Firm's value, financing constraints and dividend policy in relation to firm's political connections

A thesis submitted for the Degree of Doctor of Philosophy
By

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ABSTRACT

The relationship between politicians and firms has attracted a considerable amount of research, especially in developing countries, where firms' political links are a widespread phenomenon. However, existing literature offers contradicting views about this relationship, espicially regarding the impact of firms' political connections on firms' market-performance. Furthermore, there is limited evidence on the impact of firms' political connections on some of the important corporate decisions, including firms' investment- and dividend-policies. Therefore, this thesis seeks to fill these gaps by offering three empirical essays with Jordan as a case study.

The first essay examines the impact of firms' political links on their values by controlling for macroeconomic conditions. Also, in the extended models, by specifying three major events which occurred after 2008, namely, the establishment of the Anti-Corruption Commission (ACC), the Global Financial Crisis, and the Arab Uprisings, we investigate the effects of these events on the relationship between firms' political ties and their value. The findings of this essay indicate that politically-connected firms have higher values compared to their non-connected counterparts in Jordan. Moreover, it is found that firms with stronger political-ties have higher values than firms with weaker ties. Furthermore, the positive effect of political connections continues, even after controlling for the macroeconomic conditions, though the latter are considered to be more important than political connections for firm valuation due to their impact on the share price. Interestingly, findings show that the events occurring after 2008 do not seem to have affected the relationship between political connections and firm value since the significant positive impact of political-ties on firm value persists during the post-event period.

The second empirical essay studies the role of political connections in mitigating firms' financing-constraints. Moreover, it investigates the effect of the strength of political connections in alleviating these constraints. Finally, it looks at the impact of the above-mentioned three events which occurred after 2008, notwithstanding the new banking Corporate Governance Code issued in 2007. Findings of this essay reveal that firms' political connections are important in mitigating their financing-constraints. Furthermore, the results show that stronger political connections seem to reduce financing-constraints more than weaker

connections. Finally, findings show that the impact of firms' political connections has diminished during the post-event period (2008 – 2014).

The third essay examines how a firm's political connections can affect its dividend-policy. It also considers the impact of the strength of political connections on dividend-policy. Finally, we extend the empirical analysis by investigating any shift in the relationship between political connections and dividends due to the events of the Global Financial Crisis, the Arab Uprisings, and the adoption of the International Financial Reporting Standards (IFRS). Results of this essay reveal that a firm's political connections have a significant positive impact on both the propensity to pay dividends and the dividend-payout ratio. Regarding the impact of the strength of political connections on dividends, it is found that firms with weaker political connections pay out more in dividends than firms with stronger connections. In terms of the impact of the events which occurred after 2008 on the relationship between political connections and dividends, the findings show that the impact of these connections on dividends is eliminated.

Dedicated to My Parents, My Lovely Wife and Daughter.

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DECLARATION OF AUTHORSHIP

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CHAPTER ONE

Introductory Background

1.1 Political connections in the emerging markets:

The institutional environment in the emerging markets can be differentiated from that of the developed markets based on distinctive attributes (Fan, 2011). governments in the emerging markets are highly interventionist and may enact and enforce different rules that adversely affect the firms' operations. For example, rules may include increasing corporate tax, tariffs on goods exported or imported by firms, or even facilitating or making it hard for new competitors to entre specific industries. Additionally, corrupted politicians and government officials in the emerging markets can use their powerful positions to obtain self-interest goals including soliciting bribes to provide better services for firms at the expense of others. As a result, firms will try to find unique resources which either protect them from unfavourable treatment by the government or which go a step further and help them to obtain government oversight (Wu et al., 2012; Li and Zhou, 2005). In other words, firms in such an environment will seek rent.

Rent seeking as term has been coined by Krueger (1974) in 1974 in her seminal work entitled "The Political Economy of the Rent-Seeking Society" to explain firms' behavior in relation to political connections. Subsequently, the term has been well-known and used by economic scholars when studying the political connections of firms. Simply put, the term refers to the firm's attempt of selecting and appointing individuals with political presence or have close ties to current or former influential politicians. The firm rent-seeking behavior can be explained by the common belief that a politically-connected individual can ensure an advantageous position for the firm in obtaining government benefits such as tax reductions, low cost debt, or even imposing some threatening regulations on prospective competitors (Goldman, Rocholl and So, 2009).

Krueger's (1974) work has set the foundations for future research on the relationship between politicians and firms. Krueger's conclusion that firms are willing to provide and allocate specific resources to hire politically-connected individuals has driven growing scholarly efforts aiming at providing detailed and

more insights into the effects of political connections on firms' policies and performance.

It has been theoretically argued that firms' political ties can have either a positive or a negative impact on the firm's value. The Resource Dependence Theory (RDT) provides a sound and solid explanation for the positive effect. Based on the tent of this theory, the company board main responsibility is the provision of resources which function refers to the board's ability to gain and secure resources for the firm (Hillman and Dalziel, 2003). Resources are defined as "anything that could be thought of as a strength or weakness of a given firm" (Wernerfelt,1984). Salancik and Pfeffer (1978) (as cited in Hillman, Withers and Collins, 2009), pointed out that there are four benefits a firm can obtain by appointing a board of directors, namely: advice and counsel, channels of information between the firm and external organizations, legitimacy and preferential access to resources.

Despite the fact that that politically-connected directors can be valuable for the firm in terms of preferential access to resources (reflected in the market value), political connections can have an adverse impact on firms. For instance, government-owned enterprises could suffer poor performance because their boards or CEOs may divert its overarching goal (i.e. maximizing a firm's value and enhancing its performance) to achieve politically and/or socially oriented goals (Wu et al., 2012). A typical example that mirrors this diversion is establishment of the Concorde jetliner wherein French politicians insisted on producing the Concorde, despite the low demand it was experiencing (Šljajfer, 1994). Similarly, Sapienza (2004) finds that state-owned banks provide loans at lower interest rates during election period, which leads to devastating consequences for the banks' performance as emphasized by Boubakri, Cosset and Saffar (2012).

Political connections can also have an adverse impact on firms caused by politicians' rent-seeking behavior. This act refers to the so-called 'grabbing hand Model' by Shleifer (1996). Šljajfer (1994) contends that the relationship between managers and politicians is mainly relies on a benefits exchange. As managers are constantly under stakeholders' pressure to maximize the firm's value, managers utilize bribes as a mean to convince politicians to facilitate any official economic activity of interest (Johnson, 1998; Kaufmann, 1997). On the other hand, politicians can benefit firm's top management through providing them with undeserved state

subsidies. Peng and Luo (2000) point out that a firm's managers may also use entertaining or gifts to obtain and sustain a good relationship with government officials. Indeed, this may lead to the fact that hiring or even pleasing politicians can be extremely costly to the extent that it may outweigh the benefits obtained from them (Faccio, 2010). This seems to be the case when politicians try to exploit their former or even current political positions to achieve their respective ambitions by serving some firms against others for the sake of personal gain.

1.2 Political connections in Jordan:

The impact of political connections on firms is manifested more in countries with high levels of corruption Faccio (2010). In Jordan, one of the most prevalent forms of corruption is favouritism. Favouritism can be defined as the tendency to provide favourable treatment to relatives and acquaintances (Loewe et al., 2007). At the country level, favouritism has a negative impact on the business climate and subsequently on economic development in Jordan. Favouritism develops perception of unfairness among individuals and leads to inefficiency in the state-business relationship according to Loewe et al. (2007). However, due to the poor governance on the country level and the poor government quality induce firms to seek rent as it is deemed to be beneficial for firms. primarily, building political connections affects firms' investment decisions as Loewe et al. (2007) find that firms' managers devote much time and money to networking and building political connections rather than to business ideas and to product innovation. Moreover, having politically-connected individuals could help to access bank loans or in the granting of tax reductions notwithstanding government tenders and moreover, the prevalence of political connections in Jordan is may be due to the belief of these firms that having such links makes things happen easier and opens to the company prospects may be closed without these connections. Which in will be reflected in these companies' performance and value. This might explain why over half of the nonfinancial firms listed on Amman Stock Exchange are politically- connected either to individuals at the ministerial and/or parliamentarian level, or to close relatives to leading politicians or through government ownership.

In order to combat the growing corruption of all forms in Jordan, the Parliament enacted an Anti-Corruption Law in 2006 and established the Anti-Corruption Commission (ACC). The ACC's main duty as highlighted in its national

strategy (2008) is to investigate allegations of corruption in both political and business arenas. The ACC deals with Corruption cases including misuse of power and authority, favouritism and poor management and waste of public funds, few to name.

The impact of the establishment of this unit on companies can potentially lead to opposite effects. On one hand, it will weaken or possibly eliminating the value of corporate political connections for companies in obtaining superior benefits compared to those companies without such connections. On the other hand, the unit will make the value of political links higher on the assumption that it will be risky (for both parties) and hard to provide additional services under the unit scrutiny. As a result, the politicians and connected individuals' returns for the services provided will be higher. Therefore, companies that can afford the increase in services' costs are the only ones that will benefit from the influential people, which will be more beneficial to these companies and will make them in better position compared to other companies.

1.3   Data on political connections in Jordan:

Jordanian firms seek political connections via different means and levels including at ministerial or parliamentarian level, through government ownership or building good relationships with close relatives of leading politicians. Close relatives include father, mother, son, daughter or cousin. In particular, close relatives' connection is easy to trace in Jordan because of the tribal system where members of the same family can be identified based on their   same unique surname that cannot be used by others.

The data on political connections in Jordan is obtained through steps. In the first step, all the firms' annual reports between 2004 and 2014 were downloaded and all the names of their chairs and boards of directors were obtained. For the government ownership, we scanned the Government Property Bulletin to find the companies in which the government owns voting shares. In the second step, profiling of the names was carried out to identify any political connections. Finally, all the political connections that had been identified in the previous has been classified according the strength of the political connectedness of each firm. Specifically, we classified a political tie as strong, if the firm is connected through government ownership or has at least one board member or chairperson, who has served as a

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Minister or Prime Minister. On the other hand, the link was considered as weak, if the firm has at least one board member or chairperson, who has served as a Member of Parliament or has a blood relationship with a leading politician.

Data on firms' political connections in Jordan demonstrates that on average 66% of the nonfinancial firms listed on Amman Stock Exchange are politically connected. This is relatively a significant size reflecting a dominated phenomenon in Jordan, which provides a fertile context for the current study. The data, on average, reveals that the majority of the firms (45%) are politically connected through leading politicians' close relatives. This is followed by those firms connected to individuals on the ministerial level (34%) then firms connected through government ownership (20%) and firms linked to parliament members (2%).

CHAPTER TWO

Introduction

Firms' ties with government and politicians have attracted a considerable amount of research, especially in developing countries which are characterized by the weak protection of property rights, high levels of government intervention in the area of business as well as high levels of corruption. In such countries, firms are more likely to seek economic rent, for example, by building connections with the government and leading politicians in order to gain a better position than firms without such connections.

There is no standardized definition for firm's political connections, as the literature provides several means by which a firm may be cosidered politically-connected. For example, Wu et al. (2012) define a firm as politically-connected if the firm's CEO or at least one of the directors has served, or is currently serving, in the central government or in the army. Agrawal and Knoeber (2001) employ the board's previous experience in dealing with the government, whether through initiating trade contracts or through obtaining government licenses as a proxy for political-connectedness. Moreover, if a leading politician owns a proportion of the firm's voting shares, then this firm will be regarded as being politically-connected (Faccio, 2010; Bunkanwanicha and Wiwattanakantang, 2009; Adhikari, Derashid and Zhang, 2006; Sapienza, 2004). Also, if at least one of the firm's directors has ties with a leading politician or party, this firm is considered politically-connected (Faccio, 2010; Goldman, Rocholl and So, 2009; Li et al., 2008; Leuz and Oberholzer-Gee, 2006; Li and Zhou, 2005; Johnson and Mitton, 2003; Fisman, 2001). Some other studies such as Cooper, Gulen and Ovtchinnikov (2010) and Claessens, Feijen and Laeven (2008) rely on campgain contributions made during elections as a proxy for political connections.

Several studies have attempted to explore the impact of political connections on firms. Some of these studies support the positive impact of political connections. For instance, Goldman, Rocholl and So (2009) and Fisman (2001), among others, conclude that politically-connected firms experience higher stock returns than their non-connected counterparts. However, some other studies have found evidence of the negative effect of political connections on firms' performance (see, e.g., Faccio,

2010; Boubakri, Cosset and Saffar, 2008). Furthermore, researchers have studied the mechanisms through which firms' political connections can enhance both accounting performance and market-value. These mechanisms include favourable government treatment by means of tax reductions (Wu et al., 2012; Adhikari, Derashid and Zhang, 2006), gaining government contracts (Goldman, Rocholl and So, 2009), and enjoying easier and cheaper access to external finance (Fraser, Zhang and Derashid, 2006; Leuz and Oberholzer-Gee, 2006; Khwaja and Mian, 2005).

Although previous studies have covered several aspects of the relationship between politicians and firms, this relationship is still unclear. These studies provide contradictory evidence about this relationship, especially regarding the impact of political connections on the performance of companies. Additionally, there is a limited number of studies which have examined the impact of firms' political links on some of the important corporate decisions including a firm's investment and dividend policy.

Therefore, this thesis complements this strand of the literature in three empirical chapters to fill the abovementioned gaps. The first empirical essay (i.e. Chapter 3) investigates the impact of firm's political connections on a firm's value by controlling for macroeconomic conditions. In the extended models, by specifying three major events which occurred after 2008, namely, the establishment of the Anti-Corruption Commission (ACC), the Global Financial Crisis, and the Arab Uprisings, we examine any shift in the relationship between firms' political ties and their value.

The second and third essays (i.e. Chapter 4 and Chapter 5, respectively) of the thesis focus on the impact of firms' political connections on two important areas of firms' decision-making, i.e. decisions regarding investment and their dividend policy. Specifically, the second empirical essay examines the role of firms' political connections in mitigating financing constraints. Specifically, we investigate the effect of political connections in reducing the investment cash-flow sensitivity of politically-connected firms. Moreover, we investigate the effect of the strength of political connections in alleviating financial constraints. We also look at the impact of the abovementioned three events which occurred after 2008, together with the new

banks' corporate governance code issued in 2007[1]. The third essay scrutinizes how firms' political connections can affect their dividend policy. Also considered is the impact of the strength of political connections on the dividend policy of firms. In this essay, we extend the empirical analysis by investigating any shift in the relationship between political connections and dividends due to the events of the Global Financial Crisis, the Arab Uprisings, and the adoption of the International Financial Reporting Standards (IFRS). The thesis outline is as follows.

Chapter 3 provides empirical evidence of the impact of political ties on firm value in a Middle East country, with Jordan as a case study. There is an absence of literature on the subject of firms' political connections in this region due to the difficulty of obtaining adequate data about firms' political ties. Therefore, this study is the first on this topic in the region of the Middle East and North Africa. The unique cultural aspects in Jordan that can increase the opportunity for nepotism to play a significant role in the business field can enhance our understanding about the impact of political connections on firm value. A further contribution in this chapter rests on the idea that economic conditions may affect firm value more than political connections, macroeconomic conditions such as inflation and GDP growth affect all firms listed on the stock exchange by affecting the demand for their shares by investors, as these conditions have an impact on the investor's behaviour according to the consumption smoothing behaviour by making them more risk averse, which consequently affect the stock prices, therefore, the value of the listed firms with regardless of their political connectedness. In other words, these conditions may be more important than a firm characteristic such as political connectedness. This argument raises the need to control for these conditions whilst investigating the relationship between firms' political ties and their value. Finally, we extend the sample period beyond 2008, where most recent studies cap their sample periods when investigating the impact of political connections on firm valuations. By extending the sample period, this chapter contributes to the literature by examining the impact of a major event, the establishment of the Anti-Corruption Commission (ACC), and two successive major shocks, namely, the Global Financial Crisis, and the Arab Uprisings. The establishment of the Anti-corruption commission may hamper the politicians from using their power and connections to benefit the firms

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[1] This code regulates the ability of banks' boards of directors to extend credit facilities to politically-connected firms just as it increases their accountability.

they are related to. Furthermore, Arab Uprisings that started in 2010 increased the pressure on the state to curb corruption as it was one of the main drivers of the revolutions in the surrounding countries. Finally, the Global Financial crisis has had a significant adverse impact on the nonfinancial firms listed on the Amman Stock Exchange in general with regardless of their political connectedness. Therefore, it is important to investigate the impact of these events on the relationship between firms' political connections and the value of the firm. In order to examine the impact of these events, we split the sample period into two sub-periods, the pre-event period (2000 – 2007) and the post-event period (2008 – 2014).

In chapter 3, following Wu *et al.* (2012), the method of Ordinary Least Squares (OLS) with clustered standard errors at the firm level is employed. Furthermore, we use the Heckman Two-step treatment effects model to correct for potential causality and omitted variable bias.

Findings in chapter 3 indicate that political ties are important in enhancing firm valuation in Jordan. Moreover, this positive effect persists even after controlling for the macroeconomic conditions, though the latter are considered to be more important than political connections for firms' value due to their impact on firms' share prices. Interestingly, findings reveal that the events which occurred after 2008 do not seem to have any impact on the relationship between political connections and firm value, since political connections are found to continue to exert a significant positive impact. This result is alarming as it implies that government's attempts have failed to limit politicians' ability to assist firms with which they are connected.

Chapter 4 provides the first empirical evidence on the impact of firms' political connections on the investment cash-flow sensitivity in countries where the banking sector is owned by the private sector. Previous studies focused on countries such as China and Taiwan where state-owned banks dominate the banking industry (see, e.g., Cull *et al.*, 2015; Shen and Lin, 2016). The motivation behind investigating this relationship in Jordan is that, although the Jordanian banking system is privately owned, these banks have politicians in their board-rooms, which may lead these banks to facilitate access to banks loans by politically-connected firms as politicians use their ties with each other. Furthermore, this chapter examines the effect of the strength of political connections in alleviating financing constraints. This chapter extends to investigating the impact of four major events, namely, the Global

Financial Crisis, the establishment of the Anti-Corruption Commission (ACC), the Arab Uprisings, and the issuance of the new Corporate Governance Code for Jordanian banks, on the relationship between political connections and financing constraints.

In chapter 4, following Bond *et al.*, (2003); Harrison and McMillan, (2003) and Bond and Meghir, (1994), we employ the Euler investment model. The Euler model is estimated using the Generalized Method of Moments (GMM), which mitigate the problems of potential endogeneity and individual-firm heterogeneity.

The findings of chapter 4 reveal that firms' political connections exert a significant effect in mitigating financing constraints, which indicates that private banks can have a political role in Jordan. Furthermore, the results show that the strength of political connections affects the nature of the effect of these connections in reducing financing constraints, where stronger political connections seem to reduce financing constraints more than weaker connections. Finally, findings show that the impact of firms' political connections has diminished during the post-event period (2008 – 2014). In light of the results of the post-event period in Chapter 2, we are not able to conclude that this result is driven by the establishment of the ACC; rather it could be due to the issuance of the Corporate Governance Code for Jordanian banks which has focused on the responsibility and accountability of banks' boards.

Chapter 5 contributes to the literature as the first attempt to examine the relationship between firms' political connections and their dividend policy from the view-point of the agency theory and information asymmetry costs. In addition, this chapter examines how the strength of political connections affects the payout ratios of politically-connected firms. In addition, it investigates the impact of the above-mentioned events, notwithstanding the adoption of the International Financial Reporting Standards (IFRS) by Jordanian publicly-listed firms, on the relationship between political connections and dividends. These events are likely to affect the dividend policies of Jordanian publicly-listed firms. Furthermore, The adoption of IFRS provides higher quality of accounting information and reduces the forecasting errors by analysts According to Ashbaugh and Pincus (2001). Consequently, this will reduce the information asymmetry problem between firms and external investors.

Therefore, firms will be in less need to pay out dividends to deliver information about their performance.

In chapter 5 we follow the recent literature on dividend policy by employing the Logit model to examine the impact of political connections on the propensity to pay dividends. Furthermore, we employ the Tobit model to investigate the impact of political connections on the payout ratio. Finally, we estimate the marginal effects at the means to study the impact of firms' political connections on both the propensity to pay dividends and dividend payout ratio, fixing all other explanatory variables at their mean value. For robustness, we employ the propensity-score matching (PSM) method to fix differences between firms' characteristics to isolate the impact of firms' political connections on dividends. Also, we estimate pooled Logit and pooled Tobit models with clustered standard errors.

Results of chapter 5 show that politically-connected firms are more likely to pay dividends than non-connected firms. Furthermore, they pay higher dividends than non-connected counterparts. There are two possible explanations for this effect: Firstly politically-connected firms use dividends as a substitute for high agency costs and weak corporate governance. Secondly, these firms use dividends to reduce the high information-asymmetry problems that stem from the fact that they have poorer accounting disclosure compared to non-connected firms. Regarding the impact of the strength of political connections on dividends, findings reveal that firms with weaker political connections pay out more in dividends than firms with stronger connections. This result is puzzling, especially if we assume that firms connected through stronger connections suffer higher agency costs and information-asymmetry problems than firms connected through weaker connections. A possible explanation for this result is the ability of stronger connections to help firms gain favourable access to bank loans even when they have high information-asymmetry problems (Chaney, Faccio and Parsley, 2011). This leads these firms to be less incentivised to use dividends to reduce the above-mentioned problems. Another possible explanation is that these firms keep the cash in the firm for expropriation purposes. On the impact of the events which occurred after 2008 on the relationship between political connections and dividends, findings show that the impact of these connections on dividends is eliminated. The adoption of IFRS by Jordanian publicly-connected firms may explain this result as the adoption of the IFRS reduce the need for dividends to

reduce information asymmetry problems between firms and external investors. Alternatively, this result can be explained by the impact of the Global Financial Crisis and the Arab Uprisings which hit the profitability of Jordanian listed firms adversely after 2008. The latter explanation relies on Jordanian company law which prohibits the payment of dividends, if a firm reports a loss at the end of a financial year or has a cumulative loss from the previous year.

Chapter 6 summarises the main conclusions of this thesis, highlights the key findings and offers some policy implications. Furthermore, it identifies the main limitations of this thesis and suggests new areas for future research.

CHAPTER THREE

Political connections and firm value: Evidence from Jordan.

3.1   Introduction

The literature offers different definitions of a firm's political connections. For instance, a firm is considered politically-connected if it has a Chief Executive Officer (CEO) or a director who served or is currently serving in the central government or the Army (Wu *et al.*, 2012; Francis, Hasan and Sun, 2009; Fan, Wong and Zhang, 2007). Another source of connections can come from previous experience dealing with the government whether by initiating trade contracts with the government or by obtaining government licenses (Agrawal and Knoeber, 2001; Agrawal and Knoeber, 2001). Moreover, a firm is politically-connected if a leading politician, owns a particular portion of the firm's voting shares (Faccio, 2010; Bunkanwanicha and Wiwattanakantang, 2009; Adhikari, Derashid and Zhang, 2006; Faccio, 2006; Sapienza, 2004). Besides, if at least one member of the firm's board has political ties with a leading politician (including a blood relationship) or party, this firm is considered politically-connected (Faccio, 2010; Goldman, Rocholl and So, 2009; Li *et al.*, 2008; Leuz and Oberholzer-Gee, 2006; Li and Zhou, 2005; Johnson and Mitton, 2003; Fisman, 2001). Some other studies such as Cooper, Gulen and Ovtchinnikov (2010) and Claessens, Feijen and Laeven (2008) rely on the contributions provided by firms to support the campaign of any deputy in the elections as a proxy for political ties.

Firms' Political relations have attracted a considerable amount of research, especially in developing countries, where political links are a widespread phenomenon (Wu *et al.*, 2012). The prevalence of firms' political connections in these countries is due to weak protection of property rights and the high levels of intervention of governments in the business area, in general, and in firms' operations, in particular. Therefore, companies in such an environment seek to attract politicians to their boardrooms to gain an advantageous position against firms without such board-composition (Faccio, 2010). Some studies confirm this view and find that political connections improve a firm's value (Goldman, Rocholl and So, 2009; Bunkanwanicha and Wiwattanakantang, 2009; Li *et al.*, 2008; Fan, Rui and Zhao, 2008; Fisman, 2001; Sojli and Tham, 2017; Tang *et al.*, 2016). According to these

studies, a firm's political connections affect its value through various means, such as favorable treatment by government in terms of tax deductions (Wu *et al.*, 2012; Adhikari, Derashid and Zhang, 2006), or through receiving government contracts (Goldman, Rocholl and So, 2009), or securing key resources such as the easy access to debt financing (Fraser, Zhang and Derashid, 2006; Leuz and Oberholzer-Gee, 2006; Khwaja and Mian, 2005).

Conversely, some other studies suggest that firms' political connections can affect both a firm's value or accounting performance adversely (See, e.g., Faccio, 2010; Boubakri, Cosset and Saffar, 2008; Fan, Wong and Zhang, 2007; Faccio, 2006). The explanation for these adverse effects, according to these studies, is that appointing politicians can be either costly for firms or a cause of inefficiency regarding decision-making processes, and the latter can be because of a lack of experience of the appointed politician in a company's or industry's operations.

Thus, the effect of political connections on firm value remains unclear despite all the studies on this topic, which raises the need to investigate this relationship in a new setting, where new aspects of political connections appear to give more understanding about these relationships. Moreover, none of the studies reviewed have taken into account economic conditions, whilst investigating the relationship between political connections and firm value. More importantly, most recent studies concerning the influence of firms' political connections on their market performance cover the period before 2008.

This study, therefore, contributes to the literature in three ways: First is filling the gap which arises from the lack of studies about the effects of political connections on firm value in the Middle East North Africa (MENA) region, in general, and in Jordan in particular, where the unique cultural aspects can increase the opportunity for nepotism to play a significant role in the business field. The absence of any empirical studies about firms' political ties in Jordan results from the difficulty of obtaining data about their political connections, where the need arises to collect the annual reports for each firm to obtain the board's of directors names, then tracing those names to identify which individuals are politically-connected. Second is controlling for economic conditions whilst examining the effects of political ties on the firm value. Macroeconomic conditions affect all firms listed on the stock exchange by affecting the investor's behaviour according to the consumption

smoothing behaviour by making them more risk averse, which consequently affects the stock prices, therefore, the value of the listed firms with regardless of their political connectedness. In other words, these conditions may be more important than a firm characteristic such as political connectedness. Therefore, it is important to control for the economic conditions while investigating the impact of firms' political connections on firm value, as these conditions may wipe out the impact of these connections. In this regard, and as a point of difference from the study of Faccio (2010), we control for these conditions in a single country study not a cross-country analysis. Furthermore, this study differentiates itself from the study by Faccio (2010) by using panel data form not cross-sectional data. The third contribution is investigating the impact of the establishment of the Anti-corruption Commission, notwithstanding two successive major shocks, namely, the Global Financial Crisis, and the Arab Uprisings which have increased the pressure on the state to curb corruption and eliminate the ability of elites to benefit from their political positions. The establishment of the Anti-corruption commission may hamper the politicians from using their power and connections to benefit the firms they are related to. Furthermore, Arab Uprisings that started in 2010 increased the pressure on the state to curb corruption as it was one of the main drivers of the revolutions in the surrounding countries. Finally, the Global Financial crisis has had a significant adverse impact on the nonfinancial firms listed on the Amman Stock Exchange in general with regardless of their political connectedness. Therefore, it is important to investigate the impact of these events on the relationship between firms' political connections and the value of the firm. Thus, this study brings about an examination of whether these shocks have had any effect on the relationship between firms' political connections and their value.

To sum up, this study attempts to address the following four questions: First, are political connections important for a firm's value in Jordan? Second, is the strength of political connections important for a firm's value in Jordan? Third, are political connections important after controlling for economic conditions? Fourth, do the establishment of the Anti-Corruption Commission, the Global Financial Crisis, and the Arab Uprisings affect the relationship between firms' political connections and firm value in Jordan?

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To address the research questions, we use data on 131 Jordanian non-financial companies over the sample period between 2000 and 2014. Furthermore, in order to address the fourth question, we divide the sample period into two sub-periods, namely 2000 – 2007 and 2008 – 2014.

To test our hypotheses, we employ the method of Ordinary Least Squares (OLS) and Heckman Two-step treatment effects model to correct for potential causality and omitted variable bias following Wu *et al.* (2012). We specify the model for this study with a firm's political connections dummy in addition to firms' specific characteristics (Leverage, Size, Tangible assets and Sales growth). Also, we include macroeconomic variables (growth of Gross Domestic Product (GDP) and Inflation rates) to control for economic conditions. Moreover, we divide the sample period into two sub-periods, namely 2000 – 2007 and 2008 – 2014 to investigate the effect of firms' political connections on firm value pre- and post the events above.

For the full sample period, this study shows that politically-connected firms experience a higher market value compared to non-connected firms, which supports our hypothesis of the positive effect of political ties on a firm's value. On the second question, we extend the research to examine the effect of the strength of political connections on a firm's market valuation. Results show that firms with stronger political ties have significantly higher market values compared to firms with weaker political connections, which supports our second hypothesis. On the third question, we provide evidence that political connections can add to the firm's value even after controlling for the economic conditions. Finally, on the fourth question, we find that politically-connected firms are more valuable than non-connected firms, which means that these events had no significant impact on the relationship between a firm's political connections and its value. Also, we find that connections through government-ownership are the only level of connections that have a positive and significant impact on a firm's value for the post-event period.

