, leading to a series of protests and riots against government cronyism and exploitation. The tunneling effect associated with pyramid ownership essentially manifests in weak institutional settings and ultimately deteriorates firm performance (Young et al., 2008).

While the legal environment is an essential factor in driving the impact of control patterns and ownership structures (La Porta, Lopez-de-Silanes, Shleifer, & Vishny 2000) and increasing

the incentives and probabilities of shareholders expropriation (Faccio, Marchica, & Mura 2011), capital markets are also a power control mechanism against free riding and minority investor expropriation (Maug, 1998). In a region like the MENA, with very low minority investor protection, the tunneling effect of the state's investment within a pyramid ownership is further exacerbated and favors private projects over the benefits to the firm (Bae, Kang, & Kim, 2002). Additionally, minority investor expropriation may be more likely when stock markets are underdeveloped and illiquid, which can impede minority shareholders' attempts to sell out when they perceive abuses by controlling owners (De Miguel, Pindado, & De La Torre, 2004). In such circumstances, the state can increase its capital investment in the firm without necessarily improving performance (Inoue et al., 2013). The impact of the state's equity in firms is hence mitigated by the tunneling effect of pyramid ownership. Poor investor protection and underdeveloped financial institutions in the region therefore alleviate the impact of the state within a pyramid ownership. Because the ownership costs are lower than the returns, the state could engage in poor investments for political and social reasons rather than financial ones. Thus, whereas state ownership serves as a profit mechanism, pyramid ownership serves as a policy instrument. Hence:

Hypothesis 2: Government ownership has a negative effect on firm performance in the MENA region when control is separated through a lengthy ownership chain.

2.2.5. Foreign Government Ownership in the MENA

Corporate governance scholars commonly argue for a positive effect of foreign investors on firm performance (Khanna & Palepu, 2000). However, given the institutional context of emerging economies, foreign investors are expected to exploit their relative advantages and negatively impact performance (Wang, Buckley, Clegg, & Kafouros, 2007). While foreign ownership might lead to resource, capital, and know-how transfer, domestic investors are distinguished by their

longer commitment to the firm. In the case of an economic slowdown, for example, a foreign investor would more readily transfer his investment than a domestic investor (Piesse, Strange, & Toonsi, 2012). A higher level of commitment from foreign investors is especially important for firm performance in emerging economy contexts (Douma et al., 2006).

While state ownership might lead to serious information asymmetry and agency problems (Chen, El Ghoul, Guedhami, & Wang, 2017), foreign government owners suffer from a third agency conflict between the home and host country managers (Cuervo-Cazurra et al., 2014). Foreign state investors are expected to access and secure strategic resources in the host country while safeguarding home country interests (Bass & Chakrabarty, 2014). Foreign government managers are therefore asked to meet the conflicting objectives of citizens and politicians as well as the host SOE's goals, which might lead to unfocused business strategies (Choudhury & Khanna, 2014) that deviate towards the state's political and social agenda (Bai & Xu, 2005; Borisova et al., 2012). The multiple conflicts are likely to increase the cost of doing business and eventually lower the business value of cross-border investments for foreign governments. These conflicts might be further intensified for foreign SOEs in the MENA because of the institutional normative pressures they face. Weak embeddedness in the institutional environment results in dramatic failure, especially in a context like that of the MENA (Andersen, 2008; Blaszczyk, 2008). As such, given the region's market failures and institutional voids, affiliation with political actors is vital in order to insure the success of foreign firms (Mellahi, Demirbag, & Riddle, 2011). A foreign SOE accordingly needs to fulfill its home country's commercial and non-commercial objectives and, at the same time, meet the objectives of its host country.

The risks associated with foreign investors might be elevated when the investor is a foreign government. SOEs are traditionally known to be affiliated with their home institutions and

therefore do not strictly pursue business objectives but are also required to fulfil political obligations (Cui & Jiang, 2012) that do not necessarily benefit firms' interests (Chen & Young, 2010; Zou & Adams, 2008). They have, however, been increasingly engaging in foreign direct investment (FDI) (Carney & Child, 2012; Cuervo-Cazurra, 2017; Mariotti & Marzano, 2019), which introduce a new set of agency conflicts as foreign government investors are likely to be perceived by the host countries not simply as business entities, but also as political actors (Globerman & Shapiro, 2009; He & Lyles, 2008).

While the government offers secured financing to state-controlled firms (Musacchio et al., 2015) and is a powerful actor in granting firms access to scarce and valuable resources (Mellahi et al., 2011), it is not necessarily always profit-driven and may pursue its own political agenda (Borisova et al., 2012; Cui & Jiang, 2012), especially when its investments are not local. In such cases, the government then does not essentially prioritize profit maximization but would rather pursue social and political goals with the host country at the expense of the firm (Li, Yi, & Cui, 2017). The region's poorly developed institutions place further normative pressures on foreign investors and make it costlier and more challenging to conform with national settings in order to ensure profitability, a strategy that will not necessary be pursued. Under such circumstances, foreign SOEs would rather focus on their political and social goals than on profit-making. The foreign government's investments abroad could thus be perceived as a political move rather than a profit-making one (Cui & Jiang, 2012; Meyer et al., 2014). We argue, therefore, that foreign government ownership is expected to be associated with lower firm performance. Hence:

Hypothesis 3: Government ownership has a negative effect on firm performance in the MENA region when the ultimate owner is foreign.

2.2.6. Foreign Government Ownership from within MENA vs. from Outside MENA

Foreign investors face legitimacy pressures stemming from the institutional differences between the home and the host country (Kostova & Zaheer, 1999). Legitimacy pressures are likely to be higher for foreign government owners as the host country stakeholders tend to view foreign governments as agents of another government whose objectives are seen to be in conflict with the interests of the home country. These legitimacy concerns arise from ideological differences, perceived threats to national security, and potential unfair competitive advantage due to support by the home country's government. Indeed, recent research shows that SOEs face more complex institutional pressures in host countries than private firms (Meyer et al., 2014).

These concerns might be particularly amplified for government owners from outside the MENA region given the significant mismatch in institutional configurations. Foreign ownership is commonly associated with the notion of institutional distance between the home and the host country and can be a source of distrust and legitimacy pressures and concerns (Ghemawat, 2001). Foreign owners with more local proximity, on the other hand, face less institutional normative pressures, adopt organizational routines and practices that better fit the host institutional environment, overcome regulatory barriers, and consequently improve performance (Delios & Beamish, 2001; Dikova, Sahib, & van Witteloostuijn, 2010; Kostova, Roth, & Dacin, 2008; Kostova & Zaheer, 1999; Luo & Peng, 1999). It might, therefore, be easier for a foreign government investor from within the MENA region to adjust to the legitimacy requirements of the host country as the similarities between the home and host country institutions reduce the liability of foreignness and the associated costs of doing business (Kobeissi & Sun, 2010; Zaheer & Mosakowski, 1997).

Political and socio-cultural discrepancies between the MENA region and the rest of the world are evident. For example, MENA economies, unlike their free-market counterparts, are

rooted in governmental participation. Middle Eastern and North African companies also have cultures and organizational systems of their own, which differ greatly from those adopted in other regions of the word. Companies in the MENA are not only distinguished by their non-compliance with international governance practices, they also lack formal organizational structures and appear to have minimal resemblance to actual communication networks and decision-making processes (Zahra, 2011). These problems are further worsened by the presence of autocratic leaders at the tops of companies, who shape firm strategies and decisions in ways that perpetuate their control.

In addition to the socio-cultural discrepancies that elevate the legitimacy concerns, the region's underdeveloped financial markets and limited access to financing also set it apart from other regions and have a crucial impact on the role of foreign government ownership from outside the MENA. The region bears substantive deficiencies and illiquidity in its financial markets (International Monetary Fund, 2018), where financing is limited to commercial banks (Ghosh, 2017). The stock and bond markets are relatively small in size with minimal sectoral diversification despite their steady growth since the 1980s (OECD, 2019). Government financing and subsidized credits as well as familial financing remain the region's two primary credit sources for firms' activities. Additionally, despite the continuous efforts in demutualization and privatization, most of the region's stock exchanges remain either owned by the government or structured as public institutions and operate under inflexible monetary and fiscal policies (Shachmurove, 2003). Overall, the region's underdeveloped financial markets and the scarcity of alternative financing amplifies the institutional distance with regard to the financial markets' development between the MENA countries and the rest of the world.

Furthermore, regulatory barriers also play a vital role in the outcomes of foreign government ownership from outside the MENA. For example, the implementation of and abidance

by rules and regulations in the region have historically been much lower than Western Europe, the United States, and even East Asia (Kuran, 2004). Countries in the MENA, for instance, did not implement pro-market economic reforms until the late 1990s and remained heavily dependent on state-led substitution models of development, which created social tensions, caused the private and the public sectors to lag behind in competitiveness and global integration (Cuervo-Cazurra, 2011; Dasgupta, Keller, & Srinivastan, 2002), and generally exaggerated the regulatory and normative institutional distance between MENA countries and the rest of the world. Regulatory divergences between countries within and outside the MENA region are therefore expected to impact the relationship between foreign government ownership and firm performance.

The extent and impact of such institutional pressures vary depending on the institutional distance between the host and home countries (Francis, Zheng, & Mukherji, 2009; Ghemawat, 2001). Accordingly, foreign investors from within the MENA face fewer legitimacy pressures given the institutional similarities between countries, whereas foreign investors from outside the region are likely to face higher costs to overcome legitimacy concerns due to the increased institutional distance, which might hinder firm performance. Foreign government ownership of firms from within the MENA region is therefore expected to have a more positive impact on firm performance compared to foreign government ownership of firms from outside the MENA. Hence:

Hypothesis 4: Government ownership has a positive effect on firm performance in the MENA region when the ultimate owner is foreign but from within the MENA.

2.3. Data Description and Methodology

2.3.1. Data Collection and Sample

We used the Thomson Reuters Eikon database to obtain a list of all the publicly listed firms in the MENA region from 2010 to 2017. Our sample was initially constituted of 1244 firms. After dropping inactive firms and firms without any ownership data, the sample was eventually composed of 1215 publicly listed firms between 2010 and 2017 from Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Qatar, Morocco, Saudi Arabia, Tunisia, and the United Arab Emirates. We also relied on the Thomson Reuters Eikon database to collect ownership data since it was the database with the most extensive ultimate ownership data from the MENA region[2]. While the MENA region includes more countries, ownership data of publicly listed firms in the region was only available for the eleven MENA countries on Thomson Reuters Eikon when we started our study. Since the Thomson Reuters Eikon's regional grouping of the MENA only consisted of these eleven countries, our investigation was limited to them. We thus obtained the ownership percentage, the identity, and the country of the final largest owner. Based on Thomson Reuters Eikon's shareholders' classification as "government" owners, we then filtered the dataset and specifically focused on government owners, obtained government ownership percentage, calculated the chain length, and created dummy variables for whether the final largest owner is the government, a foreign investor, a foreign investor from within the MENA, a foreign government, or a foreign government from within the MENA[3]. It is worth noting that ownership belonging to

[2] Ownership data was initially collected and compiled over 18 spreadsheets. The base dataset consisted of the main companies selected for further research into their ownership chains. Each sheet was tested for structural similarity and data was then compiled into a single sheet (master set).

[3] While our sample is constituted of only 11 MENA countries due to data limitations, we follow the World Bank's classification of MENA countries (Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, and Yemen) in order to categorize countries as within or outside the MENA region.

sovereign wealth funds (SWFs) was classified separately and did not count as part of our government ownership measure. Financial data such as performance measures (Tobin's Q and return on assets [ROA]) as well as data on firm age and firm size (based on firm's total assets) were collected from the Bureau van Dijk (BvD) database. We also relied on the BvD major sector classification to obtain industry classification of firms. Finally, GDP per capita and GDP growth were obtained from the World Bank's World Development Indicators (WDI) database.

2.3.2. Measurements

Performance Measures: We use *Tobin's Q* and *return on assets (ROA)* as measures of performance. Tobin's Q is defined as the sum of market value equity and book value of total debt (market capitalization) over the book value of total assets. ROA is defined as the net income before interest, taxes, and depreciation over the book value of total assets. Such measures encompass a combination of accounting and market-based indices (Andersen & Reeb, 2003; Douma et al., 2006; Thomsen & Pedersen, 2000).

Explanatory Variables: The explanatory variable used to test our hypotheses is *government ownership* and is measured through (1): a continuous variable indicating the *percentage of ownership held by the final largest state investor*, and (2): a *dummy* variable indicating whether the final largest investor is the state. We follow the Thomsen & Pedersen (2000) choice of ownership variables in which ownership percentage is specifically for the largest owner and the owner's type is a categorical variable.

Moderators: We introduce a set of interactions between the government ownership explanatory variable and the moderators: chain length, final foreign investor dummy, and final foreign investor from within the MENA dummy in order to test hypotheses 2, 3, and 4 respectively.

Pyramid ownership is the discrepancy between the ultimate investor's ownership and control rights. Pyramid structures are defined by Claessens, Djankov, & Lang (2000) as "owning the majority of shares of one company which in turn holds the majority of shares of another, a process that can be repeated a number of times". It is therefore the product of ownership stakes along the ownership chain (Faccio & Lang, 2002). In order to capture the pyramiding, we measure the ownership chain length and then introduce an *interaction* between *government ownership* and *chain length*. The aim of this interaction is to look at the pyramid ownership through the ownership chain of the ultimate largest state investor. The chain length variable measures the size of the ownership chain when moving from the largest investor A to the largest investor B and so on until reaching the end of the ownership chain of each firm. We find that in our sample it has a minimum of 1 and a maximum of 4. For instance, if firm Y holds the majority of shares in firm X, and firm Z holds the majority of shares of firm Y, then the chain length is 2.

We measure foreign government ownership as the *interaction* between *government ownership* and *final foreign investor*. The final foreign investor variable is measured through a *dummy* variable indicating whether the final largest investor is foreign or domestic to the firm's country of origin. We likewise measure foreign government ownership from within the MENA as the *interaction* between *government ownership* and *final foreign investor from within the MENA*. The final foreign investor from within the MENA variable is measured through a *dummy* variable indicating whether the final largest foreign investor is from within or from outside the MENA region. For the final investor's identity, we follow a similar categorical grouping of ownership identity variables as adopted by Desender, Aguilera, LópezPuertas-Lamy, & Crespi (2016) and Douma et al. (2006).

Control Variables: Our control variables include log of firm assets, log of firm age, GDP per capita, GDP growth, and 19 industry dummies.

Log(assets) is a proxy for firm size and is computed as the natural logarithm of the firm's total assets. Firm size can have a significant impact on ownership and on performance. Bigger firms for example can afford to have longer ownership chains and more complex pyramiding, which might consequently affect performance. *Log(age)* is a proxy for firm age and is computed as the natural logarithm of the number of years since the firm was incorporated. Firm age is also an important determinant of firm performance. Older firms are considered to be more experienced and hence benefit from additional competitive advantages. These firms, however, can also suffer from inflexibility and an inability to adapt to market changes and competitiveness pressures (Douma et al., 2006). Log(assets) and log(age) are proxies used in most studies explaining the impact of ownership on firm performance (Desender et al., 2016; Tihanyi et al., 2019; Xia & Walker, 2015; Zhou & Guillén, 2015).

At the country-level, we control for *GDP per capita* and *GDP growth*. GDP per capita breaks down a country's economic output per person and is calculated by dividing the GDP of a country by its population. GDP growth measures the output of a nation in which government spending is an essential driver i.e., the nation's economic growth speed. GDP per capita and GDP growth are common controls in studies investigating state capitalism (Borisova et al., 2012) and corporate governance studies (Arregle, Miller, Hitt, & Beamish, 2013; Belenzon, Patacconi, & Zarutskie, 2016; Jia & Mayer, 2017).

Additional control variables include the 19 industries available in our dataset. We control for the *industry effect* using industry dummies (Thomsen & Pedersen, 2000). The effect of ownership structure is influenced by industry effects (Thomsen & Pedersen, 1998) and should

accordingly be included in the controls. The corresponding description of each variable is presented in Table 1 below.

Insert Table 1 about here

2.3.3. Analysis

To examine the relationship between state ownership and firm performance, we used a random effects (RE) model with standard errors clustered on firm-level. We did not use a fixed effects (FE) model because there is little variation within firms in terms of state ownership, especially for dummy variables. For further validation of the choice of our econometric model, we also conducted the Hausman test, which suggested that the random effects (RE) model is a better fit than the fixed effects (FE) model to test our dataset.

We address the issue of endogeneity that could bias our results by using the instrumental variables two-stage least squares (IV-2SLS) methodology. Endogeneity occurs when a variable, observed or unobserved, that is not included in our model, is related to an explanatory variable and the outcome variable. Although it is generally difficult to completely resolve the endogeneity problem, we tried to address this concern by (1) introducing adequate control variables and (2) using instrumental variable methods (Cui & Jiang, 2012; Desender et al., 2016). A valid instrument must be highly correlated with the instrumented regressor and orthogonal with the error term. Following Liu, Miletkov, Wei, & Yang (2015) and Li, Lu, & Mittoo (2015), we used the average value of percentage of government ownership (excluding SWFs) in the same industry (based on SIC codes) in the same country (based on ISO country codes) as the instrumental variable.

We also used Propensity Score Matching (PSM) (Imbens & Wooldridge, 2009; Rosenbaum & Rubin, 1983). PSM provides a way to create a counterfactual performance for the

purpose of comparison. Specifically, PSM generates a vector score using all covariates for each observation and matches it with the closest scoring observation in the respective subset. It then estimates the differences between state and private firm observations for each of the dependent variables. Since the government ownership variable is a dummy, we used PSM to construct comparisons between the treatment (government = 1) and the control group (government = 0) based on the controls used in our main analysis: log assets, log age, GDP growth, GDP per capita, and all industry controls.

2.4. Results

Table 2 provides an overview of the summary statistics of our variables. The descriptive statistics of the performance variables are presented in Panel A, where the mean values for Tobin's Q and ROA are 0.762 and 2.205 respectively. The descriptive statistics of the government ownership variables are presented in Panel B and reveal that 19% of firms in the MENA region have the state as their final largest investor. Among the firms having the state as their final largest investor, 38.27% of the ultimate ownership in the MENA belongs to the government.

Insert Table 2 about here

A correlation matrix including ownership, performance, institutional, and control variables altogether is presented in Table 3. The correlation table suggests that bivariate correlations are unlikely to be a concern, given that all are smaller than 0.7, which Kennedy (2003) indicates as the threshold at which multicollinearity is likely to become problematic. For the exceptions that are higher than 0.7, the corresponding variables would not be included in the same table. Our

results for the maximum VIF for each regression are all less than 5 and hence indicate that multicollinearity is unlikely to be an in issue in our analysis.

Insert Table 3 about here

In Table 4, we examine the influence of government ownership on firm performance based on RE panel data regressions and IV-2SLS estimations in order to test H1. In models 1 and 2 of Panel A, the government ownership percentage variable is insignificant with Tobin's Q but positive and highly significant with ROA (coef. = 0.031, $p<0.01$). To interpret, ROA will increase by 0.031 if government ownership increases by 1%. Alternatively, when we use the government ownership dummy variable, the results remain consistent (models 3 and 4). Models 5 and 6 of Panel B indicate similar results where government ownership percentage is insignificant with Tobin's Q but positive and highly significant with ROA (coef. = 0.040, $p<0.01$). ROA will increase by 0.040 if government ownership increases by 1%. When we use the government ownership dummy variable, the results likewise remain consistent (models 7 and 8). The findings for both the RE and the IV-2SLS regressions are therefore consistent and confirm that government ownership is positively related to performance in the MENA region, supporting H1.

Insert Table 4 about here

For H2, we test the effect of the interaction term between government ownership and chain length in Table 5. In models 1 and 2 of Panel C, we find that the coefficient of the interaction term between the government ownership percentage variable and chain length is negative and significant with Tobin's Q (coef. = -0.003, $p<0.05$), suggesting that the positive influence of government ownership is weakened if firms have long chains of control, but insignificant with

ROA. As Figure 1 illustrates, when the chain length is long (mean + 1SD), the coefficient of the main effect is -0.001. Tobin's Q will decrease by 0.001 if government ownership increases by 1%. Conversely, when the chain length is short (mean - 1SD), the coefficient of the main effect is 0.004. Tobin's Q will increase by 0.004 if government ownership increases by 1%. This suggests that when the ownership chain of the government is long, its benefits diminish. The results are similar when we test the effect of the interaction term between the government ownership dummy variable and chain length (models 3 and 4), where the coefficient of the interaction term is negative and highly significant with Tobin's Q (coef. = -0.129, $p<0.01$) but insignificant with ROA. Models 5 and 6 of Panel D indicate similar and more robust results than those in Panel C, where the coefficient of the interaction term between government ownership percentage and chain length is negative and highly significant with Tobin's Q (coef. = -0.011, $p<0.01$) and negative and marginally significant with ROA (coef. = -0.041, $p<0.10$). When we test the effect of the interaction term between the government ownership dummy variable and chain length (models 3 and 4), the results are negative and highly significant with both Tobin's Q and ROA (coef. = -0.327/-1.835, $p<0.01$). Therefore, the results for both the RE and the IV-2SLS regressions are consistent and validate that the separation between ownership and control through a lengthy chain in the MENA region is negatively related to performance, supporting H2.

Insert Table 5 about here

Insert Figure 1 about here

For H3, we test the effect of the interaction term between government ownership and the final foreign investor dummy variable in Table 6. We find that the coefficient of the interaction term between the government ownership percentage variable and final foreign investor is

insignificant in both models 1 and 2 of Panel E. The results in models 3 and 4 are partially similar when we test the effect of the interaction term between the government ownership dummy variable and final foreign investor, where the coefficient of the interaction term is negative and marginally significant with Tobin's Q (coef. = -0.136, $p<0.10$) but insignificant with ROA. Panel F presents more robust results, where the interaction term between government ownership percentage and final foreign investor in models 5 and 6 is negative and marginally significant with Tobin's Q (coef. = -0.004, $p<0.1$) and negative and highly significant with ROA (coef. = -0.101, $p<0.01$). These results suggest that the positive effect of government ownership is weakened if the final investor is foreign. The results remain consistent when we test the effect of the interaction term between the government ownership dummy variable and final foreign investor (models 7 and 8). Accordingly, these findings support H3, that foreign government ownership deters firm performance in the MENA region.

Insert Table 6 about here

We then examine the effect of the interaction term between government ownership and the final foreign investor from within the MENA dummy variable in Table 7 in order to test H4. We find that the coefficient of the interaction term between the government ownership percentage variable and final foreign investor from within the MENA in models 1 and 2 of Panel G is positive and highly significant with Tobin's Q (coef. = 0.020, $p<0.01$) and positive and marginally significant with ROA (coef. = 0.116, $p<0.10$). When we test the effect of the interaction term between the government ownership dummy variable and final foreign investor from within the MENA in models 3 and 4, the results are positive and highly significant with both Tobin's Q and ROA (coef. = 0.484/4.416, $p<0.01$). These results suggest that the positive effect of government ownership

is stronger when the final foreign owner is from within the MENA. As Figure 2a illustrates, when the final foreign investor is from outside the MENA, the coefficient of the main effect is -0.007. Tobin's Q will decrease by 0.007 if government ownership increases by 1%. Conversely, when the final foreign investor is from within the MENA, the coefficient of the main effect is 0.009. Tobin's Q will increase by 0.009 if government ownership increases by 1%. Figure 2b shows that when the final foreign investor is from outside the MENA, the coefficient of the main effect is -0.085. ROA will decrease by 0.085 if government ownership increases by 1%. Conversely, when the final foreign investor is from within the MENA, the coefficient of the main effect is 0.066. ROA will increase by 0.066 if government ownership increases by 1%. These results suggest that foreign government ownership from within the MENA benefits firm performance while that from outside the MENA harms it. Models 5 and 6 of Panel H also show similar results where the coefficient of the interaction term between government ownership percentage and final foreign investor from within the MENA is positive and highly significant with both Tobin's Q and ROA (coef. = 0.042/0.750, $p<0.01$). These results remain consistent when we test the effect of the interaction term between the government ownership dummy variable and final foreign investor from within the MENA in models 7 and 8. The RE and IV-2SLS regression results are therefore consistent and support H4, that government ownership from within the MENA positively affects performance.

Insert Table 7 about here

Insert Figures 2a & 2b about here

The results of the PSM are presented in Table 8. Specifically, rows 1, 3, 5, 7, 9, 11, and 13 use Tobin's Q as the dependent variable while rows 2, 4, 6, 8, 10, 12, and 14 use ROA as the dependent variable. Rows 1 and 2 suggest that state-owned firms perform better than others.

The comparison between rows 3 (4) and 5 (6) suggests that the longer the ownership chain, the weaker the relationship between government ownership and firm performance. The results in rows 7 and 8 are not significant; however, those in rows 9 and 10 indicate that low levels of foreign ownership positively moderate the impact of government ownership on firm performance. Lastly, the comparison between rows 11 (12) and 13 (14) suggests that the relationship between government ownership and firm performance is stronger when foreign ownership is from within the MENA, but weaker when foreign ownership is from outside the region.

Insert Table 8 about here

2.5. Additional Analysis, Post-Hoc Analysis, and Robustness Checks

Emerging economies are characterized by severe market imperfections and underdeveloped institutions referred to as institutional voids (Khanna & Palepu, 1997; 2000) that present opportunities for investors to provide firms with necessary resources and capabilities to bridge these institutional voids. Institutional voids are best thought of as moderating variables (Carney, Gedajlovic, Heugens, van Essen, & Oosterhout, 2011) affecting the relationship between government ownership and firm performance. Governments are particularly well-suited to addressing legal and financial markets voids because of their political power and superior capacity to raise capital (Cuervo-Cazurra & Li, 2020). On the downside however, depending on certain ownership configurations, these institutional voids can likewise foster disadvantaged behavior. Therefore, in our additional analysis, we test the moderating effect of financial and legal institutional voids respectively on each of the relationships we examine and argue that the state's impact on firm performance is stronger when financial and legal institutions are weak. However, since the impact of state ownership on firm performance is not uniform and the role of SOEs varies

relative to the government's ownership structure and identity, we further examine the ways the region's institutional voids drive each relationship differently. We therefore find that the positive impact of government ownership on firm performance becomes stronger amid poor institutional infrastructures as the government provides scarce resources and offsets the deficiencies in financial and legal markets (see Table 9). We also argue that the tunneling effect of pyramid ownership structure and legitimacy concerns associated with foreign owners are particularly worsened when severe financial and legal institutional voids are evident. Thus, we find that the negative impact of pyramid ownership and foreign ownership respectively becomes stronger where there are deep financial and legal institutional voids (see Tables 10 and 11). For our last relationship, we focus particularly on the distance between the home and the host country's institutional voids and find that the positive impact of foreign government ownership from within the MENA region on firm performance becomes stronger when the institutional distance between countries is smaller due to institutional similarities and lessened normative pressures (see Table 12). The corresponding RE and the IV-2SLS regression results are presented in Appendix A.

Insert Appendix A about here

Additionally, we developed several models as post-hoc tests to check the robustness of our results. First, because the Arab Spring (2010-2012) falls in our sample period, we divided our sample between the Arab Spring period (2010-2012) and the post-Arab Spring period (2013-2017) and ran our analysis on these two sub-samples. Next, we focused on the three countries in which the Arab Spring occurred (Bahrain, Egypt, and Tunisia) and separated them from the rest of the countries in our main sample. We also divided the sub-sample composed of Bahrain, Egypt, and Tunisia between the Arab Spring period and the post-Arab Spring period and ran our analysis simultaneously on each

of these sub-samples. The results were consistent with our initial analysis and thus support our findings that the impact of government ownership on firm performance is a response to the region's underdeveloped institutions and is not necessarily due to institutional transitions. The corresponding RE regression results are presented in Tables 13, 14, 15, and 16 in Appendix B. We re-run these models using IV-2SLS estimations and find that the results are consistent with the findings from the RE regressions. We have therefore kept the results of the IV-2SLS estimations un-tabulated.

Insert Appendix B about here

Second, we retested our initial analysis and focused on non-government ownership as our explanatory variable. We find that the results from the relationship between non-government ownership and firm performance were insignificant, suggesting that state owners affect firm performance differently compared to other owners. The results of the moderating effect of the chain length on the relationship between non-government ownership and firm performance were negative but only significant with Tobin's Q and when interacting the chain length variable with the non-government ownership dummy variable. These findings are hence partially consistent with our initial findings as we find that lengthy ownership chains create substantive agency problems and deter performance outcomes. The interaction results of foreign investors and foreign investors from within the MENA on non-government ownership were consistent with our initial analysis and confirm that foreign investors impair performance as they face higher legitimacy pressures, as opposed to foreign investors from within the region. The corresponding RE regression results are presented in Table 17 in Appendix C. We re-run these models using IV-2SLS estimations and find that the results are consistent with the findings from the RE regressions. We have therefore kept the results of the IV-2SLS estimations un-tabulated.

Third, we test the moderating effect of financial market development and legal development respectively on the relationship between non-government ownership and firm performance. The respective interaction terms are mainly positive and significant, suggesting that private firms successfully operate in the context of well-developed institutions while SOEs are more prevalent amid market failures as they overcome and fill institutional voids, and consequently outperform their private counterparts. The corresponding RE regression results are presented in Table 18 in Appendix C. We re-run these models using IV-2SLS estimations and find that the results are consistent with the findings from the RE regressions. We have therefore kept the results of the IV-2SLS estimations un-tabulated.

Insert Appendix C about here

Lastly, we conducted six robustness checks: First, we used winsorized regressions, in which the left and the right winsorized values are within 1st and 99th percentile of the two performance variables and then of all the variables used in our analysis. Second, we added the lagged values of the outcome variables by one year and then by two years as additional control variables. Third, we separately added three sets of additional controls: (1) firm country dummy variable, (2) ratio of debt over total assets, ratio of R&D over total sales, and ratio of receivables and inventories over total assets, and (3) family ownership dummy and block ownership dummy. The second set of controls was only included in our robustness checks because relevant data was only available for less than 65% of observations. Fourth, we lagged the government ownership percentage explanatory variable by one year and then by two years and used the lagged values as alternative instrument variables. Fifth, we standardized the interaction terms. Lastly, we ran the regressions in Tables 9, 10, 11, and 12 from Appendix A using dummy variables as explanatory variables rather than the continuous

ones used. Overall, the results of the six robustness checks are consistent with our initial analysis and hence support our findings. We have therefore kept them un-tabulated.

2.6. Discussion

This paper examines the impact of SOEs on firm performance in the MENA in light of the region's weak institutional setting. Therefore, we treated government ownership as a response to market failures that facilitates economic activities, secures firm financing, and exercises political power in the absence of adequate legal enforcement (Cuervo-Cazurra & Li, 2020). Our findings support this view and show that state ownership plays a crucial role on firm performance outcomes in the MENA region. We contend that governments overcome and fill institutional voids by offering financial and non-financial means aimed at enhancing firm performance. We then examine governments' ownership chains and found that the separation between control and cash-flow rights through lengthy ownership chains creates substantial agency problems and has detrimental effects on firm performance. Furthermore, we highlight the importance of considering the owner's identity and show that foreign government ownership in the MENA region is disadvantageous to the firm since it is perceived as a political investment rather than a profit-making one (Cui & Jiang, 2012). Considering the similarities of the institutional environment among MENA countries, we then argue that foreign government ownership from within the region overcomes institutional legitimacy pressures and consequently benefits firm performance (Kostova et al., 2008; Meyer et al., 2014). Lastly, we test the moderating role of institutional configurations on our main models as part of our robustness check and find that while the impact of government ownership on firm performance becomes stronger in a positive direction when financial and legal institutions are weak, that of pyramid ownership is stronger in a negative direction. As for government identity, we show that the

relationship between foreign government ownership and firm performance deteriorates amid poor financial and legal institutions; however, that of foreign government ownership from within the region is enhanced when institutional distance between countries is smaller.

Our study therefore offers important insights for the comparative corporate governance and strategic management literatures. We contribute to the corporate governance literature by examining SOEs in a region which is overlooked despite significant state involvement in its economic activities. The traditional retreat of the state from market affairs has stopped during the last decades as observed by the successes of economies such as China and the United Arab Emirates, which have positioned SOEs as economic growth engines. The Middle East, specifically, has displayed a quiet state-driven economic revolution in recent years. The MENA, with its distinct institutional characteristics and its turbulent and poorly-developed institutional environment, is a peculiar region compared to the rest of the world and other emerging economies. Our contribution to the corporate governance literature therefore lies in our examination of SOEs' performance in unstable and extreme institutional contexts marked by severe institutional voids, such as those in the MENA region.

The main implication is that the MENA offers unique opportunities to explore the role of government ownership in institutionally fragile and conflict-afflicted economies (Henry & Springborg, 2010; Hertog, 2019). Drawing on the institution-based view and the literature on institutional voids, we emphasize that the impact of government ownership is embedded in firms' institutional environment (Bruton et al., 2015; Ralston et al., 2006). In the case of market efficiencies, the government's investment generally strengthens and broadens firms' political connections (Bruton et al., 2015; Musacchio & Lazzarini, 2014), whereas in the case of market inefficiencies, government ownership fills institutional voids and is a source of funding (Borisova & Megginson, 2011; Inoue et al., 2013; Thomsen & Pedersen, 2000). These opposing institutional contexts drive the impact of

SOEs differently. While some argue that there is a negative effect of government ownership (Megginson & Netter, 2001; Zou & Adams, 2008) and others argue that there is a positive effect (Dong, Putterman, & Unel 2006; Mutlu, van Essen, Peng, Saleh, & Duran 2018), the impact of SOEs appears to be institutionally driven. The government's social and political agenda in its investment in firms should not be ignored, but where there are market failures, the benefits of the state's investment might dominate. In addition, our findings imply that less complex ownership structures enhance the performance of SOEs. As such, the separation of control and ownership rights through pyramid structures might augment private benefits of control, especially when investor protection is weak (Bae et al., 2002; Bai & Xu; 2005; Young et al., 2008). We therefore highlight that different configurations of government ownership might have different impacts on SOE performance.

Second, based on the neo-institutional theory, we differentiate between the impact of foreign and domestic government ownership. Our findings contribute to the view that foreign government owners suffer from a third agency conflict between the home and host country managers, as foreign state investors are expected to access and secure strategic resources in the host country while safeguarding home country interests (Bass & Chakrabarty, 2014; Cuervo-Cazurra et al., 2014). Foreign government owners are therefore more likely to pursue their political and social goals when investing abroad in firms (Meyer et al., 2014), while domestic government owners are more committed to the firm and are more profit driven (Piesse et al., 2012). The implication is that the objectives of the government as an investor in firms is better understood by looking at its origins. However, we find that this effect disappears when we compare foreign governments from within the MENA region to those from outside the MENA. This is in sync with the view that foreign owners are likely to face higher levels of illegitimate ownership challenges as institutional distance increases (Kostova & Zaheer, 1999).

Finally, we unpack the notion of institutional voids, which define a country's level of development (Khanna & Palepu, 1997; 2000) and test the moderating effect of institutional voids in financial and legal markets on our main models as part of our robustness checks. Our findings confirm that SOEs enhance firm performance by overcoming and filling institutional voids. SOEs in emerging economies outperform their private counterparts because of their political power and superior capacity to raise capital (Cuervo-Cazurra & Li, 2020). Government ownership in underdeveloped settings is hence advantageous as it addresses deficiencies in capital markets as well as in legal ones. Our findings also indicate that institutional configurations moderate our relationships differently, relative to the government's ownership structure and identity. We hence underscore the importance of distinguishing between institutional voids and examining their impact their impact relative to different organizational configurations instead of simply identifying emerging markets as underdeveloped ones marked by severe market failures that either exaggerate the state capacity to support firms or that mitigate firm development.

2.6.1. Policy and Managerial Implications

Our research has important implications for policymakers, particularly concerning the corporate governance reforms undertaken following the Arab Spring. Specifically, our findings support the view that state capitalism is prevalent in many countries, yet successful economies are now shifting their focus to addressing the weaknesses of SOEs in order to move them from the periphery of economic activity to central spots in the global economy. This increases the responsibility of policymakers in the MENA region towards exploring the competitive potentials of SOEs rather than leveraging them for their political agenda. Our findings, therefore, stress the importance of considering the institutional environment when exploring the impact of government ownership on firm performance. While it is important for MENA firms to undergo corporate governance reforms

and comply with international practices, it is equally important to understand the particularity of the region's environment and how it shapes corporate governance practices. In more practical terms, efforts could focus on the importance of adopting less complex ownership structures and the implementation of policies that attract foreign governments from outside the MENA region and eliminate institutional barriers for them through the establishment of a corporate code of best practices for SOEs in the MENA.

Amidst the political turmoil, some of the MENA countries continue to attract FDI. A leading example is the United Arab Emirates, which in recent years attracted more inward FDI than all its neighboring Gulf countries combined (UNCTAD, 2019). Other countries, including Saudi Arabia, have introduced "strategic ownership" initiatives for foreign investors to promote higher firm performance (Capital Market Authority, 2019). Oman and Qatar have recently updated their foreign investment laws to increase the level of foreign ownership in certain industries (PwC, 2019). Although MENA countries do not have uniform institutional contexts, policymakers are increasingly aware of the advantages of corporate governance reforms that boost economic growth, promote a more skilled workforce, and create better opportunities for their societies.

2.6.2. Limitations and Future Research

Our study has certain limitations. We only focus on listed firms in the MENA. Our findings therefore might not be generalized to non-listed firms in the region. We also analyze the region as a whole, although some countries have more developed institutions than others and certain institutional discrepancies exist among MENA countries. Recognizing the heterogeneity among MENA countries in terms of institutional development, financial resources, and economic growth, we accordingly ran our analysis on a country-level and found that the results are mainly stable across the eleven countries. Another limitation in our study lies in our government ownership

variables. A more fine-grained way to measure government ownership would advance our results. For instance, we only consider the government in our study without segregating its equity stake across public pension funds, SWFs, state-owned holding companies, or life insurance companies. For our continuous ownership variable, we measure the percentage of government ownership without differentiating whether the government is a majority or a minority investor. Additionally, we only distinguish between foreign owners from within and from outside the MENA region. Foreign owners from emerging economies might share similar institutional settings as those from within the MENA region and consequently present different implications than foreign owners from developed economies. Future studies examining the role of foreign ownership from emerging economies in the MENA should incorporate this distinction.

Our research likewise offers opportunities for future research. Most importantly, with its distinct institutional configurations, the MENA region offers ample opportunities to explore corporate governance mechanisms and their manifestation in firm strategies and structures. For example, understanding the impact of government ownership on firms' corporate governance practices, such as the board of directors and the top management, along with their strategies, including firm internationalization, innovation, connections, leverage structure, or R&D expenditure, may lead to a deeper understanding of the state's impact on firms. Additionally, an interesting prospect for future work would be to look into details at state ownership and to differentiate among the state's various institutions and levels of ownership. Furthermore, it would be interesting to examine the state's role across various industries and sectors that are depicted by different market conditions and which might subsequently influence the effect of state ownership. Finally, future work could test our framework in different institutional settings in order to verify the generalization of our findings on other developing and emerging economies.

2.7. Conclusion

This paper examines the impact of government ownership on firm performance amid the MENA region's weak institutional development. We find that government ownership arises as a response to market failures and enhances firm performance by overcoming and filling institutional voids. The impact of government ownership is, however, not uniform and can reverse when the ownership follows a lengthy and complex structure and when it belongs to a foreign investor. Such impacts are particularly manifest when institutions are underdeveloped. Lastly, we find that given the institutional distance and similarities between MENA countries, foreign government ownership enhances firm performance by essentially overcoming legitimacy concerns.

