Board Structure and Organisational Performance

An empirical study in the country of Pakistan

By

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A Thesis submitted to the Brunel Business School

Brunel University London

In partial fulfilment of the requirements of the degree of
Doctor of Philosophy (PhD)

September 2017

ABSTRACT

Corporate governance (CG) is the set of rules and regulations through which organisations account to their stakeholders. An effective CG system promoting the efficient use of organisational resources is instrumental in the economic growth of a country. Based on the existing literature, this research identifies board structural features i.e., '*Board Independence*', '*CEO Duality*', '*Board Diversity'*, *'Number of Board Committees'* and '*Audit Committee Independence'* as key variables of an effective CG system. Previous studies have largely examined the direct relationship between CG systems and firm performance. This research develops a multi-theoretical model that links the Board structural characteristics with firm performance measured in Tobin's Q, Return on Assets and Return on Equity, via two crucial mediating variables, 'Board Size' and the 'Frequency of Board Meetings', and two additional moderating variables, 'Code of Corporate Governance' and 'Ownership Concentration'.

The conceptual model that is developed is tested with the help of an econometric study based on a comprehensive set of balanced panel data of 265 companies listed on the Karachi Stock Exchange for a period of six years. The first panel (2009-2011) represents the time-period before the implementation of the revised Code, and the second panel (2013-2015) covers the time-period following the implementation of the revised Code. The results show that the Number of Board Committees (discussing strategic issues) is significantly related to performance and the 'Size of Board' significantly *mediates* the relationship between the number of *board committees* and *performance*. The relationship is also *moderated* by the *Code of Corporate Governance* and *ownership concentration* held by the *largest* shareholder. The results also show that the links between additional Board structural variables (board independence, CEO duality, board diversity and audit committee independence) and the financial performance are positive but not significant to draw conclusive result. Comparison between pre-and post-implementation of the revised Code of CG suggests that the *intervening* relationship between the board variables and the performance is stronger after the implementation of the revised Code.

This research is a significant milestone in the country context of Pakistan that reflects the socio-economic set of several emerging economies. A key implication of this research is that the corporate sector in Pakistan needs to move away from the tick-box culture of CG. The sector needs to implement CG as a tool to mitigate business risks, appoint and empower non-executive directors to achieve an effective monitoring of management. The companies also need to establish their own ethical and governance principles applicable to the Board of Directors in order to deal with factors that are likely to reduce Directors' efficiency. The research offers new insights and conceptual framework for further research in this area.

Key words: *Corporate Governance, Board Structure, Firm Performance, Mediation, Moderation, Pakistan*

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ABBREVIATIONS

ACCA	Association of Chartered Certified Accountants
ADB	Asian Development Bank
AMLA	Anti-Money Laundering Act
ASX	Australian Securities Exchange
CDC	Central Depository Company
CDS	Central Depository System
CEO	Chief Executive Officer
CIPE	Centre for International Private Enterprise
CSR	Corporate Social Responsibility
FDI	Foreign Direct Investment
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GMM	General Method of Moments
ICAP	Institute of Chartered Accountants of Pakistan
IFC	International Financial Corporation
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IPR	Intellectual Property Rights
IV	Instrumental Variables
KSE	Karachi Stock Exchange
MNSs	Multi-National Corporations
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Squares
PESTLE	Political, Economic, Social, Technological, Legal and Environmental
PICG	Pakistan Institute of Corporate Governance
RDT	Resource dependence theory
ROA	Return on Assets
ROE	Return on Equity
ROSC	Review of Observance of Standards & Codes
SBP	State Bank of Pakistan
SCT	Social Contract Theory
SECP	Securities and Exchange Commission of Pakistan
SOE	State-Owned Enterprise
TQ	Tobin's Q
TRIPS	Trade Related Aspects of Intellectual Property Rights
UN	United Nations
VIF	Variance Inflation Factor
WB	World Bank
WTO	World Trade Organisation

ACKNOWLEDGEMENT

DECLARATION

I hereby declare that this Doctor of Philosophy (PhD) thesis entitled *Board Structure and Organisational Performance – An empirical study in the country context of Pakistan* is my own work. This thesis contains no material that has been accepted for the award of any other degree or diploma in any university or institution. To the best of my knowledge, this thesis contains no material previously published or written by another person, except where due reference has been given and acknowledged according to the requirement given in the Student Guide Book of the Brunel University.

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Date: ……………………

LIST OF PUBLICATIONS

Singh, S., Tabassum, N., Darwish, T. K. & Batsakis, G., 2017. Corporate Governance and Tobin's Q as a Measure of Organizational Performance. *British Journal of Management,* 00, pp. 1-20.

1 INTRODUCTION

1.1 Background

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1.1 Background

We are living in an era of globalisation, which is transforming the face of the global economy. Companies in the twenty-first century are operating in a highly complex and dynamic business environment (Deresky, 2008). Because of globalisation, countries are moving away from a world in which national economies featured as relatively small and self-contained entities. Hill (2009) suggests that a gradual lifting of trade barriers, supported by rapid changes in telecommunications, data processing and transportation facilities have all accelerated the process of globalisation of markets and production. Globalisation has turned the whole world into a level playing field (Friedman, 2006) and a 'global village' for everyone (McLuhan, 1962). It is now much easier for companies to control their costs through outsourcing and the use of more structured and sophisticated distribution channels for their goods and services.

Owing to globalisation, companies around the world have been able to not only control their production costs but have benefit from improved quality in their products and services. The effects of globalisation can be seen almost everywhere but have been most visible in the significant growth demonstrated in the cross-border trade of goods and services, as well as the free movement of capital and technology across countries. Although globalisation is advantageous for a wider world, its benefits overall remain unevenly distributed across developed and developing countries. There are several reasons for this difference, with the inadequate development of corporate governance (CG) in developing countries seemingly one of the many factors contributing to such disparity.

According to Cadbury (1992), report CG 'is the whole system of controls, both financial and otherwise, by which a company is directed and controlled'. It involves a set of rules and relationships between the internal and external stakeholders of a company, aimed at creating an effective environment in which the company can achieve its business objectives. CG is a widely accepted tool in terms of its role in keeping businesses under control and checks so as to prevent management from abusing their power and corporate resources for personal benefit. In its simplest sense, CG is a set of practices by which companies are held accountable for their actions.

There is a vast amount of evidence to illustrate that the degree to which companies comply with good CG practices has become an important factor in helping investors to make sensible investment decisions. As an example, in 1996, McKinsey surveyed a large number of US investors, with the majority of respondents confirming they would be willing to pay

a higher price for shares in companies that were well-governed, responsive and proactive in protecting the interests of their shareholders. In June 2002, McKinsey conducted a similar survey in other parts of the world, including Asia, Europe and Latin America, with respondents registering almost the same opinions as their American counterparts in terms of being willing to pay high premiums for the shares and securities of well-governed and transparent companies. Investors, both individual and institutional, are therefore recognised as being more likely to risk their financial resources by making investments in companies with a good record of CG achievements (Bushee, et al., 2014) and less information asymmetry and exploitation of the rights of minority shareholders (Choe, et al., 2005).

There is no doubt that sound CG practices have the potential to become a powerful development tool for developing countries seeking to achieve their national objectives. The importance of CG, for both commercial success and the social welfare of the world, cannot be overstated. In this vein, several large, high-profile corporate failures stemming from weaknesses in systems of CG have emphasised the need to improve and reform CG practices at an international level (Solomon, 2010). Since the collapse of Enron in 2001, CG has demonstrated significant growth and development throughout the world, with many countries having either implemented best CG practices developed by international bodies, such as the Organisation for Economic Co-operation and Development (OECD), otherwise having issued their own codes of CG tailored to their own local economic and political environments.

Corporate Governance in Pakistan

In Pakistan, the Securities and Exchange Commission of Pakistan (SECP) issued the country's first Code of Corporate Governance in March 2002. The Code was subsequently incorporated into the listing rules of Pakistan's three stock exchanges and applied to all listed companies in the country. The SECP revised the Code in 2012 in a bid to ensure the CG framework in Pakistan remained relevant and effective for dealing with the dynamic nature of CG practices. According to the SECP, the main objective of the Code of Corporate Governance is to establish a system that holds the directors of listed companies in Pakistan more accountable and responsible for the direction and control of their companies. They are required to comply with the provisions of the Code as a way of protecting the interests of diversified stakeholders (SECP, 2002). The Code is expected to facilitate the country's economic development through its anticipated positive impact on

the performance of listed companies in Pakistan. The Code is also expected to position Pakistan as an attractive destination for foreign direct investment (FDI) whilst also increasing the overall attractiveness of companies to domestic investors.

Despite differences in terms of the country's corporate sector, institutional framework, and culture and political issues, Pakistan's Code of Corporate Governance is largely based on the Anglo-American systems of CG. In contrast to the UK and the USA, where a majority of listed companies have a diffuse ownership structure, companies in Pakistan are characterised by strong internal control maintained through family ownership, pyramid structures, cross-holdings, and the participation of the owners in day-to-day management and control (Javed & Iqbal, 2006; Spedding & Rose, 2008). Concentrated ownership in Pakistan creates an Agency problem between dominant and minority shareholders, rather than the traditional Agency disputes between managers and shareholders. Features such as inefficient capital markets, concentrated ownership, a fragile legal system and economic instability combine to make Pakistan fundamentally different from developed countries. Furthermore, due to the lack of an established institutional framework, there is only a very weak level of protection available to minority shareholders in Pakistan. Consequently, the effects of CG practices on the performance of firms in Pakistan could potentially differ to those that in developed countries.

The Literature Review presented in Chapter Three reveals a striking imbalance where relatively little attention is dedicated towards developing an understanding of the links between CG and firm performance in the context of developing countries. Even in the context of developed countries, the overall relationship between CG and firm performance remains uncertain and is characterised by a degree of ambiguity since a large majority of studies have only examined direct links between CG practices and performance (O'Connell & Cramer, 2010). Furthermore, the existing literature provides evidence of an excessive reliance on the use of Agency Theory as a perspective from which to understand the governance–performance relationships (Shleifer & Vishny, 1997). Ambiguity and doubts surrounding these mixed findings are reported in many studies (Carpenter, et al., 2004; Daily, et al., 2003; Ghoshal, 2005), which have similarly questioned the suitability of Agency Theory in answering and covering all aspects of the relationships between CG and performance. There is no shortage of studies (Roberts, et al., 2005; Pye & Pettigrew, 2005; Aguilera, et al., 2006) in which researchers established that the scope of Agency Theory as being too narrow to understand and explain the dynamic nature of CG and the roles of various governance systems for various types of organisations operating under different

political and economic settings. Therefore, many research questions remain unanswered in terms of the true nature of CG, its impacts on firm performance, the protection of shareholder interests, and many other issues in the context of both developed and developing countries. There is a dearth of empirical evidence due to a lack of research initiatives and the non-availability of reliable data, and it is unclear the extent to which Pakistan's revised Code of Corporate Governance has achieved its objectives. This research questions whether the Code, which is heavily influenced by the Anglo-American model, is suitable for listed companies in Pakistan.