Findings of this study are important for policy makers, firms's managers, and investors. For instance, these results give the managers an indication of how much such connections are important in Jordan. Furthermore, investors can benefit from these results in their investment decision. Finally, results of the post-event period are of high importance for policy makers regarding the establishment of the Anti-Corruption Commission. In this regard, we recommend the policy makers to increase

their efforts to curb corruption in the business area by giving the Anti-Corruption Commission the autonomy regarding decision making so it can perform its duties efficiently and without bias.

In addition to the introductory section, this chapter is organised as follows: Section 2 provides a literature review and development of the hypotheses. Section 3 presents the research methodology. Section 4 provides the empirical results. Section 5 concludes the chapter.

3.2 Literature Review:

According to Peng and Luo (2000), firms' political connections can strongly affect their performance, and this effect can be more significant in the presence of a highly interventionist government and/or corrupt officials. For instance, the interventionist government can impose some rules that might have an adverse impact on the firms' operations, such as increasing corporate tax, tariffs on goods exported or imported by firms, or even facilitating or complicating the entrance of new rivals to the market. Similarly, corrupt politicians can exploit their positions to achieve their respective goals by soliciting bribes to provide services for some firms to the detriment of others. In such an environment, firms will try to find unique resources which either protect them against any unfavourable treatment by the government or which go a step further and help them to obtain government oversight (Wu *et al.*, 2012; Li and Zhou, 2005). In other words, firms in such an environment will seek rent. Krueger (1974) has introduced the term "Rent Seeking" in 1974 in her seminal work entitled "The Political Economy of the Rent-Seeking Society". After this work, the label has been prevalent in economic literature when investigating the political connections of firms. Mainly, a company is rent-seeking when it attempts to appoint individuals who have a political background or have close ties to either a current or to a former leading politician. This rent-seeking behaviour by firms is due to the real belief that such individuals can help companies to achieve an advantageous position in obtaining government benefits such as tax reductions, low cost of debt, or even imposing some threatening regulations on prospective competitors (Goldman, Rocholl and So, 2009).

Krueger (1974) paved the way to growing interest in investigating the relationships between politicians and firms when she concluded that firms are willing

to provide, and even devote, resources to hiring politically-connected individuals. This conclusion has encouraged researchers to conduct detailed investigations into the effects of political connections on firms. However, previous studies offer mixed evidence on the effect of political connections on firms (Wu *et al.*, 2012).

Theoretically, firms' political ties can have either a positive or a negative effect on a firm's value. The Resource Dependence Theory (RDT) can explain the positive effect. According to this theory, there is an important function for the company board which is the provision of resources, and this function refers to the board's ability to gain resources for the firm (Hillman and Dalziel, 2003). Birger Wernerfelt (1984) defines resources as "anything that could be thought of as a strength or weakness of a given firm". Salancik and Pfeffer (1978) (as cited in Hillman, Withers and Collins (2009)), assert that there are four benefits a firm can obtain by appointing a board of directors: Advice and counsel, channels of information between the firm and external organizations, legitimacy, and preferential access to resources. Regarding politically-connected firms, as will be discussed in more detail in the next section, politically-connected directors can be valuable for the firm in terms of gaining counsel and preferential access to resources, which will be positively reflected in the market value of these firms.

However, political connections can have an adverse impact on firms. For instance, Government-owned enterprises could be inefficient because boards or CEOs of these enterprises may miss their main goal, which is maximising a firm's value and enhancing its performance to achieve goals that have a political and/or social nature (Wu *et al.,* 2012). A good example of the social or political objective is the production of the Concorde jetliner wherein French politicians insisted on producing the Concorde, although the demand for it was low (Šljajfer, 1994). Similarly, Sapienza (2004) finds that state-owned banks provide loans at lower interest rates, especially during an election period which leads to negative consequences for the banks' performance according to Boubakri, Cosset and Saffar (2012).

Another mean of the adverse effect of political connections is the rent-seeking behaviour of politicians. This act refers to the so-called 'grabbing hand Model' by Shleifer (1996). Šljajfer (1994) points out that the relationship between managers and politicians relies on a benefits exchange. By assuming that managers seek to

maximise the firm's value, those managers use bribes to convince politicians to assist the firm by facilitating any official economic activity (Johnson, 1998; Kaufmann, 1997). On the other hand, politicians can cause a firm's management to achieve personal benefits through state subsidies introduced to the firm by the politicians. Peng and Luo (2000) also point out that a firm's managers may use entertaining or gifts to obtain and sustain a good relationship with government officials. Indeed, this may lead to the fact that hiring or even pleasing those politicians can be costly to the degree that it may outweigh the benefits obtained from them (Faccio, 2010). This seems to be the case when politicians try to exploit their former or even current political positions to achieve their respective ambitions by serving some firms against others for the sake of personal gain.

3.2.1 Empirical studies on political connections and firms

The existing body of literature has examined the effect of political connections on firms from different viewpoints including firm value, accounting performance, and decision-making in addition to some other factors that relate to investors. Studies show that companies can exploit their relations with government officials to gain preferential treatment by government (Bunkanwanicha and Wiwattanakantang, 2009; Francis, Hasan and Sun, 2009; Goldman, Rocholl and So, 2009; Claessens, Feijen and Laeven, 2008). In an attempt to investigate the direct effect of political connections on firms' market performance, Wu *et al.* (2012) divided the sample firms into state-owned enterprises and private firms to examine the different effects of corporate ownership structure. By using the Ordinary Least Squares (OLS) methodology and the Heckman two-step treatment effect models to handle endogeneity issues, they find that private firms' market performance measured by Tobin's q is higher for politically-connected firms. On the other hand, Faccio (2010), using cross-section data, finds that politically-connected firms have poorer market performance measured by Tobin's q. Moreover, beside Tobin's q ratio as a measure of market value, Bunkanwanicha and Wiwattanakantang (2009) employ stock returns as a proxy for the firms' market value and find that politically-connected firms in Thailand have significantly higher stock returns and higher Tobin's q ratios. Similarly, (Boubakri, Cosset and Saffar, 2012) by employing event study methodology find that after the establishment of their political ties, firms witness an increase in their accounting performance.

Additionally, Peng and Luo (2000) have examined the impact of managerial ties with government officials on firm performance measured by Return on Assets (ROA) and market share as a measure of the strategic performance. Peng and Luo (2000) find a positive effect of political ties on both ROA and Market Share. In contrast, (Faccio, 2010) in her cross-country analysis of 16191 firms in 47 countries found that firms with political connections have poorer accounting performance compared to non-connected firms, but she asserted the positive impact of political ties on market share. Faccio (2010) attributes the adverse effect of political connections on firm performance to the lack of management skills for some of those politicians. She claims that the primary objective of appointing them is their political power only, which may lead to a lack of effectiveness in management decision-making. By using an event study methodology, Fisman (2001) concludes that politically connected firms have higher returns than non-connected firms. By using the same method, Cooper, Gulen and Ovtchinnikov (2010), Bunkanwanicha and Wiwattanakantang (2009), Goldman, Rocholl and So (2009) and Ferguson and Voth (2008) support the positive effect of political ties on stock returns. Recently, Tang *et al.* (2016) found that appointing politically-connected directors enhances the value of firms in China. On multinational corporations level, Sojli and Tham, (2017) concludes that having political connections to the host government improves the value of the listed firms and facilitate the access to the market.

Furthermore, as previously mentioned, firms can exploit their relations with government officials to gain preferential treatment through different channels. To prove this view, Wu *et al.* (2012) find that private firms with politically-connected CEOs pay lower taxes compared to non-connected private companies. This preferable treatment by the government leads to higher market value for private firms that have political ties against their counterpart of non-connected firms. Similarly, Adhikari, Derashid and Zhang (2006) show that Malaysian firms that have close ties to government officials receive preferential tax treatment compared to non-connected firms.

In addition to preferential tax treatment, politically-connected firms also enjoy privileged access to debt financing, especially by government-owned banks. Khwaja and Mian (2005) point out that state-owned banks prefer to lend to politically-connected firms, even if the default risk for these firms is high. Moreover,

they conclude that the stronger the political ties are, the higher the debt provided will be. This is consistent with recent findings by Boubakri, Cosset and Saffar (2012) and Faccio (2010). Moreover, Sapienza (2004) in her study about state-owned banks' lending behaviour finds that they lend to politically-connected firms at lower interest rates. However, Faccio (2010) could not find similar results in her cross-country analysis. In another context, Claessens, Feijen and Laeven (2008) conclude that firms that contribute more to election campaigns enjoy more access to debt and if they contribute to the winner, the effect on access to debt will be more significant. Banks' favouritism in terms of lending to politically-connected firms may be because these firms are more likely to be bailed out by the government if they face financial distress (Faccio, Masulis and McConnell, 2006).

3.2.2 Strength of political connection

The strength of political ties can be measured by identifying the current or previous political position of the politically-connected individual. Faccio (2010) asserts the importance of the strength of political connections when examining the relationship between political relationships and firm performance because it can give a deeper understanding of the relationship. Fan, Wong and Zhang (2007) employed a general definition of the strength of political connections by considering the affiliation of the CEO with the government. They define the political link as strong if the CEO is affiliated with the central government or to the local government that has a direct authority over the region where the firm operates. However, if the CEO relates to a local government that has no direct power over the firm's business region, the political connection is considered weak. Nonetheless, this definition of the strength of political connections does not capture other possible channels of political ties according to Fan, Wong and Zhang, (2007).

Following on, Faccio (2010) attempted to consider more specific channels for political links. Accordingly, she divided the sample firms into five categories based on the strength of political connections: the first group includes firms that are politically-connected through owners (when the politically-connected person is a controlling shareholder), the second category comprises firms connected through directors (when the politically-connected person is a board member), thirdly, if a controlling shareholder or a member of the board is the king/president of the country, this firm will be connected through these roles. The fourth category contains

companies that are politically-connected to a member of parliament. Finally, if the firm has a controlling shareholder or a board member who has a relationship with at least one leading politician or political party, this firm will be considered connected through a close relationship.

Claessens, Feijen and Laeven (2008) employ the campaign contributions provided by firms to election candidates to measure their political connectedness, and they depend on some characteristics of the candidate such as being an incumbent candidate and affiliation to the president to gauge the strength of political connections. Finally, Khwaja and Mian (2005) measure the strength of political connections based on electoral success, votes obtained in elections, and political party. According to them, the politically-connected person will be strong if he or his party wins the elections. Furthermore, the higher the votes obtained by the politician, the more powerful he will be.

For the purpose of this study, our classification is similar to that of Faccio (2010). However, it distinguishes itself from Faccio in the following manner: We consider political connections through boards of directors and chairpersons but not through the CEOs. Unlike Faccio (2010), we only consider connections through blood relationships with leading politicians and do not include relationships through links of friendship. The latter is due to the difficulty in obtaining such data. Moreover, we include firms with state ownership, so long as the government owns a stake of the firm's voting shares that is not considered in the study of Faccio (2010).

Regarding the strength of political connections, we classify a political tie as strong if the firm is connected through government ownership or has at least one board member or chairperson, who has served as a Minister or Prime Minister. However, the link will be considered weak if the firm has at least one board member or chairperson, who has served as a Member of Parliament or has a blood relationship with a leading politician.

Results on the effect of the strength of political connections on firm value are consistent with the notion that stronger political connections have a greater influence than weaker links. For example, Fan, Wong and Zhang (2007) declare that the type of connection can alter the effect of political connections, as they find that firms with a CEO who is connected to the central government and a CEO, who is connected to

the local government and serves in the same region where the firm is operating, can have more impact on firms than a CEO, who is connected to the local government but without direct authority on the firm. In the same vein, Faccio (2010) finds that firms connected to a minister enjoy a lower cost of debt. Moreover, she concluded that firms related to a member of parliament, and with a close relationship, experienced the lowest market valuation amongst politically-connected firms. These results are consistent with the evidence found in Pakistan, where state-owned banks increase the value and lower the cost of loans provided to firms that have stronger political connections (Khwaja and Mian, 2005). Furthermore, in Brazil, Claessens, Feijen and Laeven (2008) state that benefits to incumbent candidates and candidates linked to the president are higher than the benefits to candidates without such characteristics, which supports the view that politicians with stronger political positions can deliver better assistance to firms.

3.2.3 Macroeconomic Environment:

Fama (1989) and Chen (1991) declare that based on consumption smoothing behaviour, expected returns would be low in the active economic status and high in the weak state of the economy. This inverse association can be explained by the effect of the status of the economy on the current stock prices of firms, so that in a boom economy, current stock prices will increase, and the opposite is applicable in a period of recession. Furthermore, economic conditions can influence the future profitability of firms, and because a company's future profitability is reflected in its stock price, then expectations about the economic conditions will affect current values of firms (Sadorsky, 2003).

Furthermore, it is argued that inflation and stock prices are negatively correlated, and the effect of inflation can be in different forms; one form is the adverse effect of inflation on the corporate sector consequently decreasing the price of a firm's stock. Another form is by affecting an investor's behaviour by making them more risk averse, which will increase the required rate of return or the real discount rate (Campbell and Vuolteenaho, 2004). Moreover, Fama and Jensen (1983) found a negative correlation between inflation and real stock-returns. Therefore, it is important to control the macroeconomic environment whilst investigating the relationship between firms' political connections and firms' values.

3.2.4 Anti-Corruption Law, Global Financial Crisis and Arab Uprising

Although the literature supports the negative impact that corruption has on investments and the growth of a country, when considering the literature on political connections and financial markets for countries with high levels of corruption, the view tends to consider the benefits of political connections to firms (Porta *et al.,* 1998; Faccio, 2010). Additionally, the differences between firms which have political connections and those which do not, are greater in countries with high levels of corruption particularly when considering access to debt financing (Faccio, 2010).

A form of corruption is favouritism, which can be defined as the provision of favourable treatment to family members and acquaintances (Loewe *et al.*, 2007). Favouritism is the main form of corruption demonstrated in Jordan, which is widespread and it results in impacting the development of the national economy of the country. An example of its effect is highlighted when dealing with state-business relations according to Loewe *et al.* (2007), as it demonstrates unfairness, inequality and inefficiency. Moreover, favouritism affects investment decisions, as a large amount of time and money is expended on networking and making connections, which distracts the focus from the business and its development. However, firms with connections tend to acquire loans and reductions in taxes more easily which causes distortions in the market.

Therefore, the Jordanian Parliament took action to face up to corruption in 2006 by passing a law to form the Anti-Corruption Commission (ACC), which was created in 2008 to investigate corruption allegations. In 2010, the number of complaints reported were 1026, with 43% related to misuse of power, 12% related to waste of public funds and 10% related to favouritism. Since then the number of complaints have decreased, in 2012 it reached 303 complaints and in 2014 there were 151 complaints. The aforementioned numbers demonstrate how influential members of a society can abuse their power and use it to benefit their networks and connections. Furthermore, the Arab Uprisings which started around 2010 exerted more pressure on the state to combat corruption and limit politicians' interference into the business sector, as corruption was one of the main drivers of the uprisings in the Arab World. An example of this is Egypt, which capitalised its market to the benefit of a minority of the Egyptian people in its state-led developments and this could be replicated in Jordan and many of the MENA region countries. Thus, in such

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an environment, one would expect favouritism to have a major impact on the business climate and play an important role in doing business.

Moreover, the Global Financial Crisis in addition to the Arab Uprisings had an effect on non-financial firms in Jordan, while the banking sector was not effected as it has low relations to the international capital markets. However, the effects on non-financial firms were high, with losses reported at 48% in the Amman Stock Exchange in 2011 rising from 16% in 2007. Also, this could have affected the market value of firms which are publicly listed regardless of their political connectedness.

Following on from previously mentioned statements, this study formulates as one of its objectives an investigation into the impact of establishing the ACC with two external shocks that affected the Jordanian economy and their effects on the relationship between firms' policital connections and value. The sample will be divided into two periods: from 2000 to 2007 and 2008 to 2014, to enable an in-depth investigation into these current events.

3.2.5   Hypothesis development

3.2.5.1   Political connections and firm value

Based on the previous discussion and the argument of Faccio (2010) that benefits of firms' political connections are greater in countries with high level of corruption, we argue that politically-connected boards in Jordan can assist firms to obtain and sustain favourable treatment such as government contracts, tax reductions, and favourable access to external finance. Consequently, they can help firms to enjoy an advantageous position compared to non-connected firms (Wu *et al.*, 2012; Claessens, Feijen and Laeven, 2008; Adhikari, Derashid and Zhang, 2006). Thus, we posit our first hypothesis as follow,

H1. Jordanian listed firms with politically-connected boards have higher market value than non-connected firms.

3.2.5.2   Strength of political connections and firm value

As discussed in the section of strength of political connections, existing literature shows that the strength of firms' political ties can exert a significant effect on obtaining more resources and can assist firms to enhance their market-value (Faccio, 2010). Moreover, Fan, Wong and Zhang (2007) and Khwaja and Mian (2005)

conclude that the stronger the politician connected to the firm is, the more benefits such a firm can obtain, particularly in terms of a firm's value and its access to finance. Thereby, the second hypothesis will be as follows,

H2. Jordanian listed firms with stronger political-connections will enjoy a higher value than firms with weaker political-connections.

3.2.5.3 Macroeconomic environment effect

According to consumption smoothing behaviour, economic conditions can affect stock prices and expected stock returns. Also, it can affect investor behaviour by making them risk averse, which in turn will be reflected in the stock prices and, consequently, firms' value. This argument means that economic conditions can be more influential than political connections and can affect the market value of a firm regardless of the political connectedness of the firm. Thus, we draw our third hypothesis as follows,

H3: After controlling for economic conditions, political connections of Jordanian listed firms will have no impact on a firm's value.

3.2.5.4 Corruption Law, Global Financial Crisis and Arab Uprising

In the fourth hypothesis, we test whether the global financial crisis, Arab Uprisings and the establishment of the Anti-Corruption Commission, that took place after 2008, have an impact on the relationship between political connections and firm value. As discussed in the previous section, the Global Financial Crisis affected firms' profitability. Moreover, the Arab Uprising, alongside the establishment of the Anti-Corruption Commission, affects the ability of political connections to assist firms to which they are related. Thus, we formulate our fourth hypothesis as follows,

H4: The effect of political connections in enhancing firm value is lower during the post-events period.

3.3 Methodology

3.3.1 Estimation framework

To investigate the relationship between political connections and firm value in Jordan, we use the model by Wu *et al.* (2012).

$$\text{FirmValue}_{i,t} =$$
$$\alpha + \beta_1 \text{POLCON}_{i,t-1} + \beta_2 \text{SIZE}_{i,t-1} + \beta_3 \text{LEVERAGE}_{i,t-1} + \beta_4 \text{TANGIBILITY}_{i,t-1} +$$
$$\beta_5 \text{MAGE}_{i,t-1} + \beta_6 \text{GROWTH}_{i,t-1} + \beta_7 \text{EDU}_{i,t-1} + \text{Industry and year dummies} + \varepsilon_{i,t}$$
(3.1)

However, due to lack of data, we excluded the variables of managers' human capital (manager age (MAGE) and manager education (EDU)). Thus, the general model of this study is as follows,

$$\text{FirmValue}_{i,t} = \alpha + \beta_1 \text{POLCON}_{i,t-1} + \beta_2 \text{SIZE}_{i,t-1} + \beta_3 \text{LEVERAGE}_{i,t-1} + \beta_4 \text{TANGIBILITY}_{i,t-1} +$$
$$\beta_6 \text{GROWTH}_{i,t-1} + \text{Industry and year dummies} + \varepsilon_{i,t} \qquad (3.2)$$

3.3.1.1 Dependent variable

Following the literature, we use Tobin's q to measure the firm value (Antonczyk and Salzmann, 2014; Wu *et al.,* 2012; Adams and Ferreira, 2009; Villalonga and Amit, 2006). Tobin (1969) and Brainard and Tobin (1968) have introduced the q ratio with the detailed reasoning for its calculation. They calculate the Q ratio as the market value of the firm divided by total assets, where the market value of the firm is calculated as the book value of total assets minus the book value of equity plus the market value of equity. Moreover, to calculate the market value of equity, they multiply the number of outstanding shares by the annual closing price of these shares.

Data for Tobin's q is obtained from the annual financial statements and annual reports published on the website of the Amman Stock Exchange (ASE). The data consist of 131 non-financial firms listed on ASE for the period of 2000 to 2014. Furthermore, to exclude the effect of outliers, we use the natural log of Tobin's q, following Adams and Ferreira (2009).

3.3.1.2 Firm's political connections

POLCON (Political Connections) is a proxy for firms' political connections. A firm is defined as politically-connected if it has at least one board member or chairman who served as a former Member of Parliament, Minister, or Prime Minister. Moreover, if a close relative of a Member of Parliament, Minister or Prime Minister has a board member or chairman's position, this firm will be considered as a politically-connected. Close relatives include father, mother, son, daughter, or cousin. This kind of relationship is easy to trace in Jordan because of the tribal system where members of the same family will have the same surname that cannot

be used by others. Furthermore, if the government holds a stake of the firm's voting shares, this firm is regarded as being politically-connected. Finally, and exclusively in Jordan, firms that have at least one board member who is a representative of the Social Security Corporation are considered politically-connected firms.

3.3.1.3 Control Variables

GROWTH (Sales Growth), Kogan and Papanikolaou (2014) argue that a firm's value can be decomposed into the value of assets in place and the value of growth-opportunities. Moreover, Danbolt, Hirst and Jones (2002) point out that growth-opportunities account for a large proportion of a firm's value. In other words, firms with high growth-opportunities will have greater market value. Also, agency cost between managers or controlling shareholders and minority shareholders will be affected by the presence of valuable projects, wherein the presence of such projects will decrease the probability of minority-shareholder expropriation by managers or controlling shareholders (Durnev and Kim, 2005). However, growth can be a result of the over-investment of free cash-flow, as managers may try to grow firms to increase their powers instead of maximising shareholder-wealth (Jensen, 1986). Therefore, we control for growth-opportunities in the model by including one-year sales growth.

SIZE (Firm Size) is calculated as the natural log of the firm's total assets. Firm size can have either positive or negative impacts on a firm's value. The positive effect can be due to the notion that large firms may have better investment opportunities which lead those firms to have higher values (La Porta, Shleifer and Vishny, 2002). However, smaller firms might have more profitable investment-opportunities than larger firms (Agrawal and Knoeber, 1996). Therefore, we control for the size effect in the model.

TANGIBILITY is calculated as the firms' net fixed assets divided by total assets. According to Maury *et al.* (2005), higher ratios of asset tangibility presumably indicate that the firm has lower ratios of intangible assets generating cash-flows. Therefore, we would expect a negative effect for asset-tangibility on firm value.

LEVERAGE is the ratio of the firm's total liabilities to the book value of the firm's total assets. Leverage can have either a positive or a negative impact on a firm's value. According to Hart (1995) and Jensen (1986), a firm's reliance on debt

will reduce agency costs and consequently increase a firm's value because of the fixed obligation that firms must pay to creditors, which will lessen the ability of managers to invest in unprofitable projects. However, leverage ratios can have a negative effect on the firm value because firms which are highly-leveraged may face difficulties repaying their obligations, which will negatively affect their ability to obtain funds in the future. Consequently, this may lead to a reduced ability to exploit any future profitable projects, as creditors prefer to place their money in safer investments (Miller, 1977). Therefore, we include Leverage in the model to control for its effect on firm values.

Table 3.1 Variables Definition and Sources

Variables	Definition	Source
TQ	The ratio of the market value of equity plus the book value of total debts to the book value of total assets	Company's Financial Statement
POLCON	A dummy variable that takes the value of 1 if the firm is politically-connected and 0 otherwise.	Company's Annual Reports and Board's Profile
Government	A dummy variable that takes the value of 1 if the firm is connected through government-ownership and 0 otherwise.	Company's Annual Reports and government reports
Minister/Prime Minister	A dummy variable that takes the value of 1 if the firm is politically-connected through a Minister or Prime Minister and 0 otherwise.	Company's Annual Reports and Board's Profile
MP	A dummy variable that takes the value of 1 if the firm is connected through a Member of Parliament and 0 otherwise.	Company's Annual Reports
Relation	A dummy variable that takes the value of 1 if the firm is connected to a board member who has a blood relationship with a leading politician and 0 otherwise.	Company's Annual Reports and Press
Growth	One year sales growth.	Company's financial statements
Size	The natural log of the firm's total assets at the end of the year	Company's financial statements
Leverage	The ratio of a firm's total liabilities to the book value of the firm's total assets.	Company's financial statements

Tangibility	A firm's net fixed assets divided by total assets	Company's financial statements
Inflation	Annual inflation rates	Central Bank of Jordan (CBJ)
GDP Growth	Annual growth rate of Gross Domestic Product (GDP)	Central Bank of Jordan (CBJ)

Finally, the model includes industry and year dummies to control for the industry- and year-effects.

3.3.2 Method of Estimation

In this study, the method of Ordinary Least Squares (OLS) is employed to estimate Equation (3.2). Li *et al.* (2008) applied this method to examine the effect of political ties on the accounting performance of Chinese private firms. Similarly, Wu *et al.* (2012) utilised the OLS method to investigate the relationship between political connections and firm valuation in China. Furthermore, Faccio (2010) examined the effect of political connections on firm valuation in a cross-country study by using the OLS methodology. Furthermore, Maury (2006) and Villalonga and Amit (2006) applied the OLS method to investigate the relationship between family ownership of firms and their value.

In this method, the error terms are assumed to be identically and independently distributed (i.i.d). In panel data, we have pooled, fixed effects model and random effects model. In the Pooled OLS, constant coefficients are specified, so that,

$$y_{it} = \alpha + \chi'_{it}\beta + \varepsilon_{it} \tag{3.3}$$

Where, i = 1, 2… N, t = 1, 2, …T and χ_{it} is a vector of regressors (consists of all independent variables) and β is K × 1 vector of coefficients to be estimated. The above model can be estimated using OLS where the data are grouped over i and t into one regression of NT observations. The error term in the above model captures differences over time and individuals, and this error is assumed to be uncorrelated with the explanatory variables. However, if this error term for each individual was correlated over time (time series dependence), this model will yield inconsistent estimates. One source of this time series dependence is the presence of unobserved

individual-specific effects (firm fixed effects). In addition to the inconsistency of the estimates produced by OLS in the presence of time series dependence, Petersen (2009) shows that parameter estimates will be biased downwards. In this case, the random effects model and the fixed effects model can be used to capture the unobserved firm fixed effect. In these two models, each individual will have its intercept that captures the unobserved firm-specific effect. In the case of the random effects model, the model is formulated as follows,

$$y_{it} = \chi'_{it}\beta + \alpha + u_i + \varepsilon_{it} \qquad (3.4)$$

Where, u_i, is a group-specific random element. This model assumes that the unobserved heterogeneity (unobserved individual specific fixed effects) is uncorrelated with the observed independent variables. To produce efficient coefficient estimates, random effect models using the Generalised Least-Squares (GLS) approach can be employed. However, this method is correct only if the unobserved firm fixed effect is permanent, because if the correlation between residuals decays, the standard errors will be biased. Furthermore, if the unobserved individual specific fixed effects are correlated with the observed explanatory variables, the estimates produced by this model will be biased and inconsistent. This shortcoming of the random effects model implies that the fixed effects model should be used to obtain unbiased and consistent results. The fixed effect model relies on the time variation within the same individual in order to estimate the parameters, and this is why it is called 'within estimator', and it works as follows, assuming the following model where the unobserved heterogeneity appears amongst individuals,

$$y_{it} = \chi'_{it}\beta + \alpha_i + \varepsilon_{it} \qquad (3.5)$$

Where, α_i is the unobserved heterogeneity, and it is assumed to be constant over time, which allows the fixed effects model to use the demeaning process to eliminate the effect of the unobserved heterogeneity, and this can be done in two steps:

The first step is to calculate the mean for all observations within the same individual. For instance the average of the dependent variable (also applies for χ'_{it} , α_i and ε_{it}) for individual i is,

$$\overline{Y}_i = \frac{\sum_{i=1}^{n} y_{it}}{n} \qquad (3.6)$$

The second step is the demeaning process that can be executed as follows,

$$(y_{it} - \overline{Y}_i) = (\chi'_{it} - \overline{\chi}_i)\beta + (\alpha_i - \alpha_i) + (\varepsilon_{it} - \overline{\varepsilon}_i) \qquad (3.7)$$

From Equation (3.7), it can be seen that since it is assumed that the unobserved heterogeneity is constant over time, then it will be removed by using the demeaning process above and the estimated model will be as follows,

$$y_{it} = \chi'_{it}\beta + \varepsilon_{it} \qquad (3.8)$$

Model (3.5) will produce consistent and unbiased estimates. However, a drawback of the fixed effects model is that it estimates the model parameters depending on the time-variant variables and it omits the time-invariant variables because of the demeaning process it follows. Thus, the fixed effect estimator is not feasible to be employed in the presence of the time-invariant variables. Consequently, due to the nature of our primary independent variable (POLCON) that does not vary much within the same firm, the fixed effects model is not preferable for the purpose of this study, as it dramatically reduces the predictive power of the variable. Moreover, the fixed effect model can produce unbiased standard errors only if the firm fixed effect is permanent.