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2.9. Tables and Figures

Table 1 – Variables Description	
Variable Name	Variable Definition
Panel A: Performance Variables	
Tobin's Q	(Market Capitalization / Total Assets) * 100
ROA	(Net income / Total Assets) * 100
Panel B: Government Ownership Variables	
Government Ownership %	Ownership percentage held by the final largest state investor
Government	Dummy: 1 if the government is the final largest owner, 0 otherwise
Pyramid Government Ownership %	Ownership percentage of the final largest state investor multiplied across the ownership chain
Foreign Government Ownership %	Ownership percentage held by the final largest foreign state investor
Foreign Government Ownership MENA %	Ownership percentage held by the final largest foreign state investor from within the MENA
Panel C: Moderators	
Chain Length	Length of ownership chain (min=1, max=4)
Final Foreign Investor	Dummy: 1 if the final largest investor's country is not the same as the main company's country; 0 otherwise
Final Foreign Investor MENA	Dummy: 1 if the final largest investor's country is from within the MENA; 0 otherwise
Financial Market Development	Development of financial markets defined as the factors, policies, and the institutions that lead to the efficient intermediation and effective financial markets
Legal Development	Effectiveness of judiciary and enforceability of contracts
Financial Market Development Distance	Financial market development distance between MENA countries and other countries
Legal Development Distance	Legal development distance between MENA countries and other countries
Panel D: Control Variables	
Log Assets	Natural logarithm of firm's total assets
Log Age	Natural logarithm of firm's age
GDP per Capita	GDP per Capita as obtained from the World Bank's WDI database
GDP Growth	GDP Growth as obtained from the World Bank's WDI database
Industry	Dummy: 1 as denoted; 0 otherwise

Table 2 – Descriptive Statistics					
Variable	Mean	Std. Dev.	Min	Max	Count
Panel A: Performance Variables					
Tobin's Q	0.762	0.830	0	15.334	8,681
ROA	2.205	9.662	-97.697	83.991	8,681
Panel B: Government Ownership Variables					
Government Ownership % (of total firms)	7.411	18.226	0	99.89	8,681
Government Ownership % (of only firms with their final largest owner being the state)	38.27	23.123	2	99.89	1,684
Government	0.194	0.395	0	1	8,681
Pyramid Government Ownership %	6.642	17.670	0	99.89	8,681
Foreign Government Ownership %	0.911	6.168	0	86.87	8,681
Foreign Government Ownership MENA %	0.789	5.837	0	86.87	8,681
Panel C: Moderators					
Chain Length	1.261	0.518	1	4	8,681
Final Foreign Investor	0.260	0.439	0	1	8,681
Final Foreign Investor MENA	0.152	0.359	0	1	8,681
Financial Market Development	4.185	0.683	2.855	8.8	8,681
Legal Development	3.681	0.539	2.1	4.789	8,681
Financial Market Development Distance	0.010	0.060	0	1.311	8,681
Legal Development Distance	0.018	0.132	0	2.773	8,681
Panel D: Control Variables					
Log Assets	12.307	2.187	5.175	19.222	8,681
Log Age	3.205	0.704	0.693	5.100	8,681
GDP Growth	3.175	2.832	-4.712	19.592	8,681
GDP per Capita	20235.110	18458.150	2440.510	85076.150	8,681

Table 3 - Correlation Matrix

	Tobin's Q	ROA	Government Ownership %	Government	Chain Length	Final Foreign Investor	Final Foreign Investor MENA	Pyramid Government Ownership %	Foreign Government Ownership %
Tobin's Q	1								
ROA	0.294*	1							
Government Ownership %	0.040*	0.120*	1						
Government	0.021	0.107*	0.718*	1					
Chain Length	-0.053*	-0.074*	-0.057*	0.018	1				
Final Foreign Investor	-0.030*	-0.049*	-0.138*	-0.127*	0.309*	1			
Final Foreign Investor MENA	0.027*	0.013	0.142*	0.130*	-0.229*	-0.589*	1		
Pyramid Government Ownership %	0.176*	0.175*	0.836*	0.536*	-0.528*	-0.267*	0.161*	1	
Foreign Government Ownership %	-0.054*	-0.007	0.249*	0.302*	0.182*	0.249*	-0.017	-0.131*	1
Government Ownership MENA %	0.058*	0.124*	0.779*	0.818*	-0.068*	-0.140*	0.140*	0.839*	0.250*
Log Assets	-0.211*	0.144*	0.238*	0.178*	-0.008	0.023*	-0.119*	0.041	0.101*
Log Age	-0.008	0.133*	0.057*	0.013	-0.025*	-0.021*	-0.030*	0.174*	-0.034*
GDP per Capita	0.071*	0.066*	0.056*	0.047*	-0.057*	0.031*	-0.040*	0.071*	-0.017
GDP Growth	-0.038*	0.035*	0.084*	0.091*	0.050*	-0.134*	0.063*	-0.175*	-0.003
Financial Market Development	-0.074*	-0.028*	-0.058*	-0.030*	0.111*	0.058*	-0.124*	0.104*	0.000
Legal Development	-0.077*	-0.047*	-0.029*	-0.022*	0.064*	-0.014	-0.003	0.147*	-0.011
Financial Market Development Distance	-0.040*	-0.014	-0.017	-0.001	0.079*	0.302*	-0.212*	-0.062*	0.156*
Legal Development Distance	-0.031*	-0.012	-0.005	0.009	0.063*	0.233*	-0.169*	-0.045	0.138*

p-values in parentheses * $p < .05$

Table 3 - Correlation Matrix, *continued*

	Foreign Government Ownership MENA %	Log Assets	Log Age	GDP per Capita	GDP Growth	Financial Market Development	Legal Development	Financial Market Development Distance	Legal Development Distance
Foreign Government Ownership MENA %	1								
Log Assets	0.146*	1							
Log Age	0.054*	0.138*	1						
GDP per Capita	0.045*	0.085*	-0.056*	1					
GDP Growth	0.028*	0.360*	-0.123*	0.200*	1				
Financial Market Development	0.019	-0.169*	0.199*	-0.238*	-0.490*	1			
Legal Development	0.033*	-0.205*	0.140*	-0.279*	-0.448*	0.560*	1		
Financial Market Development Distance	-0.012	0.057*	0.048*	0.001	-0.084*	0.319*	-0.362*	1	
Legal Development Distance	-0.004	0.039*	0.041*	0.004	-0.061*	0.292*	-0.402*	0.964*	1

p-values in parentheses * $p < .05$

Table 4 - Performance Implications of Government Ownership

Panel A: RE, cluster on firm-level					**Panel B: IV-2SLS**				
	(1) Tobin's Q	(2) ROA	(3) Tobin's Q	(4) ROA		(5) Tobin's Q	(6) ROA	(7) Tobin's Q	(8) ROA
Government Ownership %	0.002	0.031***			Government Ownership % - Instrumented	0.000	0.040***		
	(0.124)	(0.005)				(0.742)	(0.000)		
Government			0.035	1.134***	Government - Instrumented			0.013	2.344***
			(0.247)	(0.007)				(0.742)	(0.000)
Industry	Yes	Yes	Yes	Yes	Industry	Yes	Yes	Yes	Yes
Log Assets	-0.110***	1.198***	-0.109***	1.206***	Log Assets	-0.055***	0.901***	-0.055***	0.890***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.069*	1.133***	-0.068*	1.152***	Log Age	0.025	1.382***	0.025	1.421***
	(0.087)	(0.001)	(0.092)	(0.001)		(0.157)	(0.000)	(0.153)	(0.000)
GDP per Capita	0.000***	-0.000	0.000***	-0.000	GDP per Capita	0.000***	-0.000	0.000***	-0.000
	(0.000)	(0.668)	(0.000)	(0.594)		(0.000)	(0.315)	(0.001)	(0.129)
GDP Growth	0.006***	0.099***	0.006***	0.102***	GDP Growth	0.022***	0.176***	0.022***	0.179***
	(0.007)	(0.001)	(0.006)	(0.001)		(0.000)	(0.000)	(0.000)	(0.000)
Constant	2.329***	-12.906***	2.319***	-13.081***	Constant	1.333***	-10.905***	1.332***	-11.004***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	Observations	8681	8681	8681	8681
r2	0.119	0.095	0.118	0.093	r2	0.135	0.099	0.135	0.097

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 5 - Performance Implications of Pyramid Government Ownership Structure

Panel C: RE, cluster on firm-level					**Panel D: IV-2SLS**				
	(1) Tobin's Q	(2) ROA	(3) Tobin's Q	(4) ROA		(5) Tobin's Q	(6) ROA	(7) Tobin's Q	(8) ROA
Government Ownership %	0.006**	-0.002			Government Ownership % - Instrumented	0.012***	0.082***		
	(0.016)	(0.943)				(0.000)	(0.002)		
Government			0.232***	0.111	Government - Instrumented			0.356***	4.260***
			(0.005)	(0.910)				(0.000)	(0.000)
Chain Length	0.013	-0.600*	0.019	-0.640*					
	(0.725)	(0.099)	(0.616)	(0.084)					
Government Ownership % * Chain Length	-0.003**	0.027			Government Ownership % * Chain Length - Instrumented	-0.011***	-0.041*		
	(0.019)	(0.119)				(0.000)	(0.090)		
Government * Chain Length			-0.129***	0.735	Government * Chain Length - Instrumented			-0.327***	-1.835***
			(0.007)	(0.259)				(0.000)	(0.010)
Industry	Yes	Yes	Yes	Yes	Industry	Yes	Yes	Yes	Yes
Log Assets	-0.111***	1.199***	-0.111***	1.206***	Log Assets	-0.056***	0.898***	-0.056***	0.883***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)

Log Age	-0.069*	1.120***	-0.066	1.134***	Log Age	0.022	1.372***	0.022	1.404***
	(0.088)	(0.001)	(0.100)	(0.001)		(0.210)	(0.000)	(0.211)	(0.000)
GDP per Capita	0.000***	-0.000	0.000***	-0.000	GDP per Capita	0.000***	-0.000	0.000***	-0.000
	(0.000)	(0.725)	(0.000)	(0.670)		(0.000)	(0.381)	(0.000)	(0.208)
GDP Growth	0.005***	0.100***	0.006***	0.102***	GDP Growth	0.020***	0.169***	0.020***	0.167***
	(0.008)	(0.001)	(0.007)	(0.001)		(0.000)	(0.000)	(0.000)	(0.000)
Constant	2.322***	-12.193***	2.307***	-12.291***	Constant	1.354***	-10.836***	1.362***	-10.863***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	Observations	8681	8681	8681	8681
r2	0.121	0.096	0.121	0.094	r2	0.135	0.099	0.136	0.100

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 6 - Performance Implications of Foreign Government Ownership

Panel E: RE, cluster on firm-level					**Panel F: IV-2SLS**				
	(1) Tobin's Q	(2) ROA	(3) Tobin's Q	(4) ROA		(5) Tobin's Q	(6) ROA	(7) Tobin's Q	(8) ROA
Government Ownership %	0.002*	0.031**			Government Ownership % - Instrumented	0.000	0.046***		
	(0.094)	(0.015)				(0.566)	(0.000)		
Government			0.068*	1.270**	Government - Instrumented			0.022	2.616***
			(0.073)	(0.013)				(0.591)	(0.000)
Final Foreign Investor	0.050	-0.132	0.055	-0.063					
	(0.408)	(0.755)	(0.370)	(0.884)					
Government Ownership % * Final Foreign Investor	-0.002	-0.005			Government Ownership % * Final Foreign Investor - Instrumented	-0.004*	-0.101***		
	(0.269)	(0.815)				(0.065)	(0.004)		
Government * Final Foreign Investor			-0.136*	-0.820	Government * Final Foreign Investor - Instrumented			-0.144*	-4.372***
			(0.089)	(0.345)				(0.054)	(0.001)
Industry	Yes	Yes	Yes	Yes	Industry	Yes	Yes	Yes	Yes

Log Assets	-0.110***	1.198***	-0.109***	1.206***	Log Assets	-0.054***	0.915***	-0.054***	0.912***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.068*	1.126***	-0.067*	1.145***	Log Age	0.023	1.344***	0.023	1.371***
	(0.089)	(0.001)	(0.097)	(0.001)		(0.190)	(0.000)	(0.187)	(0.000)
GDP per Capita	0.000***	-0.000	0.000***	-0.000	GDP per Capita	0.000***	-0.000	0.000***	-0.000**
	(0.000)	(0.645)	(0.000)	(0.562)		(0.001)	(0.209)	(0.002)	(0.040)
GDP Growth	0.005**	0.100***	0.005**	0.102***	GDP Growth	0.022***	0.172***	0.022***	0.179***
	(0.012)	(0.001)	(0.010)	(0.001)		(0.000)	(0.000)	(0.000)	(0.000)
Constant	2.319***	-12.868***	2.306***	-13.055***	Constant	1.333***	-10.902***	1.331***	-11.041***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	Observations	8681	8681	8681	8681
r2	0.120	0.095	0.119	0.094	r2	0.136	0.098	0.136	0.097

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 7 - Performance Implications of Foreign Government Ownership from within the MENA

Panel G: RE, cluster on firm-level					**Panel H: IV-2SLS**				
	(1) Tobin's Q	(2) ROA	(3) Tobin's Q	(4) ROA		(5) Tobin's Q	(6) ROA	(7) Tobin's Q	(8) ROA
Government Ownership %	-0.019**	-0.085			Government Ownership % - Instrumented	-0.041***	-0.711***		
	(0.011)	(0.209)				(0.000)	(0.002)		
Government			-0.434***	-3.173**	Government - Instrumented			-1.268***	-20.838***
			(0.001)	(0.017)				(0.000)	(0.003)
Final Foreign Investor MENA	-0.013	0.080	-0.013	0.034					
	(0.737)	(0.885)	(0.743)	(0.951)					
Government Ownership % * Final Foreign Investor MENA	0.020***	0.116*			Government Ownership % * Final Foreign Investor MENA - Instrumented	0.042***	0.750***		
	(0.006)	(0.088)				(0.000)	(0.001)		

Government * Final Foreign Investor MENA			0.484***	4.416***	Government * Final Foreign Investor MENA - Instrumented			1.280***	23.085***
			(0.000)	(0.002)				(0.000)	(0.001)
Industry	Yes	Yes	Yes	Yes	Industry	Yes	Yes	Yes	Yes
Log Assets	-0.110***	1.202***	-0.109***	1.208***	Log Assets	-0.053***	0.928***	-0.053***	0.924***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.071*	1.117***	-0.068*	1.144***	Log Age	0.018	1.261***	0.020	1.332***
	(0.078)	(0.001)	(0.092)	(0.001)		(0.317)	(0.000)	(0.259)	(0.000)
GDP per Capita	0.000***	-0.000	0.000***	-0.000	GDP per Capita	0.000***	-0.000*	0.000**	-0.000**
	(0.000)	(0.627)	(0.000)	(0.532)		(0.006)	(0.064)	(0.016)	(0.011)
GDP Growth	0.006***	0.100***	0.006***	0.103***	GDP Growth	0.022***	0.179***	0.022***	0.184***
	(0.008)	(0.001)	(0.006)	(0.001)		(0.000)	(0.000)	(0.000)	(0.000)
Constant	2.349***	-12.968***	2.335***	-13.106***	Constant	1.345***	-10.726***	1.335***	-10.981***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	Observations	8681	8681	8681	8681
r2	0.120	0.095	0.119	0.094	r2	0.130	0.081	0.128	0.078

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 8 - Performance Implications of Government Ownership - Propensity Score Matching

	DV	Moderators	Conditions	Treated	Controls	Difference	S.E.	T-test	p<0.05	Matching pair number
(1) Government	Tobin's Q			0.800	0.698	0.102	0.030	3.42	YES	1458
(2) Government	ROA			4.305	2.370	1.935	0.325	5.95	YES	1560
(3) Government	Tobin's Q	Chain Length	HIGH	0.488	0.621	-0.133	0.048	-2.77	YES	333
(4) Government	ROA	Chain Length	HIGH	0.734	0.065	0.669	0.745	0.90	NO	347
(5) Government	Tobin's Q	Chain Length	LOW	0.892	0.714	0.178	0.036	4.95	YES	1125
(6) Government	ROA	Chain Length	LOW	5.324	2.985	2.339	0.336	6.96	YES	1213
(7) Government	Tobin's Q	Final Foreign Investor	HIGH	0.489	0.535	-0.046	0.056	-0.83	NO	209
(8) Government	ROA	Final Foreign Investor	HIGH	1.431	1.775	-0.344	0.672	-0.51	NO	222
(9) Government	Tobin's Q	Final Foreign Investor	LOW	0.852	-0.740	0.112	0.034	3.24	YES	1249
(10) Government	ROA	Final Foreign Investor	LOW	4.782	2.504	2.278	0.357	6.39	YES	1338
(11) Government	Tobin's Q	Final Foreign Investor MENA	HIGH	0.813	0.701	0.112	0.030	3.74	YES	1417
(12) Government	ROA	Final Foreign Investor MENA	HIGH	4.383	2.750	1.633	0.327	5.00	YES	1519
(13) Government	Tobin's Q	Final Foreign Investor MENA	LOW	0.374	0.762	-0.388	0.181	-2.15	YES	213
(14) Government	ROA	Final Foreign Investor MENA	LOW	1.399	6.146	-4.747	1.328	-3.58	YES	235

Figure 1
Moderation Effect of Chain Length on Government Ownership
(with Tobin's Q)

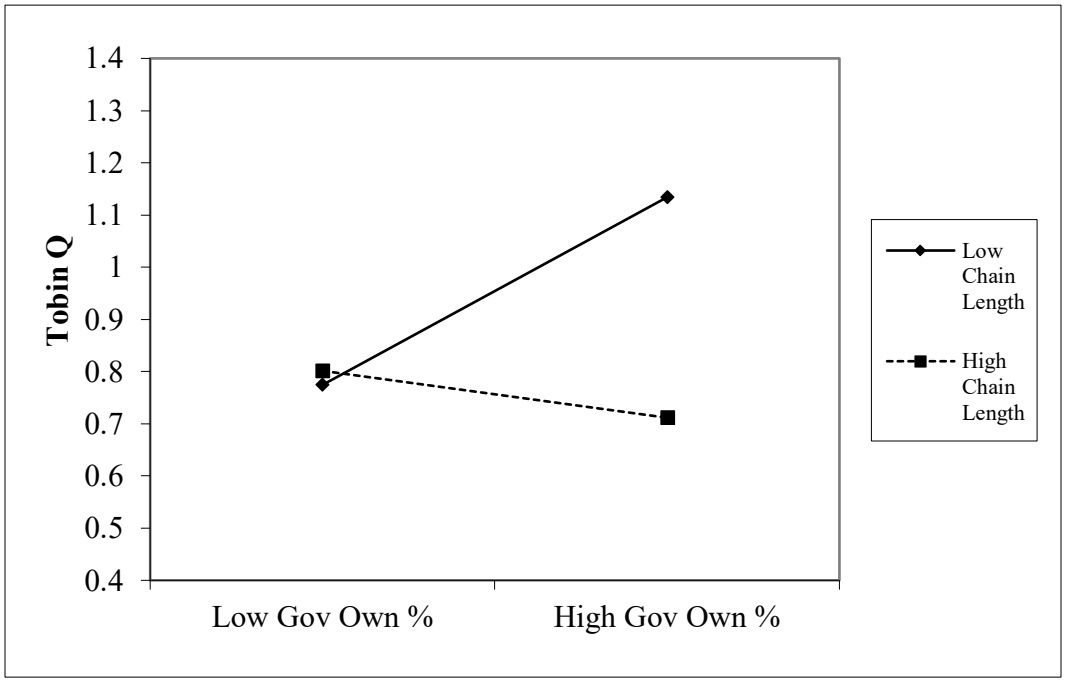


Figure 2a
Moderation Effect of Final Investor MENA on Government Ownership
(with Tobin's Q)

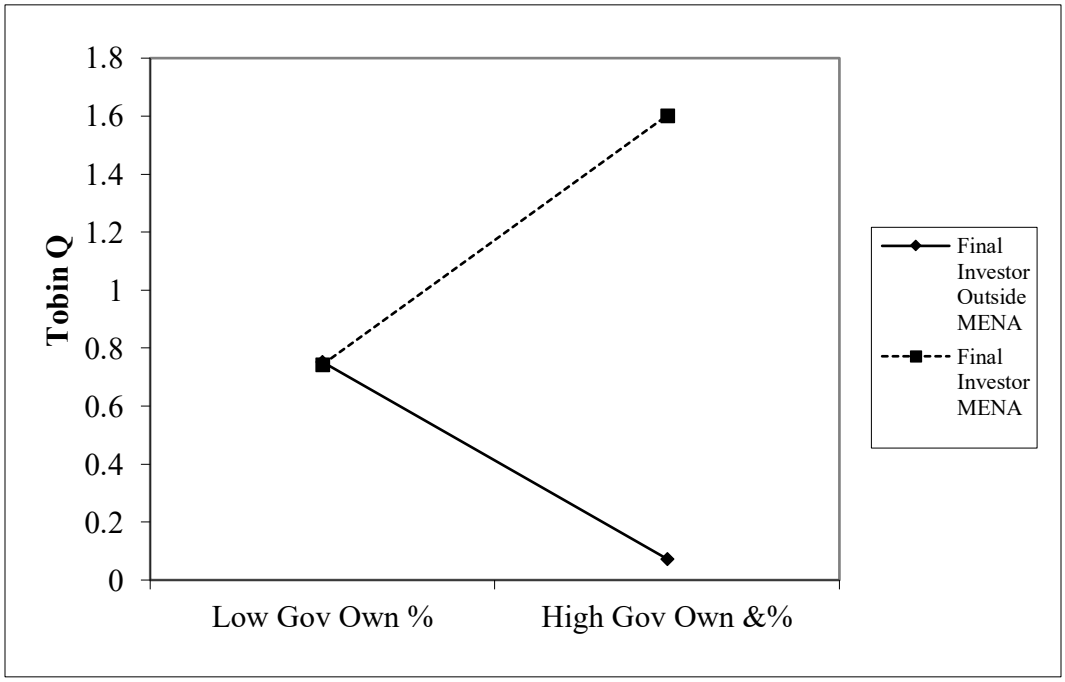
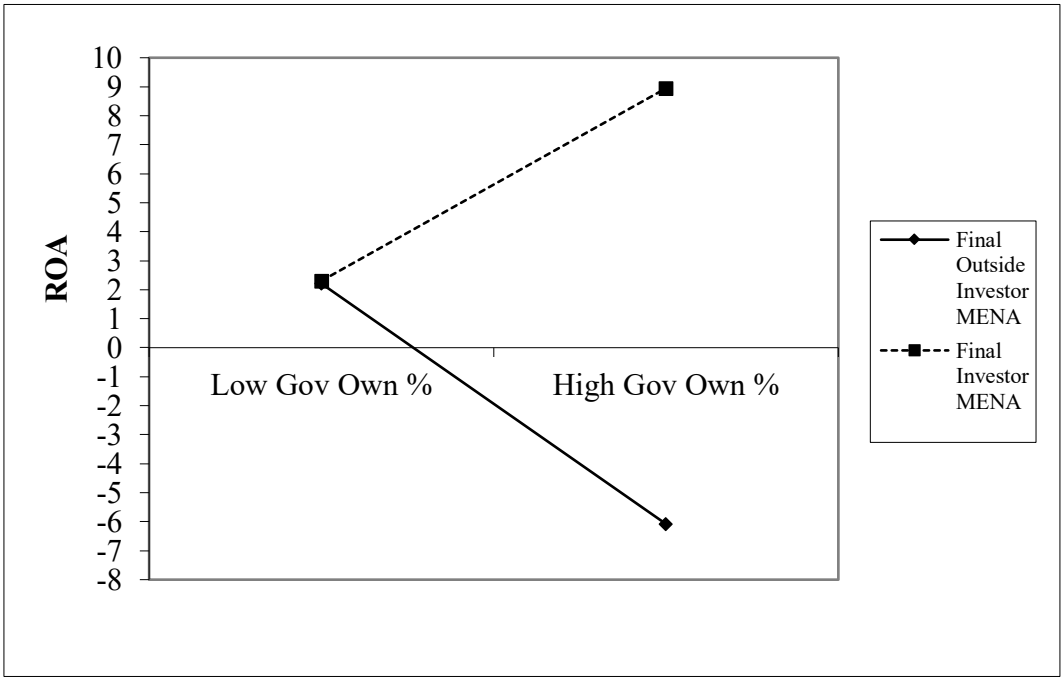


Figure 2b
Moderation Effect of Final Investor MENA on Government Ownership (with ROA)



2.10. Appendices

2.10.1. Appendix A

For our first robustness check, we used the *percentage of ownership held by the final largest state investor*, *pyramid government ownership percentage*, *percentage of foreign government ownership*, and *percentage of foreign government ownership from within the MENA* for our regression analysis in Tables 9, 10, 11, and 12 respectively as our explanatory variables. Pyramid ownership is calculated by multiplying the ownership percentage of the largest state investor along the ownership chain, based on Faccio & Lang (2002) calculation of cash-flow rights. Percentage of foreign government ownership and percentage of foreign government ownership from within the MENA are both continuous variables indicating the ownership percentage held by the final largest foreign state investor and by the final largest foreign state investor from within the MENA respectively.

We used *financial market development* and *legal development* as our moderators in Tables 9, 10, and 11, and *financial market development distance* and *legal development distance* in Table 12. Financial market development measures the development of financial markets defined as the factors, policies, and the institutions that lead to the efficient intermediation and effective financial markets. Legal development measures the effectiveness of judiciary and enforceability of contracts. Financial market development distance and legal development distance are computed using the formula below:

$$\mathrm{DIS}_x = \sum_{i=t}^{n} [(I_{ix} - I_{iy})^2 / V_i] / n$$

where DIS measures (1): the financial market development distance between country x and the eleven MENA countries, I_{ix} is country's x's score on the i'th financial market development

dimension, I_{iy} is the score of the eleven MENA countries on this dimension, V_i is the variance of the score of the dimension, and n is the total number of countries, and (2): the legal development distance between country x and the eleven MENA countries, $I_{ix}$is country's x's score on the i'th legal development dimension, I_{iy} is the score of the eleven MENA countries on this dimension, V_i is the variance of the score of the dimension, and n is the total number of countries.

We obtained our institutional variables from the Global Competitive Index from the World Economic Forum where we found estimates measuring the development of financial institutions and legal institutions. The corresponding RE and the IV-2SLS regression results are presented in the tables below.

Table 9 - Performance Implications of Government Ownership and Institutional Development

Panel I: RE, cluster on firm-level					**Panel J: IV-2SLS**				
	(1) Tobin's Q	(2) ROA	(3) Tobin's Q	(4) ROA		(5) Tobin's Q	(6) ROA	(7) Tobin's Q	(8) ROA
Government Ownership %	0.013**	0.134**	0.018**	0.304***	Government Ownership % - Instrumented	0.020***	0.147***	0.025***	0.242***
	(0.022)	(0.041)	(0.011)	(0.000)		(0.000)	(0.007)	(0.000)	(0.001)
Financial Market Development	-0.059***	-0.163							
	(0.001)	(0.408)							
Government Ownership % * Financial Market Development	-0.002**	-0.019			Government Ownership % * Financial Market Development - Instrumented	-0.004***	-0.020*		
	(0.042)	(0.126)				(0.000)	(0.062)		
Legal Development			-0.097***	-0.518***					
			(0.000)	(0.002)					
Government Ownership % * Legal Development			-0.003**	-0.056***	Government Ownership % * Legal Development - Instrumented			-0.005***	-0.041***
			(0.019)	(0.001)				(0.000)	(0.008)

Industry	Yes	Yes	Yes	Yes	Industry	Yes	Yes	Yes	Yes
Log Assets	-0.111***	1.190***	-0.111***	1.184***	Log Assets	-0.056***	0.895***	-0.055***	0.894***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.056	1.203***	-0.033	1.382***	Log Age	0.036**	1.441***	0.036**	1.470***
	(0.166)	(0.000)	(0.409)	(0.000)		(0.040)	(0.000)	(0.039)	(0.000)
GDP per Capita	0.000***	-0.000	0.000***	-0.000	GDP per Capita	0.000	-0.000*	0.000	-0.000**
	(0.000)	(0.340)	(0.000)	(0.113)		(0.104)	(0.092)	(0.116)	(0.041)
GDP Growth	0.006***	0.101***	0.004**	0.089***	GDP Growth	0.021***	0.172***	0.021***	0.167***
	(0.004)	(0.001)	(0.047)	(0.004)		(0.000)	(0.000)	(0.000)	(0.000)
Constant	2.619***	-12.147***	2.710***	-10.940***	Constant	1.317***	-10.977***	1.317***	-11.021***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	Observations	8681	8681	8681	8681
r2	0.129	0.095	0.134	0.095	r2	0.138	0.098	0.139	0.099

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 10 - Performance Implications of Pyramid Government Ownership and Institutional Development

Panel K: RE, cluster on firm-level					**Panel L: IV-2SLS**				
	(1) Tobin's Q	(2) ROA	(3) Tobin's Q	(4) ROA		(5) Tobin's Q	(6) ROA	(7) Tobin's Q	(8) ROA
Pyramid Government Ownership %	0.011**	0.149**	0.024***	0.397***	Government Ownership % - Instrumented	0.015***	0.095**	0.026***	0.269***
	(0.016)	(0.031)	(0.002)	(0.000)		(0.005)	(0.013)	(0.000)	(0.001)
Financial Market Development	0.119***	0.320							
	(0.001)	(0.670)							
Pyramid Government Ownership % * Financial Market Development	0.001**	0.023			Pyramid Government Ownership % * Financial Market Development - Instrumented	0.003***	0.013		
	(0.041)	(0.222)				(0.004)	(0.265)		
Legal Development			0.097***	0.073***					
			(0.002)	(0.003)					

Pyramid Government Ownership % * Legal Development			0.004***	0.077***	Pyramid Government Ownership % * Legal Development - Instrumented			0.005***	0.050***
			(0.004)	(0.001)				(0.000)	(0.002)
Industry	Yes	Yes	Yes	Yes	Industry	Yes	Yes	Yes	Yes
Log Assets	-0.162***	0.191	-0.155***	0.185	Log Assets	-0.052***	0.260*	-0.053***	0.219*
	(0.001)	(0.484)	(0.001)	(0.491)		(0.000)	(0.052)	(0.000)	(0.098)
Log Age	-0.055	0.453	-0.009	0.897	Log Age	0.057	0.710**	0.066	0.890**
	(0.520)	(0.490)	(0.911)	(0.161)		(0.214)	(0.049)	(0.147)	(0.013)
GDP per Capita	0.000***	0.000	0.000***	0.000	GDP per Capita	0.000	0.000	0.000	-0.000
	(0.003)	(0.134)	(0.006)	(0.520)		(0.410)	(0.609)	(0.868)	(0.393)
GDP Growth	0.000	0.140**	-0.001	0.121*	GDP Growth	0.020***	0.287***	0.018***	0.264***
	(0.950)	(0.030)	(0.761)	(0.057)		(0.001)	(0.000)	(0.002)	(0.000)
Constant	2.699***	-12.477***	2.719***	-10.996***	Constant	1.307***	-10.750***	1.307***	-10.744***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	Observations	8681	8681	8681	8681
r2	0.130	0.094	0.135	0.095	r2	0.137	0.099	0.139	0.100

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 11- Performance Implications of Foreign Government Ownership and Institutional Development

Panel M: RE, cluster on firm-level					**Panel N: IV-2SLS**				
	(1) Tobin's Q	(2) ROA	(3) Tobin's Q	(4) ROA		(5) Tobin's Q	(6) ROA	(7) Tobin's Q	(8) ROA
Foreign Government Ownership %	0.011	0.111	0.006	0.139	Foreign Government Ownership % - Instrumented	0.749***	3.050	0.726***	3.532
	(0.266)	(0.470)	(0.712)	(0.413)		(0.000)	(0.159)	(0.001)	(0.142)
Financial Market Development	0.068***	0.257							
	(0.000)	(0.205)							
Foreign Government Ownership % * Financial Market Development	0.002	0.017			Foreign Government Ownership % * Financial Market Development - Instrumented	0.141***	0.438		
	(0.260)	(0.549)				(0.000)	(0.306)		
Legal Development			0.109***	0.717***					
			(0.000)	(0.000)					

Foreign Government Ownership % * Legal Development			0.001	0.025	Foreign Government Ownership % * Legal Development - Instrumented			0.153***	0.593
			(0.726)	(0.481)				(0.001)	(0.263)
Industry	Yes	Yes	Yes	Yes	Industry	Yes	Yes	Yes	Yes
Log Assets	-0.110***	1.223***	-0.110***	1.216***	Log Assets	-0.053***	0.815***	-0.054***	0.814***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.057	1.206***	-0.037	1.321***	Log Age	0.061***	1.759***	0.050**	1.743***
	(0.159)	(0.000)	(0.356)	(0.000)		(0.004)	(0.000)	(0.013)	(0.000)
GDP per Capita	0.000***	-0.000	0.000***	-0.000	GDP per Capita	0.000*	0.000	0.000*	0.000
	(0.000)	(0.430)	(0.000)	(0.277)		(0.084)	(0.739)	(0.078)	(0.811)
GDP Growth	0.006***	0.102***	0.004*	0.088***	GDP Growth	0.018***	0.193***	0.018***	0.192***
	(0.004)	(0.001)	(0.051)	(0.005)		(0.000)	(0.000)	(0.000)	(0.000)
Constant	2.657***	-11.996***	2.764***	-10.144***	Constant	1.213***	-11.371***	1.262***	-11.301***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	Observations	8681	8681	8681	8681
r2	0.126	0.090	0.129	0.090	r2	0.134	0.091	0.135	0.097

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 12 - Performance Implications of Foreign Government Ownership from within the MENA and Institutional Distance

Panel O: RE, cluster on firm-level					**Panel P: IV-2SLS**				
	(1) Tobin's Q	(2) ROA	(3) Tobin's Q	(4) ROA		(5) Tobin's Q	(6) ROA	(7) Tobin's Q	(8) ROA
Foreign Government Ownership MENA %	0.002*	0.033***	0.002*	0.033***	Foreign Government Ownership MENA % - Instrumented	0.001	0.044***	0.001	0.043***
	(0.081)	(0.003)	(0.082)	(0.003)		(0.414)	(0.000)	(0.436)	(0.000)
Financial Market Development Distance	0.045	-0.125							
	(0.416)	(0.825)							
Foreign Government Ownership MENA % * Financial Market Development Distance	-0.002	-0.055**			Foreign Government Ownership MENA % * Financial Market Development Distance - Instrumented	-0.022	-0.456*		
	(0.221)	(0.036)				(0.117)	(0.063)		
Legal Development Distance			0.007	-0.012					
			(0.759)	(0.953)					

Foreign Government Ownership MENA % * Legal Development Distance			-0.001	-0.022**	Foreign Government Ownership MENA % * Legal Development Distance-Instrumented			-0.008	-0.158*
			(0.276)	(0.015)				(0.129)	(0.083)
Industry	Yes	Yes	Yes	Yes	Industry	Yes	Yes	Yes	Yes
Log Assets	-0.112***	1.178***	-0.112***	1.178***	Log Assets	-0.051***	0.898***	-0.051***	0.895***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.068*	1.155***	-0.068*	1.155***	Log Age	0.029*	1.431***	0.029*	1.433***
	(0.098)	(0.001)	(0.098)	(0.001)		(0.095)	(0.000)	(0.094)	(0.000)
GDP per Capita	0.000***	-0.000	0.000***	-0.000	GDP per Capita	0.000***	-0.000	0.000***	-0.000
	(0.000)	(0.671)	(0.000)	(0.674)		(0.001)	(0.187)	(0.001)	(0.197)
GDP Growth	0.005**	0.098***	0.005**	0.098***	GDP Growth	0.022***	0.175***	0.022***	0.175***
	(0.013)	(0.002)	(0.012)	(0.002)		(0.000)	(0.000)	(0.000)	(0.000)
Constant	2.348***	-12.788***	2.348***	-12.785***	Constant	1.278***	-11.045***	1.278***	-11.026***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	Observations	8681	8681	8681	8681
r2	0.129	0.095	0.134	0.095	r2	0.139	0.099	0.139	0.100

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

2.10.2. Appendix B

Table 13 - Robustness Check - Arab Spring Period - RE, cluster on firm-level								
	(1) Tobin's Q	(2) ROA	(3) Tobin's Q	(4) ROA	(5) Tobin's Q	(6) ROA	(7) Tobin's Q	(8) ROA
Government Ownership %	0.004**	0.074***			0.009**	0.030		
	(0.013)	(0.000)			(0.012)	(0.429)		
Government			0.121***	3.333***			0.316***	2.790*
			(0.006)	(0.000)			(0.002)	(0.054)
Chain Length					-0.045	-1.095**	-0.048*	-1.029**
					(0.104)	(0.016)	(0.080)	(0.026)
Government Ownership % * Chain Length					-0.004**	0.037		
					(0.034)	(0.192)		
Government * Chain Length							-0.124**	0.388
							(0.025)	(0.697)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log Assets	-0.077***	1.198***	-0.076***	1.207***	-0.079***	1.201***	-0.078***	1.200***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log Age	0.025	1.562***	0.029	1.634***	0.023	1.547***	0.028	1.611***
	(0.399)	(0.000)	(0.336)	(0.000)	(0.434)	(0.000)	(0.355)	(0.000)
GDP Growth	0.002	0.123***	0.002	0.120***	0.002	0.118***	0.002	0.117***
	(0.450)	(0.001)	(0.451)	(0.002)	(0.401)	(0.002)	(0.396)	(0.002)

GDP per Capita	0.000	-0.000**	0.000	-0.000**	0.000	-0.000*	0.000	-0.000**
	(0.679)	(0.049)	(0.784)	(0.026)	(0.520)	(0.076)	(0.667)	(0.046)
Constant	1.662***	-12.132***	1.632***	-12.510***	1.741***	-10.791***	1.713***	-11.141***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	3140	3140	3140	3140	3140	3140	3140	3140
r2	0.138	0.174	0.136	0.173	0.142	0.178	0.141	0.178

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 13 - Robustness Check - Arab Spring Period - RE, cluster on firm-level, *continued*								
	(9) Tobin's Q	(10) ROA	(11) Tobin's Q	(12) ROA	(13) Tobin's Q	(14) ROA	(15) Tobin's Q	(16) ROA
Government Ownership %	0.005***	0.071***			-0.004	0.027		
	(0.007)	(0.000)			(0.283)	(0.662)		
Government			0.171***	3.279***			-0.101	0.012
			(0.001)	(0.000)			(0.192)	(0.992)
Final Foreign Investor	0.008	-0.578	0.011	-0.478				
	(0.841)	(0.323)	(0.786)	(0.423)				
Government Ownership % * Final Foreign Investor	-0.006***	0.009						
	(0.007)	(0.798)						
Government * Final Foreign Investor			-0.212***	-0.121				
			(0.006)	(0.927)				
Final Foreign Investor MENA					0.031	0.989	0.029	0.819
					(0.363)	(0.152)	(0.377)	(0.241)
Government Ownership % * Final Foreign Investor MENA					0.008**	0.045		
					(0.045)	(0.472)		

Government * Final Foreign Investor MENA							0.222**	3.243**
							(0.014)	(0.022)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log Assets	-0.078***	1.199***	-0.076***	1.207***	-0.076***	1.217***	-0.075***	1.224***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log Age	0.023	1.539***	0.028	1.611***	0.024	1.556***	0.028	1.622***
	(0.429)	(0.000)	(0.341)	(0.000)	(0.419)	(0.000)	(0.346)	(0.000)
GDP Growth	0.002	0.127***	0.002	0.123***	0.002	0.128***	0.002	0.125***
	(0.512)	(0.001)	(0.498)	(0.001)	(0.399)	(0.001)	(0.399)	(0.001)
GDP per Capita	0.000	-0.000**	0.000	-0.000**	0.000	-0.000**	0.000	-0.000**
	(0.661)	(0.039)	(0.838)	(0.021)	(0.741)	(0.038)	(0.851)	(0.019)
Constant	1.672***	-11.972***	1.631***	-12.357***	1.631***	-13.210***	1.602***	-13.395***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	3140	3140	3140	3140	3140	3140	3140	3140
r2	0.140	0.174	0.138	0.174	0.139	0.174	0.136	0.174

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 14 - Robustness Check – Post Arab Spring Period - RE, cluster on firm-level								
	(1) Tobin's Q	(2) ROA	(3) Tobin's Q	(4) ROA	(5) Tobin's Q	(6) ROA	(7) Tobin's Q	(8) ROA
Government Ownership %	0.002*	0.016			0.008***	0.046		
	(0.087)	(0.248)			(0.005)	(0.139)		
Government			0.050	0.161			0.353***	1.920*
			(0.254)	(0.735)			(0.003)	(0.099)
Chain Length					0.038	-0.288	0.050	-0.185
					(0.515)	(0.503)	(0.406)	(0.679)
Government Ownership % * Chain Length					-0.005**	-0.026		
					(0.012)	(0.221)		
Government * Chain Length							-0.211***	-1.222
							(0.002)	(0.109)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log Assets	-0.093***	1.021***	-0.092***	1.034***	-0.093***	1.010***	-0.094***	1.014***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.035	0.848**	-0.034	0.861**	-0.038	0.832**	-0.036	0.842**
	(0.390)	(0.017)	(0.415)	(0.015)	(0.352)	(0.018)	(0.372)	(0.017)
GDP Growth	0.021***	0.187***	0.021***	0.190***	0.020***	0.179***	0.020***	0.179***
	(0.000)	(0.003)	(0.000)	(0.003)	(0.000)	(0.005)	(0.000)	(0.005)

GDP per Capita	0.000***	0.000**	0.000***	0.000**	0.000***	0.000**	0.000***	0.000**
	(0.000)	(0.034)	(0.000)	(0.038)	(0.000)	(0.028)	(0.000)	(0.033)
Constant	1.943***	-11.878***	1.929***	-12.054***	1.916***	-11.375***	1.902***	-11.580***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	5541	5541	5541	5541	5541	5541	5541	5541
r2	0.134	0.072	0.133	0.071	0.137	0.073	0.137	0.073

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 14 - Robustness Check – Post Arab Spring Period - RE, cluster on firm-level, *continued*								
	(9) Tobin's Q	(10) ROA	(11) Tobin's Q	(12) ROA	(13) Tobin's Q	(14) ROA	(15) Tobin's Q	(16) ROA
Government Ownership %	0.003**	0.019			-0.014**	-0.028		
	(0.047)	(0.200)			(0.016)	(0.605)		
Government			0.097*	0.431			-0.352***	-1.390
			(0.085)	(0.440)			(0.001)	(0.176)
Final Foreign Investor	0.083	-0.187	0.090	-0.189				
	(0.345)	(0.691)	(0.323)	(0.693)				
Government Ownership % * Final Foreign Investor	-0.004	-0.042*						
	(0.167)	(0.062)						
Government * Final Foreign Investor			-0.205*	-1.941**				
			(0.057)	(0.038)				
Final Foreign Investor MENA					-0.031	-0.062	-0.030	0.014
					(0.563)	(0.915)	(0.574)	(0.982)
Government Ownership % * Final Foreign Investor MENA					0.016***	0.044		
					(0.006)	(0.426)		

Government * Final Foreign Investor MENA							0.419***	1.594
							(0.000)	(0.163)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log Assets	-0.093***	1.027***	-0.092***	1.040***	-0.093***	1.021***	-0.093***	1.036***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.035	0.819**	-0.033	0.830**	-0.038	0.840**	-0.035	0.855**
	(0.392)	(0.021)	(0.418)	(0.019)	(0.351)	(0.018)	(0.399)	(0.016)
GDP Growth	0.020***	0.186***	0.021***	0.191***	0.021***	0.187***	0.021***	0.190***
	(0.000)	(0.003)	(0.000)	(0.003)	(0.000)	(0.003)	(0.000)	(0.003)
GDP per Capita	0.000***	0.000*	0.000***	0.000*	0.000***	0.000**	0.000***	0.000**
	(0.000)	(0.051)	(0.000)	(0.067)	(0.000)	(0.036)	(0.000)	(0.043)
Constant	1.927***	-11.802***	1.911***	-11.979***	1.985***	-11.790***	1.966***	-12.055***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	5541	5541	5541	5541	5541	5541	5541	5541
r2	0.135	0.073	0.134	0.072	0.135	0.072	0.134	0.071

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 15 - Robustness Check – Arab Spring Period (Bahrain, Egypt, and Tunisia) - RE, cluster on firm-level								
	(1) Tobin's Q	(2) ROA	(3) Tobin's Q	(4) ROA	(5) Tobin's Q	(6) ROA	(7) Tobin's Q	(8) ROA
Government Ownership %	0.005	0.063**			0.010	0.096		
	(0.114)	(0.012)			(0.125)	(0.134)		
Government			0.049	2.590**			0.192	5.424**
			(0.476)	(0.017)			(0.261)	(0.015)
Chain Length					-0.025	-0.729	-0.039	-0.602
					(0.739)	(0.431)	(0.618)	(0.509)
Government Ownership % * Chain Length					-0.004	-0.034		
					(0.198)	(0.483)		
Government * Chain Length							-0.093	-2.161*
							(0.201)	(0.057)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log Assets	-0.148***	0.468	-0.147***	0.528	-0.150***	0.469	-0.148***	0.513
	(0.000)	(0.142)	(0.000)	(0.111)	(0.000)	(0.142)	(0.000)	(0.124)
Log Age	0.031	0.057	0.064	0.278	0.029	0.072	0.059	0.200
	(0.643)	(0.948)	(0.398)	(0.745)	(0.664)	(0.935)	(0.428)	(0.816)
GDP Growth	0.037***	0.644***	0.038***	0.644***	0.037***	0.639***	0.038***	0.639***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

GDP per Capita	-0.000	0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000
	(0.231)	(0.860)	(0.295)	(0.891)	(0.267)	(0.821)	(0.266)	(0.853)
Constant	2.221***	10.842**	2.119***	9.746*	2.267***	11.531**	2.186***	10.716**
	(0.000)	(0.036)	(0.000)	(0.063)	(0.000)	(0.028)	(0.000)	(0.044)
Observations	533	533	533	533	533	533	533	533
r2	0.098	0.368	0.278	0.357	0.300	0.371	0.280	0.365

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 15 - Robustness Check – Arab Spring Period (Bahrain, Egypt, and Tunisia) - RE, cluster on firm-level, *continued*								
	(9) Tobin's Q	(10) ROA	(11) Tobin's Q	(12) ROA	(13) Tobin's Q	(14) ROA	(15) Tobin's Q	(16) ROA
Government Ownership %	0.008*	0.068**			-0.025***	-0.317***		
	(0.053)	(0.020)			(0.000)	(0.000)		
Government			0.217*	4.062***			-0.272***	-3.412***
			(0.080)	(0.004)			(0.000)	(0.000)
Final Foreign Investor	0.093	-1.484	0.039	-1.331				
	(0.170)	(0.231)	(0.541)	(0.283)				
Government Ownership % * Final Foreign Investor	-0.010**	-0.112***						
	(0.014)	(0.006)						
Government * Final Foreign Investor			-0.306**	-5.373***				
			(0.014)	(0.002)				
Final Foreign Investor MENA					-0.117	-0.021	-0.091	0.035
					(0.117)	(0.988)	(0.265)	(0.979)
Government Ownership % * Final Foreign Investor MENA					0.031***	0.381***		
					(0.000)	(0.000)		

Government * Final Foreign Investor MENA							0.373***	6.274***
							(0.000)	(0.000)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log Assets	-0.152***	0.660**	-0.144***	0.767**	-0.155***	0.467	-0.151***	0.530
	(0.000)	(0.043)	(0.000)	(0.025)	(0.000)	(0.144)	(0.000)	(0.114)
Log Age	0.016	-0.076	0.048	-0.006	0.029	0.064	0.062	0.267
	(0.805)	(0.931)	(0.504)	(0.995)	(0.672)	(0.942)	(0.416)	(0.754)
GDP Growth	0.037***	0.634***	0.038***	0.635***	0.039***	0.656***	0.040***	0.660***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
GDP per Capita	-0.000	0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000
	(0.350)	(0.545)	(0.213)	(0.952)	(0.278)	(0.892)	(0.279)	(0.784)
Constant	2.296***	9.426*	2.137***	8.345	2.398***	10.830*	2.250***	9.693*
	(0.000)	(0.075)	(0.000)	(0.116)	(0.000)	(0.056)	(0.000)	(0.092)
Observations	533	533	533	533	533	533	533	533
r2	0.305	0.383	0.285	0.382	0.300	0.368	0.277	0.357

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 16 - Robustness Check – Post Arab Spring Period (Bahrain, Egypt, and Tunisia) - RE, cluster on firm-level								
	(1) Tobin's Q	(2) ROA	(3) Tobin's Q	(4) ROA	(5) Tobin's Q	(6) ROA	(7) Tobin's Q	(8) ROA
Government Ownership %	0.002	0.020			0.006	0.035		
	(0.247)	(0.434)			(0.148)	(0.563)		
Government			0.073	0.820			0.270	1.604
			(0.485)	(0.401)			(0.203)	(0.484)
Chain Length					-0.067	0.676	-0.059	0.671
					(0.322)	(0.286)	(0.294)	(0.304)
Government Ownership % * Chain Length					-0.003	-0.012		
					(0.228)	(0.755)		
Government * Chain Length							-0.132	-0.592
							(0.195)	(0.642)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log Assets	-0.153***	0.774	-0.152***	0.788*	-0.155***	0.777	-0.155***	0.789
	(0.001)	(0.103)	(0.001)	(0.099)	(0.001)	(0.104)	(0.001)	(0.101)
Log Age	0.022	0.534	0.028	0.587	0.022	0.503	0.023	0.553
	(0.760)	(0.448)	(0.687)	(0.405)	(0.758)	(0.475)	(0.734)	(0.436)
GDP Growth	-0.031	0.019	-0.031	0.021	-0.031	0.013	-0.030	0.018
	(0.110)	(0.947)	(0.104)	(0.940)	(0.108)	(0.963)	(0.111)	(0.950)

GDP per Capita	0.000	0.000*	0.000	0.000*	0.000	0.000*	0.000	0.000*
	(0.127)	(0.066)	(0.142)	(0.072)	(0.134)	(0.057)	(0.174)	(0.071)
Constant	2.078***	-1.425	2.049***	-1.725	2.161***	-2.029	2.151***	-2.294
	(0.000)	(0.781)	(0.000)	(0.739)	(0.000)	(0.700)	(0.000)	(0.665)
Observations	1063	1063	1063	1063	1063	1063	1063	1063
r2	0.215	0.075	0.212	0.073	0.219	0.075	0.214	0.073

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 16 - Robustness Check – Post Arab Spring Period (Bahrain, Egypt, and Tunisia) - RE, cluster on firm-level, *continued*								
	(9) Tobin's Q	(10) ROA	(11) Tobin's Q	(12) ROA	(13) Tobin's Q	(14) ROA	(15) Tobin's Q	(16) ROA
Government Ownership %	0.003*	0.026			-0.034***	-0.116		
	(0.097)	(0.384)			(0.000)	(0.237)		
Government			0.193	1.620			-0.430***	-1.265
			(0.163)	(0.201)			(0.000)	(0.369)
Final Foreign Investor	0.150**	-0.351	0.174**	-0.140				
	(0.013)	(0.660)	(0.016)	(0.861)				
Government Ownership % * Final Foreign Investor	-0.007	-0.100**						
	(0.109)	(0.011)						
Government * Final Foreign Investor			-0.357**	-4.159***				
			(0.035)	(0.007)				
Final Foreign Investor MENA					-0.115**	1.427	-0.121*	1.478
					(0.038)	(0.146)	(0.060)	(0.133)
Government Ownership % * Final Foreign Investor MENA					0.037***	0.129		
					(0.000)	(0.208)		

