School of Accounting, Economics, and Finance

Financial Reporting Quality, Political Connectedness, and Monitoring Mechanisms: Evidence from Saudi Arabia

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Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Faisal Saleh S. Alsalhi

January 2022

Abstract

This study investigates the associations between financial reporting quality, political connectedness, and monitoring mechanisms in Saudi Arabia. Namely, the study aims to investigate the impact of strategic institutional ownership and audit quality of the quality of financial reports of Saudi listed firms. Moreover, the impact of internal audit sourcing arrangements on financial reporting quality, a largely unexplored area in the Saudi context, is also examined. Additionally, the study examines the impact of the interaction effects between political connectedness and monitoring mechanisms on the quality of financial reports. The study contributes to the accounting and auditing literature by unravelling the effects of a number of important and under-investigated factors on the quality of financial reports. The study comes at a critical time due to drastic socio-economic changes in the Saudi Arabian context. The study builds on a multi-theoretical framework to develop its hypotheses and examine the hypothesised associations. Specifically, resource dependency theory, legitimacy theory, and agency theory are utilised in the context of this study in order to obtain a deeper understanding of the study findings. The study sample comprises 899 non-financial firm-year observations listed on the Saudi Capital Market (*Tadawul*) between 2009 and 2017. The findings show that political connectedness and strategic institutional investors enhance the quality of financial reports in the Saudi Arabian context. The study also reveals a negative effect of audit quality, measured by the engagement of a Big 4 audit firm, on financial reporting quality. Finally, the study does not find consistent evidence with regards to the impact of internal audit sourcing arrangements on the quality of financial reports. Intensive additional analysis is implemented to ensure the soundness of the conclusions that have been drawn, including alternative variable definitions and measures, as well as sample partitioning tests. Furthermore, propensity score matching, the Heckman selection model, generalised method of moments, and difference-in-differences are also performed. Examination results show substantial consistency. The findings of the study have significant implications for a range of stakeholders, including regulators, capital providers, auditors, and scholars.

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Abbreviations

CGR	corporate governance regulation
CMA	Capital Markets Authority
CSR	corporate social responsibility
DID	difference-in-differences
ESG	environmental, social and governance (reporting)
FTSE	Financial Times Stock Exchange
G20	Group of Twenty
GAAP	Generally Accepted Accounting Principles
GCC	Gulf Cooperation Council
GDP	gross domestic product
GICS	Global Industry Classification Standard
GMM	generalised method of moments
GOSI	General Organization for Social Insurance
IAASB	International Auditing and Assurance Standards Board
IFRS	International Financial Reporting Standards
IIA	Institute of Internal Auditors
IPO	initial public offering
KSA	Kingdom of Saudi Arabia
LIFO	last-in-first-out
M&A	merger and acquisition
MSCI	Morgan Stanley Capital International
OLS	ordinary least squares (model)
OPEC	Organization of Petroleum Exporting Countries
PCAOB	Public Company Accounting Oversight Board
PPA	Public Pension Agency
PSM	propensity score matching
ROA	return on assets
SAMA	Saudi Arabian Monetary Authority
SEC	Stock Exchange Commission
SOX	Sarbanes–Oxley Act
VIF	variance inflation factor

Chapter One

Introduction

1.1 Background and Motivation

Financial reports of publicly listed firms are the main source of financial information for external stakeholders. Financial information communicated in financial reports provides the basis upon which stakeholders make important decisions related to investments, contractual agreements (e.g., borrowing and compensation), and regulatory requirements (e.g., taxes and compliance). For this reason, the quality of the information included in financial reports is vital to the effectiveness and efficiency of decisions that are based on that information, and to the economic consequences of those decisions. However, recent waves of accounting and auditing failures driven by manipulative reporting behaviour from management have raised serious concerns over the quality of financial reports. Across the world, legislators and regulators have passed laws and regulations to combat corporate scandals and enhance trust in capital markets. For instance, corporate governance codes and regulations (such as Sarbanes–Oxley in the US and corporate governance regulations [CGRs] in Saudi Arabia) constitute significant efforts that aim to mitigate conflicting interests that arise as a result of ownership–management segregation.

Over the last decade, Saudi Arabia has made significant changes to corporate governance practices so that they align with international standards. In the wake of the crash of the Saudi capital market in early 2006, which triggered the need for capital market reforms, CGRs were issued in November of that year (Al-Matari et al., 2012). Initially, those CGRs were optional in terms of their implementation, and firms were required to follow the principle of "comply or explain" with respect to corporate governance compliance. In 2008, the Saudi Arabian Capital Markets Authority (CMA) called for increased conformity with the CGRs of 2006 in relation to internal audit requirements. To ensure compliance, all listed firms were subsequently required to implement changes with respect to how their activities were audited, according to the scope and nature of their operations. Another significant development in the Saudi Arabian context relates to the introduction of Vision 2030 by the Council of Economic Affairs and Development under the leadership of His Royal Highness the Crown Prince Mohammed bin Salman Al-Saud. Saudi Arabia's Vision 2030 blueprint has

three main themes: a vibrant society, a thriving economy, and an ambitious nation[1]. The themes all involve an aspiration towards increased transparency and accountability. Additionally, Vision 2030 outlines necessary improvements with respect to anti-corruption measures and represents a high intolerance towards corruption ("Full Text of Saudi Arabia's Vision 2030", 2016). With increased awareness of the seriousness of corruption and its destructive impact on the nation, the Saudi Vision 2030 sets accountability, transparency, and integrity as its fundamental pillars ("Full Text of Saudi Arabia's Vision 2030", 2020).

The theme of a thriving economy in Vision 2030 aims at increasing foreign investment contributions to gross domestic product (GDP) to the international level (i.e., from 3.8% to 5.7%) (Alregab, 2020). Saudi Arabia is also making substantial efforts to open its economy and attract foreign investments (Belloumi & Alshehry, 2018; Mazaheri, 2013). Besides promoting direct investment, the capital market constitutes an important means by which foreign investments can be attracted. According to Fama and French (1997), emerging capital markets offer great opportunities for superior returns. The *Tadawul* has been through extensive improvements since its crash in 2006. Such improvements have been made with a special focus on enhancing the efficiency of the capital market and increasing investors' trust. For instance, the CMA has recently opened the Saudi capital market for foreign investors, which is hoped to contribute to economic growth and market efficiency (Alnori & Alqahtani, 2019; Belloumi et al., 2018). Additionally, the CMA introduced the use of financial derivatives and allowed the use of short selling to enhance capital market operations. However, in order to achieve the desired operational efficiency, financial assets need to be valued in an informationally efficient environment. Informationally efficient pricing of financial assets contributes to efficient capital allocation. Achieving desired levels of operational, informational, and capital allocation efficiencies is conditional on the quality of published financial information (i.e., financial reporting quality).

The embeddedness of Royal Family members in listed firms may be perceived as a source of uncertainty due to the potential for preferential treatment by the government to Royal Family members. Nonetheless, the coronation of King Salman

[1] Additional information on the Saudi Vision 2030 can be found on the website: www.vision2030.gov.sa/

bin Abdul-Aziz Al Saud as king of Saudi Arabia and head of the Saudi Arabian Government signaled a new era for the country in which serious efforts were made to combat cronyism and nepotism. Likewise, an extensive anti-corruption crackdown has been led by His Royal Highness the Crown Prince Mohammed bin Salman Al Saud. Over 200 individuals have been detained, including members of the Royal Family, several current and former ministers, other government officials, and a number of well-known businessmen. The government has recouped over US$107 billion, above the preliminary estimate of US$100 billion. This has primarily been recouped from transactions with the government.

As a consequence of the recently uncovered fraudulent practices of elite members within the government, one may assume that firms connected to elite members of Saudi Arabian society may engage in manipulative reporting behaviour without being subject to legal sanctions. On the other hand, the cultural importance of status and prestige, and the fear of reputational loss may work against potential manipulation (Al-Hadi et al., 2017), since publicly listed firms are required to report their financial results and position, unlike individual government organisations. The impact of Royal Family members' practices on Saudi listed firms remain largely underinvestigated in the prior literature (Alnasser, 2019), although research into these practices may produce interesting findings and be a valuable contribution to this field.

The efforts made in Saudi Arabia to enhance market efficiency, reduce uncertainty, and enhance investors' trust may lead to favorable outcomes. Empirical studies constitute a vital means by which regulators, capital market participants, and other stakeholders are assured as to the fruitfulness of regulatory efforts. Therefore, this study predominantly aims to examine the impact of one potential source of perceived uncertainty. Specifically, investors across different institutional settings may perceive political connectedness of listed firms as a source of competitive advantage or as a threat (Al-Hadi et al., 2016; Alnasser, 2019; Fisman, 2001; Gul, 2006; Johl et al., 2013). Additionally, this study aims to examine important monitoring mechanisms and their interactive effects with political connectedness. Considerable attention has been placed on enhancing the monitoring role of a number of governance mechanisms by regulators and other stakeholders. Specifically, the roles of institutional investors, internal auditing, and external auditing have undergone significant changes in the Saudi context over the last decade.

Due to their superior access to essential resources, institutional investors have the ability to improve their investees' operations and governance, especially when operating in environments characterised by weak investor protection (Bushee, 1998; Chung & Zhang, 2011; Collins et al., 2003). However, the literature suggests that institutional investors are not a unified group, but are heterogeneous due to differences in their nature, investment orientation, and investment behaviour (Bushee, 1998; Zhong et al., 2017). As a result, different types of institutional investors may be expected to affect their investees differently. Therefore, this study focuses on a specific type of institutional investor – namely, strategic institutional investors – that are expected to have a more significant impact on the quality of financial reports as a result of the size of their holdings and their longer-term investment horizon. This category of institutional investor has become more important in the Saudi context since the market crash in 2006.

Traditionally, the Saudi Arabian capital market has been characterised as an emerging market that operates in a less strict legal environment than the capital markets of developed countries (Bozec et al., 2010; Alnasser, 2019). Up until the market crashed in 2006, corporate governance has been of lower importance (Alnasser, 2019). In the recent years, however, capital market regulators placed greater importance on corporate governance mechanisms in order to enhance investor protection and market efficiency. For instance, recognising the importance of institutional investors as a monitoring mechanism, the CMA in Saudi Arabia has advocated for increased participation of such investors in the capital market. With the increased focus on enhancing the role of institutional investors, self-governed institutional investors such as the General Organization for Social Insurance (GOSI) and the Public Pension Agency (PPA) may become vital players in the achievement of the CMA's objectives with respect to market efficiency and investor protections in the Saudi capital market (Albassam, 2014; Al Kahtani, 2014; Amico, 2017). These investors play an important role not only in the financial reporting context, but also in contributing to social and economic objectives for the sake of improving the capital market. For instance, after the Saudi capital market crashed in 2006, GOSI and PPA substantially increased their stockholdings in an attempt to support the market valuation and restore investor confidence (Amico, 2017). This may be an indication of socially responsible investing behaviour of this type of institutional investor in the Saudi context.

To the best of the researcher's knowledge, despite the heterogeneity of institutional investors, all of the studies investigating their impact on various aspects of Saudi listed firms have treated them as a homogenous group. In other words, prior studies have examined the overall impact of institutional investors regardless of their idiosyncratic type. Therefore, this study seeks to examine the role of the largest self-governed institutional investors on financial reporting quality, in isolation of other kinds of institutional investor. Furthermore, the study will investigate the interactive effect this kind of investor has on the quality of financial reports in politically connected firms.

Internal auditing has become a vital governance mechanism that has caught the special attention of capital market regulators in Saudi Arabia. The call for increased conformity with the CGRs of 2006 in relation to internal audit requirements, and the mandate of Article 14 of these regulations, created a more regulated environment for internal auditing (Albassam, 2014). More highly regulated internal auditing environments are likely to improve the quality of financial reports. This has become a persistent theme as issues around the credibility of firms' financial reports confirm the assertion that firms experiencing financial distress or bankruptcy are characterised by poor financial reporting practices (Habib et al., 2020). To address this issue, regulatory authorities have sought to widen internal auditors' reporting responsibilities and also to monitor audit quality. In these circumstances, outsourcing of the internal audit function has become popular among listed firms, as this benefits auditors and firms alike, in terms the efficiency and effectiveness of the audit (Aldhizer & Cashell, 1996). However, the relative newness of the profession in Saudi Arabia brings serious challenges to the effectiveness and efficiency of internal audit functions. The potential positive impact of internal auditing on Saudi listed firms relies heavily on the preparedness of internal audit professionals in terms of both quality and quantity. The abrupt demand for internal auditors, however, may influence the profession's readiness to play its intended role. The Institute of Internal Auditors (IIA) has recognised the need for alternative arrangements and indicated as much in their recent definitions, using the term "activity" instead of "department" (Ahlawat & Lowe, 2004). Additionally, Saudi CGRs require listed firms to disclose the provider of internal audit activities, indicating regulatory recognition of the alternative sourcing arrangements. Outsourcing internal audit functions may constitute an effective

alternative to performing the function in-house that can be utilised by Saudi listed firms to acquire effective and efficient internal audit services.

However, a number of issues should be noted. First, the profession of internal auditing in the Saudi context suffers from serious deficiencies; specifically the independence of internal auditors constitutes a major concern for Saudi listed firms (AlAkra et al., 2016). Second, an important issue relates to whether internal audit sourcing arrangements contribute to financial reporting, auditing, assurance, corporate transparency, and accountability in less developed economies such as Saudi Arabia, where efforts are being made to improve corporate governance practices by publicly listed firms. In other words, investigating the impact of alternative sourcing arrangements may reveal an effective means of mitigating the independence shortfall. Third, the literature reveals a lack of empirical work investigating the association between internal audit function and the quality of financial reports in non-US settings (Johl et al., 2013). Specifically, despite the increased importance of and interest in the area, literature investigating the impact of the internal audit function on listed firms in Saudi Arabia is relatively scarce. In fact, the vast majority of prior studies conducted in the Saudi context are survey-based studies (e.g., Al-Shetwi et al., 2011; Al-Twaijry, 2004; Al-Twaijry et al., 2003, 2004; Alzeban & Gwilliam, 2014), and the impact of self-selection issues may have serious consequences on the conclusions drawn from these findings. Archival research examining different aspects of internal audit functions in the context of Saudi Arabia is limited. Empirical studies in this context would make a valuable contribution to the literature and the practice of internal auditing at a time when the Saudi government has introduced regulatory and institutional reforms to improve the quality of financial reporting in the interests of enhanced market efficiency and investor confidence. Therefore, this study seeks to investigate whether different sourcing arrangements for the internal audit function affect the quality of financial reports. Moreover, the study will examine the interactive effect that internal audit sourcing arrangements might have on the financial reporting quality of politically connected firms.

Finally, audit quality, as measured by the size of the audit firm, is considered a significant factor in producing quality financial reports (Alhadab & Clacher, 2018). For shareholders and other external stakeholders, external auditing is a key instrument for credible and transparent financial reporting (Alhadab & Clacher, 2018; Fan &

Wong, 2005). The auditor's experience, knowledge, and independence are important determinants of audit quality (Al-Matari et al., 2012), constraining the potential for financial manipulation and falsification of materials. It has been argued that higher audit quality can curb accounting-based contractual manipulations (Gul et al, 2009; Habbash & Alghamdi, 2017). In general, quality auditing reduces information asymmetry and controls potential residual losses associated with directors' opportunism through financial reporting (Habbash & Alagla, 2016). An important source of audit quality is the quality of the firm conducting the external audit. Specifically, it is largely accepted, both in academia and in practice, that brand name audit firms (Big N) are capable of delivering higher-quality audits than local non-brand name audit firms (Non-Big N). Therefore, engaging a Big N audit firm constitutes a source of uncertainty mitigation for various stakeholders. However, recent unfortunate events related to audit failures have significantly harmed corporates, audit firms, and capital markets at large. Such events have triggered uncertainty with regards to the quality of audit services provided by Big N audit firms. For this reason, it becomes important to direct scholarly attention to the growing number of corporate financial scandals in developed and emerging economies, which raise questions about financial reporting quality and the role of external auditors in constraining poor financial reporting and audit failure (Allehaidan, 2012). The Saudi Arabian context is no exception, with important audit failure incidents (i.e., of Mobily and Al-Mojil Group). These cases resulted in the banning of one the Big 4 audit firms (Deloitte) from providing audit services in Saudi Arabia. According to Habbash and Alghamdi (2017), the increasing occurrence of audit failure in capital markets of both developed and emerging economies has raised major concerns about the quality of audit services across the board. Consequently, the impact of the Big 4 audit firms on the financial reporting quality of Saudi listed firms is an area that needs to be further investigated, specifically, examining the associations between brand name auditors and practices of alternative earnings management techniques. Furthermore, potential interactions between Big 4 auditors and politically connected firms constitute an important area that may reveal significant findings.

This discussion of political connectedness, institutional investors, internal audit sourcing arrangements and audit quality highlights how important it is to investigate their influence on financial reporting quality in the Saudi context. Coupled

with the rapid, drastic changes in the Saudi capital market – in terms of increased regulations – political connectedness of publicly listed firms and the aforementioned monitoring mechanisms may play an important role in the country's movement towards liberalising its economy, reducing potential threats, and opening its market to attract foreign investors.

1.2 Uniqueness of Saudi Institutional Setting

The impact of political connectedness on the Saudi capital market is too significant to neglect owing to contextual factors such as the Saudi political system and societal structure. Saudi Arabian society is described as an extended-family society, where not only are close relatives taken care of by family members, but other relatives within the tribe or clan are also patronised (Srdar, 2017). Cultural bonds between Saudi family members can lead to nepotism and affect many aspects of life, including the way Saudis operate their businesses (Mazaheri, 2013; Rice, 1999). Furthermore, the Saudi Arabian government is a monarchical regime in which the king acts as the prime minister (Ismail et al., 2016; Tannous, 1951). Given the tribal nature of Saudi society and the familial relations of members of the Saudi Royal Family, it is reasonable to argue that they may enjoy special treatment in both public and private sectors (Almadi, 2016). Yet, the prestigious status and accompanying concern over potential reputational loss may be an effective deterrent for politically connected firms operating in the Saudi capital market (Alhadi et al., 2017). Political connectedness of firms in the capital market, which typically means the presence of Royal Family members, has a long history. As indicated in recent news reports (Alzahrani & Che-Ahmad, 2015), publicly listed firms are predominantly under Royal Family ownership and control. It has been estimated that members of the Saudi Royal Family hold about 10% of board seats in Saudi listed firms, giving them effective control of many listed firms. Additionally, a recent report indicates that members of the Royal Family directly control more than 75% of the US$319 billion invested in publicly listed firms in the Arab region (Alzahrani & Che-Ahmad, 2015).

For a number of reasons, Saudi Arabia provides an important and unique context in which to examine these issues. First, although sharing some characteristics with other countries in the Gulf Cooperation Council (GCC) region, the embeddedness of the Royal Family in Saudi geopolitical and economic structures has an undeniable

impact on the general business environment (Habbash & Alagla, 2016). Second, since the coronation of King Salman bin Abdul-Aziz Al Saud, the Saudi Government has turned its attention to corruption, transparency, and governance. Third, Saudi Arabia's Vision 2030 blueprint, as introduced by the Council of Economic Affairs and Development and approved by the Council of Ministers in April 2016, has three overarching themes: a vibrant society, a thriving economy, and an ambitious nation – the third of which aims toward a high standard of corporate transparency and accountability, with zero tolerance for financial and administrative corruption ("Full Text of Saudi Arabia's Vision 2030", 2016). Additionally, the government launched a program in support of this commitment (called *Qawam*), which aims at broadening the scope of auditing from simple process auditing to a "more integrated approach with effective and efficient spending controls, and specific and measurable goals, while sustaining resources and assets" ("Full Text of Saudi Arabia's Vision 2030", 2016, n.p.). This shift made it evident to the researcher that both government agencies and corporate firms would be required to provide specialised training to enhance transparency and increase the credibility of their financial disclosure. This is especially important given that the CMA, the Saudi Organization of Certified Public Accountants (SOCPA), and the IIA in the Kingdom of Saudi Arabia (KSA) are all under government control and are important players in the country's move towards higher transparency and lower corruption.

The timing of this study is particularly crucial considering the international focus on the Saudi market by major economic players. For instance, the Saudi capital market has been included in the emerging market indexes of the Financial Times Stock Exchange (FTSE) and Morgan Stanley Capital International (MSCI)[2], signalling the increased importance of the market (Alnori & Alqahtani, 2019). In addition to the growing importance of the Saudi capital market, the country's economy constitutes a key player in the global economy. The country is among the founders of Organization of Petroleum Exporting Countries (OPEC) and a member of Group of Twenty[3] (G20). Additionally, Saudi Arabia contributes the largest share of oil production of all OPEC members, and is the largest oil exporter, and the second largest holder of proven oil

[2] In the case of FTSE, this is the FTSE Shariah Global Equity Index Series. For MSCI, it is their Emerging Markets Index.

[3] The G20 is an intergovernmental forum whose member countries account for 80% of the global economy and 75% of the world exports (G20, 2021).

reserves, in the world, which lends its economy particular significance among global capital markets (Organization of Petroleum Exporting Countries [OPEC], 2021). The recent initial public offering (IPO) of the state-owned oil giant, ARAMCO, the Arabian-American Oil Company, further enhanced the connection between the country's position as the world's leading oil producer and the importance of financial reporting practices of listed firms in the country.

1.3 Research Questions and Objectives

The importance of the financial reporting quality of Saudi listed firms has gained increased focus due to significant changes and improvements in the country's capital market and society as a whole. The increased instances of accounting and audit failures in global markets and in the Saudi capital market highlight the need for extensive scholarly work to elucidate the factors that influence the quality of reported financial information. Empirical examination of potential factors can contribute to the development of regulatory changes that aim at increasing the transparency and accountability of listed firms as well as enhancing the efficiency of the capital market.

Numerous studies focus on the impact of corporate governance mechanisms on different aspects of corporate operations, such as financial performance (e.g., Al-Ghamdi & Rhodes, 2015; Fallatah & Dickins, 2012; Haniffa & Hudaib, 2006), earnings management (Al-Thuneibat et al, 2016; Mohamad et al., 2012; Prawitt et al., 2009), risk disclosure (Al-Hadi et al., 2016; Brown et al., 2009; Ntim et al., 2013), accounting conservatism (Ahmed & Duellman, 2007; Ahmed & Henry, 2012; García Lara et al., 2009; Mohammed et al., 2017), and audit quality (Abbott et al., 2007; Francis & Yu, 2009; Habbash & Alagla, 2016).

Internal governance mechanisms have been the focus of the vast majority of corporate governance literature, while research on external corporate governance mechanisms is limited (Aguilera et al., 2015). However, the direct link between financial reporting quality and corporate governance mechanisms emphasises the need to incorporate both internal and external mechanisms when investigating their overall impact on the quality of financial reports. In Saudi Arabia, the need for strong corporate governance practices is especially important due to the fact that listed firms in developing countries operate in weaker legal environments compared with their counterparts in developed countries (Bozec et al., 2010; Claessens & Yurtoglu, 2013).

There is a scarcity of empirical studies that triangulate the impact of political connectedness and different monitoring mechanisms on financial reporting, as measured using different proxies that gauge the quality from distinct, yet related, measures (i.e., accrual-based earnings management, real activity-based earnings management, and reporting small positive profits). On this basis, the main objective of the proposed study is to investigate the impact of political connectedness and important internal and external monitoring mechanisms on publicly listed firms in Saudi Arabia in light of recent changes in the corporate governance scheme. This study focuses on the following primary research questions:

RQ₁ *Is political connectedness among listed firms in Saudi Arabia associated with the quality of their financial reports?*

RQ₂ *Are strategic institutional investors associated with the quality of their financial reports of listed firms in Saudi Arabia?*

RQ₃ *Are internal audit sourcing arrangements associated with the quality of their financial reports of listed firms in Saudi Arabia?*

RQ₄ *Is audit quality associated with the quality of their financial reports of listed firms in Saudi Arabia?*

Additionally, in order to examine the interaction effects of the monitoring mechanisms with political connectedness, this study aims to address the following secondary research questions:

SRQ₁ *Do strategic institutional investors influence the association between political connectedness and the quality of their financial reports of listed firms in Saudi Arabia?*

SRQ₂ *Do internal audit sourcing arrangements influence the association between political connectedness and the quality of their financial reports of listed firms in Saudi Arabia?*

SRQ₃ *Does audit quality influence the association between political connectedness and the quality of their financial reports of listed firms in Saudi Arabia?*

Corresponding to the aforementioned research questions, this study has the following objectives:

1. To investigate the association between political connectedness and financial reporting quality of listed firms in Saudi Arabia.
2. To examine the association between strategic institutional ownership and financial reporting quality of listed firms in Saudi Arabia.
3. To investigate the association between internal audit sourcing arrangements and financial reporting quality of listed firms in Saudi Arabia.
4. To examine the association between external audit quality and financial reporting quality of listed firms in Saudi Arabia.
5. To examine whether strategic institutional ownership influences the association between political connectedness and financial reporting quality of listed firms in Saudi Arabia.
6. To examine whether internal audit sourcing arrangements influence the association between political connectedness and financial reporting quality of listed firms in Saudi Arabia.
7. To examine whether external audit quality influences the association between political connectedness and financial reporting quality of listed firms in Saudi Arabia.

1.4 Study Significance

This study provides new insights into the impact of political connectedness, strategic institutional investors, internal audit sourcing arrangements, and audit quality on the quality of financial reports of Saudi listed firms. First, this study employs a number of proxies for financial reporting quality to estimate the quality of the disclosed financial information of the listed firms. Specifically, this study uses accruals-based earnings management models to estimate accounting-based manipulation of financial reports. Additionally, real activity-based earnings management models are utilised to estimate the use of transactional manipulation by Saudi listed firms. These techniques have received increased focus in recent years due to their long-term impact, compared with other earnings management techniques. For instance, Habbash and Alghamdi (2012) document evidence that real activity manipulation is commonly used by Saudi listed firms to manipulate their financial

results. Despite its importance and increased recognition by scholars and practitioners, real activity-based earnings management remains underinvestigated in Saudi Arabia. Loss avoidance by reporting small positive profits constitutes a key driver of opportunistic behaviour on the part of management. Habbash and Alghamdi (2015) find that loss avoidance is a main driver of earnings management practices among listed firms in Saudi Arabia. Therefore, this study uses the reporting of small positive profits as another proxy for the quality of financial reports.

Second, as mentioned earlier, the uniqueness of the Saudi Arabian sociopolitical setting provides certain contextual qualities that reflect on the formation of political connections. The strong familial ties among Saudis amplify the potential for preferential treatment of relatives, within a broad definition of family. This may contribute to the potential harm that political connectedness could have in capital markets. On the other hand, the collectivist mindset of family members in Saudi Arabia may work against self-orientation of individuals and help mitigate the tendency to commit wrongdoing so as to protect the family's reputation (Al-Hadi et al., 2017). Additionally, Saudi Arabian society derives its values and norms from the Islamic literature, which emphasises the importance of adopting the highest standards of ethical conduct and integrity, especially so for highly recognised individuals. Evidently, the opposing points of view may also be valid rationales for politically connected individuals in Saudi listed firms. Therefore, this study's findings provide a significant contribution towards understanding the impact of political connectedness in capital markets. Additionally, a considerable proportion of studies in this area investigate the impact of political connectedness on financial reporting quality across different settings, using international samples. However, scholars suggest that countries' idiosyncratic characteristics and diverse political schemes mean that focusing on individual national contexts may be more beneficial than investigating the impact of political connectedness across multiple contexts (Wong & Hooy, 2018).

Third, the importance of institutional investors to financial reporting quality stems from their capabilities and resources as sophisticated stockholders that enable them to scrutinise management activities and monitor their investee firms' operations and financial reporting. However, institutional investors are deemed to be heterogeneous in their nature and operations (Almazan et al., 2005; Brickley et al., 1988; Bushee, 1998; Zhong et al., 2017). Extant literature indicates that some types of

institutional investors may not be as effective as others, as monitoring mechanisms. Specifically, Zhong et al. (2017) assert that strategic institutional investors (i.e., long-term oriented institutional investors with large stockholdings) have both the capability *and* willingness to be involved in their investees' decision making and have a favorable impact on how firms are operated. To the best of the researcher's knowledge, no prior study differentiates between types of institutional investors in the Saudi capital market. Since the two dominant institutional investors (GOSI and PPA) are considered to be strategic investors due to their stockholdings and investing behavior, this study provides a deeper understanding of the role of a specific, and major, type of institutional investor.

Fourth, internal auditing has increasingly gained the attention of scholars, regulators, and practitioners because of the effects of multiple accounting failures and the regulations that have been implemented in response. The tasks of internal auditors have drastically evolved in recent years and the need for alternative sourcing of the function has increased (Mubako, 2019). The profession is still in its infancy in the Saudi context and the demand for internal auditors has sharply increased. However, prior studies conducted in Saudi Arabia reveal serious issues regarding the lack of independence of internal auditors (Al-Shetwi et al., 2011; Al-Twaijry, 2004; Al-Twaijry et al., 2003, 2004; Alzeban & Gwilliam, 2014). Therefore, it is reasonable to assume that the quality of the services they provide may be questionable. Consequently, investigating the differential impact of alternative sourcing arrangements on the quality of financial reports can shed light on the optimal alternative that firms can employ in order to enhance their reporting credibility. Additionally, the overwhelming majority of the extant literature is survey-based and archival studies are rare. Therefore, the findings of this study contribute to the shared understanding of how alternative sourcing arrangements may affect the quality of internal audit services.

Fifth, the role of audit quality on financial reporting quality has been extensively investigated in the contexts of developed countries, especially the USA. However, scholarly work on the association between the quality of the audit and the quality of financial reports in the Saudi context is limited. Furthermore, the majority of prior studies examine the impact of audit quality using accrual-based measures of financial reporting quality and largely neglect the use of real activity-based earnings

management techniques and loss avoidance. Therefore, this study provides a significant contribution by employing a more comprehensive approach to estimating the quality of financial reports of publicly listed firms.

Sixth, the quality of financial reports may be affected by interactions between different factors. For instance, monitoring mechanisms may be more (or less) effective in a specific environment than in other environments. Specifically, institutional investors, internal auditing, and external auditing may differently impact the quality of financial reports within politically connected firms compared to their non-politically connected counterparts. Therefore, in order to improve understanding of the interactions between different monitoring mechanisms and political connectedness, this study investigates the impacts of strategic institutional investors, internal audit sourcing arrangements, and audit quality by investigating their interaction effects in politically connected firms.

Finally, the vast majority of prior accounting and auditing studies utilise a single-theory approach in explaining the investigated phenomena (Alhossini et al., 2021; Gordon & Nazari, 2018). In the literature on financial reporting quality, agency theory is largely employed to justify different associations. Despite its attractiveness in this context, agency theory may provide insufficient explanation with respect to the role of political connectedness and monitoring mechanisms on financial reporting quality (Alhossini et al., 2021; Gordon & Nazari, 2018; Hillman & Dalziel, 2003). Therefore, this research employs a multi-theoretical approach in order to provide a more comprehensive explanation of the role of political connectedness and its interaction effects with internal and external monitoring mechanisms. Consequently, in addition to agency theory, this study also utilises legitimacy theory and resource dependency theory to examine the impact of the variables of interest and their interaction effects on financial reporting quality.

The findings of this study contribute important implications to several potential stakeholders. First, policymakers and regulators have been increasingly focused on improving the capital market in Saudi Arabia and combatting the detrimental effects of cronyism and nepotism in order to attract foreign capital (Habtoor et al., 2019). This study offers a more comprehensive understanding of the opportunities regarding and threats to the credibility of financial reporting and the impact of monitoring mechanisms that regulation has sought to improve. Second, capital providers,

including investors and lenders, will gain a better understanding of the role of political connectedness in the capital market, which has been found to be significant by prior studies (e.g., Al-Hadi et al., 2016; Al-Hadi et al., 2017). Third, internal and external audit providers can also benefit from the findings of this study, as it gives them a better understanding of different ways mangers seek to manipulate financial reports and the potential motivations behind their use of these techniques.

1.5 Study Limitations

In a similar way to the existing literature on financial reporting quality, this study is subject to a number of limitations. First, because financial reporting quality is unobservable, this study uses various proxies to measure it. It uses earnings management detection techniques whose utility has been questioned in estimating the level of financial reporting quality (as proxied by earnings management) (Dechow et al., 2010; Doukakis, 2014; Gunny 2010; Kothari et al., 2005). Specifically, earnings management detection models are criticised in terms of their specifications and accuracy. Nonetheless, the models are widely accepted in estimating the impact of earnings management on financial reporting quality (Cohen et al, 2010; Zang, 2012). In order to improve the validity of conclusions drawn from the analysis presented in this thesis, a number of detection techniques are utilised as a means of mitigating the issues related to the misspecification of specific models. A second limitation is that this study focuses on a single country, which may contribute to limited generalisability of its results to other countries, due to contextual differences. However, studies investigating political aspects and their impact on capital markets are encouraged to be conducted on singular settings in order to avoid the impact of unobservable contextual factors (Wong & Hooy, 2018). Third, in addition to investigating the impact of political connectedness, the study investigates the effects of specific monitoring mechanisms (i.e., strategic institutional investors, internal audit sourcing arrangements, and audit quality). These mechanisms have gained increased attention in recent years in the Saudi capital market, yet they are still underinvestigated. However, the literature provides a wide range of other monitoring mechanisms that may have significant effects on financial reporting quality. This may constitute another limitation of this study, specifically, that several other variables (related to both financial and governance aspects) have been identified in the literature that may have a potential impact on financial reporting quality, yet have not been used in this study.

Nonetheless, an extensive literature review has been conducted in order to identify such factors and include them as control variables in the model. While these limitations have been acknowledged, the strength of this study and the importance of its findings are not diminished.

1.6 Thesis Structure

The remaining chapters of this thesis are structured in the following order. Chapter Two provides a review of the literature, including an extensive discussion of financial reporting quality, including its definition, characteristics, and measurement. The chapter then discusses political connectedness in listed firms by reviewing its definition, means of identifying, and impact. Following that, the chapter pays close attention to the impact of political connectedness in the Saudi Arabian and similar contexts. Next, Chapter Two provides a review of the literature on institutional investors starting with a definition then discussing different criteria for classifying institutional investors and their impact on investee firms. The chapter then provides a review of prior studies conducted in the Saudi Arabian and similar contexts. Chapter Two then reviews internal audit functions by providing a discussion of its definition, importance, and alternative sourcing arrangements, and reviewing prior studies in the Saudi and similar contexts. A review of different concepts related to audit quality and its definition then leads to a discussion of its impact on financial reporting quality, and its determinants. Finally, the chapter ends with a discussion of prior studies that investigate audit quality in the Saudi and similar contexts.

Chapter Three begins with a detailed discussion on the theoretical framework that forms the basis of the empirical analysis of this study. An analysis of the applicability of the framework to the Saudi context is also presented. Subsequently, the chapter addresses the development of study hypotheses relating to the association between political connectedness, strategic institutional investors, internal audit sourcing arrangements, and audit quality, and the quality of financial reports.

Chapter Four provides an in-depth discussion of the methodology used to investigate the study hypotheses. The sample and time period chosen to test the given hypotheses are discussed and justified in this chapter, followed by data source documentation. The chapter then addresses different measures of the dependent, independent, and control variables that will be examined. The chapter presents the

regression model of the main analysis, and discusses additional sensitivity and robustness tests, as well as the endogeneity analysis that will be used to enhance the conclusions obtained.

Chapters Five, Six and Seven present the analysis findings and offer an extensive discussion of the results. First, the descriptive statistics and results of univariate analysis of the dependent, independent, and control variables are presented in Chapter Five. The chapter opens with an explanation of the sample selection method, followed by a discussion of the distribution of the four independent variables (i.e., political connectedness, strategic institutional investors, internal audit sourcing arrangements, and audit quality). The chapter then presents detailed statistical descriptions of the study variables, including statistical comparisons between subsamples based on the study's main explanatory variables. Next, a correlational analysis is performed to highlight the direction and strength of the relationships between the variables. Chapter Six then provides the results pertaining to the main analysis for the association between political connectedness, strategic institutional investors, and audit quality as explanatory variables of financial reporting quality. Next, this chapter provides a detailed discussion of the findings of the main analysis. Chapter Seven presents the results related to the additional tests performed to examine the study hypotheses. Alternative measures of the dependent, independent, and control variables are employed to confirm the robustness of the main analysis results. Next, Chapter Seven presents the findings of additional analyses performed after partitioning the study sample based on firms' profitability, firm complexity, firm size, and growth opportunities. Additionally, the chapter presents the results of a range of endogeneity analyses performed on the study sample. Specifically, Chapter Seven presents the results of the propensity score matching (PSM), Heckman selection model, generalised method of moments (GMM) and difference-in-differences (DID) statistical tests.

The final chapter, Chapter Eight, provides concluding remarks and a summary of the findings of this study. This chapter also discusses the implications of the findings and relevant conclusions that can be drawn for a variety of stakeholders that may benefit from them. Finally, the study limitations and recommendations for future research are presented.

Chapter Two

Literature Review

2.1 Introduction

Chapter One discussed the contextual background and motivation for the study, outlined the primary and secondary research questions, and presented the study objectives. Following that came a discussion of the significance of this study and the limitations associated with it. Chapter One concluded with a presentation of the thesis structure.

This chapter provides a comprehensive review of the literature related to the investigated areas. Specifically, the chapter begins with a review of the literature related to financial reporting quality. Then, the chapter provides a detailed discussion of prior studies related to institutional investors. Next, literature on internal audit function. Finally, the chapter reviews the literature on audit quality.

2.2 Financial Reporting Quality

This section reviews and analyses the literature related to financial reporting quality. It begins with the definition and conceptual outline of financial reporting quality. Then, the fundamental and enhancing characteristics of financial reporting quality are discussed. Next, a review of different methods of measuring the quality of financial reports is provided.

2.2.1 Definition and Concept of Financial Reporting Quality

The broad concept of financial reporting quality is inextricably linked to the quality of published financial information. For example, earnings quality, as well as the quality of auditing services provided to the reporting firm, are two measures that are closely related to financial reporting quality. Some scholars, given the difficulty of identifying a generally accepted definition of financial reporting quality, claim that measures of quality depend on the purpose for which the financial reports are prepared as well as the users for whom such reports are intended. For this reason, financial reporting quality may have multiple definitions (Achim & Chiş, 2014; Cheung et al., 2010). For example, Biddle et al. (2009) define the quality of financial reports as "the precision with which financial reporting conveys information about the firm's

operations, in particular its expected cash flows, that inform equity investors" (p. 113). Another definition offered by Elbannan (2011) states that financial reporting quality refers to "the extent to which financial reports of a company communicate its underlying economic state and its performance during the period of measurement in the representationally faithful manner defined in SFAC 2" (p. 210).

2.2.2 Characteristics of Quality Financial Reports

2.2.2.1 Fundamental Characteristics.

As a fundamental characteristic of financial information, "relevance" relates to the usability of that financial information for making economic decisions. That is, the degree to which the information included in a firm's financial reports supports its users' decision-making processes is the degree to which it can be considered quality information. In order for financial reports to be influential to stakeholders making economic decisions, the information they provide must have "predictive" or "confirmatory" value (International Accounting Standards Board [IASB], 2018; Financial Accounting Standards Board [FASB], 2018). In other words, the reports must provide information that is beneficial to those making predictions about future economic circumstances, or seeking to confirm or correct previously predicted circumstances (FASB, 2018; IASB, 2018). For instance, when financial information is able to assist its users to estimate the amounts and timing of future cash flows, it enhances their ability to make investment decisions. This is consistent with the view of Biddle et al. (2009) on the definition of financial reporting quality; they posit that accounting quality stems from the precision of the provided information regarding future cash flows. Furthermore, the confirmatory role of reported financial information relies on its ability to provide users of the information with feedback on the accuracy of predicted inputs used to make economic decisions in the past. Additionally, in order to be economically feasible, financial information needs to present benefits that exceed the accompanying costs of reporting such information. Finally, and in accordance with the concept of "relevance", reported financial information has to be significant and sufficiently material in order to be valuable in decision-making processes. Materiality may be determined if the economic decisions could be influenced by omitting or misstating the relevant information (Cheung et al., 2010; IASB, 2018).

The other fundamental characteristic relates to the "faithful representation" of financial reports. Specifically, financial reports need to deliver information that faithfully represents the economic circumstances and financial results of the reporting firm without intentional or unintentional distortion or concealment. In order to achieve this, IASB's conceptual framework (2018) states that completeness, neutrality, and correctness (i.e., being free of error) are essential if financial information is to be considered faithfully represented. This conceptual framework states that "completeness" means that the representation "includes all information necessary for a user to understand the phenomenon being depicted, including all necessary descriptions and explanations" (2018, p. 15). With respect to the second factor, the conceptual framework of IASB states that "neutrality" refers to "depiction without bias in the selection or presentation of financial information" (2018, p. 15). Finally, the framework explains that financial reports are considered "free from error" when there are "no material errors or omissions in the description of the phenomenon, and the process used to produce the reported information has been selected and applied with no mistakes in the process" (2018, p. 15). The ISAB conceptual framework acknowledges that faithful representation is not an absolute notion, and that the factors of completeness, neutrality, and correctness are present in degrees, with the highest quality of reporting associated with the maximum degree that they are attributed (IASB, 2018). Furthermore, the conceptual framework indicates that faithful representation may be conditional to uncertainties related to financial information measurement (IASB, 2018). Barker and Penman (2020) critique the framework, arguing that although the approach followed by IASB in addressing uncertainty is necessary, it leaves the notion of uncertainty largely underdeveloped.

2.2.2.2 Enhancing Characteristics.

The enhancing characteristics of quality financial reporting are considered to support the fundamental characteristics in high-quality reports. First, "comparability" plays an important role in enhancing the usability of published information by financial report users. This characteristic allows stakeholders to identify the similarities and differences between the financial reports of a firm over multiple reporting periods and between different firms for the same reporting period (Beest et al., 2009; Cheung et al., 2010). Braam and Beest (2013) indicate that measuring comparability as an enhancing characteristic relies on the continual use of the chosen accounting methods

as well as the use of similar methods across different firms. FASB (2018) states that "although a single economic phenomenon can be faithfully represented in multiple ways, permitting alternative accounting methods for the same economic phenomenon diminishes comparability" (p. 20). Cheung et al. (2010) explain "comparability" by means of "consistency" and "uniformity". The authors propose that consistency relates to the reporting firm using the same accounting methods over multiple periods, whereas uniformity is a more rigid concept that narrows accounting choices (p. 156). However, comparability does not necessitate uniformity (FASB, 2018). In other words, differentiating between items that are different is not less important than making similar items look alike (Achim et al., 2014; FASB, 2018).

Second, "verifiability" refers to independent observers coming to similar conclusions using the same inputs (Lisowsky et al., 2017). Specifically, financial information is verifiable if "different knowledgeable and independent observers could reach consensus, although not necessarily complete agreement, that a particular depiction is a faithful representation" (FASB, 2018, p. 20). Verifiability of reported information enhances users' ability to make economic decisions, especially when the verified information relates to intangible assets (Kim-Gina, 2018). Verification of numerical information may be achieved directly (i.e., through direct observation of the subject amounts) or indirectly (by recalculating reported values using the same inputs and measurements) (FASB, 2018).

The third enhancing characteristic relates the "timeliness" of information reported to the users of the financial report. The underlying concept of this enhancing characteristic suggests that in order for the reported financial information to be influential in decision making, the information must be available in a timely manner (FASB, 2018). The timeliness of available information enhances the informational efficiency of capital markets by allowing all external users of financial reports to assess and evaluate the information that is relevant to them. Although timeliness is a highly desirable qualitative characteristic for good decision making, Achim et al. (2014) propose that it less important than relevance and faithful representation.

Finally, IASB (2018) defines the characteristic of "understandability" as "classifying, characterising, and presenting information clearly and concisely" (p. 21). Understandability of information is crucial to the usefulness of financial reports; it is

a truism that the needs of users can only be fulfilled if the reported information is comprehensible to them (Beest et al., 2009). Cheung et al. (2010) echo this, stating that higher-quality financial reports provide more coherent financial information. Herath and Albarqi (2017) suggest that graphical illustration may be beneficial in enhancing the understandability of financial reports. To conclude, it is evident that the enhancing characteristics of comparability, verifiability, timeliness, and understandability improve the level of financial reporting quality. As useful as they are, however, these enhancing characteristics are secondary to the fundamental characteristics of financial reporting quality (Achim & Chiș, 2014; FABS, 2018; IASB, 2018).

2.2.3 Measurement of Financial Reporting Quality

The quality of the information contained in financial reports is a complex and unobservable construct that lacks consensus in terms of its measurability. The difficulty stems from the nature of financial reporting quality, in that the level of quality may relate to many variables and concepts, such as the quality of reported earnings and the quality of auditing services provided by both internal and external auditors. Consequently, in order to properly quantify and thus gauge the level of financial reporting quality, prior studies have used a number of proxies by which the quality of financial reports can be estimated. In the subsections to follow, a detailed discussion is offered on the proxy measures utilised by scholars, namely: earnings management, earnings smoothing, accounting conservatism, value relevance of reported earnings, and reporting manipulation beyond numbers.

2.2.3.1 Earnings Management.

Definition and Concept of Earnings Management.

Earnings management refers to discretionary managerial behaviour with respect to financial reporting preparation and accounting choices. Although it has been the focus of a considerable body of literature, there is no consensus among scholars on one definition of earnings management. For instance, Schipper (1989) states that earnings management is a "purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain" (p. 92). Similarly, Healy and Wahlen (1999) propose that "earnings management occurs when managers use

judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers" (p. 368). More recently, El Diri (2017) states that earnings management within Generally Accepted Accounting Principles (GAAP) is "management discretion over external financial reporting by abusing some contracting deficiencies, stakeholders' bounded rationalities, and information asymmetry in the market, through some economic decisions, a change in the accounting treatment, or other sophisticated methods" (p. 8). The latter definition indicates that earnings management may involve practices that extend beyond accounting choices to include other forms of deliberate manipulation, such as real transaction alteration.

Another definition offered by Ronen and Yaari (2008) states that "earnings management is a collection of managerial decisions that result in not reporting the true short-term, value-maximising earnings as known to management" (p. 27). It is a three-fold definition: "the first measures earnings against the short-term truth as it is known to management. The second attaches subjective value to earnings management. The third describes in a broad sense how earnings management is achieved." (Ronen & Yaari, 2008, p. 27).

Incentives of Earnings Management.

The literature on earnings management offers several explanations of the rationale behind firms engaging in these practices. First, capital market incentives constitute one of the strongest motivations to engage in earnings management. For example, Cohen et al. (2008) document that firms issuing seasoned equity offerings engage in earnings management as a means of impacting their stock price. Another capital market incentive relates to meeting or beating earnings benchmarks. Small positive profits, small earnings increases, and analysts' forecasts are examples of benchmarks a firm's management may be induced to meet or beat (Carey et al., 2006; Francis & Yu, 2009; Gul et al., 2013). In Saudi Arabia, loss avoidance by reporting small positive profits constitutes one of the main drivers of managers adopting earnings management techniques (Habbash & Alghamdi, 2015, 2017)

A firm's management may also engage in earnings management for direct motives of self-interest. For instance, management compensation packages that are

directly linked to the firm's financial performance may strongly motivate a firm's executive team to engage in earnings management. Numerous scholars find that management compensation is strongly and directly related to accrual-based and real activity-based earnings management (e.g., Healy, 1985; Zhou et al., 2018). Other factors that motivate discretionary financial reporting practices may stem from contractual commitments to other firms or organisations. For instance, firms with considerable levels of leverage and poor financial performance may engage in earnings management to avoid violating debt-related covenants (Roychowdhury, 2006). The findings of DeFond and Jiambalvo (1994) show that firms with high probability of covenant violation attempt to boost their earnings using accounting discretion.

Finally, earnings management may be practised as a response to political incentives. The political cost hypothesis has been investigated in and supported by a number of studies (e.g., Cahan, 1992; Ramanna & Roychowdhury, 2010). Another political perspective relates to the implications of agency theory (Type II). Specifically, Chaney et al. (2011) find that firms connected to politicians are more likely to engage in earnings management than their non-connected counterparts are. Finally, in some jurisdictions, regulatory bodies impose strict requirements that could lead to listed firms engaging in earnings management in order to avoid penalties. In support of this view, Hu et al. (2012) find that Chinese firms practise earnings management in an attempt to avoid penalties associated with violating the regulations of the China Security Regulatory Commission or in order to meet its requirements.

Determinants of Earnings Management.

A) Firm Characteristics

The literature establishes that firm characteristics are important determinants of earnings management practices (e.g., Alhadab, 2017; Alzoubi, 2016; Becker et al., 1998; Jelinek, 2007; Jensen & Meckling, 1976; McNichols & Stubben, 2008; Simon et al., 1986; Sloan 1996; Watts & Zimmerman, 1978; White, 1970). For instance, scholars provide evidence that firm size, firm profitability, firm growth and firm growth opportunities, dividend payout policy, cash flow from operations, capital structure, firm complexity, and capital expenditure are all important factors in determining earnings management practices (Abbott et al., 2003; Alhadab, 2018; Alzoubi, 2016; Becker et al., 1998; Cohen & Zarowin, 2010; Doukakis, 2014;

Habbash, 2019; Jelinek, 2007; Kim et al., 2010; Lemma et al., 2013; McNichols & Stubben, 2008; Peasnell et al., 2005; Simon et al., 1986; Summers & Sweeney, 1998).

Firm size has been extensively investigated by numerous scholars as a factor that influences earnings management (Alhadab, 2018; Francis & Yu, 2009; Jensen & Meckling, 1976; Sun & Liu, 2016; Watts & Zimmerman, 1978; Zang, 2012). Firm size may be a contributing factor to earnings management on the one hand, because large firms have strong reasons to be involved in earnings management practices due to capital market pressure to meet predicted performance (Watts & Zimmerman, 1978). On the other hand, various scholars (e.g., Becker et al., 1998; Choi et al., 2010; Lemma et al., 2013) indicate that larger firms are subject to closer regulatory monitoring, which diminishes their opportunities to engage in earnings management. In addition, larger firms may suffer from greater reputational damage as a consequence of earnings management that is discovered (Kim et al., 2003). Additionally, smaller firms have less access to resources, which may mean fewer opportunities to improve their governance and monitoring mechanisms (Kim et al., 2003; Sloan 1996). Consequently, smaller-sized firms may have a higher tendency to engage in earnings management (Doukakis, 2014; Koh, 2003).

Another characteristic that has been proposed as a significant determinant of earnings management is firm profitability (Alzoubi, 2016; Singh et al., 2019; Sun & Liu, 2016; White, 1970). Prior studies (e.g., Ashari et al., 1994; Lee et al., 2006) suggest that firms' underperformance constitutes a greater incentive that motivates them to engage in earnings management. Ashari et al. (1994) explain that underperforming firms can polish their reported financial performance using earnings management techniques in order to access external financing. In addition to this, a number of studies document a negative relationship between earnings management and firm financial performance (e.g., Alzoubi, 2016; Burgstahler & Dichev, 1997; Kuo et al., 2014); indeed firms who report negative financial performance may not be motivated to engage in earnings management (Francis & Yu, 2009). In addition, higher profitability may induce firms to maintain or increase their reported earnings (Roychowdhury, 2006). Consequently, superior firm performance may be positively related to earnings management.

The literature demonstrates that firm growth and growth opportunities constitute important factors in determining managerial discretionary practices towards financial reporting (Alzoubi, 2016; Lemma et al., 2013; Roychowdhury, 2006; Skinner & Solan, 2002). The motivation to engage in earnings management by rapidly growing firms relates to capital market incentives. Specifically, growth firms engage in earnings management in order to avoid negative earnings surprises (Roychowdhury, 2006). Lemma et al. (2013) provide another explanation that relates to access to external financing. In support of these views, Kuo et al. (2014), and Alzoubi (2016) find that growth opportunities are significantly related to firms' engagement in earnings management.

Researchers have argued that a firm's cash flow from operating activities may also be an important driver of earnings management. Dechow et al. (1995) and Cohen et al. (2010) explain that cash flow from operating activities is an important factor to consider when investigating managerial tendencies to engage in earnings management practices. Scholars (e.g., Bhuiyan et al., 2020; Gul et al., 2009; Peasnell et al., 2005) document a significant relationship between earnings management and cash flow from operating activities.

The literature on earnings management also indicates that a firm's capital structure is another significant determinant of earnings management behaviour (Becker et al., 1998; Jelinek, 2007; Kim et al., 2010; Kuo et al., 2014; Watts & Zimmerman, 1978). Specifically, debt capital providers (i.e., lending institutions) may play a significant role in restraining managerial opportunism by closely monitoring the quality of borrowing firms' financial reports (Becker et al., 1998; Jelinek, 2007; Kim et al., 2010; Lee et al., 2012). In contrast, other scholars suggest that borrowing firms may be motivated by debt covenants to engage in earnings management practices. That is, in order for firms to avoid violating their financing contractual agreements, managers may deliberately engage in income-increasing earnings management. Additionally, firms may engage in earnings management as a means of enhancing their financial position and results in order to access external financing (i.e., "window-dressing" practices). In support of these views, scholars such as Francis and Wang (2008), and Boone et al. (2010) find that highly leveraged firms are more likely to engage in earnings management.

Practices of managerial discretion may be occasioned when a firm's economic and operational circumstances provide managers with opportunities to engage in manipulative practices. For instance, operational complexity may be a contextual factor that managers can exploit to conceal earnings management. The existence of subsidiary firms may increase the complexity of reporting processes (Simon et al., 1986), especially when such subsidiaries operate in an environment with lower legal enforcement (Dyreng, Hanlon et al., 2012). In addition, Bonacchi et al. (2018) find supporting evidence that managers take advantage of existing consolidated structures to practise earnings management in the subsidiary level.

Levels of capital expenditure has also been investigated in the accounting literature to determine its impact on earnings management practices. Scholars (e.g., Cohen & Zarowin, 2008; Kedia & Philippon, 2009; McNichols & Stubben, 2008) claim that capital expenditure and managerial opportunistic behaviour are positively related. McNichols and Stubben (2008) explain that this may be related to the aggressive management of a firm's operations. Specifically, managers may resort to earnings management in order to facilitate the approval of over-investment decisions. In support of this view, Cohen and Zarowin (2008) and Kedia and Philippon (2009) document that during periods of increased capital expenditure, managers tend to distort financial reporting through earnings management practices.

Finally, firm life cycle constitutes another factor that may play a role in determining earnings management practices (Gul et al., 2009; Singh et al., 2019; Wang, 2014). Prior studies use a number of proxies to investigate the impact of firm life cycle on managerial opportunism. For instance, scholars often use firm age as a proxy and find that earnings management is significantly related; Chi et al. (2009) and Gul et al. (2009) report that managers of a mature firm are more likely to avoid engaging in earnings management.

B) Firm Governance Structure

The governance structure of a firm has been widely accepted as an important determinant of earnings management (García et al., 2012; Habbash, 2019; Klein, 2002). For instance, components of governance such as the board of directors (Klein, 2002; Peasnell et al., 2005), audit committee (Abbott et al., 2004), internal audit function

(Stewart & Subramaniam, 2010), and external auditing (Becker et al., 1998; Habbash & Alghamdi, 2017; Zhu, 2012) are factors that can limit managerial opportunism.

The board of directors is an important component in the governance environment of listed firms. A number of board characteristics have been investigated and found to be significantly related to earnings management. For instance, Xie et al. (2003) and Dalton and Dalton (2005) find that having a large number of directors serving in the boardroom tends to restrict earnings management practices. This relates to the increased ability of the board to detect and constrain opportunistic practices on the part of management. In seeming contrast to this, Rahman and Ali (2006) find that smaller boards are more effective in restraining managerial opportunism. Another important factor is the independence of the board. Scholars propose that independent directors are more likely to be free from bias and may contribute to less engagement in earnings management. For instance, Klein (2002) documents board independence as an effective governance mechanism that restrains the reporting of abnormal accruals. In the same vein, Peasnell et al. (2005) find that outside directors can alleviate earnings management practices.

Another governance component that has received significant attention in the earnings management literature is the audit committee (e.g., Klein, 2002). Audit committee characteristics, such as size, activity, and expertise are considered effective governance mechanisms that may mitigate managerial discretion. For instance, Lin and Hwang (2010) suggest that larger audit committees are effective in decreasing earnings management. Similarly, Abbott et al. (2004) demonstrate that increased activities of the audit committee can restrain managerial opportunism. Xie et al. (2003) also find that more frequent meetings of an audit committee during the reporting period is significantly associated with lower discretionary current accruals. These authors, however, fail to report a significant relationship with regards to the size of the audit committee.

In addition to audit committees' direct impact on earnings management practices, an effectively operating audit committee may also contribute indirectly through overseeing and supporting an effective internal audit function (Alzoubi, 2019; Anderson, 2004). The internal audit function has increased in importance due to its significance as a corporate governance mechanism. The literature provides significant evidence on the importance of internal auditing in restraining discretionary reporting

practices. For instance, García et al. (2012) find that the internal audit function plays an important role in restraining managerial opportunism. Similarly, Prawitt et al. (2009) provide evidence that the extent of earnings management is negatively associated with the quality of internal auditors. Finally, Alzoubi (2019) finds that earnings management can be mitigated by the internal audit function.

C) Firm Ownership Structure

Those who make up the ownership structure of a listed firm comprise one of the main stakeholder categories. Firm owners (i.e., stockholders) play a significant role in leading the direction of strategic decisions by controlling the board of directors through general assembly. Therefore, stockholders may contribute to the extent to which firms report neutral or distorted earnings. Specifically, family ownership and government ownership are two of the extensively investigated ownership structures that may be determinant of earnings management (Alzoubi, 2016; Chaney et al., 2011; Chen, H. et al., 2011; Razzaque et al., 2016; Wang et al., 2020).

Prior studies on earnings management suggest that family ownership may significantly influence managerial discretion (Alzoubi, 2016; Chaney et al., 2011; Razzaque et al., 2016; Wang, 2006). Specifically, Wang (2006) and Alzoubi (2016) find that family ownership is associated with enhanced quality of reported earnings as family members are motivated to preserve long-term benefits to their firm in order to protect the family name and the stake of future generations. However, Gul et al. (2009) indicate that contrary to this, family owners may be induced to extract personal gains to the detriment of a non-controlling interest. Another variable related to ownership structure that may be a driver of financial reporting quality is government/state ownership. Studies that investigate the impact of government ownership on listed firms provide extensive evidence that governments being shareholders can influence the reporting systems of firms (Wang et al., 2008). The literature also shows that earnings management is significantly related to government ownership (Chen, H. et al., 2011; Wang et al., 2020).

Earnings Management Detection Techniques.

Accrual-Based Earnings Management

A) Aggregate Accruals Approach

Accrual-based accounting is an essential practice that has been implemented by businesses for decades. Simply put, accrual-based accounting is based on the matching principle whereby both revenues and expenses related to a given accounting period are included in a firm's financial statements for that period, regardless of whether the associated cash flows have taken place. However, managerial discretion with respect to accruals has diverted the intended use of accrual-based accounting towards the attainment of self-oriented objectives. The literature offers several techniques that can measure earnings management practices that manipulate the reporting of accruals and their impact on the quality of financial reports. Scholars such as Healy (1985), Jones (1991), Dechow et al. (1995), and Kothari et al. (2005) employ detection techniques that aim to quantify the total accruals used to measure a firm's earnings (aggregate accruals). Other accrual-based detection techniques that have been used by researchers in the literature of earnings management consider specific/single account accruals.

Healy (1985) developed one of the earliest models to estimate the effect of earnings management as reflected in the discretionary component of accruals. In estimating the non-discretionary component, Healy (1985) notes that total accruals are composed of discretionary and non-discretionary components and his model estimates the non-discretionary component as a function of the firm's accruals over recent reporting periods. Specifically, the model estimates the non-discretionary component as the long-term average of five years (Dechow et al., 1995; El Diri, 2017). However, due to accruals reversal in subsequent periods, the model may result in estimating discretionary accruals as total accruals of the firm in a given year (El Diri, 2017). This indicates that the process of estimation may lead to misclassification of the discretionary and non-discretionary components of firms' accruals (Dechow et al., 1995; El Diri, 2017).

Jones' (1991) model has been extensively used in the accounting literature to capture earnings management. In its original form, the model uses a time-series

approach. The model assumes that total accruals of a firm arise from two main sources: economic conditions and managerial discretion. While managerial discretion contributes the discretionary portion of total accruals, a firm's economic conditions contribute the non-discretionary portion. The model estimates the amount of non-discretionary accruals as a function of two explanatory variables using a linear regression method. Specifically, sales revenue is used as a determinant of the variation in total accruals that relates to economic changes caused by the firm's working capital, while capital intensity is used as a determinant of the total accruals variation related to depreciation expenses (Bernard & Skinner, 1996; Dechow et al., 2010; Lee & Vetter, 2015). Finally, the residual value of the regression is considered to be the discretionary portion that can be attributed to managerial discretion. In order to mitigate the issue of heteroscedasticity (where the variability of the key variable is unequal across the range of values of a second variable), all model components are scaled by the lagged value of the firm's total assets. However, the model does not account for the variation in total accruals related to credit sales that arise as a result of managerial discretion rather than the real economic conditions of the firm (Dechow et al., 2010). In an attempt to resolve this issue, Dechow et al. (1995) introduced the modified Jones model in 1995.

Jones' (1991) model assumes that total change in revenue is a result of economic conditions. However, due to the fact that credit sales may be used to manage firm's earnings, Dechow et al. (1995) introduced to Jones' (1991) model the change in credit sales from the prior year, in order to control for sales that arise from genuine business practices (i.e., cash sales) (Dechow et al., 2010; Lee & Vetter, 2015). The modified Jones model assumes that genuine credit sales of the current year is a function of credit sales of the previous year and therefore asserts that the increase (or decrease) in credit sales is a result of earnings management. The improvements represented by the modified Jones model give it better explanatory power than the Jones (1991) model. However, a number of researchers criticise both models for misspecifications due to not controlling for the financial performance of firms. For instance, the findings of Kasznik (1999) and McNichols (2000) imply that exceptionally performing firms may undermine the predictability of the model. For this reason, Kothari et al. introduced a performance matching model in 2005.

A number of studies (e.g., Dechow et al., 1995; Kothari et al., 2005) indicate that a correlation between the level of accruals and the financial performance of sample

firms can be detrimental to the accuracy of discretionary accruals estimates. Based on the concern that the distribution of sample firms may be skewed in terms of financial performance, the performance matching model introduces additional specifications in an attempt to improve the accuracy of estimates of the non-discretionary portion of total accruals. First, in order to control for the highly skewed distribution of financial performance of sample firms, the performance matching model of Kothari et al. (2005) includes the return on assets (ROA) of the firm as an additional component in the regression. The authors propose that this approach is beneficial for studies with sample size limitations in order to minimise the number of eliminated observations. An alternative approach to using performance matching that was proposed by the authors for calculating discretionary accruals relies on matching two comparably performing firms (i.e., treatment and control) based on their ROA ratios. The discretionary accruals of the treatment firm are then calculated by subtracting the discretionary accruals of the control firm, using the Jones model or the modified Jones model.

Kothari et al. (2005) demonstrate that this approach (i.e., adding ROA as an additional component) may overcome the disadvantage related to the assumed linearity between accruals and performance when following the first approach. The authors claim that using ROA as a component to control for financial performance is justified by its nature as a measure of performance. That is, the ratio of a firm's net income to its total assets can, by definition, be considered a measure of its financial performance (Kothari et al., 2005). Additionally, empirical research on the relationship between abnormal performance and abnormal stock returns shows that using ROA as a performance-matching criterion enhances the specifications of the model and thus the resulting power of tests (Kothari et al., 2005). Another significant contribution of the performance matching model relates to mitigating the econometric specification of the Jones (1991) and modified Jones (1995) models. Specifically, Kothari et al. (2005) suggest that the inclusion of a constant term (an intercept) further enhances the model estimation by mitigating the issue of heteroscedasticity and variable omittance.

B) Specific/Single Account Accruals Approach

Another accrual-based detection technique that has been used by researchers investigating earnings management relates to the managerial use of specific/single accounts. This approach recognises the exploitation of specific accounts that require

considerable managerial judgment and estimation. For instance, accounting for allowances (e.g., allowance of doubtful accounts) requires managers to estimate bad debts in order to match revenue of the current period. Scholars (e.g., Cecchini et al., 2012; Jackson & Liu, 2010; McNicols & Wilson, 1988) investigating managerial discretion over bad debt accounting have found that managers use their discretion in accounting for bad debt expenses as a means to deliberately impact financial results. Similarly, other scholars find that managers misuse accrual accounting to manage earnings through accounting for the depreciation of fixed assets (Teoh et al., 1998); warranty reserves (Cohen et al., 2011); and allowance of deferred tax assets (Miller & Skinner, 1998). An evident drawback of using the specific account approach to detect earnings management is the fact that managers are not likely to restrict their discretionary powers to one single account if they are seeking to manipulate the financial reports of their firms (McNichols, 2000). In fact, if this is their aim, managers are likely to use more than one technique simultaneously to affect reported earnings. Another technique that managers may utilise is based on the discretionary use of real transactions to affect earnings, which is discussed in the following section.

Real Activity-Based Earnings Management

Methods for detecting accrual-based earnings management have been the focus of earlier scholarly works in the financial reporting literature. More recently, a growing body of research has emphasised the importance of examining other means by which firms may influence their financial reports. For instance, a management team may deliberately fail to optimise the micro-economic condition of their firm for the sole purpose of influencing financial reports. A number of scholars (e.g., Bhuiyan et al., 2020; Gunny, 2010; Roychowdhury, 2006) have documented evidence of the deliberate altering of real business transactions with the intent to manipulate reported earnings. The manipulation of real transactions is driven by an attitude of short-termism on the part of managers in order to achieve certain objectives. For instance, Roychowdhury (2006) finds that managers manipulate real activities in order to meet earnings benchmarks to the detriment of future financial performance.

In a similar way to techniques of accrual-based earnings management, methods of detecting real activity-based earnings management have been the focus of a number of studies (e.g., Cohen & Zarwin, 2010; Gunny, 2010; Roychowdhury, 2006).

Roychowdhury (2006) utilises a three-model approach to examine managerial discretion over real transactions and the motivations of managers to engage in this form of manipulation. The author finds that firms purposefully alter sales, production, and expenditure in order to affect reported earnings. First, the author examines certain practices such as exceptional price discounts and lenient credit terms that firms may use to increase their earnings in a particular period to meet predetermined earnings benchmarks. The authors assume that such practices aim to motivate customers to accelerate their purchases in order to benefit from the promotional offers. Consequently, revenues of that period and the firms' earnings increase as a result of the leniency. However, Roychowdhury (2006) finds that this practice does not come without a cost; in the subsequent period, firms would be likely to experience an abnormal decline in their cash flow from operations.

Second, Roychowdhury (2006) investigates discretionary practices related to the production behaviour of firms in order to identify potential abnormalities. Specifically, the author examines whether firms misuse strategies related to economies of scale in order to influence the cost of goods sold. Roychowdhury (2006) find that firms can inflate the quantity of units produced in order to distribute their fixed overhead costs over higher production numbers, thus decreasing the overhead cost assigned to each unit.

Third, Roychowdhury (2006) investigates discretionary expenses for potential deviations from normal levels that may constitute managerial attempts to affect reported earnings. Specifically, these are expenses related to research and development (R&D) activities and advertising, that may be altered in order to enhance profit margins. In addition, selling, general, and administrative expenses may also be manipulated to enhance reported earnings. Roychowdhury (2006) claims that although these expenses may not be considered as subject to discretion as those associated with R&D and advertising, they include a certain proportion of expenses that can be manipulated, such as those related to staff training and maintenance. When these expenses are associated with cash outflows in the current period, cash flow from operations will abnormally increase in the reporting period to the detriment of cash flows from operations in future periods.

Finally, Cohen et al. (2008) provide a combined measure, or proxy, that aggregates the effects of the three-model approach developed by Roychowdhury (2006). Specifically, Cohen et al. (2008) suggest that a firm may engage in real activity-based earnings management by employing one or more of the techniques discussed earlier (i.e., sales manipulation, production cost manipulation, and discretionary expense manipulation). The authors developed as a proxy the sum of the standardised individual measures in order to capture the combined effect of the three techniques. However, Cohen et al. (2008) suggest that the index may be subject to a dilutive effect due to the combination of the three variables. This is based on the notion that firms use real activity-based earnings management in order to report upwardly biased earnings. Sales manipulation and discretionary expense manipulation would reflect lower levels of cash flow from operations and discretionary expenses, while reporting higher levels of productions costs. Furthermore, Roychowdhury (2006) as well as other scholars (e.g., Cohen & Zarwin, 2010; Gunny, 2010) provide strong evidence of managerial discretion over real transactions in an attempt to engage in income-increasing real earnings management. Nevertheless, other scholars (e.g., Cooper et al., 2008; Eldenburg et al., 2011; Francis et al., 2016; Mao & Renneboog, 2015) provide evidence that supports the view that real economic transactions may also be altered to manage earnings downwardly. This suggests that regardless of the objective of the managing team, financial reports can be distorted using real activity-based earnings management in a similar manner to using accrual-based earnings management (Bhuiyan et al., 2020).

In a similar way to the single-account approach in accrual-based earnings management, scholars attempting to detect real activity-based earnings management can also use a single-transaction approach. In this context, a single transaction refers to using one type of business transaction to manage reported earnings in an attempt to attain predetermined objectives. Consequently, scholars examining real activity-based earnings management focus on specific transactions that would be apt for such managerial discretion. The impact of these practices may be a direct consequence of managers exercising their discretion. Specifically, some scholars focus their attention on the use of R&D expenditure as a means of detecting real transaction manipulations (e.g., Bushee, 1998; Osma, 2008). In these cases, the impact of managerial discretion could be calculated as an exact value, measured as the amount of R&D expense.

Alternatively, managers may rely on an estimated gap between two values (namely, book and market values). For instance, other scholars focus on the discretionary timing of selling fixed assets or short-term investments (Bartov, 1993; Herrmann et al., 2003). In this case, managers would report an estimated market value that is higher (or lower) than the book value of the respective asset, resulting in income-increasing (or income-decreasing) manipulation. Similarly, Jackson and Wilcox (2000) provide evidence of using price discounts as a means of managing earnings using real transactions. This proxy is based on the difference between the value of the firm's product as perceived by its customers, and the offered price after the discount, and the effect of the difference in accelerating sale transactions.

The motivations behind managing reported earnings via accruals or real transactions alteration may be similar, however, the comparison between the two approaches may lead some firms to prefer one approach over the other. An important difference between them relates to the costs associated with managing reported earnings. Due to the involvement required to alter actual activities, real economic consequences are inevitable when firms engage in real activity-based earnings management. These economic consequences translate into higher costs that impact the firm's cash flows (Roychowdhury, 2006), resulting in higher incurred costs (Chi et al., 2011). Therefore, firms with fewer available resources may not be able to employ these techniques (Cohen & Zarowin, 2010; Zang, 2012). On the other hand, scholars find that quality auditors, regulatory scrutiny, litigation risk, and the accumulated impact of managing accruals may limit a firm's ability to engage in accrual-based manipulation, and thus lead firms to engage in real activity-based earnings management (Alhadab et al., 2015; Chi et al., 2011; Cohen & Zarowin, 2010; Gunny, 2010). Consequently, a manager's preference for one earnings management technique over another may be determined by their firm's particular circumstances, which implies that the two categories of earnings management techniques are more or less substitutes for each other. Nevertheless, some firms may have more flexibility in managing their earnings, which gives their managers the opportunity to employ both techniques. For instance, Alhadab et al. (2015) find that firms manage their earnings using accruals and real transaction manipulations during their initial public offering year.

The earnings management detection techniques that seek to identify and measure discretionary practices related to accrual accounting and real transactions focus on the

means by which managers transform their intentions into actions. Other scholars, however, focus on the way managers' manipulative actions translate into observable effects in financial reports. As discussed earlier in this chapter, meeting or beating certain earnings benchmarks may be a key incentive that drives managerial discretionary practices. Therefore, the next section discusses irregularity of earnings distribution around earnings benchmark as possible evidence for earnings management practices.

Earnings Distribution around Discontinuity of Earnings.

Besides the extensive use of econometric models to detect and measure accrual-based and real activity-based earnings management, the literature offers other approaches that can be used to identify and examine earnings management practices. For instance, studies by Hayn (1995) and Iatridis (2010) employ an identification approach that utilises the symmetry of normal distribution and the impact of capital market incentives to identify possible instances of managerial discretion in financial reporting. Since reported earnings are assumed to follow a smooth statistical distribution, asymmetry or discontinuity of reported earnings around certain benchmarks may signal that manipulative practices are being used (Burgstahler & Dichev, 1997; Francis et al., 2013; Gul et al., 2013; Hayn, 1995; Iatridis, 2010).