Motivation for this research

The main motivation for this research stems from the above-mentioned shortcomings in the existing literature, combined with the desire to understand the effectiveness of CG practices in Pakistan, with the objective to bridge the gap in the literature as identified between developed and developing countries. The motivation for this research also derives from the argument that an investigation of CG mechanisms in the context of developing countries is necessary not only because of gaps in the current literature or differences in the social, cultural and political landscapes of developing countries, but also because of the role of developing countries in the global economy. It is also clear that much of the existing literature in the context of developing countries is based on anecdotal evidence and assumptions, and can therefore be seen to lack empirical support. Accordingly, this research argues that the limited amount of research in the context of developing countries demonstrates that CG issues are not yet fully understood. It is strongly believed that the above-detailed background information provides sufficient justification for the execution of this research.

The specific mechanism of CG investigated in this research is Board structure, and includes the following elements of the Board of Directors: (1) Board independence; (2) CEO duality; (3) Board diversity; (4) Board committees; and (5) audit committee independence.

1.2 Research Objectives

The aim of this research is to contribute to the existing body of literature on Board governance by examining the influence of Board structure on the performance of firms through the Board's monitoring and resource-dependence roles. In order to achieve the fundamental aim of this research, the following research questions will need to be answered, both theoretically and empirically:

1. Is there a significant association between Board structure (e.g. Board independence, CEO duality, Board diversity, Board committees and audit committee independence) and firm performance in Pakistan?
2. Do the monitoring and Resource-dependence roles of Boards mediate the relationship between Board structure and firm performance?
3. What influence do the SECP's revised Code and ownership concentration have on the relationship between Board structure and firm performance in Pakistan?
4. Does Board structure really matter for firm performance?

Specific objectives of the research are as follows:

1. To understand the concept and development of CG practices in general, and the legal and institutional structure of CG practices in Pakistan in particular;
2. To develop a comprehensive research model to test the relationships between Board structure and firm performance via the mediating influence of a Board's monitoring and resource-dependence roles;
3. To determine, through a comparative analysis, the moderating influence of the SECP's revised Code and ownership concentration on Board structure and firm performance; and
4. To develop practical recommendations for use by companies, government authorities and researchers.

It is necessary for this research to achieve its specific objectives in order to answer the aforementioned questions and to achieve its ultimate aim.

1.3 Conceptual Framework

The Literature Review presented in Chapter Three indicates that a bulk of the existing empirical work on Board studies *have examined only the direct relationship* between Board of Director variables and the performance of firms (Hillman & Dalziel, 2003; Nicholson & Kiel , 2004; Levrau & Van den Berghe, 2007; Carpenter, et al., 2004); otherwise stated, relatively few studies have taken into account the effects of moderating and mediating variables. Carpenter et al. (2004) posit that empirical work ignoring the importance of intervening factors is no longer appreciated by the research community. Based on this argument, this research has included both moderating and mediating variables in the model in an effort to understand the true nature of the relationship between Board structure and firm performance. The conceptual framework of this research is

derived from the principles of the Agency, resource-dependence and stakeholder theories of CG. Such theories are selected on the basis that they have the ability to offer a better understanding of CG issues in the context of both developed and developing countries. These theories can address the relationship between Board structure and the performance of firms in Pakistan.

Figure 4-5 presents the conceptual framework of this research. In an effort to answer the research questions and accordingly achieve the main objectives of the research, four different groups of variables are included in the research model developed. The first group is independent variables relating to Board structure and includes *Board independence*, *CEO duality*, *Board diversity*, *Board committees* and *audit committee independence*. The second group is mediator variables, representing the two important roles of a Board, and includes *Board size* as a proxy for the Board's *resource-dependence* role and frequency of *Board meetings* as a proxy for the Board's *monitoring* role. The third group represents the dependent variables used in the research model, and includes three measures of firm performance; this is measured in terms of accounting and market-based performance indicators. Proxies for market and accounting performance are, respectively, *Tobin's Q* and *Return on Equity* (ROE), and *Return on Assets* (ROA). Finally, the fourth group includes the *SECP Code* and *ownership concentration* in the hand of Top1 and Top5 shareholders of the companies. The SECP variable measures the moderating impact of the SECP's revised Code on the relationship between Board structure and firm performance.

The relationship between Board structure and firm performance is mediated by the monitoring and resource-dependence role of the Board, with the SECP's revised Code and concentration of ownership having a moderating effect on Board structure.

1.4 Research Methodology

A number of research techniques and methods may be employed; however, the use of any particular method or technique is dependent upon a number of factors, such as the scope of the research, its purpose, target population, and the resources at the researcher's disposal (Gill & Johnson, 2002). This study empirically investigates the links between Board characteristics and the performance of listed firms in Pakistan. The most logical, effective and accurate method by which corporate Boards can be investigated is undoubtedly through involvement in them, attending meetings, and watching their processes. However, in the real business world, it is almost impossible for researchers to be a part of Board proceedings due to confidentiality and other obvious reasons.

Therefore, in line with previous studies and in mind of overcoming the barrier associated with engaging with company executives and non-executive directors and officers, this research has investigated the relationship between Board structure and firm performance with the help of secondary data collected by hand for the purpose of this particular research. Two main data sets have been compiled and used in the study; Board structure and CG variables, and company financial performance. Data were gathered from annual reports (hard and soft copies), the State Bank of Pakistan (SBP) and the Karachi Stock Exchange (KSE) website.

Panel data methodology is adopted, and a deductive, quantitative, positivist approach is used to investigate the relationship between Board structure and the performance of firms. STATA and Microsoft Excel software packages are used for statistical analysis on the collected data. Chapter Five presents full details of the methodology applied in this research, along with a full account of the research design and rationale for using panel data.

1.5   Research Contribution

This research makes a valuable contribution to the understanding of CG practices and the development of Board governance literature in the context of developing countries.

As mentioned previously, much of the existing research has been conducted in the Anglo-American context, where firms have diffused ownership, capital markets are efficient, and shareholder rights are strongly protected by various laws. In contrast, institutional settings and the economic environment differ significantly in developing countries, and, as such, the findings of studies conducted in developed countries are not generalisable and may not be applicable in the context of developing countries, such as that of Pakistan. This study is conducted in Pakistan, which is an important developing country in the South Asian region; therefore, the findings of this research extend the existing knowledge, with the results going some way to closing the knowledge gap between developed and developing countries.

The research's key contribution may be seen in its theoretical and empirical perspective and the use of a multi-theory approach to illustrate the links between Board structure and firm performance by taking into account the mediating and moderating effects of Board functions, CG reforms and ownership concentration. The framework is sufficiently robust to be easily operationalised for future empirical research. Furthermore, the database created for the current research has the potential to serve and support further research on a

number of other issues not addressed in the present research. There is significant potential for this research to benefit other South Asian countries, notably those bearing similarities to Pakistan in terms of their culture, political, social and economic structures. A detailed account of the research contribution is presented Chapter Seven (Research Conclusion).

1.6 Structure of the Thesis

Figure 1-1 at the end of this chapter shows the structure of this thesis. The thesis is organised into seven chapters, commencing with Chapter One which provides an introduction to the research and focuses mainly on the research background, motivation, and key questions and objectives of the research. Chapter Two presents a broad overview of the existing framework of CG in Pakistan, including detailed analyses of the economic environment and recent developments in CG practices. Chapter Three brings together and critically reviews some of the most influential and highly researched theories on corporate governance. The literature review presented in this chapter does not focus on any particular country or region, but rather discusses, in detail, the general principles of CG in different places around the world. It defines the concept of CG from its narrow and broader perspectives to present the existing empirical evidence on the associations between Board structure and firm performance. The chapter is predominantly interested in the influence of Board independence, CEO duality, Board diversity, audit committee independence and Board committees on the performance of firms through the monitoring and resource-dependence roles of the Board. Chapter Four presents the theoretical framework and research model for this research in an effort to understand the effects of Board structure on firm performance. The chapter identifies the hypotheses regarding the relationship of Board structure variables with firm performance in Pakistan. Chapter Five outlines the research methodology adopted in this research. The chapter examines the essence of research strategies and discusses and provides justifications for the research methodology adopted, followed by the sample selection, analytical procedure operationalisation of research variables, and panel data specification tests, etc. Chapter Six presents both descriptive and inferential statistical analyses, along with the test results for the causal relationship between Board attributes, Board roles and firm performance, as based on the data collected through detailed content analysis of the annual reports of 265 listed companies for a period of six years. The research concludes with Chapter Seven, which presents an overview of the research objectives, and a summary of the key findings, contribution, implications and limitations of the research. This chapter also presents some potential directions for future research.

1.7 Chapter Summary

This chapter has provided a comprehensive introduction to this research and highlighted the focus of the research and its importance for CG literature. As mentioned by Barney (2007), a firm's strategy is its theory centred on how to compete successfully in its business environment, and it is its best guess concerning the critical economic processes in an industry or market, and how it can take advantage of these economic processes to enhance its performance. A firm's corporate strategy may be based on its CG practices, as the fundamental purpose of CG is to help companies achieve their objectives by meeting and exceeding investors' needs. This research believes that CG-orientated companies attempt to achieve not only better performance but also access to low-cost financial resources, combined with the propensity to attract and retain investors. The main motivation behind this research has stemmed from the researcher's personal interest and desire to understand the effectiveness of CG practices in Pakistan, which is one of the important countries in the South Asian region in bridging the literature gap between developed and developing countries. The motivation for this research is also driven from the fact that an investigation of CG mechanisms in the context of developing countries is necessary not only because of the gaps in the current literature or differences in the social, cultural and political landscapes of developing countries, but also owing to the role of developing countries in the global economy. It is believed that the current research will make valuable contributions to the CG literature in the context of developing countries—an area which is of immense growing importance.