Government * Final Foreign Investor MENA							0.560***	1.762
							(0.000)	(0.323)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log Assets	-0.161***	0.830*	-0.159***	0.857*	-0.159***	0.836*	-0.158***	0.847*
	(0.001)	(0.087)	(0.001)	(0.079)	(0.001)	(0.083)	(0.001)	(0.081)
Log Age	0.021	0.505	0.023	0.498	0.020	0.573	0.026	0.612
	(0.767)	(0.469)	(0.734)	(0.477)	(0.774)	(0.416)	(0.705)	(0.385)
GDP Growth	-0.034*	0.029	-0.035*	0.030	-0.031	0.038	-0.031	0.040
	(0.069)	(0.917)	(0.064)	(0.916)	(0.106)	(0.893)	(0.102)	(0.888)
GDP per Capita	0.000*	0.000**	0.000	0.000**	0.000	0.000	0.000	0.000
	(0.079)	(0.022)	(0.115)	(0.041)	(0.113)	(0.104)	(0.152)	(0.114)
Constant	2.161***	-1.946	2.137***	-2.132	2.250***	-3.573	2.232***	-3.852
	(0.000)	(0.709)	(0.000)	(0.684)	(0.000)	(0.521)	(0.000)	(0.491)
Observations	1063	1063	1063	1063	1063	1063	1063	1063
r2	0.217	0.083	0.213	0.083	0.214	0.081	0.209	0.080

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

2.10.3. Appendix C

Table 17 - Robustness Check – Performance Implications of Non-Government Ownership - RE, cluster on firm-level								
	(1) Tobin's Q	(2) ROA	(3) Tobin's Q	(4) ROA	(5) Tobin's Q	(6) ROA	(7) Tobin's Q	(8) ROA
Non-Government Ownership %	0.000	-0.014			0.001	0.012		
	(0.398)	(0.105)			(0.387)	(0.588)		
Non-Government			-0.035	-1.134			-0.232***	-0.111
			(0.247)	(0.107)			(0.005)	(0.910)
Chain Length					0.007	-0.111	0.109***	0.094
					(0.857)	(0.802)	(0.001)	(0.868)
Non-Government Ownership % * Chain Length					-0.001	-0.021		
					(0.474)	(0.151)		
Non-Government * Chain Length							-0.129***	-0.735
							(0.007)	(0.259)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log Assets	-0.109***	1.229***	-0.109***	1.206***	-0.109***	1.225***	-0.111***	1.206***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.068*	1.185***	-0.068*	1.152***	-0.069*	1.166***	-0.066	1.134***
	(0.091)	(0.000)	(0.092)	(0.001)	(0.088)	(0.001)	(0.100)	(0.001)

GDP Growth	0.006***	0.100***	0.006***	0.102***	0.006***	0.099***	0.006***	0.102***
	(0.006)	(0.001)	(0.006)	(0.001)	(0.006)	(0.001)	(0.007)	(0.001)
GDP per Capita	0.000***	-0.000	0.000***	-0.000	0.000***	-0.000	0.000***	-0.000
	(0.000)	(0.535)	(0.000)	(0.594)	(0.000)	(0.609)	(0.000)	(0.670)
Constant	2.301***	-12.930***	2.354***	-11.946***	2.290***	-12.786***	2.539***	-12.179***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	8681	8681	8681	8681
r2	0.116	0.091	0.118	0.094	0.116	0.092	0.121	0.094

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 17 - Robustness Check – Performance Implications of Non-Government Ownership - RE, cluster on firm-level, *continued*

	(9) Tobin's Q	(10) ROA	(11) Tobin's Q	(12) ROA	(13) Tobin's Q	(14) ROA	(15) Tobin's Q	(16) ROA
Non-Government Ownership %	0.001	-0.023**			0.002*	0.016		
	(0.365)	(0.035)			(0.081)	(0.280)		
Non-Government			-0.068*	-1.270**			0.434***	3.173**
			(0.073)	(0.013)			(0.001)	(0.017)
Final Foreign Investor	0.053	-0.824*	0.081	-0.883				
	(0.473)	(0.095)	(0.221)	(0.254)				
Non-Government Ownership % * Final Foreign Investor	-0.001	0.023						
	(0.610)	(0.100)						
Non-Government * Final Foreign Investor			-0.136*	0.820				
			(0.089)	(0.345)				
Final Foreign Investor MENA					-0.018	-1.151**	-0.471***	-4.450***
					(0.656)	(0.049)	(0.001)	(0.001)
Non-Government Ownership % * Final Foreign Investor MENA					0.001	0.039**		
					(0.167)	(0.020)		

Non-Government * Final Foreign Investor MENA							0.484***	4.416***
							(0.000)	(0.002)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log Assets	-0.109***	1.239***	-0.109***	1.206***	-0.109***	1.238***	-0.109***	1.208***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.067*	1.171***	-0.067*	1.145***	-0.070*	1.158***	-0.068*	1.144***
	(0.095)	(0.001)	(0.097)	(0.001)	(0.087)	(0.001)	(0.092)	(0.001)
GDP Growth	0.005**	0.105***	0.005**	0.102***	0.006***	0.106***	0.006***	0.103***
	(0.010)	(0.001)	(0.010)	(0.001)	(0.006)	(0.001)	(0.006)	(0.001)
GDP per Capita	0.000***	-0.000	0.000***	-0.000	0.000***	-0.000	0.000***	-0.000
	(0.000)	(0.477)	(0.000)	(0.562)	(0.000)	(0.523)	(0.000)	(0.532)
Constant	2.161***	-1.946	2.137***	-2.132	2.250***	-3.573	2.232***	-3.852
	(0.000)	(0.709)	(0.000)	(0.684)	(0.000)	(0.521)	(0.000)	(0.491)
Observations	8681	8681	8681	8681	8681	8681	8681	8681
r2	0.116	0.092	0.119	0.094	0.117	0.092	0.118	0.094

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 18 - Robustness Check – Performance Implications of Non-Government Ownership and Institutional Development - RE, cluster on firm-level

	(17) Tobin's Q	(18) ROA	(19) Tobin's Q	(20) ROA	(21) Tobin's Q	(22) ROA	(23) Tobin's Q	(24) ROA
Non-Government Ownership %	-0.002	0.062			0.001*	0.002		
	(0.724)	(0.141)			(0.077)	(0.836)		
Non-Government			0.393	7.215***			-0.009	0.017
			(0.114)	(0.008)			(0.804)	(0.975)
Financial Market Development	-0.165***	-1.555***	-0.260***	-2.859***				
	(0.000)	(0.000)	(0.000)	(0.000)				
Non-Government Ownership % * Financial Market Development	-0.001	0.019*						
	(0.653)	(0.061)						
Non-Government * Financial Market Developments			0.102*	1.996***				
			(0.088)	(0.002)				
Legal Development					-0.021***	-0.248***	-0.021***	-0.403***
					(0.000)	(0.000)	(0.002)	(0.000)
Non-Government Ownership % * Legal Development					0.000*	0.004**		
					(0.062)	(0.021)		

Non-Government * Legal Development							0.008	0.330***
							(0.296)	(0.000)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log Assets	-0.109***	1.218***	-0.110***	1.199***	-0.106***	1.240***	-0.106***	1.217***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.020	1.455***	-0.017	1.462***	-0.027	1.467***	-0.029	1.417***
	(0.620)	(0.000)	(0.679)	(0.000)	(0.501)	(0.000)	(0.477)	(0.000)
GDP Growth	0.004**	0.091***	0.004**	0.091***	0.002	0.065**	0.003	0.069**
	(0.032)	(0.003)	(0.028)	(0.003)	(0.253)	(0.048)	(0.210)	(0.035)
GDP per Capita	0.000***	-0.000*	0.000***	-0.000**	0.000***	-0.000	0.000***	-0.000
	(0.003)	(0.066)	(0.007)	(0.044)	(0.000)	(0.130)	(0.000)	(0.148)
Constant	1.494***	-19.920***	1.138***	-24.570***	2.085***	-14.682***	2.148***	-14.144***
	(0.000)	(0.000)	(0.004)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	8681	8681	8681	8681
r2	0.131	0.093	0.134	0.096	0.121	0.092	0.122	0.096

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

3. Chapter 3: The Internationalization of State-Owned Enterprises from the Middle East and North Africa: The Role of Institutional Voids, Governance Infrastructure, and Political Institutions

The Internationalization of State-Owned Enterprises from the Middle East and North Africa: The Role of Institutional Voids, Governance Infrastructure, and Political Institutions

Authors
Julia F Barbar

Abstract

Manuscript Type: Empirical
Research Questions: How does state ownership affect firm internationalization from the MENA region? How do country-level institutions impact the effect of government ownership on the extent of firm internationalization from the MENA? How does the region-relative institutional development impact the effect of government ownership on the internationalization scope of firms within the MENA region?
Research Findings/Insights: Based on a sample of 1215 MENA firms from 2010 to 2017, we examine the relationship between government ownership and firm internationalization from the MENA region. We further scrutinize this relationship and test the moderating effect of institutional voids in legal and financial markets, corruption levels, political stability, and political constraints. We find that government ownership, overall, enhances firm internationalization, and that this relationship is stronger amid severe institutional voids, good governance infrastructure, and low political constraints. We also investigate the impact of the regional institutional environment and find that while SOEs are more prone to internationalization within the MENA region, this relationship is stronger when region-relative institutional development is high.
Theoretical/Academic Implications: Our study contributes to the ongoing scholarly debate on the impact of government ownership on internationalization strategies in an unexplored context distinguished from the developed – and even the developing - countries. Focusing on the institutional environment of the home country, we highlight the crucial role of national institutions in impacting internationalization prospects. Given the MENA's variety of fragile and perilous institutions, we conduct our investigation using an inclusive set of institutional constructs and find that various institutions have different implications for SOEs' internationalization. We underscore the role of legitimacy stemming from certain institutional configurations on outward FDI. We also highlight the role of institutional isomorphism in overcoming legitimacy pressures and examine the impact of region-level institutions that might not be accurately captured only by country-level ones. We thus underscore the importance of a comprehensive analysis at the national and regional levels for a better assessment of SOEs' internationalization strategies.
Practitioner/Policy Implications: We offer insights for SOE managers to consider the governance infrastructure and political environment that impact risk exposure in their international expansion, thus emphasizing the importance of maximizing the benefits of individual firm efforts and engaging in coordinated image-building processes to subsidize the host country's legitimacy concerns and the government's key role in improving foreign perception towards MENA firms' risk and legitimacy by acting as the coordinator. For policymakers, we highlight the importance of implementing policies that eliminate institutional barriers and aligning governance mechanisms with international standards through the establishment of a corporate code of best practices for SOEs in the MENA.

Keywords: Government Ownership; Firm Internationalization; National Institutional Environment; Regional Institutional Development; Institutional Voids; Corruption; Political Instability; Political Constraints; MENA Region

3.1. Introduction

International diversification is one of the most important strategic decisions made by multinational enterprises (MNEs) in general (Goerzen & Beamish, 2003; Hitt, Hoskisson, & Kim, 1997) and state-owned multinationals (SOMNCs) in particular (Cuervo-Cazurra, Inkpen, Musacchio, & Ramaswamy, 2014). As such, scholars have investigated the impact of state ownership on firms' international diversification and factors influencing such strategies (Benito, Rygh, & Lunnan, 2016; Buckley, Clegg, Cross, Liu, Voss, & Zheng, 2007; Estrin, Meyer, Nielsen, & Nielsen, 2016) as a response to the rapid process of international growth pursued by state-owned enterprises (SOEs) worldwide. Despite the existing research conducted on SOMNCs in emerging economies (see reviews in Cuervo-Cazurra & Li, 2020; Cuervo-Cazurra et al., 2014), the Middle East and North Africa (MENA) remains an overlooked region in this regard (Cuervo-Cazurra, 2011) despite the prominent presence of SOEs in the region and their involvement in international diversification (Dasgupta, Keller, & Srinivastan, 2002).

The MENA is renowned for its severe market failures and the various institutional factors that continue to impose substantial implications on firm activities and strategies. The region's unique ethnic and cultural values, coupled with the recent discrepant economic and governance reforms amid the ongoing religious, social, and political tensions, distinguish the region from the rest of the world and demand a closer examination of its unique but hazardous institutional configurations. The MENA's institutional setting therefore offers an interesting opportunity to examine the role of SOEs in internationalization strategies.

First, in addition to its substantially underdeveloped financial markets and juridical systems, the MENA is distinguished from developed and developing economies by its ongoing political turmoil and conflict-afflicted markets that continue to threaten business operations. This unique mix of institutional factors underscores the role of the government in addressing market voids yet

overstates the risk and legitimacy concerns stemming from the government's involvement amid perilous institutional conditions. Second, the region lags behind in terms of global integration and internationalization is a relatively nascent strategy that firms have started to undergo. The region's underperformance globally is essentially the result of inefficient government intervention and business models that impede firms' presence internationally. Third, empirical studies conducted in the region have focused primarily on the diversification of firms *into* the MENA (Demirbag, Apaydin, & Tatoglu, 2011; Demirbag & Mirza, 2000; Demirbag, Glaister, & Tatoglu, 2007) rather than *out of* the MENA, or simply on domestic operations in firms' home countries in the MENA (Demirbag, Tatoglu, Tekinkus, & Zaim, 2006) without necessarily focusing on firms' foreign operations. Existing research examining outward FDI form the region focuses on a single country, overlooks the role of home-country's institutions on outward FDI from the region (Cuervo-Cazurra, 2011), and disregards the impact of government ownership in particular, despite the institutional dynamics at the national level that present substantial implications for firm activities and strategies and SOEs' recent and significant diversification efforts, which calls for a closer examination. Overall, the lack of academic attention focused on the impact of local institutional configurations on internationalization prospects, the substantial presence of SOEs and their various implications on firms' international diversification, and the market conditions that distinguish the MENA from the rest of the world highlight the importance of examining the influence of its distinct national factors on SOEs' internationalization strategies.

Furthermore, a recent research stream emphasizes the importance of regional-level factors in boosting local responsiveness, exploiting region-bound advantages, and eventually enhancing internationalization strategies (Arregle, Miller, Hitt, & Beamish, 2013; Ghemawat, 2003; 2007; Rugman & Verbeke, 2004; 2005). The literature, however, examines country- and region-level

institutional development separately, necessitating a more comprehensive approach that assesses the dynamics of these two dimensions on firm internationalization (Chan et al., 2008). The geographic and institutional proximity of countries within the MENA region offer a proper context to test the implication of national and regional factors on the scope of firm internationalization.

To develop a close and comprehensive understanding of the implications of government ownership on investment outflow from the MENA in light of the region's perilous and hazardous institutional setting, we divide our study into two parts. In the first, we examine the impact of SOEs on the extent of outward foreign direct investment (FDI) and explore national factors that influence this relationship. In the second, we focus on countries' region-relative institutional development and assess the influence of institutional proximity and similarities between a country and the region to which it belongs on the impact of government ownership on the location of outward FDI, which we define as an internationalization scope within the MENA region.

We begin by testing the focal relationship of our study: the impact of government ownership on firm internationalization from the MENA. We argue that given the government's goal in strengthening a country's international exposure and the region's unfulfilled potential for international investment, government ownership in the MENA enhances internationalization. Our findings confirm that state ownership in general enhances firms' internationalization. As emerging economies are commonly characterized by market failures known as institutional voids (Khanna & Palepu, 1997; 2000), we accordingly focus on two of the most eminent market failures in the region that governments can address and further scrutinize their moderating roles on the relationship between government ownership and outward FDI from the MENA. Governments essentially support firms' activities and strategies via financing and regulations (Wei, Clegg, & Ma, 2015). Our main argument is that given the significant voids in the regulatory environment and financial markets in

the MENA, government ownership overcomes and fills these institutional vacuums and positively impacts internationalization strategies by providing firms with valuable resources and connections as well as access to financing channels, and also by acting as a political power and a rule-maker (Cuervo-Cazurra & Li, 2020). Our results confirm that government ownership is favorable to firm internationalization strategies, specifically in the context of the region's weak institutional development. In addition to the MENA's severe institutional underdevelopment, the region is commonly known for its poor governance infrastructure as well as its unstable and obstructive political conditions. Recognizing the advantages of SOEs in underdeveloped institutional environments in addressing market failures, we further examine the influence of governance infrastructure and political institutions – specifically corruption levels, political instability, and political constraints – on the impact of SOEs on outward FDI from the MENA. We argue primarily that the region's weak governance infrastructure and precarious political environment negatively impact SOEs' internationalization by essentially increasing legitimacy concerns as well perceptions of risk and uncertainty and thus mitigate the host country's responsiveness to foreign investment. Our findings show that high levels of corruption, high political instability and turbulence, and significant political constraints enable an environment weighted with risk and uncertainty that raises legitimacy concerns and subsequently obstructs internationalization prospects.

Moreover, around 40% of FDI from the MENA is located in countries within the region. This figure underscores the prevalence of regional investment within the MENA and the importance of examining the dynamics behind it. We focus on the regional institutional development of the MENA and test the moderating impact of the region-relative factors that capture the similarities between a country's institutional development score and the weighted average score of the institutional development of MENA countries. The variable reflects the institutional development of

a country relative to the regional institutional development. We essentially argue that the institutional proximity between MENA countries is advantageous in allowing firms to overcome the liability of foreignness. We accordingly find that SOEs are more likely to conduct FDI within the MENA region, and that institutional similarities and proximity between MENA countries positively drive the relationship between SOEs and internationalization scope within the MENA.

Our study aims to make three contributions. First, relying on the institution-based view and the literature on intuitional voids, the major contribution is that we investigate firm internationalization from the MENA, a region that has an institutional environment highly different not just from developed economies, but also from developing ones. The region's underdeveloped institutions, substantial market failures, poor governance infrastructure, ongoing political turmoil, and substantive political constraints distinguish it worldwide and offer an interesting opportunity to investigate their impact on outward FDI from the region and on the ability of SOEs to internationalize. The region's institutional setting underlines the role of the government in filling institutional voids yet raises legitimacy concerns for host countries. Second, we examine the dynamics of the institutional environment on firm internationalization by focusing on the home country rather the host country. We find that the institutional environment of the home country plays a substantive role in driving the entry mode as various national institutions have different impacts on SOEs' outward FDI. Such an inference is particularly significant for emerging economies where various institutional factors are evident and differently influence firms' activities and strategies, highlighting the importance of a fine-grained analysis across different national factors. We also highlight the impact of legitimacy stemming from various institutional configurations on the role of state ownership in international diversification. And third, we provide added support for the importance of the regional institutional environment in understanding firms'

internationalization scope that might not be accurately captured at country-level institutions. We contribute to the research on SOEs' cross-border investments by highlighting the role of institutional isomorphism in overcoming legitimacy concerns and determining internationalization scope. We contend that different institutions at both country- and region-level assume different strategies with different actions at each level. We therefore complement previous studies by providing a more inclusive view that not only examines national institutions at a country-level, but also focuses on the region-relative institutional development to which a country belongs.

3.2. Theoretical Framework and Hypotheses

3.2.1. The MENA Region

The MENA region presents an extreme and precarious institutional setting that makes the investigation of firm internationalization interesting. First, firms operating in the region have been exposed to expansion processes that are different from those faced by firms operating in the rest of the world (Cuervo-Cazurra, 2011). Since the 1960s, there has been a state-led import-substitution model that was implemented in the MENA and through which countries were able to achieve growth and socio-economic development. However, in 1980s, as oil prices began to drop, this state-led model began to fall as its inefficiencies and restrictions on private firms became evident. As a result, social tensions were increasing, unemployment rate was rising, and the private sector was falling behind in competitiveness and global integration (Dasgupta et al., 2002). The region remained profoundly dependent on oil and natural resource exports, tourism, and labor migration, while other regions became tightly interrelated with one another through global production chain manufacturing, technology, and services (Cuervo-Cazurra, 2011). By the mid-1990s, countries in the MENA embarked on a massive pace of structural and pro-market economic reforms. However, unlike the

rest of world, which shifted to export-led development in the 1980's, MENA countries only started adopting this model in the late 1990s. Consequently, the region has borne a large unfulfilled potential for trade beyond oil exports and a lack of market diversification and international integration (Nugent, 2002). Despite the substantial constraints on businesses that limit their international competitiveness, outward FDI from the region rapidly increased in the mid-2000s and firms from the MENA have expanded around the world (Cuervo-Cazurra, 2011). Notably, SOEs also engaged in international diversification and became large foreign investors from the region. While there has been an increase in FDI into and out of the region, the MENA nevertheless remains one of the most underperforming regions worldwide (Apaydin, 2009).

Second, this region has suffered greatly from underdeveloped institutions and serious economic problems since the 1950s as countries started to gain their independence (Diwan & Akin, 2015). In an attempt to boost economic growth, governments' intervention in firms became increasingly evident leading, however, to crony capitalism. As a response to the ongoing corruption and patronage, the Arab Spring started in late 2010 where protests produced a wave of political disorder across the region and stimulated calls for governance reforms and strong policy implementation (Malik & Awadallah, 2013). With progress that has been noticeable ever since, corporate governance became a nascent concept in the region. Nevertheless, despite these advancements, the MENA remains distinguished by heavy state involvement and still lags behind in terms of adequate compliance with international best practices and implementation of effective governance mechanisms (OECD, 2019; World Bank, 2019). Moreover, MENA countries continue to bear severe institutional voids and underdeveloped equity and bond markets (Ghosh, 2017) where financing constraints are major setbacks for firm growth and expansion. Firms in the region also

operate under an underdeveloped regulatory environment that restricts the freedom and ability for economic actions and international investment (Mellahi, Demirbag, & Riddle, 2011).

Overall, the heavy state involvement in economic activities, the severe institutional voids and constraints on businesses, the deficiencies in governance infrastructure, and the perilous and unstable political environment distinguish the MENA from the rest of the developing economies, calling for a closer theoretical and empirical focus.

3.2.2. An Institutional Perspective of SOEs' Internationalization

The relationship between government ownership and firm internationalization has been subject to a divisive and unresolved debate. One research stream underlines the difficulties and inefficiencies of SOEs in implementing internationalization strategies and finds that governments prioritize their political (Chong & Lopez-de-Silanes, 2005; Cui & Jiang, 2012) and social (Bai & Xu, 2005) goals over the firm's benefits, which often impairs strategies, including internationalization. The opposing research stream, however, highlights the vital role of governments in directing and enhancing firm internationalization (Buckley et al., 2007; Yamakawa, Peng, & Deeds, 2008) through the valuable and advantageous resources they can offer in support of firms' overseas investment (Benito et al., 2016; Luo, Xue, & Han, 2010; Rugman & Li, 2007). Conflicting findings on SOEs' internationalization underline the relevance of the institutional environment on the implications of state ownership (Colli, Mariotti, & Piscitello, 2014; Liang Ren, & Sun, 2015; Li, Cui, & Lu, 2014; Wu & Chen, 2014; Nuruzzaman, Singh, & Gaur, 2020; Mariotti & Marzano, 2019). SOEs are political affiliates that interact differently with the institutional environment compared to other firms and thus present responses motivated not solely by self-interest but also by the interests of the institutions with which they are affiliated (Meyer, Ding, Li, & Zhang, 2014; Estrin et al., 2016). The institutional theory that has been applied to international business strategy research therefore

highlights the importance of considering the influence of various institutional dynamics on firms' international diversification (Hoskisson, Eden, Lau, & Wright, 2000; Hoskisson, Wright, Filatotchev, & Peng, 2013; Peng, Sun, Pinkham, & Chen, 2009; Wright, Filatotchev, Hoskisson, & Peng, 2005). Accordingly, it is crucial to assess the institutional context in which SOEs exist in order to examine their goals and impact on firm strategies accurately.

3.2.3. The Impact of Government Ownership on Firm Internationalization from the MENA

The MENA region's peculiar institutional setting and fragile market conditions define the extent, the ways, and most importantly, the motives of government intervention in firms and their consequent impact on internationalization strategies. SOMNCs tend to pursue strategic investment not solely for business interests, but for national ones as well. As such, the state's support is motivated by its desire to control strategic resources (Lai, O'Hara, & Wysoczanska, 2015) not only for commercial objectives, but also for its economic objectives in creating national champions that boost the local markets through their investments (Finchelstein, 2017). SOEs' investments abroad can thus be driven by national resource security motives (Bass & Chakrabarty, 2014) and by the goal of looking for resources to bring to the home country (Rudy, Miller, & Wang, 2016). In seeking economic stability and development, governments increasingly rely on long-term capital outflow such as FDI (Lipsey, 2001).

Moreover, an essential governmental goal is to reinforce its national long-term economic growth by strengthening social coalitions with political parties, trade unions, and foreign governments and banks (Mariotti & Marzano, 2019). The social and political goals of the government can be translated into its desire to strengthen the country's economic development and international exposure and arena in order to grant access to external knowledge, channels, and

resources that would strengthen its internal economy and serve its non-economic goals (Lenway & Murtha, 1994; Mariotti & Marzano, 2019; Ramasamy, Yeung, & Laforet, 2012). When investing abroad, governments are not solely focused on economic performance, but also on their home strategic, political, and diplomatic goals (Benito et al., 2016). Accordingly, the state's goals might not necessarily be in conflict with those of the firm but could very much be aligned and benefit both the state and the firm.

Recognizing the region's heavy dependence on oil exports and the unfulfilled non-oil transnational trade potentials, governments in the region began supporting internationalization projects in the late 1990s in an attempt to develop, expand, diversify, and internationalize their markets (Cuervo-Cazurra, 2011). In efforts to support economic growth and social development, SOEs from the MENA have since become large foreign investors and have boosted firm internationalization remarkably. Given the region's need for economic development and the unfulfilled potential for international diversification coupled with the government's motive to strengthen its international presence, we argue that government ownership in the MENA supports internationalization projects. Hence:

Hypothesis 1: Government ownership has a positive effect on firm internationalization from the MENA region.

3.2.4. The Impact of Institutional Voids on Government Ownership and Firm Internationalization from the MENA

Institutional voids are defined as the lack of institutional facilities and regulations needed for a well-functioning economy (North, 1990). Emerging markets are generally characterized by their pervasive deficiencies and absence of market-supporting institutions (Khanna & Palepu, 1997). Although the literature presents broad inferences about the importance of different types of

institutional voids (Carney, Gedajlovic, Heugens, van Essen, & Oosterhout, 2011), scholars primarily focus on deficiencies in financial markets and legal systems (Chakrabarty, 2009) and evidence the role of the government in addressing market limitations and granting access to resources and privileges that are unavailable for non-government affiliated firms (Stephan, Uhlaner, & Stride, 2015). The MENA region presents some of the deepest institutional voids worldwide. The government can therefore be perceived as a strategic investor addressing the apparent market failures in the region, mainly those related to financing and legal enforcement, by granting firms access to capital investment to fund internationalization projects and by acting as a political power and rule-maker that directs market relations and prioritize SOEs. Government-related resources and advantages play a crucial role in overcoming institutional deficiencies that can otherwise limit firm activities and strategies (Benito et al., 2016; Luo, Sun, & Wang, 2011; Wang, Hong, Kafouros, & Wright 2012).

The MENA's substantial institutional voids – mainly related to capital markets – can substantially obstruct internationalization opportunities. Financial markets in the region are inefficient and illiquid (International Monetary Fund, 2018) and external financing is limited to commercial banks (Ghosh, 2017). Moreover, as emerging economies such as the MENA suffer from weak capital markets in which attracting private capital is very challenging (Musacchio, Lazzarini, & Aguilera, 2015), the cost of capital is significantly higher (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998). In such economies, government ownership is commonly associated with advantages in terms of credit, liquidity, and the cost of capital (Thomsen & Pedersen, 2000) and can accordingly alleviate and supplant these capital constraints and finance projects that might not otherwise have been undertaken (Inoue, Lazzarini, & Musacchio, 2013; Musacchio & Lazzarini, 2014). SOEs accordingly obtain funds for investments either directly from

the state or from state-owned banks at lower rates (Kalasin, Cuervo-Cazurra, & Ramamurti, 2020; Li et al., 2014). Furthermore, because of their larger budgets, softer budget constraints, and longer time horizons, governments can overcome economic constraints, be patient investors, take more risks, and adopt strategic rather than purely profit-maximizing models of financing (Cuervo-Cazurra et al., 2014; Mazzucato, 2013). The preferential access to abundant and low-cost capital enables SOEs to obtain funds and undertake much larger projects than private firms could do and finance internationalization projects (Cuervo-Cazurra & Li, 2020). Governments would thus allow SOEs to undertake projects that are profitable in the long-run and reduce pressures on firms to deliver immediate results (Knutsen, Rygh, & Hveem, 2011; Rudy et al., 2016).

Moreover, in the context of underdeveloped regulatory systems, the government can play a substantial role as a political power and a rule-maker in creating policies that govern relationships among organizations that favor SOEs (Cuervo-Cazurra & Li, 2020). Because of their direct alliance with politicians and state agencies, SOEs can benefit from a superior ability in overcoming institutional vacuums, especially with regard to the uncertainties surrounding law enforcement in the adjudication of contractual disputes or unclarity (Luo et al., 2010; Tavares & Lehmann, 2017). Furthermore, given their political networks and exposure to foreign institutions, governments can enable firms to obtain information and establish relations that are unavailable to private firms and can also act as diplomats with regard to investments made externally (Benito et al., 2016; Cuervo-Cazurra et al., 2014) and reduce expropriation risks that they might face abroad (Knutsen et al., 2011). SOEs therefore benefit from privileged relationships with the government that facilitate their transactions and operations (Pan, Teng, Supapol, Lu, Huang, & Wang, 2014). The existing connections, alliances, and coordination capabilities that the government has already established can have a significant impact on facilitating international investments (Ramasamy et al., 2012).

SOEs in the region are therefore not only able to overcome deficiencies in the financial markets, but can also benefit firms with their political and legal power, political connections and support, privileged access to diplomatic apparatuses, and information about foreign markets, bilateral trade, and investment negotiations (Knutsen et al., 2011; Lawton & Rajwani, 2011).The government can thus be perceived as a strategic investor that addresses the MENA's significant institutional voids and supports firms' internationalization strategies. The impact of government ownership is therefore expected to become stronger in a positive direction as institutional voids increase in magnitude. Hence:

Hypothesis 2: The relationship between government ownership and firm internationalization from the MENA region becomes stronger when financial and legal institutions are weak.

3.2.5. Governance Infrastructure and Political Institutions in the MENA

Recent research on firm internationalization highlights the role of governance infrastructure and political institutions in driving FDI (Delios & Henisz, 2003; Globerman & Shapiro, 2003) by essentially reducing the market's risk and uncertainty (North; 1990; Williamson, 2000). Scholars have therefore investigated the impact of risk and uncertainty based upon the conflation of a range of factors such as levels of corruption (Rodriguez, Uhlenbruck, & Eden, 2005; Uhlenbruck, Rodriguez, Doh, & Eden, 2006), political constraints, and political turmoil (Globerman & Shapiro, 2003; Delios & Henisz, 2003; Henisz, 2000). Risk and uncertainty in the institutional environment are important factors to consider when examining internationalization prospects as they increase the legitimacy concerns of foreign investors and the unpredictability of organizational strategies (Miller, 1992) as perceived by the host country. In emerging markets in particular, firms experience higher levels of risk and uncertainty due to weak and unstable institutional configurations that play a

crucial role in their internationalization prospects (Henisz & Delios, 2001; Meyer & Nguyen, 2005). The institutional environment of such economies can accordingly be described as an external source of risk and uncertainty associated with investments in the host country (López-Duarte & Vidal-Suárez, 2010; Delios & Henisz, 2003; Henisz & Delios, 2002; Xu & Shenkar, 2002). The MENA region has been well-known for its weighty levels of corruption and political constraints on business activities. Moreover, the subsequent eruption of revolutions against corruption and tyranny have produced a wave of political turmoil across the MENA countries (Malik & Awadallah, 2013). Accordingly, appraisals of the severe corruption, political turbulence, and political constraints distinguishing the region can assume significant importance in the face of instability across institutional domains and are expected to be critical factors for outward FDI.

MENA countries generally suffer from severe institutional voids leading to critical organizational deficiencies (Gao, Zuzul, Jones, & Khanna, 2017). This seems to indicate that governance voids in the region in terms of institutional rules and their enforcement lead to higher rates of corruption, constraints, instability, and ambiguity (Aguilera, Marano, & Haxhi, 2019). As such, governance averages of MENA countries – particularly control of corruption and political stability – are below the world's governance average, including those in emerging economies (World Bank, 2019). The region is also marked by having the lowest scores of political constraints worldwide, indicating significant political constraints or low political democracy (Henisz, 2002). The MENA, therefore, is an area with unique taxonomies, profoundly weak governance infrastructure, and an extremely perilous political institutional setting. The region has remained the most politically unstable region since 2010 when the Arab Spring started spreading across countries as a revolt against government corruption and tyranny. It therefore ranks lower than other

emerging countries in terms of FDI due to high risks, instability, and uncertainty associated with its markets (Chan & Gemayel, 2004; Demirbag et al., 2011; Henisz, 2002).

We therefore investigate the impact of corruption, political stability, and political constraints on SOEs' internationalization from the MENA. We mainly argue that while the government ownership can address institutional voids locally, weak governance infrastructure and political institutions mitigate such advantages internationally by raising risk and legitimacy concerns for the host country. We distinguish between legal institutions and corruption whereby the first captures the quality of contract enforcement and property rights while the second measures the perceptions to which public power is used for private gains. While the government can compensate for the absence of adequate legal infrastructure and support firms by an adjudicating authority, it is nevertheless likely to be perceived as highly embedded in national contexts and conforming to local practices and norms (Cui & Jiang, 2012). When the latter are marked by corruption, SOEs face great challenges in overcoming perceptions of risk and uncertainty, and their operations become difficult to understand and appreciate from an international perspective. Moreover, while political stability and political constraints are commonly presented conjointly, the MENA region offers a proper context to present how these two constructs coexist differently with one another and might have varying implications on firms. First, while political stability captures changes related primarily to political regimes, political constraints measure policy changes. Second, while the rest of the world displays a positive correlation between political stability and political constraints, it is negative for MENA countries (see Table I). As opposed to OECD countries, for instance, when political stability is high (high score), political constraints are also high (low score i.e., low political democracy) in the region. While political stability is commonly linked with democratic regimes, the MENA does not seem to abide by this norm. Given

this peculiarity in the region, we investigate these two constructs separately as we expect that they each have different implications.

Insert Table I about here

3.2.6. The Impact of Corruption on Government Ownership and Firm Internationalization from the MENA

In emerging markets, corruption is considered to be an important governance factor in market entry strategies and entry mode decisions (Rodriguez et al., 2005; Uhlenbruck et al., 2006). High levels of corruption are found to deteriorate economic growth (Shleifer & Vishny, 1993) and constrain the development of fair and efficient markets (Boatright, 2000). When corruption is widespread, firms are more likely to comply to corrupt practices, raising concerns of policy distortion, transparency, reliability, and uncertainty throughout the economy (Uhlenbruck et al., 2006). Moreover, corruption reduces confidence in the state's ability and willingness to protect property rights, jeopardizing trust in governments and intensifying market uncertainty and risk (Pearce, 2001, Rose-Ackerman, 2001). Uncorrupt institutions, however, evidence the investing country's efficient and trustful market conditions and are expected to enhance market transactions by essentially reducing risk and uncertainty and subsequently supporting internationalization strategies (Bevan, Estrin, & Meyer, 2004; Globerman & Shapiro, 2003; Rammal & Zurbruegg, 2006). Effective, legitimate, uncorrupted, and accountable governments will have a positive impact on the firms in which they invest compared to those rooted in corruption. Firms operating under weak governance infrastructure essentially manifested by high levels of corruption in their home country are perceived by their hosts as unreliable and unpredictable and will thus be less likely to engage in international diversification.

As such, corruption erodes trust in government, impedes investments, and overall, slows down economic growth (World Bank, 2020).

Additionally, an essential dimension to consider between the home and the host country is the administrative distance influencing firms' expansion (Ghemawat, 2001). Within this taxonomy, differences in corruption levels are part of the administrative distance that creates substantial barriers for foreign investment (Habib & Zurawicki, 2002). Dissimilarities in institutional conditions between the home and the host country may create substantive concerns for the host country and conflicting sets of institutional pressures (Kostova & Roth, 2002; Rosenzweig & Singh, 1991; Westney, 1993; Xu & Shenkar, 2002). Countries with low corruption rates may find it problematic to host firms from weaker institutional settings. Firms operating in an environment embedded in corruption tend to conform to their institutional environment in an attempt to reduce variability and may eventually engage in less transparent transactions (Xu & Shenkar, 2002). Administrative distance resulting from different corruption levels between the home and the host country therefore raises legitimacy concerns for the host countries and diminishes chances for firms' internationalization. In effect, the greater the administrative distance, the greater the level of risk and uncertainty, and consequently, the greater the level of complexity faced by the internationalizing firm (Kostova & Zaheer, 1999). A firm's dependence on local constituents emphasizes its response to national institutional pressures (Kostova & Roth, 2002). As such, SOEs are less likely to resist normative pressures in conforming to local administrative practices (Cui & Jiang, 2002), which increases the host country's legitimacy concerns and perceptions of risk and uncertainty, and consequently impairs internationalization prospects.

Countries in the MENA region rank among the lowest in terms of governance quality in general and the highest in terms of corruption rates in particular (World Bank, 2019), which was

found to have a negative impact on outward FDI from the region (Kobeissi, 2005). The outbreak of the Arab Spring in late 2010 emphasized the largely widespread corruption and absence of governance infrastructure that led to the implementations of policies serving interest groups and government agencies at the expense of firms and the public at large. The region's weighty corruption rate is therefore believed to mitigate its firms' ability to internationalize as a result of the increased concerns of the legitimacy and accountability of government involvement in firms, especially as the government itself is the governing body sought to protect the public interests rather than private gains. While we argue that the government presents several advantages for international diversification, specifically by addressing market voids, we add that this positive relationship is further strengthened when governments are entrenched in a strong and uncorrupted governance infrastructure that promotes attractive and reliable investment conditions for the host country. An effective domestic governance infrastructure established on a premise of anti-corruption creates a favorable business environment and encourages capital outflows by successful domestic firms (Globerman & Shapiro, 2002). As important as credit and liquidity as well as the affiliation with a political power are for firms in the MENA, operating under an efficient and uncorrupted governance infrastructure is equally important. National constituents marked by corruption will mitigate the advantages of credit access and political connections that favor SOEs' investments amid the MENA's capital and legal market deficiencies. Because state ownership indicates high levels of dependence on the home-country government, the affiliation with national constituents that are marked by high levels of corruption can raise foreign suspicions on SOEs as having political goals that do not necessarily benefit the commercial interests of the firm (Chen & Young, 2010; Zou & Adams, 2008). We argue, therefore, that governance infrastructure rooted in high levels of corruption creates unfavorable and unreliable market conditions

for SOEs to internationalize. The impact of government ownership is thus expected to become stronger in a negative direction as corruption level increases in magnitude. Hence:

Hypothesis 3: The relationship between government ownership and firm internationalization from the MENA region becomes weaker when corruption is high.

3.2.7. The Impact of Political Instability on Government Ownership and Firm Internationalization from the MENA

A politically turbulent and unstable environment is defined as a setting predominated by confusion, disorganized change, and in extreme cases, dramatic events such as war, violence, and regime shifts. Political turmoil accordingly enables an environment weighted by risk and uncertainty in predicting firm behavior (Meyer, 2001; Santangelo & Meyer, 2011) essentially due to impaired macroeconomic performance.

Political instability and turbulence deter macroeconomic conditions and performance by reducing economic growth (Alesina, Özler, Roubini, & Swagel 1996; Aisen & Veiga, 2013) and increasing inflation volatility (Aisen & Veiga, 2008). Under such hazardous circumstances and macroeconomic deterrents, the risk and uncertainty stemming from political disorder are likely to reduce investment opportunities and deter internationalization prospects (Alesina & Perotti, 1996). Political stability and economic development go together, while conditions of high instability and turbulence obstruct macroeconomic performance in general and prevent organizational learning of firms in particular (Demirbag et al., 2011; Zaheer, 1995). As long as the market has a reputation for risk and uncertainty due to political turmoil, local institutions obstructing economic development will impede the possibility of firms competing proficiently and successfully in market-based economic ecosystems (Child & Markoczy, 1993). When macroeconomic factors are fragile and volatile, firm-specific advantages are mitigated, hindering internationalization prospects.

Moreover, political turbulence may generate inconsistency in the requirements of different institutions between the home and the host country, increasing legitimacy concerns (Meyer, 2001). Sizeable differences in macroeconomic performance increase the perceived unfamiliarity, uncertainty, and risk by the host country (Demirbag et al., 2011; Gaur & Lu, 2007). Discrepancies in macroeconomic performance are therefore a reflection of differences in terms of market stability and supporting institutions between home and host countries (Kane, Holmes, & O'Grady, 2007; Meyer, Wright, & Pruthi, 2009), which can significantly obstruct internationalization strategies. Furthermore, when macroeconomic performance is weak, taxes, government expenditures, and procedures are substituted for personal choice, voluntary exchange, and market coordination that support local businesses over international projects (Arregle et al., 2013). In other words, political instability leading to poor macroeconomic performance emphasizes the potential of the government to go after its own local political and social goals (Demirbag et al., 2011; Gwartney & Lawson, 2003) rather than investing in international projects.

Political turbulence, shocks, and instabilities have increased the risks for investments from emerging economies and negatively impacted outward FDI (Hoskisson et al., 2000). The MENA is distinguished from the rest of the emerging economies by its extreme and ongoing political turmoil and disorder, attracting scandalous and sensationalist media attention worldwide. The region has also witnessed significant regime changes since the Arab Spring in late 2010, followed by riots and violence. Research from the region indicates that the main deterrent of FDI was not pure risk itself, but the risk from political instability, which is paramount in determining the volatility of returns in MENA countries with their high levels of political turbulence (Chan & Gemayel, 2004). While the government can act as a strategic investor by compensating the firm with valuable resources for internationalization projects, political turbulence and instability lead

to low levels of economic development that can obstruct this advantage. Discrepancies in market institutions and economic infrastructure between the host and the home country therefore restrict the governments' expenditures locally rather than internationally. We argue, therefore, that political instability discourages SOEs' motives to invest abroad by deterring macroeconomic conditions and creating unfavorable and risky conditions for their operations with their hosts. The impact of government ownership is therefore expected to become stronger in a negative direction as political instability increases in magnitude. Hence:

Hypothesis 4: The relationship between government ownership and firm internationalization from the MENA region becomes weaker when political instability is high.

3.2.8. The Impact of Political Constraints on Government Ownership and Firm Internationalization from the MENA

Political constraints reflect how entities in society, specifically organizations, are governed (Gaur, Delios, & Singh, 2007). Extensive governmental regulations thus impose constraints on firms' strategies and on their ability to invest abroad by nurturing market risk and uncertainty primarily due to tyrannical control and increased transaction costs.

Political constraints are seen in the unilateral use of power, unlikely changes in policy, and policy changes without proper checks and balances or input from the public, creating an environment weighed down by uncertainty and risk with regard to firm strategies (Busse & Hefeker, 2007; Harms & Ursprung, 2002; Jensen, 2003). Political constraints also translate into low levels of political democracy and sudden policy changes, proven to negatively impact firm internationalization due to autocratic control, increase perversion, reduce transparency, and impair stability (Globerman & Shapiro, 2003; Orr & Scott, 2008). The state's power monopoly over legal coercion and its implicit presence in every economic transaction raises a threat to firms either through shifts in taxation and

regulation or through outright expropriation (Delios & Henisz, 2000; Henisz, 2000). In countries in which policy-makers can act unilaterally and are supported by allied legislatures and judicial branches, future policies are likely to be volatile and uncertain, creating unreliable and unpredictable investment conditions for firms (Blanton & Blanton, 2007; Henisz, 2008; Henisz & Delios, 2001), especially when policy-makers are part of the firm. When a firm is uncertain about future regulations, rates of taxation, or even monetary and fiscal policies, it is less likely to make long-term capital investments (Habib & Zurawicki, 2002; Henisz, 2002) and cross-border investment (Guillén, 2003).

Moreover, constraints resulting from extensive political control can cause substantive increases in transactions costs and decreases in efficiency (Brouthers, 2002; Yiu & Makino, 2002) due to bureaucratic practices and unclear regulatory frameworks, which can consequently obstruct internationalization opportunities. As such, firms operating under low political democracy face greater legitimacy concerns and therefore experience higher transaction costs in drafting acceptable contracts with their host, hiring experienced agents for effective business negotiations, monitoring foreign business activities, and developing measures to provide flexible exit plans (Arregle et al., 2013; Brouthers, 2002; Luo, 2005). Firms operating under autocratic regimes limiting economic activities and investment flows are, as a result, indicators of institutions' immaturity and consequently impede internationalization chances due the reduced incentives and means to internationalize, the increased transaction costs of doing business abroad, and the substantial levels of risk and uncertainty created for firms expanding to a new environment (Arslan, Tarba, & Larimo, 2015; Child, Chung, & Davies, 2003; Meyer & Nguyen, 2005).