Specifically, a firm's management may be induced to engage in earnings management when earnings are close to the zero earnings threshold. Hayn (1995) explains that distributional discontinuity of earnings around the zero point, with higher frequencies to the right of zero than to the left, indicates a higher likelihood that firms who repeatedly avoid reporting small losses engage in managerial discretion so as to report small profits. McNicols (2000) contends that following this approach to investigate potential earnings management may be more successful than approaches that require econometric modelling. Graham et al. (2005) find that managers are willing to exploit GAAP loopholes and alter real transactions in order to avoid severe market consequences that may arise due to missed earnings benchmarks, such as the zero-earnings point.

Despite McNicols' (2000) confidence in this approach, some scholars find that it is not without its limitations. They argue that unequal distribution of earnings around a specified benchmark may be attributed to factors other than earnings management. For instance, the basis upon which earnings size is measured (deflator), the sample

selection criteria, and/or certain differences between firms on the right of the zero threshold and the firms on the left of the zero threshold may contribute to asymmetry of earnings distribution (Durtschi & Easton, 2005). Additionally, specific earnings components may drive the irregularity of earnings distribution around the zero point. For example, Beaver et al. (2007) demonstrate that income taxes and special items also affect the shaping of earnings distribution.

Impact of Earnings Management on Financial Reporting Quality.

The quality of information in financial reports is crucial to the precision and quality of economic decisions made by the users of this accounting information (Herath & Albarqi, 2017). As discussed in Section 2.2.2, characterising a financial report as high quality assumes that the published information it contains is relevant to the economic decisions that must be based on it. In addition, a financial report must faithfully represent the economic circumstances of the reporting firm. By definition, earnings management is a deliberate deviation from conveying the real economic circumstances by using accounting treatment and/or real transactions (Eldiri, 2017; Roychowdhury, 2006; Schipper, 1989). Therefore, earnings management practices result in a reduction of the quality of financial reports.

Earnings management practices also undermine the prediction and/or confirmation value of the accounting information due to the purposeful distortion of the economic reality. The ability of financial report users to assess the fundamentals of the reporting entity is, by definition, impaired. Consequently, financial information included in reports that draw on manipulated figures lack the quality of relevance, since the information is inaccurate and therefore cannot support the decision making of their users. In addition, faithful representation of the underlying economic circumstances of the reporting entity requires that the information be complete, neutral, and free from error. Purposeful alteration of accounting treatments and/or economic transactions with the intent of misleading users of financial reports may result in significant inaccuracies that harm decision-making processes.

The destructive effects of earnings management on the quality of financial reports also extends to the harm suffered by the reporting entity itself. First, investors use accounting information to estimate the value of reporting entities. Manipulation of such information using accrual and/or real earnings management techniques may

result in an erroneous assessment of the firm value and therefore the negative performance of the stock in the long-term (Choi, Choi et al., 2018; Choi, Sohn et al., 2018; Dechow et al., 2010; Kothari et al., 2012). Second, creditors and lenders pay close attention to the credit rating assigned to borrowing firms by credit rating agencies. Francis et al. (2005) find that lower-quality accruals deteriorate the credit rating of borrowing firms and increase their cost of debt capital. Capital providers' failure to price-in the effect of earnings management on the quality of earnings may lead to less efficient pricing of the costs of both equity and debt capital, resulting in less efficient capital allocation. Third, earnings management, especially when practised through real transactions alteration, may severely affect the financial performance of the reporting entity. Scholars such as Cohen and Zarowin (2010) demonstrate the negative effect of real transaction manipulation on the performance of the firm during the period of seasonal equity offering. Similarly, Francis and Krishnan (1999) find that auditors tend to issue modified audit opinions for firms practising earnings management. This, in turn, may lead to a decline in the market value of the reporting firm (Chen et al., 2000).

2.2.3.2 Reported Earnings Smoothing.

The practice of reported earnings smoothing is defined as "the intentional dampening of fluctuations about some level of earnings that is currently considered to be normal for a firm" (Beidleman, 1973, p. 653). The stability, as opposed to volatility, of reported earnings is essential to earnings quality from an investor's perspective. The notion behind this is that earnings smoothness enhances the ability of investors to predict future operational outcomes and increase their valuation accuracy (Dechow et al., 2010). Eckel (1981) suggests that income smoothing may result naturally from legitimate accounting and business-related procedures. However, income smoothing may also be the result of intentional or discretionary managerial practices. Similar to techniques of earnings management, intentional earnings smoothing may be practised using accounting techniques and/or real smoothing techniques (Eckel, 1981).

The literature offers a number of proxies by which income smoothing can be detected. For instance: the difference between reported earnings and normal levels of earnings based on prior periods (Beidleman 1973); inconsistent use of accounting policies and procedures (Moses, 1987); relative variation of income to variation in sales (Eckel, 1981); and the ratio of variation in accounting earnings to variation in cash flows (Leuz et al., 2003) can all be used as proxies.

Earnings smoothing is considered to be a practice of managerial discretion in which earnings management techniques are deliberately employed to mitigate variation in reported accounting earnings. Although earnings smoothing is considered to be an intentional alteration of financial reports, depending on managers' motivations for engaging in it, such activities may not necessarily cause a lessening of financial reporting quality. Rather, scholars suggest that managers may use earnings smoothing as a way of revealing private information to the users of financial reports (Dechow et al., 2010; Dichev & Tang, 2009).

Consequently, there are two distinct views in the literature with respect to reported earnings smoothness. First, scholars such as Leuz et al. (2003) and Burgstahler et al. (2006) perceive smoothed earnings as resulting from managerial discretion intentionally used to hide private information from external users. This practice, sometimes referred to as "information garbling" reduces the quality of financial reports in order to achieve predetermined objectives. In fact, earnings smoothing may lead to managerial engagement in more aggressive forms of earnings management. For instance, Myers et al. (2007) argue that when estimates for future economic circumstances are unrealistically optimistic and lead to income-increasing earnings management in order to maintain a long-term trend of smoothened earnings, managers' behaviour may evolve to more aggressive forms of earnings management.

This becomes necessary due to the reversal of previously used accruals and the desire on the part of management to maintain earnings levels. In such cases, Myer et al. (2007) indicate that the cumulative impact may lead to an extreme distortion of financial reports (i.e., fraudulent practices). On the other hand, scholars such as Chaney et al., 1998 and Tucker and Zarowin (2006) argue that discretionary smoothing of reported earnings enhances the information content of such earnings. That is, the authors propose that management may choose to smooth earnings as an information conveyor (i.e., "information signalling"). In this vein, Baik et al. (2020) suggest that managers have a better ability to understand the economic circumstances of their firms and can thus better predict their future performance. From this perspective, earnings smoothing serves as a means by which managers convey private information that enhances the predictability of future performance by external stakeholders (Tucker & Zarowin, 2006).

2.2.3.3 Accounting Conservatism.

The concept of accounting conservatism has underpinned professional accounting practices for decades (Basu, 1997). An early definition of accounting conservatism offered by Bliss (1924) is to "anticipate no profits and provide for all probable losses" (p. 110), which indicates the basics of the conceptual construct. The notion behind conservative accounting is to ascribe the highest value to possible liabilities and the lowest value to firm assets (Watts & Zimmerman, 1986). Conservatism is therefore perceived as the set of practices that result in an undervaluation of the book value of a firm's net assets as compared to its underlying economic value (Ruch & Taylor, 2015).

A more operational definition for accounting conservatism offered by Basu (1997) is "the accountant's tendency to require a higher degree of verification to recognise good news or positive economic performance as gains than to recognise bad news or negative economic performance as losses" (p. 4). The importance of accounting conservatism to financial reporting stems from the restraint of opportunistic managerial practices through tighter requirements for revenue and earnings recognition compared to those of expense and loss incurrence (Watts, 2003; Watts & Zimmerman, 1986, 1990). These requirements have become an ideological construct in the accounting profession that influences financial reporting through continuous conservative practice (unconditional conservatism) and event-triggered conservative treatments (conditional conservatism).

The distinction between these modes of conservatism in the accounting literature implies that each impacts differently on financial reporting. Unconditional accounting conservatism relates to the consistent application of accounting processes and procedures that cause a firm's net assets to be undervalued (Ruch & Taylor, 2015). Examples of this type of conservatism include the overstatement of reserves, the allowance of doubtful accounts, expensive R&D costs, and employing LIFO ("last-in-first-out") methods of inventory accounting (Ruch & Taylor, 2015). Compared with this mode, the application of conditional conservatism is triggered by the receipt of bad news. That is, the recognition of a negative impact that accompanies bad economic news is accelerated, compared to the recognition of a positive impact resulting from good economic news (Basu, 1997; Qiang, 2007; Ruch & Taylor, 2015). As Basu's

(1997) definition implies, this asymmetry is a consequence of the higher verification required for a positive impact as compared to a negative impact. Examples of conditional conservatism include recognising long-lived assets and goodwill impairments and recognising the negative impact of the difference between inventory cost and market value (in GAAP) or net-present value (as per the International Financial Reporting Standards [IFRS]) (Ruch & Taylor, 2015).

The number of studies that investigate conditional conservatism suggests that it has been of greater interest to scholars than unconditional conservatism (Qiang, 2007; Ruch & Taylor, 2015). Ruch and Taylor (2015) attribute the greater focus on conditional conservatism to its implications for firms' contracting and valuation issues. That is, by practicing conditional conservatism, management can communicates uncertainties related to potential economic circumstances (Ruch & Taylor, 2015). Consequently, this communication may contribute to the complexity of assessing and evaluating future operational results by users of the financial report.

The literature offers a number of market-based and accounting-based methods to quantify accounting conservatism. One of the widely employed market-based measures is the model developed by Basu in 1997. As mentioned earlier, Basu (1997) conceptualises accounting conservatism as the asymmetry of recognising negative and positive economic news (i.e., conditional conservatism). Therefore, his model aims to gauge the differential impact of negative economic news on the stock return as compared to the impact of positive economic news. Other market-based measures use the difference between the market and book value of the firm, such as the measures employed by Feltham and Ohlson (1996) and Roychowdhury and Watts (2007). Alternatively, other researchers offer methods to measure conservatism that rely on firm characteristics rather than on market-based specifications. For instance, Ball and Shivakumar (2005) propose a measure that aims to capture the asymmetrical treatment of potentially negative and positive impacts by investigating differences between accruals and cash flows.

Despite the long history and inheritance of conservatism as an accounting concept, it has been heavily criticised. The rationale for the criticism is that conservatism diminishes the neutrality of financial reporting, which should be representative of firms' underlying economic conditions, and not skewed to the

negative. For instance, hidden reserves such as the LIFO reserve and the allowance of doubtful accounts, can be exploited by managers to practice earnings-decreasing earnings management. In this way, the quality of reported earnings can be decreased by creating hidden reserves based on a conservative viewpoint that always anticipates potential contingencies (Penman & Zhang, 2002).

2.2.3.4 Value Relevance of Reported Earnings.

The concept of value relevance of accounting outcomes was introduced to the academic literature in the works of Ball and Brown (1968), and Beaver (1968). Beisland (2009) defines value relevance as "the ability of financial statement information to capture and summarise information that determines the firm's value" (p. 10). Scholars such as Ohlson (1995), and Burgstahler and Dichev (1997) have developed a number of empirical models that aim to quantify the concept.

The value of information published in financial reports is deemed to correspond to its influence in the decision-making process. By providing relevant and faithfully represented information that supports accurate decision making, financial reports enhance the ability of decision makers to assess a variety of investment alternatives. It thus facilitates efficient capital allocation. The literature on value relevance therefore attempts to evaluate the link between reported financial information and the firm's value, and to assess the behaviour of reported earnings and stock reaction (Al-Shattarat, 2021; Beaver, 2002). Specifically, value relevance proposes the perceived importance and usefulness of reported financial information as the basis on which the users of financial reports evaluate the market value of firms (Ball & Brown, 1968; Francis & Schipper, 1999).

In order to assess this association, scholars employ a return-based measure that aims to assess the extent of market return that is explained by reported earnings. This measure is based on the association between return and earnings as indicated by the R-square of the regression of earnings on market return (Beaver, 2002). Therefore, in the context of financial reporting quality, the higher the correlation between financial reporting information and stock returns, the greater the financial reporting quality. This association implies that the qualitative characteristics (such as relevance and faithfulness of representation) of financial reporting are present in the accounting information (Nichols & Wahlen, 2004). On the other hand, a weaker association

between the market return and earnings is an indicator of poor financial reporting quality (Beisland, 2009). However, this may not be always the case. The correlation of financial reporting information with the market value of the firm is conditional on the level of efficiency of the market. According to the market efficiency hypothesis, market efficiency is a fundamental aspect of the process by which public information is priced in the value of a stock (Francis & Schipper, 1999). Overall, the literature indicates that, the value relevance of reported earnings has, in fact, deteriorated (Barth et al., 2021).

2.2.3.5 Reporting Manipulation Beyond Numbers.

In the previous sections and subsections, a detailed review of the literature on the quantitative measures of financial reporting quality has been provided. Since financial reports of listed firms include both quantitative and qualitative disclosure, this subsection discusses the emergence of a more recent issue in financial reporting, namely, reporting tone management. A growing body of accounting and finance literature examines the incremental influence of rhetoric in qualitative disclosure (Huang et al., 2014).

Qualitative disclosure supposedly plays an important role in assisting outside stakeholders to understand the information content of financial reports by reducing information asymmetry between these stakeholders and the firm's management (Davis et al., 2012; Henry, 2008; Li, 2010; Price et al., 2012). However, due to the nature of standardised financial reporting (as required by GAAP and IFRS compliance) and potential limits to practices of earnings management by accrual (due to audit scrutiny) and real activity (due to prohibitive cost), firms may attempt instead to manipulate their qualitative disclosure. Qualitative disclosure takes a number of forms, including earnings press releases, conference calls, and managerial discussions in annual and quarterly reports. Managerial discretion over qualitative reporting comes mainly in the form linguistic manipulation through choice of words.

In essence, tone management represents a deviation from the ideal of financial reporting neutrality. Huang et al. (2014) define tone management as "the choice of the tone level in qualitative text that is incommensurate with the concurrent quantitative information" (p. 1083). This definition implies that choice of wording in the qualitative dimensions of financial reporting can give rise to a deliberate misrepresentation of the quantitative information. In other words, managers can increase the use opportunistic

(or pessimistic) words to inflate (or deflate) the perceived meanings of financial information in order to attain certain objectives (Davis et al., 2012).

The underlying drivers of tone management may be similar to the motives by which managers practise earnings management, however Rankin et al. (2018) offer another view on tone management incentives. The authors explain that managers may engage in tone management as a means to evade culpability. That is, firm management may attribute negative outcomes to other agents or to "circumstances". Furthermore, managers may deliberately distort stakeholders' understanding of financial disclosure by using sophisticated technical terminology to bury their poor performance and/or to deny their responsibility (Aerts, 1994).

The concept of tone measurement describes how tone can be quantified. It includes measures such as word count and often relies on computer categorisation software such as DICTION and General Inquirer. Researchers such as Davis et al. (2012), Huang et al. (2014), and Price et al. (2012) employ these software programs to quantify optimism (represented by the number of optimistic words) and pessimism (represented by the number of pessimistic words). Huang et al. (2014) argue that faithful disclosure (identified by neutral disclosure) and managerial discretion (identified by biased disclosure) can take place concurrently. That is, if the overall tone of the financial disclosure comprises normal tone and abnormal tone, the authors aim to decompose the overall tone by running cross-sectional regression and specifying normal tone determinants. The residual value, then, represents the abnormal component of the tone (i.e., indicating tone management).

Tone management practices may be beneficial or harmful to the reporting firms, depending on managerial objectives. When managers employ discretion of reporting tone to enhance the informativeness of financial disclosure, the firm may gain a number of benefits. First, the perceived legitimacy of the firm can be enhanced by reducing information asymmetry, resulting in a better reputation and acceptance by the firm's environment (Yuthas et al., 2002). Second, a firm may incur a lower cost of capital by reducing information asymmetry. Third, when management use tone management to convey credible future information, markets tend to respond favourably. The findings of Davis et al. (2012) generally support the beneficial use of tone management in earnings press releases. On the other hand, when managers engage

in tone management for manipulative purposes, the firm can be significantly harmed. Similar to the issues associated with earnings management, agency problems will magnify a firm's negative outcomes when managers engage in tone management to exacerbate information asymmetry, resulting in increased cost of capital (Rankin et al., 2018) and litigation risk (Rogers et al., 2011).

2.3 Political Connectedness

This section provides an in-depth review and discussion of the literature related to political connectedness as a characteristic of listed firms. It begins with a review the definition of political connectedness in the context of listed firms. Then, the following subsections review different ways of identifying politically connected firms, the impacts of political connections on listed firms – on their financial reporting and in other contexts – and political connectedness in Saudi Arabia and similar contexts.

2.3.1 Definition of Politically Connected Firms

The literature offers a number of definitions of political connections and political connectedness with respect to listed firms. In general terms, Wong and Hooy (2018) define political connections as "social relation[s] involving intrigue to gain authority or power" (p. 297). This definition associates political connectedness with the kinds of social bonds that are established for a firm's benefit. Such benefits constitute a competitive advantage that firms may be able to capitalise on as a means of avoiding potential uncertainties and/or gaining potential benefits. In line with Wong and Hooy's (2018) definition, Sheng et al. (2011) define political connectedness as "a firm's informal social connections with government officials in various levels of administration, including central and local governments, and officials in regulation agencies, such as tax or stock market administrative bureaus" (p. 2).

In the context of the many definitions offered in the literature, Faccio (2006) provides a widely accepted, and more operational, definition of political connection. The author states that "a company is connected with a politician if one of the company's large shareholders or top officers is: (a) a member of parliament (MP), (b) a minister or the head of state, or (c) closely related to a top official" (p. 370).

2.3.2 Identifying Politically Connected Firms

The identification of politically connected firms and the operationalisation of political connections form the cornerstone of the empirical studies that investigate various aspects of political connectedness (Habib et al., 2018). The literature offers numerous methods to identify politically connected firms. Due to variations in the political schemes across different institutional settings, the origin of political connections may take different forms. Many scholars (e.g., Boubakri et al., 2012; Braam et al., 2015; Faccio et al., 2006; Guedhami et al., 2014; Habib et al., 2017) rely on Faccio's (2006) definition of political connections. Faccio et al. (2006) identify a firm as politically connected if "at least one of its top officers or a large shareholder [is] head of state, a government minister, or a member of the national parliament" (p. 2600).

Faccio et al. (2006) classify political connections into two types based. On the one hand, political connections are considered direct if they originate from a firm's management and ownership. The authors specify that political connections are directly established through management if the "chief executive officer (CEO), chairman of the board (COB), president, vice-president, or secretary of the board [is a] head of state (i.e., president, king, or prime minister), government minister, or a member of the national parliament" (p. 2606). Similarly, political connections are directly established through ownership "if anyone controlling at least 10% of the company's voting shares [is a] head of state (i.e., president, king, or prime minister), government minister, or a member of the national parliament" (p. 2606). On the other hand, political connections arising from kinship and friendship are considered indirect. Faccio et al. (2006) identify three ways in which indirect connections are established. First, indirect connections are established "if a relative with the same last name as a head of state or minister [is] a top officer or large shareholder" (p. 2606). Second, connections are considered indirect if "a top executive or large shareholder has been described by The Economist, Forbes, or Fortune as having a friendship with a head of state, a government minister, or a member of parliament" (p. 2606). Finally, indirect political connections can be considered to be present "if such a relationship has been identified in prior studies"[4] (p. 2606).

[4] The authors specify the following studies: Agrawal and Knoeber (2001); Backman (1999); Gomez and Jomo (1997); Johnson and Mitton (2003); and Fisman (2001).

Other scholars propose that political connectedness may result from direct government involvement in the capital market, and Wong and Hooy (2018) suggest that political connectedness can also originate from direct ownership by government. These firms are identified in prior studies as state-owned enterprises (Faccio, 2006; Guedhami et al., 2014; Wong & Hooy, 2018; Wu et al., 2012).

Preuss and Königsgruber (2021) provide comprehensive categories by which a politically connected firm is identified. Namely, the authors put forward that political connectedness may originate from financial contributions (i.e., financial donations to politicians); lobbying (i.e., actual involvement with politicians); shareholdings of politicians; state ownership; geographic proximity (i.e., the location of their headquarters); social ties (i.e., kinship and friendship); and personal services (i.e., board directors, firm managers, and employees). In addition to directly observable sources of political connections, Preuss and Königsgruber (2021) also advise scholars to make use of indicators by which politically connected firms can be identified. Specifically, politically connected firms may be identified because they display various characteristics that imply a closeness to politicians. These include market reaction to political news, subsidies and governmental expenditure, and loans from government-affiliated institutions.

2.3.3 Impacts of Political Connectedness

The literature that investigates the impact of political connectedness on different aspects of firms provides inconclusive evidence on the directionality of such impact. That is, a number of studies find that political connections are beneficial to the firms in which they are present (e.g., Agrawal & Knoeber, 2001; Battaet al., 2014; Bliss et al., 2018; Boubakri et al., 2008; Faccio et al., 2006; Wu et al., 2012). Contrariwise, other studies provide evidence for the negative influence of political connectedness on firms (i.e., Ben-Nasr et al., 2012; Chaney et al., 2011; Chen, Ding et al., 2010; Habib et al., 2017; Schweizer et al., 2019).

2.3.3.1 Positive Impacts of Political Connections.

Favourable consequences of establishing political connections may come in a variety of forms. For instance, listed firms may benefit from political connections in the form of better financial reporting quality, enhanced governance and value of the firm,

and better financial performance. Prior studies show that politically connected firms are significantly different from non-politically connected firm in terms of their financial reporting behaviour. Batta et al. (2014) investigate the impact of political connectedness on the quality of reported earnings. The authors find that politically connected firms provide significantly higher-quality financial reports compared to their non-connected counterparts. They explain that political connectedness plays an important role in enhancing the quality of financial reports as means of shielding the firm against governmental intervention. In the same vein, Harymawan and Nowland (2016) provide supporting evidence that politically connected firms are more likely to increase their financial reporting quality when operating in an environment with a highly effective government. They indicate that politically connected firms may be subject to increased scrutiny and, as a result, provide better quality reports in response to pressure from market participants. Furthermore, Johl et al. (2013) document that politically connected firms provide higher-quality financial reports, as indicated by lower absolute accruals. They explain that this may be related to managers not needing to resort to discretionary measures due to their dependence on governmental favouritism. However, other scholars provide evidence that the aforementioned explanations, although theoretically appealing, may not be empirically sound. Specifically, Jennings et al. (2021) investigate whether firms with political connections to highly influential individuals over capital market authorities are associated with increased financial reporting opportunism. The authors find that increased connectedness with influential politicians significantly reduces managerial reporting misconduct. They analyse alternative explanations for this finding to explore whether they are driven by market pressure or by greater access to financing and government favouritism. However, they fail to find evidence that support these explanations.

Adding to these studies, Guedhami et al. (2014) investigate audit choice by politically connected firms. They find that politically connected firms are more likely to appoint a quality audit firm (i.e., one of the Big 4 audit firms) and this association results in lower earnings management, increased firm value, and lower cost of equity capital. Finally, Bona-Sánchez et al. (2019) examine the influence of politically connected individuals in the boardrooms of family firms by looking at the informativeness of their reported earnings. The authors report that family firms with politically connected directors reported more highly informative earnings than their

non-connected counterparts. They explain that this may relate to the firms' desire to signal higher-quality earnings.

In addition to increased financial reporting quality, the literature shows that politically connected firms may be able to benefit from their links to politicians in terms of enhanced firm value. For instance, Faccio (2006) finds that political connections contribute to increased firm value. Goldman et al. (2009) investigate the influence of nominating a politically connected individual for board directorship on the firm's stock return. They find that announcing such a nomination has an abnormal positive impact on firm value. Additionally, the authors show evidence of the positive impact of a presidential election on firms connected to politicians affiliated with the winning party. Furthermore, Wu et al. (2012) compare the impact of political connections in state-owned firms and privately owned firms. Their evidence shows enhanced performance of privately owned firms when managers are politically connected. Chen et al. (2017) argue that increased firm value resulting from political connectedness is conditional on whether the firm is owned by the government. They find that political connections contribute to higher firm value under two conditions: (1) that the firm is not state-owned, and (2) that the number of political connections is relatively low.

Politically connected individuals may also add value through enhancement of their firms' financial performance. This may be achieved through various practical means. For instance, Boubakri et al. (2012) examine the impact of establishing political connections on the firm's operations and performance. They find that political connections result in enhanced firm performance and easier access to long-term financing. Additionally, Khwaja and Mian (2005) investigate preferential treatment to firms with politically connected directors on the part of the government. They find that politically connected firms have greater access to loans from government-owned banks, even if they are more likely to default. The authors also document that politically connected firms enjoy lower costs of debt.

Houston et al. (2014) and Chaney et al. (2011) also provide supporting evidence of these associations. Specifically, the authors report that politically connected firms are shielded against increased costs of borrowing, even when they report lower-quality financial information. Furthermore, Boubakri et al. (2012) report a lower cost of equity capital for politically connected firms compared with

firms with no political ties. A number of scholars provide consistent evidence of lower cost of capital for firms with political connections (e.g., Bliss et al., 2018; Claessens et al., 2008; Houston et al., 2014). Other means by which political connections enhance firm performance involve preferential treatment from regulators. For instance, research has shown that politically connected firms are more likely to receive preferential tax and import treatments (Faccio, 2010; Faccio et al., 2006; Goldman et al, 2009), increased government support through subsidies (Wang & Lin, 2017), and lower risk and impact of enforcement actions by the capital market authority (Correia, 2014). Even in times of financial and operational difficulties, politically connected firms have a greater likelihood of being bailed out due to preferential treatment from the government (Faccio et al., 2006).

Finally, Wong and Hooy (2018) claim that the benefits of political connections that result in superior performance are conditional on the origin of these connections. Specifically, the authors find that political connections originating from direct government links (i.e., in the case of firms owned by the government) and from directors in the boardrooms, entail a positive impact on firm performance. However, political connectedness through family members and businesspersons lack such an association.

2.3.3.2 Negative Impacts of Political Connections.

Despite these significant benefits political connectedness confers upon listed firms, the literature suggests that it can be a two-edged sword (Chen et al., 2017). Some scholars argue that firms may also suffer negative consequences as a result of their political connections (e.g., Bliss & Gul, 2012; Faccio, 2006, 2010; Gul, 2006; Habib et al., 2017; Ramanna & Roychowdhury, 2010; Schweizer et al., 2019). For instance, Chaney et al. (2011) investigate the quality of accounting earnings reported by politically connected firms. The authors argue that politically connected firms are likely to be subject to market pressure resulting from lower-quality financial reports. The authors state that politically connected firms have significantly lower-quality earnings. In a similar vein, Ramanna and Roychowdhury (2010) examine the relationship between managerial discretion in financial reporting and outsourcing activities of politically connected firms. Their results indicate lower reporting quality of politically connected firms when a large proportion of their operations are

outsourced. Specifically, findings show that politically connected firms report discretionary accruals in an attempt to lower their reported earnings as a response to potential public scrutiny over job outsourcing.

In a similar vein, Braam et al. (2015) investigate the potential trade-off with respect to managerial discretionary behaviour in relation to the earnings management techniques used in politically connected firms. Specifically, the authors investigate whether political connectedness contributes to increased caution in politically connected firms that results in using real activity-based earnings management techniques as a substitute for accruals-based earnings management in order to conceal their discretionary behaviour. The authors find that despite the higher costs of real activity manipulation, politically connected firms resort to these techniques due to the lower likelihood of being detected. Finally, the findings of Harymawan and Nowland (2016) indicate that the financial quality of politically connected firms is contingent on the political stability of the countries in which they operate. Specifically, they find that politically connected firms report lower-quality accounting information when political stability is higher.

The negative impact of political connectedness on firms' reporting quality is taken into consideration by external auditors when engaged by politically connected firms. Gul (2006) investigates the impact of political connectedness on reporting misstatement risk as perceived by auditors during a financial crisis. Gul writes (2006) that politically connected firms incur higher audit fees as a result of their perceived inherent risk. However, this risk is mitigated by government interventions, which have been implemented in the form of capital controls. Some scholars suggest that differences in financial reporting quality are negligible in politically connected firms. In other words, due to their reliance on financial resources obtained with greater ease through political connectedness, these firms have the ability to secure their financial needs without meeting capital providers' demand for quality financial reports (Preuss & Königsgruber, 2021).

In addition to the research suggesting a negative impact of political connectedness on financial reporting quality, the favourable outcome of political connectedness on firm value may be conditional upon the circumstances surrounding the politically connected individual. That is, when there are uncertainties regarding the

future of political connections, the firm value may be in jeopardy (Fisman, 2001). Fisman (2001) finds that when politically connected firms are more highly dependent on their ties to politicians to enhance their performance, the presence of uncertainties contributes to a more significant value loss than for their non-connected counterparts. Furthermore, Faccio et al. (2006) provide evidence that politically connected firms are operated significantly less efficiently. The authors also document that after politically connected firms are bailed out, such firms continue to perform poorly.

Schweizer et al. (2019) add weight to the evidence regarding the negative influences of political connections by investigating the impact of cross-border merger and acquisition (M&A) deals on firm performance and firm value. Specifically, Schweizer et al. (2019) find that although politically connected firms are more likely to be successful in completing and closing M&A deals, both short-term and long-term impacts of these deals on firm performance are not favourable. The authors indicate that this is related to the self-oriented behaviour of politically connected managers that motivates them to close M&A deals, despite their detrimental effects on shareholders. In relation to expropriatory behaviour, Habib et al. (2017) investigate related-party transactions in politically connected firms. They find that political connected individuals use related-party transactions as a funnel to expropriate firms' resources. Additionally, the authors report that firms with political ties engage in financial reporting manipulation and are more likely to appoint lower-quality auditors.

Consequences of the negative impact of political connectedness may be explained, in part, by the findings of other studies. For instance, Ben-Nasr et al. (2012) show evidence for the increased cost of equity capital incurred by politically connected firms when a government has an ownership stake in the firm. Similarly, Bliss and Gul (2012) report that politically connected firms may be characterised by increased risk compared to their non-connected counterparts. Specifically, the authors find that political connectedness is associated with increased costs of interest, higher levels of leverage, and a higher likelihood of reporting negative net income and negative equity.

2.3.4 Political Connectedness in Saudi Arabia and Similar Contexts

In the context of studies on political connectedness, the uniqueness of the Saudi Arabian context stems from its distinct political structure. The Saudi Arabian political structure has idiosyncratic qualities that may contribute to a distinctive

institutional setting (as discussed in Section 1.1). Nonetheless, Saudi Arabia shares a number of common societal characteristics with neighbouring countries in the GCC that give rise to commonalities within their capital markets. This section also reviews studies investigating the role of political connectedness in the context of listed firms in these countries.

Despite the importance of political connectedness as an influential factor in capital markets, there is a scarcity of academic literature that investigates its impact on corporate financial reporting. A limited number of studies have been conducted to unravel the different effects of political connectedness on listed firms in Saudi Arabia.

Alzahrani and Che-Ahmad (2015) investigate whether the presence of politically connected directors (i.e., directors of royal status) is value additive in terms of firm performance. The authors find that politically connected directors play an important role in mitigating agency problems and increasing their firms' financial performance. The authors suggest that this association is related to the greater scrutiny politically connected directors place on management teams. They indicate that the control exercised by these directors results in increased alignment of managers (as agents) and the firms' shareholders (as principals).

Alnasser's 2019 study investigates the impact on political connectedness on Saudi listed firms. The author examines four different aspects of political connectedness and analyses the impact of various factors – such as the proportion of political directors on the board, their degree of independence, and their attendance at board meetings – on the financial performance and value of the firm. Moreover, the author investigates the impact of stockholding by politically connected owners on firms' performance and value. The findings are largely consistent with those of Alzahrani and Che-Ahmad (2015). Alnasser (2019) indicates that the findings are related to the ability and willingness of politically connected directors to exercise their power in line with the firm's best interest. That is, these directors effectively monitor the firm's executives and provide them with necessary resources – or assist them in securing such resources – which can enhance firms' performance and maximise shareholders' wealth. Interestingly, a contradictory finding of Alnasser (2019) indicates a negative impact of board meeting attendance of politically connected directors on short-term firm performance. The authors attributes this adverse effect to the idea that

frequent attendance at board meetings does not necessarily imply effectiveness in meeting directorship duties. In line with this finding, Shaddady and Alnor (2020) investigate the impact of politically connected directors serving on the boards of Saudi listed firms on the operational performance of their firms. They find that politically connected directors negatively impact the operational performance measured using a non-parametric method (i.e., a SORM model – data envelopment analysis).

Similarly to the Saudi Arabian context, only a handful of studies investigate the effects of political connectedness on listed firms in other GCC countries. Alazzani et al. (2018) examine the impact of politically connected directors on firms' corporate social responsibility (CSR) reporting in GCC countries. They find that the presence of politically connected directors significantly enhances firms' transparency with respect to CSR disclosure. The authors interpret these findings through the lens of the servant leadership hypothesis. Specifically, Alazzani et al. (2018) state that politically connected directors (in the form of royal family members) are considered leaders of their countries in the GCC countries. As a servant leadership perspective suggests, these directors are expected to behave in responsible manner, both legally and ethically, in order to fulfil a social ideal for others to emulate. Consequently, managers in politically connected firms are expected to behave in line with their "tone at the top", and therefore promote CSR disclosure.

In a related study, Alazzani et al. (2021) investigate the interaction effect of politically connected directors on the relationship between environmental, social, and governance (ESG) reporting and financial analysts' recommendations. In contrast to the findings of Alazzani et al. in the 2018 study, they report that the presence of powerful directors adversely influences the positive relationship between ESG reporting and analysts' recommendations. They explain that this impact may be related to analysts' perception of ESG disclosure by politically connected firms. That is, financial analysts may perceive that politically connected firms disclose their ESG information as a form of "window dressing". Finally, Al-Hadi et al. (2017) examine the effect of having royal family directors in the boardrooms of listed firms and royal family stockholdings on the relationship between joint audits and the cost of debt capital. First, the authors report that joint audits significantly decrease the cost of debt. Next, they extend their investigation by examining whether politically connected directors and shareholders enhance or diminish such a relationship. They report that

politically connected firms experience a greater impact of joint audits resulting in lower cost of debt capital compared to their non-connected counterparts. Al-Hadi et al. (2017) explain that firms with a greater number of politically connected directors and higher proportions of shareholdings by politically connected owners experience benefits in the form of reduced costs of debt capital.

In spite of the benefits of political connectedness to listed firms in this context, other studies find that political connections may not always be beneficial. For instance, Al-Hadi et al. (2016) investigate the risk reporting behaviour of financial firms who have politically connected directors. They argue that agency conflicts are likely to arise in politically connected financial firms due to weak protection of minority shareholders. Therefore, politically connected directors may be self-oriented to the detriment of minority stockholders and exercise their control by deliberately concealing or distorting risk-related information. Al-Hadi et al. (2016) find that politically connected directors are significantly associated with lower risk disclosure in terms of both quality and quantity.

Al-Hadi et al. (2017) extend this analysis by incorporating the effect of corporate governance in the analysis to examine the interactive effect of political connectedness and governance on market risk reporting of financial firms in the GCC economies. They report evidence consistent with the findings of Al-Hadi et al. (2016) in term of the influence of political connections on risk disclosure. However, they find that effective corporate governance practices can curb any negative impact of politically connected directors.

Despite the fact that GCC countries may be characterised by various societal similarities, a number of prior studies suggest that cross-country research may omit significant factors that might reduce the number of useful inferences that can be made from the results (Hillman, 2005; Pérez et al., 2015; Preuss & Königsgruber, 2021). In this regard, Hillman (2005) indicates that empirical investigations that focus on specific environments may reveal novel contributions to the literature on the influence of political connectedness in capital markets. This may be due to the heterogeneity of capital markets and the diversity of ecopolitical schemes between countries that might superficially seem similar (Preuss & Königsgruber, 2021; Wong & Hooy, 2018). Pérez et al., (2015) therefore suggest that conducting firm-level analyses, as opposed to

cross-country investigations, contributes to better clarity on the distinction between significant factors attributable to inter-firm variations versus those related to cross-country variations. Given the importance of the Saudi Arabian business and economic environment (as discussed in Section 1.1), the current study seeks to expand the understanding of the role played by political connectedness in relation to the quality of listed firms' financial reports by focusing on an understudied, yet significantly important, environment (i.e., Saudi Arabia).

2.4 Institutional Investors

This section reviews the accounting literature on institutional investors, offering various definitions and a brief discussion of why they are different from other types of investors. Different criteria for classifying institutional investors are outlined, including their level of engagement in firms' decision-making processes, pressure exposure, ownership concentration, and investment objectives, as well as the effects of institutional investors on their investees. Then, a review of the literature related to institutional investors in Saudi Arabia and similar contexts is provided.

2.4.1 Definition of Institutional Investors

Institutional investors have been the focus of numerous studies over the last few decades due to their increased influence on investees and on the capital markets as a whole. There is no consensus in the literature on what constitutes an institutional investor. For instance, Koh (2003) defines institutional investors simply as "large investors, other than natural persons, who exercise discretion over the investments of others" (p. 112). This definition indicates that institutional investors are large organisations acting as investment decision makers. Another, and a more widely accepted definition, is offered by Davis and Steil (2004), who state that "institutional investors may be defined as specialized financial institutions that manage savings collectively on behalf of small investors toward a specific objective in terms of acceptable risk, return maximization, and maturity of claims" (p. XXIV).

Institutional investors are a distinct type of shareholder. Due to their superior access to professional and financial resources, institutional investors have a greater ability to improve their investment operations and procedures (Bartov et al., 2000; Bushee, 1998; Chung & Zhang, 2011; Collins et al., 2003). For instance, institutional

investors can offer their personnel advanced professional training, which results in more effective and efficient decision making. Additionally, institutional investors are able to use advanced analytical techniques that the average shareholder may not be able to, such as high-level quantitative and technical analysis (Shleifer & Vishny, 1986). Furthermore, these investors may have access to information that is not readily available to other investor groups (Bartov et al., 2000). Finally, due to the size of their shareholdings, institutional investors are more able to negotiate with the managers of their investee firms and to influence strategic decisions (Gillan & Starks, 2003).

2.4.2 Criteria for Classifying Institutional Investors

Institutional investors are heterogeneous in terms of their investment behaviour and impact. The literature offers various criteria for classifying institutional investors. These include: their level of engagement in firms' decision-making processes, pressure exposure, ownership concentration, and investment objectives (Almazan et al., 2005; Brickley et al., 1988; Bushee, 1998; Johnson & Greening, 1999; Zhong et al., 2017).

A) Level of Engagement

Institutional investors may be able to exercise shareholder rights and influence aspects of their investees' operations. Based on their involvement in directing and monitoring their investees' strategies and operations, institutional investors are classified as active or passive (Almazan et al., 2005; McCahery et al., 2016). Institutional investors are considered active if they have the power and are willing to play an important role in contributing to their investees' strategies, monitoring their managers, and engaging in other significant decisions. Active involvement with managers is expected to yield increased benefits to their investee firms (as will be discussed in Section 2.4.3). Active involvement can play out in a number of ways. For instance, voting in general assembly meetings and having actual representation on the board of directors enables institutional investors to actively contribute (Johnson & Greening, 1999; Webb et al., 2003). Institutional investors may also adopt a passive strategy and avoid the increased costs of active engagement with their investees (Zhong et al., 2017). Passive involvement of institutional investors may be reflected in the tendency to sell their shareholdings rather than engage in close monitoring activities (Maug, 1998). Passive investors may be able to trade their shareholdings more frequently than active institutional investors. Consequently, they tend to

liquidate and exit unsatisfactory investments. Furthermore, when institutional investors do not have sizable shareholdings in investee firms they may remain passive simply because they lack the power to influence managerial decisions.

B) Pressure Exposure

Another criterion of classification of institutional investors relates to their level exposure to pressure from managers of their investee firms. Such pressure may arise when institutional investors maintain multiple relationships with their investees. Brickley et al. (1988) propose that institutional investors can be classified, based on their relationship with management, into two categories: "pressure-sensitive" and "pressure-resistant". Pressure-sensitive institutional investors are those who are likely to be subject to managerial pressure due to their dealings with the investee in other-than-ownership contexts. That is, if an institutional investor has a business-related stake as well as an ownership stake in the firm, it may result in a kind of co-dependence between them and the investees' managers (Almazan et al., 2005; Brickley et al., 1988; Cornett et al., 2007). When institutional investors lack independence from management, negative consequences may arise for the investee firms as a result of institutional investors having a bias towards supporting management. (This will be further discussed in Section 2.4.3.) Contrary to pressure-sensitive institutional investors, pressure-resistant institutional investors maintain a greater degree of independence from investees' managers. In this scenario, institutions are only shareholders and do not involve themselves in business transactions with the firm; they therefore tend to be less subject to managerial pressure. The freedom of institutional investors from managers' pressure contributes to an operating environment where institutions can play their fiduciary role more effectively (Brickley et al., 1988).

C) Investment Behaviour

The investment behaviour of institutional investors constitutes another criterion that differentiates one type of investor from another. Investment behaviour may be classified by the investment objectives as well as the investment horizon of institutional investors (Bushee, 1998; Bushee & Noe, 2000). Specifically, "dedicated" (i.e., strategic) institutional investors are defined by their larger shareholdings and higher stability with regards to investment turnover (Bushee, 1998; Zhong et al., 2017). Dedicated investors tend to have lower numbers of investee firms and this enables

them to effectively and efficiently monitor them. In a similar vein, Zhong et al. (2017) suggest that long-term investors, due to their large stockholdings and long investment horizon, are expected to seek long-term performance. Consequently, the strategic investment focus of these institutions may motivate them to enhance their investees' operations and governance (as discussed in Section 2.4.3). "Transient" institutional investors, on the other hand, are characterised by a higher frequency of trading and lower shareholding stability (Bushee, 1998). This type of institutional investor tends to focus more on short-term earnings (i.e., myopic investment behaviour), which may lead to increased pressure on investees' managers to meet transient investors' investment objectives (Zhong et al., 2017). For this reason, the short-termism of transient investors is expected to magnify the negative impact of poor performance of their investees (Bushee, 1998; Koh, 2007; Zhong et al., 2017), especially when they invest in larger and concentrated stockholdings (Bushee, 1998). The consequences may be harmful to investees' operating and governance environments as well as to their reporting systems, as will be discussed in Section 2.4.3 (Bushee, 1998; Shleifer & Vishny, 1997).

2.4.3 Impacts of Institutional Investors

Studies examining different effects of institutional investors on listed firms provide inconclusive evidence on whether they are beneficial or detrimental to their investees. For instance, a number of scholars demonstrate the positive impact of these investors (e.g., Bushee, 1998; Chung et al., 2002; Sakaki et al., 2017; Zhong et al., 2017), however, other studies indicate that institutional investors have a detrimental effect on their investee firms (Chakroun & Matoussi, 2012; Koh, 2003). Finally, institutional investors achieve their aims through a number of different strategies and the variability of their impact reflects this diversity. For instance, institutional investors may pursue their objectives by voting on strategic and operational decisions – such as managerial proposals and appointment of directors (Davis & Steil, 2001; Webb et al., 2003) – or through vis-à-vis meetings with the executive team, which they arrange for closer monitoring and discipline (Bushee & Miller, 2012; Johnson & Greening, 1999). In addition to this, McCahery et al. (2016) report that institutional investors employ strategies both of "voice" (influencing the firm's decisions to reflect their own preferences) and "exit" (selling their owned stock and avoiding the incremental costs

of monitoring) in order to influence their investees' managerial decisions, with voice typically used before they resort to liquidating their investments.

2.4.3.1 Positive Impacts of Institutional Investors.

The literature is clear that institutional investors do offer their investee firms a number of beneficial contributions. For instance, studies show that firms with institutions in their ownership structure exhibit significantly different financial reporting behaviour compared to non-institutional owned firms. Bushee (1998) examines the impact of institutional investors' presence on managerial opportunistic behaviour related to R&D underspending as a means of manipulating reported earnings. The author finds that institutional investors with larger stockholdings play a significant role in constraining such manipulative behaviour on the part of their investees' managers. This indicates that institutional investors promote transparency and unbiased reporting outcomes. Furthermore, Chung et al. (2002) investigate the impact of increased institutional shareholdings on managerial opportunism. They find that institutional investors play a significant role in monitoring the reporting behaviour of their investees when management is motivated to engage in manipulative reporting. Specifically, increased institutional stockholdings constrains managerial use of both income-increasing and income-decreasing earnings management. Koh (2003), investigating the discretionary reporting behaviour of institutionally owned firms finds that the association is non-linear. The author provides evidence on the restraining role of long-term institutional investors on managerial reporting aggressiveness. That is, increased levels of institutional stockholdings are associated with lower levels of income-increasing earnings management.

Similarly, Hsu and Koh (2005) provide evidence for the positive impact of long-term institutional investors on restraining managerial discretion. Specifically, the authors find that institutional investors with a long-term investment horizon are negatively associated with income-increasing earnings management, which is beneficial for financial reporting quality. In a similar vein, Velury and Jenkins (2006) specifically examine the relation between institutional ownership and the quality of financial reports. Consistent with the argument that institutional investors constitute an effective monitoring mechanism, Velury and Jenkins (2006) document that institutional ownership enhances the predictive value, timeliness, and faithful

representation of information in the financial reports of their investee firms. Furthermore, Burns et al. (2010) show that the active engagement of institutional investors tends to be conditional on the level of their shareholdings. Specifically, institutional investors tend to increase their scrutiny over firms' management when they carry concentrated shareholdings that economically justify their involvement. In term of the types of manipulative techniques employed, Zang (2012) investigates whether institutional investors affect managerial use of alternative means of earnings management. He finds that institutional investors constrain managers' alteration of real activities to manipulate reported earnings. Zang (2012) explains that this is related to the higher costs associated with real activity-based earnings management.

In terms of the impact of institutional investors having representation on a firm's board of directors, Pucheta-Martínez and García-Meca (2014) investigate whether this enhances the quality of financial reports. The authors document that institutional investors contribute to a lower likelihood of receiving an unfavourable audit outcome and enhanced levels of financial reporting quality. More recently, Zhong et al. (2017) support the notion that strategic institutional investors who carry a higher percentage of firms' shareholdings and are long-term oriented, are associated with increased quality of reported earnings. They further investigate this impact in different investor protection environments and find that monitoring by strategic investors has higher effectiveness in jurisdictions that provide stronger protections to investors.

Other studies investigating the impact of institutional investors suggest that their benefits may be seen in contexts other than financial reporting. For instance, McConnell and Servaes (1990) look at the connection between a firm's value and the types of shareholders that make up its ownership structure. Their evidence supports the argument that institutional investors enhance their investees' value. In addition, Wright et al. (1996) examine the impact of a firm's ownership structure on its risk appetite. They document that institutional investors have a significant positive impact on a firm's value by monitoring risk-taking behaviour. That is, in the presence of institutional investors, firms' risk-taking behaviour is contingent on the growth potential associated with such risks.

Almazan et al. (2005) investigate the monitoring role played by institutional investors. The authors suggest that these investors have a greater capacity than non-

institutional investors to monitor managers. However, active institutional investors are found to have increased monitoring capabilities and lower monitoring costs (Almazan et al., 2005). Furthermore, Cornett et al. (2007) investigate the impact of institutional investors on the operational performance of their investees. They point to the positive impact of institutional investors on firms' performance, however, their findings show that the benefit is contingent on type. That is, pressure-resistant institutional investors are more likely to enhance their investees' performance. Other scholars investigating the impact of institutional investors find that they contribute to lower costs of debt (Roberts & Yuan, 2010). However, the authors find that these benefits are less significant when institutional investors have larger shareholdings. The authors attribute this decrease to the costs incurred due to agency problems. Finally, Dyck et al. (2019) investigate the effect of institutional investors on their investees' environmental and social performance. They find that their investee firms generally score significantly higher on these measures than their counterparts.

2.4.3.2 Negative Impacts of Institutional Investors.

In spite of these documented benefits of institutional investors on their investee firms, their presence in the ownership structure as large and influential shareholders may come with its own cost. Specifically, the high concentration of stockholdings may drive such institutions to only consider their own interests and neglect their fiduciary duties. In such circumstances, institutional investors may cause significant detriment to the firm and other shareholders. For instance, Bushee (1998), examining the impact of transient institutional investors' impact on managerial opportunism related to R&D cost cutting, finds that this type of institutional investors are significantly associated with R&D reduction to enhance reported earnings. Additionally, in their investigation of the reporting behaviour of institutionally owned firms, Koh (2003) documents a non-linear association between managerial opportunism and institutional investors. Specifically, the author's findings support the view that transient institutional investors increase pressure on a firm's management to report higher earnings. Koh's (2003) findings show that institutional investors' short-termism is associated with a higher use of income-increasing discretionary accruals. Hsu and Koh's (2005) findings support this view. When investigating the impact of transient institutional investors on firms' managerial discretion, they find that transient institutional investors are positively associated with income-increasing earnings management. By investigating

the alternative use of accrual- and real activity-based earnings management, Zang (2012) explains that firms with institutional ownership tend to avoid using real activity manipulation due to the higher costs associated with these earnings management techniques. Interestingly, however, the author finds that managers of firms with institutional ownership use a greater proportion of accrual-based earnings management techniques to manipulate their reported earnings.

As is the case with the benefits conferred by institutional investors, negative impacts are also reflected in contexts other than financial reporting. For instance, Bushee (2001) investigates the different effects transient and dedicated institutional investors have on a firm's value. The author documents an increase in myopic stock pricing for firms with larger shareholdings held by transient institutional investors. This evidence, as explained by Bushee (2001), suggests that short-termism of institutional investors contributes to a higher managerial focus on earnings in the near-term. However, the consequence of increased and abnormal stock returns for firms with short-term earnings potential is a decrease in their long-term value. In a similar vein, Jennings (2005) provides evidence on the negative impact on institutional investors on firms' performance. Specifically, the author investigates the causal relationship between institutional investors and firm performance. Findings reveal that while institutional investors are attracted to well-performing firms, institutional investors are detrimental to their investees when they neglect their fiduciary role. Additionally, Mura (2007) investigates the impact of institutional investors' concentrated ownership on the performance of their investee firms. The author documents a negative association between such institutional ownership and their investee firms' performance, explaining that these findings demonstrate that large shareholdings by institutional investors lead to lower monitoring of their investee firms' managers.

2.4.4 Institutional Investors in Saudi Arabia and Similar Contexts

Studies examining the impact of institutional investors' monitoring behaviour are limited out of the US context (Aggarwal et al., 2011; Zhong et al., 2017). There is likewise a scarcity of empirical studies investigating the impact of institutional investors on the reporting behaviour of their investee firms in Saudi Arabian and similar contexts (Albassam et al., 2018).

In the Saudi context, Habbash (2015) investigates listed firms' behaviour in terms of their environmental disclosure. The author documents that the higher the level of institutional investors' shareholdings in a firm's ownership structure, the more environmental information the firm is likely to disclose. Habbash (2015) explains that this is related to the monitoring efficiency of institutional investors, which contributes to lower agency costs and increased transparency in these firms. In a similar vein, Albassam and Ntim (2017) investigate the impact of firms' ownership structure on corporate governance disclosure. The authors provide evidence consistent with the findings of Habbash (2015). That is, the extent of corporate governance disclosure by listed Saudi firms is positively associated with the level of institutional stockholdings. Additionally, Albassam et al. (2018) investigate the impact of institutional investors on their investee firms' compliance with recommended corporate governance practices. Specifically, the authors investigate firms' voluntary compliance with and disclosure of corporate governance practices. They find that Saudi firms with higher institutional shareholdings tend to provide significantly more information on their corporate governance practices compared to other firms. The authors suggest that this result aligns with recent regulatory attempts to increase transparency in the Saudi stock exchange.

Similar to the studies investigating institutional investors in Saudi Arabia, research into similar contexts also reveals the favourable impact of this type of investor. For instance, Omran and Tahat (2020) investigate the impact of institutional investors on the value relevance of financial reports of Kuwaiti firms. The authors find that institutional investors are better able to monitor their investee firms, as reflected in the higher relevance of the accounting information of their investee firms. In addition, Arouri et al. (2014) examine the effect of ownership structure on listed banking firms in Kuwait. The authors document a significant positive association between institutional investors and the value of their investee firms. Arouri et al. (2014) suggest that this beneficial impact may be attributed to the financial resourcing and expertise of institutional investors. Furthermore, the authors suggest that institutional investors' ability to curb agency costs may also play an important role in reducing conflicts of interest, further improving their investees' value and performance.

Institutional investors in the Saudi Arabian and similar contexts may not always be beneficial, however. Some scholars find negative impacts of institutional investment on listed firms. For instance, Hussainey and Aljifri (2012) investigate the

impact of institutional investors on the capital structure of listed firms. The authors document evidence that contradicts the notion that institutional investors provide effective monitoring. Specifically, they find that increased levels of institutional shareholdings are associated with a significant decrease in the debt-to-equity ratio of their investee firms. Hussainey and Aljifri (2012) explain that this finding shows less institutional monitoring of managerial discretion. That is, institutional investors not being willing to intervene in the matter of stronger managerial preference for internal financing, to the detriment of shareholders' best interests.

Finally, since two of the major institutional investors in Saudi Arabia are pension funds (GOSI and PPA), their fiduciary responsibilities as well as their large stockholdings are likely to increase their governance sensitivity (Al Kahtani, 2014). This may lead such institutions to promote better governance practices on the part of their investee firms (Bushee et al., 2014). Strategic institutional investors may act more effectively in promoting transparency of their investee firms. Consequently, this study seeks to unravel the complex and various ways institutional investors influence the quality of their investees' financial reports.

2.5 Internal Audit Function

This section reviews the literature related to internal audit function. First, definitions of the internal audit function, both early and more recent, are provided and discussed. Then, a discussion is provided on the importance of the internal audit function in the context of financial reporting and other contexts. A review of the literature related to the different sourcing arrangements of the internal audit function is also provided. After that, the literature on the internal audit function in Saudi Arabia and similar contexts is discussed.

2.5.1 Definition of Internal Audit Function

The internal audit function has been of increasing interest both in academia and in practice as a result of widespread effects of accounting failures. The tasks of internal auditors as well as the concept of internal auditing have drastically evolved in the last few decades (Ahlawat & Lowe, 2004; Lampe, 1994; Mubako, 2019; Prawitt et al., 2009). A review of earlier definitions of internal auditing clearly indicates the significant shift in the nature of this function. For instance, Meigs (1951) states that

internal auditing is “an appraisal activity, employed to aid the top management of a large corporation in the efficient administration of the enterprise. It is characterized as a staff function, independent of accounting and operating processes, and responsible to a member of top management, most commonly the controller” (p. 518). This definition conceptualises the internal audit function as an independent mechanism that assists top managers in promoting efficient operations for the firm. This definition also specifies independence of the internal auditing function from accounting activities, though it does not require independence from firm management.

The Institute of Internal Auditors (IIA) (2021) provides a more recent and widely accepted definition: “Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization’s operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes” (n.p.). This definition provides a more comprehensive view of the role of internal audit functions within the modern governance structures of listed firms. Specifically, internal auditing is characterised by the IIA as an independent construct that provides not only assurance and control services but also helps a firm to achieve long-term organisational efficiency and effectiveness by means of consultation and evaluation. Additionally, the IIA’s definition emphasises the value-adding provided by internal auditing as a core function.

2.5.2 Importance of the Internal Audit Function

The internal audit function constitutes a fundamental component of the corporate governance structures of listed firms. Traditionally, internal auditors were mainly responsible for auditing firms’ financial transactions and the overall accuracy of the accounting system as well as evaluating the effectiveness of the firms’ internal control environments (Ahlawat et al., 2004; Gramling et al., 2004; Prawitt et al., 2009). Indeed, internal auditors used to act as “watchdogs” for their firms to protect against the misappropriation of assets and misreporting of accounting information. However, after the wave of corporate collapses due to fraudulent activities by top managers, regulators heavily intervened with capital market reforms (Mubako, 2019). A major legislative outcome has been the enactment of the Sarbanes–Oxley Act of 2002 (SOX). Internal auditing received enormous attention following the introduction of this Act to

the regulatory environment of the United States (Prawitt et al., 2012). Consequently, the role played by the internal audit function in firms' governance environments has evolved into a fundamental assurance and advisory component within the governance structure (Gramling et al., 2004).

Internal audit functions provide vital assurance services that contribute to improved monitoring over firms' managers (Ege, 2015). The enhanced role of internal auditors has become an important construct in monitoring processes and procedures related to the financial reporting systems of listed firms (Abbott et al. 2016; Coram et al., 2008; Gramling et al., 2004; Mubako, 2019). The internal audit function has indeed become more effective in constraining managerial discretion over financial reporting. Prior studies provide extensive evidence on the positive effect of quality internal audit functions on the quality of financial information. Specifically, Prawitt et al. (2009) examine the impact of high-quality internal audit functions on managerial use of discretionary accruals. The authors find that increased quality of internal audit functions reduces absolute abnormal accruals. Furthermore, Prawitt et al. (2009) investigate the directionality of discretionary accruals and find that quality internal audit functions significantly constrain income-decreasing accruals. Additionally, the authors find that higher-quality internal audits are associated with an increased likelihood of firms' missing analysts' forecasts. This indicates that higher-quality internal audit functions deter managers from using discretionary practices to meet analysts' earnings forecasts at any cost. Prawitt et al. (2012) also provide confirmatory evidence on the importance of the internal audit function as a monitoring mechanism. The authors document consistent findings with Prawitt et al. (2009) showing that higher-quality internal auditing is associated with lower accounting risk. Ege (2015), examining the impact of quality internal audit functions on the likelihood of managerial misconduct finds significant evidence of the restraining role of internal audit quality on management misconduct. Ege (2015) also finds that internal audit quality is not only effective in restraining misconduct related to financial reporting, but also deters other forms of managerial misconduct not related to financial reporting.

In addition to the significant role the internal audit function plays in constraining financial reporting misconduct, scholars provide significant evidence on the value additivity of internal auditing in other contexts. For instance, Coram et al. (2008) investigate the likelihood of internal audits functioning to detect and self-report

fraudulent activities related to misappropriation of firms' assets. The authors document that firms with internal audit functions have increased occurrence of fraud-detection reporting. Additionally, firms that utilise internal audit functions detect higher-value fraudulent activities. Furthermore, Lin et al. (2011) provide supporting evidence that internal audit functions significantly improve the processes of corporate financial reporting. Specifically, cooperation between internal auditors and external auditors increase firms' transparency relating to material weakness disclosure. The internal audit function also enhances the efficiency of external audit engagements. Specifically, external auditors' reliance on internal auditors' work lowers the effort required to complete external audit processes and procedures, resulting in lower engagement time.

In this regard, Pizzini et al. (2015) investigate the effect of internal audit functions on the amount of time external auditors need to issue their audit reports (i.e., audits delay). The authors find that higher-quality internal audits contribute to significantly shorter audit delays by performing independent audit tasks. Moreover, Pizzini et al. (2015) find that even lower-quality internal audit functions contribute to external audits by providing support under the supervision of external auditors. Consequently, higher reliance on internal auditors' work by external auditors is found to reduce the costs of external audit functions (Abbott et al., 2012). In addition to supporting external auditors, internal audit functions constitute a vital provider of information and decision-making support. In fact, Burton et al. (2012) find that internal audit functions are able to affect managers' opinions related to firm operations. That is, managers adopt internal auditors' recommendations that are inconsistent with their initial position more than they adopt recommendations that are consistent with their initial position.

2.5.3 Internal Audit Sourcing Arrangements

Following the substantial evolution in the nature and role of the internal audit function over the last two decades, the demand for quality internal auditors has significantly increased. Such increase in the demand for internal audit professionals has led firms to find different strategies to sourcing their internal audit activities. Specifically, there are two forms of sourcing arrangements that firms can adopt: outsourcing and in-house.

An internal audit outsourcing strategy involves a contractual agreement with an independent party to provide audit tasks for the firm that are performed internally[5] (Carey et al., 2006). Typically, firms hire an independent accounting firm to perform their internal audits (Barac & Motubatse, 2009). On the other hand, using in-house arrangements for internal audit activities requires the establishment of a separate unit or department within the firm that is able to operate independently of the firm's management. Ahlawat et al. (2004) draw attention to the fact that the evolution of the internal auditors' role has influenced sourcing arrangements of internal audits. In fact, the IIA (2021) definition of internal auditing uses the term "activity" rather than "department" in recognition of the alternative sourcing arrangements that are increasingly common (Ahlawat et al., 2004).

The literature suggests that firms' adoption of an outsourcing strategy for internal auditing may be driven by a number of factors. Specifically, Carey et al. (2006) classify the various rationales for outsourcing internal audit functions into two categories: transaction-specific factors and organisation-related factors. Transaction-specific factors relate to attributes explained by the transaction cost economics (Carey et al., 2006; Widener & Selto, 1999), namely: asset specificity, uncertainty, and frequency of audit activities – all of which constitute key drivers that may direct the sourcing decisions of internal audit functions (Carey et al., 2006; Spekl´e et al., 2007; Widener & Selto, 1999). Asset specificity relates to the idiosyncrasies of a firm's environment and operations, which demand additional investment in training internal auditors so they have the firm-specific knowledge and expertise they need to perform their tasks effectively (Spekl´e et al., 2007; Widener & Selto, 1999). Therefore, lower (or higher) asset specificity tends to encourage firms to outsource (or in-source) their internal audit functions.

With respect to the second attribute, Sharma and Subramaniam (2005) state that "uncertainty relates to variations in activities as a function of environmental complexity and dynamism (environmental uncertainty) and the ability to monitor activities (behavioural uncertainty)" (p. 35). Increased uncertainty may encourage firms to source internal audit functions internally (Sharma et al., 2005; Spekl´e et al.,

[5] Following prior studies (e.g., Carey et al., 2006; Baatwah et al., 2019, 2021 Mubako, 2019; Prawitt et al., 2012), for the purpose of this study, an internal audit function is considered outsourced if all or part of the internal audit activities are provided by a third party.

2007). Frequency refers to the recurrence – and its associated cost – of necessary internal audit procedures (Spekl´e et al., 2007). Increased frequency will induce firms to maintain in-house internal audit functions. Carey et al. (2006) provide examples of organisation-related factors that relate to firms' strategies in terms of their focus on primary business activities and the outsourcing of supporting functions, such as internal auditing. Carey et al. (2006) also find that the costs associated with fulfilling internal audit tasks significantly affect firms' sourcing decisions with respect to these functions. That is, firms tend to outsource their internal audit activities when this arrangement is perceived as a cost-saving strategy. Furthermore, technical competence constitutes another important driver of firms' internal audit sourcing arrangements. The authors find that when firms perceive external providers as more competent at providing internal audit services, they tend to outsource their internal audits. Finally, Carey et al. (2006) suggest that firm size also influences internal audit sourcing decisions. Specifically, larger firms are more likely than small firms to outsource their internal audit activities. Carey et al. (2006) suggest that this preference for outsourcing by larger firms may be explained by the flexibility this sourcing strategy provides in terms of obtaining technical expertise, especially with the increased pressure on larger firms to enhance their governance practices. Hence, internal audit outsourcing provides an optimal alternative for larger firms to employ the required technical capabilities in a timely manner.

2.5.4 Internal Audit Function in Saudi Arabia and Similar Contexts

Despite the increased importance of and scholarly interest in the internal audit function, empirical studies investigating the association between internal audit function and the quality of financial reports is significantly limited outside of the US context (Johl et al., 2013). More specifically, research into the impact of the internal audit function on listed firms in Saudi Arabia is relatively scarce. The overwhelming majority of studies conducted on the Saudi context are survey-based studies (e.g., Al-Shetwi et al., 2011; Al-Twaijry et al., 2003, 2004; Alzeban & Gwilliam, 2014). Archival studies investigating different aspects of internal audit functions in the context of Saudi Arabia are limited.

Several studies conducted in the Saudi context provide alarming findings with regards to the internal auditing function. Scholars highlight high levels of inefficiency

and the low quality of internal audit functions in Saudi Arabia (Al-Shetwi et al., 2011; Al-Twaijry, et al., 2003; Alzeban & Gwilliam, 2014). For instance, Al-Twaijry, et al. (2003) investigate the nature and practice of internal audit functions in the corporate sector. They find that internal auditing is highly underdeveloped. Specifically, the authors state that internal audit functions lack sufficient operating resources and are insufficiently independent from management. Furthermore, Al-Twaijry, et al. (2003) document that internal auditors in Saudi corporates are often unqualified and their role is based on a more traditional and limited conception of internal auditing. The authors also provide evidence of less investment in the professional development and training of internal audit personnel by their firms. Al-Twaijry, et al. (2003) suggest that this may be a key factor in the lower quality of internal audit activities.

The poor environment of internal audit functions in Saudi listed firms, as reported by Al-Twaijry, et al. (2003), suggests that negative consequences may be inevitable. Consequently, Al-Twaijry et al. (2004) examine the extent to which external auditors are willing to rely on internal auditors' work in their audits of Saudi listed firms, and indeed conclude that external auditors are less willing to rely on internal auditors' work due to concerns over their competency and independence. Al-Twaijry, et al. (2004) indicate, however, that external auditors' willingness to rely on internal audit functions is conditional on the quality of internal audits performed. The findings reported by Al-Twaijry et al. (2003, 2004) may explain what was subsequently found by Al-Shetwi et al. (2011). Examining the impact of high-quality internal auditing on financial reporting quality of non-financial Saudi listed firms, Al-Shetwi et al. (2011) did not find significant evidence that the quality of internal audits affected the quality of financial reports. Furthermore, Al-Shetwi et al. (2011) document that listed firms often establish internal audit departments merely for legal compliance purposes, since listed firms are required by the CMA to perform internal audit functions.

In a more recent study, Alzeban (2019) investigates the compliance of internal audit functions with internal audit professional standards governing the quality of financial reports of listed firms on the *Tadawul*, the Saudi Stock Exchange. The study findings show a more positive impact of internal auditing on financial reporting quality when firms adopt the professional standards. Specifically, Alzeban (2019) documents that highly compliant internal audit functions contribute to greater financial reporting

quality in their respective firms. Furthermore, the author indicates that increased competency and professional training increase the positive effect of the internal audit function on financial reporting quality. In a similar vein, Alzeban (2018) investigates the impact of internal audit functions on the successful adoption of the IFRS. The author finds that sufficient investment in internal audit functions by listed firms enhances the quality of their services. Specifically, Alzeban (2018) documents that the competence and independence of internal auditors contribute to the adoption of IFRS by Saudi listed firms. The findings of recent studies show a remarkable improvement in the performance of internal audit functions related to financial reporting of listed firms. However, these studies do not investigate whether such improvement is associated with the sourcing arrangements of internal audit functions.

Similar to the studies conducted in the Saudi Arabian context, a 2004 study shows that lack of independence of internal auditors is a source of concern in the wider GCC context. Specifically, Al-Twaijry (2004), investigating the standard of internal audit functions within GCC countries, finds that despite adherence to internal audit professional standards, internal audit functions of GCC-listed firms suffer from non-independence issues. Moreover, the outcomes of internal audits are often disregarded by the board of directors and audit committees as well as top managers. A more recent study, however, shows an improvement in the internal audit environment of the GCC region. More specifically, Alkafaji and Majdalawieh (2012) investigate the nature and practices of internal audit functions in the United Arab Emirates. The authors find that internal auditors comply with the internal auditing standards and demonstrate higher levels of independence. The 2019 study of Baatwah et al., investigated the role of internal audit sourcing arrangements on the efficiency of external audits of Omani listed firms. The authors findings show that the contribution of internal audit functions to efficient external auditing is conditional on the type of provider of the internal audit service. Specifically, Baatwah et al. (2019) report that when internal audits are outsourced to a Big 4 audit firm, external audit efficiency is enhanced. The authors explain that these findings may relate to the level of training and professional development offered to auditors in the Big 4 as compared to their Non-Big 4 counterparts.

2.6 Audit Quality

This section reviews the literature on audit quality. The concept and definitions of audit quality are reviewed and discussed. Then, detailed analysis is provided on the impact of audit quality on financial reporting quality, as well as the determinants of audit quality and related literature concerning audit quality in Saudi Arabia and similar contexts.

2.6.1 Concept and Definition of Audit Quality

The quality of external audit services is an essential component within the broader concept of financial reporting quality. Due to the complexity and multi-dimensionality of the auditing function, scholars and professionals regularly state that the concept of audit quality is difficult to condense in a single definition (DeFond & Zhang, 2014; Knechel et al., 2013). Nevertheless, DeAngelo's (1981) definition is fairly widely accepted. It states that audit quality is "the market assessed joint probability that a given audit will *both* (a) discover a breach in the client's accounting system, and (b) report the breach" (p. 186).

DeAngelo's (1981) conception of audit quality as the ability of external auditors to both detect and communicate issues related to the firm's financial reporting rests on two main constructs. First, in order for audit services to be of high quality, external auditors need to be highly competent and knowledgeable of their clients' reporting environments (Knechel et al., 2013). External auditors need to be competent in order to be able to detect financial reporting misconduct. Auditors also need to fulfil their contractual obligations to clients in accordance with professional standards. Auditors' adherence to professional standards means they must act with due diligence and maintain necessary scepticism. In doing so, auditors will gain sufficient understanding of the client's reporting environment. The second aspect of DeAngelo's (1981) definition of audit quality rests on the external auditors' independence. Auditors' independence is an important state of mind that allows them to communicate their audit findings to stakeholders without being subject to pressure from their clients (Knechel et al., 2013; Tepalagul & Lin, 2015).

DeAngelo's (1981) definition provides an important theoretical foundation for numerous studies focusing on audit quality. However, due to the difficulty in observing and quantifying the quality of audit services, the literature tends to rely on proxies by

which the quality of audit services can be measured. Assessing audit quality is based on the assumption that accounting misstatements must be discovered and exposed (Balsam et al., 2003; DeFond & Zhang 2014)[6]. Furthermore, DeFond and Zhang (2014) offer an extension to DeAngelo's (1981) definition in an attempt to incorporate the client firm's reporting environment when articulating what constitutes higher audit quality. They state that higher-audit quality is "greater assurance that the financial statements faithfully reflect the firm's underlying economics, conditioned on its financial reporting system and innate characteristics" (p. 276). Another attempt to define a higher-quality audit proposes that it "provides a higher level of assurance that the auditor obtained sufficient appropriate evidence that the financial statements faithfully represent the firm's underlying economics." (Gaynor et al., 2016, p. 5).

From an audit practice perspective, professional accounting bodies state that audit quality is a complex and challenging concept to define. For instance, the Public Company Accounting Oversight Board (PCAOB) (2019) argues that despite the increased academic and professional focus on audit quality in recent years, the concept lacks a generally accepted definition. PCAOB provides a set of audit quality indicators that can be used to assess the quality of audit services. These indicators relate to the four broad areas of firm leadership: audit engagement, team characteristics and workload, monitoring, and audit outcomes (i.e., auditor communications) (PCAOB, 2019).

Similar to the PCAOB, the International Auditing and Assurance Standards Board (IAASB) (2014) also acknowledges that the quality of audit services is a complex conceptual construct that is difficult to define. Furthermore, IAASB (2014) cites a number of factors that increase the difficulty of evaluating the quality of audit services. First, the subjective nature of some audit processes and procedures as well as the kinds of judgement required to assess the fairness of financial reports, constitute factors that can be highly problematic when it comes to measuring audit quality. The IAASB (2014) states that "in addition to the judgmental nature of aspects of the underlying financial statements, there are a number of factors that make it challenging to describe and evaluate the quality of an audit, including that:

[6] DeFond and Zhang (2014) classify audit quality measures into two categories: input measures (e.g., audit firm size and audit fees) and output measures (e.g., financial statement restatements and the auditor's opinion).

- the existence, or lack, of material misstatements in the audited financial statements provides only a partial insight into audit quality
- audits vary and what is considered to be sufficient, appropriate audit evidence to support an audit opinion is, to a degree, judgmental
- perspectives of audit quality vary among stakeholders
- there is limited transparency about the work performed and audit findings" (p. 36).

2.6.2 Impact of Audit Quality on Financial Reporting Quality

External audits constitute an essential verification step in the production of published financial reports. External auditors examine firms' financial reports in order to provide reasonable assurance to the users of these financial reports that they are prepared in accordance with accounting reporting standards (i.e., GAAP or IFRS) and are free of material misstatement. This requires auditors to scrutinise financial reports in order to provide a professional opinion on their faithfulness and credibility (Defond & Zhang, 2014; IAASB, 2014; PCAOB, 2019; Zhu, 2012). The scrutiny with which external auditors perform audit procedures enhances their role as external governance mechanisms over financial reporting (Becker et al. 1998; Habbash & Alghamdi, 2017; Watts & Zimmerman, 1983). That is, high auditor scrutiny is an important factor in financial reporting quality.