Thus, Petersen (2009) proposes a technique to generate unbiased coefficient estimates and correct standard errors. This method is based on clustered standard errors at the firm level. In the standard OLS formula, coefficient estimates can be accurate only if the errors were identically and independently distributed. However, the assumption of independent errors is often violated in panel data sets (Petersen, 2009). So, to account for the unobserved individual-specific effect, and produce accurate coefficient estimates, and robust standard errors; we follow Wu *et al.* (2012) by using OLS with standard errors corrected for firm-clustering because this method is correct whether the firm fixed effect is permanent or temporary (Petersen, 2009).

3.3.2.1 Endogeneity Problem

Simultaneous endogeneity arises when one or more of the independent variables are jointly determined with the dependent variable. In a corporate governance context, Demsetz (1985) pointed out that as corporate governance can affect firm

performance, firm performance can also affect corporate governance. Thus, when investigating the effect of political connections on firm's value, we need to address the following question: "does the politically-connected board of directors bring about a higher value for the firm? Or does an already high firm-value attract the politically-connected boards?'' This question raises the issue of simultaneous endogeneity where both firm value and political connections are simultaneously determined.

Several approaches can be employed to correct for endogeneity such as Generalised Method of Moments (GMM), three-stage least squares, Heckman two-step treatment effect models, and two-stage least squares. However, Greene (2003) pointed out that the use of Heckman two-step treatment effect models has an advantage over the Generalised Method of Moments (GMM) and three-stage least squares because it is less sensitive to distortion and specification errors in the model. Moreover, the treatment effect model's approach is preferable to Two-Stage least squares when the endogenous variable is dichotomous (Maury, 2006). Accordingly, because the endogenous variable (political connections) is a dummy variable, we employ the Heckman Two-Step treatment effect models following Wu *et al.* (2012), Miller *et al.* (2007), Maury (2006) and Villalonga and Amit, 2006).

The implementation of the treatment effect approach goes in two stages. In the first stage, we perform a Probit model, where we regress the endogenous variable (political connections) against the control variables in the original OLS model. Moreover, we include two variables proposed in the literature to distinguish politically connected firms at this stage, namely, lagged q (Wu *et al.*, 2012; Villalonga and Amit, 2006) and idiosyncratic risk (Wu *et al.*, 2012; Villalonga and Amit, 2006; Anderson and Reeb, 2003). We include the lagged value of Tobin's q in the first stage to test for potential reverse causality between firm value and political connections. Also, we include idiosyncratic risk because firm value, measured by Tobin's q, should be a function of expected returns and expected cash flows (Villalonga and Amit, 2006). According to the Capital asset pricing model (CAPM), the expected returns should be a function of market risk, but not idiosyncratic risk (Villalonga and Amit, 2006). Indeed, we find the correlation between Tobin's q and idiosyncratic risk to be 0.0157 which is not significantly different from zero.

In the first stage, we generate the probability of political connections, also called the treatment effect measure. Then, we move to the second stage, where we

regress the main dependent variable (firm value) against the same control variables used in the original OLS model plus the treatment effect measure generated in the first stage. The inclusion of the treatment effect measure in the second stage will correct for omitted variable bias (Greene, 2003).

3.3.3 Data and Sample Description

Data for this study includes two parts; the first part contains data about boards of directors where we manually collected the annual reports for each firm. Then, we revised the boards' profiles to trace any political relationships for each one. The second part contains firms' financial information (including detailed financial statements and stock prices) that has been obtained from the database provided on the website of the Amman Stock Exchange (ASE).

Regarding the sample selection process, it went through two stages; the first stage is excluding financial firms due to incomparability between financial and non-financial firms in terms of accounting profit-rates and valuation ratios (Maury, 2006). The second stage is dropping firms that don't have at least five year-observations. This criterion left us with 131 firms listed on the ASE.

Panel A of Table 3.2 shows the number and percentage of politically-connected firms on the ASE by year. It can be seen that political connections are prevalent in Jordan as the ratio of politically-connected firms in our sample is always higher than non-connected firms in spite of the decrease of the total percentage from 74% in 2000 to 54% in 2014. Furthermore, Panel B of Table 3.2 presents the number of firms connected to each level of political connections, which is the strength of political connections by year. Panel B shows that firms connected through politicians' relatives represent the highest percentage amongst politically-connected firms followed by the connections through Minister/Prime Minister.

Another important point to notice in Panel B of Table 3.2 is that the number of firms connected through Government and Minister/Prime Minister is decreasing over the sample period. However, this number is increasing for connections through MP and Relations.

Table 3.2: Descriptive statistics of firm's political connections

Panel A: Firms' political connections

Year	Total	Politically-Connected Firms	% of Politically-Connected Firms
2000	80	59	0.74
2001	80	58	0.73
2002	82	59	0.72
2003	84	62	0.74
2004	90	67	0.74
2005	100	74	0.74
2006	115	78	0.68
2007	120	79	0.66
2008	130	82	0.63
2009	131	81	0.62
2010	131	80	0.61
2011	131	76	0.58
2012	130	78	0.6
2013	130	80	0.62
2014	128	69	0.54

Panel B: Strength of political connections

Year	Government	Minister/ Prime Minister	MP	Relation
2000	10	27	1	21
2001	11	27	0	20
2002	11	27	0	21
2003	11	26	0	25
2004	12	26	0	29
2005	16	27	0	31
2006	18	30	0	30
2007	19	27	1	32
2008	18	25	2	37
2009	16	20	2	43
2010	11	17	3	49
2011	10	19	5	42
2012	10	21	6	41
2013	9	23	7	41
2014	9	18	5	37

Panel A shows the descriptive statistics of firms' political connections. Panel B shows the number of firms connected to each level of the of political connections of Jordanian listed firms by year from 2000 to 2014.

3.3.3.1 Correlation matrix

Table 3.3 presents the correlation matrix between variables. The table reveals a positive correlation between firms' political connections dummy and firm value. Similarly, Tangibility has a positive and significant correlation with the value of the firm. More importantly, the table indicates that correlations are not high between

independent variables which mean that multicollinearity is not a major problem in our analysis.

Table 3.3: Correlation matrix between variables

	TQ	POLCON	Leverage	Tangibility	Growth	Size
TQ	1					
POLCON	0.214	1				
Leverage	0.065	0.0953	1			
Tangibility	0.2078	0.0541	0.0944	1		
Growth	0.0527	-0.0072	0.0005	0.0332	1	
Size	0.152	0.151	0.2446	0.0591	-0.0107	1

This table reports the correlation matrix of the main variables. For variables definitions, please see Table 3.1.

3.4 Empirical results

3.4.1 Univariate analysis

Table 3.4 shows the summary statistics of the main variables included in the analysis. The table presents the means of the main variables in addition to the t-values for the mean difference test.

Table 3.4: Summary statistics of main variables

Variable	POLCON=0 (1)	POLCON=1 (2)	Difference (3) = (2) - (1)	t-test
TQ	1.23	1.38	0.15	3.255***
Leverage	0.27	0.32	0.05	4.714***
Size	16.34	16.88	0.54	7.792***
Tangibility	0.31	0.36	0.05	3.206***
Growth	0.09	0.10	0.01	0.31

This table presents the summary statistics of the main variables. In the table, means are shown for both politically-connected and non-connected firms as well as t-statistics for mean differences test. For variables definitions, please see Table 3.1. *, **, *** significant at the 10%, 5%, and 1%, respectively.

The table shows that the average of Tobin's q for politically-connected firms is (1.38), which is significantly higher than the average of Tobin's for non-connected firms, which is (1.23). We may view this result as preliminary evidence for the hypothesis H1a, that politically-connected firms exhibit a higher value than their non-connected counterparts. Moreover, the table reveals that politically-connected firms are significantly larger, more indebted, and have higher ratios of tangible assets than non-connected firms.

3.4.2 Multivariate Analysis

3.4.2.1 Political connections and firm value

Table 3.5 shows the results of the multivariate regression analysis of the relationship between firm's political connections and firm value. We conduct five regressions, of which the first is the effect of political connectedness on firm value and four regressions about the effect of the strength of political connections on firm value.

Results of the first regression are in line with the Resource Dependence Theory (RDT), since it shows that firms' political connections are an important source of value creation for Jordanian listed-firms, as the coefficient of firms' political connections (POLCON) is positive and statistically significant at 1%. In other words, politically-connected firms have a higher market-value than their peers which are not politically-connected in Jordan, which supports our first hypothesis (H1). This finding is consistent with Wu *et al.* (2012). However, it is inconsistent with Faccio (2010) who found no evidence of the effect of political connections upon firm value in her cross-country analysis. This study is also consistent regarding the positive effect with other studies that used different methodologies, e.g., Goldman, Rocholl and So (2009) and Fisman, (2001) who concluded that politically-connected firms have higher stock returns.

Regarding the effect of the strength of political ties on firm value, Results show that firms connected to a Minister or Prime Minister have a higher firm valuation than other levels of political connections.

Regarding the control variables, the coefficient of sales growth is statistically insignificant, indicating that sales growth is not important for firm value in Jordan, the same result found in China (Wu *et al.*, 2012). However, this result is inconsistent with the results of Danbolt, Hirst and Jones (2002) who pointed out that growth-opportunities account for a significant portion of firm value. Nevertheless, Firm Size is found to be positively related to a firm's value, which means that larger firms exhibit higher market-value and this is inconsistent with Wu *et al.* (2012). We explain the positive effect of size by the notion of La Porta, Shleifer and Vishny (2002) who suggest that larger firms may have better investment opportunities. Regarding the leverage ratio, we find no significant impact on firm value in Jordan. This finding opposes the results of the positive impact of leverage ratios on the value

of the firm found by Hart (1995) and Jensen (1986). These two studies find supportive results to the view that higher debt ratios reduce the agency costs between managers and controlling shareholders in the one side, and company owners on the other side. Finally, we find a positive and significant effect for tangibility on firm value in Jordan, contrary to the findings by Wu *et al.* (2012) who found no evidence of the relationship between asset-tangibility (Capital Intensity) and firm value.

Table 3.5: OLS regressions for the effect of political connections on firm value

VARIABLES	(1) TQ	(2) TQ	(3) TQ	(4) TQ	(5) TQ
POLCON	0.219***				
	(0.0655)				
Government		0.0807			
		(0.105)			
Minister/Prime Minister			0.151***		
			(0.0571)		
MP				0.137	
				(0.0942)	
Relation					0.0210
					(0.0621)
Tangibility	0.383***	0.408***	0.387***	0.404***	0.402***
	(0.132)	(0.125)	(0.129)	(0.129)	(0.129)
Size	0.0460*	0.0581**	0.0514*	0.0602**	0.0598**
	(0.0273)	(0.0271)	(0.0276)	(0.0273)	(0.0276)
Leverage	0.0730	0.0915	0.0945	0.0963	0.100
	(0.144)	(0.148)	(0.143)	(0.145)	(0.145)
Growth	0.0119	0.00789	0.0125	0.00815	0.00771
	(0.0285)	(0.0293)	(0.0285)	(0.0293)	(0.0293)
Constant	-1.054**	-1.107**	-1.038**	-1.141***	-1.137**
	(0.432)	(0.429)	(0.434)	(0.433)	(0.441)
Observations	1406	1406	1406	1406	1406
R-squared	0.176	0.149	0.159	0.148	0.147
F > Prob	0.000	0.000	0.000	0.000	0.000
Industry Effects	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes

This table reports the OLS results for the effect of political connections on firm value. The dependent variable (firm value) is Tobin's q (TQ). For variables definitions, please see Table 3.1. All explanatory variables are lagged by one year. Variables are winsorized at the 1st and 99th percentiles. Robust standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

Moreover, to correct for endogeneity and omitted-variable bias, we conduct Heckman two-step treatment effects models. We present the results in Table 3.6. We create five models in which the dependent variable in the second stage is Tobin's Q. For each model, we report the coefficient of the lagged dependent variable in the first stage (the Probit model) to check for the existence of reverse causality, the coefficient of the treatment effect (POLCON), that reflects the coefficient corrected

for endogeneity, and the selection parameter (lambda λ), that indicates the endogeneity problems and omitted variables.

Table 3.6 shows that the corrected coefficient of the treatment effect (POLCON) has a positive and significant effect on firm value, which confirms the results of the original OLS regression. Also, it is worth noting that the significance of lambda admitted the presence of endogeneity and omitted variable bias in the OLS analyses. Moreover, the negative sign of the selection parameter, lambda, implies that the unobserved factors, which encourage politicians to remain at the firms with which they have relations, to have a negative correlation with firm value. However, by remaining in these firms, politicians manage to command a premium for these firms compared to the value these firms would have had without the politicians' presence. Finally, the significant coefficient of the lagged dependent variable (Tobin's Q) affirms the presence of reverse causality, that firm's political connectedness is a function of prior performance.

Table 3.6: Heckman treatment effect analyses

	(1) POLCON	(2) Government	(3) Minister/Prime Minister	(4) MP	(5) Relation
Treatment effects (Heckman)	1.914*** (0.291)	5.398*** (1.752)	2.924*** (0.604)	2.780 (3.694)	6.012 (4.099)
Selection parameter (λ)	-1.116*** (0.177)	-2.871*** (0.925)	-1.668*** (0.348)	-1.048 (1.459)	-3.678 (2.505)
Lagged Tobin's Q	0.443*** (0.086)	0.195 (0.122)	0.309*** (0.081)	0.0638 (0.097)	0.0753 (0.068)

This table reports the results of Heckman two-step treatment effects models. The dependent variable (firm value) is Tobin's Q. Robust standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

Regarding the effect of the strength of political connections, results of Models 2-5 in Table 3.6 show that stronger political ties exert positive and significant impact on firm value weaker political ties the opposite, which supports our second hypothesis. Regarding the coefficient of lambda, results confirm the presence of the omitted variable bias in the original OLS regressions for the stronger political ties only (Government and Ministers or Prime Ministers). Similar to the above explanation, although the omitted variables that prompt government and ministers or prime ministers to remain at the firms they are related to are negatively correlated

with firm value, their presence enhances the value of these firms. Moreover, we can see that reverse causality appears only in the case of Ministers or Prime Ministers.

3.4.2.2 Controlling the macroeconomic environment

Table 3.7 shows OLS regressions results for the relationship between political ties and firm value after controlling for economic conditions. Results show that inflation has a negative and significant effect on firm value as expected. The adverse impact of inflation on firm value can be due to it damaging firms' performance. Because inflation leads prices of both raw materials and final goods to increase, this may adversely affect demand for these goods. Moreover, the effect of inflation is more severe when the increase in the levels of personal incomes for the majority of employees in Jordan does not cover the cost of price-inflation. On the other hand, GDP growth has positively affected firm value. A possible explanation for this positive effect is the consumption smoothing behaviour (Chen, 1991; Fama, 1989).

Table 3.7: OLS regressions after controlling macroeconomic environment

VARIABLES	(1) TQ	(2) TQ	(3) TQ	(4) TQ	(5) TQ
POLCON	0.218***				
	(0.0654)				
Government		0.0858			
		(0.103)			
Minister/Prime Minister			0.145**		
			(0.0576)		
MP				0.111	
				(0.0990)	
Relation					0.0214
					(0.0615)
Tangibility	0.357***	0.383***	0.361***	0.379***	0.377***
	(0.130)	(0.123)	(0.128)	(0.128)	(0.127)
Size	0.0512*	0.0629**	0.0572**	0.0649**	0.0646**
	(0.0269)	(0.0266)	(0.0270)	(0.0268)	(0.0270)
Leverage	0.0543	0.0730	0.0754	0.0780	0.0817
	(0.142)	(0.146)	(0.142)	(0.143)	(0.143)
Growth	0.00480	0.000585	0.00515	0.000778	0.000401
	(0.0291)	(0.0298)	(0.0290)	(0.0298)	(0.0299)
Inflation	-0.672**	-0.765***	-0.690**	-0.792***	-0.792***
	(0.266)	(0.266)	(0.270)	(0.267)	(0.266)
GDP growth	6.094***	6.514***	6.182***	6.678***	6.662***
	(1.059)	(1.146)	(1.075)	(1.130)	(1.133)
Constant	-1.257***	-1.333***	-1.250***	-1.373***	-1.372***
	(0.435)	(0.439)	(0.443)	(0.442)	(0.451)
Observations	1,406	1,406	1,406	1,406	1,406
R-squared	0.153	0.126	0.135	0.124	0.124
Prob > F	0.000	0.000	0.000	0.000	0.000
Industry Effects	Yes	Yes	Yes	Yes	Yes
Year Effects	No	No	No	No	No

This table reports the OLS results for the effect of political connections on firm value. The dependent variable (firm value) is Tobin's q (TQ). For variables definitions, please see Table 3.1. All explanatory variables are lagged by one year. Variables are winsorized at the 1st and 99th percentiles. Robust standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

Table 3.8: Heckman treatment effect analyses

	(1) POLCON	(2) Government	(3) Minister/Prime Minister	(4) MP	(5) Relation
Treatment effects (Heckman)	1.847*** (0.306)	5.407*** (1.865)	2.885*** (0.644)	3.010 (3.907)	5.839 (4.378)
Selection parameter (λ)	-1.071*** (0.185)	-2.869*** (0.986)	-1.651*** (0.370)	-1.146 (1.544)	-3.567 (2.676)
Lagged Tobin's Q	0.433*** (0.0870)	0.195 (0.122)	0.309*** (0.0817)	0.0638 (0.0973)	0.0753 (0.0682)

This table reports the results of Heckman two-step treatment effects models. The dependent variable (firm value) is Tobin's Q. Robust standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

Based on the consumption smoothing behaviour, when the economy is strong and individuals have high income relating to wealth, those individuals will smooth their consumption into the future by saving more. And so, if the demand for stocks increases, this will raise the prices of these stocks, just as the opposite happens when the economy is weak.

More importantly, inconsistent with our third hypothesis, we find that firms' political connections still play a significant role in enhancing firm value even after controlling for the macroeconomic conditions. However, this finding asserts the robustness of our original OLS results. Furthermore, to account for endogeneity and omitted variable bias, we conduct Heckman two-step models, where we incorporate the macroeconomic variables (Inflation and GDP growth) into the second stage regression. Results are presented in Table 3.8. Results of Table 3.8 do not show any dramatic change from the original OLS results regarding the effect of political connections, which confirms the initial results that firms' political connections exert a positive and significant impact on firm value. Relating to the strength of political connections, Table 3.8 shows that stronger political ties exert a greater impact on firm valuation than weaker political relations do.

3.4.2.3 Corruption Law, Global Financial Crisis and Arab Uprising

As previously mentioned, one of the objectives of this study is to investigate the impact of the establishment of the ACC, together with two other economic shocks to the Jordanian economy, on the relationship between firms' political connections and firm value. Therefore, to accomplish this objective, we divide the sample period into two sub-sample periods of 2000–2007 and 2008–2014.

3.4.2.3.1 Political connections and firm value before 2008

Table 3.9 and Table 3.10 show the results of the OLS and Heckman two-step treatment effect models, respectively, for the period between 2000 and 2007. In terms of the effect of firms' political connections on firm value, Model (1) in Table 3.9 shows that political connections have a positive and significant impact on firm value.

Table 3.9: OLS regressions for the period 2000 - 2007

VARIABLES	(1) TQ	(2) TQ	(3) TQ	(4) TQ
POLCON	0.152**			
	(0.0606)			
Government		0.133		
		(0.0870)		
Minister/Prime Minister			0.0784	
			(0.0617)	
Relation				-0.0637
				(0.0707)
Tangibility	0.195	0.208	0.191	0.200
	(0.130)	(0.126)	(0.130)	(0.131)
Size	0.0561**	0.0675**	0.0642**	0.0685**
	(0.0280)	(0.0275)	(0.0279)	(0.0269)
Leverage	0.0249	0.0261	0.0310	0.0237
	(0.150)	(0.156)	(0.155)	(0.156)
Growth	0.0230	0.0220	0.0217	0.0218
	(0.0331)	(0.0326)	(0.0318)	(0.0318)
Constant	-0.907**	-1.000**	-0.962**	-0.991**
	(0.436)	(0.429)	(0.433)	(0.421)
Observations	474	474	474	474
R-squared	0.194	0.183	0.177	0.174
F > Prob	0.000	0.000	0.000	0.000
Industry Effects	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes

This table reports the OLS results for the effect of political connections on firm value for the period 2000- 2007. The dependent variable (firm value) is Tobin's q (TQ). For variables definitions, please see Table 3.1. All explanatory variables are lagged by one year. Variables are winsorized at the 1st and 99th percentiles. Robust standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

This result is confirmed in model (1) Table 3.10, as the treatment effect (POLCON) is positive and significant at 1%. Regarding the strength of political connections, models 2 – 4 in Table 3.9 show no evidence of the impact of the strength of political connections on the value of the firm. Yet, after correcting for endogeneity and omitted variable bias, results in Table 3.10 show that stronger political ties exert a stronger impact on firm value than weaker ties do[2].

Table 3.10: Heckman treatment effect analyses for the period 2000 - 2007

	(1) POLCON	(2) Government	(3) Minister/Prime Minister	(4) Relation
Treatment effects (Heckman)	1.032***	5.001***	1.942***	-2.046
	(0.237)	(1.828)	(0.696)	(4.540)
Selection parameter (λ)	-0.577***	-2.720***	-1.147***	1.221
	(0.141)	(0.996)	(0.414)	(2.725)
Lagged Tobin's Q	0.656***	0.348*	0.341**	-0.116
	(0.181)	(0.193)	(0.168)	(0.166)

This table reports the results of Heckman two-step treatment effects models for the period 2000 - 2014. The dependent variable (firm value) is Tobin's Q. Robust standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

3.4.2.3.2 Political connections and firm value after 2008

In the second phase of the analysis, we investigate the effects of political connections on firm value during the period from 2008 to 2014. During this period, the business climate in Jordan has been affected internally by the establishment of the Anti-Corruption Commission (ACC) together with two external shocks, namely, the Global Financial Crisis and the Arab Uprisings. Table 3.11 and Table 3.12 show the results of the OLS and Heckman two-step treatment effect models, respectively. Surprisingly, model (1) in Table 3.11 shows that firm's political connections positively and significantly weighs on firm value. More importantly, the size of the coefficient has increased from 0.152 in Table 3.9 to 0.273 in Table 3.11. This increase also appears in the treatment effect (POLCON) in the Heckman treatment effect model, where the coefficient has increased from 1.032 in Table 3.10 to 2.837 in Table 3.12.

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[2] It is worth noting that we have excluded the connections through Members of Parliament (MP) for the before and after 2008 analysis due to a lack of observations for this level of connections in the period before 2008.

Table 3.11: OLS regressions for the period 2008 - 2014

VARIABLES	(1) TQ	(2) TQ	(3) TQ	(4) TQ
POLCON	0.273** (0.132)			
Government		0.176 (0.129)		
Minister/Prime Minister			0.112 (0.0985)	
Relation				0.0284 (0.103)
Tangibility	0.380*** (0.0982)	0.383*** (0.0801)	0.381*** (0.0818)	0.383*** (0.0822)
Size	0.0302 (0.0356)	0.0372 (0.0358)	0.0345 (0.0359)	0.0409 (0.0368)
Leverage	0.138 (0.174)	0.147 (0.186)	0.182 (0.181)	0.195 (0.188)
Growth	-0.0258 (0.0254)	-0.0214 (0.0281)	-0.0160 (0.0283)	-0.0204 (0.0276)
Constant	-0.814 (0.624)	-0.759 (0.621)	-0.731 (0.622)	-0.835 (0.648)
Observations	478	478	478	478
R-squared	0.165	0.135	0.132	0.127
F > Prob	0.000	0.000	0.000	0.000
Industry Effects	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes

This table reports the OLS results for the effect of political connections on firm value for the period 2008- 2014. The dependent variable (firm value) is Tobin's q (TQ). For variables definitions, please see Table 3.1. All explanatory variables are lagged by one year. Variables are winsorized at the 1st and 99th percentiles. Robust standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

This finding raises the question about the role of the ACC in limiting the ability of companies to take advantage of their political connections. On the strength of political connections, OLS results do not provide any evidence of the impact of the strength of political connections on the firm value.

Table 3.12: Heckman treatment effect analyses for the period 2008 - 2014

	(1) POLCON	(2) Government	(3) Minister/Prime Minister	(4) Relation
Treatment effects (Heckman)	2.837*** (0.652)	3.881*** (1.145)	1.985 (1.852)	11.46 (7.939)
Selection parameter (λ)	-1.643*** (0.387)	-2.052*** (0.594)	-1.097 (1.047)	-7.084 (4.904)
Lagged Tobin's Q	0.476*** (0.113)	0.653*** (0.194)	0.131 (0.119)	0.134 (0.102)

This table reports the results of Heckman two-step treatment effects models for the period 2008 – 2014. The dependent variable (firm value) is Tobin's Q. Robust standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

However, Heckman two-step treatment effects results in Table 3.12 show that connections through government still play an important role in enhancing the firm value. These results may provide a partial explanation for the limited role the ACC has played, as this commission is related to the government which may affect the independence of its decision-making.

3.5 Conclusion

This study examines the effect of firms' political ties on the value of Jordanian non-financial firms listed on the Amman Stock Exchange (ASE). In addition, this study tests the significance of the strength of political connections for firm value. Moreover, it examines the relationship between political connections and firm value whilst controlling macroeconomic determinants of firm value. Finally, this study investigates the impact of the establishment of the ACC together with two other economic shocks, namely, the Global Financial Crisis and the Arab Uprisings on the relationship between firms' political connections and their valuations.

Descriptive statistics of the sample show that firms' political connections are prevalent in Jordan, as the percentage of politically-connected firms reached 74% in some years. This striking percentage can give an indication of the importance of such connections for firms in Jordan.

Empirical findings of the whole sample reveal that political connections are important in enhancing firms' value in Jordan. The reasons behind these higher market values might be favourable treatment by government in terms of their taxation, ease of access to debt finance or even procurement of government contracts. Previous studies have examined this relationship and found that these benefits are channels through which these firms can enhance their accounting performance and market value versus those of non-connected firms.

Regarding the strength of political connections, results of the whole sample show consistent results with previous studies that find that stronger political ties have a greater impact on firm value than weaker ties.

Also, this study controls for two main macroeconomic determinants (Inflation and GDP growth) while investigating the relationship between political connections and firm value. First of all, economic conditions found to be important for firm value

in Jordan, where inflation has an adverse effect, while GDP growth has a positive effect. More importantly, the positive effect of political connections on firm value holds in Jordan, even after controlling for these economic conditions, which assert the robustness of the original results for both political connections in general and the strength of political connections in particular.

Finally, despite government attempts to curb corruption and eliminate the power of elites in both political and economic areas by establishing the Anti-Corruption Commissions (ACC), our result shows that firms' political connections still exert influence effects in enhancing firm value. In particular, companies that are connected to the government enjoy higher valuation. We conjecture that this is because the ACC is associated with the government, thus weakening its effectiveness in Jordan. The important implications drawn from our empirical findings are that the Commission should be given autonomy in decision-making so that it can perform its duties efficiently and without bias or influence.

CHAPTER FOUR

The Impact of firms' Political connections on financial constraints: Evidence from Jordan.

4.1 Introduction

Extensive research has been carried out exploring the presence of financial constraints and investigating their impact on the investment decisions of firms. However, existing works concentrate on developed countries (Attig *et al.*, 2012; Goergen and Renneboog, 2001; Erickson and Whited, 2000). Cull *et al.* (2015) stated that in developing countries, far too little attention had been paid to this topic, despite the fact that firms' owners in developing countries cite financial constraints as one of the main obstacles to investment according to Dethier, Hirn and Straub (2011). Furthermore, in developing countries, the government can have a crucial role in the capital allocation process, where it can direct funds to state-owned enterprises or to firms with close ties to the government (Ayyagari, Demirguc-Kunt and Maksimovic, 2012).

Thus, companies with political connections can have a favourable position versus politically-unconnected firms in terms of obtaining access to external finance. Several studies support this view (see, e.g., Boubakri, Cosset and Saffar, 2012; Claessens, Feijen and Laeven, 2008; Fan, Rui and Zhao, 2008; Li *et al.*, 2008; Khwaja and Mian, 2005). These studies found that politically-connected firms in developing countries have greater access to debt financing. Moreover, preferential treatment is not limited to credit suppliers, but extends to the equity market as companies with political ties can obtain equity financing without difficulty compared to non-connected firms (Boubakri *et al.*, 2012; Francis, Hasan and Sun, 2009). These findings lead us to the question of how political ties can help firms to mitigate their financing-constraints, which, thus, shapes their investment policy.

More recently, literature has emerged offering new findings on the impact of companies' political ties on their investment decisions. For instance, Cull *et al.* (2015) investigated the effect of firms' connections to the government in alleviating financial constraints in China. Furthermore, in Taiwan, Shen and Lin (2016) examined the impact of companies' links to the ruling party on firms' financing-constraints and investment.