The extensive political constraints exercised by MENA governments have been considerably noticeable since the 1960s as state-led growth policies were adopted across the region. Governments' resistance to liberalizing markets and adopting pro-market commercial

reforms as their state-led models started failing in the 1980s had detrimental consequences on MENA firms' international expansion and competitiveness. Despite the recent reforms implemented, political constraints on businesses continue to limit their international diversification. While SOEs may be able to overcome capital constraints and legal deficiencies caused by the region's significant institutional voids, they might, however, suffer from substantial government resistance to policy changes. More precisely, while governments can be advantageous in overcoming deficiencies in legal enforcement, the region's unstable political systems condition such advantages to democratic states. Rigid state policies can be a means for cronyism in return for the government's subsidies and protection for firms (Haber, 2002), deterring their possibilities for international diversification. Accordingly, we argue that the positive impact of government ownership on firm internationalization from the MENA is mitigated by significant political constraints. The impact of government ownership is therefore expected to become stronger in a negative direction as political constraints increase in magnitude. Hence:

Hypothesis 5: The relationship between government ownership and firm internationalization from the MENA region becomes weaker when political constraints are high.

3.2.9. The Impact of Government Ownership on Firm Internationalization Scope within the MENA

The geographic scope of internationalization projects is a critical dimension to consider when examining firm diversification strategies. Recent studies emphasize the importance of institutional characteristics of regions and countries within regions in impacting the location choice of internationalizing firms (Kreinin & Plummer, 2008; Oxelheim & Ghauri, 2004). Focusing on country-level institutions and disregarding the general (i.e. average) characteristics of the regional environment of countries may not fully or accurately capture firms' strategic choices and practices

(Ghemawat, 2003; Rugman & Verbeke, 2004). The degree of firm internationalization is thus influenced by both the country- and region- level institutional environment (Arregle et al., 2013). While internationalization is often fraught by ambiguity, fungibility is critical in enabling firms with flexibility and discretion in successfully effecting strategies and ensuring growth while minimizing costs (Sapienza, Autio, George, & Zahra, 2006). As such, firms diversifying regionally may benefit from regional fungibility and experience more responsiveness from the host country.

The general institutional environment of a region establishes the boundaries of FDI opportunities within this region. It is therefore vital for firms to consider the general regional institutional environment when making location decisions because regional characteristics are likely to influence the internationalization prospects in a country located in the region (Arregle et al., 2013). The legitimacy concerns that foreign investors face due to institutional differences between the home and the host country are particularly exaggerated for government investors. This is not only because SOMNCs are seen as foreign investors that are not well embedded in the host country's environment (Zaheer, 2995), but also because they are considered agents of a foreign government and are deemed less trustworthy (Cui & Jiang, 2012). The political agenda of the government cannot be ignored and SOEs can be perceived by the host country not solely as business entities but also as political actors that can be in conflict with business interests and distort business competition in the host country (Globerman & Shapiro, 2009; He & Lyles, 2008; Zhang, Zhou, & Ebbers, 2011). The political image associated with government ownership is therefore likely to stimulate political and legitimacy concerns, and thus provoke negative reactions from the public in the host country. This is because host countries are concerned with the ramifications resulting from ideological, institutional, and political differences with the investing home country (Cui & Jiang, 2012). Because of the MENA's weak institutional and governance infrastructure, as well as

its precarious political environment, legitimacy concerns might be higher, particularly in host countries with more developed institutions. Because of their geographic and institutional proximity, investors from countries within a region overcome the liability of foreignness associated with foreign investments and market factors that increase transaction costs and institutional pressures that make it challenging for investors to understand and adapt to foreign practices (Johanson & Vahlne, 2009). Moreover, given the similarities in national constituents and institutions among MENA countries, negotiations aimed at attaining legitimacy and establishing an external positive image of the investing firm become relatively easier due to the similar political settings between countries (Cui & Jiang, 2012; Kostova, Roth, & Dacin, 2008). We therefore argue that SOEs in MENA countries are more likely to pursue internationalization projects within the MENA region. Hence:

Hypothesis 6: Government ownership has a positive effect on firm internationalization scope within the MENA region.

3.2.10. The Impact of Region-Relative Institutional Development on Government Ownership and Firm Internationalization Scope within the MENA

Differences between institutional environments have been proven to have varying impacts on firms' strategies and operations (Arregle et al., 2013). As such, adapting to and replicating business activities and operations in foreign countries can be challenging because of the need to develop specific approaches to deal with the idiosyncrasies and characteristics of foreign markets (Kumar, 2009).

SOEs rely on their affiliation with the government to obtain advantages and valuable resources in their home markets (Rugman & Li, 2007) and consequently receive preferential support for their internationalization projects (Child & Rodrigues, 2005; Yamakawa et al., 2008). However, the firm's reliance on national constituents – in this case, the state – makes the perceived

salience of institutional pressure on firms higher (Kostova & Roth, 2002). Firms are less likely to resist local normative pressures when they are affiliated with and dependent on the national body that exerts those pressures (Pfeffer & Salancik, 1978). State ownership therefore increases the firm's tendency to conform to national institutions and reluctance to adapt to foreign market conditions, eventually impairing the success of internationalization projects.

The MENA's underdeveloped institutions shape the nature of SOEs' response to institutional voids as well as the ways firms operate and execute their economic transactions. SOEs in the MENA rely on governmental resources and connections in order to support their international diversification. The region's underdeveloped financial and legal markets emphasize the role of the government in business strategies and operations by essentially overcoming and filling institutional voids. More developed economies, however, rely on their efficient institutions and oppose government ownership and involvement in firm activities (Globerman & Shapiro, 2009; Meyer et al., 2014; Nyland, Forbes-Mewett, & Thomson, 2011; Zhang et al., 2011). When the levels of institutional development differ between the home and the host country, normative pressures to conform to the host country's national setting and ways of doing business become higher, which can pose great challenges to the investing firms (Luo & Rui, 2009; Peng, Wang, & Jiang, 2008). While state affiliation benefits firms locally, it does not exempt them from institutional pressures with the host country and even impacts firms' responses to these pressures.

Furthermore, state ownership is commonly associated with bureaucratic practices and inefficiencies (Dharwadkar, George, & Brandes, 2000). The state's inefficient and bureaucratic image might raise concerns about the viability of its legitimate mechanisms (Cui & Jiang, 2012), specifically in the MENA context where corruption levels are elevated, raising concerns about organizational practices and transparency. These legitimacy concerns manifest themselves particularly in host

countries marked by efficient institutions supporting businesses. The region's ongoing political turmoil and severe political constraints also make it challenging for SOEs to be appreciated from a foreign perspective (Wei & Nguyen, 2017; Zhang et al., 2011). Consequently, perceptions of risk and uncertainty stemming from the region's political environment might be particularly higher for host countries that do not share similar institutional settings (Buckley et al., 2007; Knutsen et al., 2011; Ramasamy et al., 2012).

SOEs investing in the MENA region might, however, find it easier to attain host-country legitimacy due to similarities between local constituents. SOEs investing in a country within the MENA region might thus be subject to fewer normative pressures and legitimacy concerns due to institutional proximity and similarities between the home and the host country (Kostova et al., 2008; Meyer et al., 2014). Countries in the MENA region share – to a relatively small degree of variation – similar levels of institutional development, despite the continuous efforts of some countries to further strengthen their institutions. SOEs therefore are more likely to undergo internationalization projects within the MENA region than globally because of institutional similarities that reduce the liability of foreignness in the host country. A firm operating in an institutional environment that is relatively similar to that of the region to which it belongs is more likely to internationalize within this region. The impact of government ownership is therefore expected to become stronger in a positive direction as region-relative institutional development increases in magnitude, or in other words, when a country's institutional environment is similar to that of the MENA region. Hence:

> *Hypothesis 7: The relationship between government ownership and firm internationalization scope within the MENA region becomes stronger when region-relative institutional development is high.*

3.3. Data Description and Methodology

3.3.1. Data Collection and Sample

We used the Thomson Reuters Eikon database to obtain a list of all the publicly listed firms in the MENA region from 2010 to 2017. Our sample was initially constituted of 1244 firms. After dropping inactive firms and firms without any ownership data, the sample was eventually composed of 1215 publicly listed firms between 2010 and 2017 from Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Qatar, Morocco, Saudi Arabia, Tunisia, and the United Arab Emirates. We also relied on the Thomson Reuters Eikon database to collect ownership data since it was the database with the most extensive ultimate ownership data from the MENA region[4]. While the MENA region includes more countries, ownership data of publicly listed firms in the region was only available for these eleven MENA countries on Thomson Reuters Eikon when we started our study. Since the Thomson Reuters Eikon's regional grouping of the MENA only consisted of these eleven countries, our investigation was limited to them. We thus obtained data on ownership percentage and owners' identity from which we identified whether the final largest owner is the government and calculated its ultimate ownership percentage. It is worth noting that ownership belonging to sovereign wealth funds (SWFs) was classified separately and did not count as part of our government ownership measure.

We relied on FDI data from the Financial Times' fDi market database for our internationalization variables (Albino-Pimentel, Dussauge, & Shaver, 2018; Anderson & Sutherland, 2015; Paniagua & Sapena, 2014; Paniagua, Figueiredo, & Sapena, 2015). Accordingly, we calculated the total number of internationalization projects conducted annually

[4] Ownership data was initially collected and compiled over 18 spreadsheets. The base dataset consisted of the main companies selected for further research into their ownership chains. Each sheet was tested for structural similarity and data was then compiled into a single sheet (master set).

by each firm and differentiated between internationalization projects located in countries within and outside the MENA in order to calculate the internationalization scope within the MENA region. Institutional variables were collected from various sources. We consulted the Global Competitive Index from the World Economic Forum and found estimates measuring the development of financial institutions and legal institutions. The estimates of corruption and political stability were obtained from the World Bank's World Development Indicators (WDI) database. Political constraints 3 and 5 were retrieved from Henisz (2002)'s dataset. We also relied on the Bureau van Dijk (BvD) major sector classification to obtain industry classification of firms. The constructs firm age and firm size (based on firm's total assets), foreign subsidiaries, and the performance measure return on assets (ROA) were also obtained from the BvD. Finally, GDP per capita and GDP growth were obtained from the World Bank WDI database.

3.3.2. Measurements

Internationalization Measures: We use the *total number of internationalization projects* measuring the total number of FDI projects conducted from the MENA region as our first outcome variable (Anderson & Sutherland, 2015; Paniagua & Sapena, 2014; Paniagua, Figueiredo & Sapena, 2015) in order to test hypotheses 1, 2, 3, 4, and 5. We then use *internationalization scope within the MENA* as our second outcome variable in order to test hypotheses 6 and 7. Following a similar approach to that used by Arregle et al. (2013), Mariotti & Marzano (2019) and Oesterle, Richta, & Fisch (2013), we measure internationalization scope within the MENA region as the ratio of internationalization projects conducted within the MENA region over the total number of internationalization projects conducted by the firm.

Explanatory Variables: The explanatory variable used to test our hypotheses is *government ownership* and is measured through (1): a continuous variable indicating the *percentage of*

ownership held by the final largest state investor, and (2): a *dummy* variable indicating whether the final largest investor is the state. We follow Thomsen & Pedersen (2000) choice of ownership variables in which ownership percentage was specifically for the largest owner and the owner type was a categorical variable.

Moderators: We introduce a set of *interactions* between the *government ownership* explanatory variable and the moderators at the country-level: legal development, financial market development, control of corruption, political stability, and political constraints in order to test hypotheses 2, 3, 4, and 5 respectively.

The *legal development* variable measures the effectiveness of judiciary and enforceability of contracts. The *financial market development* variable measures the development of financial markets defined as the factors, policies, and the institutions that lead to efficient intermediation and effective financial markets. The institutional voids theory suggests that institutional voids do not impact all firms equally (Khanna & Palepu, 1997; 2000). Institutional voids are best considered to be moderating variables (Carney et al., 2011). We thus focus on the two types that the government can essentially address: legal and financial institutional voids (Cuervo-Cazurra & Li, 2020; Wei et al., 2015).

Control of corruption measures the extent of exercising public power for private gain. We refer to high levels of corruption throughout this study, which is captured by low levels of control of corruption. *Political stability* measures the likelihood of political instability and/or politically motivated violence, including terrorism. These two governance infrastructure indicators were shown be crucial determinants for outward FDI (Globerman & Shapiro, 2002). *Political constraints 3*[5] and *political constraints 5*[6] both measure the feasibility of policy change. In other

[5] The Political constraints 3 index is composed from the following information: the number of independent branches of government with veto power over policy change, the extent of party alignment across branches of government, the extent of preference heterogeneity within each legislative branch.
[6] The Political constraints 5 also includes two additional veto points: the judiciary and sub-federal entities.

words, both indexes measure the extent to which a change in the preferences of any one political actor leads to a change in government policy. Political constraints 5 follows the same logic as political constraints 3 but aggregates two additional measurements. Low scores for both indicate significant political constraints i.e., low political democracy, while high scores indicate low political constraints i.e., high political democracy. Political constraints were found to mitigate internationalization prospects (Arregle et al., 2013).

We also introduce a set of *interactions* between the *government ownership* explanatory variable and the moderators at the region-level: *Region-relative legal institutional development, region-relative financial market institutional development, region-relative control of corruption level, region-relative political instability level, and region-relative political constraints (3 & 5) level* in order to test hypothesis 7. For our *region-relative institutional development* variables, we calculate the weighted average score of each variable per year of all MENA countries[7] for the financial market development, legal development, control of corruption, political stability, and political constraints variables. We then calculate the difference between the country-level measure of each variable per year in our dataset and its weighted average score at region-level. Following Arregle et al., 2013, we use this regional measure to capture the general institutional environment of the MENA region and the similarities between the institutional environment of a country and that of the region to which it belongs. A low score of the region-relative institutional development measure reveals a country's similar institutional setting relative to that of the region to which it belongs, and thus a high region-relative institutional development. For instance, if country X has an institutional development score of 8 and the MENA's institutional development is 10, the

[7] While our sample is constituted of 11 MENA countries due to data limitations, we follow the World Bank's classification of MENA countries (Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, and Yemen) in order to categorize countries as within the MENA region.

region-relative institutional development is -2. If country Y has an institutional development score of 6, the region-relative institutional development would be -4. Country X therefore has a higher region-relative institutional development than country Y.

Control Variables: Our control variables include final ownership percentage, ownership chain length, return on assets (ROA), log of firm assets, log of firm age, foreign subsidiaries, GDP per capita, GDP growth, and 19 industry dummies.

We use *final ownership percentage* as a control variable as most studies do when investigating the antecedents of firm international diversification (Alessandri & Seth, 2014; Singla, Veliyath, & George, 2014; Zhou & Guillén, 2015). It is computed through the percentage of ownership held by the final largest investor (Faccio & Lang, 2001). An additional measure of ownership concentration controls for the *chain length,* which is the length of the sequence of investors, each of which has control to a certain extent over the next one, until reaching the end of the ownership chain of each firm. We control for these proxies because on the one hand, managers may choose to invest abroad to pursue their own interests rather than those of the shareholders (Jensen & Meckling, 1976), and on the other hand, block-holdings and complex ownership structures can have substantive implications on firm outcomes (Claessens, Djankov, & Lang, 2000). We also use *ROA* defined as the net income before interest, taxes, and depreciation over the book value of total assets to control for firm performance (Alessandri & Seth, 2014; Singla et al., 2014; Sanders & Carpenter, 1998; Zhou & Guillén, 2015). *Log(assets)* is a proxy for firm size and is computed as the natural logarithm of the firm's total assets. Firm size can have a significant impact on ownership and on internationalization. Firm size for instance indicates a firm's ability to make resource commitments in outward FDI (Agarwal & Ramaswami, 1992). *Log(age)* is a proxy for firm age and is computed as the natural logarithm of the number of years since the firm was incorporated. Firm

age is also an important determinant of firm internationalization. Older firms are considered to be more experienced and hence benefit from additional competitive advantages. These firms, however, can also suffer from inflexibility and an inability to adapt to market changes and competitive pressures (Douma, George, & Kabir 2006). Log(assets) and log(age) are proxies used in most studies investigating government ownership and internationalization (Arregle et al., 2013; Cui & Jiang, 2012; Oesterle et al., 2013).

We also use *foreign subsidiaries* as an additional control variable at firm-level, calculated as the firm's total number of foreign subsidiaries. Inspired by the construct "country spread" introduced by Delios & Henisz (2003), we use this control to account for firm's existing international exposure. Firms with existing international operations profit from decreased costs of bargaining power and are thereby likely to face fewer entry barriers into the host country.

At the country-level, we control for *GDP per capita* and *GDP growth*. GDP per capita breaks down a country's economic output per person and is calculated by dividing the GDP of a country by its population. GDP growth measures the output of a nation in which government spending is an essential driver, i.e., the nation's economic growth speed. GDP per capita and GDP growth are common controls in studies investigating state capitalism (Borisova, Brockman, Salas, & Zagorchev, 2012) and corporate governance studies (Arregle et al., 2013; Belenzon, Patacconi, & Zarutskie, 2016; Jia & Mayer, 2017).

Further control variables include the 19 industries available in our dataset. We control for the *industry effect* using industry dummies (Thomsen & Pedersen, 2000). The effect of ownership structure is influenced by industry effects (Thomsen & Pedersen, 1998) and should therefore be controlled for. The corresponding description of each variable is presented in Table 1 below.

Insert Table 1 about here

3.3.3. Analysis

To examine the impact of government ownership on firm internationalization, we used a random effects (RE) model with standard errors clustered on firm-level. We did not use a fixed effects (FE) model because there is little variation within firms in terms of state ownership, especially for dummy variables. For further validation of the choice of our econometric model, we also conducted the Hausman test, which suggested that the random effects (RE) model is a better fit than the fixed effects (FE) model to test our dataset.

We address the issue of endogeneity that could bias our results by using the instrumental variables two-stage least squares (IV-2SLS) methodology. Endogeneity occurs when a variable, observed or unobserved, that is not included in our model, is related to an explanatory variable and the outcome variable. Although it is generally difficult to completely resolve the endogeneity problem completely, we try to address this concern by (1) introducing adequate control variables and (2) using instrumental variable methods (Cui & Jiang, 2012; Desender et al., 2016). A valid instrument must be highly correlated with the instrumented regressor and orthogonal with the error term. Following Liu, Miletkov, Wei & Yang (2015) and Li, Lu & Mittoo (2015), we use the average value of percentage of government ownership (excluding SWFs) in the same industry (based on 3-SIC codes) as the instrumental variable.

We also use Propensity Score Matching (PSM) (Imbens & Wooldridge, 2009; Rosenbaum & Rubin, 1983). PSM provides a way to create a counterfactual performance for the purpose of comparison. Specifically, PSM generates a vector score using all covariates for each observation, and then matches it with the closest scoring observation in the respective subset. It then estimates the differences between state and private firm observations for each of the dependent variables.

Since the government ownership variable is a dummy, we use PSM to construct comparisons between the treatment (government = 1) and the control group (government = 0) based on the controls used in our main analysis: final ownership percentage, ownership chain length, ROA, log assets, log age, GDP growth, GDP per capita, foreign subsidiaries, and all industry controls.

3.4. Results

Table 2 provides an overview of the summary statistics of our variables. The descriptive statistics of the performance variables are presented in Panel A, where the mean values for number of internationalization projects and internationalization scope within the MENA are 0.076 and 0.021 respectively. The descriptive statistics of the government ownership variables are presented in Panel B and reveal that 19% of firms in the MENA region have the state as their final largest investor. Among the firms having the state as their final largest investor, 38.27% of the ultimate ownership in the MENA belongs to the government.

Insert Table 2 about here

A correlation matrix including ownership, performance, moderating, and control variables altogether is presented in Table 3. The correlation table suggests that bivariate correlations are unlikely to be a concern, given that all are smaller than 0.7, which Kennedy (2003) indicates as the threshold at which multicollinearity is likely to become problematic. For the exceptions that are higher than 0.7, the corresponding variables would not be included in the same table. Our results for the maximum VIF for each regression are all less than 5 and hence indicate that multicollinearity is unlikely to be an in issue in our analysis.

Insert Table 3 about here

In Table 4, we examine the influence of government ownership on the number of internationalization projects from the MENA region based on RE panel data regressions and IV-2SLS estimations in order to test H1. In Models 1 and 2 of Panel A, the government ownership percentage variable and the government ownership dummy variable are both positive and marginally significant with the number of internationalization projects (coef. = 0.017/0.588, $p<0.10$). Models 3 and 4 of Panel B show similar results where the continuous and the dummy government ownership variables are both positive and significant with the number of internationalization projects (coef. = 0.339/17.462, $p<0.05$). The RE and the IV-2SLS regression results are hence consistent and confirm that government ownership positively impacts firm internationalization from the MENA region, supporting H1.

Insert Table 4 about here

For H2, we examine the moderating effect of legal development and financial market development on the relationship between government ownership and the number of internationalization projects from the MENA in Table 5. In models 1 and 3 of Panel C, we examine the moderating effect of legal development and financial market development respectively using the government ownership percentage variable as the explanatory variable. We find that both moderating effects are negative and significant with the number of internationalization projects (coef. = -0.128/-0.185, $p<0.05$). In models 2 and 4, we examine the moderating effect of legal development and financial market development respectively using the government ownership dummy variable as the explanatory variable. The moderating effects are both negative and marginally significant with the number of

internationalization projects (coef. = -3.087/-5.282, $p<0.10$). These findings suggest that when institutional voids are high, government ownership benefits firm internationalization. Panel D shows more robust results, where the moderating effects with both the continuous and the dummy government ownership variables are all negative and highly significant. The findings of both the RE and the IV-2SLS regressions are hence consistent and confirm that government ownership enhances firm internationalization amid weak financial and legal institutions, supporting H2.

Insert Table 5 about here

In Table 6, we examine the moderating effect of control of corruption on the relationship between government ownership and the number of internationalization projects from the MENA in order to test H3. Models 1 and 2 of Panel E show that the moderating effect of control of corruption on the relationship between the government ownership percentage variable and number of internationalization projects is insignificant, but positive and significant when we use the government ownership dummy variable as the explanatory variable (coef. = 2.396, $p<0.05$). These findings indicate that when control of corruption is low and, accordingly, corruption levels are high, government ownership is detrimental to firm internationalization, whereas when control of corruption is high and corruption levels are low, government ownership enhances firm internationalization. The results of models 3 and 4 of Panel F show that the moderating effect of control of corruption is positive and highly significant with the number of internationalization projects (coef. = 0.699/31.028, $p<0.01$) using the continuous and the dummy government ownership variables respectively as the explanatory variable. The findings of both the RE and the IV-2SLS regressions hence confirm the relationship between government and firm internationalization is stronger amid high levels of control of corruption and weaker amid high levels of corruption, supporting H3.

Insert Table 6 about here

For H4, we examine the moderating effect of political stability on the relationship between government ownership and number of internationalization projects from the MENA, in Table 7. Models 1 and 2 of Panel G show that the results of the moderating effect of political stability on the relationship between the government ownership percentage variable and the number of internationalization projects is insignificant, but positive and marginally significant when we use the government ownership dummy variable as the explanatory variable (coef. = 2.796, $p<0.10$). These findings suggest that when political stability is low, government ownership is detrimental to firm internationalization, while when political stability is high, government ownership enhances firm internationalization. The results in models 3 and 4 of Panel H show that the moderating effect of political stability is positive and highly significant with number internationalization projects (coef. = 0.479/21.818, $p<0.01$) using the continuous and the dummy government ownership variables respectively as the explanatory variable. The findings of both the RE and the IV-2SLS regressions thus confirm that the relationship between government and firm internationalization is stronger amid high political stability and weaker amid high political instability, supporting H4.

Insert Table 7 about here

For H5, we examine the moderating effect of political constraints on the relationship between government ownership and the number of internationalization projects from the MENA, in Table 8. The results of models 1 and 2 of Panel I show that the moderating effect of political constraints 3 on the relationship between government ownership and internationalization projects using the continuous and the dummy government ownership variables respectively are

insignificant. Model 3 shows that the moderating effect of political constraints 5 on the relationship between the government ownership percentage variable and the number of internationalization projects is positive and marginally significant (coef. = 0.287, $p<0.10$). The results in models 4 are positive and significant when we use the government ownership dummy variable as the explanatory variable (coef. = 9.087, $p<0.05$). These findings indicate that when political constraints are high (captured by the variable's low score indicating low political democracy), government ownership is detrimental to firm internationalization, while when political constraints are low (captured by the variable's high score indicating high political democracy), government ownership enhances firm internationalization. Panel J presents more robust results. In models 5 and 6, the moderating effect of political constraints 3 on the relationship between government ownership and number of internationalization projects is positive and highly significant using both the continuous and the dummy government ownership variables (coef. = 0.888/37.624, $p<0.01$). Models 7 and 8 show that the moderating effect of political constrains 5 on the relationship between government ownership and the number of internationalization projects is positive and significant using both the continuous and the dummy government ownership variables (coef. = 0.449/17.721, $p<0.05$). The findings of both the RE and the IV-2SLS regressions thus confirm the relationship between government and firm internationalization is stronger amid low political constraints and weaker amid high political constraints, supporting H5.

Insert Table 8 about here

We then examine the influence of government ownership on internationalization scope within the MENA region based on RE panel data regressions and IV-2SLS estimations in Table 9 in order to test H6. In model 1 of Panel K, the government ownership percentage variable is positive

and marginally significant with internationalization scope within the MENA (coef. = 0.025, $p<0.10$). Model 2 shows that the government ownership dummy variable is positive and significant with internationalization scope within the MENA (coef. = 1.163, $p<0.05$). Models 3 and 4 of Panel L show similar results where the continuous and the dummy government ownership variables are both positive and significant with internationalization scope within the MENA (coef. = 0.070/3.605, $p<0.05$). The RE and the IV-2SLS regression results are hence consistent and confirm that government ownership positively impacts internationalization scope within the MENA region, supporting H6.

Insert Table 9 about here

For H7, we examine the moderating effect of region-relative institutional development constructs on the relationship between government ownership and internationalization scope within the MENA region. In Panel M of Table 10, we find that the moderating effect of region-relative legal development is negative and marginally significant with internationalization scope within the MENA using the continuous (model 1) and the dummy (model 2) government ownership variables respectively as the explanatory variables (coef. = -0.033/-1.447, $p<0.10$). The moderating effect of region-relative financial market development is negative and significant with internationalization scope within the MENA using the continuous (model 3) and the dummy (model 4) government ownership variables respectively as the explanatory variables (coef. = -0.051/-2.196, $p<0.05$). Panel N shows more robust results, where the moderating effects with both the continuous and the dummy government ownership variables are all negative and highly significant.

Insert Table 10 about here

In Panel S of Table 11, models 1 and 2 show that the moderating effect of region-relative control of corruption is insignificant when we use the government ownership percentage variable as the explanatory variable but negative and significant with internationalization scope within the MENA when we use the government ownership dummy variable as the explanatory variable (coef. = -2.711, $p<0.05$). Models 3 and 4 also show that the moderating effect of region-relative political stability is insignificant using the government ownership percentage variable as the explanatory variable but negative and significant with internationalization scope within the MENA when we use the government ownership dummy variable as the explanatory variable (coef. = -1.537, $p<0.05$). The results in Panel T are more robust, where the moderating effects with both the continuous and the dummy government ownership variables are all negative and highly significant.

Insert Table 11 about here

In Panel U of Table 12, the moderating effect of region-relative political constraints 3 and 5 respectively using the government ownership percentage variable as the explanatory variable is insignificant (models 1 and 3). In models 2 and 4, however, the moderating effect of region-relative political constraints 3 and 5 respectively using the government ownership dummy variable as the explanatory variable is negative and marginally significant (coef. = -3.768/-2.859, $p<0.10$) with internationalization scope within the MENA. The results in Panel V are partially consistent, where the moderating effect of region-relative political constraints 3 in models 5 and 6 for the continuous and the dummy government ownership variables respectively is negative and significant (coef. = -0.179/-7.131, $p<0.05$) with internationalization scope within the MENA.

The results of the moderating effect of region-relative political constraints 5 in models 7 and 8 are, however, insignificant.

Insert Table 12 about here

These findings indicate the relationship between government ownership and internationalization scope within the MENA becomes stronger when a country's institutional environment is similar to that of the region in which the firm exists. The results hence support H7, that the positive impact of government ownership on firm internationalization scope within the MENA becomes stronger when the region-relative institutional development increases in magnitude (captured by the variable's low score indicating institutional similarities between the country's institutional development and the region's institutional development), or in other words, when a country's institutional environment is similar to that of the MENA region.

The results of the PSM are presented in Table 13. Rows 1, 3, 5, 7, 9, 11, and 13 use number of internationalization projects as the dependent variable while rows 2, 4, 6, 8, 10, 12, and 14 use internationalization within the MENA as the dependent variable. Rows 1 and 2 indicate that government ownership positively impacts firm internationalization in terms of the number of projects and scope within the MENA. The results in rows 3 and 5 indicate that government ownership positively impacts the number of internationalization projects when legal development and financial market development respectively are low. The results in rows 7 and 9 suggest that high levels of control of corruption and political stability respectively positively impact the relationship between government ownership and the number of internationalization projects. While the results in row 11 are insignificant, those in row 13 indicate that government ownership positively impacts the relationship between government ownership and number of

internationalization projects when political constraints are low (captured by the variable's high score indicating high political democracy). The results of rows 4, 6, 8, 10, and 14 all show that high region-relative institutional development – indicating that there is little variation between a country's institutional development and that of the region in which it exists (captured by the variable's low score) – positively impacts the relationship between government ownership and internationalization scope within the MENA.

Insert Table 13 about here

3.5. Robustness Checks and Post-Hoc Analysis

We conducted several robustness checks: First, we used winsorized regressions, wherein the left and the right winsorized values are within the 1st and 99th percentile of the two internationalization variables and then of all the variables used in our analysis. Second, we added the lagged values of the outcome variables by one year and then by two years as additional explanatory variables. Third, we separately added three sets of additional controls: (1) firm country dummy variable, (2) ratio of debt over total assets, ratio of R&D over total sales, and ratio of receivables and inventories over total assets, and (3) family ownership dummy and block ownership dummy. The second set of controls was only included in our robustness checks because relevant data was only available for less than 65% of observations. Fourth, we lagged the government ownership percentage explanatory variable by one year and then by two years and used the lagged values as alternative instrument variables. Fifth, we standardized the interaction variables. And lastly, recognizing that the Arab Spring (2010-2012) falls in our sample period, we divided our sample between the Arab Spring period (2010-2012) and the post-Arab Spring period (2013-2017) and ran our analysis on these two sub-samples. Next, we focused on the three countries in which the Arab Spring occurred

(Bahrain, Egypt, and Tunisia) and separated them from the rest of the countries in our main sample. We then divided the sub-sample composed of Bahrain, Egypt, and Tunisia between the Arab Spring period and the post-Arab Spring period and ran our analyses simultaneously on each of these sub-samples. The results are consistent with our initial analysis and confirm that the positive impact of government ownership on firm internationalization is a response to the region's institutional underdevelopment and is not necessarily due to institutional transitions. Overall, the results of the six robustness checks are consistent with our initial analysis and hence support our findings. We have therefore kept the results of these robustness checks un-tabulated.

Next, we test the non-linear effect of government ownership on internationalization but find no significant results (see Table 14 in Appendix D). However, we conduct several post-hoc tests using RE panel data regressions in order to test the robustness of our results. We focus on non-government ownership and modify the threshold of government ownership at 10% and 20% respectively (Claessens et al., 2000; Faccio & Lang, 2002). The results of government ownership at both thresholds are positive and significant, and are hence consistent with our initial analysis, that government ownership positively impacts the extent and the regional location of firm internationalization from the MENA (see Table 15 in Appendix D). These findings indicate that government ownership is particularly beneficial to firm internationalization when the government is a block shareholder. Additionally, we find that non-government ownership is insignificant with the number of internationalization projects but negative and marginally significant with internationalization scope within the MENA (see Table 15). Since we focus on the ownership of the final largest investor, we conclude from these findings that concentrated non-government ownership is detrimental to internationalization scope within the MENA. These results also indicate that government ownership has different implications on firm internationalization than

non-government ownership. We re-run these models using IV-2SLS estimations and find that the results are consistent with the findings from the RE regressions. We have therefore kept the results of the IV-2SLS estimations un-tabulated.

The results of the moderating effect of legal development and financial market development as well as their region-relative measures on the relationship between government ownership at both thresholds and firm internationalization respectively (extent and regional location) are negative and significant and are thus consistent with our initial analysis (see Tables 16 and 19 in Appendix D). These findings indicate that government ownership supports firm internationalization extent and regional location by overcoming institutional voids and normative pressures respectively, particularly when the government is a block shareholder. The moderating effect of legal and financial institutions on the relationship between non-government ownership and number of internationalization projects respectively is positive and marginally significant, indicating that non-government-owned firms require developed institutions that support their internationalization prospects (see Table 16). The moderating effect of region-relative legal and financial institutions on the relationship between non-government ownership and internationalization scope within the MENA respectively is negative and marginally significant, indicating that non-government-owned firms would also overcome legitimacy concerns given the institutional similarities between a country and the region to which it belongs (see Table 19). These findings thus underscore the importance of the role of legitimacy in cross-border investments. We re-run these models using IV-2SLS estimations and find that the results are consistent with the findings from the RE regressions. We have therefore kept the results of the IV-2SLS estimations un-tabulated.

The results of the moderating effect of control of corruption and political stability as well as their region-relative measures are insignificant with firm internationalization (extent and regional

location) using government ownership at both thresholds (see Tables 17 and 20 in Appendix D) respectively. The moderating effect of control of corruption and political stability on the relationship between non-government ownership and the number of internationalization projects respectively is positive, indicating that non-government-owned firms require a strong governance infrastructure that supports their internationalization prospects; however, we do not find supporting evidence for such claims (see Table 17). The moderating effect of region-relative control of corruption and political stability on the relationship between non-government ownership and internationalization scope within the MENA respectively is negative, but insignificant (see Table 20). We re-run these models using IV-2SLS estimations and find that the results are generally consistent with the findings from the RE regressions. We have therefore kept the results of the IV-2SLS estimations un-tabulated.

The results of the moderating effect of political constraints 3 and 5 as well as their respective region-relative measures are partially consistent with our initial analysis. The moderating effect of political constraints 3 on the impact of government ownership at both thresholds is insignificant with the number of internationalization projects, but that of political constraints 5 is positive and marginally significant (see Table 18 in Appendix D). The moderating effect of political constraints 3 and 5 region-relative is, however, insignificant with internationalization scope within the MENA (see Table 21 in Appendix D). The moderating effect of political constraints 3 and 5 on the relationship between non-government ownership and number of internationalization projects respectively is positive, indicating that non-government-owned firms require efficient political institutions that support their internationalization prospects; however, we do not find supporting evidence for such claims (see Table 18). The moderating effect of region-relative political constraints 3 and 5 on the relationship between non-government ownership and internationalization scope respectively within the MENA is negative, but insignificant (see Table 21). We re-run these models

using IV-2SLS estimations and find that the results are generally consistent with the findings from the RE regressions. We have therefore kept the results of the IV-2SLS estimations un-tabulated.

In our initial analysis, the results of the moderating effect of control of corruption, political stability, and political constraints, as well as their region-relative measures on the relationship between government ownership and firm internationalization respectively are mainly significant using the government ownership dummy variable as the explanatory variable, but insignificant when using the government ownership percentage variable. The results from our post-hoc analysis for these constructs are generally consistent with our initial analysis. This seems to indicate that given the region's weak governance infrastructure and political institutions, government ownership concentration does not necessarily harm firm internationalization, but it does not appear to enhance it. The presence of the government as an owner without necessarily holding concentrated shares in the firm appears to be enough to support internationalization prospects in the region when corruption, political instability, and political constraints are evident. It is worth noting, however, that when we run our post-hoc analysis using IV-2SLS estimations, the results of these moderating effects become particularly significant and are thus consistent with the IV-2SLS estimations results from our initial analysis. Our last claim is therefore partially supported. We have therefore kept the results of the IV-2SLS estimations un-tabulated.

Insert Appendix D about here

3.6. Discussion

This study examined the impact of SOEs on firm internationalization in eleven MENA countries while considering the region's hazardous and perilous institutional context. We argue that government ownership generally supports international diversification and further add that government ownership strategically supports firms by facilitating economic activities by essentially securing firm financing and acting as a political power and a rule-maker. Our findings support this view and show that state ownership plays a crucial role in overcoming the region's financial and legal institutional voids and enhancing firm internationalization. We do, however, contend that the range of institutions in the MENA differently impacts SOEs' internationalization. Accordingly, we highlight the importance of considering the region's perilous institutions and show that high levels of corruption, political instability, and political constraints create unfavorable and unreliable market conditions by essentially increasing risk and uncertainty as well as legitimacy concerns and consequently deterring internationalization prospects. We likewise underscore the importance of considering the region-relative institutional development on the location of outward FDI and find that countries are more prone to internationalization within the MENA given the institutional proximity and similarities that the region's boundaries offer.

Our paper therefore offers important insights for research on comparative corporate governance and international business strategy. Our study demonstrates the effects of the MENA region's peculiar and precarious institutional context on firms' internationalization decisions. We examine an overlooked region in the world, yet one that has led to renewed attention being paid to firm internationalization. The MENA remains one of the few areas where corporate governance research is seriously underdeveloped and understudied despite the region's economic and political importance. Government ownership appears to be prevailing in the region yet ownership (Piesse,

Strange, & Toonsi, 2012) and internationalization strategies (Cuervo-Cazurra, 2011) are areas in which corporate governance research is lagging behind those in other regions of the world. We thus considered a broad range of institutional variables and explored the effects of an inclusive set of national MENA constructs on SOEs' internationalization strategies. Our findings indicate that although some institutional factors moderate the focal relationship in a conventionally theorized direction, others do not. We further unpack the notion of institutional voids, which has emerged as an umbrella term for countries' level of development (Khanna & Palepu, 1997, 2000) and found that firms benefit in terms of their internationalization strategies from government ownership in contexts characterized by weak financial and legal institutions. The region is, however, particularly distinguished by its weak governance infrastructure, unstable political institutions, and ongoing political turmoil that continuously affect business risk and uncertainty, impair macroeconomic performance, threaten firms' legitimacy, and overall, create unfavorable and unreliable market conditions for firms' international diversification. Building on the institution-based view that firms' strategic choices are the dynamic outcomes between the firm and the institutional environment (Peng, 2002; Peng et al., 2009; Peng, Wang, & Jiang, 2008), this study advances our understanding of SOEs' internationalization from peculiar and hazardous institutional settings such as those in the MENA region and evidences that internationalization prospects are mitigated when firms operate in environments marked by corruption, political instability, and political constraints. Our results likewise support the institutional voids thesis in general and highlight the importance of a finer-grained distinctions between specific types of institutional voids and institutional configurations and their various impacts on firms. Lastly, considering the geographic and institutional similarities and proximity between MENA countries, the study advances our understanding of firm internationalization by providing a comprehensive analysis at both the

country and region levels. It does so by highlighting the relevance of institutional isomorphism and the importance of considering the region-relative institutional development that eases the liability of foreignness and institutional normative pressures and presents implications on firm strategies that cannot be captured at country-level alone.

The first implication is that the MENA region offers unique opportunities to investigate the role of government ownership amid fragile and turbulent institutions. Drawing on the institution-based view and the literature on institutional voids, we emphasize that local governments and national institutions play a key role in the region in determining the business environment (Mellahi et al., 2011) and accordingly examine the conditions under which national institutions contribute to SOEs' strategic decisions and capabilities. We hence underscore that a firm's strategic decisions depend on the institutional context to which the firm belongs. While the literature presents mixed findings about the effect of SOEs on internationalization strategies, we suggest that the reason behind the conflicting existing findings is the isolation of the firm from the institutional setting in which it is embedded and underline that the impact of government ownership is influenced by various institutional configurations (Bruton, Peng, Ahlstrom, Stan, & Xu, 2015; Ralston, Terpstra-Tong, Terpstra, Wang, & Egri, 2006). Ignoring the region's severe institutional voids and hazardous institutional environment can result in a biased understanding of SOEs' internationalization decisions. The region's diverse and unique taxonomies highlight the importance of examining the various dynamics of the institutional environment on firms' strategies.

Moreover, we focus on the home country rather than host country and provide empirical evidence that a firm's home country configurations play a vital role in driving its internationalization strategies. The implication is that evaluating the impact of home country institutions is vital to understanding SOEs' international expansion. The role of the home country

in FDI remains overlooked, despite the prominence of national configurations in determining a firm's ability to internationalize. While most research focuses on the host country's institutional setting and investigates the various opportunities and challenges it presents, we provide empirical evidence that a firm's home country plays an equally important role in influencing a firm's abilities to internationalize. Relying on an inclusive set of institution-specific constructs, we highlight the prominent role of the government in filling home countries' institutional voids in terms of capital restrictions and poor legal enforcement, which can otherwise severely obstruct firms' strategies and their ability to diversify internationally. At the same time, institutional environments marked by weak governance infrastructure and perilous political institutions in the home country increase perceptions of risk and uncertainty as well as legitimacy concerns from the host country's standpoint on FDI outflow and deter international expansion. Our findings therefore suggest that internationalization strategies, especially in hazardous environments, are better assessed relative to the home country's institutional setting. Our findings also underline the importance of fine-grained distinctions across different institutional voids and configurations and their consequent varied impacts on firms, rather than broadly and simply labelling the national context of the MENA as an "emerging" or "developing" one.

We also underscore the relevance of the regional institutional environment and find supporting evidence that firms are more likely to internationalize within the region they belong to due institutional proximity and similarities. Therefore, we highlight the role of legitimacy concerns in impacting firms' internationalization scope. The implication of our research is that the evaluation of firms' internationalization in terms of extent and location is more accurate and comprehensive when we focus on both country-level and region-level institutional development (Arregle et al., 2013). Understanding a country's institutional development relative to that of the

region to which it belongs is crucial for firms to assess their national similarities or variances with the location in which they intend to invest. Considering the regional institutional environment in internationalization strategies allows firms not only to optimize and leverage their investments across the region, but also to mitigate the risk exposure associated with foreign investments while enhancing the benefits and returns across the countries in the region. Existing research investigates country-level and region-level institutions independently (Chan et al. 2008). We therefore calculate the region-relative institutional development and find that firms can mitigate their risk exposure by choosing to invest in neighboring countries sharing similar institutional settings. Our findings underline the relevance of the regional environment for a more refined evaluation of firm strategic decisions.

3.6.1. Policy and Managerial Implications

Our study likewise offers implications for managers and policymakers. Our findings highlight the ways managers can evaluate and coordinate the influence of the institutional environment. SOEs' managers must be aware of the country-level institutions if they aim for successful strategic decisions. Given the region's hazardous and perilous institutional setting, SOE managers need to engage in a consistent and coordinated image-building processes in order to subsidize the host country's perceptions of risk and illegitimacy and to maximize the benefits of individual firm efforts. The home country government can accordingly play the coordinating role in identifying the key efforts at host country and at regional levels, and consequently prevent free-riding attempts of individual firms and enhance foreign perception towards MENA firms' risk and legitimacy. The government also has the crucial role of implementing reforms towards efficient and strong governance infrastructure that supports business activities and enhances the region's international exposure. The recent rapid pursuit of outward FDI from the MENA as well as the substantive

inward FDI to the region highlight the necessity of implementing governance structures and policies that eliminate institutional barriers and aligning institutional and governance mechanisms with international standards through the establishment of a corporate code of best practices for SOEs in the MENA.

While all countries in the MENA region need to sustain macroeconomic stability and pursue structural governance improvements, it is the reform of the public and private sector institutions that will make the difference. The best assurance for the MENA, a region enriched by its civilization and its abundant endowment of natural resources, to achieve its potential for higher growth rates is by adopting and sustaining an aim by MENA countries towards having more democratic political systems and undergoing essential structural and institutional as well as corporate governance reforms. While progress has been made, the process of rationalizing the role of the state and adapting it to the requirements of a modern and competitive economy remains incomplete. Policymakers in the region are, however, continuously aware of the need for improved corporate governance structures that create favorable conditions for economic growth, create better opportunities in the region, and boost its global integration.

3.6.2. Limitations and Future Research

Our study also reports some limitations which, however, offer opportunities for future research. First, we only focus on listed firms in the MENA. Our findings therefore might not be generalized to non-listed firms in the region. Second, we categorize SOEs by measuring the stake owned by the final largest owner, being the government. This measure, however, does not capture the different types of state institutions (e.g., public pension funds, SWFs, state-owned holding companies, or life insurance companies). Different government agencies might not be subject to the same institutional expectations in foreign markets and are worth investigating. Third, although

we measure both country- and region-level institutions, we do not explore how the two are integrated within the decision-making process nor do we examine the dynamics behind them that might emphasize the relevance of country factors over regional ones or vice-versa. And fourth, we analyzed the region as a whole, although some countries have more developed institutions than others and certain institutional and political discrepancies exist among MENA countries. Recognizing the heterogeneity among MENA countries in terms of institutional development, governance infrastructure, and political systems, we accordingly ran our analysis on a country-level and found that the results are essentially stable across the eleven countries.