The extent to which audit quality relates to financial reporting quality depends on the conceptual understanding of these two constructs. For instance, DeAngelo (1981) links audit quality with the quality of financial reports as assessed by market participants in a probabilistic form. In other words, DeAngelo's (1981) definition suggests that audit quality is a separate construct that builds upon auditor-supplied factors and disregards all factors relating to the financial reporting environment of the client firm. Therefore, the quality of audit services serves as a means to increase the quality of financial reports *as perceived by* the market. On the other hand, Defond and Zhang's (2014) definition proposes that higher-quality audit is, in fact, a component of financial reporting quality – that is, the quality of audit services is conditional upon the client firm's reporting system and other client-related factors. This suggests that audit quality has something of a reciprocal relationship with the client firm's reporting environment and cannot be separated as a distinct construct. For this reason, auditor scrutiny and scepticism are vital not only for carrying out audit procedures, but also

for client selection and the assessment of their inherent audit risk (Defond & Zhang, 2014). Therefore, higher-quality audits, along with supporting client characteristics, produce higher-quality financial reports (Defond & Zhang, 2014).

Finally, Gaynor et al. (2016) perceive audit quality and the quality of financial reports as two distinct components that relate to one another. They propose that audit services comprise factors related to the auditor, the audit engagement, and the audit environment, that affect the quality level of the service (Gaynor et al., 2016). For instance, auditor expertise, engagement complexity, and regulatory environment are examples of the factors that can influence audit quality (Gaynor et al., 2016). Similarly, the quality of financial reports relates to the firm's management, underlying operations, and the financial reporting environment that contribute to increasing (or decreasing) the quality of each construct (Gaynor et al., 2016). Managerial incentives, firm complexity, and corporate governance all constitute factors that influence the quality of financial reports (Gaynor et al., 2016).

There are multiple examples in the literature of higher-quality auditors constraining managerial discretion related to financial reporting (Alhadab & Clacher, 2018; Alzoubi, 2016; DeAngelo, 1981; Krishnan, 2003; Teoh & Wong, 1993). Recent studies, however, show that quality audits may incentivise other forms of managerial misconduct (Alzoubi, 2016; Chi et al., 2011; Cohen & Zarowin, 2010; Soliman & Ragab, 2014; Zang, 2012). For instance, increased scrutiny by external auditors may motivate managers to use real activity-based techniques in order to manipulate the underlying economic results (Chi et al., 2011). Such forms of managerial misconduct may fall outside of the scope of financial statements audits. Moreover, real activity-based alterations may not be easily uncovered by external auditors. Therefore, when firms opt to hire quality external auditors, managers may resort to altering real transactions, including sales activities, cost of production, and discretionary expenses (such as R&D and selling, general and administrative expenses [SG&A])[7]. Scholars suggest that this managerial manoeuvre may be even costlier to the firm and its stakeholders (Chi et al., 2011; Roychowdhury, 2006). This is because real activity manipulation involves economic and operational alterations that have real effects on

[7] Section 2.2.3.1 (subsection *Real Activity-Based Earnings Management*) provides a detailed discussion on real activity manipulation techniques.

cash flows. Consequently, scholars claim that in order to increase the quality of audit services, auditors need to take such manipulative techniques in their considerations throughout the audit engagement. For instance, Choi, Choi et al. (2018) suggest that obtaining higher-quality audit services may contribute to lower levels of real activity-based earnings management since auditors are motivated to avoid litigation risk and to mitigate the complexity and distortion of financial results when real and accrual earnings management techniques are employed. In support of this notion, Commerford et al. (2016) documents that 95 per cent of interviewed auditors are aware of managerial use of real earnings management techniques that were intended for financial reporting manipulation.

2.6.3 Determinants of Audit Quality

The quality of an audit service is dependent, to a large extent, on the quality of its provider. Specifically, auditors' competency and independence are the basic drivers of supplying quality audits. Vital qualities identified in prior studies relate to the competency of audit service providers as well as their independence (DeAngelo, 1981; Gaynor et al., 2016; Watts & Zimmerman, 1983). The literature does consistently show, however, that due to the unobservability of auditor competency and independence, scholars tend to employ a number of proxies by which the quality of audit services can be identified and measured. Prior empirical studies identify audit quality by looking at specific characteristics of auditors and audit firms in order to capture the quality of audit services (Alsultan, 2017; DeFond & Zhang, 2014).

A determinant of audit quality frequently employed in earlier and recent studies is the size of the audit firm (DeFond & Zhang, 2014; Gaynor et al., 2016). Scholars suggest that Big N audit firms consistently provide higher-quality audit services compared with Non-Big N audit firms (Alzoubi, 2016; Becker et al., 1998; DeAngelo, 1981; DeFond & Zhang, 2014; Francis & Yu, 2009; Habbash & Alghamdi, 2017; Lawrence et al., 2011). The higher-quality audit that larger audit firms are able to provide is considered to be a function of a number of factors. First, larger audit firms have access to better professional and financial resources that allow them to provide quality services (Alsaeed, 2006; DeAngelo, 1981; DeFornd & Zhang, 2014; Francis & Yu, 2009). Therefore, Big N audit firms can operate with greater competency and independence compared to their Non-Big N counterparts. In addition

to their superior competency and ability to maintain independence, Big N audit firms operate with a greater risk due to the value associated with their brand. Specifically, larger audit firms have higher engagement risk due to higher litigation risk, and a long-established professional reputation that can be jeopardised in the case of professional misconduct (DeAngelo, 1981; DeFond & Zhang, 2014; Dye, 1993). Consequently, identifying the quality of an audit service based on the size of the audit firm is a highly valid construct due to its association with the majority of other audit quality measures (DeFond & Zhang, 2014).

Another determinant of audit quality identified in the literature relates to audit fees. The rationale is that increased audit quality is a result of greater effort that auditors expend throughout an audit engagement, and such increased effort is compensated with higher audit fees (Defond & Zhang, 2014; Francis, 2004). Another explanation suggests that higher audit fees reflect the auditor's expertise based on the notion that highly experienced auditors tend to charge higher rates (Francis, 2004). However, DeFond and Zhang (2014) suggest that high audit fees may be used as a means of reducing the level of litigation risk. Specifically, audit firms may charge additional fees (a fee premium) in an attempt to transfer potential losses to the client, rather than actually increasing the effort of an audit engagement. DeFond and Zhang (2014) suggest that shifting potential costs to clients can be seen in audit billing rates as an increase in risk premia. Another issue supporting the use of audit fee as a determinant of audit quality is the notion of economic bonding between auditors and their clients. Asthana and Boone (2012) explain that audit quality may be compromised when audit fees reach an abnormally high level. That is, an abnormal increase in audit fees can induce auditors to compromise their independence in order to maximise their gains from the audit engagement. Consequently, auditors can be willing to tolerate their clients' financial reporting misconduct in the presence of abnormally high audit fees. Additionally, Asthana and Boone (2012) claim that abnormally low audit fees signal another issue of audit quality. Specifically, abnormally low audit fees suggest that the audit client enjoys a high bargaining power over the audit firm.

The literature also shows that the depth of an auditor's experience in a market industry constitutes another determinant of audit quality (DeFond & Zhang, 2014). The more experience an auditor has of a specific industry, compared with other auditors, the

greater the quality of their audit services is deemed to be. In other words, with greater exposure to a specific industry, an auditor can improve their understanding of the nature of economic transactions conducted within the industry. Additionally, the auditor can also gain a deeper understanding of different accounting choices and estimates used in the reporting environments of the firms operating in their industry of expertise. Therefore, an industry-specialist auditor is expected to perform at a higher level and produce a higher-quality audit service (Sun & Liu, 2013). Balsam et al. (2003) go so far as to suggest that the greater an auditor's industry expertise, the better they are in detecting intentional and unintentional financial misreporting. In addition, Krishnan (2003) provides supporting evidence that the clients of industry-specialist auditors exhibit lower levels of managerial discretion in their financial reports.

In addition to the industry specialisation of auditors, an extended client-specific exposure is also considered to be a determinant of audit quality. Many scholars claim that longer auditor tenure provides auditors with beneficial client exposure (DeFond & Zhang, 2014; Gul et al., 2009; Johnson et al., 2002; Myers et al., 2003). Specifically, the number of accounting reporting periods an auditor has remained as a service provider of a particular client, is associated with a deeper knowledge of their financial reporting environment (Myers et al., 2003). In other words, a long auditor–client tenure provides the auditor with the opportunity to gain an in-depth understanding of the client-specific financial reporting system, including their particular threats and risks. Consequently, better understanding the financial reporting environment of client firms contributes to an increased likelihood that auditors will detect manipulative financial reporting. However, another stream of literature claims that extended auditor tenure may damage auditor independence (Carey & Simnett, 2006; Knechel et al., 2013) because long tenure can strengthen the relationship between auditors and firms, resulting in higher auditor tolerance of managerial financial misstatements. Subsequently, longer audit tenures can also have a detrimental influence on audit quality (Carey & Simnett, 2006).

2.6.4 Audit Quality in Saudi Arabia and Similar Contexts

The literature investigating the impact of audit quality on the quality of financial reports in the US context provides extensive evidence of the constraining influence that audit quality has in mitigating managerial discretionary practices

(Almarayeh et al., 2020; DeAngelo, 1981; Eshleman & Guo, 2014; Krishnan, 2003; Zang, 2012). However, in non-US contexts, the evidence remains inconclusive (Alsultan, 2017; Francis & Yu, 2008; Habbash & Alghamdi, 2016). In the Saudi Arabian and similar contexts, the impact of audit quality, as gauged by auditors' attributes, remains underinvestigated.

In the Saudi context, scholarly research is inconclusive regarding the effect of quality audit services on firms listed on the Saudi capital market. For instance, Habbash and Alghamdi (2017) investigate the impact of audit quality on managers' use of accrual-based earnings management techniques by Saudi firms. The authors find a significant association indicating that audit quality, when measured using auditor opinion, mitigates the level of earnings management used by client firms. However, Habbash and Alghamdi (2017) document that Big N audit firms and industry-specialist auditors do not play a significant role in curbing earnings management practices by listed firms. They argue that the ineffectiveness of Big N audit firms in the Saudi context may relate to weak audit committee oversight. However, the 2006–2009 sample period used by the authors is the period when the Saudi stock exchange collapsed and the global financial crisis took place. These events may significantly impact the accuracy of the investigation results, due to measurement noise. In a similar vein, Alsultan (2017) investigates the impact of audit firm size (i.e., Big N vs Non-Big N) on the extent of accrual-based earnings management, as a proxy for audit quality. The author finds that Big N audit firms only constrain income-decreasing discretionary accruals. The author explain that Big N audit firms are more effective in deterring income-decreasing discretionary accruals due to the potential of firms to exploit the financial crisis in order to secure lower borrowing costs. Specifically, Alsultan (2017) states that firms tend to engage in earnings management practices during a financial crisis to obtain greater re-negotiating power with respect to the cost of their debt obligations. Consistent with Habbash and Alghamdi (2017), Alsultan (2017) fails to find a statistically significant association between Big N audit firms and the level of earnings management measured as an absolute value of discretionary accruals. Furthermore, Alsultan (2017) finds that Big N audit firms are not statistically associated with earnings management practices in pre-IPO accounting periods. However, Alsultan's (2017) sample may not be representative of the study population, as only four industries were included in the final sample.

In an earlier study, Alsaeed (2006) examines the impact of audit firm size on the level of Saudi firms' voluntary disclosure. The author argues that Big N audit firms enhance voluntary disclosure by non-financial listed firms in Saudi Arabia. However, the author finds that the size of the audit firm has no statistically significant association with the level of voluntary disclosure. Alsaeed (2006) indicates that this may relate to the fact that the external auditors' role, in relation to annual reports, is bound by legal and professional requirements. Therefore, larger audit firms may not require their audit clients to voluntarily disclose non-required information.

Similar to the findings of studies in the Saudi context, scholars find comparable results for the impact of Big N auditors on listed firms in similar contexts. For instance, Alzoubi (2016) investigates the impact of Big N audit firms on earnings management practices for listed firms within the Jordanian industrial sector. The author's findings support the notion that Big N audit firms provide higher-quality audit services. Specifically, the findings of Alzoubi (2016) reveal a significant decrease in earnings management practices among industrial firms that hire a Big N auditor. Alzoubi's later study (2018) uses four audit quality proxies (audit firm size, industry specialisation, tenure, and independence) and finds comparable findings to those of his 2016 study, indicating that high audit quality curbs earnings management practices for industrial firms in Jordan. In a similar vein, Tessema (2020) investigates the impact of audit quality on information asymmetry for listed banks in GCC countries. The author finds that audit quality, as measured using the proxies of audit firm size and audit opinion, significantly mitigates information asymmetry and enhances the quality of financial reports for the listed banks. However, Mnif and Hamouda (2020) find that firms operating in the gas and oil industries in the GCC tend to resort to using real activity-based earnings management techniques when audited by higher-quality auditors. This supports the assertion that accrual-based earnings management and real activity-based earnings management are substituted for one another at need.

2.7 Summary

This chapter provided a thorough review of the literature on financial reporting quality. It included the various definitions of financial reporting quality, its fundamental and enhancing characteristics, and different methods of measuring it. The chapter reviewed the literature on political connectedness, including its definition in

the context of listed firms, identification of politically connected firms, the impacts of political connections on listed firms, and political connectedness in Saudi Arabia and similar contexts; institutional investors, specifically, the definitions of institutional investors, criteria for classifying them, their impact on their investees, and factors related to institutional investors in the Saudi Arabian and similar contexts; internal audit function, including its definition, importance, and sourcing arrangements, and the internal audit function in Saudi Arabia and similar contexts; and audit quality, including a definition, the impact of audit quality on financial reporting quality, determinants of audit quality, and audit quality in Saudi Arabia and similar contexts.

Chapter Three discusses the theoretical framework underlying the study hypotheses and provides a detailed exposition of the various components that make up the theoretical construct of the study. These are resource dependency theory, legitimacy theory, and agency theory. Additionally, the chapter discusses the relevant implications of the three theories in order to elucidate their relevance to the study context. Following that, the applicability of the theoretical framework to the Saudi context is discussed. The chapter then advances the theoretical analysis and prior empirical findings related to the study hypotheses. Finally, a summary is provided to conclude the chapter discussion.

Chapter Three

Theoretical Framework and Hypothesis Development

3.1 Introduction

Chapter Two provided a comprehensive review of the literature on financial reporting quality, including its definition, concept, characteristics, and measurement. A review of the literature related to political connectedness was also provided, including a definition of politically connected firms, identification of political connectedness and its effects on firms, and political connectedness in Saudi Arabia and similar contexts. Similarly, a comprehensive review of the literature related to institutional investors was also presented, including a definition, criteria for classifying institutional investors, their impact on their investees, and institutional investors in Saudi Arabia and similar contexts. Following that, the chapter provided a thorough review of the literature related to internal audit function, including the definition of internal auditing, its specific importance in the context of quality of financial information, internal audit sourcing arrangements, and the internal audit function in Saudi Arabia and similar contexts. Subsequently, the chapter reviewed the literature on audit quality, providing a definition of audit quality, the impact of audit quality on financial reporting quality, determinants of audit quality, and audit quality in Saudi Arabia and similar contexts. Finally, the chapter concluded with a brief summary of its content.

This chapter provides a detailed discussion of the theoretical framework underlying the study hypotheses. First, detailed discussions on resource dependency theory, legitimacy theory, and agency theory are provided, along with an analysis of their relevant implications. After that, the applicability of this theoretical framework in the Saudi context is discussed. Subsequently, the theoretical and empirical analysis underlying the study hypotheses is provided. Then, the chapter provides a graphical presentation of the study hypotheses. Finally, a summary is provided to conclude the chapter.

3.2 Resource Dependency Theory

Resource dependency theory is based on a socio-organisational perspective that emphasises the importance of environmental factors and their impact on firms,

and firms' behaviour as they secure the means to minimise the uncertainties generated by those factors (Pfeffer, 1973; Pfeffer & Salancik, 1978). The theory proposes that firms' interdependence with various factors in their environments forms a source of contingency (Pfeffer & Salancik, 1978). Such contingencies arise when a firm lacks access to or control over influential factors within its environment. Since environmental influence is inevitable, firms seek to manage their environmental externalities in order to achieve autonomy and continue to survive (Brouthers et al., 2008; Pfeffer & Salancik, 1978). The attainment of this preferred status may be through means of total absorption (such as M&A) or partial absorption (such as directors appointments) (Pfeffer & Salancik, 1978). Since total absorption is not always an ideal, or even possible as an option, firms may tend to utilise partial absorption, or "co-optation", as a rational response to environmental externalities (Drees & Heugens, 2013; Pfeffer, 1972). By co-optation, firms seek to gain continuous support by cooperating with a stakeholder with critical resources in exchange for control and information (Pfeffer, 1972). For example, Pfeffer and Salancik (1978) claim that the board of directors is an important element that, by its size and structure, can play a significant role in managing a firm's dependence on environmental factors.

The benefits firms obtain by establishing connections with individuals with critical resources – by appointing them as board directors, for example – may be crucial to their survival and continuity. Specifically, directors bringing substantial resources can provide their firms with advice and counsel, facilitate the flow of information between the firm and its external environment, and provide access to resources (Pfeffer & Salancik, 1978). The human and relational (social) capital of such directors is perceived as a source of competence, strategic guidance, and connectedness with influential factors (Brown 2005; Hillman & Dalziel, 2003). In addition, resource dependency theorists claim that another benefit a firm may obtain by a well-resourced board of directors is increased legitimacy in the eyes of the general public (Pfeffer, 1972; Pfeffer & Salancik, 1978). This may also imply that the presence of highly ranked or prestigious directors confers a perception of legitimacy (Certo, 2003). In line with this notion, Suchman (1995) proposes that the desirability and propriety of a firm's actions may be enhanced by establishing political connections.

Although the literature shows that boards of directors tend to be the main mechanism by which firms can increase their control with respect to external factors,

resource dependency theory suggests that other internal and external mechanisms also play important roles in firms' survival and enhance their decision-making processes (Pfeffer & Salancik, 1978). Therefore, external and internal auditing can be seen as factors that add value to organisational processes and performance (Pfeffer & Salancik, 1978). Moreover, the ownership structure of the firm is considered an important mechanism that provides firms with the ability to control aspects of the external environment (Pfeffer & Salancik, 1980). For instance, it has been established in the literature that institutional ownership can provide important financial and organisational benefits to listed firms (Cao et al., 2020; Shleifer & Vishny, 1986).

3.3 Legitimacy Theory

Legitimacy theory is based on the notion that organisations need to fulfil certain obligations that exist as a result of their operations within specific societal contexts (Deegan, 2002; Suchman, 1995). Suchman (1995) explains the underlying concept of legitimacy as "a generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (p. 574). Scholars suggest that compliance with societal requirements and social norms is considered to be a fulfilment of obligations set forth in the social contract that exists between the society and the organisation (Deegan, 2002; Guthrie & Parker, 1989). The idea of a social contract rests on the notion that firms' compliance with societal norms and values as a response to social pressure has favourable consequences in the long term. The theory asserts that firms need to meet social expectations and adhere to socially accepted behaviour in order to be conferred the status of legitimacy (Deegan, 2002). As a result, firms that adhere to social requirements can obtain advantages that are necessary for their continuity and survival (Deegan, 2002; O'Donovan, 2002). Legitimacy theorists propose that legitimacy be seen as an operational resource that, once obtained, can be utilised by firms to achieve organisational objectives (Dowling & Pfeffer, 1975; Suchman, 1995). From this perspective, the status of legitimacy may also be considered as a competitive advantage that firms may utilise in attracting resources and support from their environments. Hence, legitimacy is vital to firms, enhancing their survival chances and promoting continuity of growth (Dowling & Pfeffer, 1975; Drees & Heugens, 2013).

The presence of individuals whom society recognises (i.e., the elite members of society) maybe seen as an advantage or a threat to a firm in the context of legitimacy theory. As discussed in Section 3.2, elite members may provide a variety of resources, including legitimacy. Furthermore, the presence of elite directors does not only benefit the appearance of a firm in the eyes of society; it is argued that by upholding and encouraging legitimate conduct by prestigious directors, firms' actual legitimacy may significantly improve (Suchman, 1995). On the other hand, the presence of elite members of society may be seen as threat in the case of politically connected directors. This is due to potential negative consequences that may result from nepotism and cronyism. Such consequences may constitute a negative outcome of political connectedness that diminishes the organisational legitimacy of politically connected firms (Patten, 1991). Consequently, the establishment of political connections may be seen as a source of legitimacy gap, which may need organisational action in order to reduce its consequences. Based on the theoretical ground that legitimacy theory provides, a number of scholars suggest that legitimacy theory constitutes a relevant and useful theoretical construct that can be employed to explain and understand issues related to financial reporting (e.g., Lightstone & Driscoll, 2008; Tsang, 2001; Woodward et al., 1996).

3.4 Agency Theory

Agency theory has been a commonly used and important theoretical basis of numerous studies in the economics, finance, and accounting literature. The theory builds on a concept discussed in an early work of Adam Smith, *The Wealth of Nations*, in which he explains the separation of ownership and management in joint-stock companies. He states that

> The trade of a joint-stock company is always managed by a court of directors. This court, indeed, is frequently subject, in many respects, to the control of a general court of proprietors. But the greater part of these proprietors seldom pretend to understand anything of the business of the company. […] The directors of such companies, however, being the managers rather of other people's money than of their own, it cannot well be expected that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own. (Smith, 1776, p. 606)

The literature states that agency costs may come as a result of two different forms of conflicts: principal–agent (Type I) and principal–principal (Type II). Agency theory (Type I) helps in analysing conflicts of interests that may arise between contractual parties as a result of the separation between management (agents) and ownership (principals) and understanding the impact of contractual relationships between these parties (Jensen & Meckling, 1976). Such conflicts may be triggered by the self-orientation of each party and their desires to advance different interests (Jensen & Meckling, 1976; Watts & Zimmerman, 1986). Based on the contractual nature of the relationship, principals' delegation of the decision-making function to the agents is built on the assumption that the agents will behave in alignment with the principals' best interest (Eisenhardt, 1989).

The organisational structure of publicly traded firms involves this contractual relationship between the executive team and shareholders. However, the delegation of managing authority to a firm's executives may induce them to seek their own interests over the interests of the firm's shareholders, especially when their compensation is determined by performance-related measures (Shleifer & Vishny, 1997; Xie et al., 2003). Such behaviour can give rise to conflicts of interest between management and shareholders, leading to greater principal–agent problems (Shleifer & Vishny, 1986, 1997). For instance, a firm's management may deliberately conceal or alter information presented in financial reports and maintain information asymmetry in order to obtain private benefits (Jensen & Meckling, 1976). The asymmetry of information provided by management further complicates agency costs by diminishing the confidence of financial report users in the faithfulness of its representation. Numerous scholars investigate different factors associated with agency costs of listed firms and find that different features of boards of directors are associated with the level of financial reporting quality (Cohen et al., 2004; Gaynor, 2016). For this reason, agency theory forms a suitable theoretical basis for analysing the impact of politically connected directors in the boardrooms of listed firms on the outcomes of their financial reporting systems.

The Type II form of agency arises in principal–principal relationships. The presence of a dominant principal may incentivise practices that seek to extract private benefits by controlling or colluding with the firm's management. Such a situation can arise in the case of controlling versus non-controlling shareholders (Shleifer & Vishny,

1986). The premise behind this type of agency conflict is that, by colluding with or controlling the firms' management, controlling principals can extract benefits according to their own interests to the detriment of non-controlling principals (Kim et al., 2007). The involvement of individual principals, as opposed to institutional principals, can be more harmful to non-controlling parties as controlling individuals might perceive a higher incentive to expropriate the interests of their non-controlling counterparts (Villalonga & Amit, 2006). It is argued that the agency costs of principal–principal conflicts (Type II agency cost) are more significant in politically connected firms (Habib et al., 2017). In other words, politically connected individuals may be able to exercise influence on the firm and extract benefits according to their own agenda to the detriment of other stakeholders.

A growing body of literature suggests that corporate governance mechanisms may help to mitigate agency issues in publicly listed firms (Abbott et al., 2004; Alzoubi, 2016; Alzoubi & Selamat, 2012; Habbash & Alghamdi, 2017; Johl et al., 2013; Klein, 2002; Krishnan, 2005). Internal governance mechanisms (such as board structure and internal audit functions) and external governance mechanisms (such as ownership structure and external auditing) have been widely considered as effective measures that can mitigate agency costs (Chi & Wang, 2009; Cohen et al., 2004; Klein, 2002; Shan, 2014). Furthermore, the literature suggests that internal and external mechanisms are components of a corporate governance system that interact in order to achieve the intended outcome (Cohen et al., 2009; Smaili & Labelle, 2009). This thesis therefore utilises agency theory as a theoretical foundation.

Despite the popularity of agency theory in accounting, audit, and corporate governance literature, it is insufficient, however, to explain the role and impact of political connectedness when it interacts with other factors (Hillman & Dalziel, 2003). In order to provide a more comprehensive explanation of the role of politically connected directors and their interactions with other factors within and outside of firms, this thesis will aim at a more nuanced understanding by following Eisenhardt (1989) who recommended using multiple theories. Therefore, in addition to using agency theory, this thesis will also make use of resource dependency theory and legitimacy theory in analysing the relationships between the variables of interest and financial reporting quality.

3.5 Applicability of the Theoretical Framework in the Study Context

The theoretical framework of this thesis is formed by combining the various strengths and emphases of resource dependency theory, legitimacy theory, and agency theory. Using these theories in the context of financial reporting quality is based on the implications of each theory with regards to the interaction of listed firms, elite-status individuals, and societal norms and expectations. Saudi Arabian society is an Islamic society in which individuals and organisations are expected to behave within the bounds of religiously accepted behaviour (Hussainey & Al-Nodel, 2008). Therefore, it is expected that individuals and organisations will promote and uphold ethical conduct that complies with the values and requirements of the society. Consequently, in contractual relationships, such as those of trading and commerce, all parties are expected to provide faithfully represented and complete information that allows each of the contractual parties to objectively assess the transaction and its consequences (Dyreng, Mayew et al., 2012). This is especially relevant in the case of politically connected individuals due to the potential for reputational loss in a society that is heavily influenced by Islamic ethical guidelines (Haniffa & Hudaib, 2007; Hussainey & Alnodel, 2008). In line with this notion, Deegan (2002) states that "organizations continually seek to ensure that they operate within the bounds and norms of their respective societies, that is, they attempt to ensure that their activities are perceived by outside parties as being legitimate" (p. 253). Therefore, from a legitimacy theory perspective, adherence to these expectations allows firms to be conferred the status of legitimacy, which is critical to the organisational survival of listed firms (Suchman, 1995).

The presence of politically connected individuals within the environment of a listed firm can have a significant impact on how it conducts its business, as well as its operational and reporting outcomes. In the case of Saudi listed firms, political connections may be based on close family ties with political leaders (Al-Hadi et al., 2017; Mazheri, 2013), and firms may seek to establish such connections through subscriptions of influential families' in new IPOs (Baydoun et al., 2013). Hence, the involvement of prestigious individuals in listed firms tends to occur via family links, rather than due to connections with a particular regime, military position, or political party affiliation. This is due to the uniqueness of the political scheme in Saudi Arabia and its impact on how political connections are formed.

For this reason, the hypothetical analysis of politically connected directors' involvement in listed firms, and their impact on firms' business and reporting practices, requires the consideration of various factors. Utilising resource dependency theory will assist in understanding the nature of the resources that politically connected directors provide to listed firms, while agency theory will help to reveal the impact of politically connected directors within the governance structure. This approach is in line with the explanation by Daily et al. (2003) that although agency theory is suitable for explaining the mitigation of conflicting interests between different parties, resource dependency theory can contribute to a more comprehensive understanding of relationships within complex governance structures.

On the one hand, resource dependency theory suggests that the appointment of politically connected directors can be favourable to listed firms due to their capacity to benefit their firms in various ways (Pfeffer & Salancik, 1978). For instance, the appointment of politically connected directors may provide firms not only with beneficial advice and counsel, easier access to financial resources, and access to information, but their presence also enhances the status of firm's legitimacy (Pfeffer, 1972; Pfeffer & Salancik, 1978). In this case, legitimacy may be achieved as a direct consequence of political connectedness – by the actual involvement and close monitoring practised by the board. Alternatively, legitimacy may be conferred as an indirect consequence, a rational response to the compliance pressure imposed by the public and authorities (Deegan, 2002; Qian & Chen, 2021; Suchman, 1995). Consequently, these firms may have an even greater need to enhance their credibility in order to protect the elite directors' reputations (Al-Hadi et al., 2017; Braam et al., 2015). Regardless of the motivation, the presence of politically connected directors in boardrooms will amount to lower agency costs and improve the quality of financial reporting outcomes. Additionally, the analysis of other explanatory variables (i.e., strategic institutional investors, internal audit sourcing arrangements, and audit quality) alongside political connectedness requires an understanding of how these variables impact on the extent of agency costs.

On the other hand, agency theory suggests that firms may establish links with politically connected individuals as a way of hedging against legal sanctions, by relying on their closeness to the political leadership (Chaney et al., 2011). In such cases, management may be able to engage in manipulative reporting practices in order

to attaint short-term objectives while being shielded from sanction by political connected directors (a Type I agency cost) (Braam, et al., 2015; Chaney et al., 2011). Alternatively, management maybe subject to pressure by politically connected directors to engage in practices that reduce the quality of financial reporting to the detriment of other stakeholders' interests (a Type II agency cost) (Habib et al., 2017). Therefore, it may be reasonable for financial reports users to assume that politically connected firms may incur higher costs due to agency conflicts.

3.6 Hypotheses Development

3.6.1 Political Connectedness and Financial Reporting Quality

Right from the outset, Saudi businesses have primarily been family-based businesses (Ekanem & Alrossais, 2017). The economic boom resulting from the commercial production of oil in Saudi Arabia in the late 1930s attracted several, now well-known, businesspeople who made their fortune through family businesses. Due to the initial focus of family businesses on rent-seeking activities as a main source of revenue, family firms sought to gain access to resources that were unavailable to other firms by establishing links with well-resourced individuals (Mazaheri, 2013). From a resource-dependency perspective, establishing connections with socially resourced individuals through the board structure amounts to better resources, easier access to finance, relatively faster government contract approvals, and the potential for future bailouts (Chaney et al., 2011; Faccio, 2006; Pfeffer, 1972; Pfeffer & Salancik, 1978).

Lester et al. (2008) argue that it is not only the social network (i.e., social capital) of elite individuals that motivates firms to appoint politically connected directors; the depth of their knowledge, expertise, and skills also constitute important factors (i.e., human capital). In line with this assertion, Hillman and Dalziel (2003) propose that the governance and resource provision functions of the board of directors are benefits that arise from the combined human and social capital of the board. Furthermore, Daily et al. (2003) suggest that individuals appointed as board directors can bring valuable resources in the forms of counsel and guidance to management, in addition to playing a monitoring role. Since members of the Saudi Royal Family are among the most highly educated individuals within Saudi society (Mazehri, 2013), it can be argued that firms with politically connected directors may also benefit from their human capital, along with their social capital. In other words, the presence of

politically connected directors in the boardrooms of Saudi listed firms constitutes an important factor not only in terms of the firms' performance, but also in enhancing their governance and financial reporting behaviour. In line with the central proposition of resource dependency theory, the presence of politically connected directors in the boardrooms of Saudi listed firms can be a source of direct or indirect enhancement of their firms' resources, including their legitimacy (Certo, 2003; Pfeffer, 1972; Pfeffer & Salancik, 1978).

From a legitimacy theory perspective, the notion that political connectedness can be a source of better governance and improved financial reporting practices is particularly relevant in the case of Saudi listed firms. This is because Saudi Arabian society is characterised as an extended-family society and the cultural bonds between Saudi family members play a significant role in making up the social fabric and values (Mazaheri, 2013; Rice, 1999). The strength of familial ties within Saudi society means that an individual's behaviour can have an extended effect that spreads to other family members (Ali, 2009; Almalki, 2020). Consequently, an individual's behaviour can impact not only their own reputation but also that of the extended family or even the whole tribe (Ali, 2009; Almalki, 2020). Coupled with the nature of the Saudi political scheme, societal pressure may require politically connected firms to adhere even more strongly to socially accepted norms (Al-Hadi et al., 2017; Knack & Keefer, 1997; Sethi, 1979). In addition, firms may structure their boards such that they not only provide direct benefits to the firm (such as through access to resources and the flow of information) and enhance governance (through their monitoring role), but they also improve their perceived legitimacy in the eyes of the general public (Pfeffer, 1972; Pfeffer & Salancik, 1978). For instance, Drees and Heugens (2013) suggest that when a firm has board connections with prestigious parties, it can overcome the issue of the firm being unfamiliar to investors in capital markets during an IPO. This implies that the appointment of highly ranked or prestigious directors (in this case, politically connected directors) may be used as a means to direct public perception towards firm's legitimacy (Certo, 2003; Certo et al., 2001).

Along with the appointment of politically connected directors, firms may also initiate legitimacy-related changes to other organisational aspects for the mere purpose of perspective management. Over time, firms that seek to connect with politically connected directors in order to convey the appearance of legitimacy may actually adopt

the "legitimate" behaviour and the conferral of legitimacy may occur of itself (Certo, 2003; Suchman, 1995). In line with this argument, Suchman (1995) proposes that the desirability and propriety of a firm's actions may be enhanced by establishing political connections. Drawing on resource dependency theory, politically connected directors may significantly enhance a firm's legitimacy both in appearance and behaviour by upholding and encouraging the legitimate conduct of firms. This in turn enhances a firm's chance of survival since legitimacy is considered an effective strategic resource (Dowling & Pfeffer, 1975; Drees & Heugens, 2013). Again, the social capital of elite individuals (i.e., politically connected directors) may be a significant contributor to higher ethical conduct and suppression of managerial opportunism (Al-Hadi et al., 2017; Knack & Keefer, 1997). Such a situation is especially relevant to societies with strong informal institutions such as the family and tribe, and it may be particularly true in the Saudi Arabian context due to the nature of the political scheme, as discussed in Sections 1.1 and 2.3.4). In other words, since political connectedness in Saudi Arabia is based, to a large extent, on familial ties, the concern of politically connected directors to avoid reputational loss may overcome any inducement to engage in exploitative practices (Al-Hadi et al., 2017). Consequently, and in line with Guedhami's et al.'s (2014) argument, politically connected directors serving in the boardrooms of listed firms in Saudi Arabia are more likely to enhance the transparency and credibility of the financial reporting system, resulting in higher reporting quality.

Another strand of the literature, however, suggests that this is not always the case. Based on the fact that the political environment in which firms operate is an important environmental factor, political actions may constitute an important source of uncertainty. Therefore, by appointing current or former politicians and/or politically connected individuals as board members, firms seek to structure a board as a rational response to such uncertainty (Pfeffer, 1972). Since capital market authorities and accounting oversight bodies concentrate ever more on the credibility and reliability of financial reports and the quality of auditing services provided, manipulative or expropriative activities can result in serious legal consequences. For this reason, listed firms may seek to avoid such legal contingencies by relying on political connections. Scholars suggest that the interdependencies created between government members, old trading families, and politically connected individuals in Saudi Arabia could amount to a lack of accountability and compliance (Al-Hadi et al., 2016; Almadi, 2016; Kshetri & Ajami, 2008; Sidani & Al Ariss, 2014). Consequently, managers may

depend on the power and protection provided by politically connected directors to engage in rent-seeking activities and financial reporting manipulation without worrying so much about penalties imposed by market authorities (Chaney et al., 2011; Faccio, 2006; Mazaheri, 2013).

The benefits obtained by appointing politically connected directors align with the argument that higher-quality boards contribute to higher-quality financial reporting (Johl et al., 2013). However, agency theory suggests that conflicting interests between principals and their agents (Type I agency problems) or between principals (Type II agency problems) may arise as a consequence of political connectedness. In line with this argument, Chaney et al. (2011) offer three factors that could contribute to a negative relationship between political connectedness and earnings quality. First, insiders of connected firms could hide, obscure or delay reporting benefits received, with the intention of misleading investors. Second, Chaney et al. (2011) argue that connected firms simply care less about the quality of accounting information as they are being shielded by politicians, and the third argument is that firms with poor earnings quality are more likely to establish political connections.

Taken together, the literature offers mixed evidence on the impact of political connections on firms. For instance, using a sample of US firms, Houston et al. (2014) find that political connections contribute to higher firm value, lower monitoring costs, and lower cost of debt, which is consistent with the resource dependency argument. Jennings et al. (2020) examine the reporting behaviour of firms connected to politicians with influence over the Stock Exchange Commission (SEC) and find that these firms are less likely to engage in aggressive and fraudulent financial reporting. On the other hand, Rmanna and Roychowdhury (2010) find that firms that are politically connected to US congressional candidates and outsource significant business activities engage in more income-decreasing earnings management. Using an index based on proximity to political leadership, Gross et al. (2016) find that politically connected firms in the US engage in earnings management practices more than non-politically connected firms. The authors explain their finding by pointing to the uncertainty of future firm performance and lack of transparency due to increased policy risk. Finally, Correia (2014) finds that politically connected firms in the US are less likely to be targeted by the SEC and are likely to pay lower penalties if they do become subject to SEC legal actions.

Similar to these studies conducted in the US, research based on samples from non-US contexts offers non-conclusive evidence. For example, Braggion and Moore (2013) find that there was an increase in firm value of new technology firms with politically connected directors during the late Victorian era, while Green and HomRoy (2020) use more a recent sample and find that both firm value and firm profitability increase for listed firms as a results of political connection. Batta et al. (2014) use a sample of Venezuelan firms and find that politically connected firms are more likely to report higher-quality earnings than their counterparts. In the same vein, the findings of Guedhami et al. (2014) support the notion that politically connected firms are more likely to engage in higher-quality audits. On the other hand, Hope et al. (2020) provide evidence that the quality of financial reports of politically connected firms in China improved after they lost their connections, while He et al. (2012) find that politically connected firms in China use real activity-based earnings management as a substitute for accrual-based earnings management. Similarly, Braam et al. (2015), using a sample derived from thirty countries, find that politically connected firms tend to use real activity-based earnings management more than accrual-based techniques due to the lower likelihood of detection. Chaney et al. (2011) use a cross-country sample and find that political connectedness is more likely to contribute to lower-quality reported earnings. Finally, using a sample of listed firms in GCC countries, Al-Hadi et al. (2016) document that lower-risk reporting quality was more common for politically connected firms, while Almadi (2016) fails to find a significant relationship between royal directors and firm performance but finds that government-affiliated directors have a positive, moderating impact on the association in publicly listed firms in Saudi Arabia.

Based on this discussion, Hypothesis 1 is stated, in the alternative form, as follows:

H₁	*There is a significant association between political connectedness and financial reporting quality.*

3.6.2 Strategic Institutional Investors and Financial Reporting Quality

Institutional investors are characterised by their advanced operational development and sophisticated investment practices (Bushee, 1998; Chung & Zhang, 2011; Collins et al., 2003). Such sophistication and operational efficiency contribute to significant differences between institutional investors and other types of

shareholders. Therefore, it is expected that institutional investors may also be different in terms of their impact on listed firms' operations and financial reporting practices (Pucheta-Martínez & García-Meca, 2014). In this regards, the literature offers opposing views on the role played by institutional shareholders as a monitoring mechanism in the firm's governance structure. First, institutional investors employ highly trained professionals with accumulated investment expertise that may enhance their contribution to the institutions' fiduciary role (Collins et al., 2003; Hope, 2013; Pucheta-Martínez & García-Meca, 2014). In line with this, resource dependency theory suggests that based on their financial capabilities and greater access to resources and data (Hope, 2013), institutional investors would be well equipped to act as an effective governance mechanism promoting transparency and ethical reporting practices. Additionally, institutional shareholders have a greater ability to negotiate and demand higher-quality audits (Carleton et al., 1998; Han et al., 2013; Shleifer & Vishny, 1997). Therefore, institutional investors can intensify their oversight and restrain opportunistic managers from resorting to earnings management techniques to distort reported financial information (Alves, 2012; Chung et al., 2002; Farooq & El Jai, 2012; Monks & Minow, 1995; Roychowdhury, 2006; Zang, 2012).

Nonetheless, scholars have found (as discussed in Section 2.4.2), that institutional investors are not a homogenous group of institutions that share the same investment objectives and behaviours. The strategic focus of their investment objectives differentiates institutional investors and leads certain institutions to behave in ways that favour longer-term performance (Almazan et al., 2005; Johnson & Greening, 1999; Zhong et al., 2017). Furthermore, strategic institutional investors are expected to enhance their investee firms' reporting environments and to increase the quality of accounting information compared to short-term institutional investors (Burns et al., 2010; Chung et al., 2015; Kane & Velury, 2004; Zhong et al., 2017). This is because strategic institutional investors are long-term oriented due to their extended investment horizon. In addition, they are more likely to maintain higher levels of stockholdings (i.e., more than five per cent of the firm's stock) (Zhong et al., 2017). Scholars indicate that pension funds, for instance, are significantly more interested in long-term investment performance than other types of institutional investors (Johnson & Greening, 1999). Additionally, pension funds, as strategic institutional investors, tend to have lower portfolio turnover as a result of their long-term orientation and

larger stockholdings (Johnson & Greening, 1999). Consequently, this type of strategic institutional investor is more likely to adopt a "voice" strategy in dealing with their investees' managers (Johnson & Greening, 1999). Since two of the major institutional investors in Saudi Arabia, GOSI and PPA, are pension funds, their fiduciary responsibilities as well as their large stockholdings are likely to increase their governance sensitivity, leading them to promote better governance environments in their investee firms (Al Kahtani, 2014; Bushee et al., 2014). Strategic institutional investors often act as "watchdogs" in their investee firms and play an important role in promoting transparency and mitigating the impact of agency problems. Consequently, it is reasonable to propose that institutional investors in the Saudi capital market could be an important governance mechanism that and contribute to lower agency costs and higher financial reporting quality.

Other scholars, however, have argued that institutional owners play a more passive role in restraining opportunistic managers (Claessens & Fan, 2002; Duggal & Millar, 1999). This may be the case when institutional investors have an other-than-ownership stake in their investees. Specifically, along with shareholdings, institutional investors may also have business transactions with the firm. In this case, these institutions may opt to play a more passive role or to simply support managerial decisions. Furthermore, institutional investors influence important firm decisions either through voice (influencing the firm's decisions to reflect their own preferences) or exit (selling their owned stock and avoiding the incremental costs of monitoring) strategies (Coffee, 1991; McCahery et al., 2016; Schmidt & Fahlenbrach, 2017). Roychowdhury (2006) argues that institutional investors tend to liquidate their investments in poorly performing firms rather than investing more resources. This tendency to downsize or liquidate their investments can put pressure on management to manipulate financial reports to recognise short-term profits to the detriment of long-term value. Additionally, the focus on short-term profits on the part of some institutional investors can lead them to collude with the investee management in engaging in manipulative reporting practices (Pucheta-Martínez & García-Meca, 2014; Sundaramurthy et al., 2005), and avoiding higher-quality auditors (Lin & Liu, 2009), and higher audit fees (Mitra et al., 2007) – even when their shareholdings are substantial and strategic (Copley & Douthett, 2002).

Drawing on agency theory, conflicts may occur between agents (management) and principals (shareholders) and between principals themselves (in the case of

majority vs minority shareholders). It is therefore argued that such conflicts encourage institutional shareholders to play an active monitoring role in order to protect the interests of minorities as well as their own (Claessens & Fan, 2002; Hay et al., 2008). In other words, institutional investors can rely on their capabilities and resources to mitigate the consequences of Type I agency conflicts arising between managers and shareholders. Similarly, institutions are able to alleviate Type II agency costs arising between controlling and non-controlling shareholders. Consequently, firms with higher institutional ownership are expected to have higher scrutiny of their governance structure, thus increased financial reporting quality. On the other hand, when institutional investors abandon their fiduciary duties and opt to act passively, managers may be induced to employ manipulative reporting practices. Such behaviour may result in increased conflict between managers and shareholders, resulting in higher Type I agency costs. Additionally, when institutional investors are exposed to greater investment risk resulting from a concentrated portfolio (Bushee, 2004), there may be a greater likelihood of principal–agent collusion, resulting in increased Type II agency costs. In other words, when institutional investors are motivated by a higher investment risk and limited ability to liquidate their investments, they may actually collude with managerial discretionary behaviour to manipulate financial reports. This may result in harm to other shareholders in the long term, as the firms' financial reporting quality deteriorates.

There are multiple examples in the literature on the positive relationship between institutional ownership and the quality of financial reports. For example, in the US context, Velury and Jenkins (2006) find that institutional ownership has a positive impact on the quality of reported earnings. Similarly, Sakaki et al. (2017) report that more stable institutional investors (e.g., pension funds) are more likely to curb managerial use of real activity-based earnings management. Additionally, Kane and Velury (2004) find that higher levels of institutional ownership are associated with higher-quality audits. Similarly, Han et al. (2013) find that long-term institutional investors enhance external corporate governance mechanisms by encouraging their investees to hire a Big 4 accounting firm and thus promote the quality of their financial reporting. Moreover, a number of scholars (e.g., Bushee, 1998; Roychowdhury, 2006; Zang, 2012) find evidence of less engagement in managerial discretionary practices, both accrual- and real activity-based, in the presence of institutional ownership. Finally, McCahery et al. (2016) report that both voice and exit strategies are used by

institutional investors to influence firms' decisions, with voice typically preceding potential liquidation. On the other hand, Velury and Jenkins (2006) report that concentrated institutional ownership has a negative impact on the quality of reported earnings. Similarly, Burns et al. (2010) document that firms with short-term oriented institutional ownership report higher discretionary accruals and are more likely to engage in manipulative financial reporting. However, contrary to Velury and Jenkins' (2006) findings with regards to concentrated institutional ownership, Burns et al. (2010) find that higher levels of institutional stockholdings incentivise higher scrutiny, thus leading to better financial reporting quality. Investigating the relationship between audit fees and the size of institutional shareholdings, Mitra et al. (2007) document an inverse relationship with large institutional shareholdings indicating lower perceived audit risk and a positive relationship when institutional shareholdings are diffused.

Empirical studies investigating the monitoring role of institutional investors outside of the US context are limited (Aggarwal et al., 2011; Zhong et al., 2017). Koh (2003) investigates the impact of institutional investors on opportunistic managerial reporting behaviour among Australian firms and documents that institutional investors with larger shareholdings are associated with less earnings management. Similarly, Zhong et al. (2017) use a multi-country sample and provide evidence for the effectiveness of strategic institutional investors as a monitoring mechanism in promoting better-quality reported earnings. Furthermore, Farooq and El Jai (2012) investigate the impact of institutional investors who have majority shareholdings in Moroccan firms and find that they contribute to higher financial reporting quality as their investees report lower levels of discretionary accruals.

In terms of the impact of their representation on boards of directors, Pucheta-Martínez and García-Meca (2014) investigate whether institutional investors' presence in the boardrooms of Spanish listed firms enhances the quality of financial reports. They find that institutional investors constitute an effective monitoring mechanism that decreases the likelihood of receiving an adverse audit outcome and promotes the quality of financial reports. On the other hand, in the Australian context, Koh (2003) documents that institutional investors' short-termism induces higher income-increasing earnings manipulation. Siregar and Utama (2008) fail to provide evidence of the effectiveness of institutional investors in constraining managerial opportunism in Indonesia. Finally, Chakroun and Matoussi (2012) provide strong evidence of the negative impact of institutional investors on the extent of voluntary disclosure in the Tunisian context.

Based on these arguments, the following hypothesis is advanced in the alternative form:

H_{2a}	*There is a significant association between strategic institutional investors and financial reporting quality.*

The interaction of institutional investors and political connectedness may be seen from two distinct points of view. From one angle, an effective board of directors can play an important role in restricting managerial discretion (Fama, 1980). Consequently, the presence of politically connected directors may play a complementary governance role that adds to that of the institutional investors. Additionally, political connectedness of listed firms may bring more legal attention and monitoring scrutiny (Chaney et al., 2011), which may in turn increase their litigation risk if they deliver misleading financial reports. From this perspective, therefore, politically connected firms would exercise more caution to avoid reputational loss and protect their politically connected directors (Al-Hadi et al., 2017). This may be of higher importance to Saudi listed firms due to the nature and formation of political connectedness in the Saudi Arabian context. That is, political connections are formed based primarily on familial bonds that extend beyond immediate-family members (Almalki, 2020; Mazaheri, 2013; Rice, 1999). As a consequence, and in line with the legitimacy theory argument, the prestigious status of the politically connected directors and the Royal family may be an effective deterrent of manipulative reporting practices. Hence, when politically connected directors and institutional investors coexist in listed firms, the financial reports are more likely to be of higher quality. Consequently, the presence of institutional investors in the ownership structure of politically connected firms can mitigate Type I agency costs that may result from managerial opportunism. Additionally, institutional investors may also be able to constrain the potential collusion between politically connected directors and their firms' management to obtain self-serving benefits to the detriment of other shareholders. Therefore, institutional owners may constitute an effective mechanism that contributes to lower Type II agency conflicts.

From another angle, however, it can also be seen that the presence of institutional investors in politically connected firms may have less of an impact on financial reporting quality when politically connected directors rely on their power to

distort the firm's financial reports without exposing themselves to litigation risk (Chaney et al., 2011). Furthermore, institutional investors may also rely on the power of political connections on the board to expand their gains without being exposed to legal sanctions. In this case, the presence of institutional investors may magnify the effect of political connectedness on potential agency conflicts within listed firms. That is, when politically connected directors behave in a self-oriented manner and institutional investors contribute to increased discretionary reporting behaviour for short-term benefit, agency costs will increase significantly, affecting other shareholders. Therefore, in order to isolate the impact of institutional ownership on the financial reporting quality of politically connected firms, this thesis investigates its moderating effect. The following hypothesis is advanced in the alternative form:

H_{2b} *Strategic institutional investors influence the association between political connectedness and financial reporting quality.*

3.6.3 Internal Audit Sourcing Arrangements and Financial Reporting Quality

The internal audit function within listed firms has been recognised as a vital monitoring mechanism that effectively enhances firms' operations and financial reporting environment (Coram et al., 2008; Prawitt et al., 2009). In order for firms to fulfil the needs and requirements of an internal audit, they may adopt one of two strategies (Coram et al., 2008). Firms may hire an external party to carry out the internal audit tasks and perform its procedures (i.e., outsourcing the internal audit function[8]). Alternatively, firms may maintain an internal audit function within the firm by establishing a dedicated unit or department that carries internal audit tasks (i.e., an in-house internal audit function). The literature demonstrates that each strategy has its own benefits and drawbacks that may impact the overall effectiveness of the internal audit (Carey et al., 2006; Glover et al., 2008; Prawitt et al., 2012; Baatwah et al., 2019).

An outsourcing strategy for internal audits involves the assignment of internal audit tasks to an independent third party, usually an accounting firm (Barac & Motubatse, 2009). The literature finds that outsourcing the internal audit function may

[8] Following prior studies (e.g., Carey et al., 2006; Baatwah et al., 2019, 2021; Mubako, 2019; Prawitt et al., 2012), for the purpose of this study, an internal audit function is considered outsourced if all or part of internal audit activities is provided by a third party.

be more beneficial for firms than utilising an in-house strategy for a number of reasons. First, Prawitt et al. (2012) argue that external providers of internal audit services are exposed to diverse operating environments since they serve a number of clients across different industries. Such exposure is likely to increase the knowledge, skills and expertise of the personnel of external services providers. Therefore, third-party internal auditors may be more competent compared with in-house internal auditors. Drawing on resource dependency theory, it can be argued that an outsourced internal audit function may be better equipped with resources to provide high-quality services to listed firms than an in-house internal audit function. Furthermore, the contractual nature of the relationship between external service providers and their clients suggests that outsourcing the internal audit function may enhance the quality of financial reports. This is because external service providers may be more concerned about legal sanctions and the severe consequences of potential reputational losses in the case of litigation. Therefore, third-party providers have a stronger incentive to provide their services with increased scrutiny (Ahlawat & Lowe, 2004). Additionally, it has been argued that internal audit outsourcing can improve the efficiency of auditing processes due to economies of scale achieved by combining client firms (Abbott et al., 2012; Klaas et al., 1999; Pizzini et al., 2014). Finally, the costs associated with internal audit outsourcing arrangements provide more flexibility to firms than the fixed costs of in-house internal audit functions (Abbott et al., 2016). That is, firms are able to request fewer audit hours at times of reduced workload (Abbott et al., 2016; Galanis & Woodward, 2006). Therefore, management may be faced with less inducement to manage earnings due to lower costs incurred by their firm.

On the other hand, other studies find that internal audit outsourcing may not always be superior to maintaining an in-house internal audit function (e.g., Abbott et al., 2007; Fitzpatrick, 2001; Muqattash, 2011; Powell, 1997). Scholars suggest that an outsourcing arrangement has certain drawbacks that may impact the effectiveness of the internal audit function. For instance, external service providers may be less competent than in-house internal auditors for two reasons. First, independent accounting firms attract recent graduates with less exposure to real-world experiences (Powell, 1997). The limits of their expertise can reduce the quality of their professional judgment and contribute to the likelihood of error and misjudgement (Carey et al., 2006). Second, independent accounting firms are characterised by high levels of staff

turnover, which may reduce the benefits of their accumulated experiences (Carey et al., 2006; Powell, 1997). Furthermore, in-house internal auditors have a deeper knowledge and understanding of the firm operations and reporting environment. Therefore, they are more likely to detect managerial reporting misconduct, and hence enhance the quality of the financial reporting system (Barr & Chang, 1993; Glover et al., 2008; Kralovetz, 1996; Prawitt et al., 2012). Finally, critics of internal audit outsourcing claim that while it is more efficient and cost-flexible, economies of scale are usually only possible for larger external service providers (Widener & Selto, 1999). Additionally, while Abbott et al. (2016) acknowledge the benefits of outsourcing arrangements in terms of cost flexibility, opportunistic managers may utilise outsourcing arrangements of internal audits as a way of practising real activity-based earnings management. That is, managers may deliberately defer incurring the costs related to outsourcing the internal audit function by simply scheduling costly non-routine internal audit tasks in the following financial year.

Agency theory suggests that, in addition to competency, the independence of internal auditors is a significant factor that contributes to their role in mitigating agency costs. Internal auditors may not properly report managerial misconduct they have detected when they lack independence. Therefore, scholars suggest that an important advantage of employing an outsourced internal audit function relates to the independence of external service providers (Ahlawat & Lowe, 2004; Baatwah & Al-Qadasi, 2020). That is, outsourced internal auditors may be less vulnerable to managerial pressure that can affect the objectivity and independence of in-house internal auditors (Desai et al., 2008). Additionally, in-house internal auditors may be incentivised to behave in alignment with management due to fears over the firm's short-term value (Ahlawat & Lowe, 2004; Dezoort et al., 2001). Therefore, studies suggest that due to the potentially greater independence of an outsourced internal audit function, it may be more effective in reducing the likelihood of accounting fraud and manipulation (Ahlawat & Lowe, 2004; Johl et al., 2013; Prawitt et al., 2011; Sharma & Subramaniam, 2005). Due to the relative newness of internal audit profession in Saudi Arabia, the effectiveness and efficiency of internal auditing may be faced with serious challenges. The drastic increase of listed firms' demand on internal auditors, caused by the increased regulatory requirements (Albassam, 2014), may not be satisfied with a wide base of well-equipped professionals to maintain an in-house

internal audit function. This lends higher potential for an outsourcing strategy to be employed by Saudi listed firms. In turn, these firms may benefit from the external, well-resourced internal audit providers by obtaining effective internal audits. As a consequence, outsourced internal audit functions may contribute to significant decrease in agency costs among Saudi listed, resulting in lower opportunistic reporting practices and increased financial reporting quality.

While this may sound reasonable, other scholars suggest that the supposed independence and objectivity of external providers of internal audit services may not always be invulnerable (Abbott et al., 2007; Ahlawat & Lowe, 2004). Specifically, outsourcing the internal auditing function creates an economic bond between the firm and the third-party service provider, potentially leading to an increased likelihood of accounting misconduct (Abbott et al., 2007). More generally, Prawitt et al. (2012) argue that in-house internal audit personnel are more committed and loyal to their firms than outside service providers. Hence, in-house internal auditors may be more willing to perform their tasks with increased scrutiny.

Another drawback of outsourcing internal audit functions relates to its impact on the independence of in-house internal auditors. This may arise when the internal audit function is partially outsourced, leading to in-house internal auditors perceiving outsourcing as a threat to their job security. In this scenario, the more internal audit tasks are outsourced, the greater the concern of job takeover among in-house staff (Abbott et al., 2012, 2016). Reduced independence of in-house internal auditors may eventually reduce the likelihood of their reporting detected managerial misconduct when the internal audit function is partially outsourced, resulting in lower-quality financial reports (Abbott et al., 2016).

Research conducted on the US context provides strong evidence supporting the superiority of outsourcing the internal audit function. For instance, Ahlawat and Lowe (2004) find that external service providers are more objective than in-house internal auditors. Similarly, Glover et al. (2008) find that in the presence of high inherent risk, external auditors are more likely to rely on the work of outsourced internal auditors than in-house internal auditors' work. Prawitt et al. (2012) also document that firms who opt to utilise an outsourced internal audit function experience significant reduction in accounting risk compared to firms with an in-house internal audit function. In line with these findings, Abbott et al. (2012) find that when the internal

audit function is outsourced, external auditors are more willing to rely on the outcomes of internal audits, leading to a reduction in audit fees. Despite these findings that show the benefits of outsourcing the internal audit function, however, Burton et al. (2012) show that management are more reliant on the outcomes of in-house internal audit function. Similarly, Jiang et al. (2020) find that services provided by in-house internal auditors that relate to a firm's operations have a significant positive impact on the firm's return on net operating assets.

Research conducted on non-US contexts provides inconclusive evidence with regards to the impact of internal audit sourcing arrangements. On the one hand, in their study of internal audit outsourcing in Australia, Carey et al. (2006) find that it is associated with perceived technical competence and cost savings. Powell (1997) finds that external providers of internal audit activities are able to develop core competencies and invest in technological efficiencies, thus reducing the costs of service provision for firms who outsource their internal audit function to them. Other studies also support this view, for example, Al-Rassas and Kamardin (2015) find that outsourcing internal audit functions enhances the earning quality of Malaysian firms. Similarly, Baatwah et al. (2021) find that firms report lower real activity-based earnings management when they outsource their internal audit functions to a firm-specific audit expert. On the other hand, Coram et al. (2008) find that in Australia and New Zealand, firms with outsourced internal audit function tend to have lower likelihood of fraud detection compared with firms that employ an in-house internal audit strategy. In addition, Johl et al. (2013) find that Malaysian firms that outsource their internal audit functions have increased levels of managerial opportunism by using income-increasing earnings management techniques. In term of cost efficiency, Barac et al. (2009) document contrasting evidence to the findings of Powell (1997). Specifically, they find that outsourcing is positively associated with higher costs. Finally, Abdolmohammadi (2013) finds that outsourced internal audit function is negatively associated with value-added activities.

Based on the above discussion, the following hypothesis is advanced in the alternative form:

H_{3a}	*There is a significant association between internal audit sourcing arrangements and financial reporting quality.*

The literature consistently shows that the stronger corporate governance mechanisms a firm has, the higher quality its financial reports are (Bushman & Smith, 2003; Johl et al., 2013). By having a strong governance structure, a firm's management may be better monitored, which benefits the firm both financially (e.g., with access to external financing, lower cost of capital, and lower risk of financial crisis) and operationally (e.g., greater cross-border investments and better operational performance) (Claessens, 2006). However, when it comes to internal auditing, the discussion related to Hypothesis 3a on which sourcing arrangement enhances the quality of financial reports is even more complicated in the presence of political connectedness. On the one hand, politically connected directors may aim to guide the firm towards favourable outcomes both financially and operationally by employing effective governance tools and mechanisms. A substantial component of an effective corporate governance framework is the internal audit function (Coram et al., 2008). Internal auditors may tend to spend more energy continuously monitoring a firm's operations and financial reporting processes due to their concerns over the higher inherent risk caused by the presence of political connections (Gul, 2006). This may be compounded by the internal auditors' concerns over litigation risk and reputational loss, especially when internal auditing is outsourced. As a consequence, employing an outsourced internal audit function by politically connected firms may contribute to mitigating agency problems, thus enhancing financial reporting quality. This is especially important to politically connected firms listed in Saudi Arabia due to the potential impact of cultural aspects. Specifically, the potential reputational loss and the effect on prestigious status in case of accounting failure may encourage politically connected firms to utilise effective monitoring mechanisms that enhance their governance practices (Alhadi et al., 2017; Alnasser, 2019), hence increase the quality of accounting information. On the other hand, however, politically connected firms may be reliant on their resources to avoid legal consequences in case of accounting failure. In other words, the presence of politically connected directors in the boardroom may induce managers to behave opportunistically, acting for their own benefit or for the benefit of the politically connected directors, resulting in distorted financial reports. In order to foreground the influence of internal audit sourcing arrangements on financial reporting quality of politically connected firms, this thesis will investigate the moderating effect of internal audit outsourcing.

Hence, the following hypothesis is advanced in the alternative form:

> ***H3b*** *Internal audit sourcing arrangements influence the significant association between political connectedness and financial reporting quality.*

3.6.4 Audit Quality and Financial Reporting Quality

The quality of a firm's financial reports is considered to result from several interacting factors, among which is the quality of the external audit service. Numerous studies find that the quality of audit service is highly dependent on the size of the audit firm (Alhadab & Clacher, 2018; Becker et al., 1998; DeAngelo, 1981; Defond & Zhang, 2014). The literature categorises audit firms into two groups based on their size: Big N and Non-Big N.

Scholars argue that Big N firms provide higher audit quality than smaller audit firms, and hence enhance the quality of audited financial reports (Becker et al., 1998; Bigus, 2015; Boulila et al., 2014; DeAngelo, 1981; Lawrence et al., 2011). The positive relationship between audit quality and audit firm size may be attributed to a number of factors. Drawing on resource dependency theory, Big N audit firms have more resources at their disposal, which enables them to employ more competent and experienced auditors compared to their smaller counterparts. Additionally, resource availability of Big N audit firms enables them to use advanced audit technologies and effective procedures (Alsaeed, 2006; Boone et al., 2010; DeAngelo, 1981; Francis & Yu, 2009; Lawrence et al., 2011). In addition, Big N audit firms' personnel are provided with advanced professional training that enables them to increase the quality of their services (Boone et al., 2010; DeAngelo, 1981). Furthermore, Big N audit firms may be more concerned over potential losses than smaller audit firms (DeAngelo, 1981). That is, Big N audit firms provide audit services to a larger base of more important clients who pay higher audit fees and demand higher-quality audits (Francis 1984; Palmrose, 1986). Therefore, Big N audit firms have "more to lose" than smaller audit firms in the case of an accounting failure. Scholars (e.g., DeAngelo, 1981; Rezaei & Shabani, 2014; Simunic & Stein, 1996) argue that in addition to loss of clientele, Big N audit firms are more concerned about their brand name and potential reputational loss than smaller audit firms. Big N audit firms may be more concerned over reputational loss when operating within the Saudi context due to the cultural

aspects that may heavily impact their decisions. That is, since the Saudi context is characterised a conservative society and that business conduct is heavily affected by cultural factors (Al-Ajmi et al., 2009), reputational loss may be significantly detrimental in the case of an audit failure. Additionally, Big N firms may also have substantial concerns over litigation losses, which motivate them to provide higher-quality audits and enhance the reliability and credibility of their auditees' financial reports. This may be attributed to the fact that litigation losses are more costly for Big N audit firms by virtue of their cumulative wealth (Dye, 1993). Finally, as Big N firms have a larger and more diversified portfolio of clients, they are less likely to become economically bonded to a particular client. Previous studies (e.g., Choi et al., 2010; Rezaei & Shabani, 2014) find that Big N audit firms do not capitulate to client pressure to misrepresent financial statements.

Despite the significant body of literature that suggests Big N audit firms provide the higher-quality services, other scholars argue that Big N and smaller audit firms may be comparable in terms of the quality of their audits (Lawrence et al., 2011; Nelson, 2006). Scholars propose that the comparability of the quality of their services may be attributed to a number of factors. For instance, both Big N and Non-Big N audit firms must adhere to the same laws and regulations. Therefore, smaller firms have the same concerns over potential reputational and litigation losses as those of Big N audit firms (Boone et al., 2010; Lawrence et al., 2011; Nelson, 2006). Indeed, Lawrence et al. (2011) suggest that smaller firms may even expend greater effort in terms of insurance coverage and avoiding litigation in cases of unsuccessful audit engagement in order to ensure that the quality of their services is comparable to that of the Big N firms. Additionally, Lawrence et al. (2011) argue that there is a mutual attraction between Big N auditors and firms with better earnings quality and performance. This suggests that high audit quality may be attributable to characteristics of the client firm rather than to the size of the audit firm (Francis et al., 1999; Lawrence et al., 2011). From this perspective, financial reporting quality would be dependent to a greater extent on the management, corporate governance structure, and quality of the reporting system of the auditee than on the attributes of the external auditor. This may also apply when the auditee's management treat accrual-based earnings management and real activity-based earnings management as substitutes. In other words, management may resort to real activity-based earnings management

techniques when accruals manipulation is not practically possible due to increased scrutiny (Chi et al., 2011).

To make matters even more complex, Boone et al. (2010) note that the theoretical basis and criteria upon which Big N firms and smaller audit firms are differentiated, are outdated, as there are now second-tier audit firms that operate worldwide and have built reputations comparable to that of Big N audit firms. Moreover, Big N firms tend to conduct their operations through decentralised offices that function more or less independently during audit engagements. For that reason, some researchers (e.g., Choi et al., 2010; Francis & Yu, 2009; Krishnan, 2005) argue that the quality of audit services is not the same across all Big N offices. Additionally, Krishnan (2005) contends that smaller audit firms have better knowledge of and business connections with local businesses. Finally, Rezaee (2005) argues that as the majority of Big N firms have some experience of unsuccessful audit engagements, audit quality cannot be attributed to audit firm size alone. It follows that the impact of audit firm size on the quality of financial reports requires further investigation, especially in developing countries.

Agency theory provides that the separation between ownership and management constitutes the main driver for hiring external auditors. This is due to potential conflicts that may arise between these parties (i.e., owners as principals and managers as agents). An important role that external auditors play is one of mitigating the effects of these potential conflicts (Becker et al., 1998; DeAngelo, 1981). Scholars find that the benefits of hiring external auditors are dependent on the quality of their services (DeAngelo, 1981; Defond & Zhang, 2014). That is, quality external auditors are more likely to provide higher-quality services and, therefore, they are better able to minimise agency costs. Consequently, managerial reporting discretion within clients of Big N audit firms' is reduced. Therefore, firms using the services of Big N audit firms are expected to produce high-quality financial reports. Other scholars, however, claim that Non-Big N auditors have similar incentives to minimise agency problems between owners and managers (Boone et al., 2010; Lawrence et al., 2011). Therefore, external auditors from both Big N and Non-Big N audit firms are likely to constrain reporting misconduct by agents. Consequently, financial reporting quality of Non-Big N audit clients is expected to be comparable to Big N audit clients.

The literature offers strong empirical evidence on higher audit quality of Big N audit firms in the US context. Prior studies' findings (e.g., Becker et al., 1998; Davidson & Neu, 1993; DeAngelo, 1981; Eshleman & Guo, 2014; Krishnan, 2003; Rezaei & Shabani, 2014; Teoh & Wong, 1993; Zang, 2012) support the argument that Big N audit firms possess the requisite abilities to deliver audit services of a higher quality than smaller audit firms. Specifically, Big N audit firms are known to be less tolerant of earnings management (Francis et al., 1999); less likely to have the financial statements that they have audited restated (Lobo & Zhao, 2013); and less like to illegally manipulate them (Lennox & Pittman, 2010). Moreover, Teoh and Wong (1993) find that investors' reactions to the clients of Big N audit firms indicate that their earnings are of a higher quality. However, Chi et al. (2011) provide evidence that Big N audit firms' clients resort to real activity-based earnings management techniques as a substitute to accruals-based manipulation. Similarly, Cohen and Zarowin (2010) find a significant positive association between the level of real activity-based earnings management and audit quality. Additionally, after controlling for endogenous choice of audit firm, Lawrence et al. (2011) find no difference in audit quality between Big N and smaller audit firms. Additionally, Carcello et al. (2011) and Bentley et al. (2013) find that Big N clients are not associated with lower likelihood of financial statement restatements. Boone et al. (2010) find that mid-tier firms provide audit quality that is comparable to that of Big N firms. Finally, Choi et al. (2010) and Francis and Yu (2009) attribute audit quality to local office size rather than to the size of the audit firm as a whole. They find that larger audit offices delivered higher audit quality than smaller offices.

Studies conducted in non-US contexts provide inconclusive results. For instance, in the UK, Alhadab and Clacher (2018) find that quality auditors constrain the use of accrual-based earnings management and discretionary expense manipulation by IPO firms. However, they find that sales manipulations are not constrained. In a similar vein, Chen, H., et al. (2011) report that Big N audit firms significantly constrain the use of earnings management techniques among Chinese firms that are not owned by the state. Additionally, Van Tendeloo and Vanstraelen (2008) find that Big N audit firms provide higher-quality audit services in European countries with increased tax monitoring. Similarly, Alzoubi's (2016) findings support the notion that Big N audit firms provide higher audit quality and curb the use of accrual-based manipulation by listed firms in Jordan. However, Alsultan (2017) documents that Big 4 audit firms

mitigate income-decreasing earnings management practices by Saudi listed firms, despite their insignificant impact on the overall level of earnings manipulation. In a similar vein, Alsaeed, (2006) finds that Big N audit firms in Saudi Arabia are associated with higher levels of required disclosure, thought they do not encourage voluntary disclosure. Nonetheless, Habbash and Alghamdi (2016) find that Big N audit firms do not provide higher audit quality compared to their Non-Big N audit firms for Saudi Listed firms. Finally, Enofe et al. (2013) do not find a statistically significant difference between Big N audit firms and other audit firms in terms of audit quality.

On the basis of the above discussion, the following hypothesis is advanced in the alternative form:

H_{4a} *There is a significant association between audit quality and financial reporting quality.*

The interaction between political connectedness and audit quality may be seen from two distinct angles. On the one hand, politically connected firms may attract increased legal and public scrutiny. Therefore, scholars argue that politically connected firms bear higher inherent risks, which results in higher audit risk (Gul, 2006). In order to avoid increased reputational costs, politically connected firms may exercise increased caution and avoid financial reporting manipulation (Al-Hadi, 2017; Gul, 2006). This notion may be particularly relevant to Saudi listed firms with political connections, due to the potential losses associated with audit failure. That is, the potential impact of prestigious status that can result from reputational loss may effectively motivate politically connected firms to employ effective monitoring mechanisms in order to enhance their financial reporting quality (Alhadi et al., 2017; Alnasser, 2019). Consequently, these firms may demand Big N audit services in order to increase their financial reporting quality as a means to protect the reputations of politicians to whom they are connected. In addition, Big N audit firms may perceive politically connected firms to be clients with greater agency problems (Bushman et al., 2004; Gul, 2006), thus they may increase their audit efforts as a means of protecting their own brand names and reputations. Therefore, politically connected client firms audited by Big N auditors may have enhanced credibility and produce more reliable financial reports. Khan et al. (2016) claim that Big N audit firms mitigate the agency costs of politically connected firms.