However, the above studies focus on countries where state-owned banks are dominant, which makes it impossible for their findings to be generalised and applied to countries where the banking system is privately owned, as stated by Shen and Lin (2016). This inability to generalise the results stems fro0m the different behaviours of private banks against those of state-owned banks towards politically-connected firms, as private banks do not indulge in political favours, according to Khwaja and Mian (2005).

Therefore, our investigation will provide the first evidence about the impact of these relationships on financial restrictions in a context where the banking system is owned by the private sector. One may argue that it is futile to examine this relationship as private banks don't play any political role. We respond to this that in the case of Jordan, though privately owned, the majority of the banks listed in the financial market, especially the larger ones, have politicians in their boardrooms. Along with the phenomenon of favouritism in Jordan, we believe that politicians can build relationships with leaders of banks and thus facilitate the process of obtaining external-funding for companies to which they are linked.

Furthermore, and as a point of difference from previous studies of political connections and financial constraints, we extend our research by conducting a deeper analysis of the effects of the strength of political connections on financial constraints, which enables us to provide greater understanding of the effect of the different and various government officials on these constraints.

Finally, we investigate the impact of four major events which happened after 2008 on the relationship between firm's political connections and financial constraints. These events are the establishment of the Anti-corruption Commission, the Global Financial Crisis, the Arab Uprisings that were unique to the Middle East and North Africa (MENA) region and the issuance of the banks' corporate governance code in Jordan.

To sum up, this study attempts to answer the following three questions; a) do firms with political connections alleviate their financial constraints? b) Do stronger connections lessen financial constraints more than weaker links? c) Do the events occurring after 2008 affect the relationship between firms' political connections and their financial constraints?

To address the above questions, we use data from 131 Jordanian non-financial companies for the period of 2000 – 2014. Also, to answer the third question, we divide the sample period into two periods, (2000 – 2007) and (2008 – 2014).

Jordan is an ideal case to investigate the effect of political connections on financial constraints for two reasons. The first reason is that in Jordan, as in most Middle-Eastern countries, there is a widespread phenomenon of favouritism defined as the use of family, business, and other personal connections to advance one's interests. In the same way, politicians and even their relatives can use their connections and power to build good relationships with bank leaders to facilitate the process of obtaining bank loans, which in turn can mitigate the financial constraints for politically-connected firms. The second reason is that, as mentioned, the banking system in Jordan is owned by the private sector, which makes this study unique from previous studies which have covered countries with the state-dominated banking systems.

To test our research hypotheses, we employ the Euler investment model, following Bond *et al.* (2003), Harrison and McMillan (2003), and Bond and Meghir (1994). We estimate the Euler model using the Generalised Method of Moments (GMM), which helps us overcome the problems of potential endogeneity and individual firm heterogeneity.

For the full sample period, results show that Jordanian firms are financially constrained. This result is expected because sources of investment funds are mostly limited to bank loans due to the underdeveloped capital market. This finding supports the view that investment cash-flow sensitivity is still pronounced in emerging markets. Furthermore, it indicates that investment cash-flow sensitivity is a valid and reliable measure of financial constraints. However, these restrictions can be alleviated by having politically-connected boards of directors supporting the political connections hypothesis. This result adds to the literature of political connections and financial markets by showing that politicians on the boards of the banks can have a political role by granting politically-connected firms favourable access to funds against non-connected firms. This result supports our view that favouritism can have a role in the Jordanian business environment.

Regarding the strength of the political connections, we find evidence supporting our second hypothesis that stronger relationships (state-ownership and Ministerial or Prime Ministerial connections) play a greater role in mitigating financing constraints than weaker links.

On the third question, we find that Jordanian companies are still financially constrained but to a lesser degree during the period 2008 to 2014. This decrease in the sensitivity of investment to cash-flow may be due to the expansionary policy applied by the Central Bank of Jordan as a reaction to the 2008 global financial crisis to increase banks' lending capability to avoid any adverse effects of the global crisis on the Jordanian economy. The significant finding during this period is that political links are no longer important in alleviating the sensitivity of investment to cash-flow. This result may reflect the effectiveness of the corporate governance code issued to Jordanian banks at the end of 2007.

Results of this study are of high importance for policymakers. Policymakers are expected to benefit from this research regarding the capital-allocation process especially for financially-constrained firms that can boost the economy with their investments. Thus, they should be aware of this point to avoid any misallocation of credit.

This chapter is organised as follows: Section 2 presents the literature review, hypotheses development, and investment models. Section 3 provides the research methodology. Section 4 presents the empirical results. Section 5 concludes the chapter.

4.2   Literature Review:

This study is related to two distinct strands of literature, measuring financial constraints literature and the literature of political connections and financial markets.

4.2.1   Financial constraints

Modigliani (1958) proposed that a firm's capital structure is irrelevant to its value. In their seminal work, they suggest that under the assumption of the perfect capital market, a firm's investment decisions and financing decisions are independent. Therefore, if this theorem holds, we can conclude that internal and external sources of finance are perfect substitutes, as firms can obtain external funding at the cost of

the internal funds which enable companies to exploit all positive net-present-value projects and, therefore, to achieve their optimal investment levels.

A serious weakness of this argument, however, is that, in reality, capital markets are rarely perfect due to several causes, such as transaction costs, taxes and, more importantly, the presence of asymmetric information between lenders and borrowers. Researchers suggest that in an imperfect capital market, information asymmetry leads to two major problems, which are the adverse selection and moral hazard. For instance, Myers and Majluf (1984) present a model of equity financing through which they assert the fact that information asymmetry leads to adverse selection. They show that if investors are about to buy the shares of a firm without having sufficient information as to its value; they will ask for a premium to compensate for the risk they are taking by acquiring its shares. Therefore, the cost of equity-financing will increase, which intuitively will raise the cost of external financing for this firm.

Concerning debt funding in the presence of information asymmetry, the discrimination between good borrowers and bad borrowers will be hard, which will lead to credit-rationing in the debt market. In such a situation, credit suppliers will deliberately set a price that generates an excess demand for credit (Stiglitz and Weiss, 1981). Also, lenders may extend loans at a high cost due to the problem of moral hazard. The moral hazard problem arises between lenders and borrowers if the borrowers have incentives to engage in investments with high risk, given the fact that the creditors will bear most of the costs if these investments turn out badly. Consequently, lenders may require a premium or even require the borrowers to avoid investing borrowed money in specific areas (Jensen and Meckling, 1976).

The above three studies provide us with a common theme regarding the information problem in capital markets which is that external and internal funds are no longer perfect substitutes. However, internally-generated funds will be much cheaper than external funds. The important point in this regard is that the gap between these two sources of funds is positively related to the level of information asymmetry. In other words, firms with high levels of information asymmetry will incur a higher cost of external finance. Consequently, the investment of these companies will be constrained to the level of internally-generated funds which may negatively affect their ability to achieve the optimal investment-level.

4.2.2 Measuring Financial Constraints

There is a long-standing debate on whether investment cash-flow sensitivity can be a reliable measure of financial constraints. In his pioneering work, Fazzari (1988) employs investment cash-flow sensitivity as a measure of financial constraints. In this approach, we can compare the investment cash-flow sensitivity across samples of firms that are divided, based on *a priori* criteria to examine the impact of credit friction on corporate investment spending. Studies which adopt this approach depend on the significance of the internal funds measured to the investment spending. A significant correlation between cash-flow and investment spending is an indicator of the presence of financial constraints that are caused by capital-market imperfections.

Again, in this approach, firms are divided into sub-samples based on *a priori* criteria indicating the size of the gap between the cost of internal and external funds. Some of these criteria are dividend payout ratio (Fazzari, 1988), firm age (Beck *et al.*, 2006), firm size (Beck *et al.*, 2006; Kadapakkam, 1998), and institutional investors' investment horizons (Attig *et al.*, 2012). More recently, Cull *et al.* (2015) divided the sample based on government ownership and whether the government appoints the CEO of the firm. In these empirical tests, there is an implicit assumption that there is a monotonic relationship between investment cash-flow sensitivities and the severity of financial constraints.

However, re-examining the sample of 49 low dividend-paying firms in Fazzari (1988), Kaplan and Zingales (1997) provide theoretical reasons why this monotonicity need not hold. Consequently, they doubted the usefulness of the investment cash-flow sensitivities as a measure of financial constraints. They conclude that the 49 firms which are classified as financially-constrained in the paper of Fazzari (1988) exhibit the lowest investment cash-flow sensitivity, which contradicts their results as they find that these firms display high sensitivity of investment for the available cash-flow. Based on a larger sample, Cleary (1999) reports evidence supporting the findings by Kaplan and Zingales (1997) as he finds that most creditworthy firms display high investment cash-flow sensitivity. Results of Cleary (1999) led to a heated debate between Fazzari, Hubbard and Petersen (2000) and Kaplan and Zingales (2000).

In an attempt to reconcile the contradictory results of Kaplan and Zingales (1997) and Fazzari (1988), Cleary, Povel and Raith (2007) stated that the main reasons behind the contradictory findings are the different classification schemes used. They concluded that if the categorisation is based on measures of capital-market imperfections, such as information asymmetry, then results will support the findings of Fazzari (1988). However, if firms are classified based on a measure that is correlated with internal funds, such as financial strength, then findings will be similar to Kaplan and Zingales (1997) and Cleary (1999). Moreover, Moyen (2004) asserts the difficulty of identifying firms with financing constraints and concludes that the sensitivity of investment to cash-flow critically depends on the classification procedure employed.

In general, the conclusions of Kaplan and Zingales (1997) have some limitations. The first limitation is the difficulty or even impossibility of defining the degree of financial constraints so finely. The second limitation is the size of the investigated sample as they rely on 49 firms only, which makes it difficult to generalise conclusions based on such a small sample. The third problem is the sample-splitting criteria employed, as they classify companies into different degrees of financial constraints based on information released by managers, which can be unreliable, given that there is no clear operational definition of these financial constraints. Furthermore, Allayannis and Mozumdar (2004) criticised the work of Kaplan and Zingales (1997) and Cleary (1999) by stating that negative cash-flows and influential observations are the key drivers for their findings.

More recently, two debates put the reliability of investment cash-flow sensitivity as a measure of financial constraints into question again. The first debate is by Chen and Chen (2012) who documented a time series evidence that investment cash-flow sensitivity has declined among U.S firms in the last four decades and even disappeared in recent years. This finding raises doubts regarding the reliability of using investment cash-flow sensitivity as a measure of financial constraints. In their study, they reported an insignificant relationship between cash-flow and investment at the end of their study period (2007 – 2009), where financial constraints are assumed to be more severe. To sum up, they assert the invalidity of investment cash-flow sensitivity as a measure of financial constraints for U.S firms. Similarly, Brown and Petersen (2009) found that investment cash-flow sensitivity declined for U.S

companies. However, they show that for the period 1994 – 2006, investment cash-flow sensitivity remained high for young firms with positive cash-flows. The second debate relies on the notion that bank loans are no longer a major source of funds for companies due to capital-market developments, which makes investment cash-flow sensitivity an unreliable measure of financial constraints (Cull *et al.*, 2015).

In the Jordanian context, investment cash-flow sensitivity can be a valid and reliable measure of financial constraints for two reasons. The first reason is that capital market in Jordan is underdeveloped, and bank loans are the first and most important source of funds for most Jordanian firms, which makes the trade-offs Jordanian firms make between internally-generated funds and the limited external funds understandable. The second reason rests on the fact that the decline in investment cash-flow sensitivity is less evident in emerging markets especially when firms with positive cash-flows are considered (Moshirian and Vadilyev, 2013).

4.2.3 Political connections and financial markets literature

What we know about the business-politics relationship is primarily based on empirical studies that investigate the impact of firms' political connections on their value (Bunkanwanicha and Wiwattanakantang, 2009; Goldman, Rocholl and So, 2009; Fan, Rui and Zhao, 2008; Li *et al.*, 2008; Fisman, 2001). Moreover, numerous studies have examined some mechanisms through which political connections can affect firms' performance. For instance, Wu *et al.* (2012) and Adhikari, Derashid and Zhang (2006) argued that tax reduction is one of the mechanisms that led to a better performance, as they found that politically-connected firms pay lower taxes than politically-non-connected firms. Furthermore, obtaining lucrative government contracts is another mechanism through which political connections can help enhance firms' performance (Goldman, Rocholl and So, 2009).

Besides, Faccio, Masulis and McConnell (2006) pointed out that politically-connected firms are in a more advantageous position for being bailed out by the government if they experience financial distress, which may partially explain why politically-connected firms have better access to external finance, whether it be debt-financing (Li *et al.*, 2008; Fraser, Zhang and Derashid, 2006; Leuz and Oberholzer-Gee, 2006; Khwaja and Mian, 2005), or equity-financing (Boubakri *et al.*, 2012; Francis, Hasan and Sun, 2009).

In light of the above findings regarding the favourable access politically-connected firms have to external finance, we can argue that politically-connected companies with greater access to external funding are less financially-constrained than non-connected firms. Recently, researchers have shown an increased interest in investigating the effect of firms' political connections on financing constraints. For instance, Chan, Dang and Yan (2012) examine the impact of political ties on funding constraints for Chinese publicly-traded firms. They find that companies with political connections are less constrained. Furthermore, regarding the impact of ownership structure, they conclude that state-owned enterprises are less constrained compared to family-owned firms. Likewise, by using a different definition of political connections, Cull *et al.* (2015) find that Chinese firms that are connected to the government are less financially-constrained. Also, they find that stronger connections to the government alleviate firms' financing constraints more. In Taiwan, Shen and Lin (2016) investigate the effect of companies' ties with the ruling party on financing constraints and the investments of these firms. Furthermore, similar to Cull *et al.* (2015), they examine whether stronger political connections have a more significant role in mitigating financial constraints than weaker political connections.

Not surprisingly, the findings of Shen and Lin (2016) were consistent with Chan, Dang and Yan (2012) and Cull *et al.* (2015) regarding the effect of political connections in alleviating firms' financial constraints. Also, consistent with Cull *et al.* (2015), they find that stronger political connections help companies to mitigate financing constraints more than weaker links. This consistency in the findings may be because both Taiwan and China have a common characteristic, that is to say, the dominance of state-owned banks in these countries.

Again, while the three studies above are different in details, such as methodology, sample period and the definition of political connections, they have an important characteristic in common which is investigating the effect of political connections on firms' financing constraints in countries dominated by a state-owned banking system. Thus, their conclusions can only be generalised and applied to countries with a dominant state-owned banking system (Chan, Dang and Yan, 2012). However, to the best of the author's knowledge, no study has been found so far on countries where the banking system is privately-owned.

Previous literature concludes that private banks do not have a political role regarding the granting of loans to companies (Dinç, 2005; Khwaja and Mian, 2005; Sapienza, 2004). However, the case in Jordan is different due to the presence of politicians on boards of directors and even as chairpersons of the majority of banks operating in Jordan. Their presence raises the tendency of these banks to direct their loans to politically-connected firms due to the favouritism phenomenon in Jordan, where politicians can use their connections with their colleagues to advance their interests. In the same way, politicians can use their connections and power to build good relationships with bank leaders, who are also politicians, to facilitate the process of obtaining bank loans. Thus, one of the distinctive features from existing studies is that it is carried out in a country with a privately-owned banking system.

The second characteristic is that our detailed classification of political connections is different from their definition. Chan, Dang and Yan (2012) define the firms as politically-connected if the CEO/chairperson is a military officer, government official, or someone with a political ranking at the ministerial or provincial-government level. Shen and Lin (2016) consider the firm's relationship with the ruling party as a measure of political connection. Cull *et al.* (2015) define the firm as politically-connected if the government appoints the CEO of this firm. However, differently from Chan, Dang and Yan (2012), we do not consider the CEO's role, but that firms can be politically-connected through a board director and chairperson if he/she has served as a former Member of Parliament, Minister, or Prime Minister. Moreover, firms with politicians' relatives on their boards of directors are also considered politically-connected which is also different from these studies. Furthermore, we consider the firm as politically-connected if the government owns a portion of the firm's voting shares. Also, if a firm has a representative of the social security corporation in its boards' room, it will be politically connected.

The third difference is the methodological approach employed in this study, as we apply the Generalised Method of Moments estimator (GMM) to estimate model parameters. Previous studies have dealt with heterogeneity and endogeneity separately by performing fixed effects and instrumental variables estimators on separate models. Note that the GMM offers a better remedy to both problems in one estimator.

Furthermore, we divide the sample period into two sub-periods, namely, 2000 – 2007 and 2008 – 2014 to investigate the impact of four major events that Jordan experienced after 2008: the Global Financial Crisis, the establishment of the Anti-Corruption Commission in Jordan in 2008, the Arab Uprisings in the Middle East region, and the issuance of the corporate governance code for banks in Jordan.

4.2.4 Strength of political connection

Faccio (2010) pointed out that the strength of political connections is an important factor in examining the relationship between firms' political links and their performance because it can give a deeper understanding of the relationship. Fan, Wong and Zhang (2007) considered the CEO's association with the government as a base to identify the strength of political connections. Based on this criterion, if the CEO is connected to the central government or to the local government that has direct authority in the region where the firm operates, this connection will be strong. However, the firm's political link will be weak if it has a CEO who is affiliated with a local government that has no direct power over the company's business region. A major problem with this definition is that it is unable to capture other possible channels of political ties.

Faccio (2010) measured the strength of political connections through more specific channels. She classified the sample firms according to the strength of political connections into two broad categories: strong and weak connections, in which five sub-categories are based on the government position of the politically-connected person and also based on the relationship between the firm and the politically-connected person. Strong connections include three categories: i) companies with a politically-connected person as a controlling shareholder, ii) firms that are connected through the king, the president or a minister, and iii) firms that are linked through a close relationship when the firm has a controlling shareholder or a board member who has a relationship with at least one leading politician or political party. Regarding the weak political-connections category, it contains two sub-categories: i) companies connected to a board member, and ii) firms linked to a member of parliament.

Furthermore, Claessens, Feijen and Laeven (2008) adopted the campaign contributions provided by firms to election candidates to measure political

connections in general. Regarding the strength of political connections, they consider that the company's relationship is strong if the candidate it supported during the election is an incumbent candidate or affiliated to the president. Khwaja and Mian (2005) measured the strength of political connections based on the candidate's electoral success, votes obtained in elections, and their political party. According to them, a firm's political connections will be strong if this firm is connected to a candidate who or whose party wins the election. Furthermore, the higher the votes obtained by the candidate in the elections, the more powerful he/she will be.

For the purpose of this study, we follow the classification of Faccio (2010) with slight differences. The first one is that we only consider political connections through boards of directors and the chairperson but not through CEOs because Boards of Directors and chairpersons are more important than CEOs in Jordan. The second difference is the definition of a firm's political connections through close relationships. Unlike Faccio (2010), we only consider connections through blood relationships with leading politicians, which does not include relationships through friendship, due to the difficulty of tracking these. Moreover, we include firms with state ownership at less than 50%, which is not considered in Faccio (2010), though state-owned enterprises are controlled in her analysis.

Results of the previous studies on the effect of strength of political connections on companies are consistent with the notion that stronger political connections have greater influence than weaker links. For example, Fan, Wong and Zhang (2007) declare that the type of relationship can alter the effect of political connections. They find that the political position of the CEO connected to the firm can have an impact on the effectiveness of the role this CEO can play. They conclude that a CEO currently serving in the central government and a CEO serving in the local government with direct authority on the firm's operations have more impact on companies than a CEO who is connected to the local government but without authority on the firm.

Similarly, Faccio (2010) finds that firms linked to a minister enjoy a lower cost of debt. Moreover, Faccio (2010) concluded that firms related to a member of parliament and by a close relationship experienced the lowest market-valuation among politically-connected companies. These results are consistent with the evidence by Khwaja and Mian (2005) in Pakistan, where politically-connected banks

increase the value and lower the cost of loans provided to firms with stronger political connections. Furthermore, in Brazil, Claessens, Feijen and Laeven (2008) state that benefits from incumbent candidates and candidates linked to the president are higher than the benefits from candidates without such characteristics. Recent studies also show that stronger political connections can have more impact in reducing a firm's financial constraints than weaker links (Shen and Lin, 2016; Cull *et al.*, 2015; Chan, Dang and Yan, 2012).

4.2.5 Political connections, corruption, and firm's financial constraints

In spite of the negative aggregate economic impact of corruption on the country's investment and growth, the literature of political connections and financial markets reveals that political connections could be beneficial for firms (Faccio, 2010). Moreover, in countries with high levels of corruption, firms can benefit even more from having political connections (Porta *et al.*, 1998). This finding is confirmed later by Faccio (2010), who finds that differences between politically-connected and non-connected firms are greater in countries with high levels of corruption, especially in terms of having preferential access to debt-financing.

In Jordan, one of the most prevalent forms of corruption is favouritism. Favouritism can be defined as the tendency to provide favourable treatment to relatives and acquaintances (Loewe *et al.,* 2007). This widespread phenomenon has a negative impact on the business climate and therefore on economic development in Jordan. For instance, Loewe *et al.* (2007) in their study about the impact of favouritism on the business-climate in Jordan, conclude that favouritism leads to unfairness and inefficiency in the state-business relationship. Moreover, they find that favouritism affects firms' investment decisions as they find that firms' managers devote much more time and money to networking rather than to business ideas and to product innovation. Moreover, the same study mentioned that favouritism could help to access bank loans or in the granting of tax reductions.

Thus, in order to combat corruption including favouritism in Jordan, the Parliament enacted an Anti-Corruption Law in 2006 to create a commission responsible for investigating allegations of corruption which developed a national strategy to combat corruption in 2008. In 2010, the number of corruption complaints reported to the commission was 1026 in addition to 625 cases from 2009. The

striking point here is that 43% of these complaints are related to the misuse of power and 10% related to favouritism and 12% to the waste of public funds[3].The number of cases has decreased in 2012 reaching 303 cases. Again, misuse of power and public funds are on top of the list with 29% each. The number of complaints continued to decrease in 2014, reaching 151 cases. But the public funds abuse and misuse of power are still top with 35% and 13% respectively.

The above numbers show how the elite can exploit their power to advance their interests, and this can sometimes be extended to their relatives or to the companies to which they are related. On the other hand, the Commission referred some high-profile corruption cases to the judiciary for investigation in Jordan, which may hinder corrupt elites from exploiting their power to achieve individual goals. Moreover, the Arab Uprisings that started in 2010 increased the pressure on the state to increase its efforts to combat corruption and limit the effect of leading politicians in both the business and the political arena, since one of the main reasons behind the Arab Uprisings is corruption. For instance, state-led development in Egypt created the opportunity for the crony capitalism which benefited a small minority of the Egyptian people. In this regard, Jordan is not exempt, because as mentioned previously, as in many countries in the MEAN region, favouritism can have a crucial role within the business environment, and it is regarded as part of the culture and part of doing business by many Jordanians.

Furthermore, government reports reveal that the Global Financial Crisis had no effect on the banking sector in Jordan due to its limited exposure to the international capital markets. However, the crisis alongside the Arab Uprisings affected non-financial firms negatively, as the percentage of companies which reported losses peaked in 2011 to reach 48% of the firms listed on the Amman Stock Exchange from 16% in 2007. This percentage decreased again in 2014 to reach 43% which is still double of percentage of 2007. This situation can affect the credit-ratings of firms and makes it harder for them to obtain bank loans. Moreover, due to the geopolitical instability caused by the Arab Uprisings, banks will be more cautious when providing loans to firms because of the high risks associated with them.

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[3] According to the law of the Anti-corruption commission in Jordan, Public funds do not include funds in the public sector only, but also funds in the private sector represented by publicly-listed firms and specialised lending institutions.

Finally, the Central Bank of Jordan (CBJ) issued a new corporate governance code, implemented by the end of 2007, to enhance corporate governance in the Jordanian banking sector. This code focuses on four main principles which banks have to follow to improve their efficiency. These principles are fourfold:

1. Provide fair treatment to all stakeholders including banks' employees, creditors, depositors, shareholders and regulators.
2. Improve the ability of stakeholders to assess a bank's condition and financial performance by enhancing transparency and disclosure.
3. Accountability in the relationships between banks' boards and stakeholders, including shareholders, and between boards and their executive management.
4. Responsibility by setting an explicit delegation and division of authority.

Hence, one of the objectives of this study is oriented towards the investigation of the impact of these four events. Therefore, we have undertaken the analysis in two phases: the first one between 2000 and 2007 and the second one between 2008 and 2014.

4.2.6   Hypotheses development

This study is intended to examine the political-connection hypothesis where a firm's political connections are expected to have an influence on the financial constraints of this firm. To achieve this aim, we investigate three hypotheses.

In our general hypothesis, we examine whether firms' political connections can mitigate financial constraints. Previous studies focus on some firm characteristics to examine their financial constraints, for example, Beck *et al.* (2006) find that larger, older and foreign-owned firms are less financially-constrained. Recently, Attig *et al.* (2012) find that institutional investors with a long investment horizon can also mitigate a firm's financial constraints. More recently, Cull *et al.* (2015) conclude that government connections have a vital role in alleviating financial constraints by allowing firms to have favourable access to loans from state-owned banks. In the Jordanian context, although the private sector owns the Jordanian banking system, the presence of politicians is prevalent on the banks' boards of directors, which makes it easier for firms with political connections to build relationships with banks'

leaders and thus enjoy favourable access to bank loans. Therefore, our first hypothesis is as follows,

H1: Jordanian publicly-listed firms with political connections are less financially-constrained.

The second hypothesis is concerned with the strength of the political connections. As previously mentioned, strong political connections are either connections through some form of state-ownership or via a Minister or Prime Minister, and weak connections are connections through a Member of Parliament or a blood relationship with a leading politician. We posit our hypothesis based on previous literature that confirms that stronger political connections have a higher effect than weaker links in enhancing the financing-ability of firms. Thus, our second hypothesis is as follows,

H2: Jordanian publicly-listed firms with stronger political connections can mitigate financing-constraints more than firms with weaker political connections.

In the third hypothesis, we test whether the Global Financial Crisis, the Arab Uprisings, the establishment of the Anti-Corruption Commission and the issuance of a banking corporate governance code introduced after 2008, have had an impact on the ability of firms' political connections to reduce their financing constraints. As discussed in the previous section, the Global Financial Crisis affected companies' ability to generate cash-flows internally. Consequently, it affected the credit-ratings of these companies due to losses reported by these companies. Moreover, the Arab Uprising, alongside the establishment of the Anti-Corruption Commission and the issuance of a banking corporate governance code, may affect the ability of politicians to assist firms to which they are related to gain favourable access to bank loans. Thus, the third hypothesis can be formulated as follows,

H3: The effect of political connections in reducing firms' financing constraints is smaller during the post-event period.

4.2.7 Investment models

The purpose of this section is to review the testable models that are used to describe a firm's investment decisions. Goergen and Renneboog (2001) reported that there are four primary models which can be employed to describe the investment spending of

a firm. These models are the neoclassical model, the sales accelerator model, the q model, and the Euler model. Moreover, the error-correction model that departs from the neoclassical models is used to test the financing-constraints hypothesis, (See e.g., Guariglia and Mateut, 2006; Bond *et al.*, 2003).

4.2.7.1   The neoclassical model

This model is first introduced by Jorgenson (1963) and assumes that the cost of capital is the main determinant of a firm's investment spending. Consequently, the firm will invest the capital only if the return on this investment exceeds its cost. Therefore, the investment equation is as follows,

$$\left(\frac{I}{K}\right)_{it} = \alpha_i + \alpha_1 \left(\frac{C_K}{K}\right)_{it} + \alpha_2 \left(\frac{C_K}{K}\right)_{i,t-1} + \alpha_3 \left(\frac{CF}{K}\right)_{it} + \varepsilon_{it} \qquad (4.1)$$

Where I is the investment level, K is the capital stock, C_K is the cost of capital, and CF is the cash flow that is used to measure the firm's financial constraints. In this model, reaching the optimal capital stock in the current period is the main aim of the company. This base allows us to consider the firm's desired investment as a change towards the optimal capital stock.

Moreover, as can be seen in the model, current and past periods' cost of capital are included as primary determinants of the firm's current investment. This inclusion is because of Jorgenson's assumption that there will be a delay in the firm's movement towards the optimal capital-stock which leads to the idea of the delivery lags. The meaning of the delivery lags is that the firm does not receive investment goods at the same time of ordering them. However, it will receive it in the next period. Thus, assuming that the investment is a continuous process, we can consider the current investment level as the sum of the current and past desired investments that are delivered in the current period.

Regarding the cash-flow variable, a significant positive relationship between it and the investment indicates the presence of financing constraints. However, the drawback of this model is the negligence of the forward-looking variables despite the fact that tomorrow's output is generated from today's investment (Goergen and Renneboog, 2001).

4.2.7.2 The sales accelerator model

This model is first proposed by Abel and Blanchard (1986). They assume that the sales factor is the only determinant of investment. Moreover, similar to the neoclassical model, they include the cash-flow variable to measure financial constraints. Thus, the model is as follows,

$$\left(\frac{I}{K}\right)_{it} = \alpha_i + \alpha_1 \left(\frac{S}{K}\right)_{it} + \alpha_2 \left(\frac{S}{K}\right)_{i,t-1} + \alpha_3 \left(\frac{CF}{K}\right)_{it} + \varepsilon_{it} \tag{4.2}$$

Where I is the investment level, K is the capital stock, S is the total sales, and CF is the cash-flow used to measure the firm's financial constraints. Similar to the neoclassical model, a significant relationship between a firm's internal cash-flow and investment is an indicator of the presence of financing constraints. However, this model, as in the case of the neoclassical model, has the disadvantage of ignoring the firm's growth potential.