Our research also offers opportunities for future research. For example, different types of state institutions acting as owners may have different attitudes and strategies that influence the outcome of decision-making processes (Musacchio et al., 2015). Future studies can thus examine how different types of government ownership, level of ownership, level of influence, level of development, and independence in decisions impact firm strategies and activities. Moreover, SOEs may differ in their board and top management teams, which may have different implications on internationalization strategies (Kirca, Hult, Perryy, & Cavusgil, 2010). With its distinct institutional configurations, the MENA region offers ample opportunities to explore corporate governance mechanisms and their manifestation in firm strategies and structures. As such, understanding the impact of government ownership on firms' corporate governance practices beyond such ownership structures as the board of directors and the top management and on firm strategies beyond such internationalization factors as firm innovation, connections, leverage structure, or R&D expenditure may offer a more refined understanding of SOEs' involvement with and impact on firms. Future studies can likewise investigate the impact of the networks and how the relationships between the firm and the government can affect SOMNCs and their international exposure. Finally, future work

could test our framework on different institutional settings in order to verify the generalization of our findings on other developing and emerging economies. Future research for instance can also explore other geographic regions such as Europe and examine how the institutional environment of more developed economies influences internationalization strategies.

3.7. Conclusion

This paper explores the impact of government ownership on firm internationalization from the MENA's context, in which severe institutional voids in financial and legal markets, as well as high levels of occupation, political instability, and political constraints are prevalent. We find that government ownership generally supports firms' international projects, specifically amid the region's market failures. The region's weak governance infrastructure and hazardous political environment, however, raises legitimacy concerns as well as perceptions of risk and uncertainty by host countries, which mitigates internationalization prospects. This study thus highlights the substantive role of severe institutional configurations defined by significant institutional vacuums, high levels of corruption, political instability, and political constraints in the home country in influencing the impact of government ownership on internationalization strategies. Finally, recognizing the prominence of the regional institutional environments in driving outward FDI's scope, this paper highlights the importance of region-relative factors in overcoming the liability of foreignness and driving firms' internationalization scope regionally.

3.8. References

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3.9. Tables

Table 1 – Variables Description	
Panel A: Internationalization variables	
Internationalization Projects	Total number of internationalization projects
Internationalization Scope within MENA	Internationalization projects within the MENA / Total number of internationalization projects
Panel B: Government Ownership variables	
Government Ownership %	Ownership percentage held by the final largest state investor
Government	Dummy: 1 if the government is the final largest owner, 0 otherwise
Panel C: Moderators	
Legal Development	Effectiveness of judiciary and enforceability of contracts
Financial Market Development	Development of financial markets defines as the factors, policies, and the institutions lead to the efficient intermediation and effective financial markets
Control of Corruption	Perceptions of corruption defined as the exercise of public power for private gains
Political Stability	Perceptions of the likelihood of political instability and/or politically motivated violence including terrorism
Political Constraints	Feasibility of policy change defined as the extent to which a change in the preferences of any political actor may lead to a change in government policy
Legal Development, region-level	Country-Level Legal Institutions minus Weighted Average of Region-Level Legal Institutions
Financial Market Development, region-level	Country-Level Financial Institutions minus Weighted Average of Region-Level Financial Institutions
Control of Corruption, region-level	Country-Level Control of Corruption minus Weighted Average of Region-Level Control of Corruption
Political Stability, region-level	Country-Level Political Stability minus Weighted Average of Region-Level Political Stability
Political Constraints, region-level	Country-Level Political Constraints minus Weighted Average of Region-Level Political Constraints

Table 1 – Variables Description, *continued*	
Panel D: Control variables	
Final Ownership %	Ownership percentage held by the final largest investor
Chain Length	Length of ownership chain (min=1, max=4)
ROA	(Net income / Total Assets) * 100
Log Assets	Natural logarithm of firm's total assets
Log Age	Natural logarithm of firm age
GDP per Capita	GDP per Capita as obtained from the World Bank's WDI database
GDP Growth	GDP Growth as obtained from the World Bank's WDI database
Foreign Subsidiaries	Total number of foreign subsidiaries
Industry	Dummy: 1 as denoted, 0 otherwise

Table 2 – Descriptive Statistics					
Variable	Mean	Std. Dev.	Min	Max	Count
Panel A: Internalization Variables					
Number of Internationalization Projects	0.076	0.555	0	17	8,681
Internationalization Scope within MENA	0.021	0.139	0	1	8,681
Panel B: Government Ownership Variables					
Government Ownership % (of total firms)	7.411	18.226	0	99.89	8,681
Government Ownership % (of only firms with their final largest owner being the state)	38.27	23.123	2	99.89	1,684
Government	0.194	0.395	0	1	8,681
Panel C: Moderators					
Legal Development	3.681	0.539	2.1	4.789	8,681
Financial Market Development	4.185	0.683	2.855	8.8	8,681
Control of Corruption	0.098	0.487	-1.037	1.407	8,681
Political Stability	-0.239	0.712	-1.703	1.224	8,681
Political Constraints 3	0.162	0.199	0	0.531	8,681
Political Constraints 5	0.314	0.325	0	0.773	8,681
Legal Development, region-relative	0	0.680	-4.581	1.378	8,681
Financial Market Development, region-relative	0	0.483	-4.257	1.033	8,681
Control of Corruption, region-relative	0	0.486	-1.133	1.254	8,681
Political Stability, region-relative	0	0.705	-1.635	1.502	8,681
Political Constraints 3, region-relative	0	0.184	-0.190	0.412	8,681
Political Constraints 5, region-relative	0	0.288	-0.391	0.625	8,681
Panel D: Control variables					
Final Ownership %	32.152	22.075	0	100	8,681
Chain Length	1.261	0.518	1	4	8,681
ROA	2.205	9.662	-97.697	83.991	8,681
Log Assets	12.307	2.187	5.175	19.222	8,681
Log Age	3.205	0.704	0.693	5.1	8,681
GDP Growth	3.175	2.832	-4.712	19.592	8,681
GDP per Capita	20235.110	18458.150	2440.510	85076.150	8,681
Foreign Subsidiaries	0.633	3.736	0	101	8,681

Table 3 - Correlation Matrix

	Nbr Intel Projects	Intl Scope MENA	Gov Own %	Government	Legal Dev	Financial Market Dev	Control of Corruption	Political Stability
Nbr Intel Projects	1							
Intl Scope MENA	0.588*	1						
Gov Own %	0.090*	0.085*	1					
Government	0.074*	0.089*	0.820*	1				
Legal Dev	-0.071*	-0.058*	-0.058*	-0.138*	1			
Financial Market Dev	-0.081*	-0.069*	-0.052*	-0.133*	0.607*	1		
Control of Corruption	0.075*	0.069*	0.062*	0.142*	-0.482*	-0.511*	1	
Political Stability	0.062*	0.053*	-0.006	0.084*	-0.453*	-0.497*	0.540*	1
Political Constraints 3	0.024*	0.019	0.052*	0.081*	-0.479*	-0.484*	-0.443*	-0.240*
Political Constraints 5	0.052*	0.045*	0.171*	0.193*	-0.386*	-0.471*	-0.331*	-0.264*
Legal Institutions, RL	-0.076*	-0.066*	-0.059*	-0.144*	0.528*	0.659*	-0.441*	-0.447*
Financial Institutions, RL	-0.069*	-0.056*	-0.059*	-0.139*	0.596*	0.694*	-0.583*	-0.586*
Control of Corruption, RL	-0.076*	-0.069*	-0.061*	-0.141*	0.482*	0.516*	-0.697*	-0.539*
Political Stability, RL	-0.059*	-0.050*	0.004	-0.087*	0.450*	0.469*	-0.544*	-0.690*
Pol Constraints 3, RL	-0.020	-0.017*	-0.051*	-0.078*	0.440*	0.448*	-0.418*	-0.221*
Pol Constraints 5, RL	-0.042*	-0.039*	-0.171*	-0.193*	0.356*	0.410*	-0.323*	-0.226*
Final Own %	0.024*	0.012	0.399*	0.131*	0.105*	0.095*	-0.091*	-0.081*
Chain Length	-0.021	-0.034*	-0.057*	0.020	0.111*	0.085*	-0.099*	0.006
ROA	0.030*	0.024*	0.120*	0.105*	-0.028*	-0.051*	-0.027*	-0.009
Log Assets	0.197*	0.205*	0.238*	0.286*	-0.169*	-0.194*	0.138*	0.127*
Log Age	-0.001	0.031*	0.057*	0.018	0.199*	0.182*	-0.172*	-0.159*
GDP Growth	0.045*	0.029*	0.056*	0.060*	-0.238*	-0.285*	0.163*	0.150*
GDP per Capita	0.086*	0.073*	0.084*	0.196*	-0.390 *	-0.419*	0.437*	0.505*
Foreign Subsidiaries	0.117*	0.078*	0.022*	0.024*	-0.026*	0.015	0.027*	-0.012

p-values in parentheses * $p < .05$

Table 3 - Correlation Matrix, *continued*

	Political Constraints 3	Political Constraints 5	Legal Institutions, RL	Financial Institutions, RL	Control of Corruption, RL	Political Stability, RL	Political Constraints 3, RL	Political Constraints 5, RL
Political Constraints 3	1							
Political Constraints 5	0.512*	1						
Legal Institutions, RL	-0.401*	-0.420*	1					
Financial Institutions, RL	-0.507*	-0.464*	0.632*	1				
Control of Corruption, RL	-0.455*	-0.331*	0.442*	0.585*	1			
Political Stability, RL	-0.235*	-0.231*	0.413*	0.453*	0.546*	1		
Pol Constraints 3, RL	-0.691*	-0.492*	0.472*	0.443*	0.419*	0.223*	1	
Pol Constraints 5, RL	-0.521*	-0.652*	0.432*	0.458*	0.324*	0.228*	0.528*	1
Final Own %	-0.081*	-0.057*	0.089*	0.104*	0.093*	0.078*	0.072*	0.046*
Chain Length	-0.170*	-0.128*	0.113*	0.095*	-0.099*	0.004	0.162*	0.131*
ROA	0.034*	0.077*	-0.052*	-0.029*	0.027*	0.009	-0.033*	-0.083*
Log Assets	-0.008	0.191*	-0.219*	-0.175*	-0.140*	-0.138*	0.004	-0.204*
Log Age	-0.178*	-0.128*	0.150*	0.192*	0.176*	0.143*	0.158*	0.093*
GDP Growth	0.184*	0.258*	-0.233*	-0.236*	-0.184*	-0.133*	-0.127*	-0.189*
GDP per Capita	-0.041*	0.187*	-0.317*	-0.294*	-0.314*	-0.409*	0.049*	-0.185*
Foreign Subsidiaries	-0.050*	-0.034*	-0.019	-0.025*	-0.018	-0.005	0.019	0.009

Table 3 - Correlation Matrix, *continued*

	Final Own %	Chain Length	ROA	Log Assets	Log Age	GDP Growth	GDP per Capita	Foreign Subsidiaries
Final Own %	1							
Chain Length	-0.179*	1						
ROA	0.071*	-0.074*	1					
Log Assets	0.027*	-0.008	0.144*	1				
Log Age	0.134*	-0.025*	0.133*	0.138*	1			
GDP Growth	-0.007	-0.057*	0.066*	0.085*	-0.056*	1		
GDP per Capita	-0.129*	0.050*	0.035*	0.360*	-0.123*	0.200*	1	
Foreign Subsidiaries	0.012	-0.017	-0.008	0.153*	0.042*	-0.091*	0.030*	1

p-values in parentheses * $p < .05$

Table 4 – Internationalization Extent Implications of Government Ownership

Panel A: RE, cluster on firm-level			**Panel B: IV-2SLS**		
	(1) Number of Internationalization Projects	(2) Number of Internationalization Projects		(3) Number of Internationalization Projects	(4) Number of Internationalization Projects
Government Ownership %	0.017*		Government Ownership % - Instrumented	0.339**	
	(0.055)			(0.017)	
Government		0.588*	Government - Instrumented		17.462**
		(0.078)			(0.017)
Final Ownership %	-0.012	-0.009	Final Ownership %	-0.057	0.016
	(0.627)	(0.752)		(0.265)	(0.647)
Chain Length	-1.160	-1.178	Chain Length	-1.347	-1.756
	(0.463)	(0.463)		(0.303)	(0.201)
ROA	-0.026	-0.026	ROA	-0.054	-0.059
	(0.623)	(0.619)		(0.161)	(0.128)
Log Assets	4.420***	4.423***	Log Assets	4.834***	4.685***
	(0.000)	(0.000)		(0.000)	(0.000)
Log Age	-2.656*	-2.652*	Log Age	-3.186***	-3.103***
	(0.081)	(0.081)		(0.001)	(0.002)
GDP Growth	0.523**	0.525**	GDP Growth	0.559**	0.598**
	(0.036)	(0.034)		(0.036)	(0.028)

GDP per Capita	-0.000	-0.000	GDP per Capita	-0.000	-0.000
	(0.411)	(0.412)		(0.794)	(0.340)
Foreign Subsidiaries	0.794	0.793	Foreign Subsidiaries	1.410*	1.416*
	(0.156)	(0.156)		(0.084)	(0.084)
Industry	Yes	Yes	Industry	Yes	Yes
Constant	-38.552***	-38.715***	Constant	-39.564***	-41.169***
	(0.000)	(0.000)		(0.000)	(0.000)
Observations	8681	8681	Observations	8681	8681
r2	0.066	0.067	r2	0.063	0.053

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 5 – Internationalization Extent Implications of Government Ownership and Institutional Voids

Panel C: RE, cluster on firm-level					**Panel D: IV-2SLS**				
	(1) Number of Internationalization Projects	(2) Number of Internationalization Projects	(3) Number of Internationalization Projects	(4) Number of Internationalization Projects		(5) Number of Internationalization Projects	(6) Number of Internationalization Projects	(7) Number of Internationalization Projects	(8) Number of Internationalization Projects
Government Ownership %	-0.568*		-0.747*		Government Ownership % - Instrumented	-1.916***		-2.671***	
	(0.083)		(0.084)			(0.000)		(0.000)	
Government		-13.937		-21.854	Government - Instrumented		-84.176***		-122.014***
		(0.113)		(0.107)			(0.000)		(0.000)
Legal Development	-0.846	-1.258							
	(0.348)	(0.225)							
Financial Market Development			-2.454	-2.814					
			(0.248)	(0.214)					
Government Ownership % * Legal Development	-0.128**				Government Ownership % * Legal Development - Instrumented	-0.538***			
	(0.044)					(0.000)			

Government Ownership % * Financial Market Development			-0.185**		Government Ownership % * Financial Market Development - Instrumented			-0.765***	
			(0.042)					(0.000)	
Government * Legal Development		-3.087*			Government * Legal Development - Instrumented		-23.503***		
		(0.074)					(0.000)		
Government * Financial Market Development				-5.282*	Government * Financial Market Development - Instrumented				-34.752***
				(0.059)					(0.000)
Final Ownership %	-0.012	-0.007	-0.012	-0.007	Final Ownership %	-0.131**	0.003	-0.118*	0.007
	(0.658)	(0.810)	(0.653)	(0.820)		(0.040)	(0.930)	(0.050)	(0.849)
Chain Length	-0.884	-0.812	-0.850	-0.763	Chain Length	-0.186	0.146	-0.364	-0.121
	(0.568)	(0.609)	(0.593)	(0.638)		(0.884)	(0.911)	(0.776)	(0.927)
ROA	-0.024	-0.024	-0.013	-0.016	ROA	-0.076*	-0.100**	-0.092**	-0.116***
	(0.654)	(0.650)	(0.803)	(0.764)		(0.055)	(0.018)	(0.019)	(0.006)
Log Assets	4.324***	4.381***	4.342***	4.394***	Log Assets	4.199***	4.177***	4.315***	4.293***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)

Log Age	-2.165	-2.274	-1.727	-1.826	Log Age	-1.282*	-1.439*	-1.325	-1.355
	(0.121)	(0.111)	(0.231)	(0.210)		(0.088)	(0.066)	(0.109)	(0.111)
GDP Growth	0.529**	0.527**	0.485**	0.484**	GDP Growth	0.393	0.369	0.331	0.282
	(0.034)	(0.033)	(0.038)	(0.037)		(0.132)	(0.164)	(0.195)	(0.275)
GDP per Capita	-0.000	-0.000	-0.000	-0.000	GDP per Capita	-0.000**	-0.000***	-0.000***	-0.000***
	(0.940)	(0.921)	(0.849)	(0.838)		(0.012)	(0.006)	(0.009)	(0.003)
Foreign Subsidiaries	0.778	0.777	0.795	0.792	Foreign Subsidiaries	1.318	1.327	1.380*	1.396*
	(0.166)	(0.165)	(0.158)	(0.158)		(0.103)	(0.104)	(0.091)	(0.090)
Industry	Yes	Yes	Yes	Yes	Industry	Yes	Yes	Yes	Yes
Constant	-42.586***	-44.828***	-50.063***	-51.876***	Constant	-35.040***	-38.422***	-35.984***	-39.098***
	(0.000)	(0.001)	(0.000)	(0.001)		(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	Observations	8681	8681	8681	8681
r2	0.071	0.068	0.072	0.069	r2	0.049	0.025	0.052	0.026

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 6 – Internationalization Extent Implications of Government Ownership and Control of Corruption					
Panel E: RE, cluster on firm-level			**Panel F: IV-2SLS**		
	(1) Number of Internationalization Projects	(2) Number of Internationalization Projects		(3) Number of Internationalization Projects	(4) Number of Internationalization Projects
Government Ownership %	0.014		Government Ownership % - Instrumented	0.496***	
	(0.179)			(0.004)	
Government		0.630	Government - Instrumented		20.660***
		(0.241)			(0.009)
Control of Corruption	1.351	1.713			
	(0.383)	(0.588)			
Government Ownership % * Control of Corruption	0.031		Government Ownership % * Control of Corruption - Instrumented	0.699***	
	(0.167)			(0.001)	
Government * Control of Corruption		2.396**	Government * Control of Corruption - Instrumented		31.028***
		(0.047)			(0.001)

Final Ownership %	-0.012	-0.009	Final Ownership %	-0.141**	-0.003
	(0.646)	(0.767)		(0.029)	(0.937)
Chain Length	-0.977	-0.942	Chain Length	-0.298	-0.010
	(0.531)	(0.555)		(0.817)	(0.994)
ROA	0.029	-0.029	ROA	-0.052	-0.073*
	(0.576)	(0.575)		(0.172)	(0.073)
Log Assets	4.438***	4.433***	Log Assets	4.348***	4.376***
	(0.000)	(0.000)		(0.000)	(0.000)
Log Age	-2.505*	-2.491*	Log Age	-1.527**	-1.834**
	(0.084)	(0.090)		(0.040)	(0.019)
GDP Growth	0.543**	0.542**	GDP Growth	0.431	0.410
	(0.026)	(0.026)		(0.117)	(0.149)
GDP per Capita	0.000	-0.000	GDP per Capita	-0.000***	-0.000***
	(0.798)	(0.837)		(0.005)	(0.003)
Foreign Subsidiaries	0.792	0.791	Foreign Subsidiaries	1.340*	1.346*
	(0.156)	(0.157)		(0.099)	(0.100)
Industry	Yes	Yes	Industry	Yes	Yes
Constant	-38.928***	-38.995***	Constant	-35.628***	-39.223***
	(0.000)	(0.000)		(0.000)	(0.000)
Observations	8681	8681	Observations	8681	8681
r2	0.068	0.069	r2	0.044	0.028

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 7 - Internationalization Extent Implications of Government Ownership and Political Stability

Panel G: RE, cluster on firm-level			**Panel H: IV-2SLS**		
	(1) Number of Internationalization Projects	(2) Number of Internationalization Projects		(3) Number of Internationalization Projects	(4) Number of Internationalization Projects
Government Ownership %	0.028*		Government Ownership % - Instrumented	0.766***	
	(0.086)			(0.001)	
Government		1.068**	Government - Instrumented		32.601***
		(0.048)			(0.002)
Political Stability	1.529*	2.850**			
	(0.053)	(0.022)			
Government Ownership % * Political Stability	0.020		Government Ownership % * Political Stability - Instrumented	0.479***	
	(0.166)			(0.000)	
Government * Political Stability		2.769*	Government * Political Stability - Instrumented		21.818***
		(0.064)			(0.000)
Final Ownership %	-0.016	-0.009	Final Ownership %	-0.148**	-0.000
	(0.544)	(0.752)		(0.025)	(0.997)

Chain Length	-1.088	-1.085	Chain Length	-1.445	-1.694
	(0.494)	(0.502)		(0.279)	(0.227)
ROA	-0.027	-0.027	ROA	-0.069*	-0.080*
	(0.606)	(0.610)		(0.080)	(0.052)
Log Assets	4.535***	4.550***	Log Assets	4.565***	4.615***
	(0.000)	(0.000)		(0.000)	(0.000)
Log Age	-2.231	-2.186	Log Age	-1.336*	-1.550**
	(0.126)	(0.137)		(0.072)	(0.046)
GDP Growth	0.538**	0.542**	GDP Growth	0.482*	0.538*
	(0.033)	(0.030)		(0.075)	(0.052)
GDP per Capita	-0.000	-0.000	GDP per Capita	-0.000***	-0.000***
	(0.518)	(0.492)		(0.003)	(0.002)
Foreign Subsidiaries	0.799	0.796	Foreign Subsidiaries	1.370*	1.383*
	(0.154)	(0.156)		(0.092)	(0.092)
Industry	Yes	Yes	Industry	Yes	Yes
Constant	-38.497***	-39.203***	Constant	-37.887***	-42.097***
	(0.000)	(0.000)		(0.000)	(0.000)
Observations	8681	8681	Observations	8681	8681
r2	0.068	0.070	r2	0.041	0.022

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 8 – Internationalization Extent Implications of Government Ownership and Political Constraints

Panel I: RE, cluster on firm-level					**Panel J: IV-2SLS**				
	(1) Number of Internationalization Projects	(2) Number of Internationalization Projects	(3) Number of Internationalization Projects	(4) Number of Internationalization Projects		(5) Number of Internationalization Projects	(6) Number of Internationalization Projects	(7) Number of Internationalization Projects	(8) Number of Internationalization Projects
Government Ownership %	0.121		0.146		Government Ownership % - Instrumented	0.486***		0.418**	
	(0.280)		(0.219)			(0.009)		(0.012)	
Government		3.522		4.363*	Government - Instrumented		22.893**		20.282**
		(0.145)		(0.090)			(0.010)		(0.014)
Political Constraints 3	0.986	1.628							
	(0.509)	(0.677)							
Government Ownership % * Political Constraints 3	0.268				Government Ownership % * Political Constraints 3 - Instrumented	0.888***			
	(0.194)					(0.004)			
Political Constraints 5			-1.941	-1.528					
			(0.341)	(0.372)					

Government Ownership % * Political Constraints 5			0.287*		Government Ownership % * Political Constraints 5 - Instrumented			0.449**	
			(0.094)					(0.036)	
Government * Political Constraints 3		9.924			Government * Political Constraints 3 - Instrumented		37.624***		
		(0.137)					(0.005)		
Government * Political Constraints 5				9.087**	Government * Political Constraints 5 - Instrumented				17.721**
				(0.033)					(0.036)
Final Ownership %	0.018	0.035	0.013	0.030	Final Ownership %	-0.042	0.033	-0.039	0.029
	(0.640)	(0.499)	(0.726)	(0.548)		(0.322)	(0.285)	(0.347)	(0.335)
Chain Length	-1.187	-1.056	-1.143	-1.060	Chain Length	-0.771	-0.655	-0.862	-0.939
	(0.433)	(0.501)	(0.458)	(0.503)		(0.548)	(0.613)	(0.496)	(0.466)
ROA	0.008	0.011	-0.008	-0.010	ROA	-0.061	-0.074*	-0.053	-0.066
	(0.878)	(0.843)	(0.893)	(0.853)		(0.155)	(0.097)	(0.216)	(0.134)
Log Assets	4.386***	4.430***	4.425***	4.464***	Log Assets	4.788***	4.675***	4.879***	4.767***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)

Log Age	-2.307	-2.306	-2.574*	-2.561*	Log Age	-2.112**	-2.105**	-2.413***	-2.331**
	(0.129)	(0.127)	(0.098)	(0.097)		(0.015)	(0.017)	(0.008)	(0.010)
GDP Growth	0.497*	0.496*	0.499*	0.498*	GDP Growth	0.337	0.308	0.336	0.326
	(0.079)	(0.078)	(0.077)	(0.077)		(0.259)	(0.307)	(0.263)	(0.285)
GDP per Capita	0.000	0.000	-0.000	-0.000	GDP per Capita	-0.000	-0.000	-0.000	-0.000
	(0.425)	(0.413)	(0.416)	(0.430)		(0.621)	(0.327)	(0.727)	(0.353)
Foreign Subsidiaries	1.162	1.160	1.153	1.151	Foreign Subsidiaries	2.087	2.130	2.080	2.117
	(0.395)	(0.396)	(0.399)	(0.400)		(0.231)	(0.224)	(0.233)	(0.226)
Industry	Yes	Yes	Yes	Yes	Industry	Yes	Yes	Yes	Yes
Constant	-40.215***	-41.136***	-40.120***	-40.913***	Constant	-42.445***	-44.028***	-42.060***	-43.390***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	Observations	8681	8681	8681	8681
r2	0.062	0.060	0.063	0.061	r2	0.059	0.047	0.060	0.049

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 9 – Internationalization Scope Implications of Government Ownership

Panel K: RE, cluster on firm-level			**Panel L: IV-2SLS**		
	(1) Internationalization Scope within MENA	(2) Internationalization Scope within MENA		(3) Internationalization Scope within MENA	(4) Internationalization Scope within MENA
Government Ownership %	0.025*		Government Ownership % - Instrumented	0.070**	
	(0.096)			(0.021)	
Government		1.163**	Government - Instrumented		3.605**
		(0.028)			(0.021)
Final Ownership %	-0.001	0.004	Final Ownership %	-0.019*	-0.004
	(0.936)	(0.681)		(0.095)	(0.587)
Chain Length	-0.746*	-0.785*	Chain Length	-0.923***	-1.006***
	(0.062)	(0.057)		(0.001)	(0.001)
ROA	-0.006	-0.006	ROA	-0.018**	-0.019**
	(0.510)	(0.510)		(0.042)	(0.035)
Log Assets	1.210***	1.205***	Log Assets	1.211***	1.180***
	(0.000)	(0.000)		(0.000)	(0.000)
Log Age	-0.257	-0.252	Log Age	-0.281	-0.264
	(0.446)	(0.456)		(0.185)	(0.215)
GDP Growth	0.038	0.042	GDP Growth	0.062	0.071
	(0.410)	(0.361)		(0.230)	(0.172)

GDP per Capita	-0.000	-0.000	GDP per Capita	-0.000	-0.000
	(0.998)	(0.870)		(0.672)	(0.306)
Foreign Subsidiaries	0.082	0.081	Foreign Subsidiaries	0.202**	0.203**
	(0.294)	(0.297)		(0.025)	(0.025)
Industry	Yes	Yes	Industry	Yes	Yes
Constant	-11.683***	-11.838***	Constant	-11.127***	-11.459***
	(0.000)	(0.000)		(0.000)	(0.000)
Observations	8681	8681	Observations	8681	8681
r2	0.054	0.053	r2	0.052	0.049

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 10 – Internationalization Scope Implications of Government Ownership and Institutional Voids, region-relative

Panel M: RE, cluster on firm-level					**Panel N: IV-2SLS**				
	(1) Internationalization Scope within MENA	(2) Internationalization Scope within MENA	(3) Internationalization Scope within MENA	(4) Internationalization Scope within MENA		(5) Internationalization Scope within MENA	(6) Internationalization Scope within MENA	(7) Internationalization Scope within MENA	(8) Internationalization Scope within MENA
Government Ownership %	0.027*		0.027*		Government Ownership % - Instrumented	0.109***		0.106***	
	(0.090)		(0.084)			(0.002)		(0.003)	
Government		1.031**		1.017**	Government - Instrumented		4.768***		4.681***
		(0.041)		(0.043)			(0.005)		(0.006)
Legal Development, region-relative	-0.281	-0.222							
	(0.331)	(0.356)							
Financial Market Development, region-relative			-0.239	-0.153					
			(0.459)	(0.583)					

Government Ownership % * Legal Development, region-relative	-0.033*				Government Ownership % * Legal Development, region-relative - Instrumented	-0.094***		
	(0.091)					(0.000)		
Government Ownership % * Financial Market Development, region-relative			-0.051**		Government Ownership % * Financial Market Development, region-relative - Instrumented			-0.139***
			(0.036)					(0.000)
Government * Legal Development		-1.447*			Government * Legal Development, region-relative - Instrumented		-4.029***	
		(0.054)					(0.000)	
Government * Financial Market Development				-2.196**	Government * Financial Market Development, region-relative - Instrumented			-6.058***
				(0.020)				(0.000)

Final Ownership %	-0.001	0.005	-0.001	0.005	Final Ownership %	-0.032**	-0.006	-0.031**	-0.006
	(0.944)	(0.634)	(0.949)	(0.623)		(0.011)	(0.401)	(0.016)	(0.455)
Chain Length	-0.661*	-0.652	-0.684*	-0.681*	Chain Length	-0.734***	-0.705**	-0.756***	-0.742***
	(0.093)	(0.110)	(0.084)	(0.094)		(0.008)	(0.012)	(0.006)	(0.008)
ROA	-0.006	-0.007	-0.007	-0.007	ROA	-0.022**	-0.026***	-0.023**	-0.027***
	(0.478)	(0.444)	(0.425)	(0.406)		(0.018)	(0.007)	(0.013)	(0.005)
Log Assets	1.185***	1.190***	1.185***	1.193***	Log Assets	1.099***	1.092***	1.111***	1.103***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.125	-0.143	-0.142	-0.159	Log Age	0.046	0.014	0.030	0.007
	(0.698)	(0.666)	(0.667)	(0.638)		(0.833)	(0.947)	(0.893)	(0.976)
GDP Growth	0.038	0.042	0.037	0.042	GDP Growth	0.035	0.034	0.034	0.035
	(0.405)	(0.361)	(0.420)	(0.358)		(0.508)	(0.528)	(0.528)	(0.511)
GDP per Capita	-0.000	-0.000	-0.000	-0.000	GDP per Capita	-0.000***	-0.000***	-0.000***	-0.000***
	(0.337)	(0.241)	(0.391)	(0.278)		(0.008)	(0.002)	(0.009)	(0.002)
Foreign Subsidiaries	0.077	0.076	0.080	0.079	Foreign Subsidiaries	0.186**	0.189**	0.192**	0.195**
	(0.323)	(0.330)	(0.308)	(0.312)		(0.036)	(0.037)	(0.032)	(0.031)
Industry	Yes	Yes	Yes	Yes	Industry	Yes	Yes	Yes	Yes
Constant	-11.695***	-11.865***	-11.652***	-11.855***	Constant	-10.317***	-10.962***	-10.390***	-10.991***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	Observations	8681	8681	8681	8681
r2	0.057	0.056	0.058	0.056	r2	0.046	0.039	0.048	0.040

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 11 – Internationalization Scope Implications of Government Ownership and Control of Corruption, region-relative and Political Stability, region-relative

Panel S: RE, cluster on firm-level					**Panel T: IV-2SLS**				
	(1) Internationalization Scope within MENA	(2) Internationalization Scope within MENA	(3) Internationalization Scope within MENA	(4) Internationalization Scope within MENA		(5) Internationalization Scope within MENA	(6) Internationalization Scope within MENA	(7) Internationalization Scope within MENA	(8) Internationalization Scope within MENA
Government Ownership %	0.026*		0.030*		Government Ownership % - Instrumented	0.118***		0.154***	
	(0.096)		(0.068)			(0.001)		(0.000)	
Government		0.969*		1.062**	Government - Instrumented		4.946***		6.563***
		(0.051)		(0.038)			(0.003)		(0.001)
Control of Corruption, region-relative	-0.729	-0.436							
	(0.288)	(0.454)							
Political Stability, region-relative			-0.852*	-0.733*					
			(0.074)	(0.068)					

Government Ownership % % * Control of Corruption, region-relative	-0.048				Government Ownership % * Control of Corruption, region-relative - Instrumented	-0.150***		
	(0.119)					(0.000)		
Government Ownership % * Political Stability, region-relative			-0.029		Government Ownership % * Political Stability, region-relative - Instrumented			-0.094***
			(0.120)					(0.000)
Government * Control of Corruption, region-relative		-2.711**			Government * Control of Corruption, region-relative - Instrumented		-6.704***	
		(0.019)					(0.000)	
Government * Political Stability, region-relative				-1.537**	Government * Political Stability, region-relative - Instrumented				-4.264***
				(0.044)					(0.000)
Final Ownership %	-0.001	0.004	-0.002	0.004	Final Ownership %	-0.037***	-0.008	-0.037***	-0.007
	(0.886)	(0.670)	(0.840)	(0.657)		(0.004)	(0.281)	(0.004)	(0.336)

Chain Length	-0.631	-0.613	-0.730*	-0.745*	Chain Length	-0.707**	-0.646**	-0.942***	-0.994***
	(0.112)	(0.134)	(0.069)	(0.071)		(0.011)	(0.024)	(0.001)	(0.001)
ROA	-0.004	-0.005	-0.005	-0.005	ROA	-0.018**	-0.022**	-0.021**	-0.023**
	(0.655)	(0.588)	(0.589)	(0.566)		(0.044)	(0.016)	(0.019)	(0.013)
Log Assets	1.204***	1.206***	1.244***	1.253***	Log Assets	1.107***	1.115***	1.158***	1.166***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.114	-0.135	-0.140	-0.147	Log Age	0.076	0.012	0.082	0.040
	(0.712)	(0.673)	(0.654)	(0.649)		(0.715)	(0.954)	(0.694)	(0.849)
GDP Growth	0.042	0.042	0.047	0.052	GDP Growth	0.032	0.024	0.047	0.059
	(0.371)	(0.362)	(0.306)	(0.251)		(0.552)	(0.649)	(0.377)	(0.269)
GDP per Capita	-0.000	-0.000	-0.000*	-0.000**	GDP per Capita	-0.000***	-0.000***	-0.000***	-0.000***
	(0.171)	(0.110)	(0.071)	(0.048)		(0.001)	(0.000)	(0.002)	(0.000)
Foreign Subsidiaries	0.081	0.080	0.080	0.078	Foreign Subsidiaries	0.189**	0.190**	0.194**	0.196**
	(0.299)	(0.308)	(0.305)	(0.315)		(0.035)	(0.036)	(0.030)	(0.030)
Industry	Yes	Yes	Yes	Yes	Industry	Yes	Yes	Yes	Yes
Constant	-11.785***	-11.938***	-11.867***	-12.132***	Constant	-10.280***	-11.032***	-10.798***	-11.640***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	Observations	8681	8681	8681	8681
r2	0.058	0.058	0.058	0.057	r2	0.040	0.038	0.042	0.035

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 12 – Internationalization Scope Implications of Government Ownership Political Constraints, region-relative

Panel U: RE, cluster on firm-level					**Panel V: IV-2SLS**				
	(1) Internationalization Scope within MENA	(2) Internationalization Scope within MENA	(3) Internationalization Scope within MENA	(4) Internationalization Scope within MENA		(5) Internationalization Scope within MENA	(6) Internationalization Scope within MENA	(7) Internationalization Scope within MENA	(8) Internationalization Scope within MENA
Government Ownership %	0.025*		0.024		Government Ownership % - Instrumented	0.077**		0.068**	
	(0.095)		(0.102)			(0.014)		(0.026)	
Government		1.141**		1.055**	Government - Instrumented		3.771**		3.540**
		(0.028)		(0.036)			(0.017)		(0.024)
Political Constraints 3, region-relative	-0.162	0.303							
	(0.894)	(0.801)							
Government Ownership % * Political Constraints 3, region-relative	-0.057				Government Ownership % * Political Constraints 3, region-relative - Instrumented	-0.179**			
	(0.279)					(0.023)			

Political Constraints 5, region-relative			0.770	1.132*					
			(0.271)	(0.091)					
Government Ownership % * Political Constraints 5, region-relative			-0.039		Government Ownership % * Political Constraints 5, region-relative - Instrumented			-0.033	
			(0.356)					(0.640)	
Government * Political Constraints 3, region-relative		-3.768*			Government * Political Constraints 3, region-relative - Instrumented		-7.131**		
		(0.074)					(0.036)		
Government * Political Constraints 5, region-relative				-2.859*	Government * Political Constraints 5, region-relative - Instrumented				-1.214
				(0.085)					(0.660)
Final Ownership %	-0.001	0.004	-0.002	0.003	Final Ownership %	-0.022*	-0.004	-0.020*	-0.005
	(0.954)	(0.679)	(0.841)	(0.784)		(0.065)	(0.566)	(0.082)	(0.547)
Chain Length	-0.715*	-0.712*	-0.762*	-0.749*	Chain Length	-0.812***	-0.844***	-0.909***	-0.994***
	(0.064)	(0.077)	(0.054)	(0.068)		(0.002)	(0.002)	(0.001)	(0.001)

ROA	-0.006	-0.007	-0.006	-0.006	ROA	-0.021**	-0.023**	-0.019**	-0.020**
	(0.449)	(0.443)	(0.509)	(0.459)		(0.021)	(0.013)	(0.038)	(0.030)
Log Assets	1.200***	1.191***	1.219***	1.216***	Log Assets	1.172***	1.146***	1.202***	1.173***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.212	-0.219	-0.282	-0.283	Log Age	-0.163	-0.168	-0.259	-0.244
	(0.523)	(0.511)	(0.400)	(0.398)		(0.438)	(0.427)	(0.214)	(0.242)
GDP Growth	0.040	0.043	0.039	0.043	GDP Growth	0.052	0.054	0.059	0.066
	(0.388)	(0.352)	(0.403)	(0.355)		(0.322)	(0.300)	(0.262)	(0.213)
GDP per Capita	-0.000	-0.000	0.000	-0.000	GDP per Capita	-0.000	-0.000	-0.000	-0.000
	(0.977)	(0.811)	(0.987)	(0.824)		(0.459)	(0.206)	(0.606)	(0.261)
Foreign Subsidiaries	0.084	0.084	0.083	0.084	Foreign Subsidiaries	0.204**	0.206**	0.203**	0.204**
	(0.284)	(0.283)	(0.288)	(0.281)		(0.024)	(0.023)	(0.024)	(0.024)
Industry	Yes	Yes	Yes	Yes	Industry	Yes	Yes	Yes	Yes
Constant	-11.747***	-11.804***	-11.654***	-11.750***	Constant	-11.013***	-11.393***	-11.049***	-11.387***
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	Observations	8681	8681	8681	8681
r2	0.055	0.054	0.055	0.055	r2	0.053	0.053	0.049	0.048

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 13 - Internationalization Implications of Government Ownership - Propensity Score Matching

	DV	Moderators	Conditions	Treated	Controls	Difference	S.E.	T-test	p<0.05	Matching pair number
(15) Government	# of Projects			9.615	6.722	2.894	1.558	2.01	YES	1455
(16) Government	Scope MENA			2.850	2.683	0.1667	0.571	2.95	YES	1560
(17) Government	# of Projects	Legal Dev	LOW	7.014	5.564	1.450	2.994	2.06	YES	432
(18) Government	Scope MENA	Legal Dev, RL	LOW	2.032	0.966	1.066	1.041	2.82	YES	445
(19) Government	# of Projects	Fin Markets Dev	LOW	8.580	5.924	2.656	2.243	2.37	YES	637
(20) Government	Scope MENA	Fin Markets Dev, RL	LOW	2.647	1.635	1.011	0.585	3.73	YES	641
(21) Government	# of Projects	Control of Corruption	HIGH	15.754	6.680	9.074	2.298	3.95	YES	749
(22) Government	Scope MENA	Control of Corruption, RL	LOW	4.469	3.286	1.183	0.976	4.25	YES	811
(23) Government	# of Projects	Political Stability	HIGH	17.672	9.391	8.281	3.026	2.74	YES	713
(24) Government	Scope MENA	Political Stability, RL	LOW	4.322	2.201	2.121	0.660	3.21	YES	700
(25) Government	# of Projects	Pol Constraints 3	HIGH	6.865	5.723	1.141	2.173	0.97	NO	617
(26) Government	Scope MENA	Pol Constraints 3, RL	LOW	1.844	1.727	0.117	0.565	1.99	YES	629
(27) Government	# of Projects	Pol Constraints 5	HIGH	5.475	5.167	0.308	1.800	2.76	YES	641
(28) Government	Scope MENA	Pol Constraints 5, RL	LOW	1.960	1.316	0.644	0.478	3.76	YES	694

3.10. Appendix D

Table 14 – Non-Linear Effect of Government Ownership on Internationalization		
Panel W: RE, cluster on firm-level		
	(1) Number of Internationalization Projects100	(2) Internationalization Scope within MENA
Government Ownership %	-0.059	0.053
	(0.654)	(0.176)
(Government Ownership %)^2	0.001	-0.000
	(0.563)	(0.505)
Final Ownership %	-0.018	0.002
	(0.522)	(0.862)
Chain Length	-1.084	-0.778*
	(0.499)	(0.059)
ROA	0.026	-0.006
	(0.621)	(0.501)
Log Assets	4.432***	1.206***
	(0.000)	(0.000)
Log Age	-2.689*	-0.245
	(0.082)	(0.481)
GDP Growth	0.520**	0.039
	(0.036)	(0.395)
GDP per Capita	0.000	-0.000
	(0.382)	(0.936)

Foreign Subsidiaries	0.796	0.081
	(0.156)	(0.298)
Industry	Yes	Yes
Constant	-38.325***	-11.771***
	(0.000)	(0.000)
Observations	8681	8681
r2	0.067	0.053

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 15 - Robustness Check - RE, cluster on firm-level

	(1) Number of Internationalization Projects	(2) Number of Internationalization Projects	(3) Number of Internationalization Projects	(4) Internationalization Scope within MENA	(5) Internationalization Scope within MENA	(6) Internationalization Scope within MENA
Government Ownership % (> 20)	0.022*			0.024*		
	(0.057)			(0.064)		
Government Ownership % (> 10)		0.014*			0.025**	
		(0.074)			(0.037)	
Non-Government Ownership %			-0.017			-0.025*
			(0.725)			(0.096)
Final Ownership %	-0.014	-0.012	0.004	-0.001	-0.001	0.025
	(0.580)	(0.649)	(0.938)	(0.922)	(0.924)	(0.171)
Chain Length	-1.169	-1.153	-1.160	-0.743*	-0.744*	-0.746*
	(0.459)	(0.466)	(0.463)	(0.062)	(0.062)	(0.062)
ROA	-0.026	-0.026	0.026	-0.006	-0.006	-0.006
	(0.626)	(0.622)	(0.623)	(0.509)	(0.509)	(0.510)
Log Assets	4.416***	4.425***	4.420***	1.216***	1.210***	1.210***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-2.655*	-2.655*	-2.656*	-0.254	-0.257	-0.257
	(0.081)	(0.081)	(0.081)	(0.450)	(0.446)	(0.446)

GDP Growth	0.523**	0.523**	0.523**	0.038	0.038	0.038
	(0.036)	(0.036)	(0.036)	(0.417)	(0.417)	(0.410)
GDP per Capita	-0.000	-0.000	0.000	-0.000	-0.000	-0.000
	(0.413)	(0.409)	(0.411)	(0.985)	(0.994)	(0.998)
Foreign Subsidiaries	0.794	0.794	0.794	0.081	0.082	0.082
	(0.156)	(0.156)	(0.156)	(0.295)	(0.293)	(0.294)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-38.458***	-38.622***	-38.552***	-11.751***	-11.680***	-11.683***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	8681	8681
r2	0.066	0.066	0.066	0.054	0.054	0.054

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 16 - Robustness Check - RE, cluster on firm-level

	(1) Number of Internationalization Projects	(2) Number of Internationalization Projects	(3) Number of Internationalization Projects	(4) Number of Internationalization Projects	(5) Number of Internationalization Projects	(6) Number of Internationalization Projects
Government Ownership % (> 20)	-0.595*			-0.775**		
	(0.076)			(0.025)		
Government Ownership % (> 10)		-0.557*			-0.728*	
		(0.089)			(0.074)	
Non-Government Ownership %			-0.066			-0.024
			(0.770)			(0.950)
Legal Development	-0.897	-0.881	1.755			
	(0.519)	(0.531)	(0.326)			
Financial Market Development				-2.544	-2.504	3.899**
				(0.221)	(0.238)	(0.031)
Government Ownership % (> 20) * Legal Development	-0.135*					
	(0.093)					

Government Ownership % (> 10) * Legal Development		-0.125*				
		(0.092)				
Non-Government Ownership % * Legal Development			0.011*			
			(0.0.98)			
Government Ownership % (> 20) * Financial Market Development				-0.193**		
				(0.044)		
Government Ownership % (> 10) * Financial Market Development					-0.180*	
					(0.074)	
Non-Government Ownership % * Financial Market Development						0.002*
						(0.083)
Final Ownership %	-0.014	-0.011	0.005	-0.014	-0.011	0.004
	(0.601)	(0.683)	(0.934)	(0.590)	(0.676)	(0.936)
Chain Length	-0.901	-0.884	-0.944	-0.860	-0.848	-0.881
	(0.559)	(0.567)	(0.539)	(0.588)	(0.594)	(0.579)

ROA	-0.023	-0.024	0.025	-0.013	-0.013	0.019
	(0.657)	(0.652)	(0.637)	(0.808)	(0.798)	(0.715)
Log Assets	4.327***	4.330***	4.405***	4.341***	4.347***	4.387***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-2.140	-2.168	-2.341*	-1.706	-1.733	-1.939
	(0.124)	(0.121)	(0.097)	(0.236)	(0.229)	(0.179)
GDP Growth	0.527**	0.529**	0.520**	0.483**	0.484**	0.478**
	(0.034)	(0.034)	(0.035)	(0.039)	(0.039)	(0.038)
GDP per Capita	-0.000	-0.000	0.000	-0.000	-0.000	-0.000
	(0.938)	(0.927)	(0.809)	(0.853)	(0.863)	(0.987)
Foreign Subsidiaries	0.779	0.778	0.782	0.796	0.795	0.792
	(0.165)	(0.165)	(0.160)	(0.158)	(0.158)	(0.156)
Constant	-42.861***	-42.832***	-47.170***	-50.424***	-50.337***	-56.012***
	(0.000)	(0.000)	(0.002)	(0.000)	(0.000)	(0.001)
Observations	8681	8681	8681	8681	8681	8681
r2	0.072	0.071	0.067	0.072	0.072	0.067