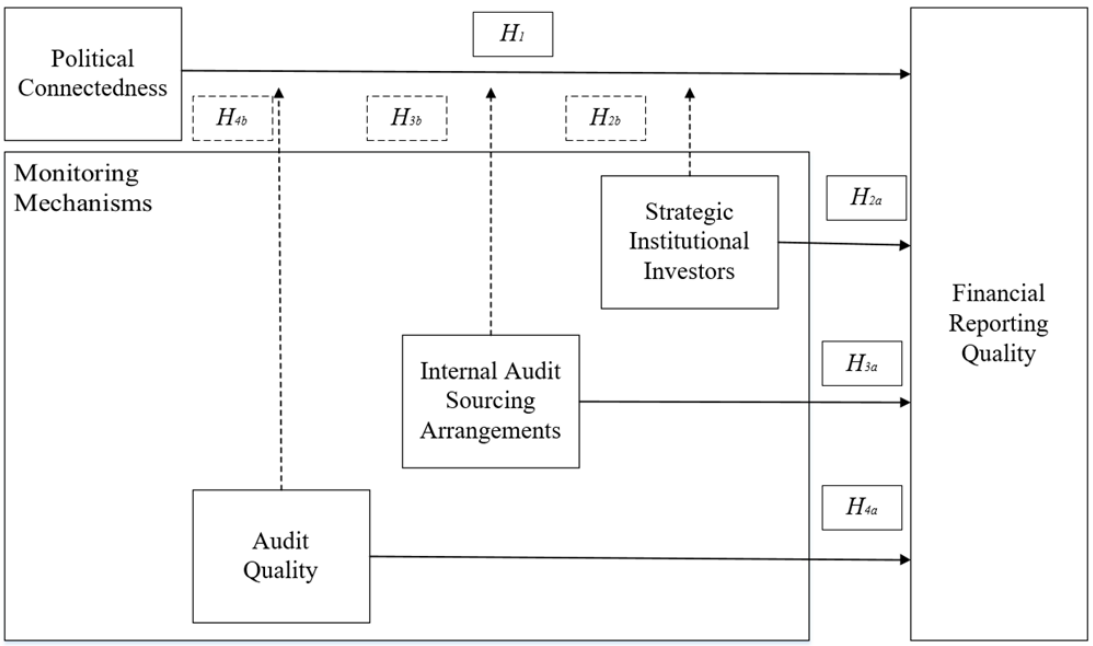
On the other hand, it is arguable that because of the preferential treatment that politically connected firms enjoy, various advantages may be guaranteed regardless of the quality of their financial reports (Al-Hadi, 2017; Mazaheri, 2013). As mentioned earlier, the preferential treatment comes in a variety of ways, including in the form of financial subsidies, and bailouts, in case of financial failure. Thus, politically connected firms can operate and survive with less need of bank loans, for which audit quality and the quality of the resulting financial reports constitute important pricing factors (Karjalainen, 2011). In order to investigate the impact of hiring Big N audit firms by politically connected clients on their financial reporting quality, the following hypothesis is advanced in the alternative form:

H4b *Audit quality influences the significant association between political connectedness and financial reporting quality.*

3.7 Conceptual Schema

Figure 3.1 provides a conceptual schema of the hypothesised associations between financial reporting quality, political connectedness, and monitoring mechanisms investigated in this study.

Figure 3.1
Conceptual Schema



3.8 Summary

This chapter provided a detailed discussion of the theoretical framework underlying the study hypotheses, identifying the main features of resource dependency theory, legitimacy theory, and agency theory, and analysing their relevant implications to this research. After that, the applicability of the theoretical framework to the Saudi context was discussed. Subsequently, the theoretical bases for the study hypotheses were advanced, along with a detailed discussion of related empirical findings. Finally, the chapter provided a diagrammatic representation of the study hypotheses.

Chapter Four details the methodology followed to investigate the study hypotheses. First, the chapter discusses the chosen sample and time frame selected to conduct the study analysis, and outlines the data source documentation. Following that, the chapter discusses how the chosen variables will be measured. The chapter also provides the specifications of the underlying regression model of the study and discusses the additional analysis as well as the robustness tests and endogeneity analysis that will be performed to enhance the conclusions drawn from the study main analysis.

Chapter Four

Research Methodology

4.1 Introduction

Chapter Three articulated the theoretical framework of this research, outlining the key features of resource dependency theory, legitimacy theory, and agency theory and their relevance to this study. Subsequently, the chapter discussed the applicability of the theoretical framework within the Saudi context. After that, the chapter outlined the theoretical arguments and prior empirical research findings upon which the thesis hypotheses have been developed, and stated the study hypotheses. The chapter, then, presented a diagram representing the study hypotheses. Finally, the chapter provided a brief summary of its content.

This chapter presents the research methodology that was followed to examine the stated hypotheses. This chapter begins with a discussion of and justification for the sample and time period selected to test the stated hypotheses, and outlines the data source documentation. Next, the chapter describes how the dependent, independent, and control variables were measured and analysed. After that, the chapter presents the regression model used and discusses the additional tests, including robustness tests and endogeneity analysis, that were performed to enhance the main analysis conclusions. The chapter ends with a brief summary.

4.2 Sample Selection and Documentation

This section presents a justification of the firms and time period utilised for the study sample, documents the sources that were used to collect data, and discusses details related to the data collection process.

4.2.1 Sample Selection

The population from which the study sample was drawn included all Saudi Arabian firms listed on the *Tadawul* between 2009 and 2017. The sample used for this research was drawn from a population of publicly listed firms, as these firms are required to publish two periodic reports (i.e., board reports and annual reports). These reports provide detailed information related to firm governance, and their financial position and results. Banks, financial institutions, and insurance firms were excluded

since they are required to follow regulations imposed by the Saudi Central Bank (The Saudi Arabian Monetary Authority – SAMA) that other listed firms are not required to adhere to (Al-Moghaiwli, 2010; Alsehali, 2006; Habbash & Alghamdi, 2017; Ho et al., 2015). Furthermore, banks, financial institutions, and insurance firms prepare their financial statements using a different set of accounting standards and operate differently compared with other firms (Carey & Simnett 2006; Habbash & Alghamdi, 2017; Hessayri & Saihi, 2015; Leventis & Caramanis, 2005). In addition to these exclusions, firms with missing data were excluded from the sample.

4.2.2 Time Period Selection

The Saudi capital market experienced increased calls for conformity with CGRs in the aftermath of the market crash in 2006 and the global financial crisis of 2007–2008. As a result, the CMA mandated adherence to corporate governance requirements, starting in 2009. For instance, Articles 9, 12, and 14 became mandatory in 2009 based on resolution Number 1−36−2008. These articles outline the requirements regulating the formation of the board, audit committee and internal audit function, as well as disclosure related to the regulated requirements including a brief description of the jurisdictions and duties of the board's main committees such as the audit committee. Information related to the existence and sourcing arrangements of the internal audit function thus became available. Therefore, data was collected starting from the year 2009. Further to this, the Saudi stock market was significantly impacted by the global financial crisis of 2007–2008, lending additional weight to the decision to chose 2009 as the first year of the sample in order to avoid the potential noise resulting from the crisis.

4.2.3 Data Source Documentation

A number of data sources and data collection procedures were used to collect and verify the accuracy of the data used in this thesis. First, financial data was obtained from Standard and Poor's Global Data (Capital IQ). Second, published annual and board reports were collected from the *Tadawul* and listed firms' websites. The reports were used to collect missing data and to cross-check the accuracy of data obtained from Capital IQ. Third, corporate governance data was collected manually using published reports obtained from the aforementioned websites. The Saudi CGRs require all firms to disclose all information related to corporate governance in their annual

board reports. The annual reports published by listed firms are credible source for collecting data related to corporate governance due to the fact that information provided in these reports constitute a legal obligation (Omar and Simon, 2011; Ntim et al., 2013; Albassam, 2014; Habtoor et al, 2019; Ibrahim, Habbash, and Hussainey, 2019). Following prior studies (Albassam, 2014; Alsaeed, 2006; Alsultan, 2017; Shaddady and Alnor, 2020 ; Habtoor et al, 2019; Halim et al., 2020; Ibrahim, Habbash, and Hussainey, 2019) corporate governance data was collected manually using published reports obtained from the aforementioned websites. In order to insure the validity of the corporate governance variables used in this study's analysis, already established and extensively used measures by prior studies (e.g. Al-Hadi et al., 2017; Alzoubi, 2016; Binakeel, 2016; Chen, H. et al., 2011; Chen et al., 2017; Elhabib et al., 2015; Habbash & Alghamdi, 2017; Habib & Bhuiyan, 2016; Habtoor et al., 2019; Halim et al., 2020; Sun & Liu, 2016; Wang et al., 2020) are employed. Additionally, extensive univariate analysis on a variable-by-variable basis is performed in order to insure the consistency of collected data with prior studies.

4.3 Measurement of the Dependent Variable

Financial reporting quality is a complex construct. It is based on the quality of published financial information and relates to other conceptions of quality, such as earnings quality and the quality of auditing services provided to the reporting firm. However, due to the difficulty in observing and quantifying the quality of financial reports, researchers tend to use proxies by which the level of quality can be estimated (Bhuiyan et al., 2020; Johl et al., 2013). Therefore, this thesis employed a number of proxies in order to gauge the quality of financial reports, namely, accrual-based earnings management as estimated by Jones (1991) and modified by Kothari et al. (2005); real activity-based earnings management as estimated by Roychowdhury (2006); and the reporting of small positive profits as proposed by Iatridis (2010), Gunny (2010), and Gul et al. (2013).

4.3.1 Accrual-based Earnings Management (EM_Kothari)

The literature related to financial reporting quality offers a number of measurements that approximate the quality of reported financial information, one of which is earnings management. This study employs accrual-based earnings management as a proxy to measure financial reporting quality following prior studies

(e.g., Johl et al., 2013). An important advantage of using accrual-based earnings management to measure financial quality is its direct and detrimental impact on the quality of reported financial information (as discussed in Chapter Two). That is, the greater the use of accrual-based earnings management the lower the financial report quality. Furthermore, earnings management models may capture manipulative practices that do not constitute violations of reporting standards. Although such practices are not considered violations, they provide an indicator of managers' intent, which auditors should also assess in the audit planning phase (DeFond & Zhang, 2014). Finally, using earnings management as a proxy for financial reporting quality facilitates the examination of variations in the quality of reported financial information between firms, unlike other output measures of information quality, such as restatements. Thus, the dependent variable, i.e., financial reporting quality, was measured using accrual-based earnings management, following prior studies (e.g., Johl et al., 2013), using the performance-adjusted model developed by Kothari et al. (2005) using the following cross-sectional regression for each year-industry:

$$\boldsymbol{TAC}_{it} / A_{it-1} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 [1/A_{it-1}] + \boldsymbol{\beta}_2 [(\Delta Sales_{it} - \Delta\, \boldsymbol{AR_{it}})/A_{it-1}] + \boldsymbol{\beta}_3 [PPE_{it} /A_{it-1}] + \boldsymbol{\beta}_4 [ROA_{it-1}] + \boldsymbol{\varepsilon}_{it} \quad (4.1)$$

Where:

$\boldsymbol{TAC_{it}}$	Total accruals of firm i in period t
$\boldsymbol{A_{it-1}}$	Total assets of firm i as of the end of period t − 1
$\Delta\boldsymbol{Sales_{it}}$	Change in sales of firm i from period t − 1 to period t
$\boldsymbol{\Delta AR_{it}}$	Change in accounts receivables of firm i from period t − 1 to period t
$\boldsymbol{PPE_{it}}$	Gross property, plant, and equipment of firm i as of the end of period t
$\boldsymbol{ROA_{it-1}}$	Return on assets of firm i in period t − 1

In order to estimate the discretionary accruals component using the model developed by Kothari et al. (2005), total accruals need to be determined. The literature offers two approaches of calculating total accruals: the cash-flow statement approach and the balance sheet approach. Hribar and Collings (2002) and Kothari et al. (2005) advocate using the cash-flow statement approach as it is found to generate more accurate estimates of firms' total accruals and increase the potential of the earnings management model to detect discretionary accruals. Therefore, this thesis employed the cash-flow statement approach to calculate total accruals in line with prior studies (e.g., Mascarenhas et al., 2010), as follows:

$$TAC_{it} = EARN_{it} - CFO_{it} \quad (4.2)$$

Where:

TAC_{it}	Total accruals of firm i in period t
$EARN_{it}$	Earnings before interest and tax of firm i in period t
CFO_{it}	Cash flow from operations of firm i in period t

Managerial discretion may lead to the inflation or deflation of reported earnings based on management's objectives. Regardless of the management's motivations for utilising earnings management practices, both income-increasing and income-decreasing discretionary accruals have negative effects on the quality of financial reports. A greater deviation from the faithful representation of the firm's financial results indicates a higher effect of managerial discretion, hence lower financial reporting quality. Therefore, this thesis employed the absolute value of discretionary accruals to gauge the magnitude of earnings management as a proxy for the quality of financial reports, following the extant literature (Becker et al., 1998; Johl et al., 2013; Prawitt et al., 2009).

4.3.2 Real Activity-based Earnings Management

Prior studies widely employ discretionary accruals as a proxy for estimating reported information quality based on the notion that distorted financial reports significantly diminish the ability of financial users to draw accurate inferences concerning a firm's financial performance and financial position (Asthana & Boone, 2012; Becker et al., 1998; Choi et al., 2010; Gul et al., 2013; Johl et al., 2013; Prawitt et al., 2009). This implies that accrual-based earnings management practices are destructive of the fundamentals upon which financial reporting is based. In other words, the erroneous representation that results from intentionally altering a firm's financial results undermines the ability of financial reports users to make economically efficient decisions due to lack of faithful representation. In the same vein, the effect of manipulating real activities in order to alter reported earnings is detrimental to those seeking to understand the economic circumstances of the reporting firm. Scholars claim that, in a similar way to accrual-based earnings management, real activity-based manipulation contaminates the reported financial information and distorts the conclusions that can be drawn from it (Choi, Sohn et al., 2018; Choi, Choi et al., 2018).

Therefore, regardless of the techniques used to intentionally misrepresent a firm's financial results, a firm's underlying economic circumstances are distorted as a result of the abnormalities arising from earnings management practices. Consistent with this notion, this study followed prior studies employing real activity manipulation as a proxy for financial reporting quality (e.g., Bhuiyan et al., 2020). Based on this discussion, this study utilised Roychowdhury's (2006) models to measure the magnitude of sales manipulation, production cost manipulation, and discretionary expense manipulation. The higher the deviation from the normal levels of these respective metrics, the greater the earnings management practices utilised, hence the lower financial reporting quality (Bhuiyan et al., 2020).

4.3.2.1 Sales Manipulation (Abnormal Cash Flow from Operations – REM_CFO).

According to Roychowdhury (2006), sales manipulation occurs when a firm's management induces sales by offering exceptionally lenient credit terms and/or exceptional price discounts that apply for a limited period. These practices incentivise a firm's customers and boost sales in that year. As a result, such practice may lead to abnormally high levels of sales and abnormally low levels of cash flows from operations. In order to measure the abnormality in the level of cash flow from operations, the normal level was estimated first, following Dechow et al. (1998) and Roychowdhury (2006), using the following cross-sectional regression for each year-industry:

$$CFO_{it} / A_{it-1} = \beta_0 + \beta_1 [1/A_{it-1}] + \beta_2 [Sales_{it} /A_{it-1}] + \beta_3 [\Delta Sales_{it} /A_{it-1}] + \varepsilon_{it} \quad (4.3)$$

Where:

CFO_{it}	Cash flow from operation of firm i in period t
A_{it-1}	Total assets of firm i as of the end of period t – 1
$Sales_{it}$	Sales of firm i in period t
$\Delta Sales_{it}$	Change in sales of firm i from period t − 1 to period t

After the normal levels are estimated, abnormal cash flow from operations can be calculated by deducting normal-level cash flow from operations from firm-years respective operating cash flow values.

4.3.2.2 *Production Cost Manipulation (Abnormal Production Costs – REM_Prod).*

According to Roychowdhury (2006), management discretion related to production costs can abnormally reduce the cost of goods sold that is reported on the income statement, resulting in an abnormal increase in operating income and reported earnings. Such results can be attained by applying the concept of economies of scale on a fixed production overhead. That is, by increasing the quantity produced in a given reporting period, the average overhead cost per unit will decrease, resulting in an abnormally low average total cost per unit produced (Cohen, 2010; Roychowdhury, 2006). However, this abnormally low figure can only be realised as long as the firm-year does not experience diminishing returns of increased quantity that may result from increasing marginal costs (Roychowdhury, 2006). In order to measure abnormality of production costs, the normal level was first estimated, following Roychowdhury (2006), using the following cross-sectional regression for each year-industry:

$$PROD_{it}/A_{it-1} = \beta_0 + \beta_1 [1/A_{it-1}] + \beta_2 [Sales_{it}/A_{it-1}] + \beta_3 [\Delta Sales_{it}/A_{it-1}] + \beta_4 [\Delta Sales_{it-1}/A_{it-1}] + \varepsilon_{it} \quad (4.4)$$

Where:

$PROD_{it}$	The sum of cost of goods sold and change in inventory of firm i in period t
$\Delta Sales_{it-1}$	Change in sales of firm i from period t − 2 to period t – 1

Abnormal production costs were therefore measured by deducting the estimated normal level of production costs from the firm-year's reported production costs.

4.3.2.3 *Discretionary Expense Manipulation (Abnormal Discretionary Expenses – REM_Exp).*

The manipulation of discretionary expenses occurs when management decides to decrease operational expenses, such as advertising and maintenance, to an abnormally low level, which results in increased reported earnings (Roychowdhury, 2006). When such expenses are associated with cash outflows in the respective period, operating cash flow will be abnormally inflated to the detriment of the cash flows of future periods. In order to measure abnormality in the level of discretionary expenses,

the normal level was first estimated, following Roychowdhury (2006), using the following cross-sectional regression for each year-industry:

$$\boldsymbol{DISEXP}_{it}/A_{it-1} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 [1/A_{it-1}] + \boldsymbol{\beta}_2 [Sales_{it-1}/A_{it-1}] + \boldsymbol{\varepsilon}_{it} \quad (4.5)$$

Where:

$\boldsymbol{DISEXP}_{it}$ The sum of selling and marketing expenses and general and administrative expenses of firm i in period t

After that, abnormal discretionary expenses were measured by deducting the estimated normal level of discretionary expenses from the firm-year's reported discretionary expenses.

In addition to using real earnings management techniques to achieve upwardly biased reported earnings, Francis et al. (2016) demonstrate that a firm's management may also engage in deflationary sales manipulation in order to make personal gains. Similarly, other scholars (e.g., Cooper et al., 2008; Eldenburg et al., 2011; Mao & Renneboog, 2015) provide evidence on the income-decreasing practices of real activity-based earnings management. Therefore, following prior studies (e.g., Sun & Liu, 2016), the absolute values of abnormal cash flows from operations, abnormal production costs, and abnormal discretionary expenses were used in this thesis to measure the magnitude of earnings management, since both income-increasing and income-decreasing earnings management results in lower-quality financial reports.

4.3.3 Reporting Small, Positive Profits (Small_Profits)

The literature investigating the quality of reported information by listed firms considers the distribution of reported earnings of listed firms around the zero benchmark to be an indicator of the quality of reported earnings (Burgstahler & Dichev, 1997; Francis et al., 2013; Gul et al., 2013; Gunny, 2010; Hayn, 1995; Iatridis, 2010; Lennox et al., 2016). Specifically, an asymmetrical distribution of earnings that shows a significantly higher proportion of firms on the nearest positive interval compared to the nearest negative interval indicates that a considerable number of firms are engaging in income-increasing earnings management (Francis et al., 2013; Gul et al., 2013). The primary incentive for these kinds of manipulative practices is to meet or beat the breakeven benchmark, and utilising these practices implies that resulting financial

reports will be of a lower quality (Carey & Simnett, 2006; Francis et al., 2009; Gul et al., 2013). Therefore, reporting small positive profits (*Small_Profits*) was used as proxy to estimate financial reporting quality. Following prior studies (e.g., Gul et al., 2013; Lang et al., 2003), the variable *Small_Profits* takes the value of 1 when the firm-year reports a net income that is between 0 and 1 per cent of the firm's average total assets.

4.4 Measurement of Independent Variables

The independent variables utilised in this study are: political connectedness (Al-Hadi et al., 2016, 2017; Alzahrani & Che-Ahmad, 2015), strategic institutional ownership (Zhong et al., 2017), internal audit sourcing arrangements (Barac & Motubatse, 2009; Carey et al., 2006; Johl et al., 2013; Knechel & Vanstraelen, 2007; Spekl´e et al., 2007), and audit quality (Alsultan, 2017; Alzoubi, 2016; DeAngelo, 1981; Francis & Yu, 2009).

4.4.1 Political Connectedness (PC)

Faccio (2006) argues that if a top official or large shareholder is closely related to a politician, the firm is considered to be politically connected; by this definition, Saudi firms with royal directors on their boards are considered politically connected firms (Binakeel, 2016). A number of researchers have investigated the relationships between different aspects of listed firms with political connections (Al-Hadi et al., 2017; Elhabib et al., 2015). In this thesis, political connectedness was measured using the number of politically connected directors sitting on board relative to the board's size.

4.4.2 Monitoring Mechanisms

4.4.2.1 Strategic Institutional Ownership (InstOwn).

Institutional ownership is widely considered to be an effective corporate governance mechanism that can play an important role in deterring manipulative financial reporting practices (Alghamdi, 2012). Because of their capabilities and access to resources and data (Hope, 2013), institutional shareholders tend to demand higher-quality audits (Shleifer & Vishny, 1997) and constrain opportunistic managers from accrual-based and real activity-based misrepresentation of financial reports (Alves, 2012; Chung et al., 2002; Farooq & El Jai, 2012; Monks & Minow, 1995; Roychowdhury, 2006; Zang, 2012). In this thesis, a particular type of institutional investor was examined: strategic institutional investors. Following Zhong et al. (2017),

strategic institutional ownership was included as a main explanatory variable and measured using the percentage of strategic institutional investors' shareholdings. Strategic institutional investors were defined as institutional investors whose shareholdings constitute 5% or more of the firm's total shares and who were long-term oriented, namely pension funds (Sialm, Starks, & Zhang, 2015; Zhong et al., 2017). Pension funds constitute an example of institutional investors that are have long-term investment horizon, compared to other types of institutional investors (Faccio & Lasfer, 2000; Johnson & Greening, 1999; Tihanyi et al., 2003). In addition to their lower portfolio turnover, pension funds are more likely to be activists when dealing with their investees' managers (Bushee, 2001; Johnson & Greening, 1999; Tihanyi et al., 2003), and are found to be pressure-resistant and maintain greater independence from management (Faccio & Lasfer, 2000; Gilson & Kraakman, 1991; Smith, 1996). Since two of the major institutional investors in Saudi Arabia, GOSI and PPA, are pension funds, their fiduciary responsibilities as well as their large stockholdings are likely to increase their governance sensitivity, leading them to promote better governance practices within their investees (Al Kahtani, 2014; Bushee et al., 2014). Therefore, this thesis follows prior studies that classify pension funds as long-term oriented investors (e.g. Tihanyi et al., 2003; Faccio & Lasfer, 2000).

4.4.2.2 Internal Audit Sourcing Arrangements (IAF_Out).

Researchers emphasise the importance of internal governance mechanisms in deterring financial reporting manipulation and enhancing financial reporting quality (Johl et al., 2013; Prawitt et al., 2012). Generally, listed firms have two options for sourcing internal audit functions. Prior studies find that the sourcing arrangement decisions may have an impact on the quality of reported earnings (Al-Rassas & Kamardin, 2015). Therefore, this study accounted for the variable of internal audit sourcing arrangement using a dichotomous variable that took the value of 1 if the internal audit function was outsourced, and 0 otherwise.

4.4.2.3 Audit Quality (AUDIT4).

Many studies have found that Big N firms provide better audit quality than smaller audit firms (Alsultan, 2017; Becker et al., 1998; Bigus, 2015; Boulila Taktak & Mbarki, 2014; DeAngelo, 1981; Habbash & Alghamdi, 2017; Lawrence et al., 2011). The positive relationship between audit quality and audit firm size can be

attributed to a number of factors, including higher concern about potential losses (DeAngelo, 1981), lower risk of economic bonding (Choi et al., 2010; Rezaei & Shabani, 2014), and better access to resources (Boone et al., 2010; DeAngelo, 1981; Francis & Yu, 2009; Lawrence et al., 2011). This study therefore assigned a dichotomous variable to this factor, taking the value of 1 if the listed firm was audited by a Big 4 audit firm, and 0 otherwise.

4.5 Measurement and Justification of Control Variables

Consistent with prior studies, a number of variables that have been documented in the literature as drivers of earnings management practices were included in the regression. These variables were included in order to control for the potential impact of ownership structure and firm characteristics, specifically: family ownership, government ownership, firm size, profitability, firm growth, cash flows, financial leverage, reporting negative net income, firm complexity, capital expenditure, board independence, audit committee meetings, and firm age were included in order to control for their effects on the variation in the dependent variable. A detailed discussion is provided in the following subsections for each control variable.

4.5.1 Family Ownership (FamOwn)

Prior studies on earnings management suggest that family ownership may significantly impact the quality of reported financial results (Alzoubi, 2016; Chaney et al., 2011; Razzaque et al., 2016; Wang, 2006). Specifically, Wang (2006) and Alzoubi (2016) find that family ownership enhances the quality of reported earnings as family members are motivated to preserve the long-term interests of their firm in order to protect the family name and the stake of future generations. However, Jaggi et al. (2009) indicate that Type II agency problems can arise in family firms due to the tendency to extract personal gains to the detriment of any non-controlling interest. Therefore, following prior studies (e.g., Alzoubi, 2016; Eng et al., 2019; Habbash & Alghamdi, 2017), the ratio of total family stockholdings to the total number of common shares was used to measure family ownership.

4.5.2 Government Ownership (GovOwn)

Another ownership structure-related variable that may be a driver of the quality of financial reports is government/state ownership. Research investigating the

impact of government ownership on listed firms provides extensive evidence that when the government is a shareholder, it can influence the reporting systems of firms (Wang, et al., 2008), earnings management (Chen, H. et al., 2011), and real earnings management (Wang et al., 2020). Hence, following prior studies (e.g., Alotaibi, 2016), government ownership was included in the regression analysis in order to control for its potential effect on financial reporting quality. The ratio of total stockholdings owned by the government to the total number of common shares was used to measure government ownership.

4.5.3 Firm Size (FSIZE)

Multiple studies have found that firm size plays a significant role in determining whether earnings management practices are being utilised (e.g., Alghamdi, 2012; Alhadab, 2017; Cohen, 2010; Francis & Yu, 2009; Sun & Liu, 2016; Watts & Zimmerman 1978; Zang, 2012). On the one hand, large firms have greater access to resources, which enables them to employ better reporting control mechanisms. In addition, larger firms are subject to higher scrutiny due to closer regulatory monitoring (Becker et al., 1998; Choi et al., 2010). On the other hand, however, other studies (e.g., Jensen & Meckling, 1976; Watts & Zimmerman, 1978) find that larger firms tend to engage in more earnings management as they are highly motivated to meet predicted profitability. Therefore, in this thesis, the natural logarithm transformation of total assets at year-end was included to control for firm size, following prior studies (e.g., Becker et al., 1998; Boone et al., 2012; Francis & Yu, 2009; Habbash & Alghamdi, 2017; Habib & Bhuiyan, 2016).

4.5.4 Profitability (ROA and LOSS)

The literature on earnings management indicates that a firm's profitability can be a significant determinant of earnings management behaviour (e.g., Alhadab & Clacher, 2018; Alzoubi, 2016; Bhuiyan et al., 2020; Chi et al., 2011; Gul et al., 2013; Habbash, 2019; Singh, 2019; Sun & Liu, 2016; White, 1970). Some scholars argue that lower firm profitability is associated with higher earnings manipulation in order to "window-dress" their financial statements when seeking external financing (Ashari et al., 1994). Conversely, other scholars (such as Bhuiyan et al., 2020 and Roychowdhury, 2006) indicate that more profitable firms may have a greater incentive to engage in manipulative practices. In addition, Francis and Yu (2009) suggest that

firms with negative net income are not motivated to engage in earnings management. Therefore, following prior studies (e.g., Alhadab & Clacher, 2018), two variables were included to control for firm profitability in this study. First, the return on assets was used (*ROA*), as measured by the firm's earnings before interest, tax, depreciation, and amortisation, scaled by total assets. Second, reporting negative net income (*LOSS*) was used, which was measured by assigning a dichotomous variable that took the value of 1 if the firm incurred a net loss during the reporting period, and 0 otherwise.

4.5.5 Firm Growth and Growth Opportunities (SALES_G and MTB)

Prior studies on the quality of listed firms financial reports have consistently found that a firm's growth may be a significant factor in managerial opportunistic behaviour. This is largely based on the notion that managers are subject to market pressure to meet predicted performance (Roychowdhury, 2006). Summers and Sweeney (1998) suggest that rapid growth creates a situation that may facilitate financial reporting manipulation due to weaknesses in internal governance resulting from lagged improvement. Lemma et al. (2013) suggest that growth firms may be inclined to engage in earnings management in order to secure external funding. Furthermore, Alzoubi (2016) documents a positive relationship between accrual-based earnings management and a firm's growth opportunities, while Doukakis (2014) and Bhuiyan et al. (2020) find that growth opportunities are significant factors driving the use of real earnings management techniques. Therefore, consistent with prior studies (e.g., Bhuiyan et al. 2020; Chen et al., 2010; Francis & Yu, 2009; Habib & Bhuiyan, 2016; Singh et al., 2019), two variables were used to control for firms' past growth as well as future growth opportunities. Sales growth (*SALES_G*) was measured as the difference between a firm's revenue in the current year and the firm's revenue in the previous year. Future growth opportunities was controlled for using the ratio of market value of equity to its book value (*MTB*).

4.5.6 Cash Flow Ratio (CFO)

It has been widely argued in the accounting and auditing literature that the proxies used in this study for financial reporting quality (i.e., accrual-based and real activity-based earnings management) are significantly associated with the levels of operating cash flows. In particular, Dechow et al. (1995) highlight that earnings management is associated with operating cash flows. Similarly, Cohen et al. (2010)

argue that real activity earnings management techniques may impact cash flow from operations, both positively and negatively. The literature documents that the level of cash flows from operations is, in fact, positively (e.g., Bhuiyan et al., 2020; Peasnell et al., 2005) and negatively (e.g., Gul et al., 2009) associated with earnings management. Therefore, the ratio of operating cash flow to the firm's total assets was included as a control variable, following prior studies (e.g., Alhadab, 2017; Bhuiyan et al., 2020; Carey & Simnett, 2006; Habbash & Alghamdi, 2017; Habib & Bhuiyan, 2016).

4.5.7 Leverage (LEV)

A firm's capital structure may be a significant determinant of the extent to which a firm is engaged in earnings management. On the one hand, higher levels of debt may trigger higher scrutiny and closer monitoring by lenders (Jelinek, 2007), which implies that higher leverage may be associated with lower levels of earnings management. In line with this, Becker et al. (1998) find that leverage has a negative relationship with earnings management. On the other hand, firms who seek external financing may engage in "window-dressing" earnings management in order to secure loans with less stringent debt covenants or to avoid violating debt covenants they are already obligated to adhere to (Boone et al., 2010; Francis & Wang, 2008; Kim et al., 2010). As a result, higher leverage may be associated with higher earnings management. Therefore, leverage was controlled for using the ratio of long-term debt to total assets, following prior studies (e.g., Braam et al, 2015; Chaney et al. 2011; Ding et al., 2018; Habbash & Alghamdi, 2017; Kim et al., 2020; Sun & Liu, 2013, 2016).

4.5.8 Firm Complexity (COMPLEX)

The complexity of a firm's financial reporting system may provide managers with more opportunities to engage in earnings management. The presence of sophisticated reporting systems that involve other firms as subsidiaries is commonly considered to be complex (Abbott et al., 2003; Simon et al., 1986). In addition, Dyreng, Hanlon et al. (2012) find that firms owning subsidiaries that operate in weak legal environments are more likely to engage in earnings management activities. Therefore, a control dichotomous variable that was assigned the value of 1 if the firm owns a subsidiary, and 0 otherwise, was included in the regression model, following other studies (e.g., Alsultan, 2017; Habbash & Alghamdi, 2017).

4.5.9 Capital Expenditure (CAPEX)

Several scholars argue that capital expenditure is related to manipulative earnings practices (Cohen & Zarowin, 2008; Kedia & Philippon, 2008). McNichols and Stubben (2008) provide evidence that higher capital expenditure is associated with higher levels of earnings management. They claim that this relationship results from distorted reporting to both external and internal information users. In the same vein, Kedia and Philippon (2008) find that firms tend to increase their capital expenditure during periods of misstated reporting and decrease it afterwards. Cohen and Zarowin (2008) find that firms' behaviour with respect to real based-earnings management techniques is similar to that which is associated with using accruals. That is, firms with higher real activities earnings management tend to also engage in higher capital expenditure. On the other hand, Graham et al. (2005) propose that firms' managers may deliberately defer capital expenditure as a means of managing earnings. Therefore, a negative association may be expected between capital expenditure and earnings management. Thus, following Huang et al. (2020), the ratio of capital expenditure to total assets was used to control for the effect of capital expenditure.

4.5.10 Board Independence (IND)

The presence of independent directors in firms' boardrooms is widely considered to be an effective governance mechanism. Prior studies suggest that independent directors play an important role in constraining opportunistic managerial practices (Peasnell et al., 2005; Xie et al. 2003). For example, Klein (2002) finds that board independence is effective in reducing abnormal accruals. Similarly, Peasnell et al. (2005) find that outside directors can mitigate income-increasing earnings management. Hence, in line with prior studies (e.g., Alzoubi, 2016; Chen, H. et al., 2011; Habib & Bhuiyan, 2016; Habtoor et al., 2019; Sun & Liu, 2016; Wang et al., 2020), the proportion of independent directors relative to board size was included as a control variable in the regression model.

4.5.11 Audit Committee Meetings (lnACMeet)

Studies suggest that audit committees constitute an integral factor in enhancing the quality of accounting numbers. Abbott et al. (2004) find that highly active audit committees are associated with lower financial restatements and fraudulent activities.

In the same vein, Xie et al. (2003) show that an increased number of audit committee meetings during the reporting period significantly decreases discretionary current accruals. Therefore, the natural log of the frequency of audit committee meetings was included to control for audit committee activity, in line with prior studies (e.g., Chen et al., 2017; Halim et al., 2020).

4.5.12 Firm Age (lnAGE)

Firm life cycle may be a determinant of managerial engagement in earnings management (Gul et al., 2009; Myers et al., 2003; Singh et al., 2019; Wang, 2014). The accounting and audit literature provides strong evidence for the relationship between firm life cycle (as proxied by firm age) and quality of financial reporting processes and output. For example, Chi et al. (2009) suggest that mature firms are less likely to engage in manipulative activities, while younger firms may have more opportunities and inducements to engage in earnings management. Gul et al. (2009) find that the magnitude of discretionary accruals decreases in mature firms. Therefore, this thesis follows prior studies (e.g., Alhadab & Clacher, 2018; Dhole et al., 2016; Ding et al., 2018; Gul et al., 2009; Sirait & Siregar, 2014; Sun & Liu, 2016) by controlling for firm life cycle using the natural log of the firm's age.

4.5.13 Industry and Year Effects

Studies indicate that variations in the quality of accounting systems and outputs may relate to cross-sectional and time-series factors. That is, firms within different industries may have different incentives to engage in earnings management or to avoid it. Firm-year observations are classified into specific industries, based on the Global Industry Classification Standard (GICS) industry classification. These include Communication Services, Consumer Discretionary, Consumer Staples, Energy, Healthcare, Industrials, Materials, and Utilities. Therefore, a dichotomous variable was included and took the value of 1 if a firm operated within a given GICS industry, and zero otherwise. Since the study sample spreads over nine years (2009 to 2017), another dichotomous variable was included in the regression model and took the value of 1 if the firm-year observation fell in the corresponding year, and zero otherwise.

4.6 Underlying Model

The hypotheses of this study were investigated by employing a pooled ordinary least squares (OLS) model with robust standard error (the Huber-White Sandwich Estimator) and running multiple regressions to obtain empirical data on the hypothesised relationships (as discussed in Chapter Three), following prior accounting and auditing studies (e.g., Alhababsah, 2019; Alhababsah & Yekini, 2021; Alzoubi, 2014, 2016; Dimitropoules & Asteriou, 2010; Gunny et al., 2020; Habbash, 2010; Habib & Bhuiyan, 2016). The use of the Huber-White Sandwich Estimator contributed to the reliability of regression analysis results as it controls for the effect of heteroscedasticity (Gujarati, 2009)[9].

As discussed in Section 4.3 of this chapter, the dependent variable (i.e., financial reporting quality) was proxied using accrual-based earnings management, real activity-based earnings management, and reporting small positive profits. The following model represents the underlying model specified for testing the hypotheses as stated in Chapter Three:

[9] A number of researchers use a logistic regression or a linear probability model when the dependent variable is dichotomous (as in the case of the variable *Small_Profits*). However, Wooldridge (2012) explains that heteroscedasticity may exist and impact the inferred conclusions of regression analysis when using a probit model. Wooldridge (2012) also states that employing an OLS regression with robust standard error is an effective method for overcoming the issue of heteroscedasticity. Nevertheless, a probit model has been employed for testing the stated hypotheses when *Small_Profits* is used as a dependent variable and the results obtained are vastly similar to the reported results using OLS regressions. Hence, this thesis follows the work of Gul et al. (2013) in using an OLS regression model.

$$FRQ_{it} = \beta_0 + \beta_1 PC_{it} + \beta_2 InstOwn_{it} + \beta_3 IAF\_Out_{it} + \beta_4 AUDIT4_{it} + \beta_5 PC_{it}* InstOwn_{it} + \beta_6 PC_{it}* IAF\_Out_{it} + \beta_7 PC_{it}* AUDIT4_{it} + \beta_8 FamOwn_{it} + \beta_9 GovOwn_{it} + \beta_{10} FSIZE_{it} + \beta_{11} ROA_{it} + \beta_{12} SALES\_G_{it} + \beta_{13} MTB_{it} + \beta_{14} CFO_{it} + \beta_{15} LEV_{it} + \beta_{16} LOSS_{it} + \beta_{17} COMPLEX_{it} + \beta_{18} CAPEX_{it} + \beta_{19} IND_{it} + \beta_{20} lnACMeet_{it} + \beta_{21} lnAGE_{it} + \beta_{22} Industry_{it} + \beta_{23} Year_{it} + \varepsilon_{it} \quad (4.6)$$

Where:

FRQ	Financial reporting quality estimated using *EM_Kothari*, *REM_CFO, REM_Prod, REM_Exp,* and *Small_Profits*
PC	The proportion of politically connected directors relative to board size
InstOwn	The proportion of shareholdings held by strategic institutional investors relative to the total number of shares outstanding
IAF_Out	Dichotomous variable taking the value of 1 if the internal audit function of the firm is outsourced, and 0 otherwise
AUDIT4	Dichotomous variable taking the value of 1 if the firm is being audited by a Big 4 audit firm, and 0 otherwise
FamOwn	The proportion of shareholdings held by family shareholders relative to the total number of shares outstanding
GovOwn	The proportion of shareholdings held by the government relative to the total number of shares outstanding
FSIZE	The natural log transformation of a firm's total assets at year-end
ROA	The firm's earnings before interest, tax, depreciation, and amortisation, relative to the total assets at year-end
SALES_G	The annual growth ratio of the firm's revenue
MTB	The ratio of the market value of equity to its book value
CFO	The ratio of cash flows from operations to the firm's total assets at year-end
LEV	The ratio of firm's long-term debt to its total assets at year-end
LOSS	Dichotomous variable taking the value of 1 if the firm reports negative net income, and 0 otherwise
COMPLEX	Dichotomous variable taking the value of 1 if the firm owns at least one subsidiary, and 0 otherwise
CAPEX	The ratio of a firm's capital expenditure divided by its total assets at year-end
IND	The proportion of independent directors relative to the board size
lnACMeet	The natural log transformation of a firm's audit committee meetings
lnAGE	The natural log transformation of the number of years since the firm's establishment
ε	Error term

4.7 Robustness Tests and Endogeneity Analysis

In order to further examine the stated hypotheses of this thesis and enhance the reliability of the main analysis results, several robustness and endogeneity tests were conducted. Specifically, additional analysis was performed using alternative measures for the accruals-based, real activity-based, and small profits proxies for financial reporting quality. The accrual-based proxy was measured using the modified Jones model as introduced by Dechow et al. (1995) as an alternative to the estimation of abnormal accruals using the model of Kothari et al. (2005). Furthermore, an aggregate measure (i.e., *REM_Index*) was constructed as the sum of the standardised variables *REM_CFO*, *REM_Prod*, and *REM_Exp* to capture the overall effect of real activity-based earnings management, following prior studies (e.g., Cohen et al., 2008; Cohen & Zarowin, 2010). Following Gul et al. (2013) and Gunny (2010), a firm's total assets at year-end was used as the basis to determine the cut-off threshold for reporting small positive profits, which is 1%, as an alternative approach to using the average total of the firm's assets that was in the main analysis. In addition to using alternative measures for the dependent variable, the independent variables (namely political connectedness and strategic institutional investors) were measured and regressed using a number of alternative measures. Specifically, the political connectedness of a firm was proxied as the presence of politically connected directors as a dichotomous variable; the existence of politically connected shareholders as a dichotomous variable; whether the board chairperson is politically connected as a dichotomous variable; and the political connectedness index, and the presence of strategic institutional investors, as dichotomous variables.

In term of the control variables, since prior studies do not offer a consensus with respect to their definitions, a number of control variables were defined differently and the main analysis regressions were re-performed. Specifically, the natural log transformation of market capitalisation (*FSIZE_MKT*) was substituted for the natural log transformation of a firm's total assets as a proxy for firm size. In addition, the return on assets (*ROA*) was one of the variables used to control for firm profitability, while the ratio of long-term debt to total assets (*LEV*) was used to control for the firms' capital structure in the main analysis. In order to ensure the consistency of the main analysis results, the effect of firm profitability was controlled for using the return on equity (*ROE*), and the firm's leverage was recalculated using the firm's total debt instead of long-term debt (*LEV_TD*). Additionally, prior studies (e.g., Kwon et al., 2019) find that the adoption of IFRS may have an impact on the quality of accounting

information. Therefore, the variable *IFRS* was introduced in the additional regression analysis in order to control for the mandatory adoption of IFRS by listed firms.

Next, partitioning tests were undertaken to determine if the political connectedness/financial reporting quality association varied according to specific firm characteristics. Prior studies suggest that financial reporting quality, as proxied by earnings management, may be attributed to firm characteristics (Alhadab, 2017; Francis et al., 2009; Prawitt et al., 2009; Watts & Zimmerman 1978; Zang, 2012). For example, Singh et al. (2019) use market capitalisation to investigate the impact of firm size on earnings management behaviour, while Makarem and Roberts (2020) investigate the impact of profit reporting versus loss reporting on the use of earning management. This thesis followed this approach by partitioning the pooled sample based on profit reporting and loss reporting, firm complexity, firm size, and growth opportunities. (Additional details of these analyses will be discussed in Chapter Seven.)

Since the issue of endogeneity may arise due to self-selection bias (Rosenbaum & Rubin, 1983) a number of analytical approaches were utilised in order to address its potential impact on the analysis. First, using the propensity score matching (PSM) technique attempted to address the endogeneity issue by creating two comparable groups of observations (i.e., the treatment group and the control group) that were matched using pre-specified characteristics. The control group consisted of a set of non-politically connected firm-year observations that were similar in the chosen characteristics to the treatment group, which contained the politically connected firm-year observations in the study pooled sample. The analysis was then performed using the PSM sample. In addition, the two-stage selection model technique introduced by Heckman (1979) was utilised by constructing a dichotomous variable for the independent variable, in the first stage, and performing a probit regression, after introducing the inverse mills ratio, in the second stage. After that, the thesis followed the suggestion of Wintoki et al. (2012) by using the dynamic generalised method of moments (GMM) estimation technique as developed by Arellano and Bond (1991) and Blundell and Bond (1998) in order to address the concern of reverse causality. Finally, the difference-in-differences (DID) approach was used because a significant event occurred during the study sample years, which may have had a significant impact on the quality of audit services provided to listed firms. This was the suspension of Deloitte's licence by the CMA and the banning of the firm from providing audit services in Saudi Arabia in the years after 2014.

4.8 Summary

This chapter started by presenting information on the selected sample and time period used to test the thesis hypotheses, followed by documenting the data source utilised. Subsequently, the chapter detailed how the dependent, independent, and control variables were to be measured and presented the underlying regression model. The chapter then discussed the robustness tests and endogeneity analysis that were performed.

Chapter Five will discuss the descriptive statistics and univariate analysis of the study variables. An overview of the process of sample selection as well as an industry breakdown of the firm-year observations will be presented. The chapter will then provide an extensive statistical description of the study variables, including statistical comparisons between subsamples based on the study's main explanatory variables (political connectedness, strategic institutional ownership, internal audit sourcing arrangements, and audit quality). After that, an analysis of variable correlations will be presented, showing the direction and strength of the relationships between study variables. Finally, a section will be provided to summarise the chapter.

Chapter Five

Descriptive Statistics, Univariate, and Bivariate Analysis

5.1 Introduction

Chapter Four presented the methodology that was followed to test the study's hypotheses. As part of this, the sample selection criteria, measures of study variables and rationalisation of control variables selection were outlined. This chapter presents the descriptive statistics and results of univariate and bivariate analysis for the dependent, independent, and control variables. The chapter begins with an overview of the sample selection process and presents the distribution of the independent variables among sample firm-year observations. It goes on to offer an extensive statistical description as well as univariate and bivariate analysis of the study variables, including comparisons between subsamples based on the study's main test variables using statistical analysis. After that, a correlational analysis is performed to determine the direction and strength between variables used in this study. Finally, a summary of the material contained in the chapter is provided.

5.2 Sample Selection and Industry Breakdown

This section details the process followed by the researcher in selecting the observations that constituted the final sample of the study. After that, the breakdown of the distribution of sample observations across market industries is presented.

5.2.1 Sample Selection Process

Table 5.1 presents the sample selection process followed to reach the final usable observations. The initial sample consisted of 179 firms including all firms listed on the *Tadawul* as of December 31, 2017. Consistent with prior studies (e.g., Al-Moghaiwli, 2010; Habbash & Alghamdi, 2017; Ho et al., 2015), financial and insurance firms, as well as trusts and diversified financial investment firms were excluded due to their adherence to a different regulatory body (SAMA) which has different regulatory requirements that impact their governance structure, and a different set of accounting standards, which impact the preparation of their financial statements (Al-Moghaiwli, 2010; Alsehali, 2006; Alshetwi, 2016; Ho et al., 2015; Habbash & Alghamdi, 2017). Additionally, firms that were found to be missing annual

and/or board reports were also excluded. As shown in Table 5.1, a total of 547 firm-year observations were excluded from the initial sample (534 financial and insurance firms and trusts observations and 13 firm-year observations with missing data). Therefore, the final sample was unbalanced panel data consisting of 899 firm-year observations of non-financial listed firms covering the period from 2009 to 2017.

Table 5.1
Sample Selection Process

	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
Number of Firms Listed on Tadawul as of December 31	135	146	150	158	163	169	171	175	179	1446
Exclusions:										
Financial and Insurance Firms, Trust	(51)	(57)	(57)	(59)	(61)	(62)	(62)	(63)	(62)	(534)
Firm-Year Observations with Missing Data	(1)	(0)	(2)	(4)	(1)	(1)	(0)	(0)	(4)	(13)
Final Sample	**83**	**89**	**91**	**95**	**101**	**106**	**109**	**112**	**113**	**899**

5.2.2 Industry Breakdown

Table 5.2 outlines the distribution of firm-year observations across industries. It shows that 332 firm-year observations, representing 36.93% of the sample, were drawn from the Materials industry, making it the largest industry represented, while Health Care, Energy, and Utilities represented smaller proportions relative to other industries in the sample, i.e., 4.89%, 4%, and 2% (44, 36, and 18 firm-year observations) respectively. Furthermore, 53 firm-year observations were drawn from Communication Services representing 5.9% of the sample. Consumer Discretionary and Consumer Staples represent 14.57% and 15.46% with 131 and 139 firm-year observations, respectively. Finally, Industrials represented 16.24% of the sample with 146 firm-year observations.

Table 5.2
Industry Breakdown of Sample Observations

Industry	Frequency	Percentage	Cumulative Distribution
Communication Services	53	5.9	5.9
Consumer Discretionary	131	14.57	20.47
Consumer Staples	139	15.46	35.93
Energy	36	4	39.93
Health Care	44	4.89	44.83
Industrials	146	16.24	61.07
Materials	332	36.93	98
Utilities	18	2	100
Total	**899**	**100**	

5.3 Descriptive Statistics, Univariate, and Bivariate Analysis

5.3.1 Descriptive Statistics and Univariate Analysis

Table 5.3 reports the descriptive statistics for all study variables used across all models, including their means, standard deviations, and the 25th, 50th, and 75th percentiles. Panel A of Table 5.3 presents the descriptive statistics for the dependent variable measures, namely, accrual-based earnings management, real activity-based earnings management, and reporting small positive profits. The mean of accrual-based earnings management as proxied by the absolute value of discretionary accruals (*EM_Kothari*) was 0.044 (with a standard deviation of 0.040) and ranged from 0.016 at the 1st quartile to 0.058 at the 3rd quartile, signifying relative variation between sample firms' attitudes towards earnings management. This indicates that discretionary accruals formed an average of 4.4% of total assets of Saudi listed firms during the sample years. This finding is consistent with prior studies conducted in Saudi Arabia. For instance, using a sample of 591 firm-year observations, Alsultan, (2017) documents a comparable mean (0.0477 with a standard deviation of 0.0433) for absolute discretionary accruals. Similarly, Alshetwi (2016) reports a mean of 0.049 (with a standard deviation of 0.037) for absolute discretionary accruals. These results indicate less engagement in earnings management compared with the findings of Habbash and Alghamdi (2017) who show a mean of 0.103 (with a standard deviation of 0.14). This inconsistency may be explained by the variation of sample years, since

Habbash and Alghamdi (2017) use a sample of 337 firm-year observations of Saudi listed firms between 2006 and 2009, during which regulatory requirements were relatively less burdensome[10].

These findings are also consistent with studies conducted in other contexts. For instance, using a sample of 1470 French and 1674 Canadian firm-year observations, Othman and Zeghal (2006) find the means of absolute discretionary accruals to be 0.035 (with a standard deviation of 0.042) and 0.068 (with a standard deviation of 0.107) respectively, while Abdul Rahman and Ali (2006) document a mean of 0.0468 (with a standard deviation of 0.05). Using a sample of 32,211 US firm-year observations, Sohn (2016) finds a mean of 0.054 (with a standard deviation of 0.0648). Furthermore, Assenso-Okofo et al. (2020) report a mean of absolute discretionary accruals of 0.074 (with a standard deviation of 0.0495) for 1800 firm-year observations listed on the ASX, and Guo et al. (2015) find a mean of 0.043 (with a standard deviation of 0.063). On the other hand, other studies document observably higher or lower levels of absolute discretionary accruals. For instance, using a sample of 1250 firm-year observations of Australian listed firms, Singh et al. (2019) report a mean of 0.146 (with a standard deviation of 0.213), while Mohmed et al. (2019) report a mean of 0.017 (with a standard deviation of 0.018) for a sample of 772 Egyptian firm-year observations.

Table 5.3, Panel A also presents descriptive statistics of real activity-based earnings management proxies. These are absolute abnormal cash flows (*REM_CFO*), absolute abnormal production costs (*REM_Prod*), and absolute abnormal discretionary expenses (*REM_Exp*). Deviations from normal estimated levels for cash flows, production costs, and discretionary expenses were observed for all three variables, indicating that real transaction alterations were employed by Saudi Arabian firms during the sample years. The abnormal levels found were comparable to those reported by other studies.

Table 5.3 shows mean absolute abnormal cash flows (*REM_CFO*) of 0.103, indicating that abnormal cash flows represent 10.3% of the total assets for listed firms. This finding is consistent with those reported by Kim et al. (2017) who use a sample of 132,916 firm-year observations from 38 countries and find a mean of 0.104 (with a standard deviation of 0.1471), and Halabi et al. (2019) who use a sample of 15,979 firm-

[10] Corporate governance regulations in Saudi Arabia were voluntary up until 2009.

year observations across 22 countries and report a mean of 0.0807. Hugo (2019) finds a mean of 0.125 using a sample of 90,602 US firm-year observations and Nuanpradit (2019) documents mean absolute abnormal cash flows of 0.139 using a sample of 3,825 firm-year observations derived from Thai listed firms. On the other hand, Kim and Sohn (2013) document lower levels of sales manipulation in their sample of 30,276 firm-year observations, i.e., 0.0692 (with a standard deviation of 0.0688).

Next, Table 5.3, Panel A reports the mean of absolute abnormal production costs (*REM_Prod*) as 0.474 (with a standard deviation of 0.484), indicating an average magnitude of production cost manipulation that is 47.7% of total assets. This is observably higher than the mean of the other two proxies of real earnings management. This indicates a greater tendency towards using production costs to manipulate earnings by listed firms in Saudi Arabia. Comparable findings are reported by Al-Amri et al. (2017) using a sample of 1,917 firm-year observations of GCC publicly-listed firms (i.e., a mean of 0.5439), and Francis et al. (2016) document a mean of 0.466 (with a standard deviation of 0.417) for the absolute abnormal production costs measured based on a moving three-year sum. Sellami and Fakhfakh (2013) use a sample of 1,488 firm-year observations of French listed firms and find a mean of 0.57 (with a standard deviation of 0.701) for the signed abnormal production costs of their control sample and test sample, which would be even higher if the absolute value was used, as variable values will move to the right of zero (Dhole et al., 2016). Lower levels of production costs manipulation are found in other studies, however. For instance, Ding et al. (2018) report a mean of real earnings management proxied by absolute abnormal production costs of 0.182 (with a standard deviation of 0.263) for 456,849 Chinese firm-year observations and Dhole et al. (2016) document a mean of 0.144 (with a standard deviation of 0.139) for absolute abnormal production costs in a sample of 4,845 firm-year observations of US listed firms, and Oh and Jeon (2017) document a mean of 0.094 for a sample of 2,565 firm-year observations of Korean listed firms.

Additionally, Table 5.3, Panel A shows that the average level of absolute abnormal discretionary expenses (*REM_Exp*) found for this study sample is 0.076 (with a standard deviation of 0.062). Compared to the other two real earnings management techniques, discretionary expenses manipulation was the technique that Saudi listed firms were least likely to resort to, coming in at a level of only 7.6% of total assets. This level is similar to the mean documented by Oh and Jeon (2017) who find that Korean listed

firms utilise discretionary expenses manipulation by an average of 0.074. However, Kim and Sohn (2013) find higher levels of discretionary expense manipulation, i.e., 0.1410 (with a standard deviation of 0.1648), and Dhole et al. (2016) report a mean of 0.1492 (with a standard deviation of 0.1337), while Karuna et al. (2012) document absolute abnormal discretionary expenses of 0.2390 (with a standard deviation of 0.378). On the other hand, lower levels of discretionary expense manipulation are documented by Al-Amri et al. (2017) in GCC countries with an overall average of 0.0319, indicating that the majority of listed firms in other GCC countries do not engage in discretionary expense manipulation to the degree that Saudi listed firms do.

The observable differences in average levels of real earnings management proxies across different settings suggests a variation among firms' attitudes towards using real activity-based earnings management techniques. A possible explanation for such variation may be that, unlike accrual-based earnings management, real earnings management may have an immediate transitive economic effect that could apply to other sources of cost and/or revenue. For example, manipulating production costs by increasing a firm's capacity to store finished-goods could have an adverse effect. Specifically, a larger finished-goods inventory requires more warehousing capacity, which could lead to increases in inventory fixed costs. Since real estate costs constitute an important factor in warehousing decisions (Cidell, 2011), firms operating in an environment characterised by high real estate costs may choose to rely more heavily on other real earnings management techniques in order to avoid higher overheads.

The descriptive statistics of reporting small positive profits (*Small_Profits*) are also reported in Panel A of Table 5.3. The mean value of 0.050 (with a standard deviation of 0.218) indicates that 5% of firms during sample years reported profits that were slightly above the breakeven threshold. Comparably, prior studies document similar percentages of firms reporting small profits. For example, Chebaane and Othman (2013) find that 5.2% of their treatment sample and 3% of their control sample report small positive profits based on a total sample drawn from Turkish and South African firms. Similarly, Yu et al. (2016) find, using a sample of 597 firm-year observations, that 4.8% report small positive profits, while Haga et al. (2018) document a slightly lower percentage of 4.08% out of a sample of 61,439 US firm-year observations. On the other hand, Harris and Whisenant (2012) use a sample of 14,725 firm-year observations derived from three different countries – Brazil, Italy, and South

Korea – and find that an overall mean of 7.7% of the sample firms report small profits after the adoption of mandatory auditor rotation, a requirement that is also adopted by CGRs in Saudi Arabia. A larger percentage is reported by Gul et al. (2013), who find an average of 11.6% of the sample firms reporting small positive profits. Finally, the mean of *Small_Profits* shows a large difference from the mean of 23.3% reported by Francis and Yu (2009). This can be explained by the higher cut-off point they used when characterising net income as a small profit, i.e., 2% of total assets.

Next, Panel B of Table 5.3 presents descriptive statistics of the four main independent variables used in this study: political connectedness (*PC*), strategic institutional investors (*InstOwn*), internal audit function outsource (*IAF_Out*), and audit quality (*AUDIT4*). First, it shows that the representation of politically connected directors (*PC*) had a mean value of 3.6% and a standard deviation of 8%. This is in line with the findings of Alnasser (2019) who reports an average of 2.2% of the board being politically connected directors. Second, Table 5.3, Panel B shows that strategic institutional investors (*InstOwn*) held an average of 4.40% of total share outstanding. Zhong et al. (2017) report an average of 7% of strategic institutional shareholdings, with a mean of 2% for code law countries and 11% for common law counties. The levels of shareholdings held by institutional investors in general in Saudi Arabia are substantially lower than those held by their counterparts in some other countries. Albassam et al. (2018) report average institutional shareholdings of 6.98%. Similarly, Albassam and Ntim (2017) document that 5.68% of the shares outstanding are held by institutional owners. On the other hand, Gao et al. (2018) report that an average of 33.3% of total shares outstanding were held by institutional investors during their sample years. A probable explanation for this sizeable difference is that individual investors dominate the majority of stockholdings on the *Tadawul* (Albassam, 2014).

Panel B of Table 5.3 also presents the outsourcing of internal audit functions (*IAF_Out*) by listed firms. An average of 26.5% (with a standard deviation of 44.1%) of the listed firms outsourced their internal audit function versus the 73.5% who had an in-house internal audit department. Within the Malaysian context, Johl et al. (2013) report a similar level of internal audit outsourcing using a sample of 128 observations, i.e., 24% (with a standard deviation of 43%). However, Baatwah et al. (2019) find that 58% of 711 firm-year observations Omani listed firms engage with a third-party internal audit providers, while the earlier study by Carey et al (2006) documents that an

average of 45% of Australian firms outsource or co-source their internal audit function activities. The apparent variation between internal audit sourcing arrangements may be attributed to the different regulatory requirements of each context. For instance, the Omani capital market authority requires that firms with capital of five million riyals and above appoint full-time internal audit staff (Baatwah et al. 2019). Finally, Table 5.3, Panel B shows descriptive statistics of the fourth independent variable of this study, audit quality (*AUDIT4*). The mean value indicates that 60.4% of the firm-year observations were audited by a higher-quality audit firm. This finding is in line with those of prior studies on Saudi listed firms, developing countries, and developed countries. For instance, Albassam et al. (2018) and Habbash and Alghamdi (2017) use samples of 560 and 337 firm-year observations, respectively, and report that, on average, 58% and 60.8% of Saudi listed firms have their financial statements audited by a high-quality audit firm. Comparably, Baatwah et al. (2019) find that 64% of Omani listed firms engage a high-quality auditor based on a sample of 711 firm-year observations. Finally, Singh et al. (2019) report that an average of 60.6% of firms listed on the ASX hire a high-quality auditor, using a sample of 1250 firm-year observations.

Next, Table 5.3, Panel C presents descriptive statistics related to the control variables included in the analysis. First, Panel C shows that family ownership (*FamOwn*) of the total share outstanding with had a mean, a 1st quartile, a 3rd quartile, and a standard deviation of 13%, 0.0%, 20.3%, and 20%, respectively. Similarly, Habbash and Alghamdi (2017) report family ownership averaged 13.2% of total shares outstanding. Table 5.3, Panel C shows a high variation of government investments in listed firms' equity: Government ownership (*GovOwn*) had a mean of 5% of the total shares outstanding with a standard deviation of 14.7%. Average government stockholdings were comparable to those reported by Alotaibi (2016), i.e., 3.25% with a standard deviation of 13.47%. The mean value of firm size (*FSIZE*), as shown in Table 5.3, Panel C, was 6.385 ($3,432.69 million[11]) (with a standard deviation of 1.611, i.e., $12,240.47 million). Firm-year observations had firm size values for the 1st and 3rd quartiles of 5.325 ($205.4 Million) and 6.967 ($1,060.6 Million). Table 5.3, Panel C also shows that the mean and median values of firm profitability (*ROA*) were 0.104 and 0.090, respectively, indicating relatively low profitability of Saudi listed firms (Halim, Xu, et

[11] All dollar amounts are in USD.

al. 2020). These levels are comparable to the findings of Agha and Eulaiwi (2019) who report a mean and median return of 0.11 and 0.104, respectively, using a sample of 1800 firm-year observations in GCC countries covering a similar sample period. This may be plausibly attributable to GCC economies being characterised as mono-economies that depend predominantly on oil exportation. Government spending constitutes a major driver of private sectors profits in the region. This dependency, coupled with low oil prices during the sample years, may have contributed to the negative impact on firms' profitability (Maghyereh & Awartani, 2020).

Table 5.3, Panel C also presents firms' past growth, as represented by an average growth in sales (*SALES_G*) of 10.6% with a high standard deviation: 55%. Sales growth had a 25th percentile of −0.78% and a 75th percentile of 14%. Table 5.3, Panel C also shows future growth opportunities for firms, as proxied by market-to-book ratio (*MTB*), to have a 25th percentile of 1.298 and a 75th percentile of 2.999, with a mean value of 2.414, which is consistent with the findings of Zhong et al. (2017). Further, the mean value of the ratio of cash flows from operations (*CFO*) was 9.2% of total assets, as presented in Table 5.3, Panel C with a standard deviation of 9.5%. These statistics are comparable to the findings of Habbash and Alghamdi (2017), i.e., a mean cash flow ratio of 8.6% with a standard deviation of 10.5%, as well as those of Alsultan (2017) who documents a mean of 10.67% with a standard deviation of 11.62%. Similarity, Alzoubi (2016) reports a mean value of the ratio of operating cash flows of 10.4%. Table 5.3, Panel C also shows an average leverage (*LEV*) of 0.136 with a standard deviation of 0.156, suggesting lower dependency of Saudi listed firms on long-term debt as a source of financing. This finding is comparable to prior studies on Saudi listed firms. For instance, Al-Ajmi et al. (2009), using a sample of 265 firm-year observations of Saudi listed firms, report a mean leverage value of 0.0968. Similarly, Alghamdi (2016), using a sample of 624 Saudi firm-year observations, reports a mean of 0.10 with a standard deviation of 0.14. Furthermore, Alzoubi (2016) finds a mean leverage value of 0.121, using a sample of 496 firm-year Jordanian observations. A plausible explanation for the low levels of long-term debt may be related, in part, to the religiosity of the Saudi business environment. Islamic Sharia Law prohibits the receipt and payment of interest (*riba*) and Saudi listed firms may avoid long-term debt so that purchasing their shares is considered to be a Sharia-compliant investment (Al-Ajmi et al. 2009; Elnahas et al.

2017; Hassan & Lewis, 2007). This finding has also been observed in other Islamic countries (e.g., by Chaleeda et al., 2019; Gunn & Shackman, 2014).

With respect to negative net incomes, Table 5.3, Panel C indicates that an average of 18.1% of Saudi listed firms reported a negative net income (*LOSS*) during the sample years. This accords with Alsultan's (2017) finding that an average of 15.06% of his sample's firm-year observations reported a loss. Table 5.3, Panel C also shows that, on average, 56.7% of Saudi listed firms were complex businesses with one or more subsidiaries (*COMPLEX*). When compared with Habbash and Alghamdi's (2017) reported mean of 44.3%, this finding shows that Saudi listed firms have generally been expanding and becoming more complex since the sample period (2006–2009). Next, Table 5.3, Panel C shows that listed firms invested an average of 6.7% of their total assets in capital expenditure (*CAPEX*). Albassam et al. (2018) report a similar finding, i.e., an average capital expenditure of 8.57%, while Huang and Roychowdhury (2020) document a mean capital expenditure of 6.2% of total assets for their sample firms. Further, Table 5.3, Panel C presents a mean board independence (*IND*) of 50.5% indicating that independent board directors represent slightly more than half of all listed directors, which is comparable to the findings of Alzead (2017), who reports a mean of 49.69%, and Habtoor et al. (2019), who report a mean of 50%. Table 5.3, Panel C also shows that audit committee activity (*lnACMeet*) averaged 1.610 (i.e., 5.464 meetings per annum), while the natural logarithm of firm age (*lnAGE*) averaged 3.113 (i.e., 23.54 years). These findings are comparable to those of Alzead (2017) who reports an average number of audit committee meetings of 5.182 per year, and Alnasser (2019), reporting a mean of firm age natural log of 3.298.

Table 5.3
Descriptive Statistics for All Models' Variables

Variable	Mean	SD	P25	P 50	P 75
Panel A: Dependent Variables:					
EM_Kothari	0.044	0.040	0.016	0.033	0.058
REM_CFO	0.103	0.060	0.063	0.095	0.133
REM_Prod	0.474	0.484	0.168	0.313	0.591
REM_Exp	0.076	0.062	0.030	0.064	0.099
Small_Profits	0.050	0.218	0.000	0.000	0.000
Panel B: Independent Variables:					
PC	0.036	0.080	0.000	0.000	0.000
InstOwn	0.044	0.075	0.000	0.000	0.072
IAF_Out	0.265	0.441	0.000	0.000	1.000
AUDIT4	0.604	0.489	0.000	1.000	1.000
Panel C: Control Variables:					
FamOwn	0.130	0.200	0.000	0.000	0.203
GovOwn	0.050	0.147	0.000	0.000	0.000
FSIZE	6.385	1.611	5.325	6.221	6.967
TOTAL ASSETS ($'M)	3432.698	12240.470	205.400	503.200	1060.600
ROA	0.104	0.090	0.045	0.092	0.160
SALES_G	0.106	0.550	-0.078	0.033	0.140
MTB	2.414	1.692	1.298	1.810	2.999
CFO	0.092	0.095	0.028	0.079	0.148
LEV	0.136	0.156	0.011	0.075	0.209
LOSS	0.181	0.385	0.000	0.000	0.000
COMPLEX	0.567	0.496	0.000	1.000	1.000
CAPEX	0.067	0.074	0.017	0.043	0.094
IND	0.505	0.178	0.333	0.444	0.625
lnACMeet	1.610	0.429	1.386	1.609	1.792
lnAGE	3.113	0.633	2.890	3.219	3.526

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-matched model; *REM_CFO*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) sales manipulation model; *REM_Prod*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) production cost manipulation model; *REM_Exp*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) discretionary expense manipulation model; *Small_Profits*: Small positive profits; *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: Audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details refer to Appendix A.)

5.3.2 Bivariate Analysis

5.3.2.1 Political Connectedness.

Table 5.4 reports the results of the statistical analysis comparing two subsamples of politically connected and non-politically connected firms, including results from a t-test and chi-square test. Table 5.4 indicates that there was no statically significant difference between politically connected firms and non-politically connected firms with respect to the mean values of accrual-based earnings management (*EM_Kothari*). Nonetheless, a higher standard deviation of 0.042 for non-politically connected firms, compared to 0.036 for politically connected firms is indicative of higher volatility of discretionary accruals reported by non-politically connected firms. Table 5.4 does report statistically significant differences between the mean values of real activity-based earnings management, indicating that non-politically connected firms reported statistically significant higher magnitudes for the three proxies than their politically connected counterparts. Specifically, differences of mean values for real earnings management through manipulation of sales (*REM_CFO*) and manipulation of productions costs (*REM_*Prod) were significant at the 1% level, while discretionary expense manipulation (*REM_Exp*) was statistically significant at the 5% level. Furthermore, the table reports the chi-square test results for reporting of small positive profits (*Small_Profits*), indicating that there was a statistically significant difference between politically connected firms and non-politically connected firms at the 1% level. Table 5.4 also shows that, on average, politically connected firms had statistically significant higher levels of strategic institutional ownership (*InstOwn*), government ownership (*GovOwn*), profitability (*ROA*), growth opportunities (*MTB*), cash flow ratio (*CFO*), leverage (*LEV*), and board independence (*IND*). Table 5.4 also reveals that, on average, politically connected firms were relatively older (*lnAGE*) than their non-politically connected counterparts. On the other hand, Table 5.4 reveals that family ownership (*FamOwn*) was significantly lower in politically connected firms. Finally, Table 5.4 shows that politically connected firms were significantly less complex (*COMPLEX*) compared to their non-politically connected counterparts.

Table 5.4
Descriptive Statistics, T-Tests, and Chi-Square Tests for Politically Connected Firms versus Non-Politically Connected Firms

	Politically Connected Firms (n: 183)					Non-Politically Connected Firms (n: 716)					T-Test (Chi-Square)
Variable	**Mean**	**SD**	**P25**	**P50**	**P75**	**Mean**	**SD**	**P25**	**P50**	**P75**	**p-value**
EM_Kothari	0.047	0.036	0.021	0.039	0.063	0.043	0.042	0.016	0.032	0.055	0.101
REM_CFO	0.092	0.052	0.053	0.090	0.122	0.105	0.062	0.064	0.096	0.134	**0.004**
REM_Prod	0.349	0.300	0.159	0.274	0.430	0.505	0.517	0.172	0.346	0.638	**0.000**
REM_Exp	0.067	0.051	0.029	0.052	0.099	0.079	0.064	0.031	0.066	0.099	**0.013**
Small_Profits	0.011	0.104	0.000	0.000	0.000	0.060	0.238	0.000	0.000	0.000	**(0.007)**
PC	0.178	0.081	0.111	0.143	0.222	-	-	-	-	-	-
InstOwn	0.054	0.071	0.000	0.000	0.089	0.042	0.076	0.000	0.000	0.064	**0.024**
IAF_Out	0.273	0.447	0.000	0.000	1.000	0.263	0.440	0.000	0.000	1.000	(0.771)
AUDIT4	0.574	0.496	0.000	1.000	1.000	0.612	0.488	0.000	1.000	1.000	(0.349)
FamOwn	0.021	0.069	0.000	0.000	0.000	0.158	0.213	0.000	0.039	0.250	**0.000**
GovOwn	0.080	0.175	0.000	0.000	0.015	0.043	0.138	0.000	0.000	0.000	**0.001**
FSIZE	6.381	1.641	5.256	6.406	6.977	6.386	1.604	5.332	6.186	6.944	0.486
Total Assets ($'M)	4824.009	17664.590	191.800	605.300	1071.800	3077.087	10398.420	206.800	485.950	1036.500	**0.042**
ROA	0.113	0.098	0.042	0.124	0.178	0.102	0.088	0.045	0.088	0.156	**0.072**
SALES_G	0.124	0.665	−0.088	0.029	0.129	0.102	0.517	−0.076	0.036	0.144	0.312
MTB	2.579	1.665	1.389	2.105	3.360	2.372	1.697	1.267	1.770	2.963	**0.071**
CFO	0.105	0.105	0.031	0.104	0.182	0.089	0.092	0.028	0.077	0.138	**0.016**

	Politically Connected Firms (n: 183)					Non-Politically Connected Firms (n: 716)					T-Test (Chi-Square)
Variable	**Mean**	**SD**	**P25**	**P50**	**P75**	**Mean**	**SD**	**P25**	**P50**	**P75**	**p-value**
LEV	0.096	0.127	0.000	0.024	0.173	0.146	0.161	0.018	0.089	0.224	**0.000**
LOSS	0.186	0.390	0.000	0.000	0.000	0.180	0.385	0.000	0.000	0.000	(0.860)
COMPLEX	0.492	0.501	0.000	0.000	1.000	0.587	0.493	0.000	1.000	1.000	**(0.021)**
CAPEX	0.066	0.074	0.017	0.038	0.088	0.067	0.074	0.017	0.044	0.095	0.400
IND	0.530	0.191	0.364	0.500	0.667	0.498	0.174	0.333	0.429	0.625	**0.017**
lnACMeet	1.608	0.382	1.386	1.609	1.792	1.610	0.440	1.386	1.609	1.792	0.469
lnAGE	3.246	0.660	3.091	3.401	3.584	3.079	0.622	2.833	3.178	3.497	**0.001**

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-matched model; *REM_CFO*: The magnitude of real activity based earnings management based on Roychowdhury's (2006) sales manipulation model; *REM_Prod*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) production cost manipulation model; *REM_Exp*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) discretionary expense manipulation model; *Small_Profits*: Small positive profits; *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4:* Audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age (For additional details refer to Appendix A). Numbers in parentheses show chi-square test results.