Fazzari (1988) employed an alternative version of the sales accelerator model by adding Tobin's q to the model. They find that including Tobin's q reduces the effect of the cash-flow variable although it remains significant. Moreover, Goergen and Renneboog (2001) criticised the assumptions of the sales accelerator and neoclassical models that a significant impact of the cash-flow variable over investment is an indicator of the presence of liquidity constraints (Goergen and Renneboog, 2001). They pointed out that such a significant relationship could indicate higher, future profitability rather than financing constraints.

Another shortcoming of these models arose from the fact that investment does not only depend on the current optimal capital stock, but also on the future optimal level (Bond and Meghir, 1994). However, Goergen and Renneboog (2001) mentioned that estimating the relationship between investment and expected levels of output and the minimum acceptable rate of return (hurdle rate) is impossible because of the lack of availability of data about expectations. Thus, these models try to overcome this issue by estimating the impact of the current and lagged levels of the hurdle rate and output on investment. However, this can be problematic, according to Goergen and Renneboog (2001), because in this case, one cannot distinguish between factors affecting the optimal capital stock and factors forecasting the future value of the capital stock. This non-discrimination may lead to misleading results

regarding the real effect of the cash-flow variable, as it could either reflect liquidity constraints or the formation of expectations.

4.2.7.3 The Q model

As mentioned earlier, the previous two models do not take into account the forward-looking behaviour of investment which may lead to a misinterpretation of the cash-flow variable effect. Thus, to consider this behaviour, the q model is developed by introducing a forward-looking stock-market valuation variable, that is, Tobin's q (defined as the market-value of equity and debt over the replacement-value of the firm's capital stock). Therefore, a q model which is first introduced by Tobin (1969) is as follow,

$$\left(\frac{I}{K}\right)_{it} = \alpha_i + \alpha_1 Q_{it} + \alpha_2 \left(\frac{CF}{K}\right)_{it} + \varepsilon_{it} \tag{4.3}$$

Where Q_{it} stands for Tobin's q and α_1 represents the sensitivity of investment to profitability opportunities, which are reflected in Q. In addition to Q, a cash-flow variable is incorporated in the model to measure a firm's financial constraints. Essentially, if α_2 is significantly different from zero, the company will be considered financially-constrained.

Moreover, in the original model, investment is related to marginal q (defined as the market value of an additional unit of capital divided by its replacement cost). However, empirically, researchers employ average q (defined as the market value of existing capital over its replacement cost) as a proxy for marginal q, as marginal q is not directly observable (Hayashi, 1982). Nonetheless, this approach is problematic because average q is not equivalent to marginal q. Hayashi (1982) pointed out that researchers should feel uneasy when they regress investment on average q if they are not sure that they are the same. Moreover, he proposed that average q can be a proxy for marginal q only under the following assumptions: First is that the firm is a price taker in a perfectly competitive market. Second is the presence of constant returns to scale. The third is the efficiency of the financial market that will lead to the equality of Tobin's q measured by a firm's managers and the one measured by the market. However, these assumptions are unrealistic in practice, according to Goergen and Renneboog (2001).

Despite the problems associated with measuring q, numerous studies use the q model to investigate the relationship between a firm's financial position and its investments (See, e.g., Attig *et al.* 2012; Chan, Dang and Yan, 2012; Fazzari, 1988). Finally, Erickson and Whited (2000) concluded that if the q model were purged of measurement error, it would have good explanatory power.

As mentioned above in this section, a significant correlation between the cash-flow variable incorporated in the q model and a firm's investment is evidence of the presence of financing constraints. However, under the q theory, variables, other than q, should not have a significant impact on a firm's investment decisions, and financial variables such as cash-flow are not exceptions. Thereby, if one finds the cash-flow variable to be significant in the q model, this model will be rejected. Moreover, there is no consensus on whether a positive and significant cash-flow coefficient is evidence of financing constraints as the literature documents three alternative interpretations for this finding. The first and most dominant explanation is that the firm is financially-constrained due to capital-market imperfections. Fazzari (1988) argued that since the cash-flow variable proxies the company's net worth, then it determines the premium of the external finance facing the firm.

The second interpretation of the significance of the cash-flow is the failure of the q model to capture all the information available about investment opportunities. As discussed above, including average q as a proxy for the unobservable marginal q can be problematic due to the difficulty of satisfying all assumptions necessary to obtain average q that is equal to marginal q (Moyen, 2004). In other words, q will be measured with error and a major source of q measurement error will be stock-market inefficiency. When the stock market is inefficient, there will be a divergence between the market value of the firm and its fundamentals. Consequently, the market value of the firm will not be a good proxy for its fundamentals. In this case, one cannot validate the finding that investment cash-flow sensitivity is an indication of financial constraints because cash-flow can also provide information about investment opportunities that are not captured by average q (Moyen, 2004).

Cummins, Hassett and Oliner (2006) relied on the expectations of the earnings analysis to construct a modified q to proxy for investment opportunities, instead of using the average q. They find that the significance of the cash-flow variable disappeared after using that proxy. However, Carpenter and Guariglia

(2008) added a new proxy for expectations to reflect the firm's insider evaluation of opportunities alongside q to the investment model to provide an extra control for investment opportunities. They find that the significance of the cash-flow to investment falls for large firms, but remained high for small firms. In another study, Gilchrist and Himmelberg (1995) estimated marginal q directly by using a set of VAR equations to avoid using average q. They find that investment cash-flow sensitivity disappeared for unconstrained firms; however, it remained pronounced for constrained firms. These results support the findings by Fazzari (1988) in one aspect which is the persistent significance of the cash-flow variable for investment in the constrained-firms group even after full control for investment opportunities.

The third alternative explanation for the significance of the cash-flow variable for investment is the managers' incentives to overinvest the free cash-flow. In this regard, a firm's managers may have an incentive to overinvest the free cash-flow available to enhance their pay, status, and power. Jensen (1986) pointed out that if this was the case, then q model will be inappropriate to explain investment behaviour because the significance of the cash-flow variable can be explained by the free cash-flow theory.

4.2.7.4   The Euler model

To address the weaknesses of the neoclassical and average Tobin's q models, the Euler investment model can be employed (Goergen and Renneboog, 2001). Primarily, this model is derived from the maximisation problem used to obtain the q model, but with a different re-arrangement of the first order conditions[4]. Following Bond and Meghir (1994), an Euler investment model can be written as follows,

$$\left(\frac{I}{K}\right)_{i,t} = \alpha_1 \left(\frac{I}{K}\right)_{i,t-1} + \alpha_2 \left(\frac{I}{K}\right)_{i,t-1}^2 + \alpha_3 \left(\frac{CF}{K}\right)_{i,t-1} + \alpha_4 \left(\frac{S}{K}\right)_{i,t-1} + \alpha_5 \left(\frac{D}{K}\right)_{i,t-1}^2 + \psi_t + \varphi_i + \varepsilon_{it}$$

(4.4)

Where I is firm investment, CF is firm cash-flow, S is the net sales, D is the firm debt, and ψ_t and φ_i are time fixed-effects and firm fixed-effects, respectively. In this model, a firm's investment scaled by capital stock is a function of the discounted, expected future investment adjusted for the impact of the anticipated changes in the net marginal output and the input prices.

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[4] The Euler investment model will be derived in the model specification section.

Several studies tested the wedge between internal funds and external funds by using the Euler investment model (See, e.g., Harrison and McMillan, 2003; Laeven, 2003; Goergen and Renneboog, 2001; Bond and Meghir, 1994; Whited, 1992). The Euler investment model has the advantage of not using stock-market data that can be distorted especially in developing countries and for unlisted firms (Laeven, 2003). Moreover, the use of the Euler model enables us to control the impact of expected future profitability without the need to explicitly measure the expected cost or expected demand. This control can be done by using instrumental values to approximate the future unobservable values (Goergen and Renneboog, 2001). A drawback of the Euler model appears if the tightness of the financing constraints was constant over time because the Euler model may fail to capture these constraints (Zeldes, 1989). This problem, however, can be addressed if we have a sufficient period that allows us to detect the changes in the financial health of individual firms. Another issue with the Euler investment model stems from the assumption of symmetric, quadratic cost of adjustment (Bond et al., 2003). Thus, if there is irreversibility of constraints on investment or any other form of asymmetries in adjustment cost, the Euler model will be misspecified. Therefore, the Error-correction model can be employed to test the hypothesis of financial constraints.

4.2.7.5 Error-correction model for investment

Bean (1981) has introduced this model into the investment literature. The error-correction model specifies a long-run formulation (target) of the level of the capital stock. Also, it allows us to empirically estimate the short-run investment dynamics from the data (Bond *et al.*, 2003). However, there will be ambiguity in interpreting the coefficient of the financial variable included in this type of model. Bond *et al.* (2003) stated that financial variables incorporated in the error-correction model could be significant for the investment decisions, even in the absence of financial constraints. For instance, they mentioned that in the presence of the convex adjustment costs, cash-flow variable could convey information about future output, which helps to explain investment in a reduced-form model, such as the error-correction model, even if the financing constraints are not present.

4.3 Methodology

4.3.1 Estimation Framework

In this section, we present the investment model that we estimate in this chapter. In light of the discussion in the previous section, we employ the Euler investment model as it enables us to overcome the problem of the inequality of marginal q and average q that the widely-used q model faces.

The Euler equation specification is explicitly derived from a dynamic optimisation problem under the assumption of symmetric and quadratic adjustment costs. The Euler model captures the impact of future profitability-expectations on current investment spending under this maintained structure. Consequently, current and lagged financial variables are unlikely to be proxies for future profitability if they are incorporated into the equation.

The Euler investment model employed in this study is similar to models used in previous studies of financing constraints (Bond *et al.*, 2003; Harrison and McMillan, 2003; Bond and Meghir, 1994). Our model closely follows the specification in Harrison and McMillan (2003).

The firm is assumed to maximise the present discounted value of its current and future net cash-flows. Let L_{it} denote variable factor inputs, w_{it} the price of variable factor inputs, p_{it} the price of output, p_{it}^I the price of investment good, β_{t+j}^t the nominal discount factor between period t and $t + j$, δ the depreciation rate, K_{it} the capital stock, I_{it} denotes investment. E ($\cdot$) is the expectation operator, F (K_{it}, L_{it}) is the production function, gross of adjustment costs and G (I_{it}, K_{it}) is the adjustment-cost function. Conditional to information available in period t, the firm borrows the amount of D_{it} at time t, and pays interest on the debt by i_{it}. Finally, inflation is denoted by π_{it}. The firm solves

$$\max \ E_{it} \left[\sum_j^\infty \beta_{t+j}^t R\big(K_{i,t+j}, L_{i,t+j}, I_{i,t+j}\big) \right] \tag{4.5}$$

Subject to the following constraints

$$K_{it} = (1 - \delta)K_{i,t-1} + I_{it} \tag{a}$$

$$D_{it} \leq D_{it}^* \tag{b}$$

$D_{it} \geq 0$ (c)

$R_{it} = p_{it} F(K_{it}, L_{it})$ - $p_{it}G(I_{it}, K_{it})$ - $w_{it}L_{it}$ - $p_{it}^l I_{it}$ - $i_{t-1}D_{it-1} + D_{it}$ – (1- π_{t-1}) D_{it-1} (d)

$R_{it} \geq 0$ (e)

The first constraint, (a) is the accounting identity for the capital stock of the firm, where capital stock at time t is the sum of the capital stock at t-1, net of depreciation, and the investment in the current period, that is I_{it}. The second constraint, (b) limits the amount borrowed by the firm at a level less than or equal to the outstanding debt (D_{it}^*). The third constraint, (c) restricts the company's debt to be equal to or more than zero, which is the no negativity of the firm's debt. The fourth constraint, (d) defines the company's net revenue. The last restriction, (e) restricts the net revenue to be non-negative, because of the assumption that investment is immediately productive, therefore, postponing investment decision involves no future loss in output. The last constraint also has the same impact as a restriction on new share issues.

By solving the maximisation problem above (4.5), we obtain the Euler equation that characterises the optimal path of investment that can be done by relating the marginal adjustment costs in next periods. Financially-constrained firms will delay today's investment and substitute it with tomorrow's investment. This is because of the high discount rate they face due to these financing constraints. Following Harrison and McMillan (2003), if we assume that investment is immediately productive, and then the marginal cost of investment today, net of a marginal increase in output, is equal to the present value of the marginal adjustment cost of tomorrow's investment. In other words, the right-hand side of Equation (3.6) will be equal to the left-hand side of the same equation.

$$(1 - \delta)\beta_{t+1}^t E\left[(1 - \Omega_{it})\left(\frac{\partial R}{\partial I}\right)_{i,t+1}\right] = \left(\frac{\partial R}{\partial I}\right)_{it} + \left(\frac{\partial R}{\partial K}\right)_{it} \qquad (4.6)$$

Where, Ω_{it} represents the shadow value of the financing constraints. However, Harrison and McMillan (2003) pointed out that finding proxies for the derivative of net revenue R with respect to K and I and for the shadow-value of financing constraints Ω_{it} is a major challenge. Therefore, we follow Bond and Meghir (1994) by using the quadratic cost of adjustment form, $G(I_{it}, K_{it}) = (b/2) * [(I/K)_{it} - c]^2 K_{it})$, that is linearly homogeneous in capital and investment. Thereby, we can

rewrite the derivative of revenue R with respect to investment and capital respectively as follows,

$$\left(\frac{\partial R}{\partial I}\right)_t = -b\alpha p_t \left(\frac{1}{K}\right)_t + bc\alpha p_t - p_t^I \tag{4.7}$$

$$\left(\frac{\partial R}{\partial K}\right)_t = \alpha p_t \left(\frac{S}{K}\right)_t - \alpha p_t \left(\frac{\partial F}{\partial L}\frac{L}{K}\right)_t + b\alpha p_t \left(\frac{I}{K}\right)_t^2 - bc\alpha p_t \left(\frac{I}{K}\right)_t \tag{4.8}$$

In Equations (4.7) and (4.8), Y = F – G represents the net output, where F represents the production function and G is the adjustment cost function. $\alpha = 1 - (1/\varepsilon) > 0$, where ε is the price elasticity of demand and $(\varepsilon > 0)$ is assumed to be constant. Moreover, Y is considered to be linearly homogenous in K and L. Now, if we consider the absence of credit-constraints ($\Omega_{it} = 0$), by combining Equation (4.7) and (4.8) we derive the final estimation equation:

$$\left(\frac{I}{K}\right)_{i,t+1} = \beta_1 \left(\frac{I}{K}\right)_{it} - \beta_2 \left(\frac{I}{K}\right)_{it}^2 - \beta_3 \left(\frac{CF}{K}\right)_{it} + \beta_4 \left(\frac{S}{K}\right)_{it} + \beta_5 U_{it} + v_{it} \tag{4.9}$$

Where, U_{it} denotes the real user cost of capital.

In Equation (4.9), the future investment is positively related to the current investment and current output. However, it is negatively related to the squared current investment and current cash-flow. Finally, future investment is positively related to the real user cost of capital[5]. Regarding the negative coefficient of the cash-flow variable, Harrison and McMillan (2003) explain it as the higher level of current cash-flow indicating lower net marginal adjustment costs today. Consequently, it leads to lower investment tomorrow. However, in deriving Equation (4.9), we assumed that there are no financing constraints. But, if we consider the presence of financial constraints due capital-market imperfections, then we would expect the expected investment to be positively related to the cash-flow variable.

Regarding the empirical investigation of the impact of a firm's political connections on the relationship between a firm's investment and cash-flow, there are two approaches. The first is to divide the sample firms into two groups based on *a priori* criteria, which is a firm's political connections, into financially-constrained and unconstrained (companies that have political connections are assumed to be

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[5] The real user cost of capital is unobservable. Thus, we control for its impact by using the GMM estimator.

financially-unconstrained). After that, we estimate the investment model for each sub-sample separately. This approach requires the firm to be in the same category (constrained or unconstrained) for the whole sample period (Goergen and Renneboog, 2001).

However, this methodology is inapplicable in our case as we allow a firm's status to change from being politically-connected to unconnected throughout the sample period. Thus, we can estimate the model for the entire sample, including the interactive term between a dummy variable that equals one if the firm is politically-connected and zero otherwise, and the measure of cash-flow to investigate the impact of political connections in alleviating financial constraints. The latter approach has the advantage of allowing the status of the firm to change from being constrained to unconstrained during the sample period instead of restricting it to one category for the whole sample period (Goergen and Renneboog, 2001; Cleary, 1999).

Thus, we augment Equation (4.9) by including an interactive term between a firm's political-connections dummy (POLCON) and the cash-flow variable as follows,

$$\left(\frac{I}{K}\right)_{i,t} = \beta_1 \left(\frac{I}{K}\right)_{it-1} - \beta_2 \left(\frac{I}{K}\right)_{it-1}^2 + \beta_3 \left(\frac{CF}{K}\right)_{it-1} * POLCON_{it} + \beta_4 \left(\frac{S}{K}\right)_{it-1} + \beta_5 U_{it} + v_{it}$$
(4.10)

Furthermore, to examine the impact of the strength of political connections on a firm's financing constraints, we include an interaction term between the cash-flow variable and each dummy of political-connection strength which are state-ownership, ministerial and prime ministerial connections, with a Member of Parliament, and close relationships with leading politicians. See Table 4.1 for the list of variables with the definition.

Table 4.1: Variables Definitions

Variable	Definition
I_{it} (Investment)	calculated as the change in net tangible fixed assets plus depreciation
K_{it} (Capital stock)	Proxy by the net tangible fixed assets at the end of the previous period
CF_{it} (Cash Flow)	The sum of net income and depreciation and amortisation
S_{it} (Sales)	Total real sales
$\left(\dfrac{I}{K}\right)_{it-1}$	Lagged dependent variable
$\left(\dfrac{I}{K}\right)^2_{it-1}$	Lagged squared dependent variable
POLCON (firm's political connections)	A dummy variable that takes the value of 1 if the firm is politically connected and 0 otherwise
Government	A dummy variable that takes the value of 1 if the government owns a stake of the company's voting shares and 0 otherwise
Minister/Prime Minister	A dummy variable that takes the value of 1 if the company is connected through a minister and prime minister and 0 otherwise
MP (Member of Parliament)	A dummy variable that takes the value of 1 if the firm is linked to a member of parliament and 0 otherwise
Relation	A dummy variable that takes the value of 1 if the company is connected to a person who has a blood relationship with a leading politician and 0 otherwise

4.3.2 Method of estimation

In this study, we use panel data estimation to investigate the research question as this allows us to control better for the impact of omitted variables (Hsiao, 1986). Moreover, following Laeven (2003), Love (2003), and Goergen and Renneboog (2001), we employ the Generalised Method of Moments (GMM) to estimate model parameters.

Previous literature pointed out that in the presence of unobserved fixed effects, using dynamic OLS will produce biased and inconsistent estimates due to the correlation between the error term and the explanatory variables, which in turn leads to an upward bias in the lagged dependent variable (Goergen and Renneboog, 2001). This issue can be resolved by using the Within Groups-OLS estimation. In this method, we can eliminate the fixed effects in the error term by taking the deviations from the time mean. However, this estimator omits cross-section variation as it only focuses on time-series variation. Therefore, if we estimate our model by using this method, we may obtain a downward-biased estimate for the lagged dependent variable unless the number of time periods (T) is high. This bias is because the lagged dependent variable will be correlated with the lagged error term in the time mean of the current error term. Another concern when using the methods above is the bias that might arise due to the presence of endogenous variables in the Euler models. The variables of the Euler model are subject to two-way causality with the dependent variable. Therefore, to overcome these estimation problems, we use the Generalised Method of Moments estimator.

Arellano and Bond (1991) developed the first approach of this method that is the first-difference GMM to tackle two significant problems, firm-specific heterogeneity and potential endogeneity under the assumption of no second-order serial correlation. First-difference GMM estimator eliminates the impact of unobserved heterogeneity by taking the first difference for each variable. Furthermore, it overcomes the simultaneity problem of the regressors. This method considers lagged levels, normally two lags and earlier, of the endogenous variables as valid instruments for the first-differenced variables given that the error term has no second-order serial correlation. Hence, if the error term has second-order serial correlation, then our instruments of both dependent and independent variables are not valid instruments. The advantage of the first-difference GMM over the first-

differed instrumental variable estimation by Anderson and Hsiao (1982) is that the GMM efficiently uses all available instrumental variables.

However, Blundell and Bond (1998) pointed out that first-difference GMM may suffer finite-sample bias, hence performs poorly in the case of moderately short panels. This bias will lead the lagged levels to be weak instruments for the first differences. Moreover, they documented, using Monte Carlo simulations that System GMM performs better than first-difference GMM in such a case. Thus, in an attempt to improve the properties of the first-differenced GMM estimator, Blundell and Bond (1998) imposed further restrictions on the initial conditions process on developing a new method that is the system GMM. This method includes two types of equations. The first type is in levels, and their instruments are the lagged differences in both the dependent and independent variables. The second type is equations in the first differences, and their instruments are levels of both the dependent and independent variables. Moreover, Flannery and Hankins (2013) in a comparative study on panel data with an average length of 12 years conclude that system GMM is more robust than OLS, FE, and even first-difference GMM in the case of unbalanced panel data with endogenous independent variables.

Nevertheless, a disadvantage of the system GMM is the problem of too many instruments. This method generates instruments that are quadratic at T which will affect the reliability of the over-identification test that will reach unity if the number of instruments exceeds the number of cross-sections in the study. Consequently, to avoid this issue, STATA analysis software allows restricting the number of lags to be considered, so the number of instruments does not exceed the number of cross-sections being analysed.

For the purpose of this study, we follow Bond *et al.* (2003) by comparing the coefficient of the lagged dependent variable from both GMM estimators (first-difference GMM and System GMM) with the coefficients of the lagged dependent variable from OLS and Fixed-Effects estimators. According to Bond *et al.* (2003), if the coefficient of the lagged dependent variable from first-differenced GMM does not lie above the coefficient of the lagged dependent variable from the Fixed-Effects estimator and below the one from the OLS estimator, then first-differenced GMM suffers finite-sample bias. Table 4.2 presents the estimation results of the main model using the four estimators, OLS, FE, First-difference GMM, and System GMM.

Results from Table 4.2 indicates that finite-sample bias is a major problem when we estimate our regression using the first-difference GMM because the coefficient of the lagged dependent variable does not lie within the range of FE and OLS estimators. Thus, we will estimate all our specifications using System GMM that appears to be the most suitable method for two reasons: The first is the coefficient of the lagged dependent variable from the System GMM that lies within the range of the FE and OLS estimator. The second reason is the unbalanced nature of our data. As previously mentioned, the System GMM is the most robust estimator in the case of unbalanced panel data with endogenous independent variables (Flannery and Hankins, 2013).

Table 4.2: Baseline specification of Euler model estimation

VARIABLES	(OLS) $\left(\frac{I}{K}\right)$	(FE) $\left(\frac{I}{K}\right)$	GMM_{diff} $\left(\frac{I}{K}\right)$	GMM_{sys} $\left(\frac{I}{K}\right)$
$\left(\frac{I}{K}\right)_{t-1}$	0.227*** (0.0609)	-0.0187 (0.0367)	-0.0444 (0.240)	0.167 (0.136)
$\left(\frac{CF}{K}\right)_{t-1}$	0.115*** (0.0192)	0.248*** (0.0194)	0.278*** (0.0810)	0.267*** (0.0531)
$\left(\frac{S}{K}\right)_{t-1}$	0.0674*** (0.00882)	0.215*** (0.0122)	0.221*** (0.0768)	0.217*** (0.0403)
$\left(\frac{I}{K}\right)_{t-1}^{2}$	0.0146* (0.00861)	0.0224** (0.0102)	-0.0904** (0.0396)	-0.0491 (0.0350)
Constant	0.158 (2.595)	-0.640 (0.851)	-0.657 (1.163)	1.225 (1.372)
Observations	1,394	1,394	994	1,126
Number of Firms	131	131	130	131
R-squared	0.521	0.410		
Prob > F	0.000	0.000		
rho		0.377		
Sargan (p-value)			0.57	0.1544
AR1			0.0098	0.0002
AR2			0.3645	0.3086

Please see Table 4.1for variables definitions. This table shows the baseline specification of Euler model estimation. Sargan test statistic is the test of overidentifying restrictions, under the assumption of instrument validity. AR1 is a test for the first order serial correlation. AR2 tests for the second order serial correlation. Both first-difference GMM and System GMM estimators use the lagged values of all right-hand side variables dated t-2 as instruments. Robust standard errors are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1, respectively.

For consistent estimation of the System GMM estimator, the error term of the model should be serially-uncorrelated of the second order. In this study, we test for serial correlation by using first order serial correlation (AR1) and second order serial

correlation (AR2), under the null hypotheses of no serial correlation. Moreover, the instruments considered in the System GMM will only be valid if the instruments and error terms were not correlated. Therefore, we use the Sargan test statistic, which tests the over-identifying restrictions, under the null hypothesis of instrument validity.

4.3.3 Data and sample description

We use the database of the Amman Stock Exchange (ASE), which contains financial data for all publicly-traded firms in Jordan. Financial firms are excluded because this study investigates capital expenditure sensitivities (Allayannis and Mozumdar, 2004). Also, to allow for dynamic analysis, we keep companies with at least four year-observations (Goergen and Renneboog, 2001). Companies with missing values for the main regression variables are dropped. Furthermore, fixed assets, sales, and total assets cannot be missing or negative. We obtained an unbalanced firm-level panel of 131 firms covering the period between 2000 and 2014. Finally, to remove the effect of outliers, variables are winsorized at the 1st and 99th percentile.

Table 4.3 shows the structure of the data.Panel A of Table 4.3 shows the descriptive statistics of firms' political connections. The table indicates that political connections are prevalent in Jordan as the ratio of politically-connected firms is always more than that of non-connected firms. The table also shows that in spite of the decrease in the ratio of politically-connected firms from 74% in 2000 to 54% in 2014, politically-connected firms still account for more than half of non-financial firms listed on Amman Stock Exchange (ASE). Regarding the strength of political ties, Panel B of Table 4.3 shows the number of firms connected to each level of political connections, which is the strength of political connections. It can be clearly seen in Panel B that connections through politicians' relatives are prevalent in Jordan as they represent a high number amongst politically-connected firms, as opposed to connections through MP that represents a small number of politically connected firms. Furthermore, Panel B reveals an increase in the number of firms connected to politicians' relatives over the sample period. By contrast, the panel shows that the number of firms connected to Government and Minister/Prime Minister is decreasing.

Table 4.3: Descriptive statistics of firm's political connections

Panel A: Firms' political connections

Year	Total	Politically-Connected Firms	% of Politically-Connected Firms
2000	80	59	0.74
2001	80	58	0.73
2002	82	59	0.72
2003	84	62	0.74
2004	90	67	0.74
2005	100	74	0.74
2006	115	78	0.68
2007	120	79	0.66
2008	130	82	0.63
2009	131	81	0.62
2010	131	80	0.61
2011	131	76	0.58
2012	130	78	0.6
2013	130	80	0.62
2014	128	69	0.54

Panel B: Strength of political connections

Year	Government	Minister/ Prime Minister	MP	Relation
2000	10	27	1	21
2001	11	27	0	20
2002	11	27	0	21
2003	11	26	0	25
2004	12	26	0	29
2005	16	27	0	31
2006	18	30	0	30
2007	19	27	1	32
2008	18	25	2	37
2009	16	20	2	43
2010	11	17	3	49
2011	10	19	5	42
2012	10	21	6	41
2013	9	23	7	41
2014	9	18	5	37

Panel A shows the descriptive statistics of firms' political connections. Panel B shows the number of firms connected to each level of the of political connections of Jordanian listed firms by year from 2000 to 2014.

4.4   Estimation Results

4.4.1   Results of the baseline model

Table 4.4 presents the regression results for the baseline Euler equation for the full sample. The first evidence of this study is that Jordanian non-financial firms are

financially constrained, as the results show that investment spending is positively and significantly related to the internally-generated funds. This evidence is consistent with the notion that investment cash-flow sensitivities are still pronounced in emerging markets unlike the findings of Chen and Chen (2012) who reported a decline in the investment cash-flow sensitivity in a developed country that is the U.S.A.

Table 4.4: Baseline Euler Equation

VARIABLES	$\left(\dfrac{I}{K}\right)$
$\left(\dfrac{I}{K}\right)_{t-1}$	0.167 (0.136)
$\left(\dfrac{CF}{K}\right)_{t-1}$	0.267*** (0.0531)
$\left(\dfrac{S}{K}\right)_{t-1}$	0.217*** (0.0403)
$\left(\dfrac{I}{K}\right)_{t-1}^{2}$	-0.0491 (0.0350)
Constant	1.225 (1.372)
Observations	1,126
Number of Firms	131
Sargan (p-value)	0.1544
AR1 (P-value)	0.0002
AR2 (P-value)	0.3086

Please see Table 4.1 for variables definition. Sargan test statistic is the test of overidentifying restrictions, under the assumption of instrument validity. AR1 is a test for the first order serial correlation. AR2 tests for the second order serial correlation. We use the lagged values of all right-hand side variables dated t-2 as instruments. Robust standard errors are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1, respectively.