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 17 - Robustness Check - RE, cluster on firm-level						
	(1) Number of Internationalization Projects	(2) Number of Internationalization Projects	(3) Number of Internationalization Projects	(4) Number of Internationalization Projects	(5) Number of Internationalization Projects	(6) Number of Internationalization Projects
Government Ownership % (> 20)	0.019			0.035		
	(0.708)			(0.503)		
Government Ownership % (> 10)		0.011			0.024	
		(0.823)			(0.650)	
Non-Government Ownership %			-0.010			-0.027
			(0.838)			(0.587)
Control of Corruption	2.214	2.404	-4.438			
	(0.401)	(0.373)	(0.225)			
Political Stability				3.502**	3.591**	-4.244**
				(0.026)	(0.025)	(0.019)
Government Ownership % (> 20) * Control of Corruption	0.025					
	(0.745)					
Government Ownership % (> 10) * Control of Corruption		0.009				
		(0.907)				

Non-Government Ownership % * Control of Corruption			0.096			
			(0.261)			
Government Ownership % (> 20) * Political Stability				0.024		
				(0.491)		
Government Ownership % (> 10) * Political Stability					0.016	
					(0.659)	
Non-Government Ownership % * Political Stability						0.020
						(0.615)
Final Ownership %	-0.014	-0.011	0.001	-0.018	-0.015	0.006
	(0.590)	(0.669)	(0.990)	(0.493)	(0.561)	(0.922)
Chain Length	-0.986	-0.969	-0.917	-1.104	-1.076	-1.093
	(0.526)	(0.534)	(0.553)	(0.487)	(0.498)	(0.493)
ROA	0.029	0.029	0.029	0.027	0.028	0.028
	(0.578)	(0.575)	(0.576)	(0.610)	(0.604)	(0.605)
Log Assets	4.428***	4.444***	4.395***	4.531***	4.541***	4.532***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Log Age	-2.490*	-2.508*	-2.425*	-2.219	-2.239	-2.221
	(0.085)	(0.083)	(0.089)	(0.127)	(0.124)	(0.124)
GDP Growth	0.542**	0.543**	0.543**	0.537**	0.538**	0.537**
	(0.027)	(0.026)	(0.026)	(0.033)	(0.033)	(0.033)
GDP per Capita	0.000	0.000	0.000	-0.000	-0.000	-0.000
	(0.803)	(0.794)	(0.832)	(0.517)	(0.519)	(0.490)
Foreign Subsidiaries	0.792	0.791	0.791	0.799	0.798	0.798
	(0.157)	(0.156)	(0.156)	(0.154)	(0.154)	(0.154)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-38.814***	-39.006***	-38.796***	-38.439***	-38.525***	-38.270***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	8681	8681
r2	0.068	0.068	0.068	0.069	0.068	0.068

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 18 - Robustness Check - RE, cluster on firm-level						
	(1) Number of Internationalization Projects	(2) Number of Internationalization Projects	(3) Number of Internationalization Projects	(4) Number of Internationalization Projects	(5) Number of Internationalization Projects	(6) Number of Internationalization Projects
Government Ownership % (> 20)	0.129			0.153		
	(0.256)			(0.202)		
Government Ownership % (> 10)		0.115			0.139	
		(0.308)			(0.241)	
Non-Government Ownership %			-0.063			-0.075
			(0.481)			(0.403)
Political Constraints 3	1.128	1.095	3.299			
	(0.777)	(0.788)	(0.466)			
Political Constraints 5				-1.817	-1.866	0.026
				(0.356)	(0.359)	(0.989)
Government Ownership % (> 20) * Political Constraints 3	0.273					
	(0.189)					
Government Ownership % (> 10) * Political Constraints 3		0.263				
		(0.205)				

Non-Government Ownership % * Political Constraints 3			0.053			
			(0.641)			
Government Ownership % (> 20) * Political Constraints 5				0.292*		
				(0.092)		
Government Ownership % (> 10) * Political Constraints 5					0.283*	
					(0.099)	
Non-Government Ownership % * Political Constraints 5						0.001
						(0.984)
Final Ownership %	0.014	0.019	0.093	0.010	0.015	0.092
	(0.705)	(0.613)	(0.359)	(0.789)	(0.695)	(0.361)
Chain Length	-1.193	-1.181	-1.275	-1.153	-1.142	-1.420
	(0.429)	(0.434)	(0.397)	(0.453)	(0.457)	(0.355)
ROA	0.008	0.009	0.011	0.007	0.008	0.014
	(0.886)	(0.875)	(0.841)	(0.897)	(0.888)	(0.808)
Log Assets	4.395***	4.395***	4.441***	4.435***	4.433***	4.441***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Log Age	-2.291	-2.304	-2.298	-2.559*	-2.568*	-2.582*
	(0.130)	(0.130)	(0.130)	(0.098)	(0.099)	(0.098)
GDP Growth	0.495*	0.496*	0.483*	0.499*	0.499*	0.489*
	(0.080)	(0.080)	(0.086)	(0.077)	(0.077)	(0.082)
GDP per Capita	0.000	0.000	0.000	0.000	0.000	0.000
	(0.421)	(0.416)	(0.360)	(0.411)	(0.409)	(0.387)
Foreign Subsidiaries	1.162	1.162	1.167	1.153	1.153	1.157
	(0.395)	(0.395)	(0.393)	(0.399)	(0.399)	(0.398)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-40.238***	-40.354***	-40.654***	-40.146***	-40.252***	-39.955***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	8681	8681
r2	0.063	0.062	0.061	0.063	0.063	0.060

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 19 - Robustness Check - RE, cluster on firm-level

	(1) Internationalization Scope within MENA	(2) Internationalization Scope within MENA	(3) Internationalization Scope within MENA	(4) Internationalization Scope within MENA	(5) Internationalization Scope within MENA	(6) Internationalization Scope within MENA
Government Ownership % (> 20)	0.025			0.026		
	(0.117)			(0.111)		
Government Ownership % (> 10)		0.027*			0.027*	
		(0.091)			(0.085)	
Non-Government %			-0.025			-0.026*
			(0.103)			(0.092)
Legal Development, region-relative	-0.323	-0.290	0.648			
	(0.275)	(0.316)	(0.134)			
Financial Market Development, region-relative				-0.309	-0.254	0.904**
				(0.348)	(0.430)	(0.047)
Government Ownership % (> 20) * Legal Development, region-relative	-0.032*					
	(0.098)					

Government Ownership % (> 10) * Legal Development, region-relative		-0.032*				
		(0.079)				
Non-Government Ownership % * Legal Development, region-relative			-0.003*			
			(0.058)			
Government Ownership % (> 20) * Financial Market Development, region-relative				-0.049*		
				(0.051)		
Government Ownership % (> 10) * Financial Market Development, region-relative					-0.050**	
					(0.042)	
Non-Government Ownership % * Financial Market Development, region-relative						-0.013*
						(0.079)
Final Ownership %	-0.001	-0.001	0.024	-0.001	-0.001	0.024
	(0.923)	(0.936)	(0.173)	(0.924)	(0.938)	(0.182)

Chain Length	-0.660*	-0.661*	-0.669*	-0.681*	-0.683*	-0.690*
	(0.092)	(0.093)	(0.088)	(0.083)	(0.084)	(0.081)
ROA	-0.006	-0.006	-0.006	-0.007	-0.007	-0.007
	(0.480)	(0.479)	(0.477)	(0.428)	(0.426)	(0.438)
Log Assets	1.194***	1.185***	1.203***	1.194***	1.186***	1.197***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.119	-0.126	-0.170	-0.139	-0.143	-0.190
	(0.711)	(0.696)	(0.610)	(0.673)	(0.664)	(0.575)
GDP Growth	0.037	0.038	0.036	0.036	0.037	0.036
	(0.418)	(0.413)	(0.437)	(0.437)	(0.431)	(0.435)
GDP per Capita	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.356)	(0.350)	(0.444)	(0.418)	(0.407)	(0.542)
Foreign Subsidiaries	0.077	0.077	0.078	0.080	0.080	0.080
	(0.322)	(0.322)	(0.316)	(0.308)	(0.308)	(0.308)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-11.799***	-11.695***	-11.743***	-11.737***	-11.648***	-11.592***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	8681	8681
r2	0.058	0.057	0.055	0.058	0.058	0.055

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 20 - Robustness Check - RE, cluster on firm-level						
	(1) Internationalization Scope within MENA	(2) Internationalization Scope within MENA	(3) Internationalization Scope within MENA	(4) Internationalization Scope within MENA	(5) Internationalization Scope within MENA	(6) Internationalization Scope within MENA
Government Ownership % (> 20)	0.024			0.028*		
	(0.124)			(0.088)		
Government Ownership % (> 10)		0.026*			0.030*	
		(0.098)			(0.069)	
Non-Government Ownership %			-0.026*			-0.028*
			(0.087)			(0.071)
Control of Corruption, region-relative	-0.807	-0.742	2.129**			
	(0.234)	(0.280)	(0.023)			
Political Stability, region-relative				-0.894*	-0.856*	1.597**
				(0.065)	(0.073)	(0.024)
Government Ownership % (> 20) * Control of Corruption, region-relative	-0.047					
	(0.128)					

Government Ownership % (> 10) * Control of Corruption, region-relative		-0.047				
		(0.124)				
Non-Government Ownership % * Control of Corruption, region-relative			-0.037			
			(0.107)			
Government Ownership % (> 20) * Political Stability, region-relative				-0.028		
				(0.136)		
Government Ownership % (> 10) * Political Stability, region-relative					-0.029	
					(0.123)	
Non-Government Ownership % * Political Stability, region-relative						-0.013
						(0.286)
Final Ownership %	-0.002	-0.001	0.023	-0.002	-0.002	0.025
	(0.863)	(0.878)	(0.195)	(0.803)	(0.825)	(0.164)
Chain Length	-0.628	-0.631	-0.599	-0.731*	-0.727*	0.714*
	(0.113)	(0.112)	(0.132)	(0.067)	(0.069)	(0.074)

ROA	-0.004	-0.004	-0.004	-0.005	-0.005	-0.005
	(0.657)	(0.657)	(0.617)	(0.588)	(0.591)	(0.572)
Log Assets	1.213***	1.204***	1.210***	1.252***	1.243***	1.253***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.107	-0.115	-0.126	-0.136	-0.140	-0.180
	(0.728)	(0.710)	(0.695)	(0.662)	(0.652)	(0.581)
GDP Growth	0.041	0.041	0.041	0.046	0.046	0.047
	(0.374)	(0.376)	(0.373)	(0.317)	(0.316)	(0.307)
GDP per Capita	-0.000	-0.000	-0.000	-0.000*	-0.000*	-0.000*
	(0.178)	(0.177)	(0.166)	(0.073)	(0.074)	(0.051)
Foreign Subsidiaries	0.081	0.081	0.081	0.080	0.080	0.080
	(0.298)	(0.298)	(0.300)	(0.303)	(0.304)	(0.304)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-11.886***	-11.783***	-11.711***	-11.944***	-11.857***	-11.708***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	8681	8681
r2	0.059	0.058	0.058	0.058	0.058	0.057

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 21 - Robustness Check - RE, cluster on firm-level						
	(1) Internationalization Scope within MENA	(2) Internationalization Scope within MENA	(3) Internationalization Scope within MENA	(4) Internationalization Scope within MENA	(5) Internationalization Scope within MENA	(6) Internationalization Scope within MENA
Government Ownership % (> 20)	0.024			0.023		
	(0.124)			(0.125)		
Government Ownership % (> 10)		0.025*			0.024*	
		(0.096)			(0.100)	
Non-Government %			-0.025			-0.026*
			(0.102)			(0.081)
Political Constraints 3, region-relative	-0.275	-0.198	-0.769			
	(0.819)	(0.870)	(0.628)			
Political Constraints 5, region-relative				0.657	0.742	-0.031
				(0.346)	(0.289)	(0.977)
Government Ownership % (> 20) * Political Constraints 3, region-relative	-0.052					
	(0.324)					

Government Ownership % (> 10) * Political Constraints 3, region-relative		-0.054				
		(0.302)				
Non-Government Ownership % * Political Constraints 3, region-relative			-0.001			
			(0.978)			
Government Ownership % (> 20) * Political Constraints 5, region-relative				-0.030		
				(0.485)		
Government Ownership % (> 10) * Political Constraints 5, region-relative					-0.036	
					(0.394)	
Non-Government Ownership % * Political Constraints 5, region-relative						-0.018
						(0.503)
Final Ownership %	-0.001	-0.001	0.025	-0.002	-0.002	0.024
	(0.943)	(0.946)	(0.169)	(0.843)	(0.835)	(0.176)

Chain Length	-0.711*	-0.714*	-0.727*	-0.763*	-0.762*	-0.767**
	(0.064)	(0.063)	(0.057)	(0.052)	(0.053)	(0.049)
ROA	-0.006	-0.006	-0.006	-0.006	-0.006	-0.006
	(0.449)	(0.449)	(0.463)	(0.513)	(0.510)	(0.497)
Log Assets	1.208***	1.200***	1.208***	1.226***	1.219***	1.218***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log Age	-0.207	-0.212	-0.216	-0.278	-0.282	-0.284
	(0.532)	(0.524)	(0.519)	(0.407)	(0.401)	(0.398)
GDP Growth	0.040	0.039	0.039	0.038	0.038	0.039
	(0.394)	(0.395)	(0.394)	(0.412)	(0.411)	(0.407)
GDP per Capita	0.000	-0.000	0.000	0.000	0.000	0.000
	(0.995)	(0.989)	(0.949)	(0.962)	(0.977)	(0.965)
Foreign Subsidiaries	0.083	0.084	0.082	0.082	0.083	0.082
	(0.285)	(0.283)	(0.291)	(0.292)	(0.288)	(0.294)
Constant	-11.845***	-11.752***	-11.854***	-11.745***	-11.657***	-11.625***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	8681	8681	8681	8681	8681	8681
r2	0.055	0.055	0.054	0.055	0.054	0.054

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table I – Correlation Matrix for OECD and MENA Countries			
OECD Countries			
	Control of Corruption	Political Stability	Political Constraints
Control of Corruption	1.000		
Political Stability	0.591	1.000	
Political Constraints	0.344	0.439	1.000
MENA Countries			
	Control of Corruption	Political Stability	Political Constraints
Control of Corruption	1.000		
Political Stability	0.661	1.000	
Political Constraints	-0.485	-0.359	1.000

The correction matrix in the table above is for respectively the 11 MENA countries from our dataset and the 37 OECD countries for the year 2017.

4. Chapter 4: Rare and Valuable: Female Board Directorship in the Middle East and North Africa

Rare and Valuable: Female Board Directorship in the Middle East and North Africa

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Abstract

Manuscript Type: Empirical
Research Questions: How do institutional norms at the micro and macro levels affect female board directorship in the MENA? What is the value of female directors on corporate boards in the MENA? How do social institutions affect the prevalence of female assignment to corporate boards and their impact on firm performance in the MENA region?
Research Findings/Insights: Amassing unique hand-collected data for 1197 publicly-listed MENA firms from 2016, we explore the predictors of female board assignments at the firm, industry, and country level and also examine the impact of female directors on firm performance. We rely on the institutional logic and legitimacy concerns to explain the predictors of female board directorship and find that foreign ownership, firms in industries with larger female employment bases, and gender parity promote female board directorship. We find, though, partial empirical support that smaller firms as well as family- and state-owned firms assign more board seats to female directors. Supporting the upper echelons view of board gender diversity, we find that female directors have a positive impact on firm accounting performance. However, reflecting a market bias against female representation in corporate hierarchy, we find a negative impact on firm performance in terms of market measures.
Theoretical/Academic Implications: Our findings contribute to the ongoing scholarly debate on the predictors of female directors on corporate boards and their value to firm outcomes. We explore the institutional factors at micro and macro levels that affect the assignment of females to corporate boards. We thus present a comprehensive study examining multiple layers of conditions that impact female board directorship. We do so by focusing on an unexplored context that is highly different not just from developed countries but also from other developing countries, with a prevalence of challenging and unfavorable institutional configurations for female participation in the workforce. We accordingly highlight the prominence of social institutions on the appointment and the value of female directors. Our findings advocate that context plays a crucial role in the assignment of female directors and their relationship to firm performance.
Practitioner/Policy Implications: We underscore the crucial role of governments in implementing reforms for more inclusive institutions and focus on improving gender parity, which entails increasing the capacity and resources for female education. We also underline the necessity of compliance or incentive structures to regulate firms' human resource practices that include hiring, pay, and succession rules. Additionally, we emphasize the value of females on corporate boards and suggest that firms can accelerate the process of institutional change by altering their organizational practices that limit the hiring and succession of females.

Keywords: Gender Diversity; Female Board Directorship; Antecedents of Female Directors; Firm Performance; Social Institutions; MENA Region

4.1. Introduction

Gender diversity in boardrooms has been a source of debate among academics, policymakers, and practitioners over the last two decades (Adams & Ferreira, 2009; Chen, Crossland, & Huang, 2016; Dezso & Ross, 2012; Post & Byron, 2015). Along with the social and ethical reasons, advocates for a higher representation of women contend that women contribute to firm value by providing unique resources, such as expertise, knowledge, and strategic advice (Carter, Simkins, & Simpsons, 2003; Miller & Triana, 2009; Nguyen & Faff, 2012; Singh, Vinnicombe, & Johnson, 2001). Female directors are also acknowledged for enhancing management accountability and leading to more effective corporate governance mechanisms (Adams & Ferreira, 2009; Terjesen, Sealy, & Singh, 2009; Triana, Miller, & Trzebiatowski, 2014). Many countries, therefore, have adopted inclusive policies to ensure gender-balanced boards within their firms.

Although women are gaining ground on high-income countries' corporate boards, gender diversity is still a critical issue in developing countries (Abdullah, Ismail, & Nachum, 2016). One context where women's presence in boardrooms is particularly limited is the Middle East and North Africa (MENA), in which thirteen of the fifteen nations with the lowest rate of women in employment are located (Global Gender Gap Report, 2015). In fact, only 17% of 1483 publicly listed companies in the MENA have female representation on their boards (Shareholder Rights, 2016). This difference mandates a closer examination of the contextual characteristics that affect gender profiles of corporate boards in the region (Abdullah et al., 2016; Terjesen et al., 2009).

Among the factors that positively affect board gender diversity are the inclusive institutions that favor female participation and succession in the workforce (Abdullah et al., 2016; Carter et al., 2003; Martín-Ugedo & Minguez-Vera, 2014). Limited female participation on corporate boards in the MENA can be traced to formal and informal institutions that regulate gender roles

within the society and determine the participation of females in the workforce. Formally, MENA countries are characterized as having significant institutional voids with high levels of economic inequality and political instability, widespread corruption, and poor legal enforcement that do not necessarily favor board gender diversity (Belkhir, Maghyereh, & Awartani, 2016; Saeed, Belghitar, & Yousaf, 2016). Following the Arab Spring, reforms in MENA countries, including Egypt, Lebanon, and the United Arab Emirates, have called for more inclusive governments that extend economic freedom and job opportunities to females (Abdelzaher & Abdelzaher, 2019). Despite reforms, MENA countries exhibit a "gender equality paradox" (World Bank, 2013). For instance, the MENA region showed substantial institutional progress during the last two decades to close gender gaps in terms of education. Indeed, in many MENA countries, girls outperform boys in standardized tests. Despite this progress and investment in female human capital, the region has one of the lowest rates of female participation in the labor force. For example, regions including East Asia and Pacific, Latin America and Caribbean, and Sub-Saharan Africa have more than 50% of the women aged 15 and above participating in the labor market. The corresponding figure drops to 20% in the MENA (World Bank, 2020).

In addition to weak formal institutions, social norms and preconceptions about the roles and capabilities of women affect women's prevalence in economic activities in the MENA (Faghih & Zali, 2018). Driven by cultural traditions, MENA societies emphasize traditional gender activities and a gender-role-based division of labor (Harris & Firestone, 1998). Accordingly, men are expected to be concerned with the economic needs of the family, while women take care of the children and the family. Therefore, labor markets in the region display the imprint of social norms that allows gender segregation in the workforce, urging women to forgo career opportunities (UNDP, 2009).

The MENA's institutional configuration, therefore, differs significantly not only from developed economies but also from developing nations, underlying the importance of studying the factors that affect female directors on corporate boards as well as the impact of female directors on firm performance outcomes. First, we rely on the institutional logic and legitimacy concerns to explain the predictors of female board directorship. In contrast to the established "value-in-diversity" hypothesis in the West, we argue that the appointment of female directors in the MENA reduces rather than enhances organizational legitimacy, and risks exposing the firm to negative social evaluations from key stakeholders, including investors, creditors, and employees. We thus expect MENA firms to be generally averse to appointing female directors. Our empirical findings for the antecedents, however, do not fully support our claim that larger firms have fewer female directors as they face greater pressures in conforming to societal expectations. While we argue that family-owned firms are more likely to assign women to their boards because they prioritize the retention of control, and that state-ownership generally increases the probability of assigning women to corporate boards in emerging markets, our empirical findings suggest that family- and state-owned firms do not necessarily assign more board seats to female directors. Foreign ownership, on the other hand, follows a home-bias and promotes more females in the boardroom. Focusing on the industry level, we argue that institutional normative pressures differ within industries. Accordingly, we find that firms in industries with larger female employment bases are more likely to have female directors on their boards. At the national level, we underline the eminent influence of cultural configurations and societal expectations in the MENA countries on the role of women in the workforce. Our findings suggest that countries with higher gender equality support the presence of women on firms' boards.

Second, based on the upper echelons view, we investigate the impact of female directors on firm performance and argue that this impact is shaped by cultural and social views of women

in the labor force. We thus explain that female directors in the MENA region contribute to firm value but their appointment constitutes a serious deviation from established norms with respect to the perceived role and ability of women in society. Specifically, MENA firms that have female directors are likely to be perceived as violating deeply-rooted institutional norms that view men as more capable organizational leaders. Accordingly, we find that while female directors have a positive impact on firm accounting performance, they have a negative impact on firm performance in terms of market measures.

Our study aims to contribute to the ongoing scholarly debate on the factors that predict female directors on corporate boards and their value to firm outcomes. First, previous research explored the predictors of female directors at organizational or industry levels (Brammer, Millington, & Pavelin, 2007; Hillman, Shropshire, & Cannella Jr, 2007) but did not sufficiently consider the role of national context and cultural and social factors shaping gender diversity when examining the antecedents of female directorship and the board diversity-performance relationship (Johnson, Schnatterly, & Hill, 2013; Pye & Pettigrew, 2005), despite the substantial promise of the macro-contextual explanations in reconciling mixed evidence from individual studies. A comprehensive analysis exploring the influence of factors at micro and macro levels on the appointment of females to corporate boards is yet to be presented. We accordingly focus on characteristics at organizational, industrial, and national levels to systematically explore multiple layers of conditions that affect the likelihood of firms assigning female directors on corporate boards. Additionally, as a range of theories invoked the impact of female directors and yielded mixed evidence, the upper echelons theory provides a clear theoretical foundation for linking board diversity with firm performance (Post & Byron, 2015). In its core premise, the theory underlines that directors differ in their cognitive frames, and that these cognitive frames, in turn, impact firm

outcomes (Hambrick, 2007). We hence consider the effect of institutional, cultural, and social factors on female directors' perceived roles on boards in influencing their actual impact on firm performance. We rely on the institutional theory to explain how the legitimacy and prevalence of female directors is shaped by organizational, industrial, and national contingencies (Grosvold, Brammer, & Rayton, 2007; Hillman et al., 2007) and on the upper echelons theory to explain the value of female directors in corporate boards (Hambrick, 2007; Post & Byron, 2015).

Second, we focus on a unique context where the impact of institutional barriers is particularly elevated (Farah, Elias, & Aguilera, 2021). Existing empirical studies – whether on the predictors or the value of female directors - are limited to high-income countries, with minimal focus on emerging economies, leaving the MENA region completely unexplored. Gender participation is mostly shaped by the institutional context in which it takes place (Abdullah et al., 2016; Chizema, Kamuriwo, & Shinozawa, 2015). The unique institutional configurations of the MENA region can advance our understanding of the ways formal rules and social norms embedded in micro and macro levels shape the prevalence of women directors on corporate boards. The conflicting conditions in the region indeed offer a "paradox", as in some MENA countries, females achieve better educational success, yet societal expectations do not fully favor their participation in the workforce. We therefore aim to shed light on the predictors and performance outcomes of female board assignments against the backdrop of this rich context that has the most challenging and unfavorable institutional configurations for female participation in the workforce.

4.2. Theoretical Framework and Hypotheses

4.2.1. Gender Diversity and Corporate Boards in the MENA

Corporate boards are increasingly becoming more diverse (Zhu, Shen, & Hillman, 2014). This diversity leads to greater variety in human capital, social connections, and cognitive models (Carter et al., 2003). While the institutional theory emphasizes that various institutional, cultural, social, and demographic variations influence board diversity (Grosvold et al., 2007), the upper echelons theory stresses the importance of diversity in directors' cognitive frames (Hambrick, 2007). Accordingly, a diverse board offers rich resources that improve the overall decision-making quality of the board (Hillman, Cannella, & Harris, 2002). Among proxies of diversity that include nationality, age, tenure, and professional experience, gender helps capture the differences between male and female directors' human capital, social capital, and cognitive models, which in turn influence firm outcomes (Dezso & Ross, 2012).

To promote gender diversity on corporate boards, many countries, including France, Sweden, and Norway, have amended policies by enacting gender quotas or introducing "comply or explain" codes to corporate boards (Terjesen, Aguilera, & Lorenz, 2015; Thams, Bendell, & Terjesen, 2018). As a result, women are rapidly progressing in corporate boards, especially in Europe. Since 2004, the percentage of women leading European listed companies has increased from 9.1% to 32.1% due to national initiatives to promote diversity (CWDI, 2018). This movement to promote gender diversity on boards has recently seen a marked success as 44% of new appointees to Fortune 500 directorships in 2019 were women (Heidrick & Struggles, 2020).

Some MENA countries have also introduced gender quota legislations and other strategies to promote gender diversity in boardrooms. For example, the United Arab Emirates Cabinet passed a rule in 2012 that mandated all corporations and government agencies to include women on their

boards of directors. The Egyptian Institute of Directors of the Ministry of Investment has also set standards for promoting diversity. The Women on Boards initiative by the Lebanese League for Women in Business has called for 30% representation of women on corporate boards by 2025 (Deloitte, 2020). Despite these efforts, female board directorship remains scarce in the region.

Limited female participation on corporate boards in the MENA is one of the indicators of poor governance and deep institutional voids (Aguilera, Marano, & Haxhi, 2019; Gao, Zuzul, Jones, & Khanna, 2017). Indeed, some MENA countries suffer from significant levels of economic and political instability that led to the Arab Spring calling for governance reforms to better regulate economic and political spheres (Hertog, 2019). Despite significant efforts, the degree of reliability and protection in the region's institutions is still considerably wanting. Capital markets in the MENA remain weak compared to advanced economies (Henry & Springborg, 2010; Hertog, 2019). The political and economic instability that dominates the region, as well as the inferior quality of jurisdictions, have contributed to the capital markets' underdevelopment over the years. Further, the media and the legislative system are still under the controlling influence of the political system, while access to business opportunities continues to be dependent on personal ties such as nepotism, tribal affinity, and patronage (Chekir & Diwan, 2014). MENA countries are consequently characterized by widespread corruption, poor legal enforcement, and substantial property rights insecurities, notably constraining the extent to which capital markets can flourish (Belkhir et al., 2016). This weak institutional context is likely to increase the degree of uncertainty in which businesses operate, encouraging conservative decision-making strategies such as board homogeneity (Saeed et al., 2016).

Institutional configurations, including legal frameworks and social norms such as gender role attitudes, restrict women's mobility, political participation, and economic choice (Grosvold et al., 2007). In many MENA countries, the economic sphere is highly male-dominant and

employment is still not viewed as a necessity for women, who should prioritize family roles and duties before pursuing careers (OECD, 2019). This reinforces the private sector's perception of women as a costly and less productive source of labor. The public sector is also dominant over economic domains and is preferred by women compared to the private sector, which has limited employment opportunities. The public sector, however, has limited growth potentials, especially in oil-poor countries, to accommodate increasing labor (World Bank, 2013).

Religion is another important factor that affects the low participation of women in the labor market by shaping different gender roles (Lehrer, 1995). About 93% of the population in the MENA were Muslim as of 2010 (Pew Research Center, 2015). Muslim women with a strong traditional identity are less likely to enter the labor market as a result of the prevailing expectations on their societal responsibilities (Hayo & Caris, 2013). Muslim gender norms tend to create barriers to women's career advancements to leadership positions to a greater extent than non-Muslims norms do (Adida, Laitin, & Valfort, 2012).

As a result of these challenges that inhibit women from choosing corporate careers, gender diversity is still strongly unbalanced among corporate boards in the MENA. Women and other minorities are subject to significant discrimination in ensuring equal job opportunities and wages, despite recent efforts toward gender equality (Jamal & Tessler, 2008). The inclusion of women in the political and corporate spheres is limited by deeply-rooted social and cultural norms as well as by societal expectations, which persist in all MENA countries (Jamal & Tessler, 2008; Salloum, Azzi, Mercier Suissa, & Khalil 2016).

Overall, most MENA countries still maintain institutional barriers to women's economic participation yet are also on the verge of change in the aftermath of the Arab Spring (Abdelzaher

& Abdelzaher, 2019). In a region where women's presence in the workforce remains a puzzle, it is important to uncover the antecedents and the value of female board assignments.

4.2.2. The Antecedents of Female Directors in the MENA

While directing attention towards institutional, industrial, or organizational characteristics that are predictive of female director appointments allows us to empirically explore the conditions under which a firm is more likely to appoint female board directors, these characteristics might dramatically be altered in emerging economies contexts such as the MENA. In fact, socio-economic factors are likely to increase the conditions of uncertainty in the working environments in many emerging markets, boosting conservative decision-making, such as board homogeneity (Saeed et al., 2016). As a result, the underrepresentation of women on boards of directors continues to be a critical reality in Middle Eastern and North African corporate life.

Research on the antecedents of female directors has explored different factors at the institutional level (Grosvold et al., 2007; Grosvold, Rayton, & Brammer, 2016; Terjesen & Singh, 2008), the regional level (Thams et al., 2018), the industry level (Brammer et al., 2007; Hillman et al., 2007), and the firm level (Hillman et al., 2007). We argue that the common denominators at all levels are the social institutions that define gender roles and influence stereotypical attitudes towards female versus male directors on corporate boards (Chizema et al., 2015; Grosvold et al., 2016). While the differing impact of social institutions affects the prevalence of females to be assigned board seats, the institutional norms at these micro and macro levels affect the acceptability of females in the upper echelons. Accordingly, we particularly examine the impact of firm size, ownership identities, industry female representation, and gender parity on the assignment of females to corporate boards.

Firm Size

Large firms are considered to be more visible and thus experience higher public scrutiny (Suchman, 1995). The latter elevates larger firms' need to abide by social norms in order to maintain their organizational legitimacy (Hillman et al., 2007). Boards' gender composition, therefore, reflects firms' responses to societal pressures regarding gender roles and female participation in the workforce.

Firm size can have differing effects on corporate boards' gender composition. Traditionally, smaller firms are believed to attract female directors because women can assume greater responsibilities in smaller organizations (Bertrand & Hallock, 2001) while larger firms tend to be run by male executives (André, 1995). Other studies have found positive associations with firm size and female directors as larger firms usually have larger boards (Adams & Ferreira, 2009; Farrell & Hirsch, 2005). Calls for more diversity on corporate boards have also led to a higher number of female directors, especially in larger firms (Burke, 2000; Hyland & Marcellino, 2002), as large organizations are more subject to public pressures and are more accountable to external constituencies (Assenova & Sorenson, 2017). Larger firms may need to respond to numerous stakeholders and hence, may be in a better position to recognize and embrace the benefits of diversity. As pressures related to gender diversity increase, it is more likely that in economies with higher shareholder pressure, larger firms will show a tendency to conform to societal expectations and comply with a more equal gender composition (Hillman et al., 2007).

However, the institutional characteristics of the MENA region alter the conditions for gender role attitudes. MENA societies tend to hold traditional gender role attitudes. Holding a conservative view concerning women's roles in society, MENA cultures predominantly believe women violate their traditional family environment by taking a job that is not segregated from men

and not related either to household work or childcare (Hayo & Caris, 2013). Therefore, in contrast to Western organizations, where a variety of stakeholders demand larger and more visible firms to increase female representation in their upper echelons (Hillman et al., 2007), large firms in the MENA may be negatively impacted by the social stigma of female director appointments. As larger firms typically face greater scrutiny and pressure to conform to societal expectations, they might nominate fewer female directors compared to smaller firms. Hence:

Hypothesis 1: In the MENA region, larger firms are less likely to have female directors on the board.

Ownership Identities

Among the important organizational features influencing the presence of women on the board is firm ownership (Abdullah et al., 2016). Firm ownership has an influence on women's presence on the board. The peculiar ownership configurations of MENA firms, characterized by block holders, high state influence, and family concentration, affect the pressures organizations face and thus their choices within these institutional forces.

State Ownership

The institutional configurations in the MENA have predominantly led women to prefer employment in state-owned organizations over the private sector. This is promoted by two factors. First, the patriarchal state structure in the region has led to a weaker private sector that cannot afford to employ women whose primary role is still viewed as family oriented (OECD, 2019). Second, governments' affirmative action policies affect the labor practices of state-owned firms. As a result, public sector employment offers a more hospitable environment for women, stemming from the conservative gender attitudes and the need to support women's reproductive roles (World Bank, 2013). The more stable job prospects and socially acceptable work hours and conditions

lead more women to prefer state-owned firms. It is therefore socially acceptable for women to participate in the workforce through state-owned enterprises (SOEs), resulting in a greater prevalence of female directors on their boards.

Evidence supporting this inference about emerging markets has indeed found that the probability of women on the board increases with state ownership (Abdullah et al., 2016; Liu, Wei, & Xie, 2014). For similar reasons, public sector firms in developed economies are more likely to have more gender balanced boards than private sector ones (Saeed at al., 2016). As the importance of good corporate governance becomes more evident in the MENA, the need to conform with corporate governance practices and to reinforce accountability to the international public may further encourage SOEs to have a better representation of women on their boards. Hence:

Hypothesis 2: In the MENA region, state-owned firms are more likely to have female directors on the board.

Family Ownership

In addition to the prevailing state ownership, the MENA region is characterized by a high degree of family-held businesses. A broad range of academic work demonstrates that women are more likely to be appointed as directors in family firms with respect to other types of ownership (Bianco, Ciavarella, & Signoretti, 2015; Ruigrok, Peck, & Tacheva, 2007). For instance, most Canadian women become directors primarily as a result of their family affiliation (Burke, 2000). These trends are particularly evident in developing countries (Abdullah et al., 2016).

The weak legal and regulatory frameworks and corporate governance structures in which MENA firms operate suggest that family shareholders are more likely to run the company themselves rather than delegate the management to outsiders (Peng & Jiang, 2010). This, in turn, will lead to a propensity for nominating directors who are close to the founding family and strongly aligned with its

interests to ensure a reliable level of control in all parts of the business (Grosvold et al., 2016). In fact, family shareholders, in an attempt to ossify alliances with their relatives and to strengthen their centralized control, are more likely to appoint female family members as directors on their boards (Bohdanowicz, 2012).

Family firms prioritize the retention of control and typically do so through the appointment of family members to the board. In some cases, family firms may have no option but to appoint women directors if no male family members are available (Shareholder Rights, 2016). In contrast, non-family firms do not face this restriction, meaning that they are unlikely to appoint women directors out of necessity. In addition, family firms are less sensitive to external pressures imposed by debt and equity markets as they primarily rely on their familial funding to finance their activities. This implies that they are likely to view any reduction in their legitimacy from the appointment of female directors as less consequential. Hence:

Hypothesis 3: In the MENA region, family-owned firms are more likely to have female directors on the board.

Foreign Shareholders

MENA economies have increasingly been moving toward liberalization of foreign investments to boost economic growth and increase the competitiveness of the business environment. This has, over time, led to an increase in the rate of foreign shareholders in the public and private sectors (UNCTAD, 2020).

Foreign shareholders from more developed economies are subject to more advanced institutional frameworks that also shape the strategies of the firms they invest in. In other words, foreign shareholder strategies heavily depend upon the institutional framework under which they operate (Meyer & Thein, 2014; Morck, Yeung, & Zhao, 2008). Developed economy institutions

increasingly favor gender diversity on corporate boards and mandate the appointment of female directors (GMI, 2013). Home country institutions are thus likely to influence foreign shareholders' investment strategies in MENA countries with institutional configurations that do not necessarily consider female representation to be a priority in board assignments. Following a home-bias in their institutional logic, foreign investors are thus more likely to invest in firms with female directors or promote higher female representation on the boards of the firms in which they invest. Hence:

Hypothesis 4: In the MENA region, firms whose largest shareholder is from outside the region are more likely to have female directors on the board.

Industry Female Representation

Although female participation in the labor force is limited in the MENA, some industries, such as education and health care, have higher female representation (OECD, 2019). A concentration of female directors in certain industries is also observed in the United States as 63% of the 183 director positions filled by women in 2018 were in the consumer goods and financial services industries (Heidrick & Struggles, 2020). In their study over 20 countries, Adams & Kirchmaier (2016) also report that the ratio of women on corporate boards is lower for firms in the science, technology, and finance sectors, which reflects an underrepresentation of females in the lower levels of the corporate hierarchy in these industries.

In general, some industries may be viewed as more fit to employ women and perceptions towards females in the workforce and in leadership positions in these industries can be especially crucial (Adams & Ferreira, 2009). This is reinforced by institutional normative forces because for firms operating in industries in which females represent larger portions of the employment base, the appointment of female directors is less likely to be perceived as a serious deviation in norms among stakeholders (Hillman et al., 2007). For example, having female board members can be

considered normal among employees who are accustomed to viewing women as colleagues. Other stakeholders such as investors also regard female directors as qualified insiders in industries with higher female representation (Abdullah et al., 2016). Therefore, women's appointments to board seats are socially more acceptable in industries with a higher representation of women. Hence:

Hypothesis 5: In the MENA region, firms in industries with larger female employment bases are more likely to have female directors on the board.

Gender Parity

The MENA region features countries with diverse economic, political, and cultural configurations. The region also presents a paradoxical context that enables females' access to education yet limits their prevalence in corporate careers. While MENA countries primarily promote women's education, gender parity in its various aspects is advancing in the region, although the extent of these progressions varies from one country to the other (World Economic Forum, 2019). As such, some countries might have more inclusive institutions that favor women's workforce participation and existence in top management roles, whereas others have institutions that question the legitimacy of women on corporate boards. Given the cross-country institutional heterogeneity, we argue that female directors will be more common in countries with greater gender parity (Post & Byron, 2015).

Gender parity refers to a society where women enjoy equal access to education, health care, employment, and political empowerment (Hausmann, Tyson, Bekhouche, & Zahidi, 2012). It provides women the opportunity to attain higher educational levels and to be appointed to top executive positions. On the one hand, women in countries with greater gender parity are more likely to possess the types of human capital suitable for board positions (Wright, Baxter, & Birkelund, 1995). On the other hand, firms operating in countries with greater gender parity are more likely to leverage the knowledge, experience, and values that female directors bring to decision-making. Higher gender

parity, therefore, not only promotes the overall legitimacy of females in economic activities, but it also limits the questionability of female board appointments. Hence:

Hypothesis 6: In the MENA region, firms in countries with higher gender parity are more likely to have female directors on the board.

4.2.3. Women Directors and Firm Performance in the MENA

The empirical evidence on the relationship between female board representation and firm performance is mixed (Post & Byron, 2015). Some studies suggest that the diversity that women bring to boards and their distinctive management style improve boards' operations, whereas others note that women's limited experience in leadership positions and their modest drive to advance to the top diminish their effectiveness as board members (Abdullah et al., 2016; Dargnies, 2012). Nonetheless, women directors in developing countries may exert a positive impact on firm performance. The upper echelons theory posits that the impact of gender diversity usually stems from the different qualities and experiences women directors offer (Hillman et al., 2007; Miller & del Carmen Triana, 2009). Accordingly, gender diversity provides diversity in thinking and enriches board discussions (Carter et al., 2003; Erhardt, Werbel, & Shrader, 2003). Women directors therefore improve team performance by adding a greater range of perspectives and by allowing better decision-making (Brammer et al., 2007), which ultimately mitigates risks and leads to improved business performance (Abdullah et al., 2016; Bear, Rahman, & Post, 2010; Burgess & Tharenou, 2002; Terjesen, Couto, & Francisco, 2016). Additionally, women directors tend to have high education levels (Hillman et al., 2002), experience with smaller firms (Singh, Terjesen, & Vinnicombe, 2008), and expertise in non-business issues, such as non-profit experience (Bear et al., 2010; Hillman et al., 2002). These unique qualities enable women directors to contribute to the board's decisions and particularly advance the human and social capital of the board. Interacting with women directors may also allow insights into the unique problem-solving skills of

female executives as women tend to bring in a transformational leadership style that promotes teamwork and reduces aggressive culture. Women are known for creating relationships within the board and for intra-group cooperation, attributes which are highly valued for the group work that defines boards' activities (Dargnies, 2012). The value of women's contributions to the board lies in their alternative leadership styles, in that they are endowed with more sensitivity and with a particular ability to resolve interpersonal conflicts (Nielsen & Huse, 2010).

Women directors can be particularly valuable in the MENA region as female directors have been found to implement good corporate governance practices and improve the board monitoring function (Adams & Ferreira, 2009). Helping to mitigate agency problems, female directors are successful in holding management accountable for conflicts of interests within the firm (Triana et al., 2014). The effect of female directors' monitoring on firm performance is particularly important in the presence of weak corporate governance systems (Adams & Ferreira, 2009) prevalent in most developing countries. As effective external monitoring systems are weak in developing economies, the role and abilities of women in overseeing management behavior are further underscored (Gul, Srinidhi, & Ng, 2011). Particularly notable in highly concentrated ownership structures like those in the MENA region, where large shareholders are required to take actions that insure a proper management monitoring, appointed women directors can exercise a positive influence through their monitoring skills. Moreover, evidence on developing countries demonstrates that the presence of female directors on boards reduces unethical ventures and the extent to which the accounting performance is manipulated and earnings are managed, increasing disclosure in financial reports (Abdullah, Ismail, & Izah, 2017).

Contributing to board dynamics, women in the MENA are known as effective communicators and collaborators (Salloum et al., 2016). In contrast, Middle Eastern and North

African men tend to manage in a less interactive way, lacking communication and innovation (Moghadam, 2004). Given such benefits, excluding a significant portion of the population is costly for firms, especially when the unincluded group is large (Ding, Murray, & Stuart, 2013). This is usually the case for women in the MENA, who suffer labor market exclusion to a greater extent than their peers in both developed and developing countries. Overall, despite the still-evident men's monopoly, MENA women have started to be recognized as valuable assets in monitoring and contributing to the decision-making and performance dynamics. Hence:

Hypothesis 7a: In the MENA region, women on the board of directors have a positive impact on firm performance in terms of accounting measures.

Nevertheless, the outcomes of female board assignments are subject to social norms so that while female directors add value to strategic decisions and thus firm profits, the market may not perceive female representation on corporate boards in a positive light. Some studies suggest that female directors contribute negatively to firm value, especially to market returns, by adding conflicts and by increasing agency costs in terms of time-consuming and less-effective decision-making (Bøhren & Strøm, 2010; Wellalage & Locke, 2013). The general idea is that more homogenous teams are likely to share common views, communicate more frequently, and cooperate more while having fewer conflicts (Earley & Mosakowski, 2000).

However, there are more deeply-rooted reasons for negative views of women on corporate boards in developing economies. A leading reason is the societies' unfavorable view of women in top managerial positions, which are regarded as masculine (Haveman & Beresford, 2012). Religion contributes to this stance as in many MENA countries as Sharia laws do not allow women to engage in economic activities alongside men. Furthermore, in markets with male dominant investors, the nomination of female directors to corporate boards is likely to be viewed as risky

and thus discounted by the market (Abdullah et al., 2016). Therefore, although women are highly qualified to contribute to firms' accounting performance, the negative social view of women in top managerial roles is likely to elicit negative market reactions in the MENA. Hence:

Hypothesis 7b: In the MENA region, women on the board of directors have a negative impact on firm performance in terms of market measures.