5.3.2.2 Strategic Institutional Ownership.

Table 5.5 reports the results of the statistical analysis comparing firms with strategic institutional ownership and firms with no strategic institutional ownership. The results of the bivariate analysis show statistically significant differences at the 1% level between firms with strategic institutional investors and other firms, in terms of accrual-based earnings management (*EM_Kothari*) and real earnings management using both manipulation of productions costs (*REM*_Prod) and discretionary expenses manipulation (*REM_Exp*). Specifically, Table 5.5 shows that firms with strategic institutional shareholders engaged less in earnings management. However, the t-test result for real activity-based earnings management using manipulation of sales (*REM_CFO*) revealed no statistically significant difference between the two subsamples. Additionally, Table 5.5 shows that firms with strategic institutional investors showed statistically significantly lower frequency in terms of reporting small positive profits (*Small_Profits*) compared to other firms. Table 5.5 also shows that strategic institutional investors had a tendency to invest in firms with more politically connected directors in their boardrooms (*PC*). It also shows that firms with strategic institutional investors were statistically different in terms of internal audit sourcing arrangements and engaging high-quality audit firms compared to other firms. Table 5.5 also presents that firms with strategic institutional investors had statistically higher levels of government ownership (*GovOwn*), greater total assets (*FSIZE*), were more profitable (*ROA*), had better growth opportunities (*MTB*), had a higher cash flow ratio (*CFO*), greater use of long-term debt financing (*LEV*), and larger capital expenditure (*CAPEX*) compared to other listed firms with no strategic institutional stockholders in their ownership structure. Conversely, Table 5.5 shows that firms with strategic institutional investors had lower levels of family ownership (*FamOwn*), reported fewer losses (*LOSS*), and had lower board independence (*IND*) than listed firms with no strategic institutional ownership.

Table 5.5
Descriptive Statistics, T-Tests, and Chi-Square Tests for Firms with Strategic Institutional Ownership and Firms with no Strategic Institutional Ownership

	Firms with Strategic Institutional Ownership (n: 329)					**Firms with no Strategic Institutional Ownership (n: 570)**					**T-Test (Chi-Square)**
Variable	**Mean**	**SD**	**P25**	**P50**	**P75**	**Mean**	**SD**	**P25**	**P50**	**P75**	**p-value**
EM_Kothari	0.038	0.029	0.016	0.032	0.049	0.048	0.045	0.017	0.035	0.063	**0.000**
REM_CFO	0.105	0.048	0.070	0.105	0.134	0.101	0.066	0.057	0.088	0.131	0.142
REM_Prod	0.369	0.374	0.168	0.260	0.412	0.534	0.529	0.168	0.388	0.679	**0.000**
REM_Exp	0.062	0.055	0.027	0.035	0.095	0.085	0.064	0.044	0.072	0.104	**0.000**
Small_Profits	0.030	0.172	0.000	0.000	0.000	0.061	0.240	0.000	0.000	0.000	**(0.040)**
PC	0.048	0.086	0.000	0.000	0.091	0.030	0.076	0.000	0.000	0.000	**0.001**
InstOwn	0.121	0.077	0.064	0.103	0.146	-	-	-	-	-	-
IAF_Out	0.301	0.459	0.000	0.000	1.000	0.244	0.430	0.000	0.000	0.000	**(0.062)**
AUDIT4	0.672	0.470	0.000	1.000	1.000	0.565	0.496	0.000	1.000	1.000	**(0.002)**
FamOwn	0.086	0.145	0.000	0.000	0.118	0.155	0.222	0.000	0.009	0.233	**0.000**
GovOwn	0.088	0.184	0.000	0.000	0.100	0.029	0.116	0.000	0.000	0.000	**0.000**
FSIZE	7.313	1.490	6.294	6.971	8.570	5.849	1.424	5.000	5.809	6.464	**0.000**
Total Assets ($'M)	5691.146	14679.750	541.200	1065.400	5270.200	2129.124	10372.450	148.400	333.400	641.400	**0.000**
ROA	0.132	0.086	0.069	0.122	0.177	0.088	0.089	0.031	0.077	0.140	**0.000**
SALES_G	0.092	0.477	−0.066	0.028	0.129	0.114	0.589	−0.082	0.038	0.145	0.280
MTB	2.219	1.302	1.285	1.840	2.856	2.527	1.872	1.303	1.806	3.054	**0.004**
CFO	0.120	0.091	0.054	0.114	0.176	0.076	0.094	0.017	0.065	0.126	**0.000**

	Firms with Strategic Institutional Ownership (n: 329)					Firms with no Strategic Institutional Ownership (n: 570)					T-Test (Chi-Square)
Variable	**Mean**	**SD**	**P25**	**P50**	**P75**	**Mean**	**SD**	**P25**	**P50**	**P75**	**p-value**
LEV	0.162	0.162	0.022	0.129	0.231	0.121	0.150	0.008	0.058	0.179	**0.000**
LOSS	0.097	0.297	0.000	0.000	0.000	0.230	0.421	0.000	0.000	0.000	**(0.000)**
COMPLEX	0.584	0.494	0.000	1.000	1.000	0.558	0.497	0.000	1.000	1.000	(0.454)
CAPEX	0.071	0.072	0.021	0.051	0.096	0.064	0.075	0.016	0.040	0.092	**0.092**
IND	0.485	0.157	0.364	0.444	0.556	0.516	0.188	0.333	0.437	0.667	**0.006**
lnACMeet	1.589	0.406	1.386	1.609	1.792	1.622	0.441	1.386	1.609	1.792	0.136
lnAGE	3.161	0.659	2.773	3.332	3.584	3.085	0.616	2.890	3.178	3.466	**0.043**

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-matched model; *REM_CFO*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) sales manipulation model; *REM_Prod*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) production cost manipulation model; *REM_Exp*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) discretionary expense manipulation model; *Small_Profits*: Small positive profits; *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: Audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details refer to Appendix A.) Numbers in parentheses show chi-square test results.

5.3.2.3 Firms with Outsourced Internal Audit Function and Firms with In-House Internal Audit Function.

Table 5.6 documents the results of the statistical analysis comparing firms that outsource their internal audit function and firms that maintain an in-house internal audit function. The differences between these two groups were statistically significant at the 1% level across real activity-based earnings management proxies of sales manipulation (*REM_CFO*) and discretionary expenses manipulation (*REM_Exp*) and at the 5% level for manipulating productions costs (*REM_Prod*). However, Table 5.6 shows no statistically significant differences between the two groups in terms of accrual-based earnings management (*EM_Kothari*). Statistically insignificant differences were shown for the frequency of reporting small positive profits (*Small_Profits*) between firms that outsource their internal audit functions and firms with that maintain an in-house internal audit functions. Table 5.6 reveals that firms that maintain their internal audit function internally tended to have a higher proportion of politically connected directors (*PC*) and to engage higher-quality audit firms than their counterparts. Additionally, Table 5.6 shows that firms that outsource their internal audit function had statistically lower percentages of both family ownership (*FamOwn*) and government ownership (*GovOwn*). Table 5.6 reports that firms with outsourced internal audit function were smaller in size (*FSIZE*), less profitable (*ROA*), had lower growth opportunities (*MTB*), and lower cash flow ratio (*CFO*), were less complex firms (*COMPLEX*), had lower levels of capital expenditure (*CAPEX*), and were of lower age (*lnAGE*) than firms with in-house internal audit function. On the other hand, Table 5.6 reveals that firms that outsource their internal audit function had a significantly higher proportion of independent directors on their boards (*IND*).

Table 5.6
Descriptive Statistics, T-Tests, and Chi-Square Tests for Firms with Outsourced Internal Audit Function and Firms with In-House Internal Audit Function

	Firms with Outsourced Internal Audit Function (n: 239)					**Firms with In-House Internal Audit Function (n: 661)**					**T-Test (Chi-Square)**
Variable	**Mean**	**SD**	**P25**	**P50**	**P75**	**Mean**	**SD**	**P25**	**P50**	**P75**	**p-value**
EM_Kothari	0.043	0.039	0.016	0.034	0.056	0.044	0.041	0.017	0.033	0.058	0.391
REM_CFO	0.093	0.049	0.059	0.089	0.127	0.106	0.063	0.063	0.098	0.137	**0.002**
REM_Prod	0.417	0.430	0.138	0.266	0.589	0.494	0.501	0.184	0.337	0.591	**0.019**
REM_Exp	0.059	0.046	0.027	0.047	0.075	0.083	0.065	0.034	0.070	0.106	**0.000**
Small_Profits	0.059	0.236	0.000	0.000	0.000	0.047	0.212	0.000	0.000	0.000	(0.469)
PC	0.027	0.057	0.000	0.000	0.000	0.039	0.087	0.000	0.000	0.000	**0.025**
InstOwn	0.047	0.074	0.000	0.000	0.077	0.044	0.075	0.000	0.000	0.071	0.307
IAF_Out	-	-	-	-	-	-	-	-	-	-	-
AUDIT4	0.508	0.501	0.000	1.000	1.000	0.638	0.481	0.000	1.000	1.000	**(0.000)**
FamOwn	0.069	0.131	0.000	0.000	0.093	0.151	0.216	0.000	0.001	0.247	**0.000**
GovOwn	0.028	0.102	0.000	0.000	0.000	0.058	0.160	0.000	0.000	0.000	**0.003**
FSIZE	6.257	1.659	5.219	5.992	7.031	6.430	1.591	5.390	6.297	6.944	**0.077**
Total Assets ($'M)	2446.493	8413.829	184.800	400.100	1131.000	3787.779	13340.180	219.100	543.100	1036.500	**0.074**
ROA	0.079	0.080	0.030	0.078	0.128	0.113	0.092	0.050	0.096	0.169	**0.000**
SALES_G	0.114	0.555	−0.082	0.026	0.153	0.103	0.549	−0.077	0.037	0.136	0.398
MTB	2.271	1.459	1.361	1.826	2.644	2.466	1.766	1.287	1.809	3.091	**0.064**
CFO	0.064	0.090	0.008	0.062	0.114	0.102	0.095	0.035	0.089	0.160	**0.000**

	Firms with Outsourced Internal Audit Function (n: 239)					Firms with In-House Internal Audit Function (n: 661)					T-Test (Chi-Square)
Variable	**Mean**	**SD**	**P25**	**P50**	**P75**	**Mean**	**SD**	**P25**	**P50**	**P75**	**p-value**
LEV	0.138	0.165	0.011	0.062	0.212	0.135	0.152	0.011	0.079	0.209	0.395
LOSS	0.206	0.405	0.000	0.000	0.000	0.172	0.378	0.000	0.000	0.000	(0.251)
COMPLEX	0.416	0.494	0.000	0.000	1.000	0.622	0.485	0.000	1.000	1.000	**(0.000)**
CAPEX	0.056	0.065	0.015	0.035	0.073	0.071	0.076	0.017	0.048	0.099	**0.004**
IND	0.524	0.185	0.364	0.444	0.667	0.498	0.175	0.333	0.429	0.600	**0.027**
lnACMeet	1.614	0.475	1.386	1.609	1.946	1.608	0.411	1.386	1.609	1.792	0.430
lnAGE	3.000	0.751	2.485	3.157	3.526	3.153	0.580	2.890	3.219	3.526	**0.001**

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-matched model; *REM_CFO*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) sales manipulation model; *REM_Prod*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) production cost manipulation model; *REM_Exp*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) discretionary expense manipulation model; *Small_Profits*: Small positive profits; *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: Audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details, refer to Appendix A.) Numbers in parentheses show chi-square test results.

5.3.2.4 Firms Engaging High-Quality Audit Firms vs Non High-Quality Audit Firms.

Table 5.7 reports the statistical comparisons between two subsamples of firms based on the audit quality (i.e., their engagement of high-quality audit firms vs non-high quality audit firms). Table 5.7 reveals that accrual-based earnings management (*EM_Kothari*) was significantly lower at the 5% level for firms audited by high-quality audit firms than for those audited other audit firms. However, firms audited by a high-quality firm had statistically significantly higher magnitudes of real activity-based earnings management. Both proxies of real earnings management – sales manipulation (*REM_CFO*) and productions costs manipulation (*REM_Prod*) – were significantly higher at the 1% level, while discretionary expense manipulation (*REM_Exp*) was significantly higher at the 5% level. Results of the statistical analysis failed to show a statistically significant difference, however, between engaging a high-quality audit firm and engaging with a non-high quality audit firm according to the proxy of small profits (*Small_Profits*).

Regarding institutional ownership, Table 5.7 shows a significant difference at the 1% level between strategic institutional ownership of clients of high-quality audit firms compared to clients of non-high quality auditors, indicating that high-quality auditors engaged more with firms who have strategic institutional investors. On the other hand, Table 5.7 reports that the clients of non-high quality audit firms had significantly higher proportions of politically connected directors (*PC*) at the 5% level, and that their clients tended to outsource their internal audit function (*IAF_OUT*) more frequently than high-quality audit clients, at the 1% level. Further, Table 5.7 documents a statistically significantly higher level of both family ownership (*FamOwn*) and government ownership (*GovOwn*), both at the 1% level, in the ownership structure of firms who engaged high-quality audit firms. Table 5.7 also shows that high-quality audit firms' clients were significantly larger in terms of firm size (*FSIZE*), more profitable (*ROA*), had higher cash flow ratios (*CFO*), higher leverage (*LEV*), higher capital expenditure (*CAPEX*), and were more complex (*COMPLEX*), all at the 1% level of significance. Further, Table 5.7 shows that high-quality audit clients had significantly better growth rates (*SALES_G*) and better growth opportunities (*MTB*), at the 5% level and 10% level, respectively. On the contrary, clients of non-high quality audit firms had significantly higher loss reporting frequency (*LOSS*), higher board independence (*IND*), and were older in age (*lnAGE*).

Table 5.7
Descriptive Statistics, T-Tests, and Chi-Square Tests for Firms who Engage High-Quality Audit Firm vs Non-High Quality Audit Firms

	Firms who Engage High-Quality Audit Firms (n: 543)					Firms who engage Non-High Quality Audit Firms (n: 356)					T-Test (Chi-Square)
Variable	**Mean**	**SD**	**P25**	**P50**	**P75**	**Mean**	**SD**	**P25**	**P50**	**P75**	**p-value**
EM_Kothari	0.042	0.039	0.016	0.032	0.051	0.048	0.043	0.018	0.038	0.065	**0.013**
REM_CFO	0.117	0.061	0.072	0.108	0.148	0.081	0.051	0.048	0.074	0.108	**0.000**
REM_Prod	0.527	0.502	0.197	0.383	0.644	0.391	0.444	0.128	0.243	0.493	**0.000**
REM_Exp	0.080	0.066	0.031	0.064	0.105	0.071	0.053	0.030	0.061	0.094	**0.015**
Small_Profits	0.052	0.221	0.000	0.000	0.000	0.048	0.214	0.000	0.000	0.000	(0.798)
PC	0.032	0.071	0.000	0.000	0.000	0.043	0.092	0.000	0.000	0.000	**0.017**
InstOwn	0.050	0.076	0.000	0.000	0.089	0.037	0.073	0.000	0.000	0.050	**0.006**
IAF_Out	0.223	0.417	0.000	0.000	0.000	0.329	0.470	0.000	0.000	1.000	**(0.000)**
AUDIT4	-	-	-	-	-	-	-	-	-	-	-
FamOwn	0.150	0.212	0.000	0.020	0.232	0.099	0.177	0.000	0.000	0.134	**0.000**
GovOwn	0.072	0.179	0.000	0.000	0.000	0.018	0.063	0.000	0.000	0.000	**0.000**
FSIZE	6.924	1.588	5.834	6.515	7.761	5.562	1.261	4.786	5.678	6.411	**0.000**
Total Assets ($'M)	5280.686	15445.730	341.700	675.100	2348.300	613.975	1254.117	119.800	292.500	608.550	**0.000**
ROA	0.119	0.093	0.054	0.107	0.176	0.080	0.081	0.028	0.072	0.128	**0.000**
SALES_G	0.135	0.538	−0.040	0.065	0.155	0.062	0.567	−0.125	0.001	0.113	**0.027**
MTB	2.489	1.740	1.352	1.905	3.037	2.301	1.612	1.261	1.673	2.898	**0.052**
CFO	0.106	0.098	0.037	0.092	0.163	0.071	0.087	0.015	0.063	0.121	**0.000**

	Firms who Engage High-Quality Audit Firms (n: 543)					Firms who engage Non-High Quality Audit Firms (n: 356)					T-Test (Chi-Square)
Variable	**Mean**	**SD**	**P25**	**P50**	**P75**	**Mean**	**SD**	**P25**	**P50**	**P75**	**p-value**
LEV	0.172	0.168	0.032	0.120	0.273	0.082	0.116	0.000	0.028	0.126	**0.000**
LOSS	0.142	0.349	0.000	0.000	0.000	0.242	0.429	0.000	0.000	0.000	**(0.000)**
COMPLEX	0.676	0.468	0.000	1.000	1.000	0.402	0.491	0.000	0.000	1.000	**(0.000)**
CAPEX	0.075	0.076	0.025	0.053	0.101	0.055	0.069	0.011	0.029	0.080	**0.000**
IND	0.460	0.150	0.333	0.429	0.556	0.573	0.195	0.429	0.571	0.714	**0.000**
lnACMeet	1.606	0.443	1.386	1.609	1.792	1.616	0.407	1.386	1.609	1.792	0.369
lnAGE	3.019	0.670	2.639	3.135	3.526	3.256	0.542	3.045	3.296	3.526	**0.000**

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-matched model; *REM_CFO*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) sales manipulation model; *REM_Prod*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) production cost manipulation model; *REM_Exp*: The magnitude of real activity-based earnings management based on Roychowdhury's (2006) discretionary expense manipulation model; *Small_Profits*: Small positive profits; *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: Audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details, refer to Appendix A). Numbers in parentheses show chi-square test results

5.3.3 Correlation Analysis

Table 5.8 provides the results of the Pearson correlation matrix for the dependent, independent, and control variables used to identify the direction and strength of linear relationships between each pair of variables. The Pearson correlation matrix was also reviewed in order to identify whether multi-collinearity was present as an issue that threatened analytical conclusions.

As shown in Table 5.8, the accrual-based earnings management measure (*EM_Kothari*) was positively and significantly correlated with the real activity-based earnings management proxy for discretionary expense manipulation (*REM_Exp*). This indicates that firms used these two techniques as complementary alternatives when managing earnings. Further, *EM_Kothari* also positively correlated with the market-to-book ratio (*MTB*), reporting negative net income (*LOSS*), capital expenditure (*CAPEX*), and board independence (*IND*), all at significant levels. This indicates that firms with better growth opportunities, firms that report losses, firms with larger capital expenditure, and firms with higher proportions of independent directors engaged more in accrual-based earnings management. On the other hand, the table also shows a significant negative correlation between *EM_Kothari* and strategic institutional ownership (*InstOwn*), audit quality (*AUDIT4*), family ownership (*FamOwn*), firm size (*FSIZE*), profitability (*ROA*), leverage (*LEV*), and firm complexity (*COMPLEX*), indicating that firms characterised by the presence of, or higher levels of, these variables did not engage in earnings manipulation using discretionary accruals.

Table 5.8 also shows a high positive correlation between the three proxies for real activity-based earnings management: sales manipulation (*REM_CFO*), production cost manipulation (*REM_Prod*), and discretionary expense manipulation (*REM_Exp*). This indicates a similarity in listed firms' attitudes towards these earnings management techniques. Table 5.8 shows that real activity-based earnings management proxies had similar correlations with other variables used in the analysis, as well. All proxies were significantly and positively correlated with audit quality (*AUDIT4*), family ownership (*FamOwn*), profitability (*ROA*), growth opportunities (*MTB*), and cash flow ratio (*CFO*). This shows that clients of high-quality audit firms, firms with family ownership, profitable firms, firms with higher growth opportunities, and firms with

higher levels of cash flow from operations tended to engage more in real activity-based earnings management. On the other hand, *REM_CFO*, *REM_Prod*, and *REM_Exp* showed a significant negative correlation with reporting small positive profits (*Small_Profits*), political connectedness (*PC*), internal audit outsourcing (*IAF_Out*), leverage (*LEV*), negative net income (*LOSS*), and board independence (*IND*).

Differences in the behaviour of the three *REM* proxies are also shown in Table 5.8. Only *REM_Prod*, and *REM_Exp* were significantly and positively correlated with firm age (*lnAGE*) and significantly and negatively correlated with both strategic institutional ownership (*InstOwn*) and government ownership (*GovOwn*). Also, only *REM_CFO* and *REM_Exp* had a significant and positive correlation with firm complexity (*COMPLEX*). These differences suggest that although strong correlations exist between the three *REM* techniques, some firms that had certain characteristics may employ different real activity-based earnings management techniques.

Table 5.8 also identifies significant correlations between reporting small profits (*Small_Profits*) and other variables. The table shows significant positive correlation with leverage (*LEV*) indicating that firms with higher long-term debt ratios tended to report small levels of positive income. On the hand, there were significant negative correlations between *Small_Profits* and political connectedness (*PC*), profitability (*ROA*), market-to-book ratio (*MTB*), cash flow ratio (*CFO*), and the reporting of losses (*LOSS*).

Finally, it is worth noting that based on the Pearson correlation matrix, multi-collinearity did not form a major issue for this study, except in the case of the correlation between *ROA* and *CFO*. Therefore, as will be reported in Chapter Six, tests of the variance inflation factor (VIF) were conducted for each regression and the results showed no variable with a higher weight than 5, indicating no impact of multi-collinearity on the study analysis (Gujarati & Porter, 2009). Furthermore, multivariate analysis was re-run after omitting these variables and the results remained robust.

To sum up, the differences identified among some results of the bivariate analysis, that is, those relating to the earnings management proxies, demonstrate the importance of conducting a multivariate analysis on the study variables in order to control for potential effects that can impact the dependent variables.

Table 5.8
Pearson Correlation Coefficients

Variable	*EM_Kothari*	*REM_CFO*	*REM_Prod*	*REM_Exp*	*Small_Profits*	*PC*	*InstOwn*	*IAF_Out*	*AUDIT4*	*FamOwn*	*GovOwn*	*FSIZE*	*ROA*	*SALES_G*	*MTB*	*CFO*	*LEV*	*LOSS*	*COMPLEX*	*CAPEX*	*IND*	*lnACMeet*	*lnAGE*
EM_Kothari	1																						
REM_CFO	0.034	1																					
REM_Prod	0.061	0.539***	1																				
REM_Exp	0.163***	0.347***	0.690***	1																			
Small_Profits	0.001	−0.124***	−0.101**	−0.093**	1																		
PC	0.022	−0.108**	−0.130***	−0.089**	−0.073*	1																	
InstOwn	−0.121***	0.023	−0.169***	−0.171***	−0.044	0.050	1																
IAF_Out	−0.009	−0.095**	−0.070*	−0.172***	0.024	−0.066*	0.017	1															
AUDIT4	−0.075*	0.287***	0.137***	0.072*	0.009	−0.071*	0.084*	−0.117***	1														
FamOwn	−0.116***	0.258***	0.366***	0.404***	−0.059	−0.254***	−0.141***	−0.181***	0.124***	1													
GovOwn	0.056	0.029	−0.152***	−0.160***	0.024	0.053	0.190***	−0.093**	0.180***	−0.180***	1												
FSIZE	−0.186***	0.086**	−0.168***	−0.232***	0.058	−0.003	0.367***	−0.048	0.414***	−0.113***	0.476***	1											
ROA	−0.088**	0.503***	0.336***	0.163***	−0.161***	0.038	0.212***	−0.166***	0.213***	0.166***	0.059	0.109**	1										
SALES_G	0.010	−0.004	0.010	−0.034	−0.046	0.040	0.002	0.009	0.064	−0.072*	−0.010	0.063	−0.026	1									
MTB	0.191***	0.279***	0.421***	0.453***	−0.107**	0.051	−0.028	−0.051	0.054	0.142***	−0.055	−0.300***	0.317***	0.061	1								
CFO	0.028	0.517***	0.256***	0.142***	−0.148***	0.053	0.196***	−0.175***	0.178***	0.140***	0.094**	0.100**	0.813***	−0.105**	0.293***	1							
LEV	−0.162***	−0.126***	−0.239***	−0.301***	0.146***	−0.121***	0.154***	0.009	0.282***	−0.158***	0.077*	0.592***	−0.202***	0.206***	−0.241***	−0.209***	1						
LOSS	0.169***	−0.278***	−0.220***	−0.066*	−0.108**	0.011	−0.106**	0.038	−0.127***	−0.160***	−0.060	−0.097**	−0.539***	−0.028	−0.010	−0.355***	0.136***	1					
COMPLEX	−0.130***	0.149***	0.046	0.146***	−0.036	−0.081*	0.042	−0.183***	0.271***	0.266***	0.039	0.282***	−0.034	0.029	−0.161***	−0.050	0.151***	−0.090**	1				
CAPEX	0.176***	0.056	0.030	0.080*	−0.024	−0.019	0.025	−0.090**	0.133***	0.081*	0.113***	0.092**	0.148***	0.005	0.119***	0.190***	0.171***	−0.068*	−0.002	1			
IND	0.106**	−0.124***	−0.092**	−0.106**	0.001	0.040	−0.102**	0.064	−0.313***	−0.198***	−0.136***	−0.374***	−0.182***	−0.013	0.035	−0.125***	−0.162***	0.138***	−0.213***	−0.098**	1		
lnACMeet	0.071*	−0.053	0.018	0.081*	0.013	−0.017	−0.029	0.006	−0.011	−0.083*	0.207***	0.058	−0.024	−0.025	−0.014	0.006	−0.090**	0.011	0.035	−0.057	−0.061	1	
lnAGE	0.061	0.007	0.100**	0.111***	−0.043	0.110***	−0.022	−0.107**	−0.184***	0.130***	0.020	−0.287***	0.174***	−0.166***	0.025	0.190***	−0.426***	−0.186***	0.016	−0.040	0.067*	0.093**	1

N:899 (* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$)
EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-matched model; *REM_CFO:* The magnitude of real activity-based earnings management based on Roychowdhury's (2006) sales manipulation model; *REM_Prod:* The magnitude of real activity-based earnings management based on Roychowdhury's (2006) production cost manipulation model; *REM_Exp:* The magnitude of real activity-based earnings management based on Roychowdhury's (2006) discretionary expense manipulation model; *Small_Profits:* Small positive profits*; PC:* Political connectedness*; InstOwn:* Strategic institutional ownership*; IAF_Out:* Internal audit outsourcing*; AUDIT4:* Audit quality*; FamOwn:* Family ownership*; GovOwn:* Government ownership*; FSIZE:* Firm size; *ROA:* Return on assets*; SALES_G:* Sales growth*; MTB:* Market-to-book ratio; *CFO:* Operating cash flow ratio; *LEV:* Leverage; *LOSS:* Negative income*; COMPLEX:* Firm complexity; *CAPEX:* Capital expenditure*; IND:* Board independence*; lnACMeet:* Log of audit committee meetings; *lnAGE:* Log of firm age (For additional details refer to Appendix A).

5.4 Summary

This chapter outlined the process followed to obtain the final sample used to test the study hypotheses. It presented descriptive statistics and discussed the results of univariate and bivariate analytical tests performed on the study variables. Finally, the chapter outlined the statistical analysis performed on correlational coefficients in order to identify the directionality and strength of the relationships between variables. The differences identified between some of the results of the bivariate analysis of earnings management measures used in this study indicate that it is necessary to conduct a multivariate analysis on the study variables in order to control for potential factors that may have an impact on the relationships between dependent variables.

In Chapter Six, the results of the multivariate analysis will be provided. OLS regression results will be discussed in order to determine the impact of the study test variables on the different proxies of earnings management.

Chapter Six

Multivariate Analysis – Main Results

6.1 Introduction

Chapter Five presented and discussed the descriptive statistics and the results of univariate and bivariate analysis of the dependent, independent, and control variables of the study. This chapter presents and discusses the multivariate analysis performed to investigate the study hypotheses. It begins with an full presentation of the results of the regression analysis on the main explanatory variables: financial reporting quality as proxied by the absolute values of discretionary accruals and real activity-based earnings management measures, and the reporting of small positive profits. The chapter then offers a comprehensive discussion of the results, including a comparison of the findings. It concludes with a summary.

6.2 Multiple Regression Results

This section reports the results of the multiple regression analysis used to examine the impact of political connectedness, strategic institutional ownership, internal audit sourcing arrangements, and audit quality on financial reporting quality, as proxied by accrual-based earnings management, real activity-based earnings management, and reporting small positive profits. It also presents and discusses the regression results of the interaction effects between political connectedness and strategic institutional ownership, political connectedness and internal audit sourcing arrangements, and political connectedness and audit quality on the quality of financial reports.

6.2.1 Accrual-Based Earnings Management

Table 6.1 presents the results of multiple regressions examining the relationships between political connectedness (*PC*), strategic institutional ownership (*InstOwn*), internal audit outsourcing (*IAF_Out*), audit quality (*AUDIT4*), and accrual-based earnings management measured by the absolute value of discretionary accruals (*EM_Kothari*). Table 6.1 also presents multiple regressions examining the impact of interactions between political connectedness and strategic institutional ownership (*PC*InstOwn*), political connectedness and internal audit outsourcing (*PC*IAF_Out*), and political connectedness and audit quality (*PC*AUDIT4*) on accrual-based earnings management (*EM_Kothari*).

Column 1 of Table 6.1 shows the relationships between the study's control variables and accrual-based earnings management (*EM_Kothari*). First, family ownership (*FamOwn*) is shown to have a significant negative relationship with *EM_Kothari* at the 1% level as indicated by the coefficient (β = −0.023, t-stat = −3.688). This finding is in line with prior studies suggesting that family-owned firms are associated with lower levels of accrual-based earnings management (e.g., Chaney et al., 2011; Wang, 2006). Next, Column 1 shows that firm profitability (*ROA*) was significantly and negatively related to *EM_Kothari* (β = −0.075, t-stat = –1.938) suggesting that firms with higher profitability have a lower tendency to manipulate their financial performance, which is consistent with findings of Habbash (2019) and Alzoubi, (2016). Also in line with prior studies (e.g., Gul et al., 2009; Kim et al., 2019; Mohammad & Wasiuzzaman, 2019), Column 1 shows a significant positive relationship between *EM_Kothari* and the ratio of market-to-book value (*MTB*) as indicated by the coefficient (β = 0.003, t-stat = 2.525). This finding suggests that firms with higher growth opportunities are motivated to practise earnings management in order to avoid the disappointment of lower earnings (Alzoubi, 2015; Jelinek, 2007; Lee et al., 2006; Skinner & Sloan, 2002).

Additionally, and also consistent with prior research (e.g., Alzoubi, 2016; Francis & Wang, 2008), Column 1 presents a negative and significant coefficient (β = –0.018, t-stat = –1.778) indicating a negative relationship between the level of leverage (*LEV*) and *EM_Kothari*. This implies that firms with a more highly leveraged capital structure tend to report higher-quality earnings as a result of closer monitoring (Jelinek, 2007). In terms of complexity (*COMPLEX*), Column 1 shows a negative and significant coefficient (β = −0.006, t-stat = −2.083) signifying a negative relationship with *EM_Kothari* at the 5% level, which suggests that more complex firms avoided using accrual-based earnings management. This finding is generally in line with the findings reported by Jiraporn et al. (2008). Also, consistent with the literature (e.g., Kedia & Phillipon, 2009; McNichols & Stubben, 2008), Column 1 reports a significant and positive coefficient (β = 0.096, t-stat = 3.731) at the 1% level of significance for capital expenditure (*CAPEX*). This result suggests that firms with high levels of capital investments tended to manipulate their reported earnings using discretionary accruals. Finally, another significant positive coefficient (β = 0.004, t-stat = 2.029) shows that there was a significant, positive relationship between *EM_Kothari* and firm age

(*lnAGE*) at the 5% significance level, which is consistent with extant studies (e.g., Sirait & Siregar, 2014). This result indicates that mature firms tend to practise earnings management using accrual-based manipulative techniques.

Next, Column 2 to Column 5 in Table 6.1 report the results of the relationships between financial reporting quality as proxied by accrual-based earnings management (*EM_Kothari*) and the main explanatory variables of this study (political connectedness, strategic institutional ownership, internal audit sourcing arrangements, and audit quality). Specifically, Column 2 documents a statistically significant negative relationship at the 5% level between political connectedness (*PC*) and the magnitude of discretionary accruals (*EM_Kothari*) as indicated by the coefficient (β = –0.034, t-stat = –2.428). In line with prior studies (Batta et al., 2014; Boubakri et al., 2012; Guedhami et al., 2014; Johl et al., 2013), this result suggests that politically connected board members are associated with reporting lower levels of discretionary accruals by the firms on whose boards they served. Column 3 also presents a statistically significant and negative relationship, at the 10% level, between strategic institutional ownership (*InstOwn*) and *EM_Kothari* as signified by the coefficient (β = –0.026, t-stat = –1.804). Consistent with the results reported by Zhong et al. (2017), this result implies that strategic institutional investors had a negative effect on the use of accrual-based earnings management. This is consistent with findings regarding the effect of institutional investors in general, as reported by Velury and Jenkins (2006), Chung et al. (2002), Siregar and Utama (2008), and Alzoubi (2016). Column 4 of Table 6.1 fails to report a significant relationship between outsourcing of the internal audit function (*IAF_Out*) and *EM_Kothari*. Similarly, Column 5 fails to report a significant association between audit quality (*AUDIT4*) and *EM_Kothari*.

Columns 6, 7, and 8 present the results of the interaction effects between political connectedness and strategic institutional investors (*PC*InstOwn*), political connectedness and internal audit outsource (*PC*IAF_Out*), and political connectedness and audit quality (*PC*AUDIT4*). Although both of the interaction underlying variables, i.e., *PC* and *InstOwn* remained statistically significant and maintained the same direction (i.e., negative), the coefficient of *PC*InstOwn* was statistically insignificant, as shown in Column 6, indicating that strategic institutional investors did not mitigate the relationship between political connectedness and accrual-based earnings management. Similarly, Columns 7 and 8 report statistically

insignificant coefficients for the interaction terms *PC*IAF_Out* and *PC*AUDIT4*, while only the underlying variable *PC* remained statistically significant, implying that the significant and negative impact of political connectedness on earnings management was not affected by the outsourcing of the internal audit function nor by the engagement of a high-quality audit firm.

Finally, Column 9 in Table 6.1 reports the results of the regression analysis including all four independent variables of the study, and Column 10 presents the results of the interaction terms when investigated in unison. Columns 9 and 10 show results substantially consistent with those presented in Columns 2 to 8 for the relationships of all variables with the magnitude of discretionary accruals (*EM_Kothari*) both in terms of direction and significance levels.

To sum up, Table 6.1 reports the results of the regressions testing the relationships between the study's dependent variable, financial reporting quality, as proxied by the magnitude of accrual-based earnings management (*EM_Kothari*) and the main explanatory variables, namely, political connectedness (*PC*), strategic institutional ownership (*InstOwn*), sourcing arrangements of internal audit function (*IAF_Out*), and audit quality (*AUDIT4*). Table 6.1 also presents the results of the interaction terms (*PC*InstOwn*), (*PC*IAF_Out*), and (*PC*AUDIT4*) and the results for the study's control variables. The two variables: *PC* and *InstOwn* were shown to have consistent significant, negative relationships with the dependent variable across all regressions, indicating a negative impact on the magnitude of accrual-based earnings management (*EM_Kothari*). However, the variables *IAF_Out* and *AUDIT4* were not statistically significant determinants of the dependent variable (*EM_Kothari*). Table 6.1 shows that the explanatory power of the regression model, as shown by the adjusted R-square, ranges from 0.291 to 0.295, indicating that the models explain 29.1% to 29.5% of the variation in the dependent variable (*EM_Kothari*). Additionally, the reported F-statistics across all columns show that the regression models were significant at the 1% level of significance with values ranging between 8.250 and 10.030. Both industry and year dummy variables were included in order to control for the effects of industry- and time-related variations. Finally, Table 6.1 indicates that the VIF ranges between 2.30 and 2.37, signifying that multi-collinearity did not constitute a major threat to the study analysis (Gujarati & Porter, 2009).

Table 6.1
Results of OLS Regression with Robust Standard Errors – Dependent Variable: The Absolute Value of Discretionary Accruals (*EM_Kothari*).

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
PC		**−0.034**				**−0.033**	**−0.039**	**−0.032**	**−0.034**	**−0.038**
		−2.428**				***−1.749****	***−2.597*****	***−1.846****	***−2.385*****	***−1.742****
InstOwn			**−0.026**			**−0.025**			**−0.026**	**−0.025**
			−1.804*			***−1.727****			***−1.800****	***−1.671****
IAF_Out				0.001			−0.001		0.000	−0.001
				0.216			*−0.355*		*0.004*	*−0.315*
AUDIT4					0.001			0.000	0.000	0.000
					0.191			*0.092*	*−0.052*	*−0.064*
*PC*InstOwn*						−0.009				−0.002
						−0.048				*−0.012*
*PC*IAF_Out*							0.037			0.033
							1.099			*0.961*
*PC*AUDIT4*								−0.004		−0.002
								−0.170		*−0.060*
FamOwn	**−0.023**	**−0.026**	**−0.024**	**−0.023**	**−0.023**	**−0.028**	**−0.026**	**−0.027**	**−0.028**	**−0.028**
	−3.688**	***−4.030*****	***−3.837*****	***−3.627*****	***−3.641*****	***−4.124*****	***−3.968*****	***−3.956*****	***−4.074*****	***−3.979*****
GovOwn	0.010	0.010	0.011	0.011	0.010	0.010	0.008	0.010	0.010	0.009
	1.132	*1.038*	*1.152*	*1.156*	*1.126*	*1.053*	*0.896*	*1.042*	*1.062*	*0.934*
FSIZE	**−0.002**	−0.002	−0.002	**−0.002**	**−0.002**	−0.001	−0.002	−0.002	−0.001	−0.001
	−1.649*	*−1.397*	*−1.273*	***−1.653****	***−1.672****	*−1.022*	*−1.301*	*−1.397*	*−1.003*	*−0.937*

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
ROA	**−0.075**	**−0.075**	**−0.073**	**−0.074**	**−0.075**	**−0.074**	**−0.077**	**−0.075**	**−0.074**	**−0.075**
	−1.938*	***−1.966*****	***−1.909****	***−1.924****	***−1.932****	***−1.931****	***−2.004*****	***−1.954****	***−1.923****	***−1.952****
SALES_G	0.003	0.004	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004
	1.181	*1.306*	*1.190*	*1.181*	*1.184*	*1.307*	*1.326*	*1.299*	*1.314*	*1.322*
MTB	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**0.004**
	2.525**	***2.619*****	***2.597*****	***2.497*****	***2.471*****	***2.690*****	***2.627*****	***2.576*****	***2.628*****	***2.650*****
CFO	0.060	**0.061**	**0.062**	0.061	0.060	**0.062**	**0.062**	**0.061**	**0.062**	**0.063**
	1.619	***1.647****	***1.651****	*1.619*	*1.619*	***1.677****	***1.662****	***1.647****	***1.677****	***1.692****
LEV	**−0.018**	**−0.023**	**−0.018**	**−0.018**	**−0.018**	**−0.023**	**−0.022**	**−0.023**	**−0.023**	**−0.022**
	−1.778*	***−2.187*****	***−1.766****	***−1.770****	***−1.773****	***−2.148*****	***−2.099*****	***−2.171*****	***−2.160*****	***−2.051*****
LOSS	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
	1.246	*1.274*	*1.220*	*1.246*	*1.247*	*1.241*	*1.209*	*1.271*	*1.225*	*1.178*
COMPLEX	**−0.006**	**−0.006**	**−0.006**	**−0.006**	**−0.006**	**−0.006**	**−0.006**	**−0.006**	**−0.006**	**−0.006**
	−2.083**	***−2.060*****	***−2.114*****	***−2.029*****	***−2.043*****	***−2.091*****	***−2.148*****	***−1.999*****	***−1.988*****	***−2.072*****
CAPEX	**0.096**	**0.097**	**0.097**	**0.097**	**0.096**	**0.098**	**0.097**	**0.098**	**0.098**	**0.097**
	3.731**	***3.790*****	***3.759*****	***3.731*****	***3.725*****	***3.819*****	***3.754*****	***3.783*****	***3.810*****	***3.777*****
IND	0.009	0.008	0.009	0.009	0.009	0.008	0.009	0.008	0.008	0.009
	1.069	*1.005*	*1.094*	*1.077*	*1.097*	*1.024*	*1.084*	*0.996*	*1.022*	*1.067*
lnACMeet	−0.004	−0.004	−0.004	−0.004	−0.004	−0.004	−0.004	−0.004	−0.004	−0.004
	−1.315	*−1.408*	*−1.330*	*−1.323*	*−1.320*	*−1.420*	*−1.392*	*−1.407*	*−1.417*	*−1.403*
lnAGE	**0.004**	**0.005**	**0.005**	**0.004**	**0.004**	**0.005**	**0.005**	**0.005**	**0.005**	**0.005**
	2.029**	***2.240*****	***2.238*****	***2.025*****	***2.051*****	***2.414*****	***2.272*****	***2.246*****	***2.432*****	***2.417*****
CONSTANT	**0.079**	**0.079**	**0.077**	**0.079**	**0.079**	**0.076**	**0.078**	**0.079**	**0.076**	**0.076**
	5.131**	***5.117*****	***5.020*****	***5.130*****	***5.122*****	***4.930*****	***5.016*****	***5.101*****	***5.003*****	***4.831*****

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Total observations	899	899	899	899	899	899	899	899	899	899
Adjusted R-square	0.291	0.295	0.292	0.291	0.291	0.295	0.294	0.293	0.294	0.292
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	10.030	9.720	9.730	9.670	9.700	9.210	9.180	9.130	8.870	8.250
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	2.370	2.340	2.350	2.340	2.360	2.350	2.310	2.370	2.300	2.340

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-matched model; *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: Audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details, refer to Appendix A.)
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

6.2.2 Real Activity-Based Earnings Management

6.2.2.1 Sales Manipulation (Absolute Abnormal Cash Flows).

Table 6.2 presents the results of multiple regressions examining the relationships between real activity-based earnings management as proxied by absolute abnormal cash flows (*REM_CFO*) and the study's main explanatory variables, i.e., political connectedness (*PC*), strategic institutional ownership (*InstOwn*), internal audit outsourcing (*IAF_Out*), and audit quality (*AUDIT4*). Table 6.2 also documents the multiple regression analysis examining the interaction effects of political connectedness and strategic institutional ownership (*PC*InstOwn*), political connectedness and internal audit outsourcing (*PC*IAF_Out*), and political connectedness and audit quality (*PC*AUDIT4*) on absolute abnormal cash flows (*REM_CFO*).

Column 1 shows the relationships between the study's control variables and the absolute value of abnormal cash flows (*REM_CFO*). First, family ownership (*FamOwn*) was shown to have a significant and positive relationship with *REM_CFO* at the 1% level as indicated by the coefficient (β = 0.043, t-stat = 4.386). This finding is in line with the literature (e.g., Razzaque et al., 2016) suggesting that family-owned firms tend to manage their earnings through real activity techniques as an alternative to accrual-based earnings management. Next, Column 1 shows that firm profitability (*ROA*) was significantly and positively related to the magnitude of real activity-based earnings management, as indicated by the coefficient (β = 0.085, t-stat = 2.143), which is consistent with findings of Chi et al. (2011), Doukakis (2014), Kim et al. (2010), and Chen (2009). This indicates that firms with higher profitability tend to manage their financial performance using real earnings management techniques. Also, in line with prior studies (e.g., Chi et al., 2011; Doukakis, 2014; Ho et al., 2015; Kuo et al., 2014; Roychowdhury, 2006; Sun & Liu, 2016), Column 1 shows a significant positive relationship between real activity-based earnings management and the ratio of market-to-book value (*MTB*) as indicated by the positive significant coefficient (β = 0.006, t-stat = 4.646). This finding indicates that firms with higher growth opportunities were motivated to engage in earnings management.

Additionally, Column 1 reports a significant and positive coefficient (β = 0.194, t-stat = 4.783) at the 1% level for the relationship between cash flow ratio (*CFO*) and *REM_CFO*, indicating that firms that engage in real activity-based earnings

management report a higher cash flow ratio than their counterparts, which is in line with the findings of Bhuiyan et al. (2020). Additionally, and also consistent with prior research (e.g., Dhole et al., 2016; Ding et al., 2018; Elkalla, 2017), Column 1 documents a significant and negative coefficient (β = –0.034, t-stat = –2.324) at the 5% level, indicating a negative relationship between the use of leverage (*LEV*) in the capital structure and real activity-based earnings management using sales manipulation techniques. This result supports the findings with regards to accrual-based earnings management in suggesting that firms with higher levels of leverage tended to report higher-quality financial reports as a results of closer monitoring (Jelinek, 2007). Next, and consistent with the findings of Choi et al. (2018), Column 1 presents a significant positive coefficient (β = 0.020, t-stat = 5.551) for firm complexity (*COMPLEX*) indicating that complex firms engaged in more real activity-based earnings management than their less-complex counterparts. Also, and in line with the findings of Alhadab & Clacher (2018), Column 1 documents a significant negative relationship, at the 1% level, between the level of capital expenditure (*CAPEX*) and *REM_CFO*, as indicated by the coefficient (β = −0.063, t-stat = −2.618). This suggests that firms with higher levels of capital investment tended to avoid using sales manipulation techniques. Finally, and in line with prior studies (e.g., Alhadab & Clacher, 2018; Dhole et al., 2016) the significant negative coefficient (β = −0.010, t-stat = −3.527) shows that there was a significant negative relationship between firm age (*lnAGE*) and *REM_CFO*. This is an indication that mature firms tended to avoid engaging in real activity-based earnings management.

Next, Column 2 to Column 5 in Table 6.2 document the analysis results of the relationships between real activity-based earnings management using sales manipulation (*REM_CFO*) and the main explanatory variables in this study (i.e., political connectedness *PC*, strategic institutional ownership *InstOwn*, internal audit outsourcing *IAF_Out*, and audit quality *AUDIT4*). Specifically, Column 2 reports a statistically significant negative relationship, at the 1% level of significance, between *PC* and *REM_CFO* as shown by the negative coefficient (β = –0.071, t-stat = –3.987). In line with the literature (e.g., Guedhami et al., 2014; Johl et al., 2013), this result indicates that politically connected firms were less likely to engage in real earnings management. This result is also consistent with the findings of Ding et al. (2018) who report similar results for political affiliation at the country level. Next, and consistent

with the findings of Zhong et al. (2017), Column 3 documents a statistically significant, negative relationship at the 1% level between strategic institutional ownership (*InstOwn*) and *REM_CFO* as signified by the negative coefficient (β = –0.078, t-stat = –3.248). In line with prior literature investigating institutional investors in general (e.g., Alzoubi, 2016; Chung et al., 2002; Liu & Tsai, 2015; Siregar & Utama, 2008), this result implies that strategic institutional ownership negatively affected the use of real activity-based earnings management. Column 4 fails to report a significant relationship between outsourcing of the internal audit function (*IAF_Out*) and *REM_CFO*. Finally, Column 5 indicates that there was a positive and statistically significant relationship between the Big 4 audit firms (*AUDIT4*) and *REM_CFO* as shown by the positive coefficient (β = 0.017, t-stat = 4.397). This implies that the clients of high-quality audit firms were more likely to rely on real activity-based earnings management than accrual-based earnings management, which is consistent with the findings of Chi et al. (2011) and Alhadab and Clacher (2018).

Columns 6, 7, and 8 document the analysis results on the interaction terms *PC*InstOwn*, *PC*IAF_Out*, and *PC*AUDIT4*. Columns 6 fails to report statistical significance for the interaction term *PC*InstOwn*, while the underlying variables (*PC* and *InstOwn*) remained statistically significant, indicating that strategic institutional ownership did not mitigate the relationship between political connectedness and sales manipulation. Similarly, Columns 7 reports a statistically insignificant coefficient for the interaction terms *PC*IAF_Out*, while only the underlying variable *PC* remained significant, implying that the significant and negative impact of political connectedness on earnings management was not affected by the outsourcing of the internal audit function. In terms of the mitigating effect of audit quality, Column 8 also fails to report a statistically significant coefficient of the interaction term *PC*AUDIT4*, while reporting consistent results for the underlying variables (i.e., *PC* and *AUDIT4*), which are reported in Columns 2 and 5. This implies that audit quality did not mitigate the relationship between political connectedness and real activity-based earnings management as measured by the absolute value of abnormal cash flows.

Finally, Column 9 in Table 6.2 presents the results of the regression including all four independent variables of the study and Column 10 documents the results of the interaction terms when investigated in unison. Columns 9 and 10 show results largely consistent with those presented in Columns 2 to 8 for the relationships of all

variables with the magnitude of real earnings management using sales manipulation (*REM_CFO*) in terms of both direction and significance levels.

In summary, Table 6.2 documents the results of the regressions examining the relationships between the dependent variable measure (*REM_CFO*) and the main explanatory variables: political connectedness (*PC*), strategic institutional ownership (*InstOwn*), outsourcing of the internal audit function (*IAF_Out*), and audit quality (*AUDIT4*). Table 6.2 also reports the results of the interaction terms *PC*InstOwn*, *PC*IAF_Out*, and *PC*AUDIT4*, along with the results on the study's control variables. The variables *PC* and *InstOwn* show consistent significant and negative relationships across all regressions, indicating their negative impact on *REM_CFO*, while *IAF_Out* is statistically insignificant as a determinant of *REM_CFO*. The variable *AUDIT4* had a significant and positive relationship across all regressions. Table 6.2 documents that the explanatory power of the regression models ranges from 0.405 to 0.427 indicating that the models explain 40.5% to 42.7% of the variation in the dependent variable (*REM_CFO*). Additionally, the reported F-statistics across all the columns show that the regression models were significant at the 1% level with values ranging between 19.650 and 22.290. Both industry and year-dummy variables were included in order to control for the effects of industry- and time-related variations. Finally, Table 6.2 shows a VIF that ranges between 2.30 and 2.37, signifying that multi-collinearity was not a major threat to the regression analysis (Gujarati & Porter, 2009).

Table 6.2
Results of OLS Regression with Robust Standard Errors – Dependent Variable: The Absolute Value of Abnormal Cash Flows (*REM_CFO*).

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
PC		**−0.071**				**−0.080**	**−0.074**	**−0.066**	**−0.065**	**−0.074**
		−3.987***				***−3.428******	***−3.819******	***−2.967******	***−3.678******	***−2.819******
InstOwn			**−0.078**			**−0.083**			**−0.072**	**−0.076**
			−3.248***			***−3.300******			***−3.082******	***−3.120******
IAF_Out				0.002			0.001		0.001	0.002
				0.691			*0.135*		*0.409*	*0.380*
AUDIT4					**0.017**			**0.016**	**0.015**	**0.015**
					4.397***			***3.788******	***4.030******	***3.578******
*PC*InstOwn*						0.182				0.149
						0.803				*0.648*
*PC*IAF_Out*							0.023			−0.002
							0.531			*−0.053*
*PC*AUDIT4*								0.001		0.004
								0.017		*0.135*
FamOwn	**0.043**	**0.035**	**0.039**	**0.043**	**0.037**	**0.031**	**0.035**	**0.030**	**0.027**	**0.026**
	4.386***	***3.485******	***3.982******	***4.441******	***3.724******	***3.060******	***3.507******	***2.928******	***2.645******	***2.605******
GovOwn	−0.008	−0.010	−0.008	−0.007	−0.012	−0.010	−0.010	−0.014	−0.012	−0.013
	−0.727	*−0.874*	*−0.692*	*−0.601*	*−1.041*	*−0.926*	*−0.850*	*−1.158*	*−1.035*	*−1.073*
FSIZE	0.002	**0.003**	**0.004**	0.002	0.001	**0.004**	**0.003**	0.002	**0.003**	**0.003**
	1.315	***1.679****	***2.029*****	*1.286*	*0.774*	***2.414*****	***1.687****	*1.130*	***1.785****	***1.791****

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
ROA	**0.085**	**0.084**	**0.089**	**0.088**	**0.076**	**0.086**	**0.085**	**0.075**	**0.081**	**0.080**
	2.143**	***2.105*****	***2.238*****	***2.204*****	***1.924****	***2.149*****	***2.108*****	***1.901****	***2.038*****	***1.992*****
SALES_G	0.002	0.003	0.002	0.002	0.003	0.003	0.003	0.003	0.003	0.003
	0.610	*0.800*	*0.654*	*0.605*	*0.704*	*0.866*	*0.803*	*0.872*	*0.912*	*0.921*
MTB	**0.006**	**0.006**	**0.006**	**0.006**	**0.005**	**0.006**	**0.006**	**0.006**	**0.006**	**0.006**
	4.646**	***4.755*****	***4.868*****	***4.583*****	***4.102*****	***4.967*****	***4.716*****	***4.234*****	***4.399*****	***4.373*****
CFO	**0.194**	**0.195**	**0.198**	**0.195**	**0.191**	**0.199**	**0.196**	**0.192**	**0.196**	**0.196**
	4.783**	***4.857*****	***4.847*****	***4.793*****	***4.737*****	***4.899*****	***4.859*****	***4.809*****	***4.872*****	***4.841*****
LEV	**−0.034**	**−0.043**	**−0.034**	**−0.033**	**−0.040**	**−0.044**	**−0.042**	**−0.048**	**−0.048**	**−0.048**
	−2.324**	***−2.918*****	***−2.315*****	***−2.263*****	***−2.745*****	***−2.943*****	***−2.813*****	***−3.258*****	***−3.171*****	***−3.182*****
LOSS	−0.007	−0.006	−0.007	−0.006	−0.006	−0.007	−0.006	−0.006	−0.006	−0.006
	−1.403	*−1.359*	*−1.488*	*−1.334*	*−1.328*	*−1.472*	*−1.347*	*−1.291*	*−1.331*	*−1.344*
COMPLEX	**0.020**	**0.020**	**0.020**	**0.020**	**0.017**	**0.020**	**0.020**	**0.017**	**0.017**	**0.017**
	5.551**	***5.674*****	***5.523*****	***5.677*****	***4.694*****	***5.692*****	***5.637*****	***4.853*****	***4.935*****	***4.945*****
CAPEX	**−0.063**	**−0.061**	**−0.063**	**−0.063**	**−0.064**	**−0.060**	**−0.061**	**−0.062**	**−0.061**	**−0.061**
	−2.618**	***−2.482*****	***−2.618*****	***−2.599*****	***−2.619*****	***−2.478*****	***−2.489*****	***−2.495*****	***−2.479*****	***−2.467*****
IND	−0.001	−0.002	0.000	0.000	0.005	−0.001	−0.001	0.004	0.004	0.004
	−0.063	*−0.161*	*−0.022*	*−0.043*	*0.523*	*−0.147*	*−0.105*	*0.402*	*0.432*	*0.405*
lnACMeet	−0.003	−0.004	−0.003	−0.003	−0.004	−0.004	−0.004	−0.004	−0.004	−0.004
	−0.820	*−0.953*	*−0.854*	*−0.852*	*−0.910*	*−1.006*	*−0.958*	*−1.027*	*−1.071*	*−1.085*
lnAGE	**−0.010**	**−0.009**	**−0.009**	**−0.010**	**−0.009**	**−0.008**	**−0.009**	**−0.008**	**−0.007**	**−0.007**
	−3.527**	***−3.143*****	***−3.022*****	***−3.452*****	***−3.126*****	***−2.727*****	***−3.074*****	***−2.793*****	***−2.338*****	***−2.385*****
CONSTANT	**0.083**	**0.082**	**0.075**	**0.082**	**0.076**	**0.076**	**0.081**	**0.076**	**0.069**	**0.070**
	4.002**	***3.946*****	***3.684*****	***3.935*****	***3.730*****	***3.669*****	***3.858*****	***3.684*****	***3.367*****	***3.379*****

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Total observations	899	899	899	899	899	899	899	899	899	899
Adjusted R-square	0.405	0.412	0.411	0.405	0.417	0.418	0.411	0.422	0.427	0.426
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	22.160	21.330	22.290	21.530	21.340	22.100	20.110	20.060	20.050	19.650
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	2.370	2.340	2.350	2.340	2.360	2.350	2.310	2.370	2.300	2.340

REM_CFO: The Absolute Value of Abnormal Cash Flows based on Roychowdhury's (2006) model; *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details, refer to Appendix A.)
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

6.2.2.2 Production Cost Manipulation (Absolute Abnormal Production Costs).

Table 6.3 reports the results of multiple regressions testing the relationships between real activity-based earnings management as proxied by absolute abnormal production costs (*REM_Prod*) and the main explanatory variables used in this research. Specifically, Table 6.3 reports the results of the regression analysis between absolute abnormal production costs and political connectedness (*PC*), strategic institutional ownership (*InstOwn*), internal audit sourcing arrangements (*IAF_Out*), and audit quality (*AUDIT4*). Additionally, Table 6.3 documents multiple regressions that tested the interaction effects of political connectedness and strategic institutional ownership (*PC*InstOwn*), political connectedness and internal audit outsourcing (*PC*IAF_Out*), and political connectedness and audit quality (*PC*AUDIT4*) on the absolute value of abnormal production costs (*REM_Prod*).

Column 1 presents the results of the regression analysis between the control variables included in this analysis and the variable (*REM_Prod*). Firstly, family ownership (*FamOwn*) was found to be a significant positive determinant of *REM_Prod* at the 1% level, as indicated by the coefficient (β = 0.584, t-stat = 7.501), which is consistent with prior studies (e.g., Eng et al. 2019) that found that family ownership tends to increase earnings management through real activity techniques as an alternative to accrual-based earnings management. Secondly, Column 1 presents the coefficient (β = −0.532, t-stat = −6.267) indicating a significant and negative relationship between government ownership (*GovOwn*) and production cost manipulation. After that, Column 1 of Table 6.3 documents a significant and positive relationship between firm profitability (*ROA*) and the magnitude of abnormal production costs, which is consistent with findings of Zang (2012) and Bhuiyan et al. (2020). This indicates that firms with higher profitability tended to manage their financial performance by manipulating production costs. Additionally, Table 6.3, Column 1 reports a significant positive relationship between absolute abnormal production costs and the ratio of market-to-book value (*MTB*) as indicated by the significant positive coefficient (β = 0.089, t-stat = 7.341). This is consistent with the findings of Dhole et al. (2016), Bhuiyan et al. (2020), and Sun and Liu (2016), and suggests that higher growth opportunities were likely to encourage management to engage in earnings management.

Next, and in line with the findings of Dhole et al. (2016), Braam et al. (2015), and Huang and Roychowdhury (2020), Column 1 of Table 6.3 shows a significant and negative coefficient (β = −0.389, t-stat = −3.933), signifying a negative relationship between the use of debt in the firm's capital structure (*LEV*) and production cost manipulation. This result supports the findings regarding accrual-based earnings management and sales manipulation measures in suggesting that due to increased scrutiny (Jelinek, 2007), firms with higher levels of debt tended to avoid earnings management. Next, Column 1 shows the moderately significant and negative coefficient (β = −0.075, t-stat = −1.812) for the relationship between reporting a negative income (*LOSS*) and *REM_Prod*, indicating that firms that engage in production cost manipulation tended to report positive net income, which is in line with the findings of Ding et al. (2018). Furthermore, in line with Choi et al. (2016), Column 1 documents a significant positive relationship at the 1% level between firm complexity (*COMPLEX*) and the level of abnormal production costs, as indicated by the coefficient (β = 0.087, t-stat = 3.253). This suggests that firm complexity was associated with engagement in real activity-based earnings management. Next, Column 1 presents a significant and negative relationship between capital expenditure (*CAPEX*) and the magnitude of abnormal production costs (*REM_Prod*), as shown by the coefficient (β = –0.345, t-stat = –2.318). This indicates that firms with higher levels of capital expenditure tended not to engage in production costs manipulation. Finally, in line with prior studies (e.g., Dhole et al., 2016; Ding et al., 2018) the coefficient (β = –0.069, t-stat = –3.264) indicated a significant and negative relationship between firm age (*lnAGE*) and *REM_Prod* at the 1% level. This suggests that mature firms tended not to engage in earnings management using real activity-based earnings management.

Next, Column 2 to Column 5 in Table 6.3 present the regression results for the relationships between real activity-based earnings management using production costs manipulation (*REM_ Prod*) and the main explanatory variables of this study (political connectedness, strategic institutional ownership, internal audit sourcing arrangements, and audit quality). Specifically, Column 2 documents a statistically significant and negative relationship between *PC* and *REM_Prod* at the 1% level of, as indicated by the negative coefficient (β = –0.713, t-stat = –4.549). In line with prior studies (e.g., Ding et al., 2018; Johl et al., 2013), this result confirms that politically connected directors in the boardrooms restrained the use of real activity-based earnings

management to manipulate reported earnings. This supports the findings of Ding et al. (2018) for political affiliation at the country level. Next, Column 3 documents a statistically significant and negative coefficient (β = –0.441, t–stat = –3.074), at the 1% level, between *InstOwn* and *REM_Prod*, suggesting an inverse relationship. Consistent with prior studies (Sakaki et al., 2017; Zang, 2012; Zhong et al., 2017), this result signifies that the presence of strategic institutional investors had a negative impact on the use of real activity-based earnings management. Additionally, Column 4 documents that a statistically significant and positive relationship exists between *REM_Prod* and *IAF_Out* as indicated by the positive coefficient (β = 0.061, t-stat = 2.078). This result indicates that an outsourced internal audit function positively affected the magnitude of abnormal production costs. This finding is consistent with the findings of Johl et al. (2013), Burton et al. (2012), and Coram et al. (2008). Finally, and consistent with the findings of Inaam et al. (2012) and Cohen and Zarowin (2010), Column 5 presents the coefficient (β = 0.094, t-stat = 3.310) indicating a statistically significant and positive relationship between *AUDIT4* and *REM_Prod*. This finding suggests that firms that engage with a high-quality auditor were more likely to use real activity-based earnings management techniques.

Columns 6, 7, and 8 document the analysis results on the interaction effects *PC*InstOwn*, *PC*IAF_Out*, and *PC*AUDIT4*. As indicated in Columns 6, the coefficient of the interaction term *PC*InstOwn* was significant and positive, suggesting that the presence of strategic institutional investors mitigated the relationship between political connectedness and the level of abnormal production costs. However, the interaction between underlying variables, i.e., *PC* and *InstOwn* remained statistically significant and negative, as indicated in Column 6, signifying that political connectedness and strategic institutional investors were more effective in constraining managerial use of real activity-based earnings management when acting in isolation. The economic significance of the interaction effect indicates that the presence of strategic institutional investors holding 8.9% of a firm's shares (i.e., the 75th percentile) in politically connected firms[12] lowered the impact of political connectedness on production costs manipulation by approximately 35.6%. That is, moving from the 25th percentile of strategic institutional shareholdings in politically

[12] As reported in Table 5.4.

connected firms[13] (i.e., 0%) to the 75th percentile lowered the effect of political connectedness from –0.098 to –0.063. The impact of political connectedness at the 25th percentile of strategic institutional investors was calculated as follows: (–0.883 + 3.535(0%)) multiplied by the difference between the 25th percentile and the 75th percentile of the variable *PC* (i.e., 0.111). Similarly, the impact of political connectedness at the 25th percentile of strategic institutional investors was calculated as follows: (–0.883 + 3.535(8.9%)) multiplied by the difference between the 25th percentile and the 75th percentile of the variable *PC* (i.e., 0.111).

Columns 7 reports a statistically insignificant coefficient for the interaction term *PC*IAF_Out*, while the coefficient of the underlying variable *PC* (β = –0.756, t-stat = –4.488) signifies a statistically significant and negative relationship, implying that the significant and negative effect of political connectedness on earnings management was not affected by the outsourcing of the internal audit function. Similarly, Column 8 also failed to report a statistically significant coefficient of the interaction term *PC*AUDIT4*, while reporting results for the underlying variables (i.e., *PC* and *AUDIT4*) that are consistent with those reported in Columns 2 and 5. This indicates that audit quality had no mitigating affect on the association between political connectedness and the magnitude of production costs manipulation.

Finally, Column 9 of Table 6.3 reports the results of the regression including all four independent variables investigated in the research and Column 10 presents the regression results of the interaction terms when investigated in unison. Both Columns 9 and 10 show results generally consistent with those presented in Columns 2 to 8 for the relationships of all variables with the magnitude of real earnings management using production costs manipulation (*REM_Prod*) in terms of both direction and levels of significance.

To sum up, Table 6.3 reports the results of multiple regressions testing the relationships between real activity-based earnings management as proxied by absolute abnormal production costs (*REM_Prod*) and the main explanatory variables in this thesis (political connectedness (*PC*), strategic institutional ownership (*InstOwn*), outsourcing of the internal audit function (*IAF_Out*), and audit quality (*AUDIT4*)). The

[13] As reported in Table 5.4.

table also reports the results of the interaction terms *PC*InstOwn*, *PC*IAF_Out*, and *PC*AUDIT4*, along with the results for the control variables included in the analysis. The two variables: *PC* and *InstOwn* continued to hold statistically significant and negative relationship across all regressions, implying a consistent negative influence on the use of real activity-based earnings management, while the variables *AUDIT4* and *IAF_Out* both showed a statistically significant and positive relationship with the dependent variable *REM_Prod*. In terms of interaction effects, *PC*InstOwn* had a significant and positive coefficient, implying a significant mitigating affect of the variable *InstOwn* on the relationship between the variables *PC* and *REM_Prod*, however, the results of the interaction terms *PC*IAF_Out*, and *PC*AUDIT4* lacked statistical significance in determining the variation in the variable *REM_Prod*.

Table 6.3 shows that the explanatory power of the regression models ranged from 0.405 to 0.424, implying that the models explain 40.5% to 42.4% of the variation in the dependent variable (*REM_ Prod*). Table 6.3 also reports F-statistics that were significant at the 1% level across all the columns with values ranging between 17.310 and 20.610. Both industry and year dummy variables were included in order to control for the effects of industry- and time-related variations. Finally, Table 6.3 presents a VIF that ranges between 2.30 and 2.37, indicating that multi-collinearity was not a major issue in the analysis (Gujarati & Porter, 2009).

Table 6.3
Results of OLS Regression with Robust Standard Errors – Dependent Variable: The Absolute Value of Abnormal Production Costs (*REM_Prod*).

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
PC		**−0.713**				**−0.883**	**−0.756**	**−0.835**	**−0.659**	**−1.000**
		−4.549***				***−4.242******	***−4.488******	***−3.733******	***−4.245******	***−3.723******
InstOwn			**−0.441**			**−0.523**			**−0.405**	**−0.479**
			−3.074***			***−3.500******			***−2.880******	***−3.299******
IAF_Out				**0.061**			0.033		**0.050**	0.038
				2.078**			*1.026*		***1.724****	*1.177*
AUDIT4					**0.094**			**0.074**	**0.082**	**0.069**
					3.310***			***2.318*****	***2.942******	***2.202*****
*PC*InstOwn*						**3.535**				**3.168**
						1.926*				***1.732****
*PC*IAF_Out*							0.504			0.379
							1.528			*1.163*
*PC*AUDIT4*								0.319		0.285
								1.143		*1.041*
FamOwn	**0.584**	**0.505**	**0.562**	**0.599**	**0.549**	**0.477**	**0.522**	**0.483**	**0.473**	**0.474**
	7.501***	***6.307******	***7.237******	***7.770******	***7.092******	***5.977******	***6.610******	***6.069******	***6.015******	***6.038******
GovOwn	**−0.532**	**−0.549**	**−0.529**	**−0.500**	**−0.554**	**−0.565**	**−0.538**	**−0.569**	**−0.537**	**−0.568**
	−6.267***	***−6.335******	***−6.300******	***−5.753******	***−6.365******	***−6.616******	***−5.913******	***−6.463******	***−5.994******	***−6.224******
FSIZE	0.010	0.017	0.018	0.009	0.004	**0.025**	0.017	0.012	0.017	0.019
	0.795	*1.310*	*1.363*	*0.695*	*0.341*	***1.927****	*1.299*	*0.875*	*1.288*	*1.416*

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
ROA	**1.378**	**1.366**	**1.401**	**1.436**	**1.325**	**1.350**	**1.395**	**1.321**	**1.390**	**1.344**
	3.890***	***3.877******	***3.954******	***4.091******	***3.745******	***3.814******	***3.986******	***3.751******	***3.979******	***3.820******
SALES_G	−0.003	0.004	−0.002	−0.003	−0.001	0.006	0.004	0.006	0.005	0.008
	−0.094	*0.153*	*−0.072*	*−0.108*	*−0.021*	*0.222*	*0.167*	*0.240*	*0.213*	*0.301*
MTB	**0.089**	**0.092**	**0.091**	**0.088**	**0.086**	**0.093**	**0.092**	**0.089**	**0.089**	**0.090**
	7.341***	***7.579******	***7.444******	***7.297******	***6.939******	***7.718******	***7.647******	***7.156******	***7.267******	***7.341******
CFO	−0.352	−0.340	−0.332	−0.325	−0.371	−0.327	−0.307	−0.350	−0.316	−0.307
	−1.095	*−1.059*	*−1.031*	*−1.016*	*−1.153*	*−1.016*	*−0.958*	*−1.093*	*−0.989*	*−0.958*
LEV	**−0.389**	**−0.485**	**−0.389**	**−0.372**	**−0.422**	**−0.498**	**−0.456**	**−0.512**	**−0.494**	**−0.496**
	−3.933***	***−4.757******	***−3.951******	***−3.707******	***−4.299******	***−4.865******	***−4.413******	***−5.052******	***−4.812******	***−4.817******
LOSS	**−0.075**	**−0.072**	**−0.076**	**−0.066**	**−0.072**	**−0.077**	**−0.068**	**−0.069**	−0.066	**−0.069**
	−1.812*	***−1.772****	***−1.859****	***−1.651****	***−1.759****	***−1.876****	***−1.708****	***−1.700****	*−1.641*	***−1.716****
COMPLEX	**0.087**	**0.089**	**0.086**	**0.095**	**0.070**	**0.091**	**0.091**	**0.075**	**0.080**	**0.080**
	3.253***	***3.339******	***3.219******	***3.643******	***2.586******	***3.418******	***3.502******	***2.758******	***3.008******	***3.019******
CAPEX	**−0.345**	**−0.323**	**−0.342**	**−0.337**	**−0.351**	**−0.317**	**−0.328**	**−0.332**	**−0.321**	**−0.327**
	−2.318**	***−2.122*****	***−2.267*****	***−2.257*****	***−2.340*****	***−2.059*****	***−2.137*****	***−2.171*****	***−2.062*****	***−2.103*****
IND	−0.077	−0.086	−0.074	−0.072	−0.043	−0.089	−0.073	−0.051	−0.050	−0.045
	−0.753	*−0.854*	*−0.730*	*−0.705*	*−0.427*	*−0.881*	*−0.722*	*−0.507*	*−0.497*	*−0.444*
lnACMeet	0.004	−0.002	0.004	0.001	0.002	−0.004	−0.004	−0.003	−0.006	−0.007
	0.125	*−0.045*	*0.107*	*0.017*	*0.065*	*−0.107*	*−0.113*	*−0.093*	*−0.186*	*−0.217*
lnAGE	**−0.069**	**−0.060**	**−0.062**	**−0.067**	**−0.063**	**−0.057**	**−0.057**	**−0.054**	**−0.046**	**−0.049**
	−3.264***	***−2.759******	***−2.933******	***−3.106******	***−2.957******	***−2.598******	***−2.581*****	***−2.489*****	***−2.110*****	***−2.198*****
CONSTANT	0.145	0.137	0.104	0.121	0.108	0.117	0.106	0.100	0.047	0.056
	1.001	*0.931*	*0.720*	*0.818*	*0.759*	*0.786*	*0.711*	*0.694*	*0.319*	*0.374*

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Total observations	899	899	899	899	899	899	899	899	899	899
Adjusted R-square	0.405	0.416	0.408	0.407	0.410	0.420	0.417	0.421	0.424	0.424
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	20.610	19.980	20.020	20.130	20.240	18.900	18.720	19.270	18.720	17.310
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	2.370	2.340	2.350	2.340	2.360	2.350	2.310	2.370	2.300	2.340

REM_Prod: The Absolute Value of Abnormal Production Costs based on Roychowdhury's (2006) model; *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details refer to Appendix A.)
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

6.2.2.3 Discretionary Expense Manipulation (Absolute Abnormal Discretionary Expenses).

Table 6.4 documents the results of the multiple regressions examining the relationships between real activity-based earnings management as proxied by the absolute value of abnormal discretionary expenses (*REM_Exp*) and the main explanatory variables used in this study. Specifically, Table 6.4 reports the results of the regression analysis between absolute abnormal discretionary expenses with political connectedness (*PC*), strategic institutional ownership (*InstOwn*), internal audit sourcing arrangements (*IAF_Out*), and audit quality (*AUDIT4*), along with the control variables included in the analysis. Additionally, Table 6.4 presents the results of the multiple regression analysis used to examine the interaction effects of political connectedness and strategic institutional ownership (*PC*InstOwn*), political connectedness and internal audit outsourcing (*PC*IAF_Out*), and political connectedness and audit quality (*PC*AUDIT4*) on the absolute value of abnormal discretionary expenses (*REM_Exp*).