Our finding supports the results of Cull et al. (2015) who conclude that Chinese firms are financially constrained by finding a strong positive relationship between investment spending and internal cash-flow. We conjecture that the reason behind the high investment cash-flow sensitivity in Jordan is the underdeveloped capital market and therefore, the heavy reliance of firms on bank loans as a primary source of financing which makes it difficult for firms to obtain external funds.

To sum up, our finding adds further evidence to the literature of measuring financial constraints that investment cash-flow sensitivity is still a reliable and valid measure of financial constraints in emerging markets.

4.4.2 The impact of firm's political connection

Table 4.5 shows the results of the interaction term between the cash-flow variable and the political connections dummy variable. The coefficient of the interactive term between cash-flow and political connections is negative and significant. This finding supports our first hypothesis that investment spending of firms with political connections is less sensitive to internal funds than companies without political connections. In other words, political connections can help companies to mitigate financial constraints. Although with different sample characteristics, our result is in line with Cull et al. (2015) and Shen and Lin (2016) who find that a firm's political connections play a significant role in alleviating financial constraints in China and Taiwan respectively.

Table 4.5: The effect of firm's political connections

VARIABLES	$\left(\dfrac{I}{K}\right)$
$\left(\dfrac{I}{K}\right)_{t-1}$	0.166
	(0.135)
$\left(\dfrac{CF}{K}\right)_{t-1}$	0.379***
	(0.0739)
$\left(\dfrac{S}{K}\right)_{t-1}$	0.201***
	(0.0443)
$\left(\dfrac{I}{K}\right)_{t-1}^{2}$	-0.0495
	(0.0352)
$\left(\dfrac{CF}{K}\right)_{t-1} * POLCON$	-0.219**
	(0.111)
POLCON	0.258
	(0.274)
Constant	0.831
	(0.551)
Observations	1,125
Number of Firms	131
Sargan (p-value)	0.1447
AR1 (P-value)	0.0002
AR2 (P-value)	0.3695

Please see Table 4.1 for variables definition. Sargan test statistic is the test of overidentifying restrictions, under the assumption of instrument validity. AR1 is a test for the first order serial correlation. AR2 tests for the second order serial correlation. We use the lagged values of all right-hand side variables dated t-2 as instruments. Robust standard errors are reported in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$, respectively.

Thus, this study adds to the literature of political connections and financial markets that providing political rents to politically-connected firms is not limited to state-owned banks, but also, to private banks which can have a political role when they have politicians on their boards.

In Jordan, banks with politicians on boards of directors are more likely to build a strong relationship with politically-connected firms than non-connected firms. This notion is especially possible in Jordan because of the fundamental role of favouritism in both the business and the political arenas. Politicians in Jordan can exchange benefits in different ways, including helping a businessperson to enter politics, find employment, or obtain government contracts. Similarly, financial support can be provided by banks to politically-connected firms.

4.4.3   The strength of political connections

Table 4.6 shows the results of the interaction terms between cash-flow and a dummy variable indicating the strength of political connections. As previously mentioned, we split the political connections into strong and weak links based on the position of the politicians to whom a firm is related. A relationship is considered strong if the government owns a stake of the voting shares or if the firm is connected through a Minister or Prime Minister. However, the relationship is considered weak if the firm is linked to a Member of Parliament or a close relative of a leading politician. Results of Table 4.6 provide evidence that stronger connections can mitigate financing constraints more than weaker links, as we find a significant effect for Government and Minister or Prime Minister in alleviating financial constraints. The significant impact of government in reducing financial constraints is consistent with the finding of Cull et al. (2015) who find that Chinese firms with strong connections with the government are less financially-constrained.

Moreover, an interesting finding here is the highly significant impact that ministers and prime ministers have in helping firms to mitigate financial frictions. This result reflects the strength of politicians in these positions in affecting the ability of companies to reduce their investment cash-flow sensitivity. We conjecture that this result is because these two official positions are the most powerful political positions in Jordan. Also, the possibility of the return of any of them to power is very

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high in Jordan, which means the continuation of their ability to provide services to companies to which they are linked.

Table 4.6: The strength of political connections

VARIABLES	$\left(\frac{I}{K}\right)$	$\left(\frac{I}{K}\right)$	$\left(\frac{I}{K}\right)$	$\left(\frac{I}{K}\right)$
$\left(\frac{CF}{K}\right)_{t-1} * Government$	-0.219* (0.131)			
$\left(\frac{CF}{K}\right)_{t-1} * $ Minister/Prime Minister		-0.367*** (0.120)		
$\left(\frac{CF}{K}\right)_{t-1} * MP$			-0.0166 (0.351)	
$\left(\frac{CF}{K}\right)_{t-1} * Relation$				0.00449 (0.102)
$\left(\frac{I}{K}\right)_{t-1}$	0.229** (0.0963)	0.268** (0.131)	0.208** (0.0958)	0.183* (0.100)
$\left(\frac{CF}{K}\right)_{t-1}$	0.260*** (0.0721)	0.296*** (0.0680)	0.256*** (0.0673)	0.275*** (0.0642)
$\left(\frac{S}{K}\right)_{t-1}$	0.256*** (0.0621)	0.230*** (0.0650)	0.257*** (0.0661)	0.251*** (0.0512)
$\left(\frac{I}{K}\right)^2_{t-1}$	-0.0427* (0.0244)	-0.0651** (0.0289)	-0.0436* (0.0260)	-0.0447* (0.0252)
Constant	0.343 (0.636)	0.142 (1.297)	0.711 (0.659)	0.656 (0.609)
Observations	1,125	1,125	1,125	1,125
Number of Firms	131	131	131	131
Sargan (p-value)	0.2138	0.1953	0.2358	0.1462
AR1 (P-value)	0.0002	0.0002	0.0003	0.0001
AR2 (P-value)	0.1088	0.3361	0.1510	0.1329

Please see Table 4.1 for variables definition. Sargan test statistic is the test of overidentifying restrictions, under the assumption of instrument validity. AR1 is a test for the first order serial correlation. AR2 tests for the second order serial correlation. We use the lagged values of all right-hand side variables dated t-2 as instruments. Robust standard errors are reported in parentheses.*** p<0.01, ** p<0.05, * p<0.1, respectively.

4.4.4 Political connections and financial constraints before and after 2008

As was pointed out, one of the objectives of this study is to investigate the impact of the establishment of the Anti-Corruption Commission and the issuance of banks' corporate governance code besides two successive shocks which occurred and had an effect on Jordan after 2008, namely the Global Financial Crisis and the Arab Uprising. Accordingly, to investigate the impact of these changes, we undertook the

analysis in two phases, the first one between 2000 and 2007 and the second one between 2008 and 2014.

4.4.4.1 Political connections and financial constraints before 2008

Table 4.7 shows the results for the baseline model, the impact of political connections, and the impact of political connection strength on firms' financial constraints for the period 2000 – 2007.

Table 4.7: The impact of political connections and strength of political connections (2000 - 2007)

VARIABLES	(1) $\left(\frac{I}{K}\right)$	(2) $\left(\frac{I}{K}\right)$	(3) $\left(\frac{I}{K}\right)$	(4) $\left(\frac{I}{K}\right)$	(5) $\left(\frac{I}{K}\right)$
$\left(\frac{CF}{K}\right)_{t-1} * POLCON$		-0.853*** (0.311)			
$\left(\frac{CF}{K}\right)_{t-1} * Government$			-1.507** (0.720)		
$\left(\frac{CF}{K}\right)_{t-1} * \text{Minister/Prime Minister}$				-0.374* (0.222)	
$\left(\frac{CF}{K}\right)_{t-1} * Relation$					0.230 (0.274)
$\left(\frac{I}{K}\right)_{t-1}$	-0.225 (0.336)	-0.0581 (0.234)	-0.117 (0.233)	-0.267 (0.259)	-0.214 (0.310)
$\left(\frac{CF}{K}\right)_{t-1}$	0.882*** (0.207)	0.695*** (0.267)	0.698** (0.300)	0.837*** (0.259)	0.784*** (0.214)
$\left(\frac{S}{K}\right)_{t-1}$	0.0598 (0.0871)	0.154 (0.129)	0.141 (0.118)	0.0847 (0.117)	0.0964 (0.0937)
$\left(\frac{I}{K}\right)_{t-1}^{2}$	-0.036 (0.047)	-0.005 (0.015)	-0.0012 (0.017)	-0.0154 (0.036)	-0.0156 (0.0397)
Constant	-2.041 (2.881)	1.821* (1.063)	1.531* (0.819)	2.034* (1.056)	1.014 (0.913)
Observations	317	316	316	316	316
Number of Firms	84	84	84	84	84
Sargan (P-value)	0.4314	0.5319	0.3187	0.2944	0.4948
AR1 (P-value)	0.0626	0.0679	0.0896	0.0900	0.0273
AR2 (P-value)	0.6196	0.8378	0.9086	0.6073	0.7062

Please see Table 4.1 for variables definition. Sargan test statistic is the test of overidentifying restrictions, under the assumption of instrument validity. AR1 is a test for the first order serial correlation. AR2 tests for the second order serial correlation. We use the lagged values of all right-hand side variables dated t-2 as instruments. Robust standard errors are reported in parentheses.*** p<0.01, ** p<0.05, * p<0.1, respectively.

Model 1 presents the results of the baseline Euler model. The highly significant coefficient of the cash-flow variable indicates that Jordanian firms are highly financially constrained during the period 2000 to 2007. This result supports the finding by Loewe et al. (2007) who state that access to finance is one of the main obstacles which face investors and firms in Jordan. However, the results of model 2 show that a company's political connections can significantly decrease the company's investment sensitivity to cash-flow. In other words, financing constraints can be alleviated by having politically-connected boards.

Regarding the role of the strength of political connections, results show that stronger connections mitigate financing constraints more than weaker connections, which are found to be insignificant in alleviating financial constraints during this period (2000 – 2007).

4.4.4.2 Political connections and financial constraints after 2008

In the second phase of the analysis, we investigate the effect of political connections and the strength of political connections on financial constraints during the period from 2008 to 2014. As discussed previously, in this period, the business climate in Jordan has been affected by two external shocks, namely, the Global Financial Crisis and the Arab Uprisings. Moreover, internally, the Anti-Corruption Commission has been established in Jordan in 2008 to combat corruption and the central bank of Jordan issued a new corporate governance code for banks.

Table 4.8 shows the results for the baseline model, the impact of political connections, and the impact of political-connection strength on firms' financial constraints. Result in model 1 shows that Jordanian firms are less financially-constrained during this period compared to the previous period. A possible explanation for this might be the expansionary policy applied by the central bank of Jordan to help firms and the economy in general to overcome any adverse impact of the global financial crisis.

More importantly, Results in Model 2 show that a firm's political connections are no longer important in alleviating a firm's financial constraints during the period from 2008 to 2014. This result may indicate that the events occurring after 2008 affected the ability of a company's political connections in mitigating financing constraints. Viewed in the light of the results in the first empirical chapter that firms

are still able to benefit from their political affiliates in the post-event period, we conjecture that the effect didn't come from the company's side, that is the establishment of the Anti-Corruption Commission, rather it is due to the initiation of the corporate governance code for Jordanian banks which plays a major role in limiting the ability of politicians on the boards of banks to benefit politically-connected firms and thus to enable them to reduce their dependence on internally-generated funds through facilitating access to funds from external sources. Finally, we can't find any evidence of the impact of the strength of political connections on financing constraints, as we find that all levels of relationships are insignificant in alleviating financing constraints.

Table 4.8: The impact of political connections and strength of political connections (2008 - 2014)

VARIABLES	(1) $\left(\frac{I}{K}\right)$	(2) $\left(\frac{I}{K}\right)$	(3) $\left(\frac{I}{K}\right)$	(4) $\left(\frac{I}{K}\right)$	(5) $\left(\frac{I}{K}\right)$
$\left(\frac{I}{K}\right)_{t-1}$	0.228 (0.405)	0.447 (0.403)	0.577 (0.575)	0.241 (0.307)	0.595 (0.392)
$\left(\frac{CF}{K}\right)_{t-1}$	0.342*** (0.0576)	0.357*** (0.101)	0.381*** (0.0816)	0.280*** (0.0732)	0.366*** (0.102)
$\left(\frac{S}{K}\right)_{t-1}$	0.0791* (0.0434)	0.113** (0.0514)	0.0818 (0.0624)	0.150* (0.0845)	0.116 (0.0766)
$\left(\frac{I}{K}\right)_{t-1}^{2}$	-0.000251 (0.0437)	-0.116 (0.0734)	-0.115 (0.104)	-0.00611 (0.0825)	-0.139* (0.0836)
$\left(\frac{CF}{K}\right)_{t-1} * POLCON$		-0.0160 (0.134)			
$\left(\frac{CF}{K}\right)_{t-1} * Government$			-0.0687 (0.592)		
$\left(\frac{CF}{K}\right)_{t-1} * $ Minister/Prime Minister				-1.707 (2.589)	
$\left(\frac{CF}{K}\right)_{t-1} * Relation$					-0.0648 (0.201)
Constant	1.300** (0.645)	1.364** (0.545)	2.133*** (0.747)	1.291 (0.993)	2.547** (1.130)
Observations	334	334	334	334	334
Number of Firms	85	85	85	85	85
Sargan (P-value)	0.4851	0.7238	0.4388	0.3818	0.4477
AR1 (P-value)	0.0000	0.0034	0.0048	0.0100	0.0193
AR2 (P-value)	0.1090	0.2441	0.3737	0.9688	0.4327

Please see Table 4.1 for variables definition. Sargan test statistic is the test of overidentifying restrictions, under the assumption of instrument validity. AR1 is a test for the first order serial correlation. AR2 tests for the second order serial correlation. We use the lagged values of all right-hand side variables dated t-2 as instruments. Robust standard errors are reported in parentheses.*** p<0.01, ** p<0.05, * p<0.1, respectively.

4.5 Conclusion

In this study, we investigate the relationship between firms' political connections and financial frictions. Employing a firm-level data set from Jordan, we use firms' connections through state-ownership, ministerial and/or prime ministerial connections, through members of parliament, and board members with blood-relations with a leading politician as proxies for firms' political connections. We empirically test whether those links affect the investment and financing conditions of publicly-listed firms in Jordan. We also examine whether the strength of political connections influences the level of firms' financing constraints. Finally, in a separate analysis, we investigate the impact of four major changes Jordan has witnessed during the period 2008 – 2014, namely, the establishment of the Anti-Corruption Commission, the Global Financial Crisis, the Arab Uprisings, and the issuance of the corporate governance code for Jordanian banks.

Our empirical findings of the whole sample show that Jordanian publicly-listed firms are financially-constrained as the cash-flow variable is significantly correlated with investment spending. Therefore, this study contributes to the literature to the extent that investment cash-flow sensitivity is still pronounced in emerging markets. Thereby, it is still a valid and reliable measure of financial constraints.

Moreover, we add to the literature of political connections and financial markets in that political connections drive the Jordanian capital markets. On the impact of the strength of political connections, we provide evidence that stronger political connections mitigate a firm's financial constraints more than weaker ones.

Additionally, our results show that neither firms' political connections nor the strength of political connections are important in alleviating firms' financing constraints. In this regard, we cannot conclude that this result is primarily due to the establishment of the Anti-Corruption Commission considering the results of the post-event analysis in the first empirical chapter of the thesis. However, it may be attributable to the issuance of the new corporate governance code for banks in Jordan which enhances the level of accountability of the banks' boards of directors, and which decreases their ability to assist politically-connected firms in obtaining easier access to bank loans.

The impact of firm's political connections on dividend policy: Evidence from Jordan

5.1 Introduction

The dividend puzzle has been a rich area for debate among researchers. Several studies investigated different determinants of firms' dividend policies around the world. For example, Attig *et al.* (2016) examined the impact of family control on a firm's dividend policy in an international setting. De Cesari and Ozkan (2015) discussed the impact of executive incentives on dividends in Europe. Furthermore, in another international study, Denis and Osobov (2008) explored the main firm characteristics that affect companies' dividend policies.

Although the determinants of a firm's dividend policy have been thoroughly investigated, there has been limited evidence on the impact of firms' political connections on dividend policy. Given the prevalence of politically-connected firms in developing countries (Faccio, 2010), examining the dividend policy of politically-connected firms can enhance our understanding of the value relevance of companies' political connections. Moreover, Boubakri *et al.* (2012) find that politically-connected firms enjoy cheaper access to equity capital as investors require a lower rate of return for investing in such companies. In their study, they state that the benefits of investing in politically-connected firms outweigh the expropriation costs. This finding can lead to the following question, 'what are these benefits?' Although this study does not promise to provide a full explanation of the benefits that investors can obtain from investing in politically-connected firms, it will shed light on an important source of income, i.e. dividends for investors in the financial markets.

A study by Su *et al.* (2014) on the relationship between political connections and dividends attempts to test the signalling theory in China. They find a positive effect for political connections on dividends, supporting the signalling theory that states that firms use dividends as a signal for their strong future cash-flow.

However, besides the fact that the study of Su *et al.* (2014) depends on China's specific conditions, our study is different from them in four ways. First, we argue that politically connected firms use dividends to mitigate agency costs rather than signalling their future earnings. More specifically, this study attempts to explore

whether politically-connected firms in Jordan use dividends as a substitute for the low quality of corporate governance and high agency problems (the substitute hypothesis) in addition to the problem of the information asymmetry.

Second, this study examines the impact of the strength of political connections on the dividends since different levels of political connections may affect a firm's dividend decision differently. For example, assuming that firms connected to stronger political affiliates have poorer corporate governance and higher agency costs than firms connected to weaker political affiliates, the substitute model suggests that the former should pay more dividends. Furthermore, building on the assumption that firms with stronger political connections have more severe information asymmetry problems, we would expect these firms to pay more in dividends than firms with weaker political ties to reduce information asymmetry.

Third, this study examines the impact of three events which occurred after 2008, namely, the Global Financial Crisis, the Arab Uprisings, and the adoption of International Financial Reporting Standards (IFRS) by Jordanian publicly-listed firms and how these impacted on the relationship between a firm's political connections and its dividends. The first two events affected the profitability of non-financial firms negatively as government reports revealed that the percentage of companies that reported losses increased to 48% of the listed firms in the Amman Stock Exchange in 2011, compared to 16% in 2007. Consequently, if we consider the fact that Jordanian company law prohibits companies from paying dividends if they report losses or have cumulative losses from the previous year, we expect that these events will have an impact on the firms' dividend policies in general and on the relationship between political connections and dividends in particular. Furthermore, the adoption of IFRS may lessen the need for dividends to reduce the information asymmetry.

To have a clear view of the effect of these events on firms' dividend decision, Figure 5.1 below shows the dividends those firms paying and those not paying in our sample. The figure reveals the gap between the number of dividend-paying and non-paying firms after 2008 which indicates that the events affected their dividend policy.

Figure 5.1: Dividends paying and non-paying Firms

Full Sample dividend paying and nonpaying firms
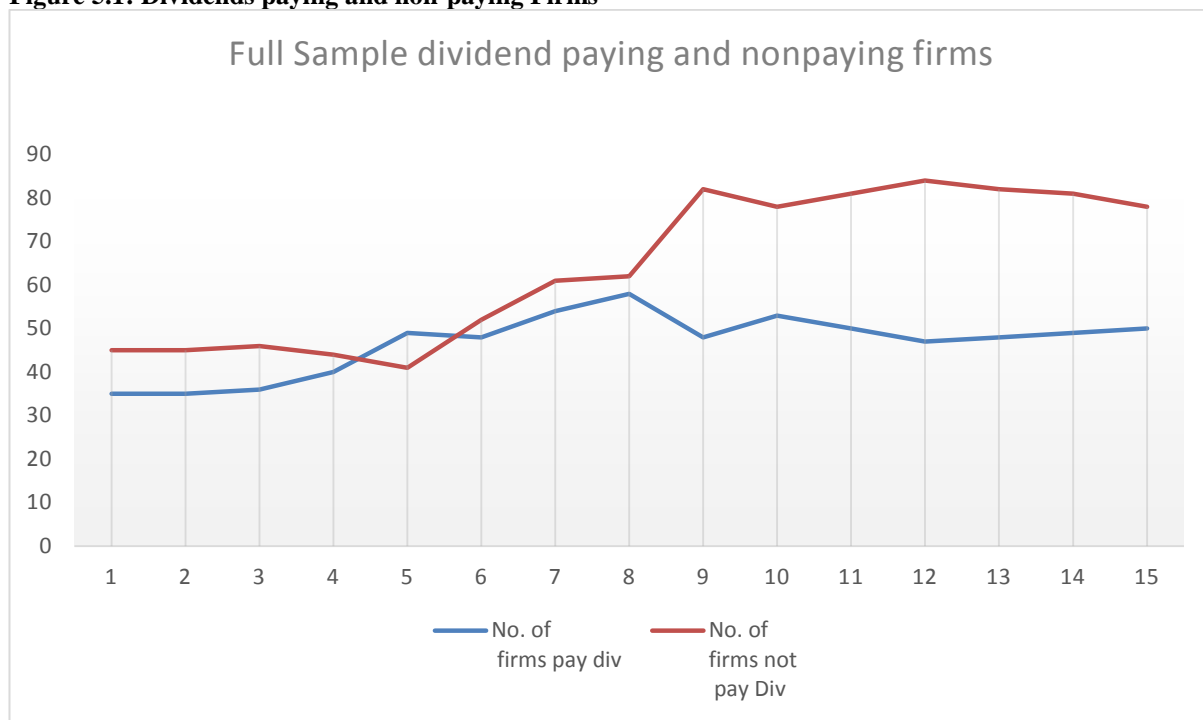
Source: author calculation

Fourth, Su *et al.* (2014) in their univariate analysis find that politically-connected firms have significantly higher ratios of return on assets (ROA) and earnings per share as measures of profitability. Moreover, they find that politically-connected firms have higher amounts of cash-flow, which raises a doubt that their results are driven by firm-level characteristics rather than political connections. In other words, they fail to isolate the impact of firms' political connections from the impact of firm characteristics. In this study, we use the Propensity-Score Matching (PSM) to overcome this issue.

To sum up, this study attempts to answer the following questions: Do firm political connections affect dividend policy? Does the strength of political connections matter in terms of dividend policy? Do the Global Financial Crisis, the Arab Uprisings, and the adoption of IFRS affect the relationship between political connections and dividends?

We use a sample of Jordanian publicly-listed firms to address our research questions. We find evidence that both the propensity to pay dividends and the dividend level are significantly positively-related to a firm's political connections. A possible explanation for this might be that politically-connected firms use dividends as a substitute for poor corporate governance and high agency costs, supporting the

predictions of the substitute hypothesis. Another possible explanation for this finding is that these firms use dividends to reduce the information asymmetry problem. Our results are robust for different methods, as we use PSM to isolate the effect of firms' political connections from the impact of firm-level characteristics and the results of the matched sample confirm our primary results.

However, regarding the strength of political connections, we find that firms with weaker political ties pay higher dividends than companies with stronger ties, which is inconsistent with our argument. We conjecture that the reason behind this result is the ability of firms with stronger political ties to have easier and cheaper access to bank loans, even when they have high information asymmetry (Chaney, Faccio and Parsley, 2011). Therefore, such firms will have less incentive to use dividends to build a good reputation in the stock market and less incentive to reduce information asymmetry problems.

Also, our results show that the effect of firms' political connections on dividends has vanished during the post-events period compared to the pre-events one. We expect that this result might be driven by the impact of the adoption IFRS which reduces the need for dividends to decrease the problem of information asymmetry. Alternatively, this finding could be due to the adverse effect of the Global Financial Crisis and the Arab Uprisings which hit the profitability of Jordanian non-financial firms adversely, and this may explain why we find profitability to be the only significant determinant of a firm's dividend decision during the post-event period (2008 – 2014).

Finally, the findings of this study are of high importance for investors to help them efficiently allocate their investments. Moreover, firms' managers can benefit from these conclusions in shaping their dividend policies.

The remainder of this chapter proceeds as follows. Section 2 reviews the literature and hypotheses development. Section 3 describes the methodology and estimation framework used in this study. Section 4 presents the empirical results. Finally, in Section 5 we present the main conclusions of this chapter.

5.2 Literature review and hypotheses development

5.2.1 Dividend theories

Since the seminal work of Miller and Modigliani (1961), financial economists have established different theories to explain the dividend puzzle. In this section, we will briefly review these theories.

5.2.1.1 Dividend irrelevance theorem

This theorem states that, under the assumptions of perfect capital markets, rational investors, and perfect certainty, the dividend policy of a firm will not have an impact on either share price or the cost of capital. Therefore, the dividend policy will be irrelevant to the firm value (Miller and Modigliani, 1961). However, the underlying assumptions of this theorem are unlikely to hold in the real world, and if any of these assumptions is violated, then it can be said that dividend policy and firm value are no longer independent as the former will have an impact on the latter. The empirical evidence makes it clear that dividends affect firm valuation (Bernhardt, Douglas and Robertson, 2005).

5.2.1.2 Signalling theory

Under the assumption that managers hold more information about their companies than investors, this theory suggests that dividends can be an instrument through which managers deliver information to the market participants about the firm's future earnings (John and Williams, 1985; Bhattacharya, 1979). Previous studies have addressed this theory by focusing on two factors; the first factor is the stock market reaction to dividends and the second factor is the dividends and future earnings relationship. Regarding the first factor, several studies show that dividend increase (decrease) is associated with an increase (decrease) in stock prices which is in line with this theory (Dong, Robinson and Veld, 2005; Allen, Bernardo and Welch, 2000; Fama and French, 1998). This association may explain why managers avoid cutting dividends (stickiness of dividends). Moreover, Lintner (1956) states that firms' managers adjust their dividends towards a target payout ratio in a gradual and smooth manner to avoid significant dividends swings that may lead to an adverse reaction from shareholders.

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Regarding the second factor, however, the literature shows mixed evidence on the relationship between dividends and future earnings. Nissim and Ziv (2001), Aharony and Dotan (1994), and Brickley (1983) find evidence supporting the theory. For instance, Nissim and Ziv (2001) find that dividend changes provide information to the market about the future profitability of the firm. Furthermore, they conclude that there is a positive relationship between dividend changes and future earnings variations in the two years subsequent to the dividend changes. Conversely, Li and Zhao (2008) Benartzi, Michaely and Thaler (1997), and DeAngelo, DeAngelo and Skinner (1996) find no support for the signalling theory. These studies find no evidence of the ability of dividends to predict a firm's future earnings. Moreover, Li and Zhao (2008) find that firms with less information asymmetry pay out greater dividends, which is against the signalling theory.

5.2.1.3 Agency Costs Theory

Agency problems arise due to the separation of ownership, where a conflict of interest between managers (agent) and shareholders (principals) arises (Jensen and Meckling, 1976). According to this theory, managers will try to exploit the free cash-flow available to advance their personal interests rather than maximising shareholders' wealth. This can be by investing the free cash-flow beyond the optimal investment targeted by the firm (overinvestment). Jensen (1986) states that firms with higher amounts of free cash-flow experience severe agency problems between managers and shareholders.

Therefore, dividends paid to shareholders can be an important tool through which these problems can be eliminated, as paying cash dividends will reduce the amount of cash flow available to managers (Easterbrook, 1984). Several studies find support for the significance of the agency theory in determining corporate dividend policy (See, e.g., Rozeff, 1982; Dempsey and Laber, 1992).

Furthermore, La Porta et al. (2000) suggest two models to explain dividend policy in emerging markets: the substitute model and the outcome model. According to the substitute model, managers can use dividends to build a positive reputation in the market, which enables them to obtain favourable treatment by investors when they need to raise equity-capital in the future. Based on this explanation we can

understand that dividends may act as a substitute for poor corporate governance and high agency problems.

On the other hand, the outcome model suggests that dividends occur as an outcome of the effective pressure exerted by minority shareholders to force insiders to disgorge cash from the firm. Therefore, one would expect that firms with strong governance would pay higher dividends. Supporting the outcome model, La Porta et al. (2000) find that companies operating in countries with stronger shareholder-protection pay higher dividends than firms in countries with weak investor-protection.

5.2.1.4 The life-cycle theory

According to this theory, the company goes through three key stages during its life, namely, an early stage, a growth stage, and a maturity stage. The theory suggests that in each of these stages, the company's ability to obtain external finance, its resources, and its investment opportunities will vary (Mueller, 1972). For instance, the early stage is characterised by limited initial resources which will lead the firm to exploit most, probably all, of these resources to build itself. In the growth stage, the firm attempts to exploit the market potential and expand its customer base. Finally, in the later stage, which is the maturity stage, the company will experience a decline, possibly disappearance, of investment opportunities.