Figure 1-1: Structure of the Thesis
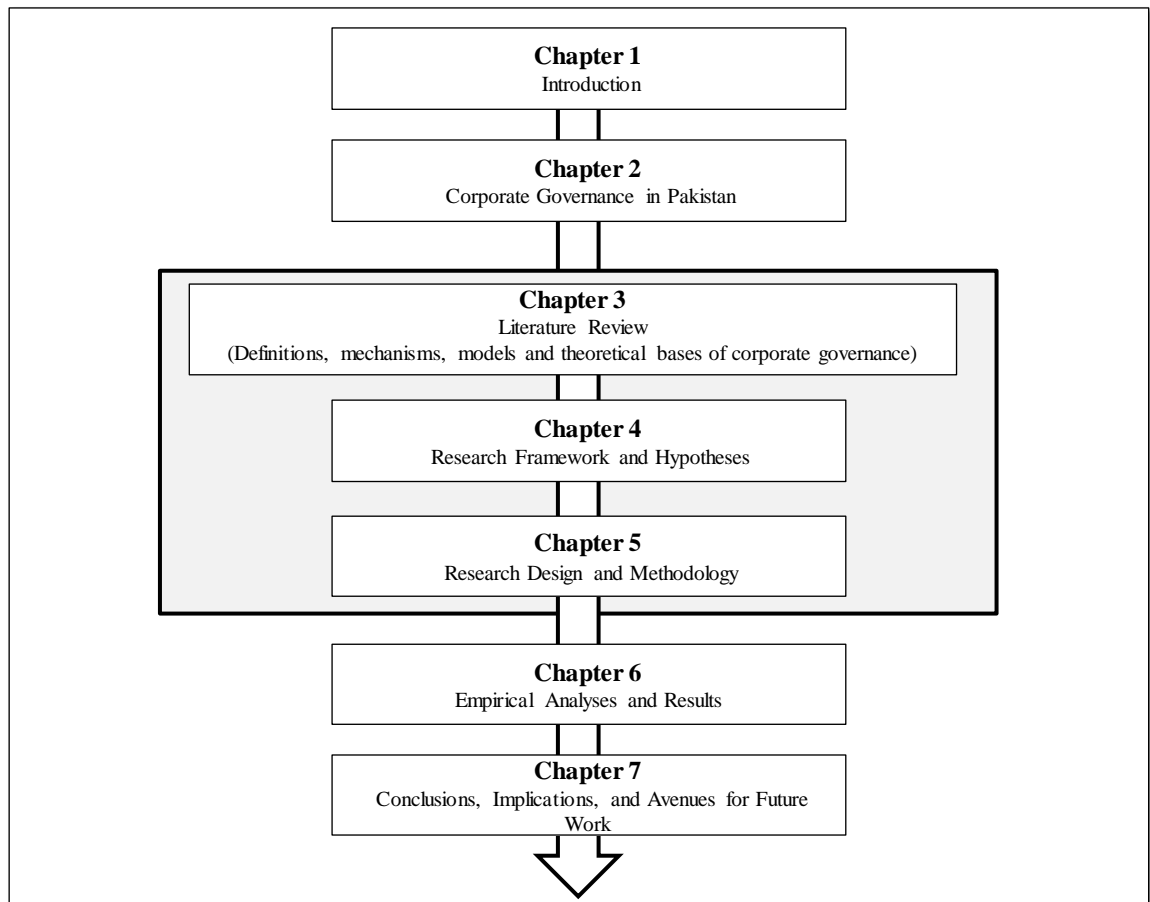
Source: Authors' own elaboration

2 CORPORATE GOVERNANCE IN PAKISTAN

2.1 Introduction

The growth of India, China, and many other countries surrounding Pakistan, suggests that the implementation of good CG practices is critically important if Pakistan is to achieve its social, political and economic objectives. In order to make the country a more attractive place for investors and accordingly achieve successful economic transformation and integration with international financial markets, Pakistan needs efficient, strong and well-regulated capital markets. However, to have such markets, Pakistan will need a strong institutional and regulatory infrastructure within which to implement good CG practices. The previous chapter discussed the overall structure of this thesis. The focus of this chapter is centred on presenting an overview of the research context and the existing framework of CG regime in Pakistan. It is believed that thorough understanding of the research context is critical for the success of the research as it can help researchers to deal with the limitations of previous research.

The chapter is divided into seven sections, including this introductory section. Section 2.2 presents an overview of Pakistan's political, economic, social, technological, legal and environmental (PESTLE) analyses, which has a profound impact on the current CG structure of the country. Section 2.3 provides an economic overview of the country. Section 2.4 presents the nature of the corporate sector in Pakistan. Section 2.5 covers Agency issues and CG in Pakistan Section 2.6 is centred on the legal and regulatory framework of CG in Pakistan. Section 2.7 explains the country's institutional framework upon which the country's CG structure is built. Section 2.8 provides a summary of the chapter.

2.2 PESTLE Analyses of Pakistan

South Asia is one of the fastest-growing regions of the world; it is home to one-fifth of the global population. Pakistan is the second-largest economy in South Asia. With a population of more than 198 million people, it is the sixth-most populated country in the world. Pakistan is ranked as the 27th largest economy in the world in terms of purchasing power parity and the 44th largest in terms of its nominal gross domestic product (GDP). According to Consulate General of Pakistan, "located in the heart of Asia, Pakistan is a gateway to the energy-rich states of Central Asia, the financially liquid Gulf States, and the economically advanced Far Eastern countries". Pakistan has emerged as a force due to its customer base, burgeoning income levels, skilled and semi-skilled labour, marketing networks, attractive investment incentives and geographical links with other international

markets. Figure 2-1 presents the summary of Pakistan's political, economic, social, technological, legal and environmental analysis (PESTLE).

Figure 2-1: Pakistan's Political, Economic, Social, Technological, Legal and Environmental Analysis (PESTLE)
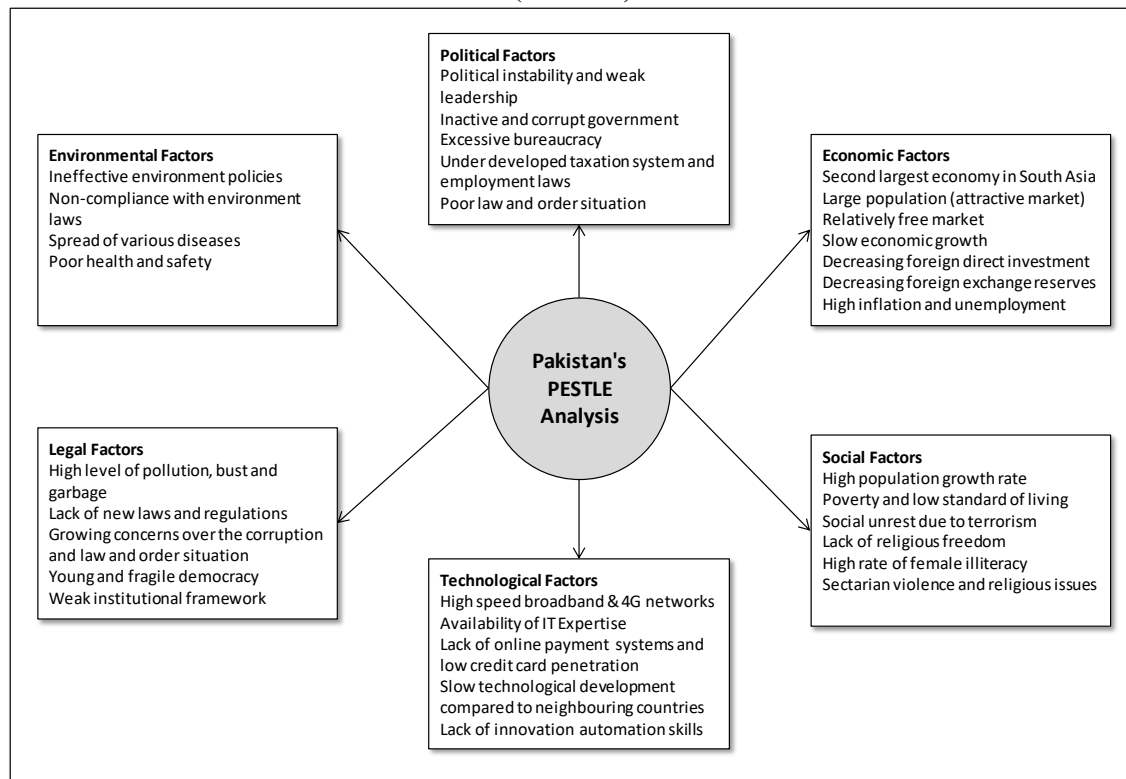
Source: Author's own elaboration

2.2.1 Political Factors

Pakistan is country recognised as deeply divided and completely surrounded by ethnic, provincial, cultural, religious and linguistic boundaries. However, since the time of its independence, Islam has been the key force and common factor holding the whole nation together. Pakistan runs on a federal form of government, and the political environment in the country is greatly influenced by Islamic principles (*Sharia*) and many other factors, such as government policies, political interests, and the ideology of provisional political parties. Pakistan is a country full of political parties; however, the main political parties are *Pakistan Muslim League-N (Nawaz Sharif)*, which is the current ruling party of the country, Pakistan People's Party (Bhutto Group), Pakistan Tehreek-e-Insaf (Imran Khan), Jamaat-e-Islami Pakistan and Pakistan Awami Tehreek, amongst others. The political system of the country is weak and fragile due to a high level of institutional corruption, as the government has never been able to make any effective legislation with the proficiency to deal with chronic issue of institutional corruption and mismanagement. Unfortunately, like its preceding governments, the current government of the country is also corrupt, and

has been involved in a number of high-profile cases of money laundering, extortions, commissions' scandals and other similar charges. According to the Corruption Perceptions Index reported by Transparency International (2016), Pakistan maintains a rating of 116/175 for its level of institutional corruption. Corruption is a significant obstacle in the way of business and social development in Pakistan. The negative impact of corruption in Pakistan is more serious when compared to its neighbouring countries because the corruption is patchy and ubiquitous, and hence difficult to manage or eliminate. It requires undivided and urgent attention from the authorities' due to its adverse effect on growth, inflation, investment and innovation, and it is strongly rejected by Islam and all other religions (Shadabi, 2013).

2.2.2 *Economic Factors*

The economic history of Pakistan began following the country's independence from British colonial rule in 1947. During the past seventy years, Pakistan's economy has witnessed many ups and downs. The process of rebuilding and developing its economy has been both impressive and disappointing. As an example, in the 1960s, Pakistan was considered an exemplar for other developing countries, at which time its manufacturing output and export rates were higher than those of many other countries in the region, namely India, Bangladesh, Sri Lanka, Thailand, Malaysia, Philippines and Indonesia. Pakistan saw seven years of strong economic growth up until 2007. The average GDP growth rate of 7% since 2000 fell to just 2.58% in the fiscal year 2010–11. According to a report by the Asian Development Bank (ADB), there are serious concerns surrounding the adequacy and sustainability of foreign currency reserves in the country. In essence, Pakistan is a classic case of half-empty or half-full (Looney, 2001).

Pakistan's economic instability stems mainly from low government revenues, which have been caused by the elite's tax evasion, corruption, loopholes, and various types of commission, exemption and government subsidy. Fewer than three million of Pakistan's 198 million citizens pay any income tax. According to the Pakistan Economic Survey 2015/16 and WB staff estimates, the country's current tax-to-GDP ratio is between 9.0% and 11.0%. Tax evasion means that fewer resources are available to the government for essential and much-needed social and development services. Due to a lack of proper economic policies of government, the net deficit of the country is mounting and, even to pay interest, the government has to rely on more borrowings. There is no doubt that, without access to sufficient revenue streams, the government will continue to borrow from

the WB, International Monetary Fund (IMF), and other donor institutions, thus further increasing the burden of an unsustainable debt.