Column 1 reports the regression analysis results for the control variables included in the analysis and the dependent variable (*REM_Exp*). Family ownership (*FamOwn*) was found to be a statistically significant positive determinant of *REM_Exp* at the 1% level, as implied by the coefficient (β = 0.058, t-stat = 6.923). This finding is in line with studies that find family ownership to be a positive determinant of earnings management through real activity-based techniques (e.g., Razzaque et al., 2016). Next, Column 1 documents a significant and negative coefficient (β = −0.048, t-stat = −5.586), indicating a negative influence of government ownership (*GovOwn)* on discretionary expense manipulation. After that, Column 1 of Table 6.4 presents a statistically significant and positive relationship at the 5% level of significance between firm profitability (*ROA*) and the magnitude of abnormal discretionary expenses. This supports the findings of Zang (2012), Bhuiyan et al. (2020), Alhadab and Clacher (2018), and Sakaki et al. (2017), and implies that more highly profitable firms tended to manage their reported earnings using discretionary expense manipulation. Column 1 also documents statistical significance for the positive coefficient (β = 0.009, t-stat = 6.047), indicating that the relationship between *REM_Exp* and the ratio of market-to-book value (*MTB*) was significant and positive. This is in line with Bhuiyan et al. (2020) and confirms that firms tended to engage in

earnings management using discretionary expense manipulation when higher growth opportunities existed.

Next, Column 1 reports the significant negative coefficient (β = −0.048, t-stat = −4.114) at the 1% level, indicating a significant, negative relationship between the level of debt capital in a firm's capital structure (*LEV*) and *REM_Exp*, which is in line with the findings of Ding et al. (2018), Braam et al. (2015), and Chi et al (2011). This confirms the findings related to the accrual-based earnings management measure (*EM_Kothari*) and the other two real earnings management measures (*REM_CFO* and *REM_Prod*) in suggesting that firms with higher levels of debt tended to avoid earnings management as a result of increased scrutiny (Jelinek, 2007). Following that, Column 1 presents the significant positive coefficient (β = 0.019, t-stat = 6.712) for the relationship between firm complexity (*COMPLEX*) and *REM_Exp*, implying that firms that engaged in discretionary expenses manipulation tended to be more complex firms, which is in line with the findings of Choi et al. (2018). Next, in line with prior studies (e.g., Garcia Osma, 2008; Kang & Kim, 2012; Talbi et al., 2015; Visvanathan, 2008), Column 1 indicates a significant negative relationship at the 1% level between board independence (*IND*) and the use of discretionary expenses manipulation (*REM_Exp*), as indicated by the coefficient (β = −0.028, t-stat = −3.784). This suggests that independent directors in the boardroom tended to deter their firms from engaging in discretionary expense manipulation. Column 1 also shows a statistically significant and positive coefficient for the variable (*lnACMeet*), (β = 0.006, t-stat = 1.942), which indicates that the frequency of audit committee meetings was associated with higher abnormal discretionary expenses. Finally, the statistically significant and negative coefficient (β = −0.006, t-stat = −2.707) implies a negative and significant relationship between firm age (*lnAGE*) and *REM_Exp*, which is in line with prior studies (e.g., Alhadab & Clacher, 2018; Ding et al., 2018). This finding confirms that mature firms tended not to engage in earnings management using real activity-based earnings management.

Next, Column 2 to Column 5 in Table 6.4 document the results of the analysis of relationships between real activity-based earnings management using discretionary expense manipulation (*REM_Exp*) and the main explanatory variables in this study (political connectedness, strategic institutional ownership, internal audit outsourcing, and audit quality). Specifically, Column 2 shows a statistically significant and negative relationship between *PC* and *REM_Exp*, at the 1% level of significance, as indicated

by the coefficient (β = −0.079, t-stat = −4.619). Consistent with prior studies (e.g., Ding et al 2018; Guedhami et al., 2014; Johl et al., 2013), this result indicates that politically connected directors in the boardroom deterred earnings management by constraining discretionary expense manipulation. Next, Column 3 of Table 6.4 documents the analytical results of the relationship between *REM_Exp* and strategic institutional ownership (*InstOwn*), the second main explanatory variable, along with the control variables included in the regression. Column 3 of Table 6.4 presents a statistically significant and negative coefficient (β = −0.041, t-stat = −3.163) at the 1% level between *InstOwn* and *REM_Exp*, indicating a significant and negative relationship. Consistent with prior studies (e.g., Zang, 2012; Zhong et al., 2017), this finding implies that strategic institutional investors constrained the use of real activity-based earnings management. Next, Column 4 in Table 6.4 presents a significant and negative relationship between *REM_Exp* and *IAF_Out* as indicated by the coefficient (β = −0.005, t-stat = −1.904). This finding indicates that firms that use discretionary expenses to manipulate their earnings were less likely to outsource their internal audit function. This finding is line with the findings of Glover et al. (2008), Prawitt et al. (2012), and Al-Rassas and Kamardin (2015). Finally, Column 5 reports a statistically significant and positive coefficient (β = 0.009, t-stat = 2.844), indicating that *AUDIT4* and *REM_Exp* were significantly and positively related, suggesting that the clients of higher-quality audit firms relied on real activity-based earnings management techniques using discretionary expense manipulation. This is consistent with findings of Alhadab (2017), and Cohen and Zarowin (2010).

Next, Columns 6, 7, and 8 of Table 6.4 document the analysis results of the interaction effects *PC*InstOwn*, *PC*IAF_Out*, and *PC*AUDIT4*. First Column 6 in Table 6.4 introduces the regression results of the interaction term *PC* InstOwn*, presenting a significant and positive coefficient (β = 0.439, t-stat = 2.210), at the 10% level, indicating that in the presence of strategic institutional ownership, politically connected firms tended to report higher abnormal discretionary expenses. However, the underlying variables *PC* and *InstOwn* remained statistically significant and negative, implying that political connectedness and strategic institutional investors were more effective in constraining real activity-based earnings management when operating in isolation. The economic significance of the interaction effect indicates that the presence of strategic institutional investors holding 8.9% of a firm's shares

(i.e., at the 75th percentile) in politically connected firms[14] lowered the impact of political connectedness on production costs manipulation by approximately 36.4%. That is, moving from the 25th percentile of strategic institutional shareholdings in politically connected firms (i.e., 0%)[15] to the 75th percentile lowered the effect of political connectedness from −0.011 to −0.007. The impact of political connectedness at the 25th percentile of strategic institutional investors was calculated as follows: (−0.100 + 0.439(0%)) multiplied by the difference between the 25th and the 75th percentiles of the variable *PC* (i.e., 0.111). Similarly, the impact of political connectedness at the 25th percentile of strategic institutional investors was calculated as follows: (−0.100 + 0.439(8.9%)) multiplied by the difference between the 25th and 75th percentiles of the variable *PC* (i.e., 0.111).

Next, Column 7 documents the regression results of the interaction term *PC* IAF_Out* that indicate a statistically insignificant relationship between abnormal discretionary expenses (*REM_Exp*) and the outsourcing of the internal audit function (*IAF_Out*) by firms with politically connected directors. However, the coefficient of the underlying variables, *PC* (β = −0.082, t-stat = −3.593) and *IAF_Out* (β = –0.006, t-stat = –2.250), remained consistent with the results reported in Column 2 and Column 4, documenting statistically significant and negative relationships with *REM_Exp*. This indicates that the sourcing arrangements of internal audit functions did not mitigate the relationship between political connectedness and the manipulation of discretionary expenses. Finally, Column 8 also failed to report a statistically significant coefficient of the interaction term *PC*AUDIT4*, while reporting results for the underlying variables (i.e., *PC* and *AUDIT4*) that were consistent with those reported in Columns 2 and 5. This indicates that audit quality did not mitigate the relationship between political connectedness and manipulation of discretionary expenses. Additionally, the findings show that clients of higher-quality audit firms tended to use discretionary expense manipulation in the absence of political connectedness.

Finally, Column 9 in Table 6.4 documents the results of the regression including all four independent variables of the study, and Column 10 reports the results of the interaction terms when investigated in unison. Both Columns 9 and 10 show results that

[14] As reported in Table 5.4.

[15] As reported in Table 5.4.

are largely consistent with those presented in Columns 2 to 8 for the relationships of all variables with the magnitude of real earnings management using discretionary expense manipulation (*REM_Exp*) in terms of both significance levels and direction.

To conclude, Table 6.4 reports the results of multiple regressions that tested the relationships between real activity-based earnings management, as proxied by the absolute abnormal discretionary expenses (*REM_Exp*), and the main explanatory variables in this study (political connectedness (*PC*), strategic institutional ownership (*InstOwn*), outsourcing of the internal audit function (*IAF_Out*), and audit quality (*AUDIT4*)). Table 6.4 also reports the results of the interaction terms *PC*InstOwn*, *PC*IAF_Out*, and *PC*AUDIT4*, along with the results of the control variables. The two variables *PC* and *InstOwn* continued to be statistically significant and negative determinants of real activity-based earnings management across all regressions. Additionally, the variable *IAF_Out* became a significant negative determinant of the variable *REM_Exp*, indicating that firms that manipulated their earnings using discretionary expenses were less likely to outsource their internal audit function, while the variable *AUDIT4* had a statistically significant and positive relationship with *REM_Exp*, which indicates the tendency to use real earnings management among clients of higher-quality audit firms. The interaction term *PC*InstOwn* had a coefficient that is significant and positive, indicating a positive effect on the variable *REM_Exp*, while the interaction terms *PC*IAF_Out*, and *PC*AUDIT4* had no significant effect on the variation in the dependent variable (*REM_Exp*).

Table 6.4 shows that the explanatory power of the regression models ranged from 0.616 to 0.629, indicating that the models explain 61.6% to 62.9% of the variation in the dependent variable (*REM_Exp*). Additionally, the reported F-statistics across all the columns indicate that the regression models were significant at the 1% level with values ranging from 52.790 to 64.300. Both industry and year-dummy variables were included in order to control for the effects of industry- and time-related variations. Finally, Table 6.4 reports a VIF that ranged between 2.30 and 2.37, confirming that multi-collinearity was not a major threat to the regression analysis (Gujarati & Porter, 2009).

Table 6.4
Results of OLS Regression with Robust Standard Errors – Dependent Variable: The Absolute Value of Abnormal Discretionary Expenses (*REM_Exp*).

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
PC		**−0.079**				**−0.100**	**−0.082**	**−0.086**	**−0.079**	**−0.107**
		−4.619***				***−4.322******	***−4.493******	***−3.593******	***−4.637******	***−3.758******
InstOwn			**−0.041**			**−0.051**			**−0.038**	**−0.048**
			−3.163***			***−3.827******			***−2.943******	***−3.602******
IAF_Out				**−0.005**			**−0.006**		**−0.006**	**−0.006**
				−1.904*			***−2.250*****		***−2.430*****	***−2.093*****
AUDIT4					**0.009**			**0.007**	**0.007**	**0.006**
					2.844***			***2.094*****	***2.380*****	***1.921****
*PC*InstOwn*						**0.439**				**0.395**
						2.210**				***1.986*****
*PC*IAF_Out*							0.003			−0.008
							0.101			*−0.227*
*PC*AUDIT4*								0.020		0.02
								0.702		*0.671*
FamOwn	**0.058**	**0.050**	**0.056**	**0.057**	**0.055**	**0.047**	**0.048**	**0.047**	**0.043**	**0.043**
	6.923***	***5.780******	***6.681******	***6.831******	***6.620******	***5.470******	***5.605******	***5.616******	***5.176******	***5.149******
GovOwn	**−0.048**	**−0.050**	**−0.048**	**−0.050**	**−0.050**	**−0.052**	**−0.053**	**−0.051**	**−0.054**	**−0.056**
	−5.586***	***−5.703******	***−5.606******	***−5.764******	***−5.762******	***−5.987******	***−5.964******	***−5.881******	***−6.129******	***−6.291******
FSIZE	0.000	0.001	0.001	0.001	0.000	0.002	0.001	0.001	0.001	0.002
	0.320	*0.895*	*0.851*	*0.401*	*−0.089*	*1.488*	*1.019*	*0.508*	*1.116*	*1.173*

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
ROA	**0.085**	**0.084**	**0.087**	**0.080**	**0.080**	**0.081**	**0.077**	**0.080**	**0.076**	**0.072**
	2.476**	***2.464*****	***2.534*****	***2.339*****	***2.339*****	***2.371*****	***2.284*****	***2.345*****	***2.234*****	***2.109*****
SALES_G	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0.001
	−0.125	*0.058*	*−0.111*	*−0.117*	*−0.081*	*0.111*	*0.075*	*0.104*	*0.119*	*0.161*
MTB	**0.009**	**0.009**	**0.009**	**0.009**	**0.009**	**0.010**	**0.010**	**0.009**	**0.01**	**0.009**
	6.047**	***6.418*****	***6.122*****	***6.086*****	***5.725*****	***6.569*****	***6.500*****	***6.081*****	***6.243*****	***6.290*****
CFO	−0.010	−0.008	−0.008	−0.012	−0.011	−0.007	−0.011	−0.009	−0.011	−0.011
	−0.329	*−0.281*	*−0.264*	*−0.406*	*−0.387*	*−0.247*	*−0.375*	*−0.318*	*−0.366*	*−0.38*
LEV	**−0.048**	**−0.059**	**−0.048**	**−0.050**	**−0.051**	**−0.060**	**−0.061**	**−0.061**	**−0.063**	**−0.07**
	−4.114**	***−4.741*****	***−4.135*****	***−4.242*****	***−4.413*****	***−4.830*****	***−4.881*****	***−4.966*****	***−5.143*****	***−5.192*****
LOSS	−0.005	−0.005	−0.005	−0.006	−0.005	−0.005	−0.005	−0.004	−0.005	−0.01
	−1.227	*−1.174*	*−1.273*	*−1.357*	*−1.179*	*−1.305*	*−1.353*	*−1.115*	*−1.357*	*−1.40*
COMPLEX	**0.019**	**0.019**	**0.019**	**0.019**	**0.018**	**0.020**	**0.019**	**0.018**	**0.017**	**0.02**
	6.712**	***6.803*****	***6.710*****	***6.370*****	***5.998*****	***6.915*****	***6.273*****	***6.154*****	***5.822*****	***5.849*****
CAPEX	0.005	0.007	0.005	0.004	0.004	0.008	0.006	0.006	0.006	0.01
	0.279	*0.420*	*0.296*	*0.243*	*0.249*	*0.466*	*0.376*	*0.379*	*0.368*	*0.40*
IND	**−0.028**	**−0.029**	**−0.028**	**−0.028**	**−0.025**	**−0.029**	**−0.029**	**−0.026**	**−0.027**	**−0.03**
	−3.784**	***−3.901*****	***−3.756*****	***−3.841*****	***−3.293*****	***−3.924*****	***−3.914*****	***−3.402*****	***−3.500*****	***−3.494*****
lnACMeet	**0.006**	**0.005**	**0.006**	**0.006**	**0.005**	0.005	**0.005**	**0.005**	**0.005**	**0.01**
	1.942**	***1.694*****	***1.932*****	***2.021*****	***1.887*****	*1.606*	***1.793*****	***1.656*****	***1.746*****	***1.674*****
lnAGE	**−0.006**	**−0.005**	**−0.005**	**−0.006**	**−0.005**	**−0.005**	**−0.005**	**−0.004**	**−0.004**	**−0.01**
	−2.707**	***−2.158*****	***−2.434*****	***−2.762*****	***−2.426*****	***−2.131*****	***−2.215*****	***−1.925*****	***−1.768*****	***−1.966*****
CONSTANT	**0.082**	**0.081**	**0.078**	**0.084**	**0.079**	**0.080**	**0.083**	**0.078**	**0.077**	**0.079**
	6.259**	***6.108*****	***6.000*****	***6.306*****	***6.026*****	***6.001*****	***6.165*****	***5.868*****	***5.765*****	***5.831*****

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Total observations	899	899	899	899	899	899	899	899	899	899
Adjusted R-square	0.616	0.625	0.617	0.617	0.619	0.627	0.626	0.626	0.629	0.629
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	64.300	62.490	62.180	62.940	62.510	58.450	59.170	59.160	57.710	52.790
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	2.370	2.340	2.350	2.340	2.360	2.350	2.310	2.370	2.300	2.340

REM_Exp: The Absolute Value of Discretionary Expenses measured based on Roychowdhury's (2006) model; *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details, refer to Appendix A.)
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

6.2.3 Reporting Small Positive Profits

Table 6.5 reports the results of multiple regressions examining the relationships between political connectedness (*PC*), strategic institutional ownership (*InstOwn*), internal audit sourcing arrangements (*IAF_Out*), and audit quality (*AUDIT4*) and earnings management as proxied by reporting small positive profits (*Small_Profits*). Table 6.5 also presents multiple regressions examining the impact of interaction terms between political connectedness and strategic institutional ownership (*PC*InstOwn*), political connectedness and internal audit outsourcing (*PC*IAF_Out*), and political connectedness and audit quality (*PC*AUDIT4*) on reporting small positive profits (*Small_Profits*).

Column 1 documents the analysis results of the relationships between the study's control variables and the dependent variable *Small_Profits*. First, firm profitability (*ROA*) had a significant negative relationship with *Small_Profits* at the 1% level of significance as indicated by the coefficient (β = –0.700, t-stat = –4.270), which is in line with prior studies suggesting that firm profitability is negatively related to reporting small profits (e.g., Gul et al., 2013). Column 1 also reports a negative and significant coefficient (β = –0.037, t-stat = –3.767) at the 1% level for the relationship between sales growth (*SALES_G*) and reporting small positive profits. This is consistent with the findings reported in the literature (e.g., Francis & Yu, 2009). After that, Column 1 presents the statistically significant and positive coefficient (β = 0.264, t-stat = 3.269) for the variable (*LEV*), which is consistent with findings of Gul et al. (2013) and Yu et al. (2016), suggesting that firms with higher levels of leverage had a lower tendency to report small positive profits. Also in line with Gul et al. (2013) and Francis and Yu (2009), Column 1 shows a significant negative relationship between the variable (*LOSS*) and the variable *Small_Profits* as indicated by the coefficient (β = –0.184, t-stat = –6.988). Column 1 also documents a significant negative coefficient (β = –0.049, t-stat = –2.787) indicating a negative relationship between the level of firm complexity (*COMPLEX*) and *Small_Profits*, which is in line with the findings of Jiraporn et al. (2008) and Dyreng et al. (2012).

Next, Columns 2 to 5 of Table 6.5 report the results of the relationships between reporting small positive profits (*Small_Profits*) and the main explanatory variables in this study (political connectedness, strategic institutional ownership,

internal audit sourcing arrangements, and audit quality). Specifically, as indicated by the coefficient (β = –0.154, t-stat = –2.056), Column 2 reports that there was a statistically significant negative relationship at the 5% level of significance between political connectedness (*PC*) and reporting small positive profits. Consistent with the findings of Batta et al. (2014), this result indicates that politically connected firms were less likely to report small positive profits. Next, Columns 3, 4, and 5 fail to report significant relationships between strategic institutional investors (*InstOwn*), outsourcing of the internal audit function (*IAF_Out*), and audit quality (*AUDIT4*) with the variable *Small_Profits*.

Columns 6, 7, and 8 report the results of the interaction effects *PC*InstOwn*, *PC*IAF_Out,* and *PC*AUDIT4*. Column 6 shows that the coefficient of *PC*InstOwn* was statistically insignificant, while only the underlying variable *PC* remained significant, indicating that politically connected firms had a significant negative relationship with reporting small positive profits only when strategic institutional investors were not present in their ownership structure. Similarly, Columns 7 and 8 report statistically insignificant coefficients for the interaction terms *PC*IAF_Out* and *PC*AUDIT4*, while only the underlying variable *PC* remained consistently significant, indicating that the significant and negative impact of political connectedness on earnings management was not affected by the outsourcing of the internal audit function or the engaging of a high-quality audit firm.

Finally, Column 9 of Table 6.5 documents the results of the regression analysis that included all four independent variables of the study, and Column 10 shows the results of the interaction terms when tested in unison. Columns 9 and 10 show results that are largely consistent with those presented in Columns 2 to 8 for the relationships of all variables with the dependent variable *Small_Profits* in terms of both direction and significance levels.

To conclude, Table 6.5 documents the results of the regressions testing the relationships between the study's dependent variable (*Small_Profits*) and the main independent variables (political connectedness (*PC*), strategic institutional ownership (*InstOwn*), sourcing arrangements of the internal audit function (*IAF_Out*), and audit quality (*AUDIT4*)). Table 6.5 also documents the results of the interaction terms *PC*InstOwn*, *PC*IAF_Out,* and *PC*AUDIT4*. Additionally, Table 6.5 reports the

results for the control variables included in the regressions. The variable *PC* consistently presented as a significant negative determinant of *Small_Profits* across all regressions, while the variables *InstOwn*, *IAF_Out*, and *AUDIT4* showed statistically insignificant relationships with the reporting of small positive profits. Finally, the results of the interaction terms *PC*InstOwn*, *PC*IAF_Out*, and *PC*AUDIT4* failed to have statistically significant effects on reporting small positive profits.

Table 6.5 reports that the explanatory power of the regression model, as indicated by the adjusted R-square, ranged from 0.112 to 0.114, implying that the models explained 11.2% to 11.4% of the variation in the dependent variable (*Small_Profits*). Additionally, the reported F-statistics across all the columns show that the regression models were significant at the 1% level, except for Column 10, which showed a significance level of 5%. Both industry and year-dummy variables were included in order to control for the effects of industry- and time-related variations. The values of F-statistic ranged between 1.590 and 1.960 Finally, Table 6.5 reports a VIF ranging from 2.30 to 2.37, confirming that multi-collinearity did not constitute a serious concern to the study analysis (Gujarati & Porter, 2009).

Table 6.5
Results of OLS Regression with Robust Standard Errors – Dependent Variable: Reporting Small Positive Profits (*Small_Profits*)

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
PC		**−0.154**				**−0.225**	**−0.156**	**−0.133**	**−0.152**	**−0.193**
		−2.056**				***−1.942****	***−1.817****	***−1.680****	***−1.955****	***−1.753****
InstOwn			−0.058			−0.092			−0.049	−0.083
			−0.513			*−0.734*			*−0.44*	*−0.667*
IAF_Out				−0.007			−0.009		−0.01	−0.008
				−0.379			*−0.391*		*−0.501*	*−0.326*
AUDIT4					0.024			0.023	0.021	0.023
					1.305			*1.174*	*1.134*	*1.136*
*PC*InstOwn*						1.462				1.455
						1.308				*1.186*
*PC*IAF_Out*							−0.025			−0.046
							−0.139			*−0.247*
*PC*AUDIT4*								−0.029		−0.047
								−0.183		*−0.272*
FamOwn	−0.049	**−0.066**	−0.052	−0.051	**−0.058**	**−0.072**	**−0.069**	**−0.074**	**−0.078**	**−0.082**
	−1.435	***−1.812****	*−1.507*	*−1.485*	***−1.762****	***−1.906****	***−1.883****	***−2.106*****	***−2.209*****	***−2.238*****
GovOwn	0.007	0.003	0.007	0.003	0.001	−0.005	−0.001	−0.002	−0.006	−0.013
	0.124	*0.058*	*0.131*	*0.053*	*0.023*	*−0.082*	*−0.023*	*−0.031*	*−0.113*	*−0.212*
FSIZE	0.002	0.003	0.003	0.002	0.000	0.005	0.004	0.002	0.003	0.003
	0.256	*0.457*	*0.365*	*0.274*	*0.057*	*0.583*	*0.470*	*0.259*	*0.381*	*0.388*

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
ROA	**−0.700**	**−0.702**	**−0.697**	**−0.707**	**−0.713**	**−0.715**	**−0.711**	**−0.715**	**−0.721**	**−0.735**
	−4.270***	***−4.283******	***−4.246******	***−4.337******	***−4.309******	***−4.300******	***−4.348******	***−4.311******	***−4.371******	***−4.381******
SALES_G	**−0.037**	**−0.036**	**−0.037**	**−0.037**	**−0.037**	**−0.035**	**−0.036**	**−0.036**	**−0.035**	**−0.035**
	−3.767***	***−3.586******	***−3.737******	***−3.759******	***−3.686******	***−3.475******	***−3.555******	***−3.556******	***−3.493******	***−3.434******
MTB	0.003	0.004	0.004	0.003	0.002	0.004	0.004	0.003	0.004	0.003
	0.788	*0.935*	*0.826*	*0.818*	*0.579*	*0.963*	*0.969*	*0.732*	*0.802*	*0.784*
CFO	0.013	0.016	0.016	0.010	0.009	0.016	0.011	0.011	0.01	0.01
	0.099	*0.118*	*0.119*	*0.074*	*0.065*	*0.116*	*0.081*	*0.082*	*0.072*	*0.04*
LEV	**0.264**	**0.243**	**0.264**	**0.262**	**0.256**	**0.238**	**0.239**	**0.237**	**0.233**	**0.23**
	3.269***	***3.008******	***3.266******	***3.212******	***3.164******	***2.919******	***2.910******	***2.925******	***2.858******	***2.754******
LOSS	**−0.184**	**−0.184**	**−0.184**	**−0.185**	**−0.184**	**−0.185**	**−0.185**	**−0.183**	**−0.185**	**−0.19**
	−6.988***	***−7.006******	***−6.984******	***−7.000******	***−6.972******	***−6.993******	***−7.015******	***−6.982******	***−6.990******	***−6.961******
COMPLEX	**−0.049**	**−0.048**	**−0.049**	**−0.050**	**−0.053**	**−0.047**	**−0.049**	**−0.052**	**−0.053**	**−0.05**
	−2.787***	***−2.766******	***−2.789******	***−2.775******	***−2.911******	***−2.701******	***−2.691******	***−2.876******	***−2.893******	***−2.762******
CAPEX	−0.102	−0.097	−0.101	−0.103	−0.103	−0.095	−0.098	−0.098	−0.099	−0.10
	−1.183	*−1.137*	*−1.179*	*−1.189*	*−1.210*	*−1.117*	*−1.136*	*−1.160*	*−1.169*	*−1.13*
IND	−0.009	−0.011	−0.008	−0.009	0.000	−0.013	−0.012	−0.003	−0.004	−0.01
	−0.212	*−0.263*	*−0.205*	*−0.226*	*−0.006*	*−0.304*	*−0.294*	*−0.076*	*−0.086*	*−0.17*
lnACMeet	−0.008	−0.009	−0.008	−0.007	−0.008	−0.010	−0.008	−0.009	−0.009	−0.01
	−0.406	*−0.474*	*−0.411*	*−0.381*	*−0.433*	*−0.515*	*−0.442*	*−0.495*	*−0.467*	*−0.51*
lnAGE	0.001	0.004	0.002	0.001	0.003	0.002	0.003	0.005	0.005	0.00
	0.128	*0.314*	*0.214*	*0.105*	*0.265*	*0.214*	*0.281*	*0.428*	*0.478*	*0.273*
CONSTANT	**0.175**	**0.173**	**0.170**	**0.178**	**0.166**	**0.176**	**0.178**	**0.165**	**0.164**	**0.174**
	2.201**	***2.180*****	***2.160*****	***2.240*****	***2.040*****	***2.228*****	***2.220*****	***2.033*****	***2.052*****	***2.135*****

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Total observations	899	899	899	899	899	899	899	899	899	899
Adjusted R-square	0.113	0.114	0.112	0.112	0.114	0.114	0.113	0.114	0.113	0.112
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	1.960	1.910	1.900	1.900	1.900	1.790	1.790	1.790	1.740	1.590
Prob > F	0.002	0.003	0.003	0.003	0.003	0.005	0.005	0.005	0.007	0.020
VIF	2.370	2.340	2.350	2.340	2.360	2.350	2.310	2.370	2.300	2.340

Small_Profits: Reporting Small Positive Profits; *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details, refer to Appendix A.)
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

6.3 Results Comparison and Discussion

Table 6.1 to Table 6.5 report multivariate analysis results of the impact of political connectedness (*PC*), strategic institutional ownership (*InstOwn*), internal audit sourcing arrangements (*IAF_Out*), and audit quality (*AUDIT4*) on the quality of financial reports as proxied using five different measures of earnings management. Specifically, earnings management was proxied by the absolute value of discretionary accruals in Table 6.1, the absolute value of abnormal cash flows in Table 6.2, the absolute value of abnormal production costs in Table 6.3, the absolute value of abnormal discretionary expenses in Table 6.4, and the reporting of small positive profits in Table 6.5.

As presented in Sections 6.2.1 to 6.2.3, political connectedness held a consistent significant and negative association across all measures of earnings management used in this study. This statistical association was significant at the 5% and 10% levels in Table 6.1–Table 6.5, and significant at the 1% level in Table 6.2–Table 6.4. Therefore, these results indicate that political connectedness of listed firms (*PC*) was significantly and positively related to financial reporting quality. Specifically, the findings suggest that politically connected directors effectively restrained the managerial use of both accrual-based earnings management and real earnings management, hence increasing the level of the financial reporting quality of their firms (Bhuiyan et al., 2020; Choi, Choi et al., 2018; Francis & Yu, 2009). A result that further supports this finding was the consistent negative relationship between political connectedness and reporting small positive profits, implying an effective curbing of manipulative reporting practices that results in higher-quality financial reports (Francis et al., 2011; Gul et al., 2013; Hayn, 1995; Iatridis, 2010). This is in line with the notion that political connectedness can be an important factor that drives listed firms towards enhancing their transparency and the quality of their financial reporting (Batta et al., 2014; Guedhami et al., 2014).

The findings are consistent with the legitimacy theory argument, specifically, that politically connected firms need to enhance their legitimacy in order to mitigate the social pressure that politically connected directors are subject to. An important aspect of this legitimacy is reflected in the promotion of legitimate financial reporting practices so as to fulfil the terms of the social contract. Thus can politically connected

firms be characterised by the society as organisations with legitimacy (Deegan, 2002; Sethi, 1979). This implies that managers of politically connected firms act in a legitimate manner in order to adhere to societal norms as a means of protecting the reputation of their politically connected directors (Alazzani et al., 2018; Al-Hadi et al., 2017; Guedhami et al., 2014), and hence maintain organisational legitimacy.

These findings are also consistent with the key arguments of resource dependency theory, namely, that in addition to providing other vital resources, politically connected directors help to confer legitimacy upon their firms, which is considered a vital strategic resource (Dowling & Pfeffer, 1975; Drees & Heugens, 2013; Hillman & Dalziel, 2003). This implies that the combined social and human capital of politically connected directors plays an important role in governance, guidance, and offering good counsel (Hillman & Dalziel, 2003). Consequently, the findings suggest that political connectedness helps to mitigate agency conflict by enhancing transparency and the faithfulness with which financial information is represented. These findings therefore contradict the notion that political connectedness may form a source of Type II agency conflict (i.e., principal–principal agency problems). In fact, the results indicate that the presence of political connections mitigates conflicts of interest arising from both Type I and Type II agency problems.

Consequently, the results of the study largely support the acceptance of Hypothesis 1 that a significant association exists between politically connected directors on the board and the quality of financial reports. This finding is consistent with the results of Alazzani et al. (2018) who report that political connectedness of Saudi listed firms enhances social responsibility reporting. Moreover, the results are consistent with the findings of Alzahrani and Che-Ahmad (2015) and Alnasser (2019) who provide evidence on the positive impact of political connections on a firm's performance, and Jennings et al. (2021) who report negative impact of political connectedness on reporting misconduct. It does, however, contradict other findings, such as those of Chaney et al. (2011), Hope et al. (2020), and Alazzani et al. (2021). A plausible explanation may rest on the distinct nature of political connectedness in the Saudi environment. As a monarchy, the Saudi political system has been more effective than non-monarchical systems in implementing business reforms due to the cooperation of politically connected members (Mazheri, 2013). Specifically, prior studies suggest that the social capital of politically connected directors can be a significant factor in

contributing to legitimate corporate practices in societies with strong informal institutions, such as family and tribe (Al-Hadi et al., 2017; Knack & Keefer, 1997).

In a similar vein, the presence of strategic institutional investors in the ownership structure of listed firms was also found to be a significant positive determinant of financial reporting quality at the 10% level (when measured using the magnitudes of discretionary accruals) and at the 5% level (when measured using real activity-based earnings management). However, the regression analysis of strategic institutional investors and the reporting of small positive profits failed to provide statistically significant results.

The findings emphasise the importance of strategic institutional investors' role in constraining financial reporting manipulation, which is in line with prior studies (e.g. Burns et al., 2010; Bushee, 2001; Bushee et al., 2014; Kane & Velury, 2004; Zhong et al., 2017; El Ghoul, 2021). The results are therefore consistent with the resource-dependency perspective that institutional investors have the capability, resources, and willingness to maintain the integrity of the financial reporting system (Zang, 2012; Zhong et al., 2017). Consequently, strategic institutional investors are deemed as a source of Type I agency conflicts (i.e., conflicts of interest between agents and principals), which implies that the results are also consistent with the agency theory argument. The findings of the study therefore largely support the acceptance of Hypothesis 2 that a significant association exists between strategic institutional investors and the quality of financial reports.

The analysis of the interaction effect of political connectedness and strategic institutional ownership (*PC*InstOwn*) failed to return a consistent statistically significant relationship to financial reporting quality. The results of the interaction term *PC*InstOwn*, however, are particularly surprising when financial reporting quality was proxied by production cost manipulation and discretionary expenses manipulation. This is because both political connectedness and strategic institutional ownership were found to be statistically significant determinants of increased financial reporting quality in publicly listed firms, while their interaction effect gave a moderately significant negative impact on the quality financial reports, when measured using production cost manipulation and discretionary expense manipulation. A plausible explanation in line with Shi et al. (2017) suggests that the increased

monitoring of strategic institutional investors may produce a paradoxical effect in the sense that managers might lose their motivation to act ethically and engage in manipulative practices, hence compromising reporting quality. The authors indicate that diminishing manager motivation may be an outcome of the higher expectations placed on firms by strategic institutional investors for satisfactory performance. In the case of the findings related to the interaction term *PC*InstOwn*, the effect may be even more pronounced due to the increased pressure on managers to provide higher returns that meet the expectations of both politically connected directors and strategic institutional investors.

The regression analysis showing the impact of internal audit sourcing arrangements on financial reporting quality provided mixed results. Outsourcing the internal audit function was found to be a significant factor in decreasing abnormal production costs, at the 10% level of significance. On the other hand, internal audit outsourcing was a significant factor that increased abnormal discretionary expenses at the 10% level. However, the regression analysis failed to provide statistical significance for internal audit sourcing arrangements in relation to the other proxies for financial reporting quality (namely, the absolute value of discretionary accruals, the absolute value of abnormal cash flows, and reporting small positive profits). Additionally, the analysis of the interaction term *PC*IAF_Out* failed to find a statistically significant effect on financial reporting quality across all measures used in this study. Consequently, Hypothesis 3a and Hypothesis 3b were not supported.

The analysis of the impact of audit quality on financial reporting quality returned statistically significant results when measured using the level of real activity-based earnings management, with generally consistent levels of significance at 5%. The findings support the argument that real activity-based earnings management techniques are less likely to be detected by external auditors due to the complexity of such techniques (Cohen et al., 2008). Moreover, real activity manipulation is considered to be an alternative earnings management technique that does not constitute a violation of regulatory or financial reporting requirements (Chi et al., 2011; Zang, 2012); hence, these techniques are less likely to draw auditors' scrutiny (Kim et al., 2010). Management may consequently resort to such earnings management practices, which eventually results in diminished audit quality provided by Big N audit firms. This is consistent with the findings of Mnif and Hamouda (2020). The authors provide

evidence that GCC firms tend to resort to real-activity based earnings management when engaged with high-quality auditors. As such, the results were contradictory with respect to the proposition that higher-quality audit firms are more capable of providing higher-quality audit services due to their higher resource availability. These findings are also inconsistent with the findings of other prior studies, such as Tessema (2020), which report a mitigating impact of audit quality on information asymmetry. As a result, audit quality, as proxied by the engagement of a Big N audit firm, did not mitigate agency conflicts between managers (as agents) and shareholders (as principals). The findings therefore, partially supported Hypothesis 4a, indicating a negative association between audit quality and financial reporting quality. The analysis of the interaction term *PC*AUDIT4*, however, failed to return statistical significance for the impact of audit quality on the relationship between political connectedness and financial reporting quality across all measures used in this thesis.

With regards to the control variables, family ownership (*FamOwn*), firm profitability (*ROA*), leverage (*LEV*), and firm complexity (*COMPLEX*) were reported as significant determinants of financial reporting quality measures. Similarly, market-to-book ratio (*MTB*) and firm age (*lnAge*) were found to be significant determinants of all financial reporting quality measures except for reporting small positive profits, for which they became insignificant. Capital expenditure (*CAPEX*) was a significant determinant of financial reporting quality when measured using the accrual-based measure as well as abnormal cash flows and abnormal production costs measures. Government ownership (*GovOwn*) was a significant factor in determining two proxies of financial reporting quality, i.e., abnormal production costs (*REM_Prod*) and abnormal discretionary expenses (*REM_Exp*), while firm size (*FSIZE*) and cash flow ratio (*CFO*) were significant variables in determining the accrual-based measure and the abnormal cash flows (*REM_CFO*). Reporting negative net income (*LOSS*) was a significant determinant for the measures *REM_Prod* and *Small_Profits*, while board independence (*IND*) and the frequency of audit committee meetings (*lnACMeet*) were significant in determining abnormal discretionary expenses. Finally, sales growth (*SALES_G*) was only significantly related to the proxy *Small_Profits*.

Finally, as a results of using multiple proxies to analyse the relationships of the explanatory variables with financial reporting quality, the adjusted R-square values ranged from 11.2% for reporting small positive profits (*Small_Profits*) to as high as

62.9% for the real activity-based proxy (*REM_Exp*). The F-statistic values, however, consistently indicated that the models were significant at the 1% level across the five tables, except for one regression in which all interaction terms were regressed against the financial reporting quality proxy *Small_Profits*, and the model became significant at the level of 5%.

6.4 Summary

This chapter began with an extensive presentation of the regression analysis results of the main explanatory variables on the dependent variable, i.e., financial reporting quality, as proxied by five different measures. These were the absolute value of discretionary accruals, the absolute value of real activity-based earnings management measures, and reporting small positive profits. The chapter then provided a comprehensive discussion that included comparisons between the findings.

Chapter Seven will present and discuss the results of sensitivity and robustness tests. It begins by presenting the results of analyses that used alternative measures of financial reporting quality, political connectedness, and strategic institutional ownership. The chapter will then present the additional analysis performed by using alternative measures for the control variables and introducing new control variables. Next, Chapter Seven will discuss the results of the analysis performed after partitioning the study's pooled sample based on firm characteristics (namely, reporting profits versus losses, firm complexity, firm size, and growth opportunities). After that, the chapter will present and discuss the results of the endogeneity analysis, including PSM, the Heckman selection model, the GMM, and DID. Finally, a brief summary will be provided to conclude the chapter discussion.

Chapter Seven

Robustness Tests and Sensitivity Analysis

7.1 Introduction

Chapter Six provided a thorough discussion of the results of the multivariate analysis on the impact of the main explanatory variables (i.e., between political connectedness, strategic institutional ownership, internal audit sourcing arrangements, and audit quality) on financial reporting quality as proxied by the magnitudes of accrual-based and real activity-based earnings management measures as well as reporting small positive profits.

This chapter presents the results of additional analyses performed to ensure the robustness of the multivariate analysis results. The chapter starts by presenting the results of the analysis performed using alternative measures of the dependent, independent, and control variables. It then discusses the results of the analysis performed after partitioning the pooled sample based on firms reporting of positive net income versus negative net income, firm complexity, firm size, and growth opportunities. Subsequently, the chapter discusses the results of the endogeneity analysis, including propensity score matching (PSM), the Heckman selection model, generalised method of moments (GMM), and difference-in-differences (DID). The chapter ends with a brief summary.

7.2 Alternative Measures of Financial Reporting Quality

This section reports the results of the multiple regression analysis used to examine the impact of political connectedness, strategic institutional ownership, internal audit sourcing arrangements, and audit quality on financial reporting quality using three alternative measures. Specifically, the modified Jones model was used as an alternative measure for accrual-based earnings management, an aggregate measure was used as an alternative measure for the three real activity-based earnings management proxies, and reporting small positive profits was measured based on the end-of-year total assets.

7.2.1 Alternative Measure of Accrual-Based Earnings Management

In this section, the analysis was conducted using the modified Jones model as introduced by Dechow et al. (1995) as an alternative measure for accrual-based earnings management. The model is specified as follows:

$$TAC_{it} / A_{it-1} = \beta_1 [1/A_{it-1}] + \beta_2 [(\Delta Sales_{it} - \Delta AR_{it})/A_{it-1}] + \beta_3 [PPE_{it} /A_{it-1}] + \varepsilon_{it} \quad (7.1)$$

Where:

TAC_{it}	Total accruals of firm i in period t
A_{it-1}	Total assets of firm i in period t − 1
$\Delta Sales_{it}$	Change in sales of firm i from period t − 1 to period t
ΔAR_{it}	Change in accounts receivable of firm i from period t − 1 to period t
PPE_{it}	Gross property, plant, and equipment of firm i in year t
ε_{it}	Error term

Table 7.1 reports the results of multiple regressions analysing the relationships between political connectedness (*PC*), strategic institutional ownership (*InstOwn*), internal audit outsourcing (*IAF_Out*), and audit quality (*AUDIT4*), and accrual-based earnings management as proxied by the magnitude of discretionary accruals (*EM_ModJones*). Consistent with the findings reported in the main Chapter Six, Table 7.1 reports that political connectedness (*PC*) continued to have a significant and negative association with the magnitude of accrual-based earnings management. This indicates that political connectedness played a significant role in constraining earnings management practices, hence enhancing financial reporting quality. In addition, the control variables *FamOwn*, *FSIZE*, *MTB*, *COMPLEX*, *CAPEX*, and *lnAGE* remained generally significant determinants of the variation in the dependent variable, indicating that family ownership, firm size, growth opportunities, firm complexity and firm age had a statistically significant impact on the magnitude of accrual-based earnings management. Furthermore, government ownership (*GovOwn*) was also indicated as a significant determinant of accrual-based earnings management when measured using the modified Jones model. The explanatory power of the regression model, as indicated by the adjusted R-square, ranged from 0.350 to 0.355. Table 7.1 also shows that the regression model was significant at the 1% level with a value of F-statistic ranging between 10.690 and 12.800. Finally, Table 7.1 documents that the VIF ranged between 2.300 and 2.370, signifying that there was no impact of multi-collinearity on the study analysis (Gujarati & Porter, 2009).

Table 7.1
Results of OLS Regression with Robust Standard Errors: The Absolute Value of Discretionary Accruals (*EM_ModJones*).

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
PC		**−0.035**				**−0.036**	**−0.039**	**−0.037**	**−0.036**	**−0.042**
		−3.017***				***−2.291*****	***−3.195******	***−2.468*****	***−3.001******	***−2.289*****
InstOwn			−0.008			−0.008			−0.009	−0.008
			−0.614			*−0.611*			*−0.656*	*−0.606*
IAF_Out				0.001			−0.001		0.000	−0.001
				0.325			*−0.274*		*0.070*	*−0.289*
AUDIT4					−0.001			−0.002	−0.002	−0.002
					−0.493			*−0.658*	*−0.722*	*−0.741*
*PC*InstOwn*						0.015				0.020
						0.109				*0.138*
*PC*IAF_Out*							0.031			0.031
							0.985			*0.986*
*PC*AUDIT4*								0.002		0.003
								0.115		*0.141*
FamOwn	**−0.014**	**−0.018**	**−0.014**	**−0.014**	**−0.013**	**−0.018**	**−0.017**	**−0.017**	**−0.017**	**−0.017**
	−2.764***	***−3.327******	***−2.771******	***−2.711******	***−2.630******	***−3.303******	***−3.283******	***−3.157******	***−3.178******	***−3.099******
GovOwn	**0.023**	**0.022**	**0.023**	**0.023**	**0.023**	**0.022**	**0.021**	**0.022**	**0.023**	**0.021**
	2.773***	***2.683******	***2.781******	***2.795******	***2.814******	***2.650******	***2.524*****	***2.733******	***2.743******	***2.543*****
FSIZE	**−0.003**	**−0.002**	**−0.003**	**−0.003**	**−0.003**	**−0.002**	**−0.002**	**−0.002**	**−0.002**	**−0.002**
	−2.786***	***−2.468*****	***−2.583******	***−2.792******	***−2.698******	***−2.269*****	***−2.371*****	***−2.343*****	***−2.136*****	***−2.042*****

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
ROA	−0.034	−0.034	−0.033	−0.033	−0.033	−0.034	−0.035	−0.033	−0.033	−0.034
	−1.035	*−1.063*	*−1.023*	*−1.004*	*−1.012*	*−1.052*	*−1.085*	*−1.032*	*−1.008*	*−1.045*
SALES_G	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	−0.179	*−0.057*	*−0.174*	*−0.181*	*−0.188*	*−0.051*	*−0.038*	*−0.066*	*−0.065*	*−0.040*
MTB	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**
	2.499**	***2.625*****	***2.522*****	***2.469*****	***2.491*****	***2.646*****	***2.630*****	***2.629*****	***2.628*****	***2.653*****
CFO	0.037	0.038	0.037	0.037	0.037	0.038	0.038	0.038	0.038	0.039
	1.232	*1.261*	*1.243*	*1.243*	*1.242*	*1.268*	*1.286*	*1.276*	*1.289*	*1.309*
LEV	−0.003	−0.008	−0.003	−0.003	−0.003	−0.008	−0.007	−0.008	−0.008	−0.007
	−0.401	*−0.955*	*−0.401*	*−0.378*	*−0.352*	*−0.952*	*−0.864*	*−0.898*	*−0.893*	*−0.802*
LOSS	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	0.366	*0.401*	*0.356*	*0.391*	*0.359*	*0.384*	*0.360*	*0.393*	*0.379*	*0.334*
COMPLEX	**−0.005**	**−0.005**	**−0.005**	**−0.005**	**−0.005**	**−0.005**	**−0.005**	**−0.004**	**−0.004**	**−0.005**
	−2.105**	***−2.085*****	***−2.119*****	***−2.018*****	***−1.964*****	***−2.085*****	***−2.152*****	***−1.905*****	***−1.871*****	***−1.961*****
CAPEX	**0.075**	**0.076**	**0.075**	**0.075**	**0.075**	**0.076**	**0.075**	**0.076**	**0.076**	**0.075**
	3.611**	***3.714*****	***3.617*****	***3.615*****	***3.612*****	***3.721*****	***3.679*****	***3.713*****	***3.724*****	***3.685*****
IND	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.008	0.008	0.009
	1.395	*1.322*	*1.402*	*1.407*	*1.338*	*1.320*	*1.408*	*1.236*	*1.244*	*1.308*
lnACMeet	−0.002	−0.002	−0.002	−0.002	−0.002	−0.002	−0.002	−0.002	−0.002	−0.002
	−0.592	*−0.709*	*−0.596*	*−0.608*	*−0.583*	*−0.715*	*−0.700*	*−0.698*	*−0.703*	*−0.692*
lnAGE	0.003	**0.003**	0.003	0.003	0.003	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**
	1.544	***1.789****	*1.595*	*1.545*	*1.511*	***1.810****	***1.824****	***1.748****	***1.785****	***1.794****
CONSTANT	**0.081**	**0.080**	**0.080**	**0.081**	**0.081**	**0.080**	**0.080**	**0.081**	**0.080**	**0.080**
	6.123**	***6.144*****	***6.065*****	***6.099*****	***6.166*****	***6.028*****	***6.024*****	***6.183*****	***6.109*****	***5.959*****

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Total observations	899	899	899	899	899	899	899	899	899	899
Adjusted R-square	0.350	0.355	0.350	0.350	0.350	0.354	0.354	0.354	0.354	0.352
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	12.800	12.490	12.520	12.360	12.350	12.030	11.700	11.770	11.470	10.690
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	2.370	2.340	2.350	2.340	2.360	2.350	2.310	2.370	2.300	2.340

EM_ModJones: The magnitude of discretionary accruals measured based on Dechow et al.'s (1995) modified Jones model; *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age (For additional details refer to Appendix A).
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

7.2.2 Alternative Measure of Real Activity-Based Earnings Management

In this section, an analysis was performed using an alternative measure for the three measures of real activity-based earnings management, introduced by Roychowdhury (2006). Specifically, an aggregate measure (i.e., *REM_Index*) was calculated to capture the overall effect of real activity-based earnings management, following the literature (e.g., Cohen et al., 2008; Cohen & Zarowin, 2010), as the sum of the variables *REM_CFO, REM_Prod,* and *REM_Exp* according to the following equation:

$$\boldsymbol{REM\_Index_{it}} = REM\_CFO_{it} + REM\_Prod_{it} + REM\_Exp_{it} \quad (7.2)$$

Where:

$\boldsymbol{REM\_CFO_{it}}$	Absolute value of abnormal cash flows from operations of firm i in period t
$\boldsymbol{REM\_Prod_{it}}$	Absolute value of abnormal production costs of firm i in period t
$\boldsymbol{REM\_Exp_{it}}$	Absolute value of abnormal discretionary expenses of firm i in period t

Table 7.2 documents the results of multiple regressions analysing the relationships between real activity-based earnings management as proxied by the aggregate measure of real earnings management (*REM_Index*) and the independent variables: political connectedness (*PC*), strategic institutional ownership (*InstOwn*), internal audit outsourcing (*IAF_Out*), and audit quality (*AUDIT4*). Consistent with the findings presented in Table 6.2–Table 6.4, the statistically significant and negative coefficients reported in Columns 2, 6, 7, 8, 9, and 10 of Table 7.2 indicate that political connectedness (*PC*) continued to hold a significant negative relationship with real activity-based earnings management. These results confirm the findings discussed in Chapter Six with regards to the individual measures of real activity-based earnings management. They emphasise the restraining role of politically connected directors on the managerial use of techniques that manipulate real activities, which results in higher levels of financial reporting quality. Furthermore, the significant negative coefficients of strategic institutional ownership (*InstOwn*) shown in Columns 3, 6, 9, and 10 suggest that strategic institutional investors were more effective in contributing to higher financial reporting quality when it was measured using real activity-based earnings management compared to their role in constraining accrual-based earnings management. A plausible explanation may be that real activity manipulation results in

considerably higher costs than accruals manipulation (Chi et al., 2011; Roychowdhury 2006; Zang, 2012). Further, the findings on the interaction effect *PC*InstOwn* were also in line with the results reported in Table 6.3 and Table 6.4, indicating that politically connected directors and strategic institutional investors were less effective when they co-existed in the same scenario, in enhancing financial reporting quality by constraining managerial manipulative practices using real activities. The coefficients of *IAF_Out* documented in Column 4 indicate that outsourcing the internal audit function increased managerial use of real earnings management techniques. This is in line with the findings regarding production cost manipulation (Section 6.2.2.2), while contradicting the results related to discretionary expense manipulation (reported in Section 6.2.2.3), giving rise to mixed results.

Next, the interaction effect *PC* IAF_Out* was also in line with the results reported for the individual components of real activity-based earnings management, signifying that outsourcing the internal audit function had no effect in enhancing financial reporting quality in politically connected firms. Table 7.2 also presents consistent findings with regards to the relationship between audit quality (*AUDIT4*) and financial reporting quality. In line with the results reported in Chapter Six, Table 7.2 shows a statistically significant and positive relationship between *AUDIT4* and the real activity-based earnings management index. Moreover, the control variables *FamOwn*, *FSIZE*, *GovOwn*, *FSIZE*, *ROA*, *MTB*, *LEV*, *LOSS*, *COMPLEX*, *CAPEX*, *COMPLEX*, *CAPEX*, and *lnAGE* remained largely consistent with the results discussed in Section 6.2.2, and were significant determinants of the variation in the variable *REM_Index*. The explanatory power of the regression model, as implied by the adjusted R-square, ranged from 0.428 to 0.448. Table 7.2 also documents a value of F-statistic ranging between 19.340 and 22.740, indicating that the regression model was significant at the 1% level. Finally, Table 7.2 shows that the VIF ranged between 2.300 and 2.370, signifying that multi-collinearity was not a threat to the analysis results (Gujarati & Porter, 2009).

Table 7.2:
Results of OLS Regression with Robust Standard Errors – Dependent Variable: The Aggregate Measure of Real Activity-Based Earnings Management (*REM_Index*)

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
PC		**−0.845**				**−1.028**	**−0.892**	**−0.952**	**−0.784**	**−1.130**
		−4.709***				***−4.353******	***−4.617******	***−3.755******	***−4.419******	***−3.731******
InstOwn			**−0.569**			**−0.658**			**−0.524**	**−0.603**
			−3.358***			***−3.732******			***−3.153******	***−3.519******
IAF_Out				**0.060**			0.030		0.048	0.036
				1.831*			0.816		*1.455*	*0.993*
AUDIT4					**0.120**			**0.098**	**0.106**	**0.092**
					3.604***			**2.653*****	***3.217******	***2.511*****
*PC*InstOwn*						**3.809**				3.398
						1.793*				*1.605*
*PC*IAF_Out*							0.525			0.359
							1.428			*0.978*
*PC*AUDIT4*								0.305		0.279
								0.953		*0.886*
FamOwn	**0.691**	**0.598**	**0.662**	**0.706**	**0.646**	**0.562**	**0.614**	**0.567**	**0.552**	**0.552**
	7.744***	***6.526******	***7.447******	***7.976******	***7.270******	***6.174******	***6.777******	***6.211******	***6.106******	***6.114******
GovOwn	**−0.590**	**−0.610**	**−0.586**	**−0.558**	**−0.618**	**−0.627**	**−0.601**	**−0.635**	**−0.604**	**−0.635**
	−6.059***	***−6.143******	***−6.102******	***−5.601******	***−6.176******	***−6.415******	***−5.783******	***−6.276******	***−5.884******	***−6.082******
FSIZE	0.016	0.024	**0.025**	0.015	0.009	**0.034**	0.024	0.017	0.025	**0.026**
	1.073	*1.601*	***1.718****	*0.986*	*0.566*	***2.295*****	*1.599*	*1.110*	*1.611*	***1.723****

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
ROA	**1.475**	**1.462**	**1.505**	**1.533**	**1.408**	**1.450**	**1.488**	**1.403**	**1.477**	**1.429**
	3.753***	***3.738******	***3.828******	***3.928******	***3.589******	***3.689******	***3.822******	***3.592******	***3.805******	***3.655******
SALES_G	0.004	0.012	0.005	0.004	0.007	0.014	0.012	0.015	0.014	0.016
	0.152	*0.444*	*0.180*	*0.141*	*0.242*	*0.525*	*0.462*	*0.546*	*0.529*	*0.619*
MTB	**0.100**	**0.103**	**0.102**	**0.099**	**0.096**	**0.105**	**0.103**	**0.099**	**0.100**	**0.101**
	7.498***	***7.791******	***7.612******	***7.463******	***7.040******	***7.951******	***7.860******	***7.317******	***7.448******	***7.518******
CFO	0.026	0.041	0.052	0.054	0.002	0.059	0.073	0.025	0.065	0.072
	0.073	*0.114*	*0.147*	*0.151*	*0.007*	*0.164*	*0.203*	*0.071*	*0.182*	*0.202*
LEV	**−0.462**	**−0.576**	**−0.463**	**−0.446**	**−0.505**	**−0.591**	**−0.548**	**−0.611**	**−0.593**	**−0.597**
	−4.102***	***−4.955******	***−4.122******	***−3.894******	***−4.498******	***−5.063******	***−4.644******	***−5.265******	***−5.049******	***−5.066******
LOSS	**−0.089**	**−0.086**	**−0.091**	**−0.081**	**−0.086**	**−0.092**	**−0.083**	**−0.083**	**−0.080**	**−0.083**
	−1.888*	***−1.845****	***−1.943****	***−1.752****	***−1.829****	***−1.954****	***−1.802****	***−1.773****	***−1.743****	***−1.809****
COMPLEX	**0.124**	**0.126**	**0.122**	**0.132**	**0.102**	**0.127**	**0.128**	**0.108**	**0.112**	**0.113**
	3.996***	***4.090******	***3.967******	***4.358******	***3.254******	***4.166******	***4.237******	***3.430******	***3.663******	**3.683*****
CAPEX	**−0.459**	**−0.434**	**−0.455**	**−0.452**	**−0.467**	**−0.426**	**−0.439**	**−0.444**	**−0.432**	**−0.438**
	−2.595***	***−2.387*****	***−2.546*****	***−2.542*****	***−2.617******	***−2.329*****	***−2.401*****	***−2.434*****	***−2.336*****	**−2.366****
IND	−0.093	−0.105	−0.090	−0.088	−0.050	−0.108	−0.091	−0.061	−0.060	−0.055
	−0.816	*−0.923*	*−0.790*	*−0.773*	*−0.446*	*−0.945*	*−0.803*	*−0.539*	*−0.528*	−0.488
lnACMeet	0.005	−0.002	0.004	0.001	0.002	−0.005	−0.005	−0.004	−0.008	−0.009
	0.119	*−0.061*	*0.099*	*0.023*	*0.051*	*−0.124*	*−0.117*	*−0.116*	*−0.199*	−0.230
lnAGE	**−0.080**	**−0.068**	**−0.071**	**−0.078**	**−0.072**	**−0.064**	**−0.066**	**−0.061**	**−0.052**	**−0.055**
	−3.281***	***−2.760******	***−2.909******	***−3.142******	***−2.938******	***−2.545*****	***−2.603******	***−2.459*****	***−2.059*****	**−2.145****
CONSTANT	0.251	0.241	0.198	0.227	0.203	0.211	0.211	0.195	0.132	0.142
	1.502	1.426	1.192	1.335	1.244	1.237	1.228	1.174	0.785	0.836

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Total observations	899	899	899	899	899	899	899	899	899	899
Adjusted R-square	0.428	0.440	0.431	0.429	0.434	0.444	0.440	0.445	0.448	0.448
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	22.740	22.100	22.310	22.100	22.450	21.170	20.680	21.330	20.890	19.340
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	2.370	2.340	2.350	2.340	2.360	2.350	2.310	2.370	2.300	2.340

REM_Index: The Aggregate Measure of Real Activity-Based Earnings Management (*REM_Index*) measured following Cohen et al. (2008) and Cohen and Zarowin (2010); *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details, refer to Appendix A.) * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

7.2.3 Alternative Measure of Reporting Small Positive Profits

As discussed in Chapter Six, the multivariate regression analysis of this study was performed using five different financial reporting quality proxies, among which is reporting small positive profits, measured as net income divided by average total assets, based on a cut-off point of 1%. In this section, the analysis was performed using a different basis of measuring the cut-off point, i.e., using total assets at year-end, following Gunny (2010). Table 7.3 reports the results of multiple regressions analysing the relationships between political connectedness (*PC*), strategic institutional ownership (*InstOwn*), internal audit outsourcing (*IAF_Out*), and audit quality (*AUDIT4*) and reporting small positive profits (*Small_Profits_TA*).

Table 7.3 documents consistent results for the analysis of political connectedness (*PC*), showing that it continued to play a significant role in constraining earnings management, resulting in higher financial reporting quality, as indicated by the statistically significant and negative coefficients reported in Columns 2 and 9. Additionally, the control variables *ROA*, *SALES_G*, *LEV*, *LOSS*, and *COMPLEX* remained statistically significant determinants of small profits reporting. The explanatory power of the regression model, as indicated by the adjusted R-square ranged from 0.115 to 0.117. Table 7.3 also presents the F-statistic for the regression models as ranging between 1.680 and 2.070. Finally, Table 7.3 documents that the VIF ranged between 2.300 and 2.370 signifying that there was no threat of multi-collinearity on the regression models (Gujarati & Porter, 2009).

Table 7.3
Results of OLS Regression with Robust Standard Errors – Dependent Variable: Reporting Small Positive Profits (*Small_Profits_TA*)

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
PC		**−0.135**				−0.184	−0.138	−0.092	**−0.136**	−0.138
		−1.714*				*−1.530*	*−1.556*	*−1.047*	***−1.689****	*−1.162*
InstOwn			−0.050			−0.074			−0.043	−0.067
			−0.443			*−0.585*			*−0.382*	*−0.527*
IAF_Out				−0.013			−0.015		−0.016	−0.013
				−0.695			−0.628		*−0.801*	*−0.562*
AUDIT4					0.021			0.022	0.018	0.022
					1.134			1.129	*0.979*	*1.081*
*PC*InstOwn*						1.012				1.045
						0.880				*0.835*
*PC*IAF_Out*							−0.035			−0.055
							−0.193			*−0.293*
*PC*AUDIT4*								−0.077		−0.086
								−0.471		*−0.491*
FamOwn	−0.045	−0.060	−0.047	−0.048	−0.053	**−0.064**	**−0.065**	**−0.068**	**−0.073**	**−0.076**
	−1.311	*−1.624*	*−1.373*	*−1.408*	*−1.593*	***−1.692****	***−1.751****	***−1.903****	***−2.033*****	***−2.066*****
GovOwn	0.031	0.028	0.032	0.024	0.027	0.023	0.021	0.024	0.016	0.012
	0.529	*0.476*	*0.534*	*0.400*	*0.448*	*0.374*	*0.333*	*0.407*	*0.264*	*0.193*
FSIZE	0.002	0.003	0.003	0.002	0.001	0.004	0.004	0.002	0.003	0.003
	0.289	*0.464*	*0.380*	*0.326*	*0.116*	*0.563*	*0.496*	*0.289*	*0.418*	*0.408*

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
ROA	**−0.714**	**−0.716**	**−0.711**	**−0.727**	**−0.726**	**−0.725**	**−0.730**	**−0.728**	**−0.739**	**−0.749**
	−4.300***	***−4.310******	***−4.274******	***−4.393******	***−4.327******	***−4.296******	***−4.399******	***−4.332******	***−4.410******	***−4.399******
SALES_G	**−0.036**	**−0.035**	**−0.036**	**−0.036**	**−0.035**	**−0.034**	**−0.034**	**−0.034**	**−0.034**	**−0.034**
	−3.434***	***−3.274******	***−3.413******	***−3.426******	***−3.368******	***−3.200******	***−3.246******	***−3.252******	***−3.195******	***−3.165******
MTB	0.003	0.004	0.004	0.004	0.003	0.004	0.004	0.003	0.004	0.004
	0.784	*0.910*	*0.815*	*0.837*	*0.602*	*0.935*	*0.967*	*0.741*	*0.825*	*0.809*
CFO	−0.024	−0.022	−0.022	−0.030	−0.028	−0.022	−0.030	−0.028	−0.030	−0.036
	−0.174	*−0.157*	*−0.157*	*−0.214*	*−0.204*	*−0.156*	*−0.210*	*−0.199*	*−0.218*	*−0.256*
LEV	**0.270**	**0.252**	**0.270**	**0.267**	**0.263**	**0.248**	**0.246**	**0.246**	**0.241**	**0.236**
	3.352***	***3.121******	***3.349******	***3.275******	***3.257******	***3.048******	***2.996******	***3.048******	***2.956******	***2.865******
LOSS	**−0.191**	**−0.191**	**−0.191**	**−0.193**	**−0.191**	**−0.192**	**−0.193**	**−0.191**	**−0.193**	**−0.193**
	−7.165***	***−7.178******	***−7.160******	***−7.183******	***−7.149******	***−7.160******	***−7.195******	***−7.157******	***−7.169******	***−7.139******
COMPLEX	**−0.051**	**−0.050**	**−0.051**	**−0.052**	**−0.054**	**−0.050**	**−0.052**	**−0.054**	**−0.056**	**−0.055**
	−2.870***	***−2.849******	***−2.869******	***−2.894******	***−2.971******	***−2.799******	***−2.805******	***−2.944******	***−2.987******	***−2.874******
CAPEX	−0.079	−0.075	−0.079	−0.081	−0.080	−0.073	−0.076	−0.076	−0.078	−0.075
	−0.883	*−0.843*	*−0.880*	*−0.899*	*−0.904*	*−0.829*	*−0.848*	*−0.856*	*−0.877*	*−0.840*
IND	0.002	0.000	0.002	0.001	0.009	−0.001	−0.002	0.006	0.005	0.002
	0.042	*−0.003*	*0.048*	*0.016*	*0.204*	*−0.030*	*−0.051*	*0.125*	*0.117*	*0.035*
lnACMeet	−0.002	−0.003	−0.002	−0.001	−0.003	−0.004	−0.002	−0.004	−0.003	−0.003
	−0.118	*−0.175*	*−0.121*	*−0.075*	*−0.141*	*−0.203*	*−0.129*	*−0.193*	*−0.149*	*−0.176*
lnAGE	0.000	0.002	0.001	0.000	0.001	0.001	0.001	0.003	0.003	0.002
	0.006	*0.166*	*0.079*	*−0.037*	*0.126*	*0.114*	*0.115*	*0.262*	*0.288*	*0.136*
CONSTANT	**0.162**	**0.160**	**0.157**	**0.167**	**0.154**	**0.162**	**0.167**	**0.153**	**0.155**	**0.163**
	2.019**	***2.001*****	***1.984*****	***2.093*****	***1.881****	***2.019*****	***2.078*****	***1.881****	***1.932****	***1.992*****

Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Total observations	899	899	899	899	899	899	899	899	899	899
Adjusted R-square	0.117	0.118	0.116	0.117	0.117	0.117	0.117	0.117	0.117	0.115
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	2.070	2.010	2.000	2.000	2.000	1.880	1.880	1.880	1.830	1.680
Prob > F	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.003	0.008
VIF	2.370	2.340	2.350	2.340	2.360	2.350	2.310	2.370	2.300	2.340

Small_Profits_TA: Reporting small positive profits; *PC:* Political connectedness*; InstOwn*: Strategic institutional ownership; *IAF_Out:* Internal audit outsourcing*; AUDIT4*: audit quality*; FamOwn*: Family ownership*; GovOwn*: Government ownership*; FSIZE*: Firm size*; ROA:* Return on assets*; SALES_G*: Sales growth*; MTB:* Market-to-book ratio; *CFO:* Operating cash flow ratio*; LEV:* Leverage*; LOSS:* Negative income*; COMPLEX*: firm complexity*; CAPEX:* Capital expenditure*; IND*: Board independence*; lnACMeet:* Log of audit committee meetings; *lnAGE:* Log of firm age. (For additional details, refer to *Appendix A.)*
** p < 0.1, ** p < 0.05, *** p < 0.01*

7.3 Alternative Measures of the Independent and Control Variables

This section reports the results of further analysis on the impact of political connectedness and strategic institutional ownership on financial reporting quality using alternative measures. Specifically, political connectedness was proxied using three dichotomous variables to analyse the impact of politically connected directors, shareholders, and as board chairperson. Furthermore, an index measure was employed to analyse the combined impact of these dichotomous measures. This section also introduces an alternative measure for strategic institutional ownership that replaces the proportion of strategic institutional stockholdings with a dichotomous variable that indicates the presence of strategic institutional investors in the firm's ownership structure. Finally, since different measures and proxies have been used in the literature to measure different control variables, the analysis was executed with different measures in order to ensure that the results in Chapter Six were not driven by specific control variable measures.

7.3.1 Alternative Measures of Political Connectedness and Strategic Institutional Ownership

Panel A in Table 7.4–Table 7.8 presents the additional analysis results of the impact of political connectedness on financial reporting quality. Specifically, Columns 1 to 3 report the analysis results when the presence of politically connected directors was measured as a dichotomous variable taking the value of 1 if a politically connected director is present, and zero otherwise (*PC_D*). Next, in Columns 4 to 6 the presence of political connectedness was measured using a dichotomous variables that took the value of 1 if a significant shareholder is politically connected (i.e., holding at least 5% of the firms' shares), and zero otherwise (*PC_Own_D*). Additionally, Columns 7 to 9 document the findings of the analysis using a dichotomous variable to measure political connectedness that took the value of 1 if the board chairperson is politically connected and zero otherwise (*PC_Chair*). Finally, Columns 10 to 12 report the results of the analysis that used an index measure taking the average value of three dichotomous variables (*PC_D*, *PC_Own_D*, and *PC_Chair*). The variables were regressed against financial reporting quality measures in isolation and in unison with other explanatory variables (i.e., strategic institutional ownership, internal audit sourcing arrangements, and audit quality). As shown across all regressions, they were

strongly consistent with the main analysis results reported in Chapter Six. Regardless of the form of political connectedness, the results indicate that politically connected firms had statistically significantly higher financial reporting quality than their counterparts. However, politically connected stakeholders had statistically significant impact in deterring earnings management (hence, improving financial reporting quality) when acting in an isolation from strategic institutional investors.

Panel B in Table 7.4–Table 7.8 reports the additional analysis results of the impact of strategic institutional investors on financial reporting quality. The analysis was conducted in a similar manner to the alternative measures of political connectedness. That is, strategic institutional ownership was measured using a dichotomous variable that took the value of 1 if a strategic institutional shareholder existed in the ownership structure, and zero otherwise (*InstOwn_D*). The association was investigated both in isolation and in unison with other explanatory variables. The results were largely consistent with the main analysis results reported in Chapter Six, indicating that the presence of strategic institutional investors was effective in restraining earnings management and improving financial reporting quality.