In light of the example mentioned above, we can see that the stage in which the firm operates will have an impact on the managers' dividend decision. In the first two stages (i.e. early and growth stages), we expect that companies tend to pay no or lower dividends because they need to exploit the retained cash to meet the problems and requirements associated with these stages. However, in the later stage, since attractive investment opportunities are more likely to disappear or at least to decline, firms in this stage are more likely to have accumulated cash-flow. Thus, firms' tendency to pay this cash to the shareholders increases. Evidence in line with the life-cycle theory can be found in DeAngelo, DeAngelo and Stulz (2006), Grullon and Michaely (2002), and Fama and French (2001). For example, DeAngelo, DeAngelo and Stulz (2006) use the ratio of retained earnings to total equity to proxy the firm life-cycle stage and find that firms with higher ratios of retained earnings to total equity (mature firms) have a greater tendency to pay dividends.

5.2.1.5 Catering theory of dividends

This theory is developed by Baker and Wurgler (2004), and it argues that managers' dividend decision depends on investors' demand for dividends. For instance, Managers cater to investors by paying dividends when those investors place a premium on the stocks of dividends-paying firms and omit dividends when those investors prefer non dividend-paying firms. By using a sample from 1962 to 2000, they find support for the catering theory against other theories of dividends, as they find a positive effect for the dividend premium (the proxy for investor demand for dividend payers) over the managers' instigation of dividends. They also find that managers tend to omit dividends when investors prefer firms to be non-paying.

Li and Lie (2006) extended the model of Baker and Wurgler (2004) by incorporating decreases and increases in existing dividends and find supportive evidence for the catering theory. Li and Lie (2006) find that when investors place a premium on dividend-paying stocks, managers' tendencies to raise dividends increases. In other words, investors demand for dividends have a positive impact on the manager's tendency to increase dividends. Also, they conclude that when the dividend premium is high, the magnitude of dividend increase is accordingly high. Furthermore, Hoberg and Prabhala (2009) find that dividend premium is positively-related to the propensity to pay dividends in the US during 1963 – 2004, which supports the catering theory. However, this effect disappears when controlling for risk (Hoberg and Prabhala, 2009). This latter finding suggests that risk is more important than the catering theory in explaining dividend policy. In the international setting, however, Von Eije and Megginson (2008) admit the irrelevance of the catering theory in the European Union. Similarly, Denis and Osobov (2008) investigate the catering theory in six developed countries (i.e. the US, the UK, Germany, Canada, Japan and France) and they support the agency cost model over the catering theory model.

5.2.2 Political connections and dividends

This section describes the link between firm's political connections and dividend policy.

Politically-connected firms are characterised by the presence of a politician or his relative on their boards of directors. Additionally, the company is politically-

connected if the government holds a stake of the firm's shares. Based on the predictions of the theories of dividend policy, the impact of a firm's political connections on dividend policy may take two scenarios.

On the one hand, the substitute hypothesis suggests that companies characterised by high agency problems tend to pay higher dividends. This tendency has its roots in the need for such firms to build a positive reputation, which can help them secure better-contracting terms when they raise capital in the financial markets (La Porta et al., 2000). In the same paper, La Porta et al. (2000) state that the need for dividends in building a reputation is the greatest in countries where the legal protection of shareholders is weak. In the context of firms' political connections, Fan, Wei and Xu (2011) demonstrate that firms under the stimulus of poor government will be more likely to have different governance patterns. For instance, in such an environment firms' managers will likely have greater incentive to build connections with politicians who can help these firms by different means, such as tax reduction, protection against laws and regulations, government contracts, and easier access to external finance. However, a negative consequence of firms' political connections is that politically-connected firms tend to have poor transparency and weak corporate governance (Fan, Wei and Xu, 2011). Also, Boubakri et al. (2012) admit this notion by stating that poor governance and higher agency problems arise as a result of the political affiliation of firms' managers, as this affiliation increases the possibility of wealth extraction by political affiliates at the expense of other stakeholders (i.e., tunnelling and self-dealing).

Another possible means by which political connections can affect the dividend policy is the problem information asymmetry. Von Eije and Megginson (2008) expressed the importance of the financial reporting frequency in reducing the information asymmetry. Moreover, according to Wood (2001), (as cited in Von Eije and Megginson (2008)), improving reporting quality diverts investor attention from dividends to earnings. Therefore, in such a case, dividends will not be as important for investors when making their investment decisions. This means that in the case of lower-quality disclosure, investors will focus more on dividends, which in turn leads firms with high information-asymmetry problems to pay higher dividends to reduce this problem.

Regarding the politically-connected firms, Chaney, Faccio and Parsley (2011) based on a sample of 4954 firms from 19 countries; find that these firms have poorer accounting-disclosure quality. Furthermore, Alfonso (2016) asserts the difficulty of forecasting the earnings of politically-connected firms. Collectively, these findings can lead to the idea that politically-connected firms have higher information asymmetry. Therefore, based on the above discussion, we posit our first hypothesis as follows,

H1a: Politically-connected firms are more likely to pay dividends than non-connected firms, *ceteris paribus*.
H1b: Politically-connected firms pay higher dividends than non-connected firms, *ceteris paribus*.

On the other hand, the outcome model suggests that in firms with weak corporate-governance, outside shareholders have less ability to force managers to pay dividends, thereby, keeping the cash in the company for expropriation purposes. Regarding politically-connected firms, they are characterised by poorer corporate-governance. For instance, Qian, Pan and Yeung (2011) maintain that the political affiliation of company management increases the incentives of this management for expropriation and rent-seeking of resources which will be at the expense of the other stakeholders (including outside shareholders). Consequently, politically-connected firms pay no or lower dividends, compared to their non-connected peers. Thus, based on this viewpoint, we posit an alternative hypothesis as follows:

H1c: Politically-connected firms are less likely to pay dividends than non-connected firms, *ceteris paribus*.

H1d: Politically-connected firms pay lower dividends than non-connected firms, *ceteris paribus*.

5.2.2.1   Strength of political connections and dividends

This part of the chapter moves on to describe, in greater detail, the relationship between political connections and dividends. In this part, we argue that the strength of political ties can affect the firm's dividend policy.

For instance, based on the argument of the substitute model, and if we assume that companies with stronger political connections have poorer corporate governance

than companies with weaker political ties, we would expect that companies with stronger ties should pay larger dividends compared to companies with weaker ties. Furthermore, drawing on the assumption that firms with stronger political ties will have more severe information asymmetry problems, we would expect that firms with stronger ties should pay more to reduce information asymmetry. Therefore, we posit our second hypothesis as follows:

H2: Firms with stronger political connections pay higher dividends than firms with weaker political connections, *ceteris paribus*.

5.2.2.2 Post-2008 period

One of the objectives of this study is to investigate the impact of the Global Financial Crisis, the Arab Uprisings, and the adoption the International Financial Reporting Standards (IFRS) by the Jordanian publicly-listed firms, especially on the relationship between firms' political connections and dividends. To achieve this objective, we divide the sample period into two sub-periods (2000-2007) and (2008-2014).

Government reports reveal that the Global Financial Crisis combined with the Arab Uprisings affected the profitability of Jordanian non-financial firms adversely, as the percentage of companies reporting losses peaked at 48% of listed firms on the Amman Stock Exchange in 2011 rising from 16% in 2007. Thus, viewed in light of the fact that Jordanian company law prohibits firms from paying dividends if they report losses or have a cumulative loss from the previous year, we would assume that these events will affect the relationship between political connections and dividends.

Moreover, building on the argument that firms may pay dividends to reduce information asymmetry, the firms' need to pay dividends might be smaller during the period 2008 – 2014, as companies started adopting the International Financial Reporting Standards (IFRS) which improved the information quality of firms (Ashbaugh and Pincus, 2001). Therefore, we posit our third hypothesis as follows:

H3: The relationship between political connections and dividends will be affected in the post-events period.

5.3 Methodology

5.3.1 Estimation Framework

In order to investigate the relationship between firm's political connections and corporate dividend policy, we specify the following regression model.

$$DIV_{it} = \alpha + \beta_1 POLCON_{i,t-1} + \beta_3 LEVERAGE_{i,t-1} + \beta_4 SIZE_{i,t-1} + \beta_7 CASH_{i,t-1} + \beta_5 GROWTH_{i,t-1} + \beta_2 ROA_{i,t-1} + \beta_6 RE/TE_{i,t-1} + \varepsilon_{it}$$
(5.1)

5.3.1.1 Dependent Variable

The dependent variable DIV_{it} (Dividend) takes two proxies for firm i at time t. Following Attig et al. (2016) and Ben-Nasr (2015), we use the dividend payout ratio as the first proxy for dividends. For the second proxy, we follow De Cesari and Ozkan (2015) and Von Eije and Megginson (2008) and use a dummy variable that equals 1 for dividend-paying firms and 0 for non-paying firms.

5.3.1.2 Firm's political connections

POLCON (a firm's political connections) is a dummy variable that is 1 if the firm is politically-connected, 0, otherwise. A company is considered politically-connected if the firm has at least one board member or chairman who has served as a former Member of Parliament, Minister, or Prime Minister. Moreover, if a close relative of a Member of Parliament, Minister, or Prime Minister is a board member or chairperson. Close relatives include father, mother, son, daughter, or cousin of a leading politician (Member of Parliament, Minister, or Prime Minister). This kind of relationship is easy to trace in Jordan because of the tribal system where members of the same family will have the same surname that cannot be used by others. Furthermore, if the government owns a stake of the company's shares, this firm is regarded as politically-connected. Finally, and exclusively in Jordan, firms that have at least one board member who is a representative of the Social Security Corporation are considered politically-connected companies as this unit is supervised by the government and is considered a government agency.

Table 5.1: Variables Definitions, Sources and expected signs

Variables	Definition	Source	Expected Sign
DIV_{it}	The ratio of cash dividends to net income before extraordinary items.	Company's Financial statement	
DIV Dummy	Dummy variable: 1 if the firm pays dividends and 0 otherwise.	Author's calculation	
POLCON	A dummy variable that takes the value of 1 if the firm is politically connected and 0 otherwise.	Company's Annual Reports and Board's Profile	?
Growth	One year total assets growth.	Author's calculation	-
Size	The natural log of the firm's total assets at the end of the year.	Author's calculation	+
Leverage	The ratio of firm's total liabilities to the book value of total assets.	Company's financial statements	-
Profitability	Net income before extraordinary items divided by total assets.	Company's financial statements	+
Cash	The ratio of Cash and short-term investments to total assets.	Author's calculation	+
RE/TE	The ratio of retained earnings to total equity.	Author's calculation	+
Government	A dummy variable that takes the value of 1 if the firm is connected through government-ownership and 0 otherwise.	Company's Annual Reports and government reports	?
Minister/Prime Minister	A dummy variable that takes the value of 1 if the firm is connected through a Minister/ Prime Minister and 0 otherwise.	Company's Annual Reports	?
MP	A dummy variable that takes the value of 1 if the firm is connected through a Member of Parliament and 0 otherwise.	Company's Annual Reports	?
Relation	A dummy variable that takes the value of 1 if the firm is connected to a board member who has a blood relationship with a leading politician and 0 otherwise.	Company's Annual Reports and Press	?

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5.3.1.3 Control Variables

Following the recent literature on corporate dividend policy (Attig et al., 2016; Ben-Nasr, 2015; De Cesari and Ozkan, 2015), we include a set of control variables that have an impact on the firm's dividend policy such as profitability, leverage, size, growth, cash and the ratio of retained earnings to total equity.

Profitability is measured as the ratio of net income, before extraordinary items, to firm total assets. Profitability is expected to be positively-related to dividends as firms with more profits are more able to distribute more cash to shareholders (Renneboog and Trojanowski, 2011; Von Eije and Megginson, 2008).

Leverage is measured as the ratio of firm's total liabilities to its total assets. The effect of leverage on dividends is expected to be negative due to the role that debt plays in mitigating agency costs, as leverage can be a substitute for payouts to shareholders (De Cesari and Ozkan, 2015; Von Eije and Megginson, 2008).

Size is measured as the natural logarithm of the firm's total assets, and it is expected to load positively on dividends. Fama and French (2001) find that larger firms pay greater dividends than smaller companies. The positive impact of firm-size on dividends originates from the fact that larger companies have easier and cheaper access to external finance (Aivazian, Booth and Cleary, 2003).

Growth is measured by a one-year growth in the firm's total assets. A negative impact of growth opportunities over dividends is expected. Firms with high growth opportunities will use internally-generated funds to finance their investments, instead of paying it to their shareholders and relying on more expensive, external finance. In other words, there will be a competition between a firm's investment policy and its dividend policy (Rozeff, 1982).

Cash is measured as the ratio of cash and short-term investments to total assets. Companies with more cash holdings are more able to pay dividends than companies with lower levels of cash holdings (Shao, Kwok and Guedhami, 2010). Thus, a positive effect for cash-holding on dividends is expected.

The ratio of retained earnings to total equity is included in the model to control for the life-cycle theory (DeAngelo, DeAngelo and Stulz, 2006). Firms with

greater retained earnings are expected to pay higher dividends. Therefore, a positive impact of the ratio of retained earnings to total equity on dividends is expected.

Furthermore, to control for the year and industry effects, we include the year and industry dummies in the estimations. Also, following De Cesari and Ozkan (2015), Renneboog and Trojanowski (2011), and Von Eije and Megginson (2008), we include lagged-values of all explanatory variables in the analysis to partially account for the potential endogeneity problem. Table 5.1 above provides the variables definitions, data sources, and expected signs.

5.3.2   Method of estimation

The purpose of this study is to investigate the impact of firms' political connections on the propensity to pay dividends in addition to the amount of dividends paid (payout ratio). Therefore, we employ two estimation methods, the Logit model and the Tobit model to test the hypotheses of the research.

5.3.2.1   Political Connections and the propensity to pay dividends

In order to test our first hypothesis, we follow the previous literature that relies on the Logit model to investigate the effect of various variables on the propensity to pay dividends (See, e.g., Brockman and Unlu, 2011; Jiraporn, Kim and Kim, 2011; Chay and Suh, 2009; Von Eije and Megginson, 2008). In a Logit model, the dependent variable has two possible outcomes as follow,

$$y = \begin{cases} 0 \\ 1 \end{cases}$$

In a binary-response model, the goal is to model the probability that one of two outcomes occurs. Therefore, when $y = 1$, the likelihood of the dependent variable y to occur is p_i and when $y = 0$, the likelihood for the outcome variable y not to occur is $1 - p_i$. Thus, if p_i depends on a set of explanatory variables, the simplest idea would be to let p_i be a linear function of these explanatory variables, say

$$p_i = x_i'\beta \tag{5.2}$$

Where, β is a vector of regression coefficients. Model (5.2) is often called the linear-probability model and is estimated using ordinary least squares (OLS). However, the

problem with this model is that the left-hand-side, p_i, has to be between 0 and 1, but the linear predictor $x_i'\beta$ can take any real value; this means that there is no guarantee that the predicted values will be in the correct range, unless one imposes complex restrictions on the coefficients.

A possible solution for the range-limits problem is transforming the probabilities into odds, where odd is the ratio of the likelihood of paying dividends p_i, to its compliment $1 - p_i$. After converting the probabilities to odds, we take the natural logarithm of the odd to obtain the following logit regression,

$$\ln\left(\frac{P_i}{1-P_i}\right) = x_i'\beta \tag{5.3}$$

Where the left-hand side of equation (5.3) is the Logit function that can vary between $-\infty$ and ∞ as p_i varies from 0 and 1. The coefficients on the explanatory variables represent a change in the log-odds or logits of paying dividends for a one-unit change in the independent variables.

Furthermore, we estimate the marginal effects at the means. These marginal effects help us measuring the change in the propensity to pay for a change in the independent variable, holding all other independent variables at their mean values. Attig et al. (2016) employed the fixed-effects logit model to investigate the impact of family-ownership on the probability of dividend-changes. Although the fixed-effect logit model can help controlling for any unobserved heterogeneity, it is not feasible for this study. This is because the primary independent variable (POLCON) does not vary much within the same firm, which may lead to losing many observations (more than 50% of the observations) due to the demeaning process that the fixed-effects logit model uses.

5.3.2.2 Political connections and dividends level

In this section, we review the method of estimation employed to examine the effect of a firm's political connections on the amount of dividends paid. Prior literature investigated the determinants of firm's dividend policy using different methods; these include GLS, Fixed effects, LSDV and Tobit. Regarding the GLS and LSDV methods, their disadvantage is their negligence of the non dividend-paying firms, which may lead to selection bias (Kim and Maddala, 1992). Moreover, Deshmukh (2003) states that ignoring the non dividend-paying companies may affect the

consistency of the parameters estimates. Therefore, these two methods are not appropriate to investigate our research hypotheses. Regarding the fixed-effects model, it helps us to overcome the problem of the unobserved heterogeneity by explaining the variation of the dependent variable about its mean, in terms of the variations of the independent variables about their means also. However, as mentioned in the previous section, the fixed-effect estimator is feasible in the presence of the time-variant variables. Thus, and due to the nature of our primary independent variable (POLCON) which does not vary much within the same firm, the fixed-effects model is not preferable.

Therefore, for the purpose of this study, we follow Deshmukh, Goel and Howe (2013) and De Cesari and Ozkan (2015) and use the Tobit model with a left-censoring at zero. This model is employed for two reasons, the first being the nature of the dependent variable. The dividend variable has a unique feature that is non-negativity, this means that its value can be either zero or positive but not less than zero (a censored dependent variable). The second reason behind using this method is that it allows firms with no dividends to enter the analysis which helps us to eliminate the selection bias which may come about from choosing only dividend-paying companies. Furthermore, the inclusion of non-paying companies increases the sample size. In addition, we perform the likelihood ratio test in all Tobit models to compare the panel Tobit model with the pooled Tobit. The results of the likelihood ratio test favour the Panel Tobit over the pooled Tobit. However, in the panel Tobit, we do not have the option to cluster the standard errors at the firm level. Thereby, for robustness, we re-estimate all Tobit models with pooled Tobit estimator, with robust standard errors clustered at the firm level[6].

The Tobit model is formed as follows:

$$\text{DIV}_{it}^* = \alpha + \beta_1 \text{POLCON}_{it-1} + \beta_3 \text{LEVERAGE}_{it-1} + \beta_4 \text{SIZE}_{it-1} + \beta_7 \text{CASH}_{it-1} + \beta_5 \text{GROWTH}_{it-1} +$$
$$\beta_2 \text{ROA}_{it-1} + \beta_6 \text{RE/TE}_{it-1} + \varepsilon_{it} \tag{5.4}$$

$$DIV_{it} = DIV_{it}^* \quad \text{for} \quad DIV_{it}^* > 0$$

$$DIV_{it} = 0 \qquad \text{for} \quad DIV_{it}^* \leq 0$$

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[6] Results will be explained based on the Panel Tobit analysis for the main model and the marginal-effects models.

It is important to note that the coefficients in Equation (5.4) measure the partial effects of the independent variables on the latent variable DIV_{it}^* that is $E(DIV_{it}^*|$independent variables). However, the purpose of this study is to measure the impact of the independent variables on the observed outcome, that is $E(DIV_{it}|DIV_{it} > 0$ independent variables), which means that for a given value of the independent variable, the expected value of DIV_{it} for the subsample where DIV_{it} is positive. Therefore, we compute the marginal effects at the means (MEMs) for the observed DIV_{it}.

5.3.3 Data and Sample Description

The initial sample for this study covers all non-financial firms on the Amman Stock Exchange for the period 2000 – 2014. We obtain the financial information from the website of the Amman Stock Exchange and the companies' annual financial reports. Regarding the data about boards, names of the boards of directors and chairpersons were obtained from the annual reports issued by firms. After obtaining the names, we identify the political-connectedness of boards by revising their profiles which are provided in the annual reports. The final sample consists of 131 non-financial firms with 1682 firm-year observations.

5.3.3.1 Descriptive statistics

Table 5.2 shows the descriptive statistics of the variables included in the estimation. The table indicates that Jordanian firms pay the equivalent of 32% of their income as cash dividends. The average value for the dummy variable identifying dividend-paying companies is 42%. Furthermore, the mean value of the political-connections dummy (POLCON) is 65% which indicates that the majority of firms in our sample are politically-connected. Finally, the table reports descriptive statistics for the firm-specific variables.

Table 5.2 Descriptive Statistics

	Payout	Dividends Dummy	POLCON	Leverage	Size	Cash	Growth	ROA	RE/TE
Mean	0.32	0.42	0.65	0.31	16.67	0.09	0.14	0.02	-0.08
Median	0.00	0.00	1.00	0.26	16.56	0.04	0.02	0.03	0.01
Std. Dev.	0.41	0.49	0.48	0.26	1.22	0.12	0.67	0.10	0.42

This table shows the descriptive statistics for the variables included in the estimation. Please see Table 5.1 for variables definitions.

5.3.3.2 Pairwise Correlations

Table 5.3 below shows the correlation matrix for the variables included in the analysis. The table shows that firms' Political Connections dummy is positively correlated with the dividends proxies. Similarly, ROA has a positive correlation with both dividends amount and the propensity to pay dividends, as firms with higher profitability can pay and maintain dividends payments. Moreover, firm size is positively-related to both dividends proxies, which indicates that larger companies are more capable of paying dividends as they have easier access to external finance than small firms. Besides, there is a positive correlation between firms' cash and dividends which highlights that companies with a higher level of cash holdings are more able to pay dividends compared to firms with lower levels of cash. However, Leverage has a negative correlation with the payout ratio which is as expected, as companies with high debt-ratios are less likely to pay dividends, also they tend to distribute lower amounts of dividends. Finally, the table also indicates that correlations are not high between independent variables, which mean that there is less concern for multicollinearity.

Table 5.3: Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Payout Ratio	1								
(2) dividends Dummy	**0.91**	1							
(3) POLCON	**0.16**	**0.20**	1						
(4) Leverage	**-0.12**	**-0.10**	**0.11**	1					
(5) Size	**0.17**	**0.19**	**0.18**	**0.18**	1				
(6) Cash	**0.17**	**0.17**	**0.13**	**-0.20**	**-0.07**	1			
(7) Growth	-0.02	-0.03	-0.02	-0.02	**0.08**	0.05	1		
(8) ROA	**0.38**	**0.42**	**0.13**	**-0.20**	**0.20**	**0.28**	0.05	1	
(9) RE/TE	**0.26**	**0.27**	**0.11**	**-0.24**	**0.23**	**0.12**	0.03	**0.51**	1

This table shows the correlation matrix between variables. For variables definitions, please see Table 5.1. Figures in bold indicate the significance at 1%.

5.4 Empirical results

5.4.1 Univariate Analysis

To further explore differences between politically-connected and non-connected firms, in Table 5.4 we examine differences in means. Table 5.4 shows that payout ratio is significantly higher for politically-connected companies (37%) than non-connected firms (22%). This result can be preliminary evidence for our hypothesis that politically-connected firms pay higher dividends than their non-connected

counterparts. Moreover, politically-connected firms have significantly a higher debt ratio, ROA, Cash, and RE/TE ratios compared to non-connected firms. However, politically-connected firms have fewer growth opportunities than non-connected firms.

Table 5.4: Univariate analysis

	POLCON=0 (1)	POLCON=1 (2)	Difference (3)= (2) - (1)	t-test
Payout	0.227	0.372	0.145	6.759***
Leverage	0.282	0.445	0.1629234	2.223**
Size	16.337	16.879	0.542	7.792***
Cash	0.078	0.108	0.029	3.969***
Growth	0.507	0.177	-0.330	-2.104**
ROA	0.009	0.038	0.029	2.233**
RE/TE	-0.144	-0.049	0.095	4.249***

This table shows the difference in means for the dependent variable and all explanatory variables between politically-connected and non-connected firms.

5.4.2 Multivariate Analysis

5.4.2.1 Political connections and the propensity to pay dividends

In Table 5.5, model 1 shows that the coefficient of firms' political connections (POLCON) is positive and significant. This result indicates that politically-connected firms are more likely to pay dividends than their non-connected peers, which supports our first hypothesis (H1a) that politically-connected firms have a higher tendency to pay dividends than their non-connected counterparts. A possible explanation for this might be that politically-connected firms use dividends as a substitute for poor corporate governance and high agency costs, supporting the predictions of the substitute hypothesis. Another possible explanation is that these firms use dividends to reduce the information asymmetry problem. Moreover, Boubakri et al. (2012) find that politically-connected firms obtain equity-financing at cheaper rates than non-connected firms and they state that the benefits of investing in politically-connected firms outweigh the expropriation costs. Therefore, our results provide a partial explanation of the benefits which investors can gain from investing in politically-connected firms. Also, the estimated marginal effects in model 2 show that amongst dividend-paying firms, the probability of paying dividends is higher in politically-connected firms by 14%, holding all other explanatory variables at their mean values.

Table 5.5: Political connections and the propensity to pay dividends

VARIABLES	Dividends dummy	Dividends dummy	Dividends dummy
	Panel Logit	Marginal Effects	PSM Sample
	(1)	(2)	(3)
$POLCON_{t-1}$	0.645**	0.141**	0.667**
	(0.261)	(0.058)	(0.303)
$LEVERAGE_{t-1}$	-0.635**	-0.139**	-0.704**
	(0.288)	(0.063)	(0.300)
$SIZE_{t-1}$	0.215*	0.047*	0.207*
	(0.116)	(0.025)	(0.125)
$CASH_{t-1}$	1.336*	0.292*	1.343*
	(0.733)	(0.161)	(0.809)
$GROWTH_{t-1}$	-0.0403	-0.009	-0.0365
	(0.0471)	(0.010)	(0.0513)
ROA_{t-1}	10.28***	2.246***	10.48***
	(1.402)	(0.328)	(1.569)
RE/TE_{t-1}	1.261**	0.275**	3.183***
	(0.518)	(0.111)	(0.780)
Constant	-6.562***		-6.543***
	(1.937)		(2.111)
Observations	1,392	1,392	1,215
Number of Firms	131	131	131
Year Effects	Yes		Yes
Industry Effects	Yes		Yes
Pseudo R2			
Prob >F			
Prob>Chi2	0.000		0.000
Log likelihood	-631.69		-539.53

This table reports the results of the panel Logit, marginal effects based on panel logit and the panel logit based on the matched sample. The dependent variable is the propensity to pay dividends. For variables definition, please see Table 5.1. All explanatory variables are lagged by one year. Variables are winsorized at the 1st and 99th percentiles. Standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

Regarding the control variables, all models show the expected signs for all variables. For instance, leverage is significantly negatively-related to the propensity to pay dividends, which is in line with Ben-Nasr (2015) and Von Eije and Megginson (2008). This adverse effect suggests that firms with high debt ratios are required to retain more cash to meet debt obligations, rather than paying dividends. Another explanation is that high debt ratios can mitigate agency costs and reduce the need to pay out cash dividends. Regarding the firm size, results show that it is positively and significantly related to the propensity to pay dividends. This finding is consistent with Fama and French (2001) and Attig et al. (2016) and supports the notion that larger firms have better market access, thus, they are more able to pay dividends. Also, in line with Ben-Nasr (2015), Von Eije and Megginson (2008), and De Cesari and Ozkan (2015), profitability is found to be positively and significantly related to firms' dividend decision, which is expected as more profitable companies have greater ability to pay dividends than less profitable firms. Finally, consistent with the

life-cycle theory, we find that companies with a higher ratio of retained earnings to total equity are more likely to pay dividends and it is consistent with Attig et al. (2016) and Chay and Suh (2009). Also, for robustness we present the results of the pooled logit model and the marginal effects at the means based on the pooled logit model in Table 7.1 in the Appendix and the results are consistent with the main panel logit results.

5.4.2.2 Political connections and dividends level

Turning now to the impact of firms' political connections on the level of dividends, Model 1 in Table 5.6 shows positive and significant influence for a firm's political connections on dividend levels. This significant effect implies that politically-connected firms pay higher dividends than non-connected firms, which supports our first hypothesis (H1b) that politically-connected firms pay higher amounts of dividends than their non-connected peers. This result is consistent with Su et al. (2014) who find that politically-connected firms pay higher dividends than their non-connected counterparts in China. Regarding the marginal effects, Model 2 in Table 5.6 shows that firms with politicians on boards predicted an increase in dividends by approximately 5%.

For robustness, Table 7.2 in the appendix shows the results of the pooled Tobit Model and the Marginal effects based on the Pooled Tobit Model. The table shows consistent results regarding the impact of firms' political connections on the payout ratio, which assure the robustness of our findings from the panel Tobit.

Furthermore, all control variables show the expected signs. For example, ROA, RE/TE, and CASH loads positively and significantly on the dividend levels, which shows that profitable firms, firms with higher ratios of retained earnings to total equity, and companies with higher cash levels pay more dividends than their counterparts. These findings are consistent with De Cesari and Ozkan (2015) and Ben-Nasr (2015). However, leverage is significantly negatively-related to the dividends amount, indicating that firms with high debt ratios pay lower dividends, which is in line with Von Eije and Megginson (2008).

Because politically-connected firms are fundamentally different from non-connected firms, (e.g., Table 5.4 shows that politically-connected firms are significantly larger, have higher ratios of Cash, ROA, and RE/TE, and also have

fewer growth opportunities compared to non-connected firms) one may doubt whether the positive relation between political connections and the propensity to pay dividends and the dividend level is driven by a company's political connections or other company characteristics. Therefore, we perform Propensity-Score Matching (PSM) to address this question. In doing so, we control for differences in the firm-specific characteristics between politically-connected and non-connected firms then estimate politically-connected firms' treatment effects. We start by running a Probit model of political connections on firm characteristics, as well as the year and industry effects. We then match each politically-connected firm to the non-connected firm with the closest score.