The government knows how to increase its revenues via a programme of tax reform, yet the country's rich, combined with powerful landlords and businesses groups, continue to resist any attempts at reform or corrective measures for fear of losing their power and wealth. The country needs to end commission culture and tax exemptions for its wealthy upper-class landlords. It also needs to gain control of corruption and accordingly develop broader, more long-term economic plans for sustainable growth and economic development. According to the IMF, slow economic growth in Pakistan is a direct result of the country's poor internal security and macroeconomic imbalances, combined with an uncertain global and regional financial environment. Along with the issues of deteriorating security, macroeconomic imbalances and long-standing structural problems, factors that are negatively impacting on Pakistan's overall economic growth include energy crises, increased outflows of capital, high inflation, low foreign exchange reserves, and natural disasters.

2.2.3 Social Factors

The social factors refer to issues recognised as potentially impacting on the business environment and the social wellbeing of people, including in terms of religion, family and wealth distribution. In developing countries, such as Pakistan, religion, education and healthcare are major issues, and therefore warrant undivided attention from the government. As an example, religion can influence human behaviour, and religious behaviour and social development in a society cannot be separated. Sadly, both political and religious leaders have used religion as an instrument of socialisation and control; more specifically, they have used Islam as an excuse to gain sympathy, power and legitimacy for their rule, and, as a result, Islam has taken a dangerous turn in Pakistan. The country has become a global hub for *jihad*, with militants having recently increased their activities and attacks against civilian and government interests. Twice as much has been spent on defence during peacetime as has been spent on education and healthcare combined. Freedom of speech is protected by the *Constitution*; however, in real life, it is subject to restrictions. The relations between the state and civil society are largely determined by the political motives, and government repression plays a major role in shaping the policy choices available to civil society.

The law and order situation in Pakistan is getting out of control. Persistent conflict in the areas bordering India and Afghanistan, combined with a myriad of internal security issues, are having an adverse effect on all aspects of life in Pakistan. Throughout the last two decades, Pakistan's currency depreciation and unemployment has shown a rise and, as a result, a very large majority of the country's population is living below the poverty line. The high rate of unemployment means that a large majority of people in Pakistan cannot afford to buy products and services from growing number of start-up companies. However, despite the hardships, economic data from SECP shows an upward trend in business activities.

2.2.4   Technological Factors

In developed countries, recent years have witnessed booming usage in mobile data, which has changed consumer experience and expectations for wireless services products and has transformed the way in which people connect and work; this has the potential to further impact economic development (Deloitte LLP, 2012). Figure 2-2 shows a snapshot of Pakistan's key digital statistical indicators.

Figure 2-2 Pakistan's Key Digital Statistical Indicators

Total Population	Internet Users	Active Social Media Users	Mobile Subscribers	Active Mobile Social Users
194.8 Million Urbanisation 39%	35.1 Million Penetration 18%	31.0 Million Penetration 16%	140.2 Million vs. Population 72%	28.0 Million Penetration 14%
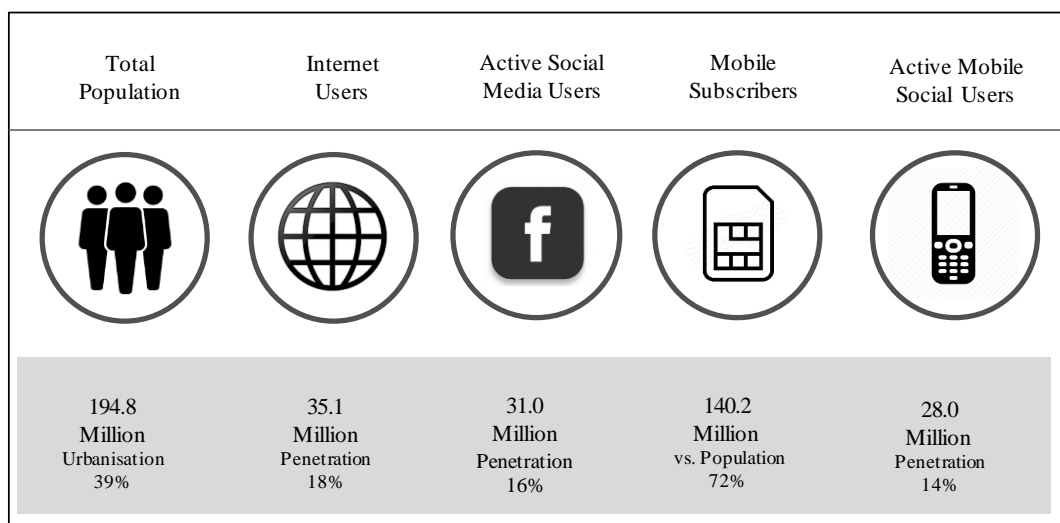
Source: 2017 Digital Yearbook by Hootsuite (P:168)

Technologically, Pakistan is largely equipped with the availability of both 3G and 4G technology and high-speed internet connection. The mobile telephone sector in Pakistan is offering endless and exceptional opportunities for social development and economic growth. The internet, along with other mobile communication services, has become an indispensable part of everyday social and business life. Pakistan had more than 136 million mobile and internet users in 2016 (140.5 million May 2017) and telecoms is one of the fastest growing sectors in Pakistan. IT professionals and technological experts are easily

available. Online shopping, digital TV and the use of bar coding are becoming more common as a result of technical advances. However, because of poor law and order situations, industrial development in the country is relatively dormant within manufacturing and supply chains structure, as compared to neighbouring countries such as Indian and China. The lack of electricity has a negative effect on the overall economy. International investors are reluctant to risk their investment, with the country's imports higher than its exports as a consequence.

2.2.5 Legal Factors

Pakistan is a Muslim country, and Islam is the main and state religion. The legal system of the country derived mainly from the English common law and is based on the Constitutions of the Islamic Republic of Pakistan, also known as the 1973 Constitution. The Constitution of the country requires that existing and future laws be consistent with the fundamental principles of Islam *(Quran and Sharia)*. The accounting and financial reporting structure for all companies in Pakistan is specified in the Companies Ordinance of 1984. The Ordinance outlines the reporting and presentation requirements of financial affairs, standard-setting procedures, as well as other financial reporting obligations of the companies operating in Pakistan. All companies are required to prepare financial statements according to International Financial Reporting Standards (IFRS). Pakistan has been a member of World Trade Organisation (WTO) since 1995 and a member of General Agreement on Tariffs and Trade (GATT) from 1948, and Intellectual Property Rights (IPR) are governed under the agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS).

The country has implemented investor-oriented policies to create an environment that is attractive for foreign investment. The policies offer various incentives, including full repatriation of capital, capital gains, dividends and profits. Foreign investment is also protected by the Foreign Private Investment (Promotion & Protection) Act, 1976 and Protection of Economic Reforms Act, 1992. Despite the fact that, in the recent past, Pakistan has introduced a number of legal changes to make the country a more attractive place for investors, the country's legal system and political systems still need radical changes to accommodate the growing needs of international investors.

2.2.6 Environmental Factors

Like most South Asian countries, in Pakistan, challenges related to land degradation, water depletion, air quality degradation and the impacts of natural disasters are some of the most

important environmental issues resulting from unsustainable development of the country. The Ministry of Environment was established in Pakistan in 1975 with power to make laws on the environment to deal with environmental issues. According to a report issued by Asian Development Bank (ADB), in Pakistan, a number of different environmental challenges are either absent or insufficiently reflected in the policies. Furthermore, the implementation and enforcement of, and compliance with, environmental policies are often weak owing to a range of capacity and other challenges (ADB, 2013).

2.3 Economic Overview of Pakistan

Although Pakistan's economy is currently weak, it is at a turning point, and, according to the WB (2014), a recovery in growth is underway. The IMF recently raised its GDP growth outlook for Pakistan from 4.4% to 5.0% for the financial year 2016–17 and 5.2% for 2017–18 based on an assessment of the country's economy being in better shape following the successful implementation of economic reforms over the last couple of years. No doubt, increased efforts are still needed from both the government and companies operating in Pakistan if investor confidence is to be boosted and more domestic and foreign capital is to be attracted.

2.3.1 GDP Growth

GDP and its annual growth rate are very important indicators for checking and evaluating the economic health of a country. Table 2-1 presents Pakistan's GDP at market and constant prices, with its annual growth rate from 2007–2015.

Table 2-1: Key Economic Indicators of Pakistan, 2007–2015

Key Economic Indicotors	2007	2008	2009	2010	2011	2012	2013	2014	2015
GDP- Current price (Billion US$)	135.8	158.6	154.27	177.41	213.75	224.65	232.50	246.96	244.0
Real GDP Growth %	5.5%	5.0%	0.40%	2.60%	3.70%	4.40%	3.60%	4.10%	4.24%
GDP Agriculture - Constant Price (Billion US$)	30.28	34.74	34.71	39.03	46.38	48.52	49.75	52.36	51.00
GDP Industry - Constant Price (Billion US$)	28.71	35.06	32.24	37.26	45.32	47.18	47.20	50.38	49.53
GDP Service Sector - Constant Price (Billion US$)	76.81	88.84	87.32	101.12	122.05	128.95	135.55	144.22	143.47
GDP- Constant price (Billion US$)	134.26	131.89	109.29	105.05	106.67	106.12	101.51	99.33	102.94
GDP Agriculture - Current Price (Billion US$)	33.22	28.88	24.59	23.11	23.15	22.92	21.72	21.06	21.52
GDP Industry - Current Price (Billion US$)	30.44	29.15	22.84	22.06	22.61	22.29	20.61	20.26	20.90
GDP Service Sector - Current Price (Billion US$)	70.60	73.86	61.86	59.88	60.91	60.91	59.18	58.01	60.53

Source: Pakistan Bureao of Statictics, State Bank of Paistan, Security and Exchange Commission of Pakistan and Economic Survey of Pakistan - Various Publications

2.3.2 Domestic and National Savings

The 2014 World Development Report notes that gross domestic savings, as a share of income, ranged from 13% to 33.52% (average 26%) in South Asian countries (Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka). In China, the rate was 49.47 % of GDP, whereas in Pakistan it was only 12.82% of GDP. The highest

saving rate in Pakistan was 14.28% in 2007. Table 2-2 presents the domestic and national savings rates for the period spanning 2007 to 2015.