Table 7.4
Results of OLS Regression with Robust Standard Errors – Dependent Variable: The Absolute Value of Discretionary Accruals (*EM_Kothari*)

Panel A: Alternative Measures of Political Connectedness

	***PC:* Existence of Politically Connected Directors**			***PC*: Existence of Politically Connected Shareholders**			***PC*: Existence of Politically Connected Chairperson**			***PC*: Index of Political Connectedness**		
Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
PC_D	**−0.006**	**−0.006**	−0.008									
	−1.810*	***−1.836****	*−1.412*									
PC_Own_D				−0.004	−0.004	**−0.013**						
				−1.382	*−1.365*	***−2.372****						
PC_Chair							**−0.006**	**−0.006**	**−0.010**			
							−2.118*	***−2.148****	***−1.965****			
PC_Index										**−0.006**	**−0.006**	**−0.011**
										−1.891*	***−1.905****	***−1.966****
InstOwn		**−0.026**	−0.020		**−0.025**	−0.016		**−0.026**	−0.021		**−0.026**	−0.019
		−1.835*	*−1.323*		***−1.740****	*−1.106*		***−1.841****	*−1.418*		***−1.801****	*−1.281*
IAF_Out		0.001	−0.002		0.001	−0.004		0.001	−0.002		0.001	−0.003
		0.193	*−0.508*		*0.254*	*−1.141*		*0.199*	*−0.600*		*0.221*	*−0.846*
AUDIT4		0.000	0.000		0.000	−0.002		0.000	−0.001		0.000	−0.001
		0.088	*−0.084*		*0.116*	−0.505		*0.095*	−0.219		*0.102*	−0.277
*PC*InstOwn*			−0.031			−0.032			−0.024			−0.028
			−0.860			*−0.875*			*−0.664*			*−0.768*

	***PC:* Existence of Politically Connected Directors**			***PC*: Existence of Politically Connected Shareholders**			***PC*: Existence of Politically Connected Chairperson**			***PC*: Index of Political Connectedness**		
Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
*PC*IAF_Out*			0.009			**0.020**			**0.011**			**0.015**
			1.510			**2.828*****			**1.760***			**2.201****
*PC*AUDIT4*			0.002			0.008			0.004			0.004
			0.320			*1.249*			*0.625*			0.713
Control Variables	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT	**0.079**	**0.077**	**0.075**	**0.081**	**0.078**	**0.073**	**0.079**	**0.077**	**0.075**	**0.080**	**0.077**	**0.074**
	5.143***	***5.019******	***4.809******	***5.195******	***5.069******	***4.826******	***5.144******	***5.019******	***4.821******	***5.157******	***5.035******	***4.809******
Total observations	899	899	899	899	899	899	899	899	899	899	899	899
Adjusted R-square	0.293	0.293	0.292	0.292	0.291	0.297	0.294	0.293	0.294	0.293	0.293	0.294
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	9.780	8.920	8.340	9.730	8.870	8.480	9.820	8.960	8.360	9.780	8.920	8.380
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	2.340	2.300	2.410	2.350	2.300	2.420	2.340	2.300	2.410	2.340	2.300	2.410

Panel B: Alternative Measure of Strategic Institutional Ownership

Regressions	**1**	**2**	**3**
PC		**−0.033**	**−0.040**
		−2.307**	***−1.768****
InstOwn_D	**−0.005**	**−0.005**	**−0.005**
	−1.908*	***−1.823****	**−1.777***
IAF_Out		0.000	−0.001
		0.079	−0.280
AUDIT4		0.000	0.000
		−0.008	−0.091
*PC*InstOwn_D*			0.002
			0.060
*PC*IAF_Out*			0.036
			1.035
*PC*AUDIT4*			0.003
			0.118
Control Variables	Included	Included	Included
CONSTANT	**0.073**	**0.073**	**0.072**
	4.708**	***4.683*****	**4.525*****
Total observations	899	899	899
Adjusted R-square	0.293	0.294	0.292
Industry Dummy	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes
F	9.770	8.900	8.240
Prob > F	0.000	0.000	0.000
VIF	2.380	2.320	2.390

Panel A Regression Models

Column 1: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_D_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 2: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 3: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_D_{i,t}* InstOwn_{i,t} + \beta_6 PC\_D_{i,t}* IAF\_Out_{i,t} + \beta_7 PC\_D_{i,t}* AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 4: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Own\_D_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}\varepsilon$

Column 5: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Own\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon$

Column 6: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Own\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_Own\_D_{i,t}* InstOwn_{i,t} + \beta_6 PC\_Own\_D_{i,t}* IAF\_Out_{i,t} + \beta_7 PC\_Own\_D_{i,t}* AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 7: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Chair_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 8: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Chair_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 9: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Chair_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_Chair_{i,t}* InstOwn_{i,t} + \beta_6 PC\_Chair_{i,t}*IAFOut_{i,t} + \beta_7 PC\_Chair_{i,t}*AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 10: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Index_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 11: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Index_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 12: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Index_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_Index_{i,t}* InstOwn_{i,t} + \beta_6 PC\_Index_{i,t}*IAFOut_{i,t} + \beta_7 PC\_Index_{i,t}*AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Panel B Regression Models

Column 1: $FRQ_{i,t} = \beta_0 + \beta_1 Instown\_D_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 2: $FRQ_{i,t} = \beta_0 + \beta_1 PC_{i,t} + \beta_2 InstOwn\_D_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 3: $FRQ_{i,t} = \beta_0 + \beta_1 PC_{i,t} + \beta_2 InstOwn\_D_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_D_{i,t}* InstOwn\_D_{i,t} + \beta_6 PC\_D_{i,t}* IAF\_Out_{i,t} + \beta_7 PC\_D_{i,t}*AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Where:

FRQ: Financial reporting quality; *EM_Kothari*: The magnitude of discretionary accruals measured based on Kothari, Leone, and Wasley's (2005) performance-adjusted model; *PC*, *PC_D*, *PC_Chair*, and *PC_Index*: Political connectedness; *InstOwn* and *InstOwn_D*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; $\varepsilon_{i,t}$: Error term (For additional details refer to Appendix A). * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 7.5
Results of OLS Regression with Robust Standard Errors – Dependent Variable: The Absolute Value of Abnormal Cash Flows (*REM_CFO*)

Panel A: Alternative Measures of Political Connectedness

	***PC*: Existence of Politically Connected Directors**			***PC*: Existence of Politically Connected Shareholders**			***PC*: Existence of Politically Connected Chairperson**			***PC*: Index of Political Connectedness**		
Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
PC_D	**−0.011**	**−0.012**	**−0.014**									
	−3.063***	***−3.156******	***−2.254*****									
PC_Own_D				**−0.017**	**−0.017**	**−0.019**						
				−4.467***	***−4.556******	***−2.971******						
PC_Chair							**−0.010**	**−0.011**	**−0.011**			
							−2.803***	***−2.914******	***−1.809****			
PC_Index										**−0.014**	**−0.014**	**−0.016**
										−3.554***	***−3.660******	***−2.474*****
InstOwn		**−0.073**	**−0.078**		**−0.069**	**−0.079**		**−0.073**	**−0.077**		**−0.072**	**−0.080**
		−3.121***	***−3.116******		***−2.978******	***−3.198******		***−3.119******	***−3.073******		***−3.086******	***−3.201******
IAF_Out		0.003	0.002		0.003	0.004		0.003	0.003		0.003	0.003
		0.697	*0.565*		*0.864*	*0.881*		*0.711*	*0.703*		*0.747*	*0.767*
AUDIT4		**0.016**	**0.015**		**0.016**	**0.016**		**0.016**	**0.016**		**0.016**	**0.016**
		4.250***	***3.598******		***4.342******	**3.830*****		***4.259******	**3.707*****		***4.282******	**3.677*****
*PC*InstOwn*			0.027			0.062			0.020			0.044
			0.575			*1.298*			*0.425*			*0.907*

	***PC:* Existence of Politically Connected Directors**			***PC*: Existence of Politically Connected Shareholders**			***PC*: Existence of Politically Connected Chairperson**			***PC*: Index of Political Connectedness**		
Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
*PC*IAF_Out*			0.000			−0.001			−0.002			−0.002
			0.056			*−0.118*			*−0.237*			*−0.260*
*PC*AUDIT4*			0.002			−0.001			0.000			0.000
			0.256			*−0.189*			*0.032*			*0.033*
Control Variables	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT	**0.083**	**0.069**	**0.070**	**0.089**	**0.075**	**0.077**	**0.083**	**0.069**	**0.070**	**0.085**	**0.071**	**0.072**
	4.001***	***3.384******	***3.386******	***4.253******	***3.651******	**3.666*****	***4.001******	***3.381******	***3.392******	***4.073******	***3.460******	***3.488******
Total observations	899	899	899	899.000	899.000	899.000	899	899	899	899	899	899
Adjusted R-square	0.410	0.426	0.424	0.415	0.431	0.430	0.409	0.425	0.423	0.411	0.428	0.426
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	21.180	19.920	18.900	21.740	20.410	19.680	21.190	19.920	18.800	21.280	20.000	19.100
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	2.340	2.300	2.410	2.350	2.300	2.420	2.340	2.300	2.410	2.340	2.300	2.410

Panel B: Alternative Measure of Strategic Institutional Ownership.

Regressions	**1**	**2**	**3**
PC		**−0.644**	**−1.073**
		−4.103***	***−3.910******
InstOwn_D	**−0.071**	**−0.065**	**−0.087**
	−2.332**	***−2.186*****	***−2.823******
IAF_Out		**0.053**	0.041
		1.828*	1.277
AUDIT4		**0.085**	**0.069**
		3.060***	**2.236****
*PC*InstOwn_D*			**0.529**
			1.902*
*PC*IAF_Out*			0.367
			1.143
*PC*AUDIT4*			0.301
			1.094
Control Variables	Included	Included	Included
CONSTANT	0.064	0.008	0.004
	0.434	*0.052*	*0.029*
Total observations	899	899	899
Adjusted R-square	0.407	0.424	0.425
Industry Dummy	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes
F	20.350	18.690	17.470
Prob > F	0.000	0.000	0.000
VIF	2.380	2.320	2.390

Panel A Regression Models

Column 1: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_D_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 2: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 3: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_D_{i,t}* InstOwn_{i,t} + \beta_6 PC\_D_{i,t}* IAF\_Out_{i,t} + \beta_7 PC\_D_{i,t}* AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 4: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Own\_D_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}\varepsilon$

Column 5: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Own\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon$

Column 6: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Own\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_Own\_D_{i,t}* InstOwn_{i,t} + \beta_6 PC\_Own\_D_{i,t}* IAF\_Out_{i,t} + \beta_7 PC\_Own\_D_{i,t}* AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 7: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Chair_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 8: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Chair_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 9: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Chair_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_Chair_{i,t}* InstOwn_{i,t} + \beta_6 PC\_Chair_{i,t}*IAFOut_{i,t} + \beta_7 PC\_Chair_{i,t}*AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 10: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Index_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 11: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Index_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 12: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Index_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_Index_{i,t}* InstOwn_{i,t} + \beta_6 PC\_Index_{i,t}*IAFOut_{i,t} + \beta_7 PC\_Index_{i,t}*AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Panel B Regression Models

Column 1: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 InstOwn\_D_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 2: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC_{i,t} + \beta_2 InstOwn\_D_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 3: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC_{i,t} + \beta_2 InstOwn\_D_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_D_{i,t}* InstOwn\_D_{i,t} + \beta_6 PC\_D_{i,t}* IAF\_Out_{i,t} + \beta_7 PC\_D_{i,t}*AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Where:

FRQ: Financial reporting quality; *REM_CFO*: The Absolute Value of Abnormal Cash Flows based on Roychowdhury (2006) model; *PC, PC_D, PC_Chair,* and *PC_Index*: Political connectedness; *InstOwn* and *InstOwn_D*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; $\varepsilon_{i,t}$: Error term (For additional details refer to Appendix A). * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 7.6
Results of OLS Regression with Robust Standard Errors – Dependent Variable: The Absolute Value of Abnormal Production Costs (*REM_Prod*)

Panel A: Alternative Measures of Political Connectedness

	***PC*: Existence of Politically Connected Directors**			***PC*: Existence of Politically Connected Shareholders**			***PC*: Existence of Politically Connected Chairperson**			***PC*: Index of Political Connectedness**		
Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
PC_D	**−0.098**	**−0.098**	**−0.200**									
	−3.254***	***−3.333******	***−3.782******									
PC_Own_D				**−0.149**	**−0.151**	**−0.226**						
				−4.872***	***−4.962******	***−4.040******						
PC_Chair							**−0.086**	**−0.087**	**−0.173**			
							−2.886***	***−2.975******	***−3.282******			
PC_Index										**−0.121**	**−0.122**	**−0.220**
										−3.854***	***−3.951******	***−3.888******
InstOwn		**−0.412**	**−0.516**		**−0.380**	**−0.496**		**−0.411**	**−0.500**		**−0.405**	**−0.523**
		−2.901***	***−3.391******		***−2.684******	***−3.391******		***−2.902******	***−3.303******		***−2.843******	***−3.479******
IAF_Out		**0.061**	0.038		**0.066**	**0.071**		**0.061**	0.042		**0.062**	0.051
		2.066**	*1.149*		**2.254****	***2.069*****		***2.080*****	*1.264*		***2.118*****	*1.495*
AUDIT4		**0.090**	**0.069**		**0.093**	**0.074**		**0.091**	**0.074**		**0.091**	**0.071**
		3.220***	***2.149*****		**3.304*****	**2.291****		***3.229******	**2.296****		***3.248******	**2.168****
*PC*InstOwn*			**0.626**			**0.590**			**0.555**			**0.688**
			1.869*			***1.705****			***1.655****			***1.971*****

	***PC:* Existence of Politically Connected Directors**			***PC*: Existence of Politically Connected Shareholders**			***PC*: Existence of Politically Connected Chairperson**			***PC*: Index of Political Connectedness**		
Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
*PC*IAF_Out*			**0.098**			−0.002			0.088			0.059
			1.759*			−0.033			1.574			0.969
*PC*AUDIT4*			0.072			0.084			0.054			0.077
			1.338			*1.442*			*1.009*			1.333
Control Variables	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT	0.150	0.051	0.053	0.199	0.100	0.101	0.149	0.05	0.052	0.164	0.065	0.068
	1.019	*0.349*	*0.356*	1.335	0.681	*0.669*	*1.014*	*0.342*	*0.350*	*1.106*	*0.440*	*0.459*
Total observations	899	899	899	899	899	899	899	899	899	899	899	899
Adjusted R-square	0.410	0.419	0.421	0.416	0.426	0.427	0.408	0.418	0.418	0.412	0.421	0.422
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	19.930	18.610	17.210	20.570	19.440	18.590	19.890	18.600	17.160	20.070	18.790	17.760
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	2.340	2.300	2.410	2.350	2.300	2.420	2.340	2.300	2.410	2.340	2.300	2.410

Panel B: Alternative Measure of Strategic Institutional Ownership.

Regressions	**1**	**2**	**3**
PC		**−0.644**	**−1.073**
		−4.103***	***−3.910******
InstOwn_D	**−0.071**	**−0.065**	**−0.087**
	−2.332**	***−2.186*****	***−2.823******
IAF_Out		**0.053**	0.041
		1.828*	1.277
AUDIT4		**0.085**	**0.069**
		3.060***	**2.236****
*PC*InstOwn_D*			**0.529**
			1.902*
*PC*IAF_Out*			0.367
			1.143
*PC*AUDIT4*			0.301
			1.094
Control Variables	Included	Included	Included
CONSTANT	0.064	0.008	0.004
	0.434	*0.052*	*0.029*
Total observations	899	899	899
Adjusted R-square	0.407	0.424	0.425
Industry Dummy	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes
F	20.350	18.690	17.470
Prob > F	0.000	0.000	0.000
VIF	2.380	2.320	2.390

Panel A Regression Models

Column 1: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_D_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 2: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 3: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_D_{i,t}* InstOwn_{i,t} + \beta_6 PC\_D_{i,t}* IAF\_Out_{i,t} + \beta_7 PC\_D_{i,t}* AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 4: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Own\_D_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}\varepsilon$

Column 5: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Own\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon$

Column 6: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Own\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_Own\_D_{i,t}* InstOwn_{i,t} + \beta_6 PC\_Own\_D_{i,t}* IAF\_Out_{i,t} + \beta_7 PC\_Own\_D_{i,t}* AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 7: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Chair_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 8: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Chair_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 9: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Chair_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_Chair_{i,t}* InstOwn_{i,t} + \beta_6 PC\_Chair_{i,t}*IAFOut_{i,t} + \beta_7 PC\_Chair_{i,t}*AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 10: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Index_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 11: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Index_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 12: $FRQ_{i,t} = \beta_0 + \beta_1 PC\_Index_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_Index_{i,t}* InstOwn_{i,t} + \beta_6 PC\_Index_{i,t}*IAFOut_{i,t} + \beta_7 PC\_Index_{i,t}*AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Panel B Regression Models

Column 1: $FRQ_{i,t} = \beta_0 + \beta_1 InstOwn\_D_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 2: $FRQ_{i,t} = \beta_0 + \beta_1 PC_{i,t} + \beta_2 InstOwn\_D_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 3: $FRQ_{i,t} = \beta_0 + \beta_1 PC_{i,t} + \beta_2 InstOwn\_D_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_D_{i,t}* InstOwn\_D_{i,t} + \beta_6 PC\_D_{i,t}* IAF\_Out_{i,t} + \beta_7 PC\_D_{i,t}*AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Where:

FRQ: Financial reporting quality; *REM_Prod*: The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *PC, PC_D, PC_Chair,* and *PC_Index*: Political connectedness; *InstOwn* and *InstOwn_D*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; $\varepsilon_{i,t}$: Error term (For additional details refer to Appendix A). * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 7.7
Results of OLS Regression with Robust Standard Errors – Dependent Variable: The Absolute Value of Abnormal Discretionary Expenses (*REM_Exp*)

Panel A: Alternative Measures of Political Connectedness

	***PC*: Existence of Politically Connected Directors**			***PC*: Existence of Politically Connected Shareholders**			***PC*: Existence of Politically Connected Chairperson**			***PC*: Index of Political Connectedness**		
Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
PC_D	**−0.013**	**−0.013**	**−0.022**									
	−3.942***	***−4.007******	***−3.459******									
PC_Own_D				**−0.016**	**−0.016**	**−0.019**						
				−5.048***	***−5.003******	***−3.128******						
PC_Chair							**−0.010**	**−0.010**	**−0.015**			
							−3.207***	***−3.270******	***−2.514*****			
PC_Index										**−0.014**	**−0.014**	**−0.020**
										−4.313***	***−4.338******	***−3.277******
InstOwn		**−0.039**	**−0.052**		**−0.035**	**−0.047**		**−0.039**	**−0.048**		**−0.038**	**−0.051**
		−2.981***	***−3.683******		***−2.725******	***−3.421******		***−2.979******	***−3.399******		***−2.905******	***−3.638******
IAF_Out		**−0.005**	**−0.006**		**−0.004**	−0.004		**−0.005**	**−0.005**		**−0.005**	−0.005
		−1.930*	***−1.920****		***−1.717****	*−1.365*		***−1.897****	***−1.677****		***−1.858****	*−1.551*
AUDIT4		**0.008**	**0.006**		**0.008**	**0.008**		**0.008**	**0.007**		**0.008**	**0.007**
		2.706***	***1.826****		***2.796******	***2.491*****		***2.718******	**2.172****		***2.740******	**2.140****
*PC*InstOwn*			**0.070**			**0.084**			0.052			**0.079**
			1.879*			***2.451*****			*1.418*			***2.150*****

	***PC:* Existence of Politically Connected Directors**			***PC*: Existence of Politically Connected Shareholders**			***PC*: Existence of Politically Connected Chairperson**			***PC*: Index of Political Connectedness**		
Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
*PC*IAF_Out*			0.003			0.001			0.001			0.001
			0.519			0.215			0.194			0.157
*PC*AUDIT4*			0.007			−0.002			0.002			0.003
			1.129			*−0.391*			*0.404*			0.439
Control Variables	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT	**0.083**	**0.078**	**0.079**	**0.088**	**0.083**	**0.085**	**0.082**	**0.078**	**0.079**	**0.084**	**0.079**	**0.081**
	6.227***	***5.805******	***5.845******	***6.629******	***6.226******	***6.176******	***6.239******	***5.818******	***5.832******	***6.351******	***5.933******	***5.946******
Total observations	899	899	899	899	899	899	899	899	899	899	899	899
Adjusted R-square	0.622	0.626	0.626	0.624	0.628	0.628	0.619	0.624	0.623	0.622	0.626	0.626
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	62.520	57.830	53.450	62.420	58.480	54.120	61.960	57.530	52.950	62.220	57.860	53.420
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	2.340	2.300	2.410	2.350	2.300	2.420	2.340	2.300	2.410	2.340	2.300	2.410

Panel B: Alternative Measure of Strategic Institutional Ownership.

Regressions	**1**	**2**	**3**
PC		**−0.078**	**−0.111**
		−4.525***	***−3.875******
InstOwn_D	−0.005	−0.004	**−0.006**
	−1.527	*−1.214*	***−1.828****
IAF_Out		**−0.006**	**−0.006**
		−2.345**	**−2.019****
AUDIT4		**0.007**	**0.006**
		2.492**	**2.000****
*PC*InstOwn_D*			**0.058**
			1.849*
*PC*IAF_Out*			−0.009
			−0.287
*PC*AUDIT4*			0.018
			0.587
Control Variables	Included	Included	Included
CONSTANT	**0.076**	**0.076**	**0.077**
	5.593***	***5.384******	***5.385******
Total observations	899	899	899
Adjusted R-square	0.617	0.628	0.628
Industry Dummy	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes
F	62.760	57.900	53.300
Prob > F	0.000	0.000	0.000
VIF	2.380	2.320	2.390

Panel A Regression Models

Column 1: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC\_D_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$

Column 2: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC\_D_{i,t} + \boldsymbol{\beta}_2 InstOwn_{i,t} + \boldsymbol{\beta}_3 IAF\_Out_{i,t} + \boldsymbol{\beta}_4 AUDIT4_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$

Column 3: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC\_D_{i,t} + \boldsymbol{\beta}_2 InstOwn_{i,t} + \boldsymbol{\beta}_3 IAF\_Out_{i,t} + \boldsymbol{\beta}_4 AUDIT4_{i,t} + \boldsymbol{\beta}_5 PC\_D_{i,t}{*}\ InstOwn_{i,t} + \boldsymbol{\beta}_6 PC\_D_{i,t}{*}\ IAF\_Out_{i,t} + \boldsymbol{\beta}_7 PC\_D_{i,t}{*}\ AUDIT4_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$

Column 4: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC\_Own\_D_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}\boldsymbol{\varepsilon}$

Column 5: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC\_Own\_D_{i,t} + \boldsymbol{\beta}_2 InstOwn_{i,t} + \boldsymbol{\beta}_3 IAF\_Out_{i,t} + \boldsymbol{\beta}_4 AUDIT4_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}$

Column 6: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC\_Own\_D_{i,t} + \boldsymbol{\beta}_2 InstOwn_{i,t} + \boldsymbol{\beta}_3 IAF\_Out_{i,t} + \boldsymbol{\beta}_4 AUDIT4_{i,t} + \boldsymbol{\beta}_5 PC\_Own\_D_{i,t}{*}\ InstOwn_{i,t} + \boldsymbol{\beta}_6 PC\_Own\_D_{i,t}{*}\ IAF\_Out_{i,t} + \boldsymbol{\beta}_7 PC\_Own\_D_{i,t}{*}\ AUDIT4_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$

Column 7: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC\_Chair_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$

Column 8: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC\_Chair_{i,t} + \boldsymbol{\beta}_2 InstOwn_{i,t} + \boldsymbol{\beta}_3 IAF\_Out_{i,t} + \boldsymbol{\beta}_4 AUDIT4_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$

Column 9: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC\_Chair_{i,t} + \boldsymbol{\beta}_2 InstOwn_{i,t} + \boldsymbol{\beta}_3 IAF\_Out_{i,t} + \boldsymbol{\beta}_4 AUDIT4_{i,t} + \boldsymbol{\beta}_5 PC\_Chair_{i,t}{*}\ InstOwn_{i,t} + \boldsymbol{\beta}_6 PC\_Chair_{i,t}{*}IAFOut_{i,t} + \boldsymbol{\beta}_7 PC\_Chair_{i,t}{*}AUDIT4_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$

Column 10: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC\_Index_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$

Column 11: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC\_Index_{i,t} + \boldsymbol{\beta}_2 InstOwn_{i,t} + \boldsymbol{\beta}_3 IAF\_Out_{i,t} + \boldsymbol{\beta}_4 AUDIT4_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$

Column 12: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC\_Index_{i,t} + \boldsymbol{\beta}_2 InstOwn_{i,t} + \boldsymbol{\beta}_3 IAF\_Out_{i,t} + \boldsymbol{\beta}_4 AUDIT4_{i,t} + \boldsymbol{\beta}_5 PC\_Index_{i,t}{*}\ InstOwn_{i,t} + \boldsymbol{\beta}_6 PC\_Index_{i,t}{*}IAFOut_{i,t} + \boldsymbol{\beta}_7 PC\_Index_{i,t}{*}AUDIT4_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$

Panel B Regression Models

Column 1: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 InstOwn\_D_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$

Column 2: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC_{i,t} + \boldsymbol{\beta}_2 InstOwn\_D_{i,t} + \boldsymbol{\beta}_3 IAF\_Out_{i,t} + \boldsymbol{\beta}_4 AUDIT4_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$

Column 3: $\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 PC_{i,t} + \boldsymbol{\beta}_2 InstOwn\_D_{i,t} + \boldsymbol{\beta}_3 IAF\_Out_{i,t} + \boldsymbol{\beta}_4 AUDIT4_{i,t} + \boldsymbol{\beta}_5 PC\_D_{i,t}{*}\ InstOwn\_D_{i,t} + \boldsymbol{\beta}_6 PC\_D_{i,t}{*}\ IAF\_Out_{i,t} + \boldsymbol{\beta}_7 PC\_D_{i,t}{*}AUDIT4_{i,t} + \boldsymbol{\beta}_k (Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$

Where:

FRQ: Financial reporting quality; *REM_Exp*: The Absolute Value of Discretionary Expenses measured based on Roychowdhury (2006) model; *PC, PC_D, PC_Chair,* and *PC_Index*: Political connectedness; *InstOwn* and *InstOwn_D*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; $\boldsymbol{\varepsilon}_{i,t}$: Error term. (For additional details refer to Appendix A.) * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 7.8
Results of OLS Regression with Robust Standard Errors – Dependent Variable: Reporting Small Positive Profits (*Small_Profits*)

Panel A: Alternative Measures of Political Connectedness

	***PC*: Existence of Politically Connected Directors**			***PC*: Existence of Politically Connected Shareholders**			***PC*: Existence of Politically Connected Chairperson**			***PC*: Index of Political Connectedness**		
Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
PC_D	**−0.038**	**−0.038**	−0.044									
	−2.847***	***−2.848******	*−1.612*									
PC_Own_D				**−0.026**	**−0.026**	−0.039						
				−1.806*	***−1.810****	*−1.477*						
PC_Chair							**−0.036**	**−0.036**	−0.042			
							−2.778***	***−2.782******	*−1.513*			
PC_Index										**−0.037**	**−0.037**	**−0.045**
										−2.771***	***−2.768******	***−1.656****
InstOwn		−0.052	−0.083		−0.045	−0.057		−0.052	−0.081		−0.049	−0.078
		−0.469	*−0.646*		*−0.403*	*−0.447*		*−0.468*	*−0.627*		*−0.442*	*−0.597*
IAF_Out		−0.007	−0.008		−0.006	−0.014		−0.007	−0.008		−0.007	−0.010
		−0.385	*−0.320*		*−0.328*	*−0.613*		*−0.377*	*−0.330*		*−0.357*	*−0.401*
AUDIT4		0.023	0.024		0.023	0.026		0.023	0.025		0.023	0.025
		1.248	*1.180*		*1.279*	*1.235*		*1.256*	*1.208*		*1.263*	*1.222*
*PC*InstOwn*			0.216			0.209			0.208			0.237
			1.045			*0.985*			*1.008*			*1.083*

	***PC:* Existence of Politically Connected Directors**			***PC*: Existence of Politically Connected Shareholders**			***PC*: Existence of Politically Connected Chairperson**			***PC*: Index of Political Connectedness**		
Regressions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
*PC*IAF_Out*			0.006			0.043			0.007			0.019
			0.186			*1.156*			*0.249*			*0.560*
*PC*AUDIT4*			−0.011			−0.022			−0.013			−0.018
			−0.407			*−0.686*			*−0.479*			*−0.610*
Control Variables	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT	**0.177**	**0.166**	**0.170**	**0.184**	**0.173**	**0.174**	**0.177**	**0.165**	**0.169**	**0.181**	**0.169**	**0.173**
	2.225 **	***2.070*** **	***2.085*** **	***2.300*** **	***2.145*** **	***2.119*** **	***2.222*** **	***2.065*** **	***2.079*** **	***2.270*** **	***2.114*** **	***2.118*** **
Total observations	899	899	899	899	899	899	899	899	899	899	899	899
Adjusted R-square	0.116	0.115	0.113	0.113	0.113	0.111	0.115	0.115	0.112	0.115	0.114	0.112
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	1.910	1.740	1.590	1.900	1.730	1.590	1.910	1.740	1.590	1.910	1.740	1.590
Prob > F	0.003	0.006	0.016	0.003	0.007	0.016	0.003	0.006	0.016	0.003	0.007	0.016
VIF	2.340	2.300	2.410	2.350	2.300	2.420	2.340	2.300	2.410	2.340	2.300	2.410

Panel B: Alternative Measure of Strategic Institutional Ownership.

Regressions	**1**	**2**	**3**
PC		**−0.145**	−0.175
		−1.867*	*−1.527*
InstOwn_D	**−0.037**	**−0.035**	**−0.038**
	−2.036**	***−1.943****	***−1.889****
IAF_Out		−0.008	−0.006
		−0.432	−0.267
AUDIT4		0.021	0.020
		1.114	1.006
*PC*InstOwn_D*			0.073
			0.427
*PC*IAF_Out*			−0.061
			−0.343
*PC*AUDIT4*			0.013
			0.070
Control Variables	Included	Included	Included
CONSTANT	**0.132**	0.128	0.130
	1.651*	*1.575*	*1.590*
Total observations	899	899	899
Adjusted R-square	0.116	0.117	0.114
Industry Dummy	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes
F	1.910	1.740	1.600
Prob > F	0.003	0.006	0.015
VIF	2.380	2.320	2.390

Panel A Regression Models

Column 1: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_D_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 2: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 3: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_D_{i,t}* InstOwn_{i,t} + \beta_6 PC\_D_{i,t}* IAF\_Out_{i,t} + \beta_7 PC\_D_{i,t}* AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 4: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Own\_D_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}\varepsilon$

Column 5: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Own\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon$

Column 6: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Own\_D_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_Own\_D_{i,t}* InstOwn_{i,t} + \beta_6 PC\_Own\_D_{i,t}* IAF\_Out_{i,t} + \beta_7 PC\_Own\_D_{i,t}* AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 7: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Chair_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 8: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Chair_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 9: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Chair_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_Chair_{i,t}* InstOwn_{i,t} + \beta_6 PC\_Chair_{i,t}*IAFOut_{i,t} + \beta_7 PC\_Chair_{i,t}*AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 10: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Index_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 11: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Index_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 12: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC\_Index_{i,t} + \beta_2 InstOwn_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_Index_{i,t}* InstOwn_{i,t} + \beta_6 PC\_Index_{i,t}*IAFOut_{i,t} + \beta_7 PC\_Index_{i,t}*AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Panel B Regression Models

Column 1: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 InstOwn\_D_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 2: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC_{i,t} + \beta_2 InstOwn\_D_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Column 3: $\boldsymbol{FRQ}_{i,t} = \beta_0 + \beta_1 PC_{i,t} + \beta_2 InstOwn\_D_{i,t} + \beta_3 IAF\_Out_{i,t} + \beta_4 AUDIT4_{i,t} + \beta_5 PC\_D_{i,t}* InstOwn\_D_{i,t} + \beta_6 PC\_D_{i,t}* IAF\_Out_{i,t} + \beta_7 PC\_D_{i,t}*AUDIT4_{i,t} + \beta_k (Control\ Variables)_{i,t} + \varepsilon_{i,t}$

Where:

FRQ: Financial reporting quality; *Small_Profits*: Reporting small positive profits; *PC*, *PC_D, PC_Chair*, and *PC_Index*: Political connectedness; *InstOwn* and *InstOwn_D*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; $\varepsilon_{i,t}$: Error term (For additional details refer to Appendix A).

7.3.2 Alternative Measures of Control Variables and Additional Control Variables

The main analysis of this study followed prior research by controlling for different variables that have been widely controlled for in earnings management studies. However, the literature does not offer a consensus view on the definitions of some control variables. For example, some studies (e.g., Gul et al., 2013) use the natural logarithm of a firm's total assets as a proxy for the size of the firm, while other studies (e.g., Kim et al., 2019; Singh et al., 2019) use the natural logarithm of market capitalisation to control for firm size. Similarly, firm profitability and firm capital structure have been controlled for using different measures in prior studies. In the main analysis of this thesis, the return on assets (*ROA*) was utilised to control for firm profitability and the ratio of long-term debt to total assets (*LEV*) was used to control for capital structure. In this section, the analysis was re-performed using different measures to control for firm size, firm profitability and firm capital structure in order to ensure the consistency of the main analysis results as discussed in Chapter Six.

The literature also suggests that the adoption of IFRS affects the quality of accounting information (e.g., Kwon et al., 2019). Therefore, an additional control variable was introduced in this section to control for the mandatory adoption of IFRS by listed firms. Table 7.9 presents the results of the multivariate analysis using the aforementioned control variables. Columns 1 and 2 present the analysis results using the absolute value of discretionary accruals as a proxy for financial reporting quality, while Columns 3 to 8 report the findings using real activity manipulation as a proxy of financial reporting quality. Specifically, Columns 3 and 4 report the analysis using sales manipulation (*REM_CFO*), Columns 5 and 6 report the analysis results using production cost manipulation (*REM_Prod*), and Columns 7 and 8 report the analysis results using discretionary expense manipulation (*REM_Exp*). Finally, Columns 9 and 10 document the results when financial reporting quality was proxied by reporting small positive profits (*Small_Profits*).

Consistent with the results presented in Chapter Six, Table 7.9 shows that political connectedness (*PC*) and strategic institutional ownership (*InstOwn*) continued to have statistically significant and negative coefficients even after controlling for IFRS adoption and using different measures for firm size, firm

profitability and firm capital structure. Furthermore, the coefficients related to audit quality (*AUDIT4*) showed results that were largely consistent with the findings documented in Chapter Six. They demonstrate a statistically significant and positive relationship with real activity-based earnings management. The return on equity (*ROE*) is documented in Table 7.9 as a significant and positive determinant of the variation in real earnings management proxies, which is consistent with the firm profitability measure used in the main analysis (i.e., *ROA*), while the other variables (*FSIZE_MKT* and *LEV_TD*) provided mixed results. The explanatory power of the regression model, as indicated by the adjusted R-square, ranged between 0.111 and 0.633. Table 7.9 also indicates that the regression model was statistically significant with an F-statistic value ranging between 1.610 and 61.170. Finally, Table 7.9 documents a VIF ranging between 2.190 and 2.240 signifying that there was no impact of multi-collinearity on the regression analysis (Gujarati & Porter, 2009).

Table 7.9
Results of OLS Regression with Robust Standard Errors – Dependent variable is specified for each two columns

Dependent Variable	***EM_Kothari***		***REM_CFO***		***REM_Prod***		***REM_Exp***		***Small_Profits***	
Regression:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
PC	**−0.032**	**−0.038**	**−0.046**	**−0.050**	**−0.490**	**−0.799**	**−0.059**	**−0.084**	**−0.200**	**−0.232**
	−2.266**	***−1.744****	***−2.641*****	***−1.855****	***−3.029*****	***−2.950*****	***−3.462*****	***−2.919*****	***−2.520*****	***−2.136*****
InstOwn	***−0.028***	−0.025	**−0.068**	**−0.071**	**−0.436**	**−0.497**	**−0.027**	**−0.036**	0.001	−0.035
	−1.883*	*−1.642*	***−2.943*****	***−2.899*****	***−3.123*****	***−3.382*****	***−1.966*****	***−2.556*****	*0.006*	*−0.277*
IAF_Out	*0.001*	−0.001	0.004	0.004	**0.059**	**0.048**	−0.004	−0.003	−0.005	−0.002
	0.309	*−0.200*	*1.064*	*0.985*	***2.297*****	***1.679****	*−1.477*	*−1.230*	*−0.255*	*−0.077*
AUDIT4	*0.000*	*−0.001*	**0.014**	**0.014**	**0.072**	**0.061**	**0.008**	**0.007**	0.025	0.027
	−0.170	*−0.233*	***3.866*****	***3.511*****	***2.516*****	***1.892****	***2.733*****	***2.250*****	*1.340*	*1.353*
*PC*InstOwn*		−0.051		0.092		2.835		**0.340**		1.461
		−0.277		*0.401*		*1.583*		***1.702****		*1.218*
*PC*IAF_Out*		*0.045*		−0.006		0.355		−0.010		−0.077
		1.299		*−0.155*		*1.066*		*−0.255*		*−0.408*
*PC*AUDIT4*		*0.004*		0.000		0.258		0.020		−0.056
		0.140		*−0.005*		*0.893*		*0.654*		*−0.319*
IFRS	−0.002	−0.002	**−0.031**	**−0.031**	**0.079**	**0.082**	**0.015**	**0.015**	0.015	0.016
	−0.352	*−0.349*	***−4.643*****	***−4.626*****	***1.780****	***1.850****	***2.866*****	***2.910*****	*0.425*	*0.436*
FSIZE_MKT	*−0.001*	−0.001	**−0.004**	**−0.004**	−0.030	−0.029	**−0.006**	**−0.006**	0.001	0.001
	−0.446	*−0.386*	***−2.127*****	***−2.136*****	*−1.498*	*−1.473*	***−4.610*****	***−4.651*****	*0.169*	*0.135*
ROE	*−0.029*	−0.030	**0.083**	**0.083**	**1.050**	**1.031**	**0.073**	**0.072**	**−0.416**	**−0.418**
	−1.478	*−1.535*	***4.326*****	***4.295*****	***6.319*****	***6.202*****	***3.791*****	***3.776*****	***−5.304*****	***−5.264*****
LEV_TD	***−0.017***	**−0.016**	**0.018**	**0.018**	0.001	0.000	**−0.015**	**−0.016**	**0.150**	**0.149**
	−2.028**	***−1.948****	***1.722****	***1.693****	*0.009*	*0.005*	***−1.647****	***−1.691****	***2.808*****	***2.739*****

Dependent Variable	***EM_Kothari***		***REM_CFO***		***REM_Prod***		***REM_Exp***		***Small_Profits***	
Regression:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Other Control Variables	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT	**0.066**	**0.065**	**0.113**	**0.114**	**0.331**	**0.345**	**0.127**	**0.129**	**0.179**	0.189
	4.491***	***4.353******	***5.440******	***5.474******	***1.652****	***1.720****	***8.782******	***8.805******	***2.197*****	*2.283***
Total observations	899	899	899	899	899	899	899	899	899	899
Adjusted R-square	0.289	0.287	0.434	0.432	0.432	0.432	0.633	0.633	0.113	0.111
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	8.750	8.140	21.250	20.370	19.290	17.810	61.170	56.160	1.750	1.610
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.014
VIF	2.190	2.240	2.190	2.240	2.190	2.240	2.190	2.240	2.190	2.240

Regression Model:

$$\boldsymbol{FRQ}_{i,t} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1\, PC\_D_{i,t} + \boldsymbol{\beta}_2\, InstOwn_{i,t} + \boldsymbol{\beta}_3\, IAF\_Out_{i,t} + \boldsymbol{\beta}_4\, AUDIT4_{i,t} + \boldsymbol{\beta}_5\, PC\_D_{i,t} * InstOwn_{i,t} + \boldsymbol{\beta}_6\, PC\_D_{i,t} * IAFOut_{i,t} + \boldsymbol{\beta}_7\, PC\_D_{i,t} * AUDIT4_{i,t} + \boldsymbol{\beta}_8\, IFRS_{i,t} + \boldsymbol{\beta}_9\, FSIZE\_MKT_{i,t} + \boldsymbol{\beta}_{10}\, ROE_{i,t} + \boldsymbol{\beta}_{11} LEV\_TD_{i,t} + \boldsymbol{\beta}_k\, (Other\ Control\ Variables)_{i,t} + \boldsymbol{\varepsilon}_{i,t}$$

Where:

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-adjusted model; *REM_CFO:* The Absolute Value of Abnormal Cash Flows based on Roychowdhury (2006) model; *REM_Prod:* The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP:* The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury's (2006) model; *Small_Profits:* Reporting Small Positive Profits; *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: Audit quality; *IFRS*: Reporting in accordance with International Financial Reporting Standards; *FSIZE_MKT:* Firm size based on market capitalisation; *ROE*: Return on Equity; *LEV_TD*: Leverage based on total debt; $\boldsymbol{\varepsilon}_{i,t}$: Error term. (For additional details refer to Appendix A.) * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

7.4 Sample Partitioning Based on Firm Characteristics

The literature indicates that financial reporting quality may be attributed to firm characteristics (Alhadab, 2017; Francis et al., 2009; Prawitt et al., 2009; Watts & Zimmerman 1978; Zang, 2012). The impact of specific firm characteristics can be examined by partitioning the study sample based on criteria given by such characteristics. For example, Singh et al. (2019) use market capitalisation to investigate the impact of firm size on earnings management behaviour, while Makarem and Roberts (2020) investigate the impact of profit reporting versus loss reporting on the use of earning management. Following this approach, the sample of this study will be partitioned based on profits and losses, firm complexity, firm size, and growth opportunities.

7.4.1 Partitioning by Profit and Loss

Prior literature suggests that reporting positive net income versus negative net income may indicate engagement in earnings management (Chen, H. et al. 2011; Francis & Dechun, 2008). In order to examine the consistency of the main analysis results as discussed in the Chapter Six, the main regressions were re-run after the study sample was divided into two sub-samples based on whether a firm reported a profit or loss in the respective reporting period. Table 7.10 reports the results of the multivariate analysis using the aforementioned partitioning criteria. Columns 1 to 4 report the analysis results using the absolute value of discretionary accruals as a proxy for financial reporting quality (*EM_Kothari*). Next, Columns 5 to 8 document the findings when financial reporting quality was measured using the magnitude of sales manipulation (*REM_CFO*), Columns 9 to 12 report the findings for analysis of the magnitude of production costs manipulation (*REM_Prod*), and Columns 13 to 16 report the regressions results using the magnitude of discretionary expense manipulation (*REM_Exp*).

The results reported in Table 7.10 were largely consistent with those of the main analysis reported in Chapter Six. The coefficients of the variable *PC* indicate that political connectedness continued to hold a statistically significant and negative relationship with both accrual-based and real activity-based earnings management, implying that it enhances financial reporting quality. Further, the results indicate that the relationship was stronger for the subsample of profitable firms than it was for the

subsample of loss firms. Similarly, the variable of strategic institutional ownership was shown to give results that were largely consistent with those of the main analysis when financial reporting quality was proxied by real activity manipulation. That is, strategic institutional ownership continued to have a statistically significant and negative relationship with real activity-based earnings management, playing an important role in increasing financial reporting quality. These findings suggest that politically connected directors and strategic institutional investors impose higher scrutiny on profitable firms than they do on firms with negative net income. Additionally, the coefficients of *AUDIT4* indicate that profitable clients of high-quality audit firms were more likely to engage in real earnings management than their counterparts (i.e., the loss-reporting clients). This indicates the tolerance of high-quality audit firms of the use of real activity manipulation techniques (Zang, 2012). This result is in line with the notion that real activity-based earnings management is costlier and has direct effects on firms' cash flows; hence, loss-reporting firms avoid using these techniques (Chi et al., 2011; Roychowdhury, 2006; Zang, 2012). The explanatory power shown in Table 7.10, as indicated by the adjusted R-square, ranged between 0.256 and 0.654. Table 7.10 shows that the regression models were statistically significant with an F-statistic value ranging between 6.300 and 310.970. Finally, Table 7.10 presents a VIF ranging between 2.520 and 2.720, signifying that there was no impact of multi-collinearity on the regression analysis (Gujarati & Porter, 2009).

Table 7.10
Results of OLS Regression with Robust Standard Errors – Partitioning Sample Based on Profit and Loss – Dependent variable is specified for each four columns

Dependent Variable	*EM_Kothari*				*REM_CFO*				*REM_Prod*				*REM_Exp*			
	Profit Firms		Loss Firms		Profit Firms		Loss Firms		Profit Firms		Loss Firms		Profit Firms		Loss Firms	
Regression:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PC	**−0.034**	**−0.051**	**−0.066**	−0.009	**−0.072**	**−0.084**	−0.022	−0.071	**−0.815**	**−1.259**	−0.268	**−0.563**	**−0.082**	**−0.103**	**−0.063**	**−0.085**
	−2.316**	***−2.307*****	***−1.913****	*−0.192*	***−3.340*****	***−2.385*****	*−0.650*	*−1.561*	***−4.142*****	***−3.447*****	*−1.514*	***−2.187*****	***−4.077*****	***−2.954*****	***−2.307*****	***−2.156*****
InstOwn	−0.023	−0.022	−0.061	−0.048	**−0.071**	**−0.077**	−0.083	**−0.130**	**−0.447**	**−0.512**	−0.342	**−0.639**	**−0.036**	**−0.04**	**−0.046**	**−0.073**
	−1.387	*−1.296*	*−1.602*	*−0.898*	***−2.582*****	***−2.690*****	*−1.460*	***−2.253*****	***−2.628*****	***−2.892*****	*−1.356*	***−2.162*****	***−2.338*****	***−2.483*****	***−1.721****	***−2.195*****
IAF_Out	0.002	0.001	−0.009	−0.008	0.001	0.002	−0.005	*−0.010*	**0.073**	0.05	−0.036	*−0.035*	**−0.006**	**−0.007**	0.000	0.002
	0.772	*0.206*	*−1.164*	*−1.024*	*0.265*	0.405	*−0.621*	*−1.142*	***2.161*****	*1.338*	*−0.884*	*−0.741*	***−2.193*****	***−2.274*****	*−0.064*	*0.313*
AUDIT4	0.000	−0.001	0.008	0.012	**0.017**	**0.016**	0.006	0.004	**0.076**	**0.065**	0.088	0.064	**0.008**	**0.008**	0.000	−0.003
	−0.112	*−0.374*	*1.170*	*1.647*	***3.949*****	***3.489*****	*0.800*	0.433	***2.443*****	***1.871****	*1.474*	*1.027*	***2.450*****	***2.238*****	*−0.064*	*−0.450*
*PC*InstOwn*		−0.005		−0.165		0.206		1.113		3.832		**7.901**		0.276		0.822
		−0.029		*−0.224*		*0.827*		*0.910*		*1.626*		***1.899****		*1.197*		*1.409*
*PC*IAF_Out*		0.044		−0.101		−0.027		**0.236**		**0.689**		−0.090		0.037		−0.144
		1.225		*−0.925*		−0.508		***2.007*****		***1.816****		*−0.171*		*1.019*		*−1.372*
*PC*AUDIT4*		0.022		−0.118		0.009		0.022		0.268		0.428		0.000		0.053
		0.847		*−1.445*		*0.240*		*0.240*		*0.768*		*1.103*		*0.000*		*0.865*
Control Variables	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT	**0.055**	**0.054**	**0.153**	**0.158**	**0.093**	**0.094**	−0.004	−0.006	0.012	0.023	0.258	0.308	**0.091**	**0.092**	0.029	0.039
	3.348**	***3.288*****	***3.446*****	***3.476*****	***3.733*****	***3.771*****	*−0.088*	*−0.120*	*0.063*	*0.121*	*0.801*	*0.906*	***5.758*****	***5.717*****	*0.642*	*0.838*
Total observations	736	736	163	163	736	736	163	163	736	736	163	163	736	736	163	163
Adjusted R-square	0.265	0.263	0.559	0.560	0.402	0.400	0.256	0.267	0.436	0.436	0.268	0.270	0.654	0.653	0.553	0.555
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	6.850	6.300	10.240	9.890	14.870	14.820	54.710	45.490	17.150	15.630	310.970	56.590	49.170	44.690	27.390	30.140
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	2.680	2.720	2.520	2.720	2.680	2.720	2.520	2.720	2.680	2.720	2.520	2.720	2.680	2.720	2.520	2.720

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-adjusted model; *REM_CFO*: The Absolute Value of Abnormal Cash Flows based on Roychowdhury's (2006) model; *REM_Prod*: The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP*: The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; *Small_Profits*: Reporting Small Positive Profits; *PC and PC_D*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; LEV: Leverage; *LOSS*: Negative income; *COMPLEX*: Firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details refer to Appendix A.)
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

7.4.2 Partitioning by Firm Complexity

Prior research documents that firm complexity is an important factor in management decisions pertaining to earnings management (Dyreng, Hanlon et al., 2012). In order to verify the consistency of study findings, the sample was partitioned based on firm complexity to form two subsamples: complex firms and non-complex firms. The main regressions were re-performed and the results are reported in Table 7.11. Columns 1 to 4 report the analysis results using the absolute value of discretionary accruals as a proxy for financial reporting quality (*EM_Kothari*). Columns 5 to 8 present the results of the analysis when financial reporting quality was measured using the magnitude of sales manipulation (*REM_CFO*), Columns 9 to 12 report the findings for analysis of the magnitude of production costs manipulation (*REM_Prod*), and Columns 13 to 16 document the findings using the magnitude of discretionary expense manipulation (*REM_Exp*). Finally, Column 17 to Column 20 show the results using *Small_Profits* as a measure of financial reporting quality.

Table 7.11 shows that the results were largely consistent with the analysis performed using the pooled sample. The coefficients of the variable *PC* show that politically connected directors contributed to improved financial reporting quality as indicated by the statistically significant and negative relationship with earnings management. Specifically, for the analysis of accrual-based manipulation, the findings indicated a consistent, stronger association for the non-complex firms subsample. In relation to the results using real activity manipulation, the findings were substantially consistent for both subsamples. Next, Table 7.11 shows largely consistent results for the variable *InstOwn*, indicating that strategic institutional ownership had a statistically significant and negative relationship with real activity-based earnings management. Despite the mixed results shown for other proxies of financial reporting quality, the significant and positive relationship between the interaction term *PC*InstOwn* and real activity-based earnings management, as shown in Columns 8, 12, and 16, lends support to the results discussed in Section 6.3. That is, politically connected directors and strategic institutional investors were more effective in constraining real activity manipulation when operating in isolation. Additionally, the coefficients of *AUDIT4* indicate that non-complex firms were more likely to engage in real activity-based earnings management than complex firm clients were. The adjusted R-square ranged

between 0.106 and 0.721, indicating the explanatory power of the regression models. Additionally, Table 7.11 shows F-statistic values that indicate that the regression models were statistically significant, except for the regression models using *Small_Profits*. Finally, Table 7.11 presents a VIF that ranged between 2.370 and 3.120, implying that there was no threat of multi-collinearity on the regression analysis (Gujarati & Porter, 2009).

Table 7.11
Results of OLS Regression with Robust Standard Errors – Partitioning Sample Based on Firm Complexity – Dependent variable is specified for each four columns

	EM_Kothari				***REM_CFO***				***REM_Prod***				***REM_Exp***				***Small_Profits***			
Dependent Variable	**Complex Firms**		**Non-Complex Firms**		**Complex Firms**		**Non-Complex Firms**		**Complex Firms**		**Non-Complex Firms**		**Complex Firms**		**Non-Complex Firms**		**Complex Firms**		**Non-Complex Firms**	
Regression:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
PC	0.009	0.027	**−0.058**	**−0.082**	**−0.077**	**−0.094**	**−0.075**	**−0.112**	**−0.465**	−0.439	**−1.409**	**−2.749**	**−0.119**	**−0.165**	**−0.136**	**−0.227**	**−0.255**	−0.223	−0.137	**−0.409**
	0.488	*0.894*	***−2.274*** **	***−2.054*** **	***−2.540*** **	***−2.334*** **	***−2.738*** ***	***−2.770*** ***	***−2.101*** **	*−1.286*	***−4.443*** ***	***−5.541*** ***	***−3.982*** ***	***−3.306*** ***	***−4.515*** ***	***−4.478*** ***	***−2.950*** ***	*−1.559*	*−0.946*	***−1.907*** *
InstOwn	−0.014	0.007	−0.027	−0.039	**−0.12**	**−0.11**	**−0.15**	**−0.166**	**−0.597**	**−0.52**	**−0.581**	**−1.044**	**−0.04**	−0.027	**−0.083**	**−0.113**	0.137	0.169	−0.192	−0.364
	−0.746	*0.379*	*−0.914*	*−1.311*	***−3.694*** ***	***−3.122*** ***	***−3.357*** ***	***−3.557*** ***	***−3.100*** ***	***−2.558*** **	***−1.749*** *	***−2.834*** ***	***−2.096*** **	*−1.236*	***−2.688*** ***	***−3.500*** ***	*0.867*	*0.917*	*−0.841*	*−1.548*
IAF_Out	**0.006**	0.004	−0.003	−0.003	−0.003	−0.005	0.005	0.004	0.043	−0.003	0.042	0.012	−0.004	−0.005	**−0.01**	**−0.013**	−0.005	−0.008	−0.005	0.004
	1.745 *	*0.831*	*−0.723*	*−0.710*	*−0.602*	*−0.873*	*0.858*	*0.732*	*1.47*	*−0.089*	*0.866*	*0.252*	*−1.234*	*−1.472*	***−2.921*** ***	***−3.396*** ***	*−0.185*	*−0.217*	*−0.159*	*0.13*
AUDIT4	0.001	0.002	−0.003	0.001	**0.014**	**0.013**	**0.018**	**0.024**	0.037	0.037	**0.179**	**0.243**	0.003	0.000	**0.014**	**0.018**	0.014	0.015	0.019	−0.002
	0.390	*0.493*	*−0.532*	*0.263*	***2.563*** **	***2.192*** **	***2.977*** ***	***3.393*** ***	*1.029*	0.962	***3.586*** ***	**4.088** ***	*0.655*	−0.028	***3.112*** ***	**3.482** ***	*0.527*	0.506	*0.624*	−0.073
*PC*InstOwn*		**−0.890**		**0.757**		−0.478		**1.096**		−3.58		**22.294**		−0.638		**1.499**		−1.377		2.37
		−2.966 ***		***2.213*** **		*−0.838*		***3.470*** ***		*−0.906*		***6.199*** ***		*−1.597*		***4.616*** ***		*−0.799*		*1.168*
*PC*IAF_Out*		0.081		0.002		0.056		0.023		**1.244**		**1.639**		0.024		**0.12**		0.097		−0.17
		1.433		*0.043*		*0.692*		*0.391*		**2.546** **		**3.466** ***		0.451		***2.698*** ***		0.303		−0.639
*PC*AUDIT4*		0.008		−0.056		0.047		**−0.082**		−0.087		−0.526		**0.112**		−0.037		0.014		0.447
		0.190		*−1.028*		*0.774*		***−1.829*** *		−0.206		−1.03		**1.995** **		−0.836		0.101		1.328
Control Variables	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT	**0.052**	**0.045**	**0.098**	**0.107**	0.047	0.046	**0.105**	**0.118**	**−0.388**	**−0.44**	**0.968**	**1.078**	**0.075**	**0.077**	**0.148**	**0.156**	0.142	0.132	0.029	−0.022
	2.531 **	***2.185*** **	***3.729*** ***	***3.715*** ***	*1.648*	*1.564*	***3.456*** ***	***2.690*** ***	***−2.458*** **	***−2.756*** ***	***3.407*** ***	***3.791*** ***	***4.196*** ***	***4.412*** ***	***7.305*** ***	***7.683*** ***	*1.369*	*1.198*	*0.206*	*−0.150*
Total observations	510	510	389	389	510	510	*389*	*389*	510	510	*389*	*389*	510	510	*389*	*389*	510	510	389	389
Adjusted R-square	0.314	0.319	0.292	0.298	0.463	0.461	0.452	0.461	0.579	0.581	0.441	0.494	0.720	0.721	0.589	0.610	0.111	0.106	0.153	0.156
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	6.430	6.100	4.920	4.680	14.270	13.220	16.730	19.420	26.060	24.270	13.500	16.440	57.120	52.400	32.450	30.970	0.900	0.820	1.050	0.970
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.629	0.763	0.400	0.516
VIF	2.370	2.480	3.010	3.120	2.370	2.480	3.010	3.120	2.370	2.480	3.010	3.120	2.370	2.480	3.010	3.120	2.370	2.480	3.010	3.120

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-adjusted model; *REM_CFO*: The Absolute Value of Abnormal Cash Flows based on: Roychowdhury (2006) model; *REM_Prod*: The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP*: The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; *Small_Profits*: Reporting Small Positive Profits; *PC* and *PC_D*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: Audit Quality; FamOwn: Family ownership; GovOwn: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: Firm complexity; CAPEX: Capital expenditure; IND: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details refer to Appendix A.)
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

7.4.3 Partitioning by Client Firm Size

Prior literature indicates that firm size is a significant determinant of earnings management practices (Alghamdi, 2012; Alhadab, 2017; Francis & Yu, 2009; Gul et al., 2013; Sun & Liu, 2016; Watts & Zimmerman 1978; Zang, 2012). For this reason, the pooled sample was partitioned into two subsamples using the median firm size value (i.e., into large firms and small firms) and the main analysis was re-performed in order to verify the consistency of the main results.

Table 7.12, Columns 1 to 4, report the analysis results using the absolute value of discretionary accruals as a proxy for financial reporting quality (*EM_Kothari*). Next, Columns 5 to 8 show the results of the analysis when financial reporting quality was measured using the magnitude of sales manipulation (*REM_CFO*), Columns 9 to 12 report the findings for analysis of the magnitude of production costs manipulation (*REM_Prod*), and Columns 13 to 16 document the findings using the absolute value of discretionary expense manipulation (*REM_Exp*). Finally, Columns 17 to 20 show the results using the reporting of small positive profits (*Small_Profits*) as a measure of financial reporting quality.

Table 7.12 shows results that are consistent with those from the analysis of the pooled sample. The coefficients of the variable *PC* indicate that politically connected directors were more effective in constraining accrual-based earnings management in larger firms (Columns 1 and 2), while they were more effective in restraining real activity-based earnings management for smaller firms (Columns 7, 8, 11, 12, 15, and 16), as indicated by the statistically significant and negative coefficients. Moreover, Table 7.12 presents consistent results regarding the impact of strategic institutional ownership on sales manipulation, regardless of firm size, and on production cost manipulation for the larger firms subsample. In addition, the coefficients of *AUDIT4* show that high-quality audit firms tend to be more tolerant of smaller firms using real earnings management, as indicated by the significant and positive coefficients in Columns 7, 8, 11, 12, 15, and 16. The explanatory power of the regression models, as indicated by the adjusted R-square, ranged between 0.074 and 0.763. Table 7.12 documents F-statistic values indicating that the regression models were statistically significant, except for the regression models using *Small_Profits*. Finally, Table 7.12 presents a VIF that ranged between 2.420 and 2.670, indicating that multi-collinearity had no impact on the regression analysis (Gujarati & Porter, 2009).

Table 7.12
Results of OLS Regression with Robust Standard Errors – Partitioning Sample Based on Client Firm Size – Dependent variable is specified for each four columns

Dependent Variable	***EM_Kothari***				***REM_CFO***				***REM_Prod***				***REM_Exp***				***Small_Profits***			
	Large Firms		**Small Firms**		**Large Firms**		**Small Firms**		**Large Firms**		**Small Firms**		**Large Firms**		**Small Firms**		**Large Firms**		**Small Firms**	
Regression:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
PC	**−0.028**	**−0.042**	−0.022	−0.023	−0.021	0.060	**−0.146**	**−0.156**	−0.128	0.188	**−1.905**	**−2.024**	**−0.04**	−0.008	**−0.209**	**−0.262**	−0.09	−0.118	−0.185	**−0.246**
	−1.963*	***−1.966*****	*−0.686*	*−0.601*	*−0.947*	*1.462*	***−4.425*****	***−4.198*****	*−0.859*	*0.677*	***−5.228*****	***−4.176*****	***−2.411****	*−0.332*	***−5.143*****	***−5.204*****	*−1.255*	*−0.817*	*−1.135*	***−2.071*****
InstOwn	−0.009	−0.009	−0.003	−0.004	**−0.078**	**−0.055**	**−0.097**	**−0.097**	**−0.584**	**−0.486**	−0.002	−0.045	−0.022	−0.021	−0.015	−0.032	−0.02	−0.029	−0.006	0.01
	−0.551	*−0.522*	*−0.148*	*−0.154*	***−2.576*****	***−1.663****	***−2.638*****	***−2.522*****	***−3.453*****	***−2.778*****	*−0.008*	*−0.177*	*−1.351*	*−1.186*	*−0.559*	*−1.192*	*−0.162*	*−0.212*	*−0.026*	*0.039*
IAF_Out	0.002	−0.000	−0.005	−0.003	**−0.008**	**−0.008**	**0.011**	0.008	−0.031	**−0.059**	**0.121**	**0.093**	**−0.008**	**−0.008**	−0.003	−0.006	0.003	−0.007	−0.012	0.001
	0.652	*−0.144*	*−1.043*	*−0.644*	***−1.761****	***−1.710****	***1.976*****	*1.246*	*−1.133*	***−1.936****	***2.362*****	***1.786****	***−2.617*****	***−2.455*****	*−0.685*	*−1.320*	*0.122*	*−0.200*	*−0.438*	*0.030*
AUDIT4	0.000	0.001	−0.001	−0.002	0.006	**0.010**	**0.027**	**0.027**	0.004	0.035	**0.183**	**0.185**	−0.005	−0.002	**0.016**	**0.012**	0.006	0.013	0.032	0.017
	0.110	*0.208*	*−0.333*	*−0.492*	*1.285*	***1.755****	***4.333*****	***3.952*****	*0.118*	*0.926*	***3.739*****	***3.323*****	*−1.251*	*−0.446*	***3.236*****	***2.217*****	*0.254*	*0.473*	*1.040*	*0.513*
*PC*InstOwn*		0.141		0.156		**−0.600**		−0.376		−0.870		3.814		0.009		2.069		0.990		−3.768
		0.796		*0.128*		***−1.943****		*−0.241*		*−0.441*		*0.342*		*0.052*		*1.320*		*0.920*		*−0.759*
*PC*IAF_Out*		**0.068**		−0.077		−0.005		0.150		**0.661**		1.114		−0.011		0.021		0.294		**−0.658**
		1.960*		*−0.815*		*−0.105*		*1.340*		***1.869****		*1.559*		*−0.296*		*0.234*		*1.178*		***−1.849****
*PC*AUDIT4*		−0.004		0.035		−0.061		−0.032		**−0.535**		−0.298		**−0.052**		0.084		−0.125		0.614
		−0.198		*0.549*		*−1.598*		*−0.512*		***−2.008****		*−0.463*		***−1.933****		*0.949*		*−0.897*		*1.185*
Control Variables	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT	**0.068**	**0.078**	**0.106**	**0.109**	**0.092**	**0.081**	**0.070**	**0.066**	**0.354**	**0.334**	−0.101	−0.128	**0.109**	**0.108**	**0.060**	**0.063**	0.160	**0.177**	0.170	**0.190**
	5.588**	***4.106*****	***4.632*****	***4.684*****	***4.960*****	***4.255*****	***2.607*****	***2.462****	***3.479*****	***2.867*****	*−0.474*	*−0.598*	***9.660*****	***8.482*****	***3.150*****	***3.228*****	*1.565*	***1.691****	*1.596*	***1.723****
Total observations	449	449	450	450	449	449	450	450	449	449	450	450	449	449	450	450	449	449	450	450
Adjusted R-square	0.341	0.339	0.336	0.332	0.501	0.504	0.441	0.439	0.593	0.597	0.404	0.402	0.763	0.763	0.588	0.591	0.155	0.151	0.074	0.080
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	7.750	7.180	6.340	5.810	16.570	15.030	13.160	12.680	11.410	10.890	31.310	29.970	57.250	51.860	23.200	21.590	1.200	1.090	0.720	0.680
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.216	0.332	0.871	0.919
VIF	2.420	2.560	2.620	2.670	2.420	2.560	2.620	2.670	2.420	2.560	2.620	2.670	2.420	2.560	2.620	2.670	2.420	2.560	2.620	2.670

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari, Leone, and Wasley's (2005) performance-adjusted model; *REM_CFO:* The Absolute Value of Abnormal Cash Flows based on Roychowdhury's (2006) model; *REM_Prod:* The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP:* The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; *Small_Profits:* Reporting Small Positive Profits; *PC* and *PC_D:* Political connectedness; *InstOwn:* Strategic institutional ownership; *IAF_Out:* Internal audit outsourcing; *AUDIT4:* audit quality; *FamOwn:* Family ownership; *GovOwn:* Government ownership; *FSIZE:* Firm size; *ROA:* Return on assets; *SALES_G:* Sales growth; *MTB:* Market-to-book ratio; *CFO:* Operating cash flow ratio; *LEV:* Leverage; *LOSS:* Negative income; *COMPLEX:* Firm complexity; *CAPEX:* Capital expenditure; *IND:* Board independence; *lnACMeet:* Log of audit committee meetings; *lnAGE:* Log of firm age (For additional details refer to Appendix A).
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

7.4.4 Partitioning by Growth Opportunities

The literature shows that growth potential can play a significant role in motivating the use of earnings management by firms (Alzoubi, 2016; Bhuiyan et al., 2020; Solan, 2002; Watts & Zimmerman, 1986). In order to investigate the impact of growth opportunities on the main analysis results, the pooled sample was divided into two subsamples using the median market-to-book value (i.e., into high-growth firms and low-growth firms). Then, the main analysis was re-performed in order to examine the consistency of findings.

In Table 7.13, Columns 1 to 4 report the analysis results using the absolute value of discretionary accruals as a proxy for financial reporting quality (*EM_Kothari*). Next, Columns 5 to 8 show the results of the analysis when financial reporting quality was measured using the absolute value of sales manipulation (*REM_CFO*); Columns 9 to 12 report the findings for analysis of the absolute value of production costs manipulation (*REM_Prod*), and Columns 13 to 16 document the findings using the absolute value of discretionary expense manipulation (*REM_Exp*). Finally, Columns 17 to 20 document the findings using the reporting of small positive profits (*Small_Profits*) as a measure of the quality of financial reports.

Table 7.13 documents consistent results for the variable *PC* with regards to the negative relationship with accrual-based earnings management and reporting small positive profits for the low-growth firms subsample (Columns 3, 19, and 20). Additionally, Table 7.13 shows a statistically significant and negative relationship between *PC* and real activity-based earnings management for the high-growth firms subsample (Columns 5, 6, 9, 10, 13, and 14), as indicated by the statistically significant and negative coefficients. This suggests that politically connected directors were highly effective in constraining real activity-based earnings management when serving on the boards of firms with high growth potential. Moreover, Table 7.13 documents consistent results regarding the role of strategic institutional investors in restraining the use of real activity-based earnings management as indicated by the coefficient reported in Table 7.13 (Columns 5, 6, 9, 10, 11, 12, 14, 15, and 16). Additionally, Table 7.13 indicates a statistically significant and positive relationship for the variable *AUDIT4*, indicating results that are consistent with the main analysis discussed in Chapter Six. This indicates that high-quality audit firms tended to be more tolerant of

firms using real activity-based earnings management. Interestingly, Columns 3 and 4 of Table 7.13 show that firms with low growth potential tended to engage in accrual-based earnings management when audited by high-quality audit firms.

The explanatory power of the regression models, as indicated by the adjusted R-square, ranged between 0.106 and 0.696. Table 7.13 present F-statistic values that imply high statistical significance for the regression models, except for the regression models using *Small_Profits*. Finally, Table 7.13 presents a VIF ranging between 2.410 and 2.570, suggesting that multi-collinearity had no impact on the regression analysis (Gujarati & Porter, 2009).

Table 7.13
Results of OLS Regression with Robust Standard Errors – Partitioning Sample Based on Firm Growth – Dependent variable is specified for each four columns

	EM_Kothari				***REM_CFO***				***REM_Prod***				***REM_Exp***				***Small_Profits***			
Dependent Variable	**High Growth Firms**		**Low Growth Firms**		**High Growth Firms**		**Low Growth Firms**		**High Growth Firms**		**Low Growth Firms**		**High Growth Firms**		**Low Growth Firms**		**High Growth Firms**		**Low Growth Firms**	
Regression:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
PC	−0.03	−0.042	**−0.041**	−0.024	**−0.097**	**−0.140**	−0.015	−0.017	**−0.960**	**−1.810**	−0.142	−0.246	**−0.124**	**−0.209**	−0.009	−0.014	−0.021	−0.056	**−0.319**	**−0.353**
	−1.332	*−1.212*	***−1.961****	*−0.811*	***−3.643*****	***−3.487*****	*−0.653*	*−0.585*	***−3.633*****	***−3.828*****	*−1.073*	*−1.085*	***−4.470*****	***−4.373*****	*−0.781*	*−0.760*	*−0.182*	*−0.359*	***−2.748*****	***−1.888****
InstOwn	−0.033	−0.028	0.006	0.006	**−0.092**	**−0.108**	−0.040	−0.039	**−0.424**	**−0.683**	**−0.284**	**−0.292**	−0.031	**−0.071**	**−0.030**	**−0.030**	0.051	0.027	−0.155	−0.180
	−1.544	*−1.316*	*0.319*	*0.319*	***−2.544****	***−2.926*****	*−1.265*	*−1.202*	***−1.802****	***−3.078*****	***−1.941****	***−1.925****	*−1.218*	***−3.069*****	***−2.013****	***−1.949****	*0.353*	*0.156*	*−0.931*	*−1.046*
IAF_Out	−0.001	−0.002	0.000	0.001	−0.004	−0.003	0.005	0.005	0.083	0.057	**0.04**	**0.054**	−0.004	−0.001	−0.002	−0.001	0.022	0.030	−0.025	−0.029
	−0.203	*−0.37*	*0.092*	*0.211*	*−0.650*	*−0.477*	*1.268*	*1.322*	*1.533*	*0.916*	***1.793****	***2.185****	*−0.926*	*−0.163*	*−1.057*	*−0.710*	*0.978*	*1.043*	*−0.801*	*−0.791*
AUDIT4	−0.006	**−0.009**	**0.009**	**0.010**	**0.016**	**0.016**	**0.014**	**0.013**	**0.150**	**0.159**	0.042	0.035	**0.015**	**0.016**	0.003	0.003	0.020	0.018	0.004	0.005
	−1.346	**−1.751***	***2.640*****	**2.683*****	***2.590*****	***2.221*****	***2.971*****	**2.753*****	***3.028*****	**2.772*****	*1.57*	1.234	***3.055*****	**2.855*****	*1.246*	1.043	*1.073*	0.798	*0.134*	0.147
*PC*InstOwn*		−0.175		0.041		**0.604**		−0.157		**11.831**		0.583		**1.388**		0.023		0.394		2.501
		−0.648		*0.136*		***2.056****		*−0.332*		***4.238*****		*0.230*		***4.629*****		*0.103*		*0.240*		*1.242*
*PC*IAF_Out*		0.017		−0.013		0.002		−0.021		**1.138**		**−0.580**		−0.057		−0.022		−0.236		0.087
		0.286		−0.371		*0.028*		−0.378		**1.773***		**−2.353****		−0.898		−0.932		−0.866		0.326
*PC*AUDIT4*		0.045		−0.037		0.010		0.022		−0.031		**0.369**		0.011		0.016		0.079		−0.118
		1.121		−1.112		*0.233*		0.483		−0.072		**1.682***		0.255		0.906		0.287		−0.644
Control Variables	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT	**0.067**	**0.068**	**0.092**	**0.094**	**0.131**	**0.135**	0.019	0.017	**0.594**	**0.676**	−0.152	−0.155	**0.146**	**0.155**	**0.070**	**0.070**	0.143	0.147	**0.280**	**0.299**
	2.706**	***2.690*****	***4.202*****	***4.142*****	***4.217*****	***4.304*****	*0.829*	*0.739*	***2.336****	***2.621*****	*−1.151*	*−1.161*	***5.958*****	***6.205*****	***6.305*****	***6.182*****	*1.366*	*1.372*	***1.957****	***1.998*****
Total observations	450	450	449	449	450	450	449	449	450	450	449	449	450	449	449	449	450	450	449	449
Adjusted R-square	0.277	0.274	0.361	0.358	0.425	0.424	0.400	0.396	0.408	0.420	0.313	0.316	0.618	0.629	0.696	0.694	0.111	0.106	0.152	0.147
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	5.300	4.830	4.920	5.030	13.050	12.210	12.520	12.320	24.460	26.880	8.730	8.750	26.890	27.500	64.130	60.250	0.520	0.480	1.450	1.320
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.986	0.995	0.057	0.108
VIF	2.490	2.570	2.410	2.450	2.490	2.570	2.410	2.450	2.490	2.570	2.410	2.450	2.490	2.570	2.410	2.450	2.490	2.570	2.410	2.450

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-adjusted model; *REM_CFO*: The Absolute Value of Abnormal Cash Flows based on Roychowdhury's (2006) model; *REM_Prod*: The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP*: The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; *Small_Profits*: Reporting Small Positive Profits; *PC and PC_D*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: Firm complexity; *CAPEX*: Capital expenditure; *IND: Board* independence; l*nACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details, refer to Appendix A.)
* p < 0.1, ** p < 0.05, *** p < 0.01

7.5 Endogeneity Analysis

7.5.1 Propensity Score Matching

Concern over endogeneity may arise due to self-selection bias (Rosenbaum & Rubin, 1983). This issue occurs when politically connected directors choose to engage with firms that avoid using earnings management techniques. The technique of propensity score matching (PSM) attempts to reduce the endogeneity issue by creating two comparable groups of observations (i.e., a treatment group and a control group) that are matched using other observation characteristics. In this study the control group consisted of a set of non-politically connected firm-year observations that were closely similar to the treatment group in the chosen characteristics. The treatment group comprised firm-year observations of politically connected firms in the study sample. This technique enhances confidence in the inferences made based on the results of OLS regressions discussed in Chapter Six.

In order to implement the PSM two-stage technique, the control group was formed in the first stage based on one-to-one observation matching and a calliper of 0.5% in order to minimise differences in the observations of the two groups. All the control variables used in the main analysis were included as matching characteristics when forming the control group. A logistic regression was performed to regress the study control variables against a dichotomous variable that took the value of 1 if a politically connected director sits on the firm's board, and 0 otherwise. Descriptive statistics are presented in Table 7.14. As shown in the table, the differences between all the variables used as matching characteristics are statistically insignificant, indicating the quality of the matching process. In the second stage, the regression analysis was performed using the PSM sample. The variable *PC* was analysed both in isolation and in unison with other explanatory variables (i.e., *InstOwn*, *IAF_Out*, and *AUDIT4*) in order to examine the consistency of the PSM results with the main analysis results reported in Chapter Six. Column 1 of Table 7.15 and Table 7.16 reports the results of the first stage, while Columns 2 to 6 of Table 7.15 and Table 7.16 report the second stage analysis when *PC* was tested in isolation and in unison, respectively.

The results presented in Table 7.15 and Table 7.16 show that political connectedness had a statistically significant and negative relationship with accrual-based earnings management and real activity-based earnings management. This signifies that politically connected directors contributed to higher-quality financial reporting. Therefore, the findings of the PSM analysis were consistent with the results

previously reported in the main analysis (Chapter Six). This provides further support to the results and indicates that self-selection bias does not jeopardise the validity of the conclusions drawn from the main analysis.