Table 5.6: Political connections and dividends level

VARIABLES	Payout Ratio	Payout Ratio	Payout Ratio
	Panel Tobit	Marginal Effects	PSM Sample
	(1)	(2)	(3)
$POLCON_{t-1}$	0.153**	0.047**	0.142*
	(0.0748)	(0.023)	(0.0821)
$LEVERAGE_{t-1}$	-0.322***	-0.099***	-0.360***
	(0.115)	(0.035)	(0.116)
$SIZE_{t-1}$	0.0218	0.007	0.0277
	(0.0343)	(0.011)	(0.0344)
$CASH_{t-1}$	0.533**	0.164**	0.465*
	(0.236)	(0.073)	(0.243)
$GROWTH_{t-1}$	-0.0374	-0.012	-0.0397
	(0.0361)	(0.011)	(0.0370)
ROA_{t-1}	2.188***	0.674***	2.308***
	(0.332)	(0.106)	(0.342)
RE/TE_{t-1}	0.852***	0.263***	0.857***
	(0.173)	(0.051)	(0.177)
Constant	-1.109*		-1.179**
	(0.573)		(0.579)
Observations	1,387	1,387	1,215
Number of Firms	131	131	131
Year Effects	Yes		Yes
Industry Effects	Yes		Yes
Pseudo R2			
Prob >F			
Prob>Chi2	0.000		0.000
Log likelihood	-932.40		-840.81

This table reports the results of the panel Tobit, marginal effects, and the panel Tobit based on the matched sample. The dependent variable is the payout ratio. For variables definition, please see Table 5.1. All explanatory variables are lagged by one year. Variables are winsorized at the 1st and 99th percentiles. Standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

The advantage of employing a matched sample is that politically-connected and non-connected firms are similar in terms of their characteristics included in the Probit model, which allows us to isolate the effect of a firm's political connections

on dividend payouts. The results, reported in Column (3) of Table 5.5 and Table 5.6, are consistent with our primary results. Specifically, political connections remain positively related to the propensity to pay dividends and to the payout ratio and are significant at the 5% and 10% level respectively.

5.4.2.3 Strength of Political connections and dividends level

The previous two sections have shown that firms' political connections affect their dividend decision. Also, it is important to ask which political connections level has the most impact on the company's dividend policy. Thus, this section investigates the relationship between dividend levels and each level of political connections separately, allowing us to explore which level of these connections has the most impact on the company's dividend decision.

Table 5.7: Strength of political connections and dividends level (Panel Tobit)

VARIABLES	Payout Ratio (1)	Payout Ratio (2)	Payout Ratio (3)	Payout Ratio (4)
$Government_{t-1}$	-0.0762 (0.0963)			
$Minister_{t-1}$		0.00987 (0.0774)		
MP_{t-1}			-0.115 (0.174)	
$Relation_{t-1}$				0.128** (0.0641)
$LEVERAGE_{t-1}$	-0.305*** (0.115)	-0.353** (0.137)	-0.301*** (0.115)	-0.287** (0.115)
$SIZE_{t-1}$	0.0325 (0.0347)	0.0383 (0.0402)	0.0285 (0.0346)	0.0307 (0.0344)
$CASH_{t-1}$	0.587** (0.236)	0.529** (0.244)	0.583** (0.236)	0.604** (0.236)
$GROWTH_{t-1}$	-0.0402 (0.0362)	-0.0358 (0.0430)	-0.0375 (0.0360)	-0.0384 (0.0360)
ROA_{t-1}	2.209*** (0.333)	2.507*** (0.393)	2.198*** (0.334)	2.175*** (0.334)
RE/TE_{t-1}	0.829*** (0.173)	0.962*** (0.203)	0.847*** (0.173)	0.850*** (0.174)
Constant	-1.204** (0.582)	-1.430** (0.674)	-1.141** (0.580)	-1.203** (0.577)
Observations	1,387	1,387	1,387	1,387
Number of Firms	131	131	131	131
Year Effects	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes
Prob>Chi2	0.000	0.000	0.000	0.000
Log likelihood	-934.15	-1000.57	-934.25	-932.47

This table reports the results of the panel Tobit for the effect of different levels of political connections. The dependent variable is the payout ratio. For variables definition, please see Table 5.1. All explanatory variables are lagged by one year. Variables are winsorized at the 1st and 99th percentiles. Standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

Panel Tobit results in Table 5.7 above reveal that connections through relationships (Relations) are the only level of connections which has an impact on the dividends amount, which is inconsistent with our second hypothesis (H2). This result is puzzling as it contradicts the argument of the substitute model and supports the argument of the outcome model. Similarly, this result is inconsistent with the information asymmetry argument, as firms with stronger political connections are supposed to pay more dividends to reduce the more severe information asymmetry problems. In this regard, our result supports Chaney, Faccio and Parsley (2011), who argue that firms with stronger ties do not need to improve their disclosure-quality to obtain external finance as they can use their strong links with banks' leaders to obtain bank loans, even if they have high information asymmetry. In other words, firms connected through stronger political affiliates have less incentive to reduce information asymmetry. This result may also raise doubt about tunnelling and expropriation by the stronger political affiliates (i.e. higher wage bills).

Table 5.8: Marginal Effects of the strength of political connections (Panel Tobit)

VARIABLES	Payout Ratio (1)	Payout Ratio (2)	Payout Ratio (3)	Payout Ratio (4)
$Government_{t-1}$	-0.023 (0.030)			
$Minister_{t-1}$		0.003 (0.023)		
MP_{t-1}			-0.035 (0.054)	
$Relation_{t-1}$				0.039** (0.020)
$LEVERAGE_{t-1}$	-0.094*** (0.035)	-0.103** (0.041)	-0.093*** (0.035)	-0.089** (0.035)
$SIZE_{t-1}$	0.010 (0.011)	0.012 (0.012)	0.009 (0.011)	0.009 (0.011)
$CASH_{t-1}$	0.181** (0.073)	0.159** (0.074)	0.179** (0.073)	0.186** (0.073)
$GROWTH_{t-1}$	-0.012 (0.011)	-0.011 (0.013)	-0.012 (0.011)	-0.012 (0.011)
ROA_{t-1}	0.681*** (0.106)	0.755*** (0.121)	0.677*** (0.106)	0.670*** (0.106)
RE/TE_{t-1}	0.255*** (0.051)	0.289*** (0.058)	0.261*** (0.051)	0.262*** (0.051)
Observations	1,387	1,387	1,387	1,387
Number of Firms	131	131	131	131

This table reports the marginal effects from Table 5.7. The dependent variable is Payout ratio. For the definition of variables, please see Table 5.1. All explanatory variables are lagged by one year. The variables are winsorized at the 1st and 99th percentiles. Standard errors are reported in the parentheses. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

Table 5.8 above shows the results of the marginal effects at the means based on the Panel Tobit. Results indicate that firms with weaker connections predict 4% higher dividends than other types of connections.

Finally, in the appendix, we include the results of the Pooled Tobit and the marginal effects based on the pooled Tobit in Table 7.3 and Table 7.4 respectively. Again, these tables show consistent results regarding the impact of the relation variable on the payout ratio.

5.4.2.1 Political connections and dividend policy before and after 2008

In this section, we divide the sample period into two sub-periods, (2000 - 2007) and (2008 – 2014). This sample split enables us to examine the impact of three events, the Global Financial Crisis, the Arab Uprisings, and the adoption of IFRS by Jordanian publicly-listed firms, which occurred during the period from 2008 to 2014 and their impact on the relationship between firms' political connections and dividends. As mentioned earlier, the first two events impacted the profitability of non-financial firms in Jordan. Our data reveals that the percentage of companies that reported losses peaked at 48% of the listed firms on the Amman Stock Exchange in 2011 from 16% in 2007, before decreasing to 39% in 2014, still more than double the figure in 2007. Viewed in the light of Jordanian company law prohibiting firms from paying dividends if they report losses, we would expect the characteristics that affect firms' dividend decision to change in the post-event period (2008 – 2014) compared to the pre-event period (2000 – 2007). Moreover, the adoption of IFRS may enhance the quality of financial information disclosed by firms which lessens the asymmetric information problem, and which in turn reduces the need for the payment of dividends to reduce this issue.

Table 5.9 presents the results for the impact of firms' political connections on dividends for the pre-event period (2000 – 2007). Panel Tobit results in Column 1 show that firms' political connections play a major role in determining their dividend policy. This result is robust to the use of the pooled Tobit with robust standard errors. Moreover, the marginal effects models for both panel and pooled Tobit assure the consistency of these results even after fixing all explanatory variables at their mean values.

Table 5.9: Political connections and dividends level (2000 – 2007)

VARIABLES	Payout Ratio	Payout Ratio	Payout Ratio	Payout Ratio
	Panel Tobit	Pooled Tobit	Marginal Effects Panel Tobit	Marginal Effects Pooled Tobit
	(1)	(2)	(3)	(4)
$POLCON_{t-1}$	0.304**	0.314**	0.114**	0.118**
	(0.145)	(0.149)	(0.054)	(0.055)
$LEVERAGE_{t-1}$	-0.886**	-0.743**	-0.332**	-0.279**
	(0.354)	(0.378)	(0.132)	(0.137)
$SIZE_{t-1}$	0.101*	0.0848	0.038*	0.032*
	(0.0533)	(0.0519)	(0.020)	(0.019)
$CASH_{t-1}$	0.322	0.173	0.121	0.065
	(0.393)	(0.283)	(0.147)	(0.106)
$GROWTH_{t-1}$	-0.310**	-0.344**	-0.116**	-0.129**
	(0.157)	(0.163)	(0.058)	(0.059)
ROA_{t-1}	1.910*	2.596**	0.715*	0.975**
	(1.036)	(1.044)	(0.387)	(0.400)
RE/TE_{t-1}	0.925**	0.992**	0.346**	0.373**
	(0.382)	(0.489)	(0.142)	(0.177)
Constant	-2.150**	-1.903**		
	(0.850)	(0.850)		
Observations	408	408	408	408
Number of Firms	85	85	85	85
Year Effects	Yes	Yes		
Industry effects	Yes	Yes		
Pseudo R2		0.12		
Prob >F		0.000		
Prob>Chi2	0.000			
Log likelihood	-384.00	-386.96		

This table reports the results of the panel Tobit, pooled Tobit, marginal effects for the pre-event period (2000 – 2007). The dependent variable is the payout ratio. For variables definition, please see Table 5.1. All explanatory variables are lagged by one year. Variables are winsorized at the 1st and 99th percentiles. Standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

Now turning to the main aim of this section, we estimate the panel Tobit, pooled Tobit and marginal effects over the post-event period (2008 – 2014). Results are presented in Table 5.10. Column 1 in Table 5.10 shows that the impact of firms' political connections has disappeared in the post-event period, which is consistent with our hypothesis that these events affect the relationship between companies' political connections and dividends. This result can be illustrated by the adverse effect of the Global Financial Crisis and the Arab Uprisings on the profitability of Jordanian non-financial firms bearing in mind the company law which allows companies to pay dividends only when profits are generated. Thus, if the firm reports losses, it will not be able to pay dividends, regardless of its political-connectedness, size or the amount of assets it holds. Another possible explanation is that this result is driven by the impact of the adoption of IFRS which reduces the need for dividends to decrease the problem of information asymmetry.

Table 5.10: Political connections and dividends level (2008 – 2014)

VARIABLES	Payout Ratio	Payout Ratio	Payout Ratio	Payout Ratio
	Panel Tobit	Pooled Tobit	Marginal Effects Panel Tobit	Marginal Effects Pooled Tobit
	(1)	(2)	(3)	(4)
$POLCON_{t-1}$	0.129	0.0666	0.035	0.018
	(0.190)	(0.174)	(0.051)	(0.048)
$LEVERAGE_{t-1}$	-0.0208	-0.0532*	-0.006	-0.015*
	(0.0513)	(0.0280)	(0.014)	(0.008)
$SIZE_{t-1}$	0.0327	0.00621	0.009	0.002
	(0.0618)	(0.0611)	(0.017)	(0.017)
$CASH_{t-1}$	0.405	-0.313	0.109	-0.086
	(0.577)	(0.462)	(0.155)	(0.128)
$GROWTH_{t-1}$	-0.235	-0.280	-0.063	-0.078
	(0.270)	(0.254)	(0.073)	(0.070)
ROA_{t-1}	6.559***	7.903***	1.767***	2.185***
	(1.184)	(1.146)	(0.309)	(0.275)
RE/TE_{t-1}	0.259	0.346**	0.070	0.096**
	(0.171)	(0.160)	(0.046)	(0.043)
Constant	-2.449**	-1.769		
	(1.153)	(1.164)		
Observations	414	414	414	414
Number of Firms	85	85	85	85
Year Effects	Yes	Yes		
Industry effects	Yes	Yes		
Prob>Chi2	0.000	0.000		
Log likelihood	-285.29	-221.37		

This table reports the results of the panel Tobit for the post-events period (2008 – 2014). The dependent variable is the payout ratio. For variables definition, please see Table 5.1. All explanatory variables are lagged by one year. Variables are winsorized at the 1st and 99th percentiles. Standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

5.5 Conclusion

In this study, we investigate the relationship between firms' political connections and their dividend policy. Using a firm-level data set for Jordan, we employ state-ownership and firms' boards of directors who have served as Ministers, Prime Ministers, members of parliament, and blood-relatives of leading politicians, as proxies for firms' political connectedness.

Our empirical findings of the whole sample show that political connections can influence a firm's dividend policy. These results can support the substitute hypothesis which states that companies use dividends as a substitute to offset poor corporate governance and high agency costs in order to enhance their reputation in the stock market. Moreover, these findings may support the argument that these firms use dividends to reduce the information asymmetry problem.

On the strength of political connections, we find that the influence of political connections on dividends is found to be primarily due to connections through

relatives of leading politicians who exert a real effect on dividends paid. For other types of political connections, there is a limited impact. This result is puzzling due to its inconsistency with our main argument (the substitute model) assuming that firms with stronger ties are supposed to have poorer corporate governance and higher information asymmetry costs, which means that they are meant to pay higher dividends to resolve these problems. However, we offer different explanations for this result: first is the fact that firms with stronger ties have less incentive to use dividends to reduce information asymmetry due to their ability to obtain easier and cheaper access to bank loans, even if they have high costs of information asymmetry. Second is the possibility of expropriation and self-dealing by politicians against outside investors.

Finally, our results show that the Global Financial Crisis, the Arab Uprisings, and the adoption of IFRS exerted an effect on the relationship between firms' political connections and their dividend policy, as the influence of political connectedness has disappeared in the post-event period. We conclude that this result might be driven by the impact of the adoption of IFRS which reduces the need for dividends to decrease the problem of information asymmetry. Alternatively, this finding could be due to the adverse effect of the Global Financial Crisis and the Arab Uprisings which hit the profitability of Jordanian non-financial firms adversely, and this may explain why we find profitability to be the only significant determinant of firms' dividend decision during the post-event period (2008 – 2014).

Finally, the findings of this study are of high importance to investors to help them allocate their resources to investments efficiently. Moreover, firms' managers can benefit from these conclusions in shaping their financial policy.

CHAPTER SIX

6.1 Concluding remarks

The relationship between politicians and firms is a major area of interest for research, especially in developing countries, where firms' political affiliations are more pronounced because of weak property rights and the presence of high levels of government intervention in these countries. Numerous studies have been carried out on the impact of political connections on the value of firms (see, e.g. Goldman, Rocholl and So, 2009; Bunkanwanicha and Wiwattanakantang, 2009; Li et al., 2008; Fan, Rui and Zhao, 2008; Fisman, 2001). Moreover, there are various means by which political connections can affect firm value. For instance, by being politically-connected, firms gain favourable treatment by government through tax deductions (Wu et al., 2012; Adhikari, Derashid and Zhang, 2006), by receiving government contracts (Goldman, Rocholl and So, 2009), or by securing key resources, such as easy access to debt financing (Fraser, Zhang and Derashid, 2006; Leuz and Oberholzer-Gee, 2006; Khwaja and Mian, 2005).

In spite of the tremendous number of studies on the effects of political connections on firm value, these are still unclear in the existing literature, where mixed evidence is provided, raising the need for further investigation to reconcile inconsistencies. Furthermore, there is limited evidence on the impact of firms' political connections on two important corporate-policies where political ties can have an impact, namely, on investment-policy and dividend-policy. Moreover, most recent studies about the influence of firms' political connections on firms cover the period before 2008. Therefore, this thesis contributes to the literature by including three empirical studies to fill these gaps. Specifically, we have investigated the impact of political connections on firm value, on the investment cash-flow sensitivity, and on dividend-policy. Throughout this thesis, we have employed several econometric approaches including univariate and multivariate analyses, OLS, Heckman Two-step treatment effects model, dynamic panel data models, Logit and Tobit analyses. Below we provide an outline of the thesis.

Chapter 3 contributes to the literature by filling the gap which arises from the lack of studies about the effect of political connections on firm value in the Middle East North Africa (MENA) region, in general, and in Jordan, in particular.

The second contribution in this chapter is controlling for the economic conditions. Furthermore, this chapter contributes to the literature by examining the impact of a major event, the establishment of the Anti-Corruption Commission (ACC), and two successive major shocks, namely, the Global Financial Crisis, and the Arab Uprisings.

Findings in chapter 3 reveal that politically-connected firms experience higher market-values compared to non-connected firms. Also, results show that firms connected through stronger political ties have significantly higher market-values than firms connected through weaker political connections. Moreover, we observe that political connections are still important in enhancing firm value even after controlling for the economic conditions. Finally, we find that political connections, in general, and connections through government, in particular, still exert a positive and significant effect on firm valuations during the post-events period. This result indicates that the events which occurred after 2008 have no significant impact on the relationship between firms' political connections and their value.

The findings of chapter 3 have important implications for policy-makers, firms' managers and their investors. These findings give an in-depth insight for investors and managers into the consequences of building political connections. Managers can recognise the importance of having politicians on their boards of directors in order to enjoy higher market-values compared to firms without such boards. Similarly, findings in this chapter can help investors to allocate their investment capital more efficiently. The last important implication drawn from our findings is that the Anti-Corruption Commission should be completely independent in terms of its decision-making so that it can perform its duties efficiently and without bias.

Chapter 4 investigates the effect of firms' political connections in alleviating their financing-constraints. Recent literature has examined the impact of government and political connections on firms' financing-constraints in countries where state-owned banks dominate (see, e.g., Cull *et al.*, 2015; Shen and Lin, 2016). Therefore, this chapter provides the first evidence about the impact of firms' political-ties on financial restrictions in a context where the banking system is owned by the private sector.

Results of this chapter show that Jordanian firms are financially-constrained. Furthermore, findings reveal that firms' political connections play an important role in alleviating financing-constraints, as evidence reveals that politically-connected firms are less constrained than non-connected firms. Besides, firms connected through stronger ties are found to be less constrained than firms connected through weaker political ties. Results from the post-events period show that Jordanian listed firms are still financially-constrained, though to a lesser degree when compared to the pre-events period. Furthermore, the important finding of the post-events analysis is the absence of impact of political connections in mitigating the sensitivity of investment to cash-flow for firms to which they are related. This result may be due to the issuance of the Corporate Governance Code for Jordanian banks at the end of 2007.

Results of this study are of major importance for policy-makers regarding the capital-allocation process, especially for financially-constrained firms. The policy planners should be aware of this point to avoid any misallocation of credit. These findings are also important for firms' managers in order to appropriately design their investment policy.

Chapter 5 provides empirical evidence of the relationship between firms' political connections and the dividend policy of Jordanian publicly-listed firms. It also explores how the strength of political connections affects firms' dividends, together with the impact of three major events which occurred after 2008, namely, the Global Financial Crisis, the Arab Uprisings, and the adoption of IFRS by Jordanian listed-firms. These events are likely to affect the dividend-policy decisions of Jordanian publicly-listed firms.

The findings of the fifth chapter show a positive and significant impact for firms' political connections on dividend policy. These findings may support the argument of the substitute hypothesis that firms with poorer corporate governance and higher agency costs should pay out greater dividends in order to build good reputation in the stock market. Alternatively, these findings may support the argument in favour of information-asymmetry, where these firms reduce information-asymmetry by paying out dividends.

However, regarding the strength of political connections, our findings are inconsistent with our argument, as we find that firms connected through weaker political-ties pay higher dividends than firms having stronger political-ties. The reason behind this result is probably the ability of firms with stronger political-ties to have more favourable access to bank loans, even when they have high information-asymmetry (Chaney, Faccio and Parsley, 2011). This may lead these firms to have less incentive to build better investor reputations in the stock market and less incentive to reduce information-asymmetry problems, as opposed to the firms with weaker political connections.

Finally, our findings show that our results are significantly different during the period 2008 – 2014 compared to 2000 to 2007 period. They reveal that the positive impact of political connections during the pre-events period (2000 – 2007) seems to have ceased in the post-events period (2008 – 2014). There are two possible explanations: The first is the impact of the adoption of the IFRS which increases the quality of information provided by firms, which in turn decreases the dependence on dividends to decrease the information-asymmetry problem. The second explanation is the adverse effect of the Global Financial Crisis followed by the Arab Uprisings on the profitability of Jordanian listed-firms. This adverse effect, along with Jordanian company law, may affect the dividends paid by these firms.

The findings of chapter 5 also present important policy implications for investors who are looking for the efficient allocation for their investment capital. Moreover, these findings are likely to contribute to shaping firms' financial policies by their managers.

To sum up, the wide-spread rent-seeking behaviour of firms leads to a resource misallocation and therefore, constraints the development of the economy. Furthermore, unfairness in treating firms by governments causes an inefficiency in the economy in general and in the financial market because the unfair treatment to the companies that don't have political connections may adversely affect its role in boosting the economy. Therefore, governments should aim at improvements in regulations, finance and governance. The later can be improved by enhancing the government credibility, reforming the market regulations, strengthen the rule of law and more importantly controlling corruption.

6.2   Research limitations and future research

The main limitation for this work is the availability of data about boards of directors, especially for the period before 2008, where firms do not include any profiles for boards, making it difficult to map those boards to identify their status in terms of political-connectedness. Another limitation is the lack of data about the quality of corporate governance, which makes it impossible to empirically investigate the impact of firms' political connections on the quality of corporate governance.

This thesis paves the way for further future work and development in different ways. For instance, one can consider a new measure of the strength of political connections by considering the percentage of politically-connected boards in the firm's board room. Furthermore, an empirical investigation is needed for the impact of politically-connected boards on the board governance characteristics such as Attendance behaviour, committee assignments, and directors' pay.

Appendix

Table 7.1: Political connections and the propensity to pay dividends (Pooled Logit)

VARIABLES	Dividends dummy	Dividends dummy
	Pooled Logit	Marginal Effects
	(1)	(2)
$POLCON_{t-1}$	0.737***	0.171***
	(0.238)	(0.055)
$LEVERAGE_{t-1}$	-1.536**	-0.356**
	(0.651)	(0.150)
$SIZE_{t-1}$	0.294**	0.068**
	(0.123)	(0.029)
$CASH_{t-1}$	0.607	0.140
	(0.573)	(0.133)
$GROWTH_{t-1}$	-0.0501*	-0.012*
	(0.0299)	(0.007)
ROA_{t-1}	11.09***	2.568***
	(2.511)	(0.596)
RE/TE_{t-1}	1.560*	0.361**
	(0.818)	(0.184)
Constant	-7.018***	
	(2.069)	
Observations	1,392	1,392
Number of Firms	131	131
Year Effects	Yes	
Industry Effects	Yes	
Pseudo R2	0.27	
Prob >F	0.000	
Log likelihood	-695.93	

This table reports the results of the pooled Logit and marginal effects based on the pooled logit model. The dependent variable is the propensity to pay dividends. For variables definition, please see Table 5.1. All explanatory variables are lagged by one year. Variables are winsorized at the 1st and 99th percentiles. Robust standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

Table 7.2: Political connections and dividends level (pooled Tobit)

VARIABLES	Payout Ratio	Payout Ratio
	Pooled Tobit	Marginal Effects
	(1)	(2)
$POLCON_{t-1}$	0.226**	0.071**
	(0.0929)	(0.029)
$LEVERAGE_{t-1}$	-0.462***	-0.146***
	(0.171)	(0.053)
$SIZE_{t-1}$	0.0553	0.017
	(0.0395)	(0.013)
$CASH_{t-1}$	0.174	0.055
	(0.251)	(0.079)
$GROWTH_{t-1}$	-0.0733*	-0.023*
	(0.0403)	(0.013)
ROA_{t-1}	3.032***	0.958***
	(0.452)	(0.135)
RE/TE_{t-1}	0.888***	0.280***
	(0.217)	(0.065)
Constant	-1.568**	
	(0.657)	
Observations	1,387	1,387
Number of Firms	131	131
Year Effects	Yes	
Industry Effects	Yes	
Pseudo R2	0.19	
Prob >F	0.000	
Prob>Chi2		
Log likelihood	-1027.80	

This table reports the results of the pooled Tobit and marginal effects based on the pooled Tobit. The dependent variable is the payout ratio. For variables definition, please see Table 5.1. All explanatory variables are lagged by one year. Variables are winsorized at the 1st and 99th percentiles. Standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

Table 7.3: Strength of political connections and dividends level (Pooled Tobit)

VARIABLES	Payout Ratio	Payout Ratio	Payout Ratio	Payout Ratio
	(1)	(2)	(3)	(4)
$Government_{t-1}$	-0.153			
	(0.106)			
$Minister_{t-1}$		0.0899		
		(0.0842)		
MP_{t-1}			-0.0887	
			(0.308)	
$Relation_{t-1}$				0.168**
				(0.0805)
$LEVERAGE_{t-1}$	-0.390**	-0.429**	-0.405**	-0.383**
	(0.169)	(0.173)	(0.174)	(0.168)
$SIZE_{t-1}$	0.0726*	0.0644*	0.0678*	0.0728*
	(0.0380)	(0.0389)	(0.0391)	(0.0388)
$CASH_{t-1}$	0.407	0.311	0.338	0.362
	(0.260)	(0.260)	(0.266)	(0.262)
$GROWTH_{t-1}$	-0.0878**	-0.0826**	-0.0815**	-0.0825**
	(0.0412)	(0.0411)	(0.0414)	(0.0413)
ROA_{t-1}	3.132***	3.094***	3.116***	3.125***
	(0.461)	(0.463)	(0.465)	(0.464)
RE/TE_{t-1}	0.853***	0.857***	0.873***	0.888***
	(0.220)	(0.221)	(0.223)	(0.222)
Constant	-1.740***	-1.617**	-1.656**	-1.783***
	(0.639)	(0.654)	(0.658)	(0.651)
Observations	1,387	1,387	1,387	1,387
Number of Firms	131	131	131	131
Year effect	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes
Pseudo R2	0.18	0.18	0.18	0.19
Prob >F	0.000	0.000	0.000	0.000
Log likelihood	-1035.27	-1036.02	-1037.57	-1031.39

This table reports the results of the pooled Tobit for the effect of different levels of political connections. The dependent variable is the payout ratio. For variables definition, please see Table 5.1. All explanatory variables are lagged by one year. Variables are winsorized at the 1st and 99th percentiles. Robust standard errors are reported in parentheses. ***, **, and * denotes significance at the 1%, 5% and 10% level, respectively.

Table 7.4: Marginal Effects of the strength of political connections (Pooled Tobit)

VARIABLES	Payout Ratio	Payout Ratio	Payout Ratio	Payout Ratio
	(1)	(2)	(3)	(4)
$Government_{t-1}$	-0.048			
	(0.033)			
$Minister_{t-1}$		0.029		
		(0.027)		
MP_{t-1}			-0.028	
			(0.097)	
$Relation_{t-1}$				0.053**
				(0.025)
$LEVERAGE_{t-1}$	-0.124**	-0.136**	-0.128**	-0.121**
	(0.053)	(0.054)	(0.055)	(0.053)
$SIZE_{t-1}$	0.023*	0.020*	0.021*	0.023*
	(0.012)	(0.012)	(0.012)	(0.012)
$CASH_{t-1}$	0.129	0.099	0.107	0.114
	(0.082)	(0.082)	(0.084)	(0.083)
$GROWTH_{t-1}$	-0.028**	-0.026 **	-0.026**	-0.026**
	(0.013)	(0.013)	(0.013)	(0.013)
ROA_{t-1}	0.994***	0.982 ***	0.987***	0.988***
	(0.136)	(0.139)	(0.138)	(0.136)
RE/TE_{t-1}	0.271***	0.272***	0.277***	0.281***
	(0.067)	(0.067)	(0.067)	(0.067)
Observations	1,387	1,387	1,387	1,387
Number of Firms	131	131	131	131

This table reports the marginal effects from Table 7.3. The dependent variable is Payout ratio. For the definition of variables, please see Table 5.1. All explanatory variables are lagged by one year. The variables are winsorized at the 1st and 99th percentiles. Standard errors are reported in the parentheses. ***, **, * denotes significance at the 1%, 5% and 10% level, respectively.

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