Table 2-2: Domestic and National Savings, 2007–2015

Key Economic Indicators	YEARS								
	2007	2008	2009	2010	2011	2012	2013	2014	2015
Domestic Savings (% of GDP)	12.2%	9.1%	9.4%	9.8%	9.7%	7.8%	8.7%	8.0%	8.4%
Domestic Savings (Billion US$)	16.57	14.44	14.50	17.39	20.73	17.61	20.23	19.76	20.50
National Savings (% of GDP)	13.6%	11.0%	12.0%	13.6%	14.2%	13.0%	13.9%	13.7%	14.5%
National Savings (Billion US$)	18.47	17.45	18.51	24.13	30.35	29.20	32.32	33.83	35.38

Source: Pakistan Bureao of Statictics, State Bank of Paistan, Security and Exchange Commission of Pakistan and Economic Survey of Pakistan - Various Publications

2.3.3 *Domestic and Foreign Direct Investment*

FDI is another important source of investment for developing countries around the world, playing a key role in the transfer of technology, human capital development and a country's integration into international financial markets. Pakistan has one of the most generous and open FDI policies in South Asia. International firms are allowed up to 100% equity in the manufacturing and infrastructure sectors. However, the flow of FDI is insignificant when compared to other countries in the South Asian region. Table 2-3 presents the annual rates of domestic and foreign direct investment during 2007–2015.

Table 2-3: Domestic and Foreign Direct Investment 2007–2015

Key Economic Indicators	YEARS								
	2007	2008	2009	2010	2011	2012	2013	2014	2015
Public Investment (% of GDP)	5.1%	4.8%	4.3%	3.7%	3.2%	3.8%	3.5%	3.2%	3.7%
Public Investment (Billions US$)	6.95	7.61	6.62	6.62	6.90	8.42	8.18	7.83	9.08
Private Investment (% of GDP)	13.0%	12.8%	11.7%	10.8%	9.3%	9.7%	9.8%	9.9%	10.2%
Private Investment (Billion US$)	17.67	20.31	17.99	19.23	19.86	21.86	22.88	24.37	24.79
Total Domestic Investment (% of GDP)	18.1%	17.6%	16.0%	14.6%	12.5%	13.5%	13.4%	13.0%	13.9%
Total Domestic Investment (Dillion US$)	24.62	27.92	24.61	25.85	26.76	30.28	31.06	32.20	33.87
Foreign Direct Investment (% of GDP)	3.8%	3.4%	2.4%	1.2%	0.8%	0.4%	0.6%	0.7%	1.1%
Foreign Direct Investment (Billion US$)	5.14	5.41	3.72	2.15	1.64	0.82	1.46	1.63	2.68

Source: Pakistan Bureao of Statictics, State Bank of Paistan, Security and Exchange Commission of Pakistan and Economic Survey of Pakistan - Various Publications

2.4 The Nature of the Corporate Sector in Pakistan

Cheema, et al. (2003), in their study on CG practices in Pakistan, discussed the nature and historical development of the corporate sector in Pakistan. According to these authors, at the time of its independence, Pakistan had very little in terms of industrial infrastructure. Furthermore, following its independence in 1947, the private sector was the main force behind the country's industrial development. Unfortunately, since 1947, a handful of rich and politically influential families have been the main beneficiaries of the government's financial policies. According to Amjad (1982), the government's financial policies have created 44 powerhouses in the country, which have controlled almost 70% of the gross assets of the large-scale manufacturing sector in 1970. In 1971, a new Pakistan emerged under the leadership of Prime Minister Zulfikar Ali Bhutto, pursuing a manifesto of the

nationalisation of private businesses in an effort to reduce the concentration of industrial power in the hands of a few private rich owners. Bhutto's government nationalised many industries which resulted in many families losing more than 50% of their control and power in the country's key industries. The government also took control of the banking sector, resulting in it maintaining strong political control and influence over the entire financial sector. Growth in the Bhutto era was relatively low when compared to that of previous decades.

The programme of economic reforms and an increasing role for the private sector in Pakistan began in the early 1980s. The fundamental aims of these reforms were to strengthen the discipline of the open market and accordingly encourage greater competition, and create a more open and transparent economic environment capable of attracting both domestic and international investors. There has been significant change to Pakistan's business and corporate environment since the start of the reforms: for example, there has been the liberalisation of foreign trade policy, with enhanced opportunities offered to domestic and foreign investors through cuts in tariffs, duties and levies. Domestic and international companies are now permitted to operate in the financial and other key sectors of the economy. Companies are also permitted to enter into joint ventures with multinational enterprises more freely, thus facilitating access to new technologies and capital goods in order to improve their productive capacity.

Over the last two decades, the country has witnessed a notable shift away from a government-controlled economy to an economy dominated by the private sector. As a direct result of such reforms, the corporate sector in Pakistan has grown steadily in terms of the number of registered companies and the amount of their paid-up capital. The SECP registered 334 companies during June 2015, thereby increasing the total number of companies to 66,616. The authorised and paid capital of these companies amounted to 526 million and 1.75 billion rupees, respectively.

Corporate ownership in Pakistan is highly concentrated, with families, the government and affiliates of multinational companies holding the majority of shares in public companies. Information collected for the purposes of this research shows that approximately 75% of listed companies in Pakistan are controlled by dominant investors, whereby more than 64.80% of the share capital is concentrated in the hands of the top five shareholders. Similar to other developing countries around the world, Javed & Iqbal (2006) reported that, in Pakistan, families and associates hold the balance of control in a large majority of listed

companies, either directly by holding a majority of voting shares or indirectly through pyramiding, cross-shareholding or interlocking management. This research also noted that many business groups and families exercise control through the appointment of their close family members and loyal associates as executive and non-executive directors, in whom they have trust and confidence, to run their companies. The prevalence of cross-holdings of ownership and the participation of the founding owners and their family members on the Board suggest that 'insider' control of CG is a common feature of listed firms in Pakistan. Like many other developing countries around the world, the concentration of ownership and inside control are the greatest problems in terms of the protection of minority shareholders in Pakistan. Majority shareholders use their concentrated power to seek private benefits, maintain control over cash flow, and control companies' Boards and management.

Over the last few decades, privatisation has reduced the size of the state-owned enterprise (SOE) sector in Pakistan. Nonetheless, the state remains the second-largest stakeholder in the corporate sector. SOEs are widespread, include both incorporated and unincorporated companies, and can be found at both central and provincial levels. There are more than 130 SOEs currently involved in commercial activities, with approximately 50% of these in strategic sectors, such as power, transport, defence and the financial sector. Twenty-three of the top 50 listed companies in the KSE are owned by the state. The contribution of SOEs to the country's output is between 10% and 12%. However, these SOEs are also the country's dominant employers; they account for one-third of the market capitalisation in Pakistan. There is, however, a fundamental issue with SOEs in Pakistan: they are politically motivated organisations that are always under the current government's control. Appointments to the Board of Directors and executive management in almost all SOEs is not determined by candidates' qualifications or experience, but rather by their political affiliations, connections and loyalty to the government.

Multinational Corporations (MNCs) are the third major stakeholder in Pakistan's equity market, playing an important role in the country's development through the transfer of technology and other spill over effects on local companies. There are currently 48 MNCs listed on the KSE. Five MNCs account for 17% of the capitalisation of the top 50 companies listed on the KSE. Table 2-4 shows a breakdown of the number and types of registered company for the last seven years, whilst Table 2-5 shows their paid-up capital as of June 30, 2015.

Table 2-4: Number and Type of Registered Companies in Pakistan—June 30, 2015

Type of Companies	Jun-09	Jun-10	Jun-11	Jun-12	Jun-13	Jun-14	Jun-15
Public Listed Companies	616	609	648	602	595	580	576
Public Unlisted Companies	2,168	2,223	2,207	2,237	2,213	2,260	2,322
Private	46,125	50,750	53,750	56,335	55,838	57,650	60,758
SMCs	775	1,024	1,225	1,438	1,623	1,792	2,079
Foreign Companies	725	783	798	807	838	847	881
Total No. of Companies	**50,409**	**55,389**	**58,628**	**61,419**	**61,107**	**63,129**	**66,616**

Source: Security and Exchange Commission of Pakistan (SECP) Annual Reports 2009-2015

Table 2-5: Capitalisation Breakdown of Registered Companies—June 30, 2015

Paid-up Capital of Listed Companies	Listed	Unlisted	Private	SMCs	Total	%
Paid-up capital up to Rs 100,000	0	398	22,882	1288	24,568	37.37%
Paid-up capital up to Rs 100,001 - 500,000	-	283	9,327	350	9,960	15.15%
Paid-up capital up to Rs 500,001 - 1,000,000	-	119	6,720	195	7,034	10.70%
Paid-up capital up to Rs 1,000,001 - 10,000,000	16	341	16,350	174	16,881	25.68%
Paid-up capital up to Rs 10,000,001 - 100,000,000	152	625	4,463	67	5,307	8.07%
Paid-up capital up to Rs 100,000,001 - 500,000,000	206	338	827	4	1,375	2.09%
Paid-up capital up to Rs 500,000,001 - 1,000,000,000	71	89	104	1	265	0.40%
Paid-up capital up to Rs 1,000,000,001 - Above	131	129	85	-	345	0.52%
Total No. of Companies	**576**	**2,322**	**60,758**	**2,079**	**65,735**	**100.00%**

Source: Security and Exchange Commission of Pakistan (SECP) Annual Reports 2014-15

2.4.1 Corporate Governance in Pakistan

Pakistan has a multidimensional CG environment and laws relating to current CG regime fall into one of the following six categories:

- ➢ General corporate laws
- ➢ Rules and regulations made under corporate laws
- ➢ Stock exchange listing regulations and bylaws
- ➢ Civil laws, including those that provide remedies for seeking declarations, enforcement of a claim and recovery
- ➢ Criminal laws for breach of trust, fraud, etc.
- ➢ Special prosecution under the National Accountability Ordinance 1999 for corporate fraud and misappropriation.

Companies in Pakistan—both private and public—are primarily regulated under the provisions of the Companies Ordinance 1984, and, where relevant and applicable, under the provisions of the Banking Companies Ordinance 1962, Securities and Exchange Ordinance 1969, Securities and Exchange Commission of Pakistan Act 1997, Insurance Ordinance 2000 and several other rules, regulations and practices.

2.4.2 Code of Corporate Governance 2002 (revised in 2012)

CG in Pakistan has recently come to prominence, despite remaining in its very early stages. The SECP introduced the country's first Code of Corporate Governance in March 2002, and has since been made an important part of the listing requirements of the Karachi, Lahore and Islamabad stock exchanges. All listed companies in Pakistan are required to publish and circulate a statement, along with their annual report, setting out the status of their compliance with the provisions of the Code. The State Bank of Pakistan (SBP) introduced further regulations, requiring all listed and non-listed commercial banks and development finance institutions in the country to comply with the provisions of the Code. The Code includes many provisions and recommendations in line with the principles of Anglo-American CG systems and international best practices adopted by OECD countries. Major areas of enforcement include reforms to Board of Directors and to the structure of audit committees. Compliance with the provisions of the Code is mandatory unless otherwise stated.