Table 7.14
Propensity Score Matching - Descriptive Statistics for The Matched Samples

	Mean				
Variables	**Treated**	**Control**	**Difference**	**T-Test**	**p-value**
EM_Kothari	0.048	0.057	-0.009	**-2.000**	**0.046**
REM_CFO	0.092	0.107	-0.015	**-2.330**	**0.020**
REM_Prod	0.339	0.355	-0.016	-0.460	0.647
REM_Exp	0.066	0.076	-0.011	**-1.770**	**0.078**
Small_Profits	0.012	0.040	-0.029	**-1.690**	**0.092**
FamOwn	0.022	0.029	-0.007	-0.940	0.350
GovOwn	0.079	0.099	-0.020	-0.990	0.325
FSIZE	6.441	6.348	0.093	0.470	0.640
ROA	0.110	0.118	-0.009	-0.760	0.447
SALES_G	0.128	0.188	-0.059	-0.770	0.443
MTB	2.546	2.826	-0.280	-1.400	0.163
CFO	0.103	0.112	-0.009	-0.800	0.423
LEV	0.101	0.103	-0.002	-0.140	0.887
LOSS	0.191	0.208	-0.017	-0.400	0.688
COMPLEX	0.491	0.555	-0.064	-1.180	0.238
CAPEX	0.065	0.062	0.002	0.310	0.757
IND	0.530	0.526	0.004	0.200	0.843
lnACMeet	1.601	1.577	0.023	0.510	0.609
lnAGE	3.229	3.208	0.021	0.330	0.741

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-adjusted model; *REM_CFO:* The Absolute Value of Abnormal Cash Flows based on Roychowdhury (2006) model; *REM_Prod:* The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP:* The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; *Small_Profits:* Reporting Small Positive Profits; *PC and PC_D*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; GovOwn: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES*_G: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: Firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details refer to Appendix A.)

Table 7.15
Propensity Score Matching – Political Connectedness *(excluding other independent variables)*

	First Stage	Second Stage				
	1	2	3	4	5	6
Variables	*PC_D*	*EM_Kothari*	*REM_CFO*	*REM_Prod*	*REM_Exp*	*Small_Profits*
PC		**−0.085**	**−0.061**	−0.190	**−0.091**	−0.020
		−3.224***	***−2.057*****	*−0.915*	***−2.796******	*−0.307*
FamOwn	**−10.778**	−0.043	0.019	**0.708**	0.006	0.292
	−6.707***	*−1.248*	*0.475*	***2.621******	*0.190*	*1.346*
GovOwn	−0.189	−0.03	−0.004	−0.216	**−0.058**	−0.009
	−0.258	*−1.568*	*−0.201*	*−2.051***	***−3.014******	*−0.272*
FSIZE	**0.187**	**0.005**	**0.007**	0.016	0.004	−0.003
	1.675*	***1.864****	***1.953****	*0.915*	*1.484*	*−0.401*
ROA	−0.992	**−0.179**	0.017	0.700	0.012	**−0.471**
	−0.45	***−2.383*****	*0.208*	*1.464*	*0.199*	***−2.117*****
SALES_G	0.208	**0.007**	0.003	−0.019	0.006	**−0.045**
	1.263	***1.661****	*0.623*	*−0.746*	*0.763*	***−2.208*****
MTB	0.049	**0.005**	**0.007**	**0.031**	**0.007**	0.011
	0.693	***1.964****	***2.585*****	***2.361*****	***2.454*****	*1.395*
CFO	1.688	0.106	**0.224**	0.252	0.040	0.000
	0.937	*1.579*	***3.023******	*0.666*	*0.930*	*0.005*
LEV	**−4.333**	**−0.076**	−0.041	**−0.208**	**−0.064**	**0.195**
	−4.148***	***−3.377******	*−1.491*	***−1.720****	***−2.499*****	***1.847****
LOSS	−0.141	0.012	−0.01	−0.056	−0.004	**−0.134**
	−0.43	*1.199*	*−1.175*	*−1.073*	*−0.535*	***−2.452*****
COMPLEX	0.295	−0.008	**0.026**	**0.133**	**0.023**	**−0.056**
	1.265	*−1.515*	***4.063******	***4.034******	***4.087******	***−2.000*****
CAPEX	**2.563**	−0.012	**−0.078**	−0.248	−0.009	−0.031
	1.780*	*−0.372*	***−2.360*****	*−1.230*	*−0.333*	*−0.371*
IND	−0.128	0.001	0.02	−0.071	**−0.020**	−0.048
	−0.211	*0.049*	*1.22*	*−0.768*	***−1.781****	*−0.840*
lnACMeet	−0.348	−0.005	−0.01	0.036	0.007	−0.039
	−1.314	*−0.72*	*−1.2*	*0.903*	*1.291*	*−1.307*
lnAGE	**0.586**	**0.009**	−0.004	0.002	0.004	0.011
	2.861***	***1.973*****	*−0.71*	*0.058*	*1.188*	*0.842*
CONSTANT	**−2.167**	0.041	0.052	−0.077	0.035	**0.296**
	−1.708*	*1.458*	*1.494*	*−0.471*	*1.315*	***2.159*****
Total observations	881	251	251	251	251	251
Adjusted R-square	0.237$^{\#}$	0.351	0.499	0.450	0.626	0.131
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-adjusted model; *REM_CFO:* The Absolute Value of Abnormal Cash Flows based on Roychowdhury (2006) model; *REM_Prod:* The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP:* The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; *Small_Profits:* Reporting Small Positive Profits; *PC and PC_D*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; GovOwn: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES*_G: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: Firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details refer to Appendix A.) * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; $^{\#}$ Adjusted R-square pseudo

Table 7.16
Propensity Score Matching – Political Connectedness *(including other independent variables)*

	First Stage	Second Stage				
Variables	**1** *PC_D*	**2** *EM_Kothari*	**3** *REM_CFO*	**4** *REM_Prod*	**5** *REM_Exp*	**6** *Small_Profits*
PC		**−0.084**	**−0.056**	−0.134	**−0.088**	−0.024
		−3.056**	***−1.838****	*−0.663*	***−2.661*****	*−0.330*
InstOwn		−0.059	**−0.178**	**−0.822**	**−0.096**	−0.245
		−1.585	***−2.807*****	***−2.289****	***−2.364****	*−1.349*
IAF_Out		−0.000	−0.005	0.017	−0.004	−0.012
		−0.022	*−0.699*	*0.438*	*−0.758*	*−0.679*
AUDIT4		0.005	**0.016**	**0.134**	**0.010**	−0.001
		0.895	***2.102****	***3.254*****	***1.671****	*−0.039*
FamOwn	**−10.778**	−0.053	−0.009	**0.545**	−0.009	0.263
	−6.707**	*−1.560*	*−0.224*	***1.955****	*−0.263*	*1.256*
GovOwn	−0.189	**−0.033**	−0.011	**−0.286**	**−0.062**	−0.008
	−0.258	***−1.746****	*−0.582*	***−2.674*****	***−3.294*****	*−0.198*
FSIZE	**0.187**	**0.006**	**0.009**	0.029	**0.006**	−0.000
	1.675*	***2.104*****	***2.575*****	*1.573*	***1.754****	*−0.014*
ROA	−0.992	**−0.172**	0.035	**0.783**	0.020	**−0.438**
	−0.45	***−2.319*****	*0.421*	***1.753****	*0.339*	***−2.063*****
SALES_G	0.208	**0.007**	0.004	−0.011	0.007	**−0.045**
	1.263	***1.750****	*0.823*	*−0.490*	*0.831*	***−2.265*****
MTB	0.049	**0.005**	**0.008**	**0.031**	**0.007**	0.013
	0.693	***1.925****	***2.678*****	***2.242*****	***2.387*****	*1.507*
CFO	1.688	0.107	**0.223**	0.261	0.038	−0.001
	0.937	*1.578*	***2.960*****	*0.740*	*0.930*	*−0.006*
LEV	**−4.333**	**−0.079**	**−0.053**	**−0.266**	**−0.072**	**0.187**
	−4.148**	***−3.389*****	***−1.832****	***−2.108*****	***−2.908*****	***1.731****
LOSS	−0.141	0.013	−0.006	−0.029	−0.002	**−0.129**
	−0.43	*1.355*	*−0.644*	*−0.530*	*−0.218*	***−2.424*****
COMPLEX	0.295	−0.009	**0.024**	**0.107**	**0.022**	**−0.052**
	1.265	*−1.495*	***3.699*****	***3.208*****	***3.744*****	***−1.981*****
CAPEX	**2.563**	−0.014	**−0.081**	**−0.321**	−0.012	−0.015
	1.780*	*−0.406*	***−2.453*****	***−1.695****	*−0.436*	*−0.181*
IND	−0.128	0.007	**0.036**	0.042	−0.012	−0.038
	−0.211	*0.447*	***2.139*****	*0.450*	*−0.988*	*−0.565*
lnACMeet	−0.348	−0.004	−0.009	0.040	0.008	−0.036
	−1.314	*−0.661*	*−1.096*	*1.026*	*1.546*	*−1.249*
lnAGE	**0.586**	**0.011**	0.003	0.040	**0.008**	0.019
	2.861**	***2.206*****	*0.471*	*1.546*	***2.028*****	*1.083*
CONSTANT	**−2.167**	0.026	0.014	−0.353	0.015	**0.270**
	−1.708*	*0.888*	*0.377*	*−1.911**	*0.488*	***1.790****
Total observations	881	251	251	251	251	251
Adjusted R-square	0.237#	0.349	0.528	0.490	0.634	0.128
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-adjusted model; *REM_CFO:* The Absolute Value of Abnormal Cash Flows based on Roychowdhury (2006) model; *REM_Prod:* The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP:* The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; *Small_Profits:* Reporting Small Positive Profits; *PC and PC_D*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; GovOwn: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES*_G: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: Firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details refer to Appendix A.) * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; # Adjusted R-square pseudo

7.5.2 Heckman Selection Model

The analysis results obtained using OLS regressions may be subject to endogeneity issues if the relationship between the independent variables (i.e., political connectedness *PC* and strategic institutional ownership *InstOwn*) and dependent variable proxies, (i.e., accrual-based and real activity-based earnings management – *EM_KOTHARI, REM_CFO, REM_Prod, REM_Exp, Small_Profits*), is attributable to unobserved factors. In order to address this issue, the two-stage selection model introduced by Heckman (1979) was employed. In the first stage a dichotomous variable was established (*PC_D* for political connectedness) that took a value of 1 if the firm has politically connected directors serving on its board and zero otherwise. Similarly, a dichotomous variable was also constructed for strategic institutional ownership (i.e., *InstOwn_D*) that took a value of 1 if strategic institutional investors were present as shareholders, and zero otherwise. After that, key determinant variables were regressed against the variables *PC_D* and *InstOwn_D* using probit regression. In the second stage, the inverse Mills ratio was calculated and introduced in the regression models against *EM_Kothari, REM_CFO, REM_Prod, REM_Exp,* and *Small_Profits* in order to address the endogeneity problem. Next, the second stage regressions were performed to analyse the relationship between the dependent variables (i.e., *PC* and *InstOwn*) and financial reporting quality proxies (as shown in Table 7.17 and Table 7.18). In addition, political connectedness was further analysed in unison with other explanatory variables, i.e., *InstOwn, IAF_Out,* and *AUDIT4* (as shown in Table 7.19).

Column 1 of Table 7.17 and Table 7.19 presents the first stage results and indicates that firm size, leverage, and firm age were statistically significant determinants of political connectedness. Columns 2 to 6 of Table 7.17 and Table 7.19 document the results of the second stage regressions. The coefficients of the variable *PC* indicated statistically significant and negative relationships between political

connectedness and both accrual-based and real activity-based earnings management. These results indicate the significant and positive impact of political connectedness on financial reporting quality. These results were consistent with those of the main analysis presented in Chapter Six and signify the robustness of the research conclusions after controlling for self-selection bias.

In a similar manner, Column 1 of Table 7.17 documents the results of the probit regression performed in the first stage and suggests that all key variables were statistically significant determinants of strategic institutional ownership, with the exception of the variable *MTB*. Columns 2 to 6 of Table 7.18 present the results of the second stage regressions. The coefficients of the variable *InstOwn* show largely consistent results with those of the main analysis. That is, they indicate a statistically significant and negative relationships between strategic institutional investors and both accrual-based and real activity-based earnings management, indicating that strategic institutional investors had a significant and positive association with the quality of financial reports. Furthermore, the coefficients of the variable *InstOwn* show largely consistent results when the analysis was performed after including other independent variables, as shown in Table 7.19. These results signify the robustness of the conclusions drawn from the main analysis after controlling for self-selection bias.

Table 7.17
Heckman Selection Model – Political Connectedness
(excluding other Independent Variables)

	First Stage	**Second Stage**				
	1	**2**	**3**	**4**	**5**	**6**
Variables	*PC_D*	*EM_Kothari*	*REM_CFO*	*REM_Prod*	*REM_Exp*	*Small_Profits*
GovOwn	0.511					
	1.227					
FSIZE	**0.138**					
	2.481 **					
ROA	0.163					
	0.243					
MTB	0.055					
	1.509					
LEV	**−2.197**					
	−4.149 ***					
IND	0.505					
	1.578					
lnAGE	**0.168**					
	1.647 *					

	First Stage	Second Stage				
	1	2	3	4	5	6
Variables	*PC_D*	*EM_Kothari*	*REM_CFO*	*REM_Prod*	*REM_Exp*	*Small_Profits*
PC		**−0.036**	**−0.072**	**−0.721**	**−0.079**	**−0.152**
		−2.555**	***−4.068*****	***−4.706*****	***−4.682*****	***−1.979*****
FamOwn		**−0.029**	**0.034**	**0.501**	**0.049**	**−0.066**
		−4.353**	***3.404*****	***6.149*****	***5.595*****	***−1.771****
GovOwn		**−0.044**	−0.036	**−0.797**	**−0.065**	0.057
		−1.867*	*−1.203*	***−3.871*****	***−3.012*****	*0.396*
FSIZE		**−0.017**	−0.007	−0.097	−0.004	0.026
		−2.513**	*−0.828*	*−1.395*	*−0.578*	*0.557*
ROA		**−0.075**	**0.073**	**1.146**	**0.078**	**−0.652**
		−1.946*	***1.803****	***3.217*****	***2.231*****	***−4.036*****
SALES_G		0.004	0.003	0.002	0.000	**−0.036**
		1.307	*0.748*	*0.074*	*0.040*	***−3.616*****
MTB		−0.002	0.002	0.046	**0.007**	0.013
		−0.814	*0.527*	*1.558*	***2.266*****	*0.702*
CFO		0.052	**0.191**	−0.328	−0.009	0.003
		1.423	***4.722*****	*−1.018*	*−0.306*	*0.021*
LEV		**0.215**	0.131	1.411	0.028	−0.133
		2.047**	*0.936*	*1.291*	*0.243*	*−0.175*
LOSS		0.006	−0.007	**−0.082**	−0.005	**−0.184**
		1.623	*−1.360*	***−2.009*****	*−1.176*	***−6.921*****
COMPLEX		**−0.005**	**0.021**	**0.096**	**0.020**	**−0.048**
		−1.863*	***5.911*****	***3.542*****	***6.810*****	***−2.806*****
CAPEX		**0.095**	**−0.060**	**−0.310**	0.007	−0.103
		3.728**	***−2.436*****	***−2.056*****	*0.419*	*−1.201*
IND		**−0.045**	−0.040	**−0.512**	**−0.048**	0.074
		−1.719*	*−1.237*	***−1.968*****	***−1.816****	*0.402*
lnACMeet		−0.004	−0.005	−0.010	0.005	−0.007
		−1.196	*−1.111*	*−0.295*	*1.644*	*−0.397*
lnAGE		−0.012	**−0.023**	**−0.216**	−0.012	0.035
		−1.440	***−2.118*****	***−2.550*****	*−1.319*	*0.598*
CONSTANT	**−1.859**	**0.378**	**0.304**	**2.569**	0.191	−0.326
	−2.877**	***2.748*****	***1.706****	***1.850****	*1.326*	*−0.333*
Inverse Mills Ratio		**−0.135**	−0.100	**−1.094**	−0.050	0.220
		−2.242**	*−1.266*	***−1.791****	*−0.781*	*0.502*
Total observations	881	881	881	881	881	881
Adjusted R-square	0.124#	0.298	0.415	0.414	0.619	0.115
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari, Leone, and Wasley's (2005) performance-adjusted model; *REM_CFO:* The Absolute Value of Abnormal Cash Flows based on Roychowdhury (2006) model; *REM_Prod:* The Absolute Value of Abnormal Production Costs based on Roychowdhurby (2006) model; *REM_EXP:* The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; *Small_Profits:* Reporting Small Positive Profits; *PC* and *PC_D:* Political # *InstOwn:* Strategic institutional ownership; *IAF_Out:* Internal audit outsourcing; *AUDIT4:* audit quality; *FamOwn:* Family ownership; *GovOwn:* Government ownership; *FSIZE:* Firm size; *ROA:* Return on assets; *SALES_G:* Sales growth; *MTB:* Market-to-book ratio; *CFO:* Operating cash flow ratio; *LEV:* Leverage; *LOSS:* Negative income; *COMPLEX:* Firm complexity; *CAPEX:* Capital expenditure; *IND:* Board independence; *lnACMeet:* Log of audit committee meetings; *lnAGE:* Log of firm age (For additional details refer to Appendix A). * p < 0.1, ** p < 0.05, *** p < 0.01; # Adjusted R-square pseudo

Table 7.18
Heckman Selection Model – Strategic Institutional Investors
(excluding other Independent Variables)

	First Stage	Second Stage				
	1	2	3	4	5	6
Variables	*PC_D*	*EM_Kothari*	*REM_CFO*	*REM_Prod*	*REM_Exp*	*Small_Profits*
GovOwn	**−1.175**					
	−2.397 **					
FSIZE	**0.665**					
	11.017 ***					
ROA	**3.166**					
	4.566 ***					
MTB	0.037					
	0.921					
LEV	**−1.277**					
	−2.657 ***					
IND	**0.618**					
	1.874 *					
lnAGE	**0.687**					
	6.746 ***					
InstOwn		**−0.025**	**−0.079**	**−0.413**	**−0.038**	−0.062
		−1.797 *	***−3.256*** ***	***−2.872*** ***	***−2.937*** ***	*−0.555*
FamOwn		**−0.025**	**0.039**	**0.510**	**0.051**	−0.043
		−3.787 ***	***3.848*** ***	***6.236*** ***	***5.829*** ***	*−1.35*
GovOwn		0.014	−0.008	**−0.294**	**−0.023**	−0.033
		1.141	*−0.564*	***−2.810*** ***	***−2.220*** **	*−0.444*
FSIZE		−0.003	0.004	**−0.072**	**−0.008**	0.018
		−1.004	*0.915*	***−1.870*** *	***−2.652*** ***	*1.154*
ROA		**−0.082**	**0.090**	**0.852**	0.030	**−0.603**
		−1.772 *	***1.778*** *	***2.103*** **	*0.803*	***−3.298*** ***
SALES_G		0.003	0.002	−0.001	−0.000	**−0.037**
		1.196	*0.653*	*−0.025*	*−0.077*	***−3.732*** ***
MTB		**0.003**	**0.006**	**0.092**	**0.009**	0.003
		2.611 ***	***4.865*** ***	***7.608*** ***	***6.163*** ***	*0.767*
CFO		**0.062**	**0.198**	−0.333	−0.008	0.016
		1.649 *	***4.847*** ***	*−1.031*	*−0.269*	*0.12*
LEV		−0.016	**−0.034**	**−0.268**	**−0.036**	**0.243**
		−1.489	***−2.182*** **	***−2.395*** **	***−2.759*** ***	***3.105*** ***
LOSS		0.005	−0.007	**−0.074**	−0.005	**−0.185**
		1.230	*−1.486*	***−1.793*** *	*−1.209*	***−6.974*** ***
COMPLEX		**−0.006**	**0.020**	**0.079**	**0.018**	**−0.048**
		−2.138 **	***5.552*** ***	***3.089*** ***	***6.533*** ***	***−2.687*** ***
CAPEX		**0.096**	**−0.062**	**−0.387**	0.000	−0.094
		3.683 ***	***−2.582*** ***	***−2.632*** ***	*0.011*	*−1.086*
IND		0.008	−0.000	−0.160	**−0.037**	0.006
		0.851	*−0.011*	*−1.342*	***−4.739*** ***	*0.15*
lnACMeet		−0.004	−0.003	0.008	**0.006**	−0.008
		−1.299	*−0.849*	*0.24*	***2.124*** **	*−0.452*
lnAGE		0.003	**−0.009**	**−0.153**	**−0.015**	0.018
		0.939	***−1.777*** *	***−3.606*** ***	***−4.036*** ***	*0.903*

	First Stage	Second Stage				
	1	2	3	4	5	6
Variables	*PC_D*	*EM_Kothari*	*REM_CFO*	*REM_Prod*	*REM_Exp*	*Small_Profits*
CONSTANT	**−6.701**	**0.093**	0.074	**1.218**	**0.195**	−0.020
	−9.697***	***2.474*****	*1.411*	***2.526*****	***4.966******	*−0.100*
Inverse Mills Ratio		−0.003	0.000	**−0.226**	**−0.024**	0.039
		−0.443	*0.027*	***−2.488*****	***−3.160******	*0.866*
Total observations	899	899	899	899	899	899
Adjusted R-square	0.345$^{\#}$	0.292	0.411	0.412	0.620	0.112
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari, Leone, and Wasley's (2005) performance-adjusted model; *REM_CFO:* The Absolute Value of Abnormal Cash Flows based on Roychowdhury (2006) model; *REM_Prod:* The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP:* The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; *Small_Profits:* Reporting Small Positive Profits; InstOwn and InstOwn_D: Strategic institutional ownership; *FamOwn:* Family ownership; *GovOwn:* Government ownership; *FSIZE:* Firm size; *ROA:* Return on assets; *SALES_G:* Sales growth; *MTB:* Market-to-book ratio; *CFO:* Operating cash flow ratio; *LEV:* Leverage; *LOSS:* Negative income; *COMPLEX:* Firm complexity; *CAPEX:* Capital expenditure; *IND:* Board independence; *lnACMeet:* Log of audit committee meetings; *lnAGE:* Log of firm age (For additional details refer to Appendix A). * p < 0.1, ** p < 0.05, *** p < 0.01; $^{\#}$ Adjusted R-square pseudo

Table 7.19
Heckman Selection Model *(including other Independent Variables)*

	First Stage	Second Stage				
	1	2	3	4	5	6
Variables	*PC_D*	*EM_Kothari*	*REM_CFO*	*REM_Prod*	*REM_Exp*	*Small_Profits*
GovOwn	0.511					
	1.227					
FSIZE	**0.138**					
	2.481**					
ROA	0.163					
	0.243					
MTB	0.055					
	1.509					
LEV	**−2.197**					
	−4.149***					
IND	0.505					
	1.578					
lnAGE	**0.168**					
	1.647*					
PC		**−0.036**	**−0.066**	**−0.669**	**−0.079**	**−0.147**
		−2.475**	***−3.721******	***−4.394******	***−4.660******	***−1.858****
InstOwn		−0.012	**−0.081**	**−0.497**	**−0.042**	−0.046
		−0.843	***−3.305******	***−3.325******	***−3.051******	*−0.421*
IAF_Out		0.002	−0.000	0.032	**−0.007**	−0.008
		0.540	*−0.001*	*1.082*	***−2.587******	*−0.404*
AUDIT4		−0.001	**0.015**	**0.086**	**0.007**	0.021
		−0.308	***4.065******	***3.015******	***2.364*****	*1.091*
FamOwn		**−0.029**	**0.026**	**0.464**	**0.043**	**−0.076**
		−4.211***	***2.604******	***5.836******	***5.092******	***−2.115*****

	First Stage	Second Stage				
	1	2	3	4	5	6
Variables	*PC_D*	*EM_Kothari*	*REM_CFO*	*REM_Prod*	*REM_Exp*	*Small_Profits*
GovOwn		**−0.042**	−0.012	**−0.655**	**−0.052**	0.075
		−1.759*	*−0.391*	***−3.119******	***−2.342*****	*0.527*
FSIZE		**−0.016**	0.001	−0.053	0.001	0.033
		−2.390**	*0.097*	*−0.746*	*0.174*	*0.703*
ROA		**−0.072**	**0.073**	**1.185**	**0.072**	**−0.664**
		−1.859*	***1.827****	***3.362******	***2.072*****	***−4.138******
SALES_G		0.004	0.003	0.004	0.000	**−0.036**
		1.307	*0.871*	*0.154*	*0.106*	***−3.530******
MTB		−0.002	0.005	**0.060**	**0.009**	0.016
		−0.736	*1.316*	***2.023*****	***2.845******	*0.828*
CFO		0.054	**0.192**	−0.303	−0.011	−0.002
		1.457	***4.751******	*−0.944*	*−0.368*	*−0.012*
LEV		**0.209**	0.000	0.726	−0.057	−0.266
		1.973**	*0.002*	*0.647*	*−0.485*	*−0.340*
LOSS		0.006	−0.007	**−0.079**	−0.006	**−0.185**
		1.625	*−1.434*	***−1.988*****	*−1.430*	***−6.891******
COMPLEX		**−0.005**	**0.018**	**0.083**	**0.018**	**−0.053**
		−1.664*	***5.063******	***3.071******	***5.758******	***−2.904******
CAPEX		**0.095**	**−0.059**	**−0.303**	0.007	−0.103
		3.744***	***−2.394*****	***−1.966*****	*0.420*	*−1.220*
IND		**−0.043**	−0.005	−0.323	−0.028	0.109
		−1.661*	*−0.171*	*−1.236*	*−1.001*	*0.572*
lnACMeet		−0.004	−0.005	−0.015	0.005	−0.008
		−1.224	*−1.289*	*−0.450*	*1.636*	*−0.412*
lnAGE		−0.011	−0.012	−0.153	−0.005	0.046
		−1.357	*−1.076*	*−1.775**	*−0.554*	*0.762*
CONSTANT	**−1.859**	**0.368**	0.130	1.625	0.086	−0.492
	−2.877***	***2.661******	*0.740*	*1.146*	*0.577*	*−0.492*
Inverse Mills Ratio		**−0.131**	−0.029	−0.713	−0.004	0.290
		−2.165**	*−0.368*	*−1.140*	*−0.063*	*0.649*
Total observations	881	881	881	881	881	881
Adjusted R-square	0.124$^{\#}$	0.296	0.431	0.422	0.623	0.114
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-adjusted model; *REM_CFO*: The Absolute Value of Abnormal Cash Flows based on Roychowdhury (2006) model; *REM_Prod*: The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP*: The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; *Small_Profits*: Reporting Small Positive Profits; *PC and PC_D*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: Firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details, refer to Appendix A.) * p < 0.1, ** p < 0.05, *** p < 0.01; # Adjusted R-square pseudo

7.5.3 Generalised Method of Moments

In the multivariate analysis of this thesis (discussed in Chapter Six), OLS regressions were employed as the main analytical method. However, results obtained using OLS regressions may be biased if the relationship between the independent variable and dependent variable is based on reverse causality. In this context, this would translate as politically connected directors and strategic institutional investors being attracted to firms that avoided managing their reported earnings, and would therefore have higher financial reporting quality regardless of their presence.

In order to ensure that reverse causality is not a significant factor in the main analysis, Wintoki et al. (2012) suggest using a dynamic generalised method of moments (GMM) estimation technique as developed by Arellano and Bond (1991), Arellano and Bover (1995), and Blundell and Bond (1998). By using this technique, the inferences based on the main multivariate analysis as discussed in Chapter Six can be verified as reliable and free from any bias that may be caused by reverse causality. In order to implement a system GMM estimation, an estimate was generated for a first difference of the model in order to address the issue of time-invariant unobserved heterogeneity. Then the GMM framework was employed using the lagged values of financial reporting quality proxies (namely, *EM_Kothari*, *REM_CFO*, *REM_Prod*, *REM_Exp*, *Small_Profits*) as instrument variables.

Table 7.20 documents the results obtained using the GMM technique on political connectedness in isolation from other explanatory variables (i.e., *InstOwn*, *IAF_Out*, and *AUDIT4*), while Table 7.22 shows the results obtained when these variables were introduced into the analysis. Table 7.21 presents the results when the GMM technique was performed on strategic institutional investors in isolation from other explanatory variables.

As shown in Table 7.20, Table 7.21 and Table 7.22, the Hansen test of over-identification shows high *p*-values, implying the validity of lagged values of the dependent variables as instruments. In addition, the Arellano-Bond first- and second-order autocorrelation tests, AR(1) and AR(2) are also presented in Table 7.20, Table 7.21 and Table 7.22. The *p*-values of AR(1) presented in all columns across the results tables indicate statistically significant autocorrelation. On the other hand, AR(2) gives higher *p*-values, indicating that the null hypothesis is not rejected and that the error

term is not correlated. Therefore, the estimates generated by employing the system GMM are consistent.

Table 7.20 and Table 7.22 document results that are consistent with those of the main analysis discussed in Chapter Six. That is, they show a consistent significant and negative relationship between political connectedness and both accrual-based and real activity-based earnings management. This implies that politically connected directors contributed to higher financial reporting quality in the firms on whose boards they serve. Similarly, Table 7.21 presents largely consistent results with those of the main analysis findings, indicating a significant and negative relationship with both forms of earnings management, hence, enhanced financial reporting quality. Additionally, Table 7.21 presents largely consistent results for the relationship between financial reporting quality and strategic institutional investors (*InstOwn*) as indicated by the statically significant and negative relationship with accruals-based earning management and real activity-based earnings management. Furthermore, Table 7.22 shows that the relationship between audit quality (*AUDIT4*) and real activity-based earnings management was also robust, that is, findings indicate that the engagement of a high-quality audit firm was associated with the use of real activity-based earnings manipulation. Therefore, according to the GMM estimation technique, the main analysis results are robust.

Table 7.20
Generalised Method of Moments – Political Connectedness *(excluding other independent variables)*

	1	2	3	4	5
Variables	*EM_Kothari*	*REM_CFO*	*REM_Prod*	*REM_Exp*	*Small_Profits*
L.EM_Kothari	**−0.185**				
	−18.045***				
L.REM_CFO		**0.209**			
		5.969***			
L.REM_Prod			**0.693**		
			49.743***		
L.REM_Exp				**1.005**	
				37.894***	
L.Small_Profits					**0.109**
					3.542***
PC	**−0.177**	***−0.071***	***−0.175***	***−0.064***	**−0.220**
	−12.516***	***−3.346******	***−2.449*****	***−6.132******	**−3.900*****
Control Variables	Included	Included	Included	Included	Included
CONSTANT	**0.090**	0.041	0.052	−0.077	0.035
	8.006***	*1.458*	*1.494*	*−0.471*	*1.315*
Total observations	786	786	786	786	786
Industry Dummy	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes
Arellano-Bond AR(1) *P*-value	0.000	0.000	0.004	0.002	0.000
Arellano-Bond AR(2) *P*-value	0.664	0.517	0.368	0.089	0.429
Hansen Test of OverID	0.592	0.399	0.270	0.585	0.999

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-adjusted model; *REM_CFO*: The Absolute Value of Abnormal Cash Flows based on Roychowdhury (2006) model; *REM_Prod*: The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP*: The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; *Small_Profits*: Reporting Small Positive Profits; *PC:* Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: Firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details refer to Appendix A.) * p < 0.1, ** p < 0.05, *** p < 0.01

Table 7.21
Generalised Method of Moments – Strategic Institutional Investors
(excluding other independent variables)

	1	2	3	4	5
Variables	*EM_Kothari*	*REM_CFO*	*REM_Prod*	*REM_Exp*	*Small_Profits*
L.EM_Kothari	**−0.145**				
	−3.235*				
L.REM_CFO		**0.170**			
		4.629*			
L.REM_Prod			**0.903**		
			44.030*		
L.REM_Exp				**0.845**	
				28.728*	
L.Small_Profits					**−0.075**
					−4.009*
InstOwn	**−0.061**	**−0.054**	**−0.251**	**−0.107**	−0.064
	−2.927*	***−2.927****	***−1.690****	***−6.484****	*−1.364*
Control Variables	Included	Included	Included	Included	Included
CONSTANT	**0.078**	**0.036**	**−0.118**	0.004	**0.133**
	4.564*	***2.640****	***−2.392****	*0.492*	***2.448****
Total observations	786	786	786	786	786
Industry Dummy	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes
Arellano-Bond AR(1) *P*-value	0.000	0.000	0.005	0.002	0.000
Arellano-Bond AR(2) *P*-value	0.805	0.345	0.283	0.115	0.756
Hansen Test of OverID	0.500	0.785	0.257	0.306	0.813

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-adjusted model; *REM_CFO*: The Absolute Value of Abnormal Cash Flows based on Roychowdhury (2006) model; *REM_Prod*: The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP*: The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; *Small_Profits*: Reporting Small Positive Profits; *InstOwn*: Strategic institutional ownership; *FamOwn*: Family ownership; *GovOwn*: Government ownership; *FSIZE*: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: Firm complexity; *CAPEX*: Capital expenditure; IND: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details, refer to Appendix A.). * p < 0.1, ** p < 0.05, *** p < 0.01

Table 7.22
Generalised Method of Moments
(including other independent variables)

	1	2	3	4	5
Variables	*EM_Kothari*	*REM_CFO*	*REM_Prod*	*REM_Exp*	*Small_Profits*
L.EM_Kothari	**−0.077**				
	−3.185 ***				
L.REM_CFO		**0.078**			
		1.680 *			
L.REM_Prod			**0.814**		
			127.201 ***		
L.REM_Exp				**0.962**	
				47.516 ***	
L.Small_Profits					**0.055**
					3.562 ***
PC	**−0.041**	**−0.058**	**−0.091**	**−0.033**	**−0.266**
	−3.084 ***	***−2.978*** ***	***−2.561*** **	***−5.809*** ***	***−6.158*** ***
InstOwn	**−0.067**	−0.048	**−0.217**	**−0.055**	**−0.129**
	−2.943 ***	*−1.379*	***−4.120*** ***	***−4.336*** ***	***−1.909*** *
IAF_Out	**0.004**	−0.001	−0.013	−0.002	**0.021**
	2.163 **	*−0.102*	*−1.163*	*−1.000*	***2.710*** ***
AUDIT4	0.001	**0.029**	**0.015**	**0.004**	**0.018**
	0.324	***6.627*** ***	***1.905*** *	***1.907*** *	***2.031*** **
Control Variables	Included	Included	Included	Included	Included
CONSTANT	**0.092**	**0.046**	**−0.117**	−0.004	**0.156**
	11.420 ***	***2.476*** **	***−4.650*** ***	*−0.548*	***5.793*** ***
Total observations	786	786	786	786	786
Industry Dummy	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes
Arellano-Bond AR(1) *P*-value	0.000	0.000	0.004	0.002	0.000
Arellano-Bond AR(2) *P*-value	0.926	0.088	0.284	0.101	0.549
Hansen Test of OverID	0.997	0.556	0.696	0.161	0.719

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-adjusted model; *REM_CFO*: The Absolute Value of Abnormal Cash Flows based on Roychowdhury (2006) model; *REM_Prod*: The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP*: The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; *Small_Profits*: Reporting Small Positive Profits; *PC*: Political connectedness; *InstOwn*: Strategic institutional ownership; *IAF_Out*: Internal audit outsourcing; *AUDIT4*: audit quality; *FamOwn*: Family ownership; *GovOwn*: Government ownership; FSIZE: Firm size; *ROA*: Return on assets; *SALES_G*: Sales growth; *MTB*: Market-to-book ratio; *CFO*: Operating cash flow ratio; *LEV*: Leverage; *LOSS*: Negative income; *COMPLEX*: Firm complexity; *CAPEX*: Capital expenditure; *IND*: Board independence; *lnACMeet*: Log of audit committee meetings; *lnAGE*: Log of firm age. (For additional details refer to Appendix A.) * p < 0.1, ** p < 0.05, *** p < 0.01

7.5.4 Difference-in-Differences

The literature on financial reporting quality demonstrates a thorough investigation of the relationship between audit quality and financial reporting quality. Although some researchers report mixed results on the relationship (e.g., Maijoor & Vanstraelen, 2006), the dominant body of literature finds that high-quality audit firms restrain the use of earnings management techniques and hence contribute to higher financial reporting quality. However, the main analysis of this study, as reported in Table 6.1, fails to show a statistically significant and negative relationship between audit quality (*AUDIT4*) and accrual-based earnings management. On the other hand, Table 6.2–Table 6.4 present a consistently significant and positive association between high-quality audit firms and the use of real activity-based earnings management. In this section, therefore, further analysis was performed in order to investigate the factor that might have contributed to the unexpected finding in the main analysis.

A major event that took place during the time span of the sample used in the analysis was the licence suspension of one of the high-quality audit firms operating in Saudi Arabia (Deloitte) by the CMA after the discovery of two accounting scandals in which they were involved. The suspension resulted in Deloitte being banned from providing audit services to Saudi listed firms. The difference-in-differences (DID) approach was therefore employed to analyse the impact of the Deloitte suspension on the quality of audit services provided by the remaining three high-quality audit firms to their new clients. In order to perform this analysis, the pooled sample was partitioned to create subsamples pre- and post-suspension. Additionally, a dichotomous variable was constructed taking a value of 1 if the client changed their audit firm, and zero otherwise (*Chng_Aud_Frm*). This provided a means of comparison between the magnitude of accrual-based earnings management of newly accepted clients by high-quality audit firms before and after 2014. The year 2014 was excluded in order to avoid noisy observations of the year in which the scandals were uncovered.

Table 7.23 presents the results of the DID analysis when a new client firm was accepted by a high-quality audit firm pre- and post-the suspension event. Column 1 presents the results on accrual-based earnings management. The coefficients of the interaction term *AUDIT4*Chng_Aud_Frm* indicate that in the period before the event took place, there was a statistically significant and negative relationship at the 5% level

between high-quality audit firms and accrual-based earnings management during the first year of engagement. On the other hand, Column 2 documents a statistically significant and positive relationship between the interaction term *AUDIT4*Chng_Aud_Frm* and the magnitude of accrual-based earnings management in the first year of the audit engagement. These findings imply that pre-2014, high-quality audit firms used to perform their audit services to new clients with more scrutiny, resulting in higher financial reporting quality in the first year of the engagement. However, after the shock of 2014, the situation changed, that is, high-quality audit firms started providing lower-quality audit services in the first year of engagement with new clients. A plausible explanation may be that the remaining three high-quality audit firms over-engaged with new clients (who had formerly been Deloitte's clients), which decreased the quality of their audit services and resulted in lower-quality financial reports.

In addition to this finding, Columns 3, 5, and 7 present statistically significant and positive coefficients for the variable *AUDIT4*, indicating a significant and positive relationship with all real activity-based earnings management measures. This means that before the event of 2014, the existing clients of high-quality audit firms relied heavily on real activity-based earnings management techniques to manipulate their reported earnings. This statistical significance disappears in the post-event period, however, indicating less use of real activity manipulation by existing clients. Scholars suggest that this could be the result of tighter constraints on the use of accrual-based earnings management and higher costs of real activity manipulation (Chi et al., 2011; Zang, 2012). In other words, existing clients of high-quality audit firms used to resort to real activity-based earnings management as a means to manipulate their earnings (Chi et al., 2011), however, during the years following Deloitte's suspension, the findings indicate that high-quality audit firms no longer had a statistically significant and positive relationship with real activity-based manipulation. This indicates that the existing clients of high-quality audit firms no longer depended as heavily on the costlier alternative to manipulate their earnings.

Table 7.23
Difference-in-Differences Analysis – High-Quality Audit Firms *(first-year engagement)*

	EM_Kothari		***REM_CFO***		***REM_Prod***		***REM_Exp***	
Dependent Variable*:*	**1** *Pre-*	**2** *Post-*	**3** *Pre-*	**4** *Post-*	**5** *Pre-*	**6** *Post-*	**7** *Pre-*	**8** *Post-*
AUDIT4	0.005	−0.003	**0.031**	0.008	**0.207**	−0.057	**0.021**	0.004
	0.954	*−0.562*	***5.072****	*1.13*	***4.236****	*−1.023*	***4.816****	*0.686*
Chng_Aud_Frm	**0.016**	−0.007	0.005	**0.01**	−0.041	−0.023	0.004	**0.018**
	2.249*	*−1.256*	0.52	**1.667***	*−0.601*	*−0.371*	0.637	**2.551****
*AUDIT4*Chng_Aud_Frm*	**−0.017**	**0.017**	−0.004	−0.007	−0.041	0.064	−0.008	−0.009
	−2.025*	***1.879****	*−0.408*	*−0.672*	*−0.51*	*0.737*	−1.045	−0.897
Control Variables	Included	Included	Included	Included	Included	Included	Included	Included
CONSTANT	**0.081**	**0.106**	**0.084**	**0.064**	0.056	0.270	**0.092**	**0.058**
	3.947*	***3.803****	***2.915****	***2.020****	*0.260*	*1.350*	***5.660****	**2.399****
Total observations	459	334	459	334	459	334	459	334
Adjusted R-square	0.321	0.270	0.462	0.369	0.429	0.394	0.683	0.574
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	6.140	6.610	15.110	9.640	12.240	8.950	46.630	23.210
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VIF	2.480	2.440	2.480	2.440	2.480	2.440	2.480	2.440

EM_Kothari: The magnitude of discretionary accruals measured based on Kothari et al.'s (2005) performance-adjusted model; *REM_CFO*: The Absolute Value of Abnormal Cash Flows based on Roychowdhury (2006) model; *REM_Prod*: The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model; *REM_EXP*: The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model; Chng_Aud_Frm: Switch of audit firm; *AUDIT4*: audit quality.

7.6 Summary

This chapter presented the results of the additional analyses performed to ensure the robustness of the main analysis results. It began by presenting the results of analyses that used alternative measures for financial reporting quality, political connectedness, and strategic institutional ownership. This chapter extended the analysis by using alternative measures for the control variables and introducing new control variables. After that, the chapter discussed the results of the analyses performed after partitioning the pooled sample in various ways, based on firm characteristics (namely: reporting profits versus losses, firm complexity, firm size, and growth opportunities). Next, the chapter discussed the results of the endogeneity analysis, including PSM, the Heckman selection model, the GMM, and DID.

Chapter Eight presents the conclusion of this study, starting with an overview of its context, aims and methods. Following that, it presents the major findings and discusses the study's contributions to the field as well as the implications of its findings to the main stakeholders. Lastly, the limitations of the study as well as recommendations for future research are presented.

Chapter Eight

Conclusion

8.1 Introduction

Chapter Seven discussed the results of the additional analyses conducted to verify the reliability of the conclusions drawn from the results of the main analysis. Results for the dependent, independent, and control variables were documented using alternative proxies. Next, the chapter discussed the findings of the analysis conducted on the pooled sample after it was partitioned based on a number of criteria (firm profitability, firm complexity, firm size, and growth opportunities). Finally, the chapter discussed the findings of the endogeneity analysis, including PSM, the Heckman selection model, GMM and DID.

This chapter presents the overall conclusions of the research, starting with an overview of the study. Next, the chapter presents the major findings and the conclusions that can be drawn from them. After that, the chapter discusses the implications to different stakeholders that may benefit from the findings of this study. The key contributions are discussed, followed by the study limitations and recommendations for future research.

8.2 Study Overview

Due to significant changes and improvements in the capital market, the quality of Saudi listed companies' financial reporting has come into a sharper focus. With the increasing number of accounting and auditing scandals around the globe, scholarly research is needed to examine the sources of those breakdowns in audit quality as well as the factors that affect the quality of financial information. Due to the uniqueness of the Saudi Arabian socio-political context, the main objective of this study was to examine the association between political connectedness of firms in the capital market and key monitoring mechanisms, on the quality of financial reports. This study utilised the theoretical perspectives of resource dependence theory, legitimacy theory, and agency theory to form hypotheses and explain the associations between the examined variables.

Based on an extensive review of related literature and the chosen theoretical framework, a hypothesised association between the quality of financial reports and political connectedness was formulated. Additionally, associations between internal and external monitoring mechanisms (namely, strategic institutional investors, internal audit sourcing arrangements, and audit quality), as well as their interaction effects with political connectedness and financial reporting quality, were also hypothesised to be statistically significant. In order to examine the specified hypotheses, financial reporting quality was proxied using a number of defining measures. Specifically, accrual-based earnings management, real activity-based earnings management, and reporting small positive profits were utilised to estimate the quality of financial reports. It was found that the concept of political connectedness was difficult to identify and define. Therefore, a number of operational definitions were employed in order to identify politically connected firms.

The sample data used in this study was obtained from a number of sources. First, financial data was obtained from Capital IQ (Standard and Poor's Global Data website). Second, annual reports and board reports that had been published on the websites of the capital market and listed firms were downloaded. The reports were utilised to collect any missing data and to cross check the accuracy of data obtained from Capital IQ. Third, corporate governance data was collected manually using listed firms' board reports. The initial sample comprised 179 firms, including all firms listed on the Saudi Stock Exchange as of December 31st, 2017. The final sample used to examine the hypothesised associations in an unbalanced panel data consisted of 899 firm-year observations of non-financial listed firms, covering the period from 2009 to 2017. The key findings are summarised in Section 8.3.

8.3 Summary of Key Conclusions

As discussed in Chapter Three, this study examined four main hypotheses related to the association between financial reporting quality and the main explanatory variables of the study. These were political connectedness, strategic institutional investors, internal audit sourcing arrangements, and audit quality as measured by the use of a Big N audit firm. They were hypothesised as potential determinants of variation in the quality of financial reports of Saudi listed firms. Additionally, three sub-hypotheses were postulated in order to examine the interaction effects between

political connectedness and the monitoring mechanisms investigated. Table 8.1 provides a summary of the findings of the study with respect to the hypotheses generated at the outset.

Table 8.1
Main conclusions of the study

Hypothesis		Decision
$\boldsymbol{H_1}$	*There is a significant association between political connectedness and financial reporting quality*	Accept
$\boldsymbol{H_{2a}}$	*There is a significant association between strategic institutional ownership and financial reporting quality*	Accept
$\boldsymbol{H_{2b}}$	*Strategic Institutional ownership mitigates the association between political connectedness and financial reporting quality.*	Reject
$\boldsymbol{H_{3a}}$	*There is a significant association between internal audit sourcing arrangements and financial reporting quality.*	Reject
$\boldsymbol{H_{3b}}$	*Internal audit sourcing arrangements mitigate the significant association between political connectedness and financial reporting quality.*	Reject
$\boldsymbol{H_{4a}}$	*There is a significant association between audit quality and financial reporting quality.*	Accept
$\boldsymbol{H_{4b}}$	*Audit quality mitigates the significant association between political connectedness and financial reporting quality.*	Reject

The first hypothesis ($\boldsymbol{H_1}$) relates to the association between the political connectedness of Saudi listed firms and the quality of their financial reports. The hypothesis was tested using a number of definitions and proxies for both variables (as discussed in Chapters Four and Seven). Both the main investigation and additional analysis findings reported a significant positive association between political connectedness and financial reporting quality, hence $\boldsymbol{H_1}$ is accepted.

The second hypothesis ($\boldsymbol{H_{2a}}$) relates to the association between strategic institutional investors and financial reporting quality of Saudi listed firms. Using different proxies of financial reporting quality (as discussed in Chapters Four and Seven), the hypothesis $\boldsymbol{H_{2a}}$ was examined. The results of the main analysis fully supported accepting the hypothesis. Specifically, the findings related to accrual-based earnings management and real activity-based earnings management showed a significant positive association between the presence of strategic institutional investors and the quality of financial reports. However, when the reporting of small positive profits was used as a proxy for financial reporting quality, the findings failed to support

a significant association. Additionally, the sub-hypothesis (H_{2b}) postulated to examine the interactive effect of strategic institutional investors and political connectedness shows mixed findings. This sub-hypothesis was therefore rejected.

The third hypothesis (H_{3a}) relates to the association between internal audit sourcing arrangements and financial reporting quality of Saudi listed firms. Utilising a number of measures to estimate financial reporting quality, the hypothesised association in H_{3a} was tested. However, both the main analysis results and the additional analysis failed to document a statistically significant association between the two variables. Additionally, the sub-hypothesis (H_{3b}) postulated to examine the interactive effect of internal audit sourcing arrangements and political connectedness shows mixed findings. Hypothesis H_{3a} and sub-hypothesis H_{3b} are not supported by the findings, hence both hypotheses were rejected.

The fourth hypothesis (H_{4a}) relates to the association between audit quality, proxied by the use of a Big N audit firm, and financial reporting quality of Saudi listed firms. Using different measures to capture the quality of financial reports, the hypothesised association in H_{4a} was tested. The results were interesting. While the relation was statistically insignificant using other measures of financial reporting quality, the results obtained from the main analysis and the additional analysis presented a statistically significant and negative association between financial reporting quality (proxied by real activity-based earnings management) and audit quality (proxied by the engagement of a Big N audit firm). Therefore, hypothesis (H_{4a}) is accepted. Finally, the sub-hypothesis (H_{4b}) arguing that audit quality mitigates the association between political connectedness and financial reporting quality failed to yield statistically significant results. Consequently, the sub-hypothesis (H_{4b}) was rejected.

8.4 Study Contributions

Unlike the majority of prior studies, especially those conducted in Saudi Arabia, this study employed a number of different measures to define the quality of financial reports in order to comprehensively determine the level of reporting quality. Different detection approaches to capture the potential manipulation of financial results were used, in order to better understand manipulative reporting practices of listed firms. Namely, this study used earnings management detection techniques to capture both accrual-based and real activity-based manipulation. While previous

studies lent greater focus to accrual-based earnings management, the use of real activity-based earnings management by Saudi listed firms was underinvestigated, although scholars have found that real activity manipulation techniques are widely employed by Saudi listed firms (Habbash & Alghamdi, 2012). Another proxy utilised in this study was loss avoidance by the reporting of small positive profits. According to Habbash and Alghamdi (2015), loss avoidance is a key driver of management misconduct related to financial reporting in Saudi Arabia. The consistent findings of this study with respect to the different definitions of financial report quality provide a deeper understanding of the variables of interest.

This study also contributes to a more nuanced understanding of the impact of political connectedness on financial reporting quality of listed firms. The investigation of these factors in a unique sociopolitical setting, i.e., in Saudi Arabia, contributes to the knowledge on the effect of political connectedness on financial reporting in capital markets. Despite the assertion that strong familial bonds between Saudis can intensify the negative consequences of cronyism towards members of the extended Saudi Royal Family on the financial reports of their firms, the findings of this study show that political connectedness curbs managerial opportunism. This may be attributed to the collectivist mindset of families in Saudi Arabia as well as the Islamic underpinning of societal norms and values, that may contribute to lower self-orientation by politically connected individuals in order to protect the family's reputation (Al-Hadi et al., 2017). Therefore, this study's findings significantly contribute to a more nuanced understanding of the impact of political connectedness in capital markets.

Additionally, the study investigated the impacts of key monitoring mechanisms (namely, strategic institutional investors, internal audit sourcing arrangements, and audit quality) on the quality of financial reports as well as their interaction effects with political connectedness. The importance of institutional investors stems from their capabilities and resources as sophisticated stockholders, which enable them to play a more effective role in enhancing the financial reporting quality of their investees. This study specifically focused on the impact of strategic institutional investors based on the finding (e.g., Bushee, 1998; Zhong et al., 2017) that institutional investors are heterogeneous in nature and in their impact on their investees. Strategic institutional investors (i.e., long term-oriented institutional investors with large stockholdings) have the capacity and willingness to play an active role in their investees' decision-making

processes (Zhong et al., 2017). The study findings consistently indicated a significant positive impact of strategic institutional investors on the quality of their investees' financial reports. This finding contributes to a better understanding of the impact of the strategic institutional investors in the Saudi context, and provides new insights into how they enhance the quality of financial information provided by Saudi listed firms.

Despite the increased attention of regulators, practitioners, and scholars on the internal auditing function as a monitoring mechanism, due to the effects of various accounting failures and the new regulations brought in to counter them, there is a paucity of empirical archival studies investigating the difference made by the alternative sourcing arrangements available to listed firms. The tasks of internal auditors have drastically evolved in recent years and there has been an ever-greater need for alternative sourcing of the function (Mubako, 2019). Examining the differential impact of sourcing arrangements on financial reporting quality may indicate which of them is the optimal alternative, under which circumstances. Prior studies in the US (e.g., Prawitt et al., 2012) and non-US contexts (e.g., Al-Rassas & Kamardin, 2015; Johl et al., 2013) indicate the significant impact of sourcing arrangements of internal audit functions. However, this study failed to document any evidence of their impact on the quality of financial reports in the Saudi context. Rather, the findings suggest that alternative sourcing arrangements do not affect the quality of financial reporting quality nor mitigate the association between political connectedness and financial reporting quality. This may be attributable to the fact that the auditing profession has only recently been under scrutiny by Saudi regulators and is still developing.

Additionally, the impact of audit quality, as measured using the size of the audit firm, on different earnings management techniques that undermine the quality of financial reports has been extensively investigated in the contexts of developed countries, especially the US. However, empirical studies investigating the impact of audit quality on financial reporting manipulation techniques in Saudi Arabia are scarce. Prior studies only investigate the impact of audit quality on accrual-based measures earnings management, and the use of real activity-based earnings management techniques and loss avoidance by reporting small positive profits are neglected. While this study failed to document a significant association between audit quality and accrual-based earnings management nor a significant interaction effect with political connectedness, the findings provide significant evidence of the increased

use of real activity-based manipulation among the clients of Big N audit firms. The study also investigated the effect of a particular capital market event related to the audit profession (the 2014 banning of Deloitte from auditing Saudi listed firms). The study documents that, after the event, new Big N audit clients tended to substitute the costlier earnings management alternative (i.e., real activity-based earnings management) with accrual-based earnings manipulation, despite the fact that such techniques are more readily subject to auditor scrutiny. Therefore, a significant contribution of this study relates to the more comprehensive approach to estimating the financial reporting quality of publicly listed firms that it employed.

Finally, the majority of scholarly work in the field of accounting, auditing, and corporate governance tends to rely on a single theory (predominantly, agency theory) to conceptualise and interpret associations (Alhossini et al., 2021; Gordon & Nazari, 2018). Scholars such as Hillman and Dalziel (2003), however, argue that agency theory may be insufficient to explain the various influences of the study variables on financial reporting quality; hence, a single theoretical approach may be less accurate in explaining the associations and interactions when investigating different monitoring mechanisms (Daily et al., 2003; Eisenhardt, 1989; Forbes & Milliken, 1999). Therefore, by utilising multiple theories (resource-dependency theory and legitimacy theory in addition to agency theory) to build its theoretical framework, this study contributes to the body of literature by providing a greater number of potential explanations for the study findings and the subsequent conclusions drawn, and a more nuanced base from which to consider the associations between the study variables.

8.5 Study Implications

The primary focus of this study was to investigate several key factors that have been subject to considerable regulatory attention. It has been established that politically connectedness, strategic institutional investors, internal auditing, and audit quality may be key determinants of the quality of financial reports of listed firms. These factors have drawn the attention of a number of stakeholders for whom this study has significant implications. Specifically, these are regulators, capital providers (i.e., debtors and shareholders), auditors, and scholars.

8.5.1 Implications for Regulators

After a series of significant accounting and auditing failures, Saudi regulators imposed drastic changes to the regulatory scheme in the capital market. For instance, the 2006 capital market crash, and the introduction of CGRs in 2006 and their enforcement in 2009 had a widespread impact on listed firms in terms of how their activities and reporting systems were audited. Additionally, the CMA's critical response to the audit failure related to the Mobily case was to ban Deloitte, the accounting firm responsible, from auditing listed firms in the country. This demonstrated a commitment by the CMA to increasing the credibility and faithfulness of financial reporting. Coupled with the focus on transparency and integrity attached to the country's Vision 2030[16], these regulatory actions provide a strong indication of the importance placed on the quality of financial reporting by regulators of the Saudi capital market. However, determining the ultimate impact of these changes, including whether they will allow regulators to achieve their desired outcomes, requires extensive examination. To this end, the findings of this study provide empirical evidence that can communicate to capital market regulators the fruitfulness of their enforcement decisions and offer practical explanations as to why they are succeeding.

This study documents a significant positive association between political connectedness and financial reporting quality and a similar positive and significant association between strategic institutional investors and the quality of financial reports. These findings contribute substantially to capital market regulators by indicating the effect of these factors on their efforts to achieve higher levels of market efficiency by enhancing the credibility of financial information. Additionally, the fact that the study failed to find a significant association between internal audit sourcing arrangements and financial reporting quality indicates that the provider of internal audit services – whether externally or internally recruited – has a negligible impact on financial reporting quality. In terms of audit quality, this study provides strong evidence on the substitutionality of earnings management techniques among Saudi listed firms. Furthermore, the study documents evidence that new audit clients of Big N firms exploited a regulatory market change (i.e., the banning of Deloitte after 2014) and resorted to the less costly, though more traceable, substitute to manipulate financial

[16] Saudi Arabia's Vision 2030 is discussed in Chapter One (Section 1.1). Information can also be found at: www.vision2030.gov.sa/

reports (i.e. accrual-based earnings management). Such decisions on the part of new clients of Big N audit firms indicate the effect of the regulatory change on the quality of their audit services.

Consequently, capital market regulators would do well to consider the factors reported here that could be taken into account in their regulatory initiatives seeking to enhance the quality of financial information in the market. Based on the findings of this study, political connectedness and strategic institutional ownership constitute means to enhancing the quality of financial reports. Additionally, regulatory bodies should place more attention on techniques other than accrual-based earnings management that can also be used to manipulate reported financial results. The study findings show the need for regulatory initiatives that require auditors to include these detrimental practices within the scope of their audits and to raise public awareness of such practices. Additionally, findings with respect to the Deloitte ban may induce regulators to reconsider the complete ban on a key player in the audit market and further assess potential undesirable consequences of such a decision.

8.5.2 Implications for Capital Providers

The tremendous losses associated with recent accounting and audit failures heavily impacted the perception and trust of capital providers with respect to the information provided in financial reports. Opportunistic reporting behaviour of firms' managers resulted in increased agency conflicts that diminished the quality of financial reports. As a result of the questionable relevance and representational faithfulness of the information presented there, capital providers were less able to assess the risks, and hence the required rate of returns, associated with their investments.

This study investigates a number of key factors in the Saudi context that affect the quality of financial reports. Capital providers may consider such factors when assessing of the quality of financial information provided by firms' management. For instance, the literature indicates that political connectedness of listed firms may be a resource of uncertainty mitigation or a threat to minority shareholders (Chaney et al. 2011; Correia, 2014; Faccio, 2006; Guedhami et al, 2014). The ambiguity of this impact in the Saudi context may lead to increased uncertainty in assessing the risk of political connectedness in listed firms. Hence, potential investors may unjustifiably require an increased rate of returns in order to compensate for the perceived

uncertainty. Consequently, by documenting a significant positive association of political connectedness and the quality of financial reports, the findings of this study contribute to enhancing capital providers' understanding of the effects of political connectedness, which could go some way to alleviating their uncertainty in making capital allocation decisions.

Similarly, the literature investigating the impact of institutional investors on financial reporting quality indicates that they have different impacts on their investee firms. By documenting a significant positive association between strategic institutional investors and financial reporting quality, this study sheds light on the role of this kind of institutional investors (e.g., GOSI and PPA) in increasing the level of information efficiency in the Saudi capital market.

This study also investigated the impact of firms' engagement with brand name audit firms. The findings show that capital providers' perceptions of the quality of Big N audit services may not be entirely accurate. Due to the fact that auditors tend to ignore non-GAAP violating earnings management techniques, their clients have been resorting to costlier forms of earnings manipulation that can be detrimental to the firm in the long term. Specifically, the findings of this study were that Big N audit firms were associated with the increased use of real activity manipulation techniques compared to accrual-based manipulation. Therefore, this study deepens the understanding of capital providers with respect to alternative techniques of earnings management, and the impact of engaging a Big N audit firm on the substitutional use of such techniques by managers.

8.5.3 Implications for Auditors

The range of ways by which managers can intentionally manipulate their economic results for deceptive purposes increases the difficulty of the auditor's task. For auditors to provide reasonable assurance of the credibility and reliability of reported accounting numbers requires extensive planning and an in-depth understanding of clients' operations and reporting environments, as well as a thorough assessment of potential risks. At the planning phase, auditors must consider the financial reporting systems of their clients in order to assess their inherent and control risks. When the financial reports on the other end of the audit process contain distorted accounting figures, it means that auditors have either failed to find or to report such

manipulation (Dechow et al., 2010; DeFond & Zhang, 2014). Regardless of whether managers have manipulated financial information using an accrual-based approach or a real activity-based approach, the reported information is less reliable and therefore less useful to decision makers. In extreme cases of audit failure, auditors may be held accountable for the consequences, and risk more significant litigation consequences (Choi, Choi, et al., 2018). Consequently, by understanding clients' business and reporting environments when assessing risks of material misstatement, auditors would be better able to evaluate abnormalities arising from earnings management. The findings of this study strongly point to the use of real activity-based manipulation in the Saudi context. Specifically, clients of Big N audit firms tend to rely heavily on these techniques in managing their earnings. Forms of real activity-based earnings management are proven to be costlier and have long-term consequences for firms. The provision of high-quality audit services may contribute to lower levels of real activity-based earnings management since auditors are motivated to avoid litigation risk (Choi, Choi et al., 2018). Therefore, this study offers an important contribution to Big N auditors by suggesting that their professional scepticism may not be satisfactory with regards to assessing alternative approaches to earnings management and that an increased focus on real activity manipulation would be particularly useful.

Additionally, the findings of this study indicated that the critical event of banning Deloitte from auditing listed firms' financial reports reduced the capacity of other Big N audit firms to provide sufficiently rigorous audits so as to restrain managerial use of accrual-based manipulation. Specifically, the DID analysis that was conducted indicated significant use of accrual-based earnings management on the part of new clients after the ban of Deloitte. This implies that Big N auditors accepted new engagements that may have constituted work overload and diluted their audit quality. In addition, although the literature suggests that political connectedness may negatively impact the quality of financial reporting, this study shows that these factors are, in fact, quality enhancers in the context of Saudi Arabia. Finally, prior studies indicate that external auditors may decide to rely on the work of internal auditors, based on the whether internal audit function was outsourced or maintained internally (e.g., Abbott et al., 2012). This study contributes to external auditors who are using sourcing strategy as a criterion for making this determination. Specifically, it failed to

find a statistically significant difference between the two sourcing strategies in terms of their impact on the quality of financial reports.

8.5.4 Implications for Scholars

In light of recent concerns over the quality and credibility of accounting outcomes, scholars' interest in the factors that significantly influence financial reporting quality of publicly listed firms has increased. Prior studies investigating the effect of political connectedness on different aspects of listed firms show significant impacts, both positive and negative, of political connectedness on financial reporting (Guedhami et al., 2014; Johl et al., 2013), firm value (Chen et al., 2017; Faccio, 2006; Fisman, 2001), and operational efficiency (Faccio et al., 2006). However, scholars tend to find that the impact of political connectedness is context-dependent. In other words, the generalisability of study findings may be significantly reduced in contexts with different institutional settings and societal norms and values.

The findings of this study contribute significantly to the ongoing scholarly discussion on the impact of political connectedness on the operations and efficiency of capital markets. Specifically, the findings of this study document a statistically significant impact of political connectedness on financial reporting quality and suggest that this finding may be attributed to the way political connections are formed in the Saudi context, and the particular constellation of societal norms. In other words, the involvement of familial ties and the importance of adhering to Islamic norms and values may contribute significantly to the mitigation of earnings management manipulation in politically connected firms, hence increasing their financial reporting quality. Therefore, scholars investigating the impact of political connectedness in Saudi Arabia and other similar contexts may generally assume a positive effect of the phenomenon on publicly listed firms.

This study also has important implications for scholars looking at the impact of monitoring mechanisms on publicly listed firms. Specifically, prior studies claim that institutional investors may significantly differ in their objectives and behaviour (Almazan et al., 2005; Bushee, 1998; Zhong et al., 2017). It is logical to assume, therefore, that different types of institutional investors may differently impact their investees. Scholarly research should identify such differences in order to better understand them. By identifying a specific type of institutional investor (i.e., strategic

institutional investors) this study offers strong findings on the impact of institutional investors on the quality of financial reports. Specifically, this study documents that strategic institutional investors positively impact the financial reporting quality of their investee firms. The findings of this study imply that strategic institutional investors have the willingness and ability to engage with their investees due to the long-term orientation of their investment horizon. Consequently, this suggests that scholars may generally assume the positive impact of strategic institutional investors on the reporting quality of their investee firms.

Another implication of this study relates to its findings with respect to the audit quality of Big N audit firms. It documents a significant increase in the use of real activity-based earnings management among the clients of Big N audit firms. This indicates that the perceived quality of the audit services performed by Big N firms may only relate to their identifying a specific technique of earnings manipulation (i.e., accrual-based earnings management). In support of the notion that earnings management techniques are considered to be substitutable, the findings imply that real activity-based earnings management constitutes a more sophisticated approach that may be difficult to detect by external auditors, and that other stakeholders (such as creditors and capital market regulators) may also be faced with similar difficulties in detecting it. Finally, the study shows that alternative internal audit sourcing arrangements may not have empirical implications in Saudi Arabia. Specifically, the findings of this study indicate no significant difference between internally sourced and externally sourced internal audit functions with regards to the quality of listed firms' financial reporting quality. Therefore, scholars may cautiously assume an indifferent effect of sourcing strategy.

8.6 Study Limitations and Recommendations for Future Research

As with previous, similar research, this study is subject to a number of limitations. First, due to the unobservability of financial reporting quality, this study employed proxies to estimate the level of reporting quality. Specifically, it utilised earnings management detection models that have been criticised for the inaccuracy of their resulting estimates for both accrual-based and real activity-based earnings management. In other words, some scholars argue that the models employed here may suffer from issues such as misspecification and variables omittance that can undercut the accuracy of estimated levels of earnings management (Dechow & Schrand, 2010;

Doukakis, 2014; Gunny 2010; Kothari et al., 2005), and hence mis-estimate the level of financial reporting quality. Despite their identified drawbacks, however, the models employed are frequently used in research on financial reporting quality and earnings management, indicating the acceptance of their levels of accuracy in scholarly work (Cohen et al., 2010; Zang, 2012). Additionally, this study employed more than one proxy in order to detect the potential use of earnings management techniques in order to overcome the model's operational drawbacks. Nevertheless, future empirical studies may choose to utilise other definitions of financial reporting quality that incorporate market response (e.g., value relevance and accounting conservatism) into the proxy.

Second, the generalisability of the study results may be considered less, due to contextual idiosyncrasies related to the variables examined in this study, especially the results related to the impact of political connectedness. Specifically, Saudi Arabia provides a unique setting for examining the impact of political connectedness in listed firms that derives its distinctiveness from the nature of the society and the way political ties are formed. However, scholars also argue that examining the situation in individual countries provides a deeper understating of the impact of political connectedness due to institutional differences in different countries (Wong & Hooy, 2018). Yet, the Saudi Arabian context is qualitatively similar with regards to its socio-political aspects to neighboring countries, such as GCC and MENA countries. For instance, the majority of these countries' economies are mono-economies that are predominantly dependent on fossil fuel exportation. In addition, several GCC and MENA countries share considerable similarities in terms of political and cultural characteristics, such as sharing similar ruling systems, religion, societal norms and values (Alhadi et al, 2017; Al-Amri et al, 2017; Alazzani et al., 2021). Therefore, the findings of this study may also add significant value due to the applicability of its findings to GCC and MENA contexts. In this regards, future scholarly work may do well to focus on political connectedness in contexts where the phenomenon has not been investigated in order to enhance the reliability of the findings inferences in GCC and MENA countries.

A further limit to the generalisability of this study is that the results may not be applicable to financial listed firms in Saudi Arabia (or elsewhere), since the focus here was on non-financial listed firms. This decision was made due to the different rquirements on financial listed firms in preparing their financial reports and their adherence to different regulations. However, with regard to its specific focus on non-

financial firms, this study recognises the aforementioned differences and follows prior studies in excluding financial listed firms when investigating earnings management techniques (e.g., Habbash & Alghamdi, 2017; Hessayri & Saihi, 2015; Ho et al., 2015; Leventis & Caramanis, 2005). This provides a potential avenue for future studies examining the impact of political connectedness on financial reporting quality of financial listed firms.

Third, this study investigates the associations between specific monitoring mechanisms and the quality of financial reports. Specifically, strategic institutional investors, internal audit sourcing arrangements, and audit quality were investigated. A limitation of the study is that by choosing these monitoring mechanisms, others that may have a significant impact on the quality of financial reports of Saudi listed firms were left out. A justification for this choice, however, is that the monitoring mechanisms investigated in this study drew special attention in the Saudi Arabian context in recent years due to their potential significant impact on financial reporting quality. Additionally, the chosen mechanisms have been underinvestigated in the Saudi context, particularly with regards to their association with the financial reporting proxies employed in this study. Nonetheless, future empirical studies may focus on investigating the impact of other monitoring mechanisms not examined in this study, such as other aspects of internal audit functions (for example, internal audit fees and size of internal audit provider) and different definitions of audit quality (such as audit fees and auditor tenure).

Fourth, prior studies employ several variables in order to control for their potential impact on financial reporting quality. Different study objectives, institutional settings, and explanatory variables may be behind the inclusion of these different variables, such that scholars need to control for their effects. A further limitation of this study is the possibility that other variables not controlled for in this study may have an impact on the quality of financial reports in Saudi Arabia. Even though a review of related literature indicated the need to control for the impact of the chosen variables in the context of this study, future research may include other variables and/or different definitions in order to add incremental value to the literature. For instance, board meetings, board expertise, audit committee expertise, and concentrated ownership may have an impact on earnings management that needs to be controlled for in the analysis.

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APPENDICES

Appendix A

Definition of Variables

Variable	Definition
Dependent Variables	
FRQ	Financial reporting quality estimated using *EM_Kothari, REM_CFO, REM_Prod, REM_Exp, REM_Index, Small_Profits, and Small_Profits_TA.*
EM_Kothari	The magnitude of discretionary accruals measured based on Kothari, Leone, and Wasley's (2005) performance-adjusted model
EM_ModJones	The magnitude of discretionary accruals measured based on Dechow, Sloan, and Sweeney (1995) model
REM_CFO	The Absolute Value of Abnormal Cash Flows based on Roychowdhury (2006) model
REM_Prod	The Absolute Value of Abnormal Production Costs based on Roychowdhury (2006) model
REM_Exp	The Absolute Value of Abnormal Discretionary Expenses based on Roychowdhury (2006) model
REM_Index	A Combined measure of *REM_CFO, REM_Prod, REM_Exp*
Small_Profits	Reporting Small Positive Profits - A binary variable that takes the value of 1 when the firm-year reports a net income that is between 0 and 1 percent of the firm's average total assets
Small_Profits_TA	Reporting Small Positive Profits - A binary variable that takes the value of 1 when the firm-year reports a net income that is between 0 and 1 percent of the firm's yar-end total assets

Variable	Definition
Independent Variables	
PC	The proportion of politically connected directors to the board size .
PC_D	A dichotomous variable taking the value of 1 if a politically-connected director is present, and zero otherwise
PC_Own_D	A dichotomous variables that takes the value of 1 if a significant shareholder exists (holding at least 5% of the firms' shares), and zero otherwise
PC_Chair	A dichotomous variable to measure political connectedness that takes the value of 1 if the board chairperson is politically connected and zero otherwise.
PC_Index	An index measure that takes the average value of three dichotomous variables (i.e. *PC_D, PC_Own_D,* and *PC_Chair*).
InstOwn	The proportion of shareholdings held by strategic institutional investors to the total number of shares outstanding.
InstOwn_D	A dichotomous variables that takes the value of 1 if a strategic institutional shareholder exists, and zero otherwise.
IAF_Out	Binary variable taking the value of 1 if the internal audit function of the firm is outsourced, and 0 otherwise.
AUDIT4	Binary variable taking the value of 1 if the firm is being audited by a Big4 audit firm, and 0 otherwise.

Variable	Definition
Control Variables	
FamOwn	The proportion of shareholdings held by family shareholders to the total number of shares outstanding.
GovOwn	The proportion of shareholdings held by the government to the total number of shares outstanding.
FSIZE	The natural log transformation of a firm's total assets at year-end.
ROA	Firm's earnings before interest, tax, depreciation, and amortization to the total assets at year-end.
SALES_G	The annual growth ration of firm's revenue.
MTB	The ratio of the market value of equity to its book value.
CFO	The ratio of cash flows from operations to the firm's total assets at year-end.
LEV	The ratio of firm's long-term debt to its total assets at year-end.
LOSS	Binary variable taking the value of 1 if the firm reports negative net income, and 0 otherwise.
COMPLEX	Binary variable taking the value of 1 if the firm owns at least one subsidiary, and 0 otherwise.
CAPEX	The ratio of a firm's capital expenditure divided by its total assets at year-end.
IND	The proportion of independent directors to the board size.
lnACMeet	The natural log transformation of a firm's audit committee meetings.
lnAGE	The natural log transformation of the number of years since the firm's existence.
IFRS	Binary variable taking the value of 1 if the firm prepares its financial statements in accordance with IFRS, and 0 otherwise.
FSIZE_MKT	The natural log transformation of a firm's market capitalization at year-end.
ROE	Firm's net income to the total equity at year-end.
LEV_TD	The ratio of firm's total debt to its total assets at year-end.
Chng_Aud_Frm	Binary variable taking the value of 1 if the client firm has changed the audit firm, and 0 otherwise