4.3. Data Description and Methodology

4.3.1. Data Collection and Sample

We used the Thomson Reuters Eikon database to obtain a list of all the publicly listed firms in the MENA region for 2016. Our sample was initially constituted of 1244 firms. After dropping inactive firms and firms without any board structure and composition data, the sample consisted of 1197 publicly listed firms from Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Qatar, Morocco, Saudi Arabia, Tunisia, and the United Arab Emirates. While the MENA region includes more countries, relevant data was only available for these eleven countries based on the Thomson Reuters Eikon's regional grouping when we started our study. Data on boards of directors was secondary and was obtained and coded from companies' annual reports and corporate governance reports. We first started by calculating firms' board size and the number of females and males on the board, and then created a dummy variable for whether the board has at least one female director. We differentiated between independent and non-independent board members and calculated the rate of board independence. We also gathered data on the presence, size, and membership of various committees and supervisory boards. Ownership data was retrieved from the Thomson Reuters Eikon database, from which we obtained ownership percentage, identity, and origins of the final largest owner. For the latter two variables, we created dummies indicating

whether the final largest owner is the state, a family, or any other type of ownership, and whether the final largest owner is from outside the MENA region[8]. Female employment rate was calculated based on the data from the International Labor Organization (ILOSTAT) which identifies the number of females and males employed per industry. The industry grouping that we followed was based on the ISIC 4.0 classification. Gender parity was obtained from the World Economic Forum Global Gender Gap Report. Lastly, data on firm performance (Tobin's Q and return on assets [ROA]), firm size (based on firm's total assets), firm age, and sector classification was retrieved from the Bureau van Dijk (BvD) database.

We recognize the limitation of examining gender diversity over only one single year. However, data on the board of directors in the MENA has limitations, and data available in databases was not as extensive as we would have wished in conducting this study. Information on board independence and board committees, for instance, was not available for all firms. There was oftentimes no distinction between present (active) and past (inactive) board members, and membership was generally aggregately reported over the years. This obstructed the actual board size comprised of active members, for example, and the accurate number of active female directors on the board. We therefore had to check for such information manually and accordingly needed to rely on firms' annual reports and corporate governance reports and also to manually code the information retrieved. Because of how extensive and protracted this process proved to be, we limited our data collection and consequently our analysis to a single year.

[8] While our sample is constituted of only 11 MENA countries due to data limitations, we follow the World Bank's classification of MENA countries (Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, and Yemen) in order to categorize countries as within or outside the MENA region.

4.3.2. Measurements

Dependent Variables: To test the hypotheses defining the antecedents of the appointment of female directors in the MENA, we used a dummy variable specifying the presence of at least one woman on the board of directors (BOD) (*female directors [0/1])*. In order to test the hypotheses defining the impact of female directors on firm performance, we used the market measure, *Tobin's Q*, defined as the sum of market value equity and book value of total debt (market capitalization) over the book value of total assets, and the accounting measure, *ROA*, defined as the net income before interest, taxes, and depreciation over the book value of total assets.

Explanatory Variables: The explanatory variables used in this study are firm size, ultimate ownership identity and origins, female employment ratio per industry, and gender parity.

Firm size is measured as the natural logarithm of the firm's total assets. As we explain in this study, firm size can have a significant impact on board structure and on performance (Assenova & Sorenson, 2017; Burke, 2000; Hyland & Marcellino, 2002). Next, we use two dummy variables that indicate the ownership identity, that is, whether the final largest investor is the state (*state [0/1])* or a family (*family [0/1]*). We also use a dummy specifying whether the final largest investor's country is from outside the MENA region (*investor outside MENA)* to test for differences between practices in the MENA and international social expectations. *Female industry employment rate* is measured as the ratio of female employment in industries based on the ISIC 4.0 industry classification. As for *gender parity*, it is a continuous variable that aggregately measures women's economic participation and opportunity, educational attainment, health and survival, and political empowerment. We followed the standard approach in the literature of analyzing cross-sectional data and lagged all of our independent variables by one year.

Control Variables: Our control variables include board size, board independence, Shariah Supervisory board, final ownership percentage, ownership chain length, firm age, and sector classification. We also use Tobin's Q and ROA as controls in the regressions testing the hypotheses defining the antecedents of the appointment of female directors in the MENA.

Board size measures the total number of directors on the board (Chizema, Liu, Lu, & Gao, 2015). While board size can be an essential factor for gender diversity (Burke, 2000), it can also drive agency costs and impact firm performance (Jensen, 1993; Lipton & Lorsch, 1992; Yermack, 1996). *Board independence* is proxied by the proportion of independent directors on the board (Li, Lu, Mittoo, & Zhang, 2015). *Final ownership percentage* is computed through the percentage of ownership held by the final largest investor (Faccio & Lang, 2002). An additional measure of ownership concentration controls for the *chain length,* which is the length of the sequence of investors, each of which has control to a certain extent over the next one, until reaching the end of the ownership chain of each firm. Board independence as well as ownership concentration and structure were found to have significant implications on firm strategies and performance (Daily, Dalton, & Cannella Jr, 2003). We also control for *firm age* measured as the natural logarithm of the number of years since the firm was incorporated, since it is a proxy used in most studies investigating corporate boards (Chizema et al., 2015; Li et al., 2015; Liu et al., 2014). To control for industry variation, we introduce two dummy variables representing financial sector (*financial sector [0/1]*) and corporate (*corporation [0/1]*) association. The two latter primarily dominate the MENA region, where 39% and 32% of firms operate in the financial and corporate sectors respectively. Various industries are regulated differently and consequently determine the nature of market competition (Hill & Deeds, 1996). The nature of industry can thus have important implications on firms' governance, strategies, and performance. Lastly, compliance with Shariah laws is the distinctive characteristic of Islamic

financial institutions. In fact, the *Shariah supervisory board* ensures the compliance of all parts of the business with Islamic laws. We measure it as dummy variable that takes the value of 1 if the firm has a Sharia Supervisory Board, and the value of 0 otherwise. The corresponding description of each variable is presented in Table 1 below.

Insert Table 1 about here

4.3.3. Analysis

We examine the determinants of female presence on corporate boards using a series of Logit and Probit regressions in order to test hypotheses 1, 2, 3, 4, 5, and 6. The major difference between Logit and Probit models lies in the assumption on the distribution of the error terms in the model. For the Logit model, the errors are assumed to follow a standard logistic distribution while for the Probit, the errors are assumed to follow a standard normal distribution. We then examine the relationship between female presence on the board and firm performance using Ordinary Least Square (OLS) regressions in order to test hypotheses 7a and 7b. We run our models with the robust estimator of variance. For further validation of the choice of our econometric models, we also conducted the Hosmer-Lemeshov test, which confirmed that our Logit and Probit models fit reasonably well. As for our OLS regressions, we acknowledge that endogeneity might drive the relationships between firm performance and female presence on the board, which would violate the causal relationship we assume between them. Endogeneity occurs when a variable, observed or unobserved, that is not included in our model, is related to an explanatory variable and the outcome variable. Although we recognize this issue, we believe that our data and study design reduce these endogeneity concerns in our analysis. Our variable measuring female presence on the board represents the cumulative nomination of women over time, whereas our performance measures are at one point in time. We hence use Tobin's Q and ROA measures for the year 2016, and for

further validation, for the years 2017 and 2018 as well. The time lag introduced between the appointment of females on the board and performance outcomes consequently eliminates the possibility of reverse causality. We nevertheless run some robustness checks to assess the soundness of our results (see section below).

We also use Propensity Score Matching (PSM) (Imbens & Wooldridge, 2009; Rosenbaum & Rubin, 1983). PSM provides a way to create a counterfactual performance for the purpose of comparison. Specifically, PSM generates a vector score using all covariates for each observation, and then matches it with the closest scoring observation in the respective subset. It then estimates the differences between the presence of at least one woman on the BOD and absence of women on the BOD for each of the dependent variables. Since the female directors variable is a dummy, we use PSM to construct comparisons between the treatment (female directors = 1) and the control group (female directors = 0) based on the controls used in our main analysis: board size, board independence, Shariah Supervisory board, final ownership percentage, ownership chain length, firm age, and sector classification.

4.4. Results

Table 2 provides an overview of the summary statistics of our variables. The descriptive statistics of the female directors are presented in Panel A and show that around 20% of firms have at least one female on their boards. The descriptive statistics of the performance variables are presented in Panel B, where the mean values for Tobin's Q and ROA are 0.711 and 2.155 respectively for 2016, 0.693 and 1.949 for 2017, and 0.690 and 1.426 for 2018. The mean value of firm size is 5.371 and that of family, state, and outside the MENA ownership is 0.387, 0.267, and 0.199 respectively. Female employment industry ratio is on average 0.157 and gender parity 0.665.

Insert Table 2 about here

A correlation matrix including ownership, performance, and control variables altogether is presented in Table 3. The correlation table suggests that bivariate correlations are unlikely to be a concern, given that all are smaller than 0.7, which Kennedy (2003) indicates as the threshold at which multicollinearity is likely to become problematic. For the exceptions that are higher than 0.7, the corresponding variables would not be included in the same table. Our results for the maximum VIF for each regression are all less than 5 and hence indicate that multicollinearity is unlikely to be an in issue in our analysis.

Insert Table 3 about here

In model 1 of Table 4, we examine the impact of firm size on the appointment of female directors based on Logit regressions. The results show that firm size is negative and significant with female directors (coef. = -0.236, $p<0.05$), indicating that larger-sized firms are less likely to have females on their boards. The state and family dummy variables in models 2 and 3 respectively are insignificant. In model 4, the final largest investor outside the MENA dummy variable is positive and highly significant with female directors (coef. = 0.659, $p<0.01$). These results indicate that firms with owners from outside the MENA are more likely to appoint female directors. Model 5 shows that the female industry employment ratio is positive and highly significant with female directors (coef. = 2.959, $p<0.01$), indicating that firms in industries with larger female employment bases are more likely to have female directors on their boards. The gender parity variable is positive and highly significant with female directors (coef. = 59.937, $p<0.01$) in Model 6. These results indicate that countries with higher gender equality support the presence of women

on firms' boards. We also run our independent variables altogether in one regression, as seen in model 7, in order to assess the robustness of our model. The results are consistent, except for firm size, which becomes insignificant and the state dummy, which becomes positive and marginally significant with female directors (coef. = 0.458, $p<0.10$), indicating that government ownership positively affects the presence of female directors on firms' boards. The family dummy remains insignificant, the final largest investor outside the MENA dummy is positive and significant (coef. = 0.670, $p<0.05$), and the female industry employment ratio and the gender parity variable remain positive and highly significant with female directors (coef. = 3.173/65.266, $p<0.01$). Next, we re-run the regression from model 7 without the gender parity variable. As seen in model 8, firm size becomes negative and significant (coef. = -0.242, $p<0.05$), the state dummy remains positive and marginally significant (coef. = 0.420, $p<0.10$), the family dummy becomes positive and marginally significant (coef. = 0.402, $p<0.10$), and both the final largest investor outside the MENA dummy and the female industry employment ratio are positive and highly significant with female directors (coef. = 0.797/2.708, $p<0.01$). As the significance of firm size and family dummy alter, the results indicate that gender parity is an essential variable for the overall robustness and proper assessment of our model. Overall, the results of the Logit regressions support hypotheses 4, 5, and 6, and partially support hypotheses 1, 2, and 3.

Insert Table 4 about here

In model 1 of Table 5, we examine the impact of firm size on the appointment of female directors based on Probit regressions. The results show that firm size is negative and significant with female directors (coef. = -0.145, $p<0.05$), indicating that larger-sized firms are less likely to have females on their boards. The state and family dummy variables in models 2 and 3 respectively are

insignificant. In model 4, the final largest investor outside the MENA dummy variable is positive and highly significant with female directors (coef. = 0.388, $p<0.01$), indicating that firms with owners from outside the MENA are more likely to appoint female directors. The results in Model 5 show that the female industry employment ratio is positive and highly significant with female directors (coef. = 1.716, $p<0.01$) and indicate that firms in industries with larger female employment bases are more likely to have female directors on their boards. The gender parity variable is positive and highly significant with female directors (coef. = 31.795, $p<0.01$) in model 6. These results indicate that countries with higher gender equality support the presence of women on firms' boards. Here too, we ran our independent variables altogether in one regression, as seen in model 7. Firm size becomes insignificant, the state and the family dummies become positive and marginally significant with female directors (coef. = 0.259/215, $p<0.10$). These results indicate that family and government ownership positively affect the presence of female directors on firms' boards. The final largest investor outside the MENA dummy is positive and significant (coef. =0.401, $p<0.05$) and the female industry employment ratio and the gender parity variable remain positive and highly significant with female directors (coef. = 1.839/35.772, $p<0.01$). Next, we re-run the regression from model 7 without the gender parity variable. Model 8 shows that the results are consistent except for firm size, which becomes negative and significant (coef. = -0.141, $p<0.05$). The state and family dummies remain positive and marginally significant (coef. = 0.242/242, $p<0.10$) and both the final investor outside the MENA dummy and the female industry employment ratio are positive and highly significant with female directors (coef. = 0.471/1.585, $p<0.01$). As the significance of firm size alters, these results indicate once more that gender parity is an essential variable in our model. Overall, the results of the Probit regressions are consistent with those of the Logit regressions and support hypotheses 4, 5, and 6 and partially support hypotheses 1, 2, and 3.

Insert Table 5 about here

We then examine the relationships between female presence on the board and firm performance using market (Tobin's Q) and accounting (ROA) measures for the years 2016 and 2017 based on OLS regressions in Table 6. For the performance measures for 2016, the female directors variable is negative and highly significant with Tobin's Q (coef. = -0.157, $p<0.01$) but insignificant with ROA. For the performance measures for 2017, the female directors variable is negative and highly significant with Tobin's Q (coef. = -0.139, $p<0.01$) and positive and marginally significant with ROA (coef. =1.203, $p<0.10$). These results support H7b, that women on corporate boards have a negative impact on firm performance in terms of market measures, and partially support H7a, that women on corporate boards have a positive impact on firm performance in terms of accounting measures.

Insert Table 6 about here

The results of the PSM are presented in Table 7. Rows 1 and 3 use Tobin's Q as the dependent variable for 2016 and 2017 respectively, while rows 2 and 4 use ROA as the dependent variable for 2016 and 2017 respectively. Rows 1 and 3 indicate that female presence on the board negatively impacts market measures, while row 4 indicates that it positively impacts accounting measures. Row 2 however presents no significant results.

Insert Table 7 about here

4.5. Robustness Checks

We conducted several robustness checks: First, consistent with previous studies using one-year-lagged variables to mitigate reverse causality biases (Carter, D'Souza, Simkins, & Simpson, 2010), we lagged the control variables Tobin's Q and ROA in the Logit and Probit regressions by one year. Second, we lagged all the control variables including Tobin's Q and ROA by one year in order to assess the soundness of the results. Third, we use the lagged values of the control variables including Tobin's Q and ROA as well as the lagged values of all the independent variables. Fourth, we lagged the outcome variable by one year and included it as an additional explanatory variable. The results of these four robustness tests are generally consistent with our initial analysis. In the first test (Tables 8 and 9), we find support for hypotheses 4, 5, and 6 and partial support for hypotheses 1, 2, and 3 in both Logit and Probit regressions. In the second test (Tables 10 and 11), we find support for hypotheses 3, 4, 5, and 6 and partial support for hypotheses 1 and 2. The results of the third test (Tables 12 and 13) were not as consistent with our initial analysis, where we find support for hypotheses 5 and 6, but partial support for hypotheses 1 and 4, and no support for hypotheses 2 and 3. In the fourth test (Tables 14 and 15), we find support for hypotheses 4, 5, and 6 and partial support for hypotheses 1, 2, and 3.

For our fifth test, we ran our OLS regressions on performance measures for the year 2018 in order to introduce an additional time lag and eliminate the possibility of reverse causality. The results in Table 16 do not fully support our initial findings where the female directors variable is positive and marginally significant with ROA, supporting H7a but insignificant with Tobin's Q, providing no support for H7b. Sixth, we lagged the outcome variable by one year and then by two years and included them as additional explanatory variables. The results in Tables 17 and 18 support H7b and partially support H7a. Four our seventh robustness check, we lagged the control

variables by one year. The results in Table 19 support H7b and partially support H7a. Lastly, for our eighth test, we used the lagged values of the control variables and lagged values of all the independent variables. The results in Table 20 partially support H7b but do not support H7a. The results of these robustness checks are presented in Appendix E.

Insert Appendix E about here

Additionally, we winsorized our performance variables, in which the left and the right winsorized values are within 1st and 99th percentile. Next, we separately added two sets of additional controls in all of our regressions: (1) firm country dummy variable, and (2) ratio of debt over total assets, ratio of R&D over total sales, and ratio of receivables and inventories over total assets. The second set of controls was only included in our robustness checks because relevant data was only available for less than 65% of observations. The results of these two robustness checks are consistent with our initial analysis and thus support our findings. We have therefore kept them un-tabulated.

4.6. Discussion

Our paper aims to shed light on the ongoing scholarly debate on the predictors and value of female directors on corporate boards in a region distinguished by its conflicting and challenging institutions that limit female participation in the workforce. Previous studies have predominantly explored the link between board gender diversity and firm outcomes using various theoretical perspectives and yielding mixed results (Post & Byron, 2015). Although scholars have investigated the effect of various factors on the antecedents of female directors, there is limited exploration on the impact of the institutional context on the existence and value of females on corporate boards (Johnson et al., 2013). Existing research in this regard primarily focuses on high-income countries. This gap is thus

particularly exacerbated in emerging economies (Abdullah et al., 2016), and specifically the MENA. The region is further distinguished from emerging economies with its prominent levels of economic and political conflicts that continue to exaggerate institutional voids and lead to unstable business contexts dominated by the public sector (Farah et al., 2021). The MENA region also has a more conservative view of women's roles in society – women are believed to be violating their traditional family environments if they take a job that is not segregated from men and not related either to household work or childcare (Hayo & Caris, 2013; Hofstede, 1998). The importance and timeliness of our study is heightened by the weak institutional constructs typical of MENA countries, the absence of sound mechanisms for corporate control, and the overall cultural and social norms discouraging females in the workplace and in managerial roles, as well as by the lack of empirical investigations of the MENA and of the reforms and progress that the region continues to undergo to decrease gender gaps. By exploring factors at the micro and macro levels that affect the appointment of women to corporate boards, our study emphasizes that a comprehensive analysis that examines multiple layers of conditions renders a more extensive understanding of the predictors of female board directorship. We do so by focusing on an unexplored context that is highly different not just from developed countries but also from other developing countries, made prevalent by challenging and unfavorable institutional configurations for female participation in the workforce. We accordingly highlight the prominence of social institutions on the appointment and the value of female directors. Our findings advocate that context indeed plays a crucial role in the assignment of female directors and in their relationship to firm performance.

Our findings for the predictors of female directors on corporate boards primarily support an institutional logic that urges MENA firms to be averse to appointing female directors (Terjesen et al., 2015). Our empirical results, however, do not fully support our statement that smaller firms favor

females on corporate boards. Following the same institutional logic in a different context, our claims contrast those of Hillman et al. (2007), who argue that larger firms in the United States appoint female directors to maintain their organizational legitimacy and to comply with the institutional pressures that scrutinize corporate boardrooms for gender diversity. However, we find that firm size does not necessarily impact the appointment of women to corporate boards. A possible explanation is that although individual efforts and performance may be more evident in smaller organizations, and women may have more opportunities to reach leadership positions, the MENA's extreme institutional configurations and conservative view of women raise institutional pressures, even on smaller firms. The adverse institutional pressures in the MENA are likely to impact all firm sizes. These findings highlight the region's overall opposing norms and attitudes towards females in the workforce and the absence of institutions that promote gender parity and a more inclusive society as well as the deficiencies and inadequate corporate governance structures that continue to limit female directorship.

Ownership identities indicate that state and family ownership do not necessarily correlate with higher levels of female directors on the board. This might be explained by firms' aversion to appointing females to top management positions despite employing them in lower-level roles. Institutional pressures against women might increase as females climb the corporate ladder, decreasing the incentives of family- and state-owned firms to appoint women as board directors. In high-income countries, state-owned companies are managed in compliance with corporate governance frameworks, which emphasize the value of having women on boards on both economic and ethical grounds. As a result, it is often the case that state-owned firms are more attentive to the board's gender composition than private firms. However, state-owned firms are also operated in compliance with the state values (Grosvold, 2011), which in the MENA do not translate into taking advantage of women's potential in business environments but rather into ossifying the societal

expectations of their roles as limited to the family dimension. Our results reveal that the need to conform with corporate governance practices and to reinforce accountability to the international public is still not a strong enough driver to ensure convergence in the corporate governance framework at the state level. Foreign-owned firms, on the other hand, are likely to be biased for their home institutions (Meyer & Thein, 2014) that mandate higher female inclusion on corporate boards. Our findings support this view as we find foreign ownership promotes more females in the boardroom in the MENA. Foreign shareholders are therefore found to be more willing to appoint women as directors as they are relatively less constrained by the region's social norms.

We also underscore the importance of an institutional logic at the industry level because for firms operating in industries in which females represent larger portions of the employment base, the appointment of female directors is perceived in a more positive light among stakeholders (Hillman et al., 2007). Although certain industries are considered to be more fit for female employment, our findings underscore the importance of underlying normative forces that can shift individuals' views of women in top executive positions.

At a macro level, we show that countries with higher gender parity support the presence of women on a firm's board. MENA countries have many shared characteristics yet differ in the degree and scope of institutional rules and norms that dictate firm behavior. This heterogeneity enables us to examine the role that gender parity plays in female director appointments. Accordingly, we show that countries that provide more opportunities for females in terms of access to education and jobs have more female directors on corporate boards. These findings support the importance of inclusive institutions that alter societal attitudes regarding female workforce participation and succession into higher level roles in the corporate world.

Our findings regarding firm performance outcomes provide insights into the value that female directors offer. Specifically, we find a positive relationship between female directors and firm accounting performance, which reflects the upper echelons view that the impact of gender diversity usually stems from the different qualities, cognitive skills, and experience women directors offer (Hillman et al., 2007; Miller & del Carmen Triana, 2009). However, the negative relationship between female directors and firm market performance reveals the dark side of the mirror that reflects the widespread societal attitudes toward women and the perceptions of their roles in top managerial positions. This suggests that female directors are subject to a biased evaluation by the market, which often overrules actual performance (Abdullah et al., 2016; Lee & James, 2007).

4.6.1. Policy and Managerial Implications

Despite little evidence from developing countries, we show that the prevalence and the influence of female directors on firm performance is deeply rooted in institutional factors. Formally, MENA countries still exhibit weak corporate governance structures that limit the promotion of women to top corporate positions. Informally, the social and cultural norms do not necessarily favor female participation in the workforce. Despite their rarity, female directors are still found to be valuable as they impact firm performance positively, granting a better understanding of the conditions that limit women's presence on corporate boards. As the region continues to undergo reforms and to make progress in reducing gender gaps, the actual translation of these improvements remains insufficient and entails greater implementations of reforms that promote more inclusive institutions and enhance gender parity. Governments, therefore, have a crucial role to play in implementing reforms for more inclusive institutions and focus on improving gender parity. On the supply side, this entails increasing the capacity and resources for female education. On the demand side, compliance or incentive structures are needed to regulate firm human resource practices that

include hiring, pay, and succession rules. In fact, the MENA region has shown great progress in reducing the gap between boys and girls in terms of access to schools as more women than men are enrolled in universities (World Bank, 2013). However, these reforms have not yet translated into sufficient levels of women participating in the workforce.

For organizations in the MENA, women represent a highly underutilized resource. Leveraging the diverse skills of females on corporate boards is likely to advance board decision mechanisms and thus their contributions to firm outcomes. Putting women's skills into action is therefore critical for MENA firms to increase their competitiveness. This is especially important given the global trends that call for higher levels of inclusiveness on corporate boards. The actions of individual firms are important during this transition as agents of institutional change. Although governments can revise their gender policies overnight, informal institutions take longer periods to change. Firms, at the micro level, can speed up this process by altering their organizational practices that limit the hiring and succession of females. A board directorship is a highly visible career positions and therefore assigning females to corporate boards might especially help the desirability of hiring women in different layers of the organizations.

Overall, curing the inequalities that women experience in attaining board positions in the MENA requires policymakers to introduce a complex mix of policy shifts, legal reforms, and higher resources for education. It also requires organizations to be more cognizant of the human capital potential of the female population and to reformulate their strategies to utilize this potential more inclusively.

4.6.2. Limitations and Future Research

Our analysis has several limitations that can be addressed by future research. First, our analysis only provides general support for women's participation on boards but no information regarding

the desired level of their presence. The small number of female directors in the MENA prevented us from gaining insights into this issue. Additionally, our study does not consider individual characteristics of female directors, which can affect the firm outcomes. Contributing to the board capital, characteristics such as education, past experience, age, and social networks can explain the impact of female directors on firm performance. These aspects of female directorship are of substantial importance as policymakers deliberate the size of gender quotas, and should receive additional research attention. A second avenue of interest might be to explore whether a board's network can alter the influence of market scrutiny. Third, given the institutional transitions and corporate governance initiatives following the Arab Spring, a temporal investigation can reveal insights regarding the impact of policy changes on the prevalence of female directors on corporate boards. Fourth, we analyzed the MENA as a whole, although some countries introduced measures that promote gender parity and gender diversity in the labor force more than others. Recognizing the heterogeneity among MENA countries in terms of institutional development, financial resources, and economic growth, we accordingly ran our analysis at a country level and found that the results are generally stable across the eleven countries. Lastly, as we limit our analysis to a single year, additional research is warranted on a more comprehensive and longitudinal dataset.

4.7. Conclusion

In this paper, we explore the predictors and firm performance outcomes of female directors in the MENA. Formal and informal configurations of institutions in the region have created an unfavorable context for female workforce participation and ultimate succession into top managerial roles. Based on an institutional logic, our findings indicate firms with foreign ownership assign more female directors on corporate boards. We also find more female board directorship in industries with a larger

female representation. Exploring the cross-country differences, we report that higher gender parity leads to more females in corporate boards. Our results, however, only partially support the argument that smaller firms, family, and state ownership positively affect female assignment on boards. Following the upper echelons view that highlights the value gender diversity provides to boards, we find a positive relationship between female directors and firm accounting performance. However, we find a reverse effect for market performance, indicating adverse market responses driven by social and cultural biases against women in the workforce in the region.

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4.9. Tables

Table 1 - Variables Description	
Variable Name	Variable Definition
Panel A: Female Directors Variables	
Female Directors	Dummy: 1 if at least one woman sits on the board of directors, 0 otherwise
Panel B: Performance Variables	
Tobin's Q	(Market Capitalization / Total Assets) * 100
ROA	(Net income / Total Assets) * 100
Panel C: Antecedents of Female Directors	
Firm Size	Natural logarithm of the firm's total assets
State Ownership	Dummy: 1 if the final largest owner is the state, 0 otherwise
Family Ownership	Dummy: 1 if the final largest owner is a family, 0 otherwise
Investor Outside MENA	Dummy: 1 if the final largest investor is from outside the MENA, 0 otherwise
Female Industry Employment Ratio	Measured as the ratio of female to the total number of female and male employed in an industry based on the ISIC 4.0 industry classification
Gender Parity	Measures women's economic participation and opportunity, educational attainment, health and survival, and political empowerment
Panel D: Control Variables	
Board Size	Measures the total number of directors on the board
Board Independence	Measures the proportion of independent directors on the board
Shariah Supervisory Board	Dummy: 1 if the firm has a Shariah Supervisory Board, 0 otherwise
Final Ownership %	Ownership percentage held by the final largest owner
Chain Length	Length of ownership chain (min=1, max=4)
Firm Age	Natural logarithm of firm's age
Financial Sector	Dummy: 1 if the firm belongs to the financial sector, 0 otherwise
Corporation	Dummy: 1 if the firm is a corporation, 0 otherwise

Table 2 - Descriptive Statistics					
Variable	Mean	Std. Dev.	Min	Max	Count
Panel A: Female Directors Variables					
Female Directors	0.204	0.403	0	1	1,197
Panel B: Performance Variables					
Tobin's Q 2016	0.711	0.799	0	8.523	1,197
ROA 2016	2.155	9.115	-96.038	51.662	1,197
Tobin's Q 2017	0.693	0.793	0	8.467	1,197
ROA 2017	1.949	9.717	-97.697	75.785	1,197
Tobin's Q 2018	0.690	1.044	0	13.291	1,197
ROA 2018	1.426	9.311	-97.897	40.698	1,197
Panel C: Antecedents of Female Directors					
Firm Size	5.371	0.950	2.436	8.170	1,197
State Ownership	0.267	0.442	0	1	1,197
Family Ownership	0.387	0.487	0	1	1,197
Investor Outside MENA	0.119	0.324	0	1	1,197
Female Industry Employment Ratio	0.157	0.123	0.001	0.746	1,197
Gender Parity	0.665	0.005	0.657	0.671	1,197
Panel D: Control Variables					
Board Size	7.369	3.152	1	35	1,197
Board Independence	0.130	0.211	0	1	1,197
Shariah Supervisory Board	0.081	0.273	0	1	1,197
Final Ownership %	33.336	21.917	0	100	1,197
Chain Length	1.245	0.503	1	4	1,197
Firm Age	1.414	0.293	0	3.304	1,197
Financial Sector	0.390	0.488	0	1	1,197
Corporation	0.605	0.489	0	1	1,197

Table 3 – Correlation Matrix

	Female Directors	Tobin's Q 2016	ROA 2016	Tobin's Q 2017	ROA 2017	Firm Size	State Ownership	Family Ownership	Investor O/S MENA	Female Industry Employment ratio
Female Directors	1									
Tobin's Q 2016	-0.089*	1								
ROA 2016	0.032	0.265*	1							
Tobin's Q 2017	-0.077*	0.770*	0.257*	1						
ROA 2017	0.065*	0.213*	0.517*	0.189*	1					
Firm Size	0.059*	-0.230*	0.075*	-0.259*	0.105*	1				
State Ownership	0.042	-0.036	0.047	-0.025	0.067*	0.292*	1			
Family Ownership	0.012	0.077*	-0.038	0.087*	-0.045	-0.221*	-0.380*	1		
Investor O/S MENA	0.118*	0.003	-0.019	-0.015	-0.018	0.100*	-0.119*	-0.134*	1	
Female Industry Employment ratio	0.179*	-0.138*	-0.098*	-0.157*	-0.014	0.019	-0.043	0.063*	0.024	1
Gender Parity	0.123*	0.065*	0.075*	0.133*	0.039	-0.195*	-0.093*	0.091*	0.095*	-0.182*
Board Size	0.232*	-0.082*	0.090*	-0.108*	0.043	0.376*	0.156*	-0.067*	0.120*	0.059*
Board Independence	-0.112*	0.080*	0.047	0.067*	-0.025	0.062*	0.049	-0.036	-0.046	-0.304*
Shariah Supervisory Board	0.002	-0.150*	-0.026	-0.150*	-0.027	0.252*	0.083*	-0.061*	0.003	0.087*
Final Ownership %	0.070*	0.039	0.057	0.085*	0.076*	0.021	0.119*	-0.064*	-0.086*	0.008
Chain Length	0.027	-0.066*	-0.053	-0.084*	-0.011	-0.007	0.042	-0.030	0.177*	0.032
Firm Age	0.149*	-0.027	0.081*	0.016	0.107*	0.107*	0.017	-0.005	0.017	0.103*
Financial Sector	0.063*	-0.232*	-0.098*	-0.239*	-0.080*	0.144*	-0.011	0.036	0.011	0.379*
Corporation	-0.066*	0.232*	0.092*	0.239*	0.077*	-0.134*	0.010	-0.039	-0.007	-0.386*

p-values in parentheses * $p < .05$

Table 3 – Correlation Matrix, *continued*

	Gender Parity	Board Size	ROA 2016	Board Size	Shariah Supervisory Board	Final Ownership %	Firm Age	Financial Sector	Corporation
Gender Parity	1								
Board Size	0.038	1							
Board Size	0.153*	0.044	1						
Shariah Supervisory Board	-0.165*	0.102*	-0.022	1					
Final Ownership %	0.154*	-0.100*	-0.071*	-0.081*	1				
Chain Length	-0.086*	0.012	-0.026	0.083*	-0.181*	1			
Firm Age	0.125*	0.103*	-0.096*	-0.081*	0.113*	0.000	1		
Financial Sector	-0.094*	0.155*	-0.082*	0.296*	-0.094*	0.013	0.006	1	
Corporation	0.087*	-0.156*	0.073*	-0.292*	0.096*	-0.019	-0.004	-0.990*	1

p-values in parentheses * $p < .05$

Table 4 - Antecedents of Female Directors - Logit Regressions

	(1) Female Directors (Yes=1, No=0)	(2) Female Directors (Yes=1, No=0)	(3) Female Directors (Yes=1, No=0)	(4) Female Directors (Yes=1, No=0)	(5) Female Directors (Yes=1, No=0)	(6) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.236**	-0.199*	-0.228**	-0.237**	-0.227**	-0.152
	(0.026)	(0.067)	(0.041)	(0.031)	(0.034)	(0.158)
State Dummy 2015		0.089				
		(0.652)				
Family Dummy 2015			0.155			
			(0.393)			
Investor O/S MENA 2015				0.659***		
				(0.007)		
Female Industry Employment Ratio 2015					2.959***	
					(0.000)	
Gender Parity 2015						56.937***
						(0.005)
Board Size	0.201***	0.192***	0.193***	0.188***	0.200***	0.188***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Board Independence	-1.734***	-1.667***	-1.692***	-1.665***	-1.290***	-1.970***
	(0.000)	(0.001)	(0.001)	(0.001)	(0.009)	(0.000)

Shariah Supervisory Board	0.094	0.128	0.119	0.169	0.137	0.146
	(0.773)	(0.697)	(0.717)	(0.609)	(0.670)	(0.664)
Final Ownership %	0.010**	0.010**	0.010**	0.011**	0.010**	0.008*
	(0.014)	(0.013)	(0.017)	(0.010)	(0.018)	(0.068)
Chain Length	0.292*	0.270*	0.258	0.181	0.290*	0.316**
	(0.063)	(0.094)	(0.112)	(0.276)	(0.068)	(0.048)
Tobin's Q	-0.482***	-0.452***	-0.442**	-0.469***	-0.510***	-0.473***
	(0.005)	(0.009)	(0.010)	(0.008)	(0.005)	(0.006)
ROA	0.028	0.030*	0.029*	0.032*	0.034**	0.026
	(0.102)	(0.095)	(0.099)	(0.077)	(0.043)	(0.127)
Firm Age	1.004***	0.987***	0.999***	0.991***	0.907***	0.859***
	(0.002)	(0.003)	(0.003)	(0.003)	(0.005)	(0.006)
Financial Sector	-0.618	-0.651	-0.597	-0.731	-0.526	-0.589
	(0.606)	(0.576)	(0.626)	(0.551)	(0.564)	(0.612)
Corporation	-0.535	-0.563	-0.530	-0.659	-0.137	-0.526
	(0.654)	(0.627)	(0.664)	(0.590)	(0.880)	(0.649)
Constant	-2.846**	-3.001**	-2.846**	-2.607*	-3.558***	-40.833***
	(0.037)	(0.025)	(0.041)	(0.063)	(0.002)	(0.002)
Observations	1197	1197	1197	1197	1197	1197
Chi2	90.51	84.91	84.52	88.00	99.00	97.12
Pseudo R2	0.108	0.103	0.102	0.109	0.122	0.117

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 4 - Antecedents of Female Directors - Logit Regressions, *continued*

	(7) Female Directors (Yes=1, No=0)	(8) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.149	-0.242**
	(0.204)	(0.038)
State Dummy 2015	0.458*	0.420*
	(0.062)	(0.084)
Family Dummy 2015	0.361	0.402*
	(0.106)	(0.071)
Investor O/S MENA 2015	0.670**	0.797***
	(0.014)	(0.003)
Female Industry Employment Ratio 2015	3.173***	2.708***
	(0.000)	(0.000)
Gender Parity 2015	65.266***	
	(0.002)	
Board Size	0.168***	0.182***
	(0.000)	(0.000)
Board Independence	-1.447***	-1.228**
	(0.005)	(0.015)
Shariah Supervisory Board	0.253	0.187
	(0.447)	(0.570)

Final Ownership %	0.007	0.010**
	(0.105)	(0.016)
Chain Length	0.197	0.154
	(0.275)	(0.372)
Tobin's Q	-0.518***	-0.524***
	(0.006)	(0.005)
ROA	0.036**	0.037**
	(0.035)	(0.032)
Firm Age	0.692**	0.889***
	(0.037)	(0.007)
Financial Sector	-0.405	-0.525
	(0.660)	(0.583)
Corporation	-0.060	-0.180
	(0.947)	(0.850)
Constant	-47.134***	-3.481***
	(0.001)	(0.003)
Observations	1197	1197
Chi2	112.58	105.94
Pseudo R2	0.137	0.125

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 5 - Antecedents of Female Directors - Probit Regressions

	(1) Female Directors (Yes=1, No=0)	(2) Female Directors (Yes=1, No=0)	(3) Female Directors (Yes=1, No=0)	(4) Female Directors (Yes=1, No=0)	(5) Female Directors (Yes=1, No=0)	(6) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.145**	-0.122*	-0.139**	-0.143**	-0.134**	-0.094
	(0.018)	(0.053)	(0.030)	(0.024)	(0.030)	(0.131)
State Dummy 2015		0.054				
		(0.630)				
Family Dummy 2015			0.096			
			(0.349)			
Investor O/S MENA 2015				0.388***		
				(0.007)		
Female Industry Employment Ratio 2015					1.716***	
					(0.000)	
Gender Parity 2015						31.795***
						(0.004)
Board Size	0.117***	0.112***	0.113***	0.109***	0.116***	0.109***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Board Independence	-0.988***	-0.953***	-0.968***	-0.949***	-0.728***	-1.136***
	(0.000)	(0.000)	(0.000)	(0.001)	(0.007)	(0.000)

Shariah Supervisory Board	0.064	0.083	0.078	0.106	0.084	0.101
	(0.726)	(0.653)	(0.674)	(0.568)	(0.647)	(0.590)
Final Ownership %	0.006**	0.006**	0.006**	0.006***	0.006**	0.004*
	(0.014)	(0.012)	(0.017)	(0.010)	(0.016)	(0.068)
Chain Length	0.165*	0.154	0.147	0.098	0.166*	0.179*
	(0.071)	(0.103)	(0.122)	(0.311)	(0.073)	(0.055)
Tobin's Q	-0.269***	-0.251***	-0.246***	-0.262***	-0.277***	-0.270***
	(0.003)	(0.006)	(0.007)	(0.005)	(0.004)	(0.003)
ROA	0.015*	0.016*	0.015*	0.017*	0.018**	0.014
	(0.085)	(0.082)	(0.086)	(0.062)	(0.033)	(0.102)
Firm Age	0.567***	0.559***	0.562***	0.568***	0.498***	0.488***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.005)	(0.005)
Financial Sector	-0.339	-0.358	-0.328	-0.407	-0.268	-0.323
	(0.645)	(0.621)	(0.661)	(0.586)	(0.659)	(0.655)
Corporation	-0.287	-0.304	-0.285	-0.366	-0.048	-0.281
	(0.695)	(0.673)	(0.701)	(0.623)	(0.937)	(0.696)
Constant	-1.632**	-1.736**	-1.630*	-1.500*	-2.069***	-22.850***
	(0.047)	(0.033)	(0.050)	(0.074)	(0.004)	(0.002)
Observations	1197	1197	1197	1197	1197	1197
Chi2	96.48	90.79	89.52	93.91	104.31	104.77
Pseudo R2	0.108	0.103	0.102	0.109	0.122	0.117

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 5 - Antecedents of Female Directors - Probit Regressions, c*ontinued*		
	(7) Female Directors (Yes=1, No=0)	(8) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.085	-0.141**
	(0.207)	(0.034)
State Dummy 2015	0.259*	0.242*
	(0.057)	(0.073)
Family Dummy 2015	0.215*	0.242*
	(0.083)	(0.050)
Investor O/S MENA 2015	0.401**	0.471***
	(0.011)	(0.002)
Female Industry Employment Ratio 2015	1.839***	1.585***
	(0.000)	(0.000)
Gender Parity 2015	35.772***	
	(0.002)	
Board Size	0.097***	0.106***
	(0.000)	(0.000)
Board Independence	-0.859***	-0.717***
	(0.002)	(0.009)

Shariah Supervisory Board	0.159	0.118
	(0.400)	(0.525)
Final Ownership %	0.004*	0.006**
	(0.095)	(0.014)
Chain Length	0.108	0.083
	(0.292)	(0.405)
Tobin's Q	-0.287***	-0.288***
	(0.004)	(0.004)
ROA	0.020**	0.020**
	(0.026)	(0.023)
Firm Age	0.390**	0.498***
	(0.034)	(0.006)
Financial Sector	-0.218	-0.279
	(0.722)	(0.660)
Corporation	-0.006	-0.075
	(0.992)	(0.905)
Constant	-25.975***	-2.042***
	(0.001)	(0.006)
Observations	1197	1197
Chi2	120.26	111.96
Pseudo R2	0.137	0.126

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 6 - Performance Implications of Female Directors - OLS Regressions

	(1) Tobin's Q 2016	(2) ROA 2016	(3) Tobin's Q 2017	(4) ROA 2017
Female Directors (Yes=1, No=0)	-0.157***	0.127	-0.139***	1.203*
	(0.002)	(0.853)	(0.007)	(0.075)
Firm Size	-0.200***	0.305	-0.234***	1.155**
	(0.000)	(0.414)	(0.000)	(0.021)
Board Size	0.021***	0.250**	0.021**	-0.039
	(0.006)	(0.021)	(0.031)	(0.834)
Board Independence	0.261**	1.866	0.223**	-1.304
	(0.013)	(0.101)	(0.020)	(0.454)
Shariah Supervisory Board	-0.089*	0.070	-0.031	-0.716
	(0.065)	(0.912)	(0.512)	(0.205)
Final Ownership %	0.001	0.017	0.003**	0.022
	(0.219)	(0.303)	(0.015)	(0.168)
Chain Length	-0.073*	-0.906	-0.086**	-0.138
	(0.058)	(0.121)	(0.013)	(0.796)
Firm Age	0.028	2.375**	0.158*	2.887**
	(0.757)	(0.011)	(0.075)	(0.011)
Financial Sector	-0.042	-6.523*	0.065	-5.373
	(0.871)	(0.087)	(0.794)	(0.334)

Corporation	0.252	-4.522	0.366	-3.644
	(0.321)	(0.232)	(0.141)	(0.514)
Constant	1.515***	0.870	1.348***	-4.322
	(0.000)	(0.836)	(0.000)	(0.478)
Observations	1197	1197	1197	1197
F	21.48	3.70	18.41	5.06
r2	0.111	0.036	0.138	0.037

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 7 - Performance Implications of Female Directors - Propensity Score Matching

	DV	Treated	Controls	Difference	S.E.	T-test	p<0.05	Matching pair number
(1) Female directors [0/1]	Tobin's Q 2016	0.560	0.727	-0.167	0.069	-2.99	YES	204
(2) Female directors [0/1]	ROA 2016	2.706	1.897	0.809	0.857	0.95	NO	222
(3) Female directors [0/1]	Tobin's Q 2017	0.568	0.673	-0.105	0.064	-2.49	YES	201
(4) Female directors [0/1]	ROA 2017	3.247	2.557	0.690	0.749	2.16	YES	212

4.10. Appendix E

Table 8 - Antecedents of Female Directors - Logit Regressions

	(1) Female Directors (Yes=1, No=0)	(2) Female Directors (Yes=1, No=0)	(3) Female Directors (Yes=1, No=0)	(4) Female Directors (Yes=1, No=0)	(5) Female Directors (Yes=1, No=0)	(6) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.242**	-0.214*	-0.245**	-0.258**	-0.239**	-0.143
	(0.021)	(0.051)	(0.026)	(0.019)	(0.025)	(0.174)
State Dummy 2015		0.071				
		(0.727)				
Family Dummy 2015			0.178			
			(0.347)			
Investor O/S MENA 2015				0.697***		
				(0.005)		
Female Industry Employment Ratio 2015					2.423***	
					(0.001)	
Gender Parity 2015						74.237***
						(0.001)
Board Size	0.225***	0.216***	0.218***	0.216***	0.224***	0.210***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Board Independence	-1.393***	-1.294***	-1.322***	-1.287***	-1.031**	-1.597***
	(0.003)	(0.007)	(0.006)	(0.007)	(0.029)	(0.001)

Shariah Supervisory Board	-0.165	-0.135	-0.146	-0.115	-0.120	-0.092
	(0.644)	(0.706)	(0.682)	(0.751)	(0.737)	(0.801)
Final Ownership %	0.018***	0.019***	0.018***	0.019***	0.018***	0.016***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Chain Length	0.355**	0.315*	0.311*	0.226	0.344**	0.391**
	(0.035)	(0.072)	(0.076)	(0.213)	(0.043)	(0.024)
Tobin's Q (t-1)	-0.322**	-0.364**	-0.347**	-0.341**	-0.318**	-0.337**
	(0.022)	(0.015)	(0.020)	(0.020)	(0.021)	(0.022)
ROA (t-1)	0.036**	0.034**	0.033**	0.031**	0.039***	0.033**
	(0.015)	(0.022)	(0.029)	(0.033)	(0.010)	(0.027)
Firm Age	0.745**	0.696**	0.705**	0.708**	0.693**	0.533*
	(0.017)	(0.031)	(0.030)	(0.026)	(0.027)	(0.084)
Financial Sector	-0.704	-0.743	-0.716	-0.812	-0.546	-0.609
	(0.440)	(0.402)	(0.439)	(0.382)	(0.470)	(0.489)
Corporation	-0.784	-0.796	-0.792	-0.905	-0.386	-0.741
	(0.384)	(0.363)	(0.386)	(0.324)	(0.607)	(0.393)
Constant	-2.926***	-2.938***	-2.740**	-2.565**	-3.609***	-52.452***
	(0.008)	(0.008)	(0.015)	(0.024)	(0.000)	(0.000)
Observations	1197	1197	1197	1197	1197	1197
Chi2	90.95	84.85	85.73	88.60	94.41	93.22
Pseudo R2	0.112	0.108	0.107	0.114	0.123	0.127