According to SECP, the Code of Corporate Governance is designed to provide a framework to direct and control listed companies in Pakistan so as to ensure the following conditions are met:

- ➢ adequate disclosure and effective decision-making by companies in line with their objectives;
- ➢ transparency in their business activities;
- ➢ protection of shareholder and stakeholder interests; and
- ➢ Legal and statutory compliance.

2.4.3 Development of CG in Pakistan

Pakistan's CG journey did not end with the implementation of the Code of Corporate Governance in March 2002. The Issuance of the Code in 2002 was soon followed by the publication of two reports from the SECP in 2003. In April 2003, the SECP published its first report, aimed at developing better coordination and harmonisation between the Code of Corporate Governance and the Companies Ordinance 1984, in addition to other laws and regulation applicable to governance in the corporate sector. The second report, published in September 2003, contained an assessment of the Code's impact. The main objective of this report was to guide authorities and policymakers—in particular, the SECP—in learning about problems and potential weaknesses in the Code. The report concluded that the introduction and implementation of the Code in 2002 had led to

significant improvements in standards of transparency, accountability and disclosure in the reporting of listed companies' financial and non-financial information in Pakistan.

In December 2004, the Pakistan Institute of Corporate Governance (PICG) was founded following joint efforts between the SECP and many other financial, non-financial, and educational institutions. The PICG is a non-profit organisation recognised under Section 42 of the Companies Ordinance 1984. Its fundamental aim is centred on undertaking educational and research activities in an effort to help deliver good CG in Pakistan and to create an enabling environment for effective implementation of the Code of Corporate Governance. The PICG has become the country's leading provider of knowledge and awareness related to issues and practices of good CG. The PICG is encouraging businesses, Board of Directors, business executives, policymakers, investors and other stakeholders to adopt best business and ethical practices to attract investors and move the country forward.

In April 2005, in collaboration with the SECP, the SBP and the Institute of Chartered Accountants of Pakistan (ICAP), the WB conducted a Review of Observance of Standards & Codes (ROSC) to assess the health of the CG framework in Pakistan. The goal of the ROSC initiative was to identify potential weaknesses in the country's businesses and corporate environment in an attempt to address economic and financial vulnerability.

In 2006, for the first time, significant effort was made by Mr Zaffar Khan—a well-known and well-respected corporate executive—to understand the effectiveness of corporate Boards in Pakistan. In his personal capacity, he conducted a CG perception survey, gathering information on 26 important attributes of CG from 54 executives serving on the Boards of 40 well-established companies. In the same year, as part of their combined efforts to improve CG practice in Pakistan, the SECP, International Financial Corporation (IFC) and PICG conducted a survey on the 'Code of Corporate Governance of Pakistan'. The Pakistan arm of the Association of Chartered Certified Accountants (ACCA) conducted the survey on behalf of the IFC, SECP and PICG, the main purpose of which was to serve as a reference point for the promotion of CG reforms (ACCA, 2007). A key finding from both of the above-mentioned surveys was the need to create greater awareness amongst company directors of the benefits of good CG practices. The survey was also designed to make directors of the listed companies understand that CG is not merely a tick-box compliance with the SECP's Code of Corporate Governance. In reality, proper compliance with the Code could help their companies to go further in realising their strategic objectives. Another significant event in 2007 was the first round-table event on

CG, held in Karachi and organised by the country representative of the Centre for International Private Enterprise (CIPE), USA. An overwhelming majority of its participants agreed that the Code of Corporate Governance required revisiting in order to accommodate the growing needs of international investors and the challenges facing the country.

In December 2007, a task force of 11 members was set up by the PICG to review and evaluate the Code of Corporate Governance in light of global changes and international best practices. CIPE worked closely with the PICG and, in March 2009, the task force prepared and submitted the first draft of its report. In its report, CIPE recommended several amendments to the existing Code. The report was then reviewed and discussed by PICG Board members. After a number of meetings and discussions, a focus group comprising members of the Karachi, Lahore and Islamabad stock exchanges was consulted on final changes to the report and on delivering a revised version. A revised report containing proposed changes to the existing Code was discussed with representatives from listed companies across the country at three round-table conferences held in Karachi, Lahore and Islamabad.

In January 2011, the SECP posted an amended draft of the Code of Corporate Governance on its website for open discussion and to seek input from stakeholders. This resulted in further deliberations, changes and improvements to the Code. In September 2011, the Chairman of the SECP confirmed that all of the changes to the Code had been introduced to create a more conducive business environment in Pakistan so that the country was able to move forward and in line with international best practices. The SECP revised the current Code and launched its revised Code of Corporate Governance on 10 April 2012.

2.4.4   *Ownership Concentration and Corporate Governance in Pakistan*

Corporate governance (CG) has been a growing area of management research; however, review of the current literature reveals that empirical work on CG in the context of Pakistan is limited due to a lack of research interest and the availability of reliable data. The issue of the CG of listed companies, particularly family-owned companies has fundamental importance for the country, because the power culture in Pakistan has concentrated the wealth of the nation into the hands of very few families within the country. (Cheema, et al., 2003). Family-owned companies are often privately held businesses where a large majority of shares are held by the founding family, and therefore there are often restrictions on the free movement of shares in these companies (Kashif, 2013). As a result, such

companies have very limited access to resources and often suffer considerably due to a lack of focused growth and sustainable strategic policies on the part of the directors. In the context of Pakistan, the culture and traditions of controlling shareholders (i.e. close families and business groups) plays a central role in determining the CG practices applicable to listed companies.

A number of studies (i.e. Javid & Iqbal, 2008; Awan, 2012; Cheema, et al., 2003; Irshad, et al., 2015; Kamran & Shah, 2014; Sheikh, et al., 2013; Yasser & Mamum, 2015) have examined the extent to which family control can influence the effectiveness of their Boards and consequently the performance of these firms. Previous studies, in other parts of the world, also suggest that the strength of the Board of Directors' effectiveness in monitoring management or providing access to resources is considerably affected by the ownership type (Bennett, et al., 2003; Aguilera, 2005). According to Bhojraj & Sengupta (2003), in companies controlled by large shareholders, even with an efficient Board of Directors, the cost of debt cannot be reduced, as it is likely that members of the Board are not appointed on merit. The problems of poor CG are more severe in a family-owned firm in Pakistan, as family owners have both incentive and the ability to extract private benefits at the expense of minority shareholders (Yasser & Mamum, 2015; Khalid & Hanif, 2005).

The qualifications, experience and independence of Board members has a direct impact on the success of a company. Kashif (2013) argued that the Board should be comprised of suitably qualified and experienced directors who place the goals and objectives of the company above their personal aims. It is also essential that there should be a significant ratio of independent Board members. A number of studies (Awan, 2012; Rehman & Shah, 2013; Javed & Iqbal, 2006) have reported a significant positive relationship between the proportion of external directors and corporate performance. However, finding and retaining qualified and experienced independent directors is a fundamental problem in Pakistan. CG depends on the social, legal, regulatory and institutional environment, as well as on factors such as business ethics and corporate awareness of the environmental and societal interests of the communities (Yasser, et al., 2011; Nazir, 2016; Sajjad & Eweje, 2014; Majeed, et al., 2015; Yunis, et al., 2017; Lone, et al., 2016). The social system of the country systematically discriminates women in the work place, especially when it comes to the appointment of female directors in public listed companies. As a result, women are not able to fulfil their social and psychological needs, they do not have a health life or social identity (Malik, 2015). According to a review conducted by South Asian Federation of Exchanges, in Pakistan women's representation on Boards of

KSE-100 companies is under 4%. The data shows that KSE-100 companies have 35 women directors against a total population of 878 directors.

2.5 Agency Issues and Corporate Governance in Pakistan

Similar to south Asian, and many other countries around the world, family-owned firms within Pakistan are critical pillars of the country's economy. The country's corporate sector is dominated by a large number of family-owned businesses, and is significantly influenced by the founding owners of these family businesses. However, the existing literature on family focused CG in Pakistan is immensely limited, due to a lack of research interest and the availability of reliable data. A common perception regarding family-owned businesses is that ownership and management are aligned, the business control stays with the same family and in the majority of the cases with the same person (Chau & Gray, 2010; Chua, et al., 1999; Litz, 1995). Jensen & Meckling (1976) argue that this alignment of interests would lead to the avoidance of agency costs. Theoretically, it would be correct to assume that businesses where ownership is concentrated in the hands of a few individuals are likely to be more efficient than other businesses. Concentrated ownership gives the owners more specific and personal incentives to monitor the managers, thus reducing agency costs connected to hired management (Shleifer & Vishny, 1997). However, family culture and issues form a unique situation in family firms, leading to multiple sources of agency costs, and creating a more complex structure of individual preference which negatively influences performance (Kallmuenzer, 2015; Chrisman, et al., 2004).

The main agency issue in family-controlled businesses is the conflict of interest between controlling (family) shareholders and non-controlling shareholders. In family-controlled businesses the major shareholders may use their controlling power to take control of the business assets for private benefits at the expense of the smaller shareholders (Andres, 2008; Maury & Pajuste, 2005; Caprio, et al., 2011; Marbun, et al., 2016; Lefort & Walker, 2007; Grossman & Hart, 1980). In countries where most of businesses are characterised with concentrated ownership structures, it becomes more important for researchers to understand and measure the costs associated with the controlling shareholders–minority shareholders relationship, since there is strong reason to believe that the controlling shareholders will try to extract private benefits of control (Dyck & Zingales, 2004). Concentrated family ownership not only reduces the effectiveness of external CG mechanisms (Schulze , et al., 2001), but also endangers firms to a "self-control" issue created by incentives that cause owners to take actions which damage themselves as well

as those around them (Jensen, 1994). Similarly, La Porta, et al., (1999), Bebchuk, et al., (2000), Morck, (1995), Morck, et al., (1988) and Morck, et al.,(2000) reported that concentrated family ownership and family business groups can have serious CG problems. They claim that the key difference between widely-held firms and family-owned business groups is that agency problems in the former involve managers who do not act for shareholders, while agency problems in the latter involve managers acting solely for one shareholder, the family, neglecting other shareholders. Zulfiqar & Fayyaz (2014) study the impact of CG in family and non-family owned firs in Pakistan and their study shows that family firms are not superior and their performance was poor as compared to the non-family owned firms. The other studies that considered the agency issues in family owned businesses in Pakistan are (Afza & Nazir, 2014; Mehboob, et al., 2015; Hasan & Butt , 2009; Abdullah, et al., 2011; Din & Javid, 2012). These studies reported a negative relationship between family-owned listed companies and firm performance.

2.6 The Legal and Regulatory Framework of Corporate Governance

Despite their universal importance and utility for businesses, CG systems differ from country to country. Evidence shows that, since countries differ in terms of their cultures, legal systems, religion, history and level of economic development, they are likely to develop their own systems of CG in an effort to accommodate and serve the interests of local businesses. Perhaps the most common reason for these differences in CG systems is the existence of several distinctive legal traditions and systems across countries (Shleifer & Vishny, 1997). An effective legal and regulatory framework is a key factor in ensuring the proper and sustained growth of the corporate sector. Due to the increased level of complexity of modern corporations, the nature of CG practices and principals are constantly changing. This research argues that, if we are to understand the nature of a country's corporate sector and its CG systems, a review of its regulatory and institutional framework is necessary.

As mentioned in the previous section, the main law governing most aspects of listed companies in Pakistan is the Companies Ordinance of 1984. This section provides an overview of the following key pieces of legislation recognised as shaping the CG landscape in Pakistan.

Table 2-6: Key Corporate Governance Legislation in Pakistan

Legislation	Year
Securities and Exchange Ordinance	1969
Companies (Appointment of Legal Advisors) Act	1974
Modaraba Companies and Modaraba (Floatation and Control) Ordinance	1980
Companies Ordinance	1984
Central Depositories Act	1997
Securities and Exchange Commission of Pakistan Act	1997
Insurance Ordinance	2000
Listed Companies (Substantial Acquisition of Voting Share and Take-Over) Ordinance	2002
Anti-Money Laundering Act	2010
Stock Exchange (Corporatisation, Demutualization and Integration) Act	2012

2.6.1 Securities and Exchange Ordinance 1969

The Securities and Exchange Ordinance was promulgated in 1969 with the aim of providing protection for investors and the regulation of capital markets and dealings in shares and other securities. The ordinance requires listed companies to submit their annual reports to those stock exchanges on which they are listed. Companies are also required to provide any other information required within the relevant laws to make it easier for investors to make informed investment decisions. It is realistic to believe that the sole purpose of this Ordinance was to provide a safeguard between managers and shareholders in an effort to ensure that managers would always act in the best interests of shareholders.

2.6.2 Companies (Appointment of Legal Advisors) Act 1974

Every company in Pakistan with a paid-up share capital of Rupees 500K or more, whether publicly or privately registered, must appoint at least one legal advisor. This legal advisor must be an approved member of the Bar Council in terms of this the Act. The legal advisor is required to advise and assist the company in complying with and discharging its duties in accordance with applicable laws. Failure to appoint a legal advisor renders the manager or other responsible officer of the company liable to either imprisonment for a maximum of three months, a fine, or both.

2.6.3 The Modaraba Companies and Modaraba (Floatation and Control) Ordinance, 1980

The Modaraba sector plays an active role in the growth of the Pakistani economy. During the last two decades, it has cemented its place amongst the country's financial intermediaries and has created a niche in the market for Muslim investors. According to the Modaraba Association of Pakistan, there are, at present, 24 operative Modaraba companies recognised as members of the association. Of these 24 Modaraba companies, 18 have paid cash dividends in the range of 2.5% to 6.5%, whilst two Modaraba companies have declared bonus shares to their certificate-holders. The Modaraba Companies and

Modaraba (Floatation & Control) Ordinance and Modaraba Companies and Modaraba Rules were introduced in 1980 by the Government of Pakistan. The purpose was to provide a legal framework for promoting and managing business activities according to Islamic principles of trade and commerce. The ordinance provides information relating to the registration of Modaraba companies and their floatation, management and regulation.

2.6.4 Companies Ordinance 1984

The history of corporate law in South Asian countries, including Pakistan, is much older than the history of some of the countries in which the law applies. The English Companies Act 1844 is the main force behind the development of corporations in this part of the world. At the time of its independence in 1947, Pakistan adopted the Companies Act of 1913, which was passed and introduced by Great Britain. In 1949, the Government of Pakistan made some changes to the Companies Act 1913 and, up to 1984, when the Companies Ordinance 1984 was declared, companies in Pakistan were established and governed in accordance with the provisions of the Companies Act 1913. Some of the relevant provisions of the ordinance are highlighted in the sub-sections below.

Shareholder Rights

The Companies Ordinance requires every company to hold an annual general meeting and accordingly provide an effective mechanism for shareholders to participate and vote at the company's annual and general meetings. Moreover, in an effort to protect shareholders, the ordinance also requires the regular release of information in the form of annual reports, minutes of general meetings, Board meetings, auditors' reports, governance compliance reports and any other major announcements.

Disclosure and Transparency

The Companies Ordinance affirms that disclosure and transparency form an integral part of a company's CG structure. Therefore, information pertaining to the company and its activities must be provided to shareholders, the companies' registrar and stock exchanges in the form of an annual report and other corporate documents, as mentioned in the Companies Ordinance. The annual accounts of the company are required to be audited and certified by qualified auditors, who are appointed by its shareholders at the annual general meeting.

Responsibilities of the Board

The Board of a company is appointed at the general meeting, with each director's appointment to be agreed by a majority of shareholders via a voting system. Similarly, shareholders can remove a director by way of a simple majority vote. Although the Board has general powers, the consent of shareholders is mandatory when seeking to make certain corporate decisions, such as a further issue of share capital, issuing shares at a premium or discount, share buy-backs, mergers and acquisitions, redemption, or the issuance of debentures and any change of registered office.

A closer look at the provisions of the Companies Ordinance 1984 strongly suggests that, at least in theory, this ordinance can help align the interests of managers and shareholders.

2.6.5   Central Depository Act, 1997

The Central Depository Company (CDC) of Pakistan Limited was formed under the Central Depositories Act, 1997. This Act made it possible, for the first time in Pakistan's history, to recognise the beneficial ownership of securities on the basis of holdings in depository accounts. Since the formation of the CDC, all three of the country's stock exchanges have seen significant increases in their trading volumes. This has increased the efficiency, effectiveness and credibility of the markets, with increased interest noted from foreign investors. Within the current depository structure, all securities are registered in the name of CDC of Pakistan Limited in the capacity of a nominee, with account holders considered to be the beneficial owners of the securities based on their holdings in Central Depository System (CDS) accounts.

2.6.6   Securities and Exchange Commission of Pakistan Act, 1997

The Securities and Exchange Commission of Pakistan Act came into force in December 1997. This Act provided the foundation for the establishment of the SECP, the role of which would be the regulation of the country's capital markets.

2.6.7   Insurance Ordinance, 2000

The insurance sector in Pakistan witnessed a major change in 2000 when the Insurance Act 1938 was replaced with the Insurance Ordinance 2000. This new law was introduced to regulate the business of the insurance industry, with the prime objective to ensure the protection of policyholders' interests. The ordinance strengthened the solvency of the insurer by raising existing standards. The new legislation also provided for the redressing of policyholder grievances arising from insurers' non-settlement of claims.

2.6.8 Listed Companies (Substantial Acquisition of Voting Shares and Takeovers) Ordinance, 2002

In an effort to further strengthen the CG regime of the country, in October 2002, Pakistan introduced the Listed Companies (Substantial Acquisition of Voting Shares and Takeovers) Ordinance 2002 to provide fair and equal treatment for all investors, as well as a transparent and efficient system for the substantial acquisition of voting shares and takeovers of listed companies and related matters.

2.6.9 Anti-Money Laundering Act, 2010

The Asia/Pacific Group on Money Laundering issued a warning notice to Pakistan and its authorities that the country could see its membership rescinded if it failed to address the concerns of the international community regarding illegal money-laundering activities in Pakistan. Since then, Pakistan has taken substantial steps to create an effective anti-money laundering regime. In 2007, Pakistan issued the Anti-Money Laundering Ordinance. However, it contained many inconsistencies and lost its legal authority in 2009, with the government enacting a new law known as the Anti-Money Laundering Act, 2010 (AMLA).

2.6.10 Stock Exchanges (Corporatization, Demutualization and Integration) Act, 2012

The Stock Exchanges (Corporatization, Demutualization and Integration) Act, 2012 requires that all of Pakistan's three stock exchanges be demutualised and change their status from one of a company limited by guarantee to a company limited by shares. As a result of this Act, brokers are no longer 100% owners of the stock exchanges since demutualisation has made it possible for the public and other investors to own shares in them. The Act aims to achieve more transparency at stock exchanges and a greater balance between the interests of various stakeholders. Demutualisation is a well-established global trend, with almost all stock exchanges worldwide now operating under a demutualised set-up. Enactment of this law has brought Pakistan's capital market on a par with other international jurisdictions like India, Malaysia, Singapore, the USA and the UK.

2.7 Institutional Framework of Corporate Governance

Institutions are an inescapable part of our social, political and economic life. Institutions provide all kinds of rules and regulations that make it possible to transact and reduce our exposure to risk. Institutions have always played a key role in economic theory and economic policy. They assist us in coordinating transactions smoothly at low cost by

distributing the rights and duties of those involved in the transaction (Groenewegen, et al., 2010). It is a commonly held fact that strong institutions play a key role in shaping and developing countries' corporate landscapes. As an example, a comprehensive institutional set-up is essential for an effective and favourable business environment and the performance of firms. Institutions regulating CG in Pakistan are the SECP, all three of its stock exchanges, the ICAP, SBP and the PICG.

2.7.1 The Securities and Exchange Commission of Pakistan (SECP)

The SECP was established in 1999 through the Securities and Exchange Commission of Pakistan Act, 1997. Establishment of the SECP represented an important step towards the development of the country's regulatory framework for capital markets. The SECP is a statutory body attached to the Ministry of Finance. The objectives of the SECP are concerned with regulating the securities markets to protect investors' interests and maintaining order and fairness in the trading of securities in the country. Over time, its functional areas have expanded to include the supervision and regulation of insurance companies, non-banking finance companies, and private pension companies. The SECP is structured into the following six divisions:

- ➢ Company Law Division
- ➢ Securities Market Division
- ➢ Specialised Companies Division
- ➢ Finance and Admin Division
- ➢ Human Resource and Training Division
- ➢ Insurance Division
- ➢ Information System and Technology Division.