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 8 - Antecedents of Female Directors - Logit Regressions, *continued*		
	(7) Female Directors (Yes=1, No=0)	(8) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.161	-0.262**
	(0.167)	(0.024)
State Dummy 2015	0.530**	0.440*
	(0.042)	(0.082)
Family Dummy 2015	0.412*	0.417*
	(0.081)	(0.076)
Investor O/S MENA 2015	0.676**	0.851***
	(0.018)	(0.002)
Female Industry Employment Ratio 2015	2.559***	2.068***
	(0.001)	(0.004)
Gender Parity 2015	80.660***	
	(0.001)	
Board Size	0.193***	0.209***
	(0.000)	(0.000)
Board Independence	-1.107**	-0.936**
	(0.022)	(0.049)
Shariah Supervisory Board	-0.005	-0.103
	(0.988)	(0.774)

Final Ownership %	0.016***	0.019***
	(0.000)	(0.000)
Chain Length	0.244	0.188
	(0.216)	(0.314)
Tobin's Q (t-1)	-0.363**	-0.349**
	(0.019)	(0.018)
ROA (t-1)	0.030**	0.033**
	(0.048)	(0.029)
Firm Age	0.400	0.655**
	(0.212)	(0.040)
Financial Sector	-0.422	-0.616
	(0.573)	(0.436)
Corporation	-0.362	-0.521
	(0.623)	(0.506)
Constant	-57.302***	-3.365***
	(0.000)	(0.002)
Observations	1197	1197
Chi2	112.58	95.85
Pseudo R2	0.137	0.127

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 9 - Antecedents of Female Directors - Probit Regressions

	(1) Female Directors (Yes=1, No=0)	(2) Female Directors (Yes=1, No=0)	(3) Female Directors (Yes=1, No=0)	(4) Female Directors (Yes=1, No=0)	(5) Female Directors (Yes=1, No=0)	(6) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.144**	-0.126**	-0.145**	-0.149**	-0.138**	-0.082
	(0.018)	(0.045)	(0.023)	(0.018)	(0.025)	(0.179)
State Dummy 2015		0.045				
		(0.696)				
Family Dummy 2015			0.105			
			(0.327)			
Investor O/S MENA 2015				0.400***		
				(0.007)		
Female Industry Employment Ratio 2015					1.370***	
					(0.001)	
Gender Parity 2015						39.720***
						(0.001)
Board Size	0.130***	0.125***	0.126***	0.124***	0.129***	0.121***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Board Independence	-0.800***	-0.746***	-0.765***	-0.740***	-0.590**	-0.920***
	(0.002)	(0.004)	(0.003)	(0.005)	(0.025)	(0.000)

Shariah Supervisory Board	-0.096	-0.084	-0.087	-0.069	-0.069	-0.062
	(0.636)	(0.679)	(0.666)	(0.733)	(0.733)	(0.763)
Final Ownership %	0.010***	0.011***	0.010***	0.011***	0.010***	0.009***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Chain Length	0.202**	0.180*	0.177*	0.126	0.196**	0.219**
	(0.039)	(0.076)	(0.081)	(0.226)	(0.047)	(0.028)
Tobin's Q (t-1)	-0.190**	-0.211***	-0.202**	-0.199**	-0.187**	-0.197**
	(0.014)	(0.010)	(0.013)	(0.014)	(0.013)	(0.015)
ROA (t-1)	0.020**	0.019**	0.018**	0.017**	0.021**	0.018**
	(0.014)	(0.021)	(0.027)	(0.034)	(0.011)	(0.029)
Firm Age	0.425**	0.400**	0.401**	0.410**	0.386**	0.309*
	(0.016)	(0.028)	(0.028)	(0.023)	(0.029)	(0.079)
Financial Sector	-0.391	-0.410	-0.398	-0.456	-0.292	-0.346
	(0.470)	(0.442)	(0.467)	(0.404)	(0.544)	(0.516)
Corporation	-0.435	-0.440	-0.439	-0.507	-0.202	-0.413
	(0.417)	(0.403)	(0.417)	(0.350)	(0.673)	(0.433)
Constant	-1.698***	-1.721***	-1.595**	-1.508**	-2.084***	-28.208***
	(0.009)	(0.008)	(0.015)	(0.022)	(0.001)	(0.000)
Observations	1197	1197	1197	1197	1197	1197
Chi2	95.01	89.46	89.03	93.15	98.93	99.69
Pseudo R2	0.112	0.108	0.107	0.114	0.122	0.126

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 9 - Antecedents of Female Directors - Probit Regressions, *continued*		
	(7) Female Directors (Yes=1, No=0)	(8) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.086	-0.148**
	(0.199)	(0.025)
State Dummy 2015	0.289**	0.249*
	(0.046)	(0.078)
Family Dummy 2015	0.225*	0.237*
	(0.085)	(0.067)
Investor O/S MENA 2015	0.392**	0.488***
	(0.017)	(0.002)
Female Industry Employment Ratio 2015	1.424***	1.170***
	(0.001)	(0.006)
Gender Parity 2015	42.369***	
	(0.001)	
Board Size	0.110***	0.120***
	(0.000)	(0.000)
Board Independence	-0.663**	-0.557**
	(0.014)	(0.035)
Shariah Supervisory Board	-0.028	-0.064
	(0.890)	(0.754)

Final Ownership %	0.009***	0.011***
	(0.000)	(0.000)
Chain Length	0.134	0.105
	(0.228)	(0.328)
Tobin's Q (t-1)	-0.207**	-0.202**
	(0.015)	(0.012)
ROA (t-1)	0.016*	0.018**
	(0.067)	(0.035)
Firm Age	0.231	0.371**
	(0.206)	(0.039)
Financial Sector	-0.246	-0.341
	(0.609)	(0.490)
Corporation	-0.194	-0.281
	(0.684)	(0.567)
Constant	-30.299***	-1.959***
	(0.000)	(0.002)
Observations	1197	1197
Chi2	120.26	101.81
Pseudo R2	0.137	0.127

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 10 - Antecedents of Female Directors - Logit Regressions

	(1) Female Directors (Yes=1, No=0)	(2) Female Directors (Yes=1, No=0)	(3) Female Directors (Yes=1, No=0)	(4) Female Directors (Yes=1, No=0)	(5) Female Directors (Yes=1, No=0)	(6) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.195*	-0.127	-0.162	-0.134	-0.158	-0.093
	(0.053)	(0.226)	(0.127)	(0.201)	(0.121)	(0.367)
State Dummy 2015		0.336*				
		(0.078)				
Family Dummy 2015			0.134			
			(0.438)			
Investor O/S MENA 2015				0.605**		
				(0.013)		
Female Industry Employment Ratio 2015					2.716***	
					(0.000)	
Gender Parity 2015						75.513***
						(0.000)
Board Size (t-1)	0.021	0.002	0.002	0.002	0.010	0.005
	(0.427)	(0.946)	(0.944)	(0.935)	(0.714)	(0.861)
Board Independence (t-1)	-1.032**	-1.022**	-1.060**	-1.046**	-0.690	-1.303***
	(0.025)	(0.032)	(0.025)	(0.025)	(0.141)	(0.006)

Shariah Supervisory Board $_{(t-1)}$	0.120	0.203	0.205	0.151	0.142	0.207
	(0.696)	(0.519)	(0.514)	(0.630)	(0.641)	(0.513)
Final Ownership % $_{(t-1)}$	0.009**	0.008**	0.009**	0.008*	0.008**	0.006
	(0.014)	(0.028)	(0.027)	(0.052)	(0.027)	(0.106)
Chain Length $_{(t-1)}$	0.192	0.185	0.196	0.183	0.139	0.232
	(0.221)	(0.251)	(0.223)	(0.247)	(0.367)	(0.156)
Tobin's Q $_{(t-1)}$	-0.363***	-0.333**	-0.318**	-0.331**	-0.318**	-0.351***
	(0.006)	(0.014)	(0.019)	(0.015)	(0.013)	(0.009)
ROA $_{(t-1)}$	0.025**	0.024*	0.021*	0.023*	0.027**	0.022*
	(0.039)	(0.068)	(0.095)	(0.073)	(0.033)	(0.066)
Firm Age $_{(t-1)}$	1.201***	1.154***	1.150***	1.098***	1.171***	1.006***
	(0.000)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)
Financial Sector $_{(t-1)}$	-0.472	10.717***	11.292***	11.538***	-0.594	-0.411
	(0.665)	(0.000)	(0.000)	(0.000)	(0.599)	(0.717)
Corporation $_{(t-1)}$	-0.583	10.622***	11.167***	11.455***	-0.575	-0.559
	(0.591)	(0.000)	(0.000)	(0.000)	(0.609)	(0.620)
Constant	-1.941	-13.317***	-13.738***	-14.013***	-2.401*	-52.317***
	(0.118)	(0.000)	(0.000)	(0.000)	(0.063)	(0.000)
Observations	1197	1197	1197	1197	1197	1197
Chi2	43.17	157.61	174.82	179.29	57.99	52.66
Pseudo R2	0.047	0.043	0.046	0.049	0.063	0.065

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 10 - Antecedents of Female Directors – Logit Regressions, *continued*		
	(7) Female Directors (Yes=1, No=0)	(8) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.030 (0.787)	-0.145 (0.184)
State Dummy 2015	0.868*** (0.001)	0.768*** (0.002)
Family Dummy 2015	0.498** (0.030)	0.536** (0.019)
Investor O/S MENA 2015	0.748*** (0.007)	0.872*** (0.001)
Female Industry Employment Ratio 2015	2.770*** (0.000)	2.139*** (0.002)
Gender Parity 2015	90.417*** (0.000)	
Board Size (t-1)	-0.030 (0.314)	-0.009 (0.767)
Board Independence (t-1)	-0.972** (0.042)	-0.777* (0.096)
Shariah Supervisory Board (t-1)	0.271 (0.394)	0.138 (0.654)

Final Ownership % $_{(t-1)}$	0.003	0.007*
	(0.424)	(0.077)
Chain Length $_{(t-1)}$	0.197	0.175
	(0.245)	(0.274)
Tobin's Q $_{(t-1)}$	-0.283**	-0.317**
	(0.042)	(0.018)
ROA $_{(t-1)}$	0.018	0.022*
	(0.170)	(0.094)
Firm Age $_{(t-1)}$	0.866**	1.080***
	(0.011)	(0.002)
Financial Sector $_{(t-1)}$	12.044***	11.534***
	(0.000)	(0.000)
Corporation $_{(t-1)}$	11.983***	11.506***
	(0.000)	(0.000)
Constant	-75.543***	-14.707***
	(0.000)	(0.000)
Observations	1197	1197
Chi2	217.42	194.68
Pseudo R2	0.096	0.072

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 11 - Antecedents of Female Directors - Probit Regressions

	(1) Female Directors (Yes=1, No=0)	(2) Female Directors (Yes=1, No=0)	(3) Female Directors (Yes=1, No=0)	(4) Female Directors (Yes=1, No=0)	(5) Female Directors (Yes=1, No=0)	(6) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.119**	-0.080	-0.099	-0.080	-0.094	-0.058
	(0.043)	(0.191)	(0.108)	(0.187)	(0.114)	(0.336)
State Dummy 2015		0.199*				
		(0.070)				
Family Dummy 2015			0.073			
			(0.466)			
Investor O/S MENA 2015				0.367**		
				(0.011)		
Female Industry Employment Ratio 2015					1.585***	
					(0.000)	
Gender Parity 2015						40.995***
						(0.000)
Board Size (t-1)	0.012	0.001	0.001	0.001	0.005	0.002
	(0.434)	(0.934)	(0.934)	(0.958)	(0.746)	(0.896)
Board Independence (t-1)	-0.536**	-0.534**	-0.569**	-0.568**	-0.346	-0.683***
	(0.032)	(0.040)	(0.029)	(0.027)	(0.177)	(0.008)

Shariah Supervisory Board $_{(t-1)}$	0.068	0.114	0.111	0.078	0.078	0.114
	(0.698)	(0.529)	(0.540)	(0.668)	(0.659)	(0.524)
Final Ownership % $_{(t-1)}$	0.005**	0.005**	0.005**	0.005**	0.005**	0.003
	(0.013)	(0.025)	(0.023)	(0.047)	(0.022)	(0.110)
Chain Length $_{(t-1)}$	0.114	0.108	0.116	0.104	0.080	0.132
	(0.214)	(0.253)	(0.223)	(0.265)	(0.384)	(0.159)
Tobin's Q $_{(t-1)}$	-0.213***	-0.195**	-0.186**	-0.194**	-0.192***	-0.207***
	(0.004)	(0.010)	(0.014)	(0.010)	(0.007)	(0.007)
ROA $_{(t-1)}$	0.014**	0.014*	0.012*	0.013*	0.015**	0.013*
	(0.027)	(0.052)	(0.072)	(0.057)	(0.027)	(0.054)
Firm Age $_{(t-1)}$	0.670***	0.645***	0.641***	0.619***	0.642***	0.569***
	(0.000)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)
Financial Sector $_{(t-1)}$	-0.243	4.370***	4.272***	3.610***	-0.321	-0.218
	(0.729)	(0.000)	(0.000) ***	(0.000)	(0.653)	(0.762)
Corporation $_{(t-1)}$	-0.309	4.313***	4.197	3.558***	-0.307	-0.297
	(0.658)	(0.000)	(0.000)	(0.000)	(0.666)	(0.678)
Constant	-1.127	-5.848***	-5.668***	-5.033***	-1.377*	-28.480***
	(0.148)	(0.000)	(0.000)	(0.000)	(0.085)	(0.000)
Observations	1197	1197	1197	1197	1197	1197
Chi2	44.46	175.71	195.89	353.14	59.61	52.55
Pseudo R2	0.047	0.043	0.046	0.049	0.063	0.063

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 11 - Antecedents of Female Directors - Probit Regressions, *continued*		
	(7) Female Directors (Yes=1, No=0)	(8) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.011 (0.859)	-0.083 (0.188)
State Dummy 2015	0.483*** (0.001)	0.432*** (0.002)
Family Dummy 2015	0.260** (0.042)	0.288** (0.022)
Investor O/S MENA 2015	0.441*** (0.005)	0.512*** (0.001)
Female Industry Employment Ratio 2015	1.593*** (0.000)	1.257*** (0.002)
Gender Parity 2015	49.548*** (0.000)	
Board Size $_{(t-1)}$	-0.019 (0.275)	-0.006 (0.727)
Board Independence $_{(t-1)}$	-0.575** (0.030)	-0.446* (0.084)
Shariah Supervisory Board $_{(t-1)}$	0.133 (0.470)	0.063 (0.728)

Final Ownership % $_{(t-1)}$	0.002	0.004*
	(0.437)	(0.076)
Chain Length $_{(t-1)}$	0.101	0.089
	(0.301)	(0.346)
Tobin's Q $_{(t-1)}$	-0.167**	-0.189**
	(0.032)	(0.012)
ROA $_{(t-1)}$	0.010	0.012*
	(0.169)	(0.080)
Firm Age $_{(t-1)}$	0.477**	0.600***
	(0.012)	(0.002)
Financial Sector $_{(t-1)}$	3.377***	3.628***
	(0.000)	(0.000)
Corporation $_{(t-1)}$	3.357***	3.612***
	(0.000)	(0.000)
Constant	-38.247***	-5.422***
	(0.000)	(0.000)
Observations	1197	1197
Chi2	305.69	389.58
Pseudo R2	0.095	0.072

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 12 - Antecedents of Female Directors - Logit Regressions

	(1) Female Directors (Yes=1, No=0)	(2) Female Directors (Yes=1, No=0)	(3) Female Directors (Yes=1, No=0)	(4) Female Directors (Yes=1, No=0)	(5) Female Directors (Yes=1, No=0)	(6) Female Directors (Yes=1, No=0)
Firm Size 2015 (t-1)	-0.195*	-0.153	-0.139	-0.166	-0.158	-0.085
	(0.053)	(0.138)	(0.191)	(0.107)	(0.121)	(0.411)
State Dummy 2015 (t-1)		-0.134				
		(0.492)				
Family Dummy 2015 (t-1)			0.028			
			(0.872)			
Investor O/S MENA 2015 (t-1)				0.473*		
				(0.057)		
Female Industry Employment Ratio 2015 (t-1)					2.716***	
					(0.000)	
Gender Parity 2015 (t-1)						79.039***
						(0.000)
Board Size (t-1)	0.021	0.014	0.014	0.008	0.010	0.003
	(0.427)	(0.620)	(0.609)	(0.784)	(0.714)	(0.900)
Board Independence (t-1)	-1.032**	-1.077**	-1.075**	-1.052**	-0.690	-1.313***
	(0.025)	(0.024)	(0.024)	(0.028)	(0.141)	(0.006)

Shariah Supervisory Board $_{(t-1)}$	0.120	0.194	0.204	0.223	0.142	0.206
	(0.696)	(0.534)	(0.513)	(0.476)	(0.641)	(0.516)
Final Ownership % $_{(t-1)}$	0.009**	0.008**	0.009**	0.009**	0.008**	0.006
	(0.014)	(0.025)	(0.021)	(0.020)	(0.027)	(0.105)
Chain Length $_{(t-1)}$	0.192	0.085	0.090	0.026	0.139	0.238
	(0.221)	(0.605)	(0.583)	(0.877)	(0.367)	(0.146)
Tobin's Q $_{(t-1)}$	-0.363***	-0.315**	-0.314**	-0.326**	-0.318**	-0.348***
	(0.006)	(0.017)	(0.017)	(0.014)	(0.013)	(0.010)
ROA $_{(t-1)}$	0.025**	0.024*	0.024*	0.025**	0.027**	0.022*
	(0.039)	(0.056)	(0.055)	(0.047)	(0.033)	(0.068)
Firm Age $_{(t-1)}$	1.201***	1.350***	1.347***	1.353***	1.171***	0.989***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Financial Sector $_{(t-1)}$	-0.472	-0.587	-0.651	-0.649	-0.594	-0.407
	(0.665)	(0.580)	(0.548)	(0.535)	(0.599)	(0.720)
Corporation $_{(t-1)}$	-0.583	-0.684	-0.740	-0.753	-0.575	-0.560
	(0.591)	(0.517)	(0.492)	(0.469)	(0.609)	(0.620)
Constant	-1.941	-2.126*	-2.113*	-1.930	-2.401*	-54.684***
	(0.118)	(0.086)	(0.089)	(0.112)	(0.063)	(0.000)
Observations	1197	1197	1197	1197	1197	1197
Chi2	43.17	40.89	40.74	47.58	57.99	53.67
Pseudo R2	0.047	0.047	0.048	0.051	0.063	0.066

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 12 - Antecedents of Female Directors - Logit Regressions, *continued*

	(7) Female Directors (Yes=1, No=0)	(8) Female Directors (Yes=1, No=0)
Firm Size 2015 (t-1)	-0.031	-0.152
	(0.775)	(0.157)
State Dummy 2015 (t-1)	-0.002	-0.037
	(0.994)	(0.872)
Family Dummy 2015 (t-1)	-0.015	0.039
	(0.941)	(0.846)
Investor O/S MENA 2015 (t-1)	0.297	0.463*
	(0.265)	(0.076)
Female Industry Employment Ratio 2015 (t-1)	3.008***	2.395***
	(0.000)	(0.001)
Gender Parity 2015 (t-1)	88.306***	
	(0.000)	
Board Size (t-1)	-0.014	0.005
	(0.628)	(0.869)
Board Independence (t-1)	-0.923*	-0.685
	(0.070)	(0.167)
Shariah Supervisory Board (t-1)	0.351	0.244
	(0.267)	(0.436)

Final Ownership % $_{(t-1)}$	0.005	0.009**
	(0.217)	(0.022)
Chain Length $_{(t-1)}$	0.087	0.023
	(0.633)	(0.889)
Tobin's Q $_{(t-1)}$	-0.334**	-0.347***
	(0.016)	(0.009)
ROA $_{(t-1)}$	0.027**	0.030**
	(0.039)	(0.023)
Firm Age $_{(t-1)}$	0.969***	1.257***
	(0.003)	(0.000)
Financial Sector $_{(t-1)}$	-0.427	-0.603
	(0.775)	(0.654)
Corporation $_{(t-1)}$	-0.313	-0.475
	(0.835)	(0.725)
Constant	-61.509***	-2.469
	(0.000)	(0.103)
Observations	1197	1197
Chi2	73.25	60.77
Pseudo R2	0.084	0.061

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 13 - Antecedents of Female Directors - Probit Regressions

	(1) Female Directors (Yes=1, No=0)	(2) Female Directors (Yes=1, No=0)	(3) Female Directors (Yes=1, No=0)	(4) Female Directors (Yes=1, No=0)	(5) Female Directors (Yes=1, No=0)	(6) Female Directors (Yes=1, No=0)
Firm Size 2015 $_{(t-1)}$	-0.119**	-0.096	-0.087	-0.106*	-0.113*	-0.053
	(0.043)	(0.110)	(0.157)	(0.077)	(0.057)	(0.379)
State Dummy 2015 $_{(t-1)}$		-0.072				
		(0.521)				
Family Dummy 2015 $_{(t-1)}$			0.007			
			(0.945)			
Investor O/S MENA 2015 $_{(t-1)}$				0.294**		
				(0.045)		
Female Industry Employment Ratio 2015 $_{(t-1)}$					1.535***	
					(0.000)	
Gender Parity 2015 $_{(t-1)}$						42.845***
						(0.000)
Board Size $_{(t-1)}$	0.012	0.008	0.008	0.004	0.009	0.001
	(0.434)	(0.619)	(0.607)	(0.786)	(0.563)	(0.934)
Board Independence $_{(t-1)}$	-0.536**	-0.560**	-0.557**	-0.543**	-0.327	-0.689***
	(0.032)	(0.030)	(0.031)	(0.036)	(0.205)	(0.008)

Shariah Supervisory Board $_{(t-1)}$	0.068	0.112	0.116	0.135	0.085	0.114
	(0.698)	(0.531)	(0.516)	(0.448)	(0.632)	(0.526)
Final Ownership % $_{(t-1)}$	0.005**	0.005**	0.005**	0.005**	0.005**	0.003
	(0.013)	(0.023)	(0.020)	(0.018)	(0.015)	(0.109)
Chain Length $_{(t-1)}$	0.114	0.050	0.054	0.009	0.108	0.134
	(0.214)	(0.600)	(0.572)	(0.923)	(0.239)	(0.151)
Tobin's Q $_{(t-1)}$	-0.213***	-0.185**	-0.184**	-0.192***	-0.225***	-0.206***
	(0.004)	(0.012)	(0.011)	(0.009)	(0.002)	(0.007)
ROA $_{(t-1)}$	0.014**	0.014**	0.014**	0.014**	0.017**	0.013*
	(0.027)	(0.041)	(0.040)	(0.035)	(0.012)	(0.055)
Firm Age $_{(t-1)}$	0.670***	0.755***	0.752***	0.770***	0.615***	0.561***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)
Financial Sector $_{(t-1)}$	-0.243	-0.304	-0.341	-0.344	-0.231	-0.216
	(0.729)	(0.658)	(0.625)	(0.613)	(0.776)	(0.764)
Corporation $_{(t-1)}$	-0.309	-0.364	-0.396	-0.408	-0.150	-0.298
	(0.658)	(0.595)	(0.568)	(0.547)	(0.853)	(0.677)
Constant	-1.127	-1.221	-1.221	-1.113	-1.423	-29.723***
	(0.148)	(0.116)	(0.117)	(0.147)	(0.110)	(0.000)
Observations	1197	1197	1197	1197	1197	1197
Chi2	44.46	41.95	41.74	49.30	60.89	53.52
Pseudo R2	0.047	0.047	0.047	0.051	0.059	0.065

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 13 - Antecedents of Female Directors - Probit Regressions, *continued*		
	(7) Female Directors (Yes=1, No=0)	(8) Female Directors (Yes=1, No=0)
Firm Size 2015 (t-1)	-0.024	-0.097
	(0.706)	(0.120)
State Dummy 2015 (t-1)	-0.007	-0.020
	(0.956)	(0.881)
Family Dummy 2015 (t-1)	-0.028	0.015
	(0.806)	(0.897)
Investor O/S MENA 2015 (t-1)	0.190	0.287*
	(0.222)	(0.061)
Female Industry Employment Ratio 2015 (t-1)	1.768***	1.425***
	(0.000)	(0.001)
Gender Parity 2015 (t-1)	48.192***	
	(0.000)	
Board Size (t-1)	-0.009	0.002
	(0.576)	(0.905)
Board Independence (t-1)	-0.495*	-0.352
	(0.069)	(0.188)
Shariah Supervisory Board (t-1)	0.200	0.148
	(0.267)	(0.409)

Final Ownership % $_{(t-1)}$	0.003	0.005**
	(0.219)	(0.019)
Chain Length $_{(t-1)}$	0.041	0.007
	(0.685)	(0.943)
Tobin's Q $_{(t-1)}$	-0.196**	-0.208***
	(0.011)	(0.005)
ROA $_{(t-1)}$	0.015**	0.017**
	(0.035)	(0.017)
Firm Age $_{(t-1)}$	0.559***	0.707***
	(0.002)	(0.000)
Financial Sector $_{(t-1)}$	-0.281	-0.344
	(0.735)	(0.662)
Corporation $_{(t-1)}$	-0.199	-0.270
	(0.810)	(0.732)
Constant	-33.599***	-1.384
	(0.000)	(0.114)
Observations	1197	1197
Chi2	75.58	64.01
Pseudo R2	0.084	0.062

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 14 - Antecedents of Female Directors - Logit Regressions

	(1) Female Directors (Yes=1, No=0)	(2) Female Directors (Yes=1, No=0)	(3) Female Directors (Yes=1, No=0)	(4) Female Directors (Yes=1, No=0)	(5) Female Directors (Yes=1, No=0)	(6) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.238**	-0.201*	-0.232**	-0.239**	-0.228**	-0.156
	(0.025)	(0.066)	(0.038)	(0.031)	(0.034)	(0.150)
State Dummy 2015		0.103				
		(0.603)				
Family Dummy 2015			0.160			
			(0.378)			
Investor O/S MENA 2015				0.645***		
				(0.008)		
Female Industry Employment Ratio 2015					2.903***	
					(0.000)	
Gender Parity 2015						54.849***
						(0.006)
Female Directors (Yes=1, No=0) (t-1)	0.228	0.242	0.240	0.209	0.163	0.141
	(0.263)	(0.240)	(0.241)	(0.312)	(0.431)	(0.489)
Board Size	0.200***	0.190***	0.191***	0.186***	0.199***	0.187***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Board Independence	-1.685***	-1.616***	-1.642***	-1.622***	-1.263**	-1.929***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.011)	(0.000)
Shariah Supervisory Board	0.108	0.147	0.135	0.182	0.143	0.156
	(0.739)	(0.656)	(0.679)	(0.582)	(0.655)	(0.643)
Final Ownership %	0.010**	0.010**	0.010**	0.010**	0.010**	0.008*
	(0.016)	(0.015)	(0.021)	(0.012)	(0.020)	(0.069)
Chain Length	0.284*	0.262	0.249	0.174	0.285*	0.310*
	(0.071)	(0.104)	(0.126)	(0.293)	(0.074)	(0.054)
Tobin's Q	-0.481***	-0.450***	-0.440**	-0.468***	-0.509***	-0.474***
	(0.005)	(0.010)	(0.011)	(0.008)	(0.005)	(0.006)
ROA	0.028	0.030*	0.029	0.032*	0.034**	0.026
	(0.102)	(0.096)	(0.101)	(0.077)	(0.044)	(0.126)
Firm Age	0.971***	0.950***	0.964***	0.962***	0.885***	0.843***
	(0.002)	(0.004)	(0.004)	(0.003)	(0.006)	(0.007)
Financial Sector	-0.672	-0.710	-0.648	-0.778	-0.565	-0.624
	(0.573)	(0.540)	(0.597)	(0.524)	(0.537)	(0.591)
Corporation	-0.580	-0.610	-0.571	-0.697	-0.177	-0.554
	(0.625)	(0.596)	(0.639)	(0.567)	(0.846)	(0.631)
Constant	-2.771**	-2.919**	-2.759**	-2.535*	-3.491***	-39.389***
	(0.042)	(0.029)	(0.048)	(0.071)	(0.002)	(0.003)
Observations	1197	1197	1197	1197	1197	1197
Chi2	90.96	85.24	86.35	88.47	99.29	96.76
Pseudo R2	0.109	0.104	0.105	0.110	0.123	0.118

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 14 - Antecedents of Female Directors - Logit Regressions, *continued*		
	(7) Female Directors (Yes=1, No=0)	(8) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.152 (0.199)	-0.245** (0.036)
State Dummy 2015	0.463* (0.059)	0.435* (0.073)
Family Dummy 2015	0.364 (0.102)	0.410* (0.064)
Investor O/S MENA 2015	0.668** (0.014)	0.789*** (0.003)
Female Industry Employment Ratio 2015	3.146*** (0.000)	2.650*** (0.000)
Gender Parity 2015	64.171*** (0.003)	
Female Directors (Yes=1, No=0) $_{(t-1)}$	0.053 (0.807)	0.175 (0.407)
Board Size	0.168*** (0.000)	0.181*** (0.000)
Board Independence	-1.432*** (0.005)	-1.202** (0.017)

Shariah Supervisory Board	0.255	0.197
	(0.447)	(0.552)
Final Ownership %	0.007	0.010**
	(0.107)	(0.019)
Chain Length	0.193	0.147
	(0.287)	(0.396)
Tobin's Q	-0.518***	-0.523***
	(0.006)	(0.005)
ROA	0.036**	0.037**
	(0.035)	(0.032)
Firm Age	0.690**	0.868***
	(0.037)	(0.009)
Financial Sector	-0.416	-0.562
	(0.653)	(0.559)
Corporation	-0.072	-0.216
	(0.937)	(0.821)
Constant	-46.379***	-3.413***
	(0.001)	(0.004)
Observations	1197	1197
Chi2	112.51	106.74
Pseudo R2	0.137	0.126

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 15 - Antecedents of Female Directors - Probit Regressions

	(1) Female Directors (Yes=1, No=0)	(2) Female Directors (Yes=1, No=0)	(3) Female Directors (Yes=1, No=0)	(4) Female Directors (Yes=1, No=0)	(5) Female Directors (Yes=1, No=0)	(6) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.144**	-0.121*	-0.140**	-0.142**	-0.134**	-0.095
	(0.019)	(0.054)	(0.029)	(0.024)	(0.031)	(0.125)
State Dummy 2015		0.063				
		(0.579)				
Family Dummy 2015			0.101			
			(0.327)			
Investor O/S MENA 2015				0.379***		
				(0.009)		
Female Industry Employment Ratio 2015					1.685***	
					(0.000)	
Gender Parity 2015						30.469***
						(0.006)
Female Directors (Yes=1, No=0) (t-1)	0.138	0.148	0.145	0.126	0.103	0.084
	(0.234)	(0.210)	(0.216)	(0.285)	(0.384)	(0.472)
Board Size	0.116***	0.111***	0.112***	0.108***	0.115***	0.108***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Board Independence	-0.956***	-0.920***	-0.936***	-0.920***	-0.709***	-1.110***
	(0.000)	(0.001)	(0.001)	(0.001)	(0.009)	(0.000)
Shariah Supervisory Board	0.069	0.090	0.084	0.110	0.086	0.103
	(0.706)	(0.626)	(0.649)	(0.552)	(0.636)	(0.582)
Final Ownership %	0.006**	0.006**	0.005**	0.006**	0.006**	0.004*
	(0.015)	(0.014)	(0.020)	(0.011)	(0.017)	(0.067)
Chain Length	0.162*	0.150	0.142	0.095	0.163*	0.176*
	(0.078)	(0.112)	(0.134)	(0.325)	(0.079)	(0.060)
Tobin's Q	-0.270***	-0.251***	-0.246***	-0.262***	-0.277***	-0.270***
	(0.003)	(0.006)	(0.007)	(0.005)	(0.004)	(0.003)
ROA	0.015*	0.016*	0.015*	0.017*	0.018**	0.014
	(0.086)	(0.083)	(0.088)	(0.063)	(0.034)	(0.102)
Firm Age	0.545***	0.534***	0.538***	0.548***	0.484***	0.478***
	(0.002)	(0.004)	(0.003)	(0.003)	(0.006)	(0.006)
Financial Sector	-0.371	-0.393	-0.358	-0.435	-0.293	-0.342
	(0.614)	(0.586)	(0.631)	(0.560)	(0.632)	(0.636)
Corporation	-0.316	-0.333	-0.311	-0.390	-0.073	-0.298
	(0.666)	(0.643)	(0.676)	(0.600)	(0.905)	(0.679)
Constant	-1.594*	-1.695**	-1.584*	-1.464*	-2.033***	-21.942***
	(0.052)	(0.037)	(0.058)	(0.081)	(0.005)	(0.003)
Observations	1197	1197	1197	1197	1197	1197
Chi2	96.90	91.20	90.23	94.27	104.61	104.34
Pseudo R2	0.109	0.104	0.104	0.110	0.123	0.118

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 15 - Antecedents of Female Directors - Probit Regressions, *continued*		
	(7) Female Directors (Yes=1, No=0)	(8) Female Directors (Yes=1, No=0)
Firm Size 2015	-0.086 (0.201)	-0.141** (0.034)
State Dummy 2015	0.264* (0.052)	0.253* (0.061)
Family Dummy 2015	0.218* (0.077)	0.249** (0.043)
Investor O/S MENA 2015	0.400** (0.011)	0.466*** (0.002)
Female Industry Employment Ratio 2015	1.819*** (0.000)	1.552*** (0.000)
Gender Parity 2015	34.929*** (0.003)	
Female Directors (Yes=1, No=0) $_{(t-1)}$	0.043 (0.725)	0.114 (0.345)
Board Size	0.096*** (0.000)	0.105*** (0.000)
Board Independence	-0.847*** (0.002)	-0.698** (0.011)

Shariah Supervisory Board	0.158	0.122
	(0.401)	(0.513)
Final Ownership %	0.004*	0.006**
	(0.096)	(0.016)
Chain Length	0.106	0.079
	(0.305)	(0.427)
Tobin's Q	-0.287***	-0.288***
	(0.004)	(0.004)
ROA	0.020**	0.020**
	(0.026)	(0.024)
Firm Age	0.387**	0.482***
	(0.035)	(0.008)
Financial Sector	-0.227	-0.302
	(0.712)	(0.634)
Corporation	-0.016	-0.098
	(0.979)	(0.877)
Constant	-25.397***	-2.006***
	(0.001)	(0.007)
Observations	1197	1197
Chi2	120.11	112.79
Pseudo R2	0.137	0.127

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 16 - Performance Implications of Female Directors - OLS Regressions		
	(1) Tobin's Q 2018	(2) ROA 2018
Female Directors (Yes=1, No=0)	0.061	1.084*
	(0.654)	(0.078)
Firm Size	-0.150*	0.997***
	(0.060)	(0.006)
Board Size	-0.011	0.017
	(0.442)	(0.899)
Board Independence	0.134	-3.246**
	(0.472)	(0.023)
Shariah Supervisory Board	-0.087	-0.724
	(0.158)	(0.430)
Final Ownership %	0.003	0.022
	(0.139)	(0.165)
Chain Length	-0.103*	-0.421
	(0.063)	(0.456)
Firm Age	0.165	2.061
	(0.355)	(0.230)
Financial Sector	-0.055	-3.919
	(0.850)	(0.545)

Corporation	0.199	-2.360
	(0.506)	(0.715)
Constant	1.211***	-4.004
	(0.002)	(0.565)
Observations	1197	1197
F	10.83	2.65
r2	0.019	0.036

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 17 - Performance Implications of Female Directors - OLS Regressions				
	(1) Tobin's Q 2016	(2) ROA 2016	(3) Tobin's Q 2017	(4) ROA 2017
Female Directors (Yes=1, No=0)	-0.137**	-0.007	-0.122**	1.100*
	(0.013)	(0.992)	(0.036)	(0.070)
Tobin's Q 2016 (t-1)	0.084**			
	(0.017)			
ROA 2016 (t-1)		0.087***		
		(0.003)		
Tobin's Q 2017 (t-1)			0.085*	
			(0.056)	
ROA 2017 (t-1)				0.034
				(0.328)
Firm Size	-0.201***	0.291	-0.242***	0.820*
	(0.000)	(0.452)	(0.000)	(0.074)
Board Size	0.021**	0.316***	0.019*	0.117
	(0.012)	(0.004)	(0.098)	(0.359)
Board Independence	0.300***	2.006*	0.248**	-1.175
	(0.008)	(0.092)	(0.018)	(0.534)
Shariah Supervisory Board	-0.102**	0.079	-0.036	-0.464
	(0.031)	(0.909)	(0.488)	(0.423)

Final Ownership %	0.002*	0.022	0.003**	0.033**
	(0.071)	(0.208)	(0.011)	(0.032)
Chain Length	-0.082**	-1.052*	-0.083**	0.045
	(0.048)	(0.077)	(0.031)	(0.930)
Firm Age	-0.029	2.284**	0.162*	3.306***
	(0.760)	(0.020)	(0.098)	(0.003)
Financial Sector	-0.016	-6.337	0.117	-4.982
	(0.947)	(0.107)	(0.644)	(0.375)
Corporation	0.275	-4.220	0.395	-2.945
	(0.262)	(0.280)	(0.119)	(0.602)
Constant	1.496***	0.073	1.296***	-5.355
	(0.000)	(0.987)	(0.000)	(0.388)
Observations	1197	1197	1197	1197
F	19.57	4.11	16.49	4.91
r2	0.130	0.050	0.152	0.046

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 18 - Performance Implications of Female Directors - OLS Regressions

	(1) Tobin's Q 2016	(2) ROA 2016	(3) Tobin's Q 2017	(4) ROA 2017
Female Directors (Yes=1, No=0)	-0.193***	-0.207	-0.191***	1.236*
	(0.000)	(0.772)	(0.001)	(0.084)
Tobin's Q 2016 (t-2)	0.048			
	(0.135)			
ROA 2016 (t-2)		0.019		
		(0.500)		
Tobin's Q 2017 (t-2)			0.058*	
			(0.070)	
ROA 2017 (t-2)				0.044
				(0.126)
Firm Size	-0.189***	0.292	-0.243***	1.111**
	(0.000)	(0.433)	(0.000)	(0.039)
Board Size	0.020**	0.218**	0.022*	-0.073
	(0.012)	(0.035)	(0.056)	(0.722)
Board Independence	0.263**	1.696	0.222**	0.006
	(0.018)	(0.124)	(0.030)	(0.997)
Shariah Supervisory Board	-0.074	-0.213	-0.019	-0.497
	(0.139)	(0.700)	(0.713)	(0.370)

Final Ownership %	0.001	0.013	0.002**	0.022
	(0.199)	(0.445)	(0.046)	(0.196)
Chain Length	-0.061	-0.523	-0.086**	-0.028
	(0.132)	(0.310)	(0.028)	(0.959)
Firm Age	0.041	2.187**	0.194**	2.703**
	(0.665)	(0.015)	(0.049)	(0.030)
Financial Sector	0.171	-6.191	0.187	-5.133
	(0.504)	(0.101)	(0.595)	(0.347)
Corporation	0.459*	-4.412	0.491	-3.307
	(0.072)	(0.240)	(0.161)	(0.546)
Constant	1.181***	1.160	1.214***	-4.090
	(0.000)	(0.783)	(0.003)	(0.504)
Observations	1197	1197	1197	1197
F	17.461	3.511	14.931	4.057
r2	0.115	0.031	0.148	0.041

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 19 - Performance Implications of Female Directors - OLS Regressions

	(1) Tobin's Q 2016	(2) ROA 2016	(3) Tobin's Q 2017	(4) ROA 2017
Female Directors (Yes=1, No=0)	-0.134**	0.855	-0.125**	1.740***
	(0.018)	(0.235)	(0.039)	(0.006)
Firm Size (t-1)	-0.009	0.826**	-0.032	0.981***
	(0.804)	(0.012)	(0.333)	(0.008)
Board Size (t-1)	-0.003	-0.001	-0.010	-0.072
	(0.764)	(0.990)	(0.202)	(0.501)
Board Independence (t-1)	0.186	2.178	0.085	2.433
	(0.173)	(0.119)	(0.435)	(0.130)
Shariah Supervisory Board (t-1)	0.013	0.699	-0.064	-2.161
	(0.907)	(0.341)	(0.358)	(0.163)
Final Ownership % (t-1)	-0.000	0.028**	0.001	0.005
	(0.820)	(0.024)	(0.572)	(0.736)
Chain Length (t-1)	-0.040	-1.015	-0.046	0.262
	(0.438)	(0.120)	(0.340)	(0.611)
Firm Age (t-1)	0.002	0.886	0.168*	1.701*
	(0.987)	(0.340)	(0.093)	(0.092)
Financial Sector (t-1)	-0.686	-5.676	-0.788*	-4.566
	(0.168)	(0.221)	(0.067)	(0.305)

Corporation $_{(t-1)}$	-0.562	-4.514	-0.669	-3.289
	(0.259)	(0.329)	(0.118)	(0.458)
Constant	1.446***	1.135	1.466***	-2.387
	(0.006)	(0.820)	(0.002)	(0.632)
Observations	1197	1197	1197	1197
F	2.073	2.887	3.127	2.315
r2	0.018	0.026	0.028	0.028

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

Table 20 - Performance Implications of Female Directors - OLS Regressions

	(1) Tobin's Q 2016	(2) ROA 2016	(3) Tobin's Q 2017	(4) ROA 2017
Female Directors (Yes=1, No=0) $_{(t-1)}$	-0.114**	0.285	-0.066	0.814
	(0.049)	(0.653)	(0.283)	(0.230)
Firm Size $_{(t-1)}$	-0.011	0.817**	-0.032	0.978***
	(0.757)	(0.014)	(0.334)	(0.008)
Board Size $_{(t-1)}$	0.001	-0.010	-0.009	-0.097
	(0.922)	(0.919)	(0.298)	(0.366)
Board Independence $_{(t-1)}$	0.192	2.073	0.098	2.243
	(0.159)	(0.139)	(0.370)	(0.166)
Shariah Supervisory Board $_{(t-1)}$	0.011	0.706	-0.065	-2.148
	(0.917)	(0.334)	(0.349)	(0.167)
Final Ownership % $_{(t-1)}$	-0.000	0.028**	0.001	0.006
	(0.853)	(0.022)	(0.591)	(0.712)
Chain Length $_{(t-1)}$	-0.038	-1.001	-0.048	0.273
	(0.463)	(0.128)	(0.315)	(0.599)
Firm Age $_{(t-1)}$	-0.012	0.997	0.151	1.906*
	(0.903)	(0.274)	(0.116)	(0.057)
Financial Sector $_{(t-1)}$	-0.735	-5.766	-0.824*	-4.728
	(0.171)	(0.189)	(0.072)	(0.226)

Corporation $_{(t-1)}$	-0.611	-4.621	-0.702	-3.488
	(0.255)	(0.290)	(0.123)	(0.368)
Constant	1.488***	1.287	1.500***	-2.109
	(0.008)	(0.786)	(0.002)	(0.640)
Observations	1197	1197	1197	1197
F	1.720	2.524	2.920	1.860
r2	0.016	0.025	0.025	0.024

p-values in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$

5. Summary

The last two decades have witnessed a substantial growth in the amount of research on corporate governance around the world and on the role of ownership configurations in particular. In recent years, scholarly attention was also drawn towards the diversity of corporate boards, and more specifically, towards gender diversity. Most corporate governance research, however, follows conventional theoretical approaches that traditionally fit the Anglo-American or the Continental European governance models. The research presented in this dissertation shows that the classical views of corporate governance mechanisms seem unrefined as they do not capture variations within countries and regions.

This thesis provides a detailed understanding of the role of ownership structure, namely government ownership, in a relatively unexplored institutional context predominated by government involvement in business activities and investments, and marked by severe market failures, socio-economic discrepancies and pressures, and ongoing political tension. The thesis generally highlights that institutional constellations are crucial factors with respect to the impact of government ownership on firm performance and strategy. Its findings likewise indicate that differences across institutional factors present various implications on diverse ownership configurations such as ownership concentration, ownership structure, and owner type, and that different institutional settings inversely impact firms' response to market voids, risk exposure, and legitimacy pressures. The thesis' inferences also underline the prominence of institutional isomorphism and its implications on legitimacy concerns and foreign investments. Lastly, this thesis explores the dynamics of the region's conservative social view regarding the role of females in society on the nomination and role of female directorship. Accordingly, its findings underscore

the various effects of different layers of institutional factors on the appointment of female directors and the relevance of societal norms and expectations in shaping female directorship roles.

This thesis thus contributes to the comparative corporate governance literature by examining internal corporate governance mechanisms from an institutional perspective, by expanding the institutional theory's empirical domain, and by testing novel hypotheses concerning the interaction between governance mechanisms and the institutional environment.

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The author wrote this dissertation between September 2016 and March 2021 as part of her work as a research associate at the University of St. Gallen. She was also part of the Global Center for Entrepreneurship and Innovation of the School of Management at the University of St. Gallen, where she participated in various projects and researches regarding international business, strategic management, comparative corporate governance, firm strategy and internationalization, organizational efficiency and effectiveness, and innovation and entrepreneurship. Her main area of research covers the topics of comparative corporate governance and the institution-based view of business strategy.

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