Since taking up its responsibilities, the SECP has been active in the development of strong capital markets in Pakistan by taking into account changes taking place in the international business environment. According to the SECP (2015), its main functions include the following:

- ➢ Regulating the issue of securities, and regulating the business conducted in stock exchanges and other securities markets;
- ➢ Supervising and monitoring the activities of any central depository and stock exchange clearing house;

- Registering and regulating the working of stockbrokers, sub-brokers, share transfer agents, bankers to an issue, trustees of trust deeds, registrars to an issue, underwriters, portfolio managers, investment advisers and other such intermediaries who may be associated with the securities markets in any manner;
- Proposing regulations for the registration and regulation of the working of collective investment schemes, including unit trust schemes;
- Prohibiting fraudulent and unfair trade practices relating to securities markets;
- Regulating the substantial acquisition of shares and the merger and takeover of companies;

2.7.2   The Karachi Stock Exchange (KSE)

Literature on the relationship between institutions and economic development shows that much of the economic growth and industrialisation in developed countries has occurred as a result of the existence of efficient capital markets and other financial institutions. Levine & Zervos (1998) presented empirical evidence of the relationship between stock markets and long-term economic growth. They concluded that the development of stock markets is positively associated with economic growth, even after controlling for microeconomic factors associated with the long-term economic development of a country. Efficient capital markets provide companies with the ability to raise low-cost capital to finance their operations. Companies can sell their shares and other securities to investors who do not have an immediate productive use for their funds. Despite the fact that the majority of business corporations in Pakistan are privately owned and unlisted, the country has three stock exchanges: the Karachi, Lahore and Islamabad Stock Exchanges. The principal functions of stock exchanges in Pakistan are as follows:

- Listing of companies in accordance with the Code of Corporate Governance and the Listing Regulations of the stock exchanges;
- Providing effective and efficient trading systems for the trading of listed securities;
- Providing fair, well-regulated and transparent markets for brokers, companies and investors for raising capital for businesses and mobilising savings for investors;
- Monitoring, administration and control of the activities of listed companies;
- Creating investment opportunities for companies operating in Pakistan; and

2.7.3   The Institute of Chartered Accountants of Pakistan (ICAP)

The ICAP was Pakistan's first professional accountancy body, established on July 1, 1961 under the Chartered Accountant Ordinance 1961 to regulate the accountancy profession in

Pakistan. The ICAP has played a significant role in the development of CG in Pakistan. In December 1998, it took the initiative to develop a framework of good CG in Pakistan. Through financial reporting, auditing and other services, members of the above-mentioned bodies support transparency and the flow of reliable information between management, Boards, shareholders, regulators and other stakeholders of the companies. Other main Pakistani professional accountancy bodies include the following:

- ➢ The Institute of Cost & Management Accountants of Pakistan (ICMAP)
- ➢ The Institute of Professional Accountants of Pakistan (IPA)
- ➢ The Institute of Certified Public Accountants of Pakistan (ICPAP)
- ➢ The Pakistan Institute of Public Finance and Accountancy (PIPFA)

2.7.4 State Bank of Pakistan (SBP)

The SBP was founded in 1948 to act as the government's banker. Since then, the role of the bank has developed, evolved, and become centred on the management of the nation's currency and its position as the regulator of Pakistan's financial system. The SBP has a strict regime in place for the governance of financial institutions to protect both investors and depositors. The country's banks are, in addition, required to follow the national Code of Corporate Governance, 2012, aimed at greater transparency and accountability for corporations, including banks.

2.8 Chapter Summary

This chapter has focused on CG environment in Pakistan, with the main objective of the chapter to provide a comprehensive picture of the economic environment and CG framework in Pakistan.

First, the chapter presented political, economic, social, technological, legal and environmental factors, followed by an economic overview and the nature of corporate sector in Pakistan. In addition, the Code of Corporate Governance and developments in CG environment were also highlighted. Second, the chapter categorised and presented the CG environment in Pakistan across two dimensions: the legal and regulatory framework of CG, and the institutional framework of CG. The legal and regulatory framework is made up of the Companies Ordinance 1984, Code of Corporate Governance, and many other statutory laws governing and regulating firms from within and defining their operational boundaries with respect to their incorporation, governance, structure and responsibilities. By contract, the institutional framework consists of major financial, regulatory and

professional bodies responsible for the formulation, implementation and enforcement of Code of Corporate Governance and other laws. These include the Security and Exchange Commission of Pakistan, the Karachi Stock Exchange, the Institute of Chartered Accountants of Pakistan and State Bank of Pakistan. The overall outlook emerged in this chapter suggests that CG is rapidly developing in Pakistan and SECP, with other regulatory institutions having played a major role in institutionalising CG in Pakistan. In the next chapter, theoretical literature is presented in an effort to define the concept of CG, its importance, models and mechanisms, the theories behind the development of CG practices, and the relationship between Board structure and firm performance.

3 LITERATURE REVIEW

3.1 Introduction

3.2 Corporate Governance

3.3 Theories of Corporate Governance

3.4 The Board of Directors

3.5 Board Structure and Firm Performance

3.6 Ownership Concentration and Firm Performance

3.7 Firm Performance

3.8 Chapter Summary

3.1 Introduction

The Literature Review is crucial for any research activity because it presents the current status of the existing knowledge developed by previous researchers in the area under examination. The aim of this chapter is to provide a comprehensive account of the existing literature on CG practices so as to enable this research to critically review the existing understanding of these practices around the world. The aim also includes identifying any strengths and weaknesses highlighted in the previous research work so as to guide this research in pinpointing potential gaps in the literature. Furthermore, it is believed that a comprehensive review and deep understanding of the existing literature will provide the context within which the researcher can place this research to contribute to existing knowledge. The existing literature on the topic of CG is too large for anyone to review in full detail in a single study. The literature reviewed in this research does not focus on any particular country; instead, a generic review of the literature is presented in this research in an attempt to understand the relationship between Board structural characteristics (board independence, CEO duality, Board diversity, Board committees and audit committee independence) and firm performance.

This chapter is divided into eight sections: Section 3.1 presents an introduction to this chapter; Section 3.2 deals with definitions of CG, its importance, models, mechanisms and recent developments in CG; Section 3.3 looks at some of the most important and highly influential theories applicable to the development of CG around the world; Section 3.4 explains the role of Board of Directors in CG, mainly from a public company's perspective; Section 3.5 explains the structural characteristics of Board from Agency and resource-dependency perspectives, and further highlights the importance of each characteristic of the Board and its potential links with firm performance; Section 3.6 considers the importance of ownership concentration and it relationship with performance; Section 3.7 provides a brief explanation as to the concept of performance and measures of firm performance used in this research; and finally Section 3.8 presents a summary of this chapter.

3.2 Corporate Governance

3.2.1 Definition

The term governance originates from the Latin word *gubernare*, meaning 'to steer', and has commonly been applied in the context of the steering of a ship (Solomon, 2010). It

refers to the way in which something is governed, with the term being used as a proxy for authority and control in the context of public companies (Luo, 2007).

Rose et al. (2005) presented a simple balance sheet model of the firm (Figure 3-1) to capture and define the essence of CG. According to this model, the left-hand side of the diagram depicts the elements of internal governance whilst the right-hand side displays the external elements of CG. The management of the company is shown as acting on behalf of the company's shareholders to decide where to direct the company's funds: for example, what assets should it invest in? How should these assets be financed? The Board of Directors, as the most important element of internal governance, is charged with the function of advising and monitoring management, and has the responsibility of hiring and firing, and compensating the senior management team (Jensen, 1993). The model highlights the separation between providers and users of capital in a publicly traded firm, with this separation creating the need for structures of CG.

Figure 3-1: Firm's Balance Sheet Model of Corporate Governance
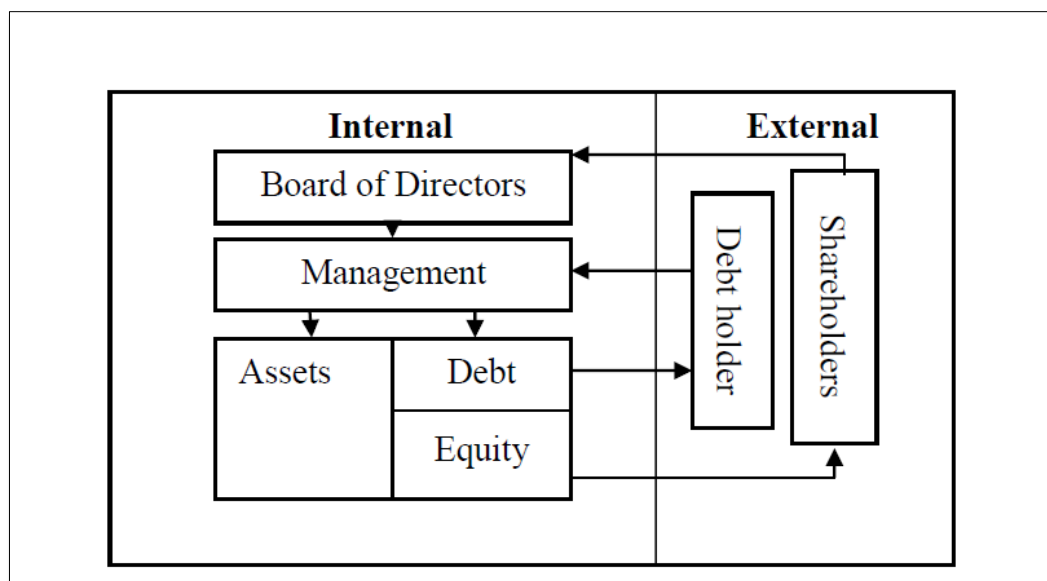
Corporate governance and the balance sheet model of the firm – Adapted from Ross et al. (2005)

The concept of CG and its understanding vary from firm to firm, country to country, and even scholar to scholar. Different people have defined the term CG differently, in line with their own understanding, experience and interest in the subject of CG. Some authors have defined the term in its narrow sense, whereas others have explained it in relation to its broader meanings (Abdullah & Page, 2009). Despite the fact that CG has become a buzzword, its precise definition remains blurred (Gillan, 2006). A survey of the extant literature revealed the absence of any consensus as to what constitutes CG; hence, there is no uniform and widely accepted definition of the term (Solomon, 2010).

In order to develop clear view of the term, the following section presents some of the most widely cited definitions of the term CG in their narrow as well as broad perspectives.

Narrow View of Governance

In its narrowest sense, CG is a system of relationships amongst the various internal actors of a company, namely its Board of Directors, management and shareholders. When defined in its narrow sense, it suggests that both the directors and management of the company are accountable to its shareholders (Cadbury, 1992; Shleifer & Vishny, 1997; La Porta, et al., 1999). Sir Adrian Cadbury, in his famous and widely recognised report *The Financial Aspects of Corporate Governance*, defined CG as follows:

> *"Corporate governance is the system by which companies are directed and controlled. Boards of directors are responsible for the governance of their companies. The shareholders' role in governance is to appoint the directors and the auditors and to satisfy themselves that an appropriate governance structure is in place. The responsibilities of the directors include setting the company's strategic aims, providing the leadership to put them into effect, supervising the management of the business and reporting to shareholders on their stewardship. The Board's actions are subject to laws, regulations and shareholders in general meeting."* (Cadbury, 1992:14)

Similarly, Shleifer & Vishny (1997) defined CG as "*the ways in which suppliers of finance to corporations assure themselves of getting return on their investment*". According to La Porta et al. (1999), CG is *"a set of mechanisms through which outside investors (owners) protect themselves against expropriations by the insiders (managers)"*.

Wider View of Governance

The wider view of CG looks beyond the company's internal responsibilities and instead suggests that companies have a set of economic and social responsibilities towards other stakeholders in the company, such as their employees, suppliers, authorities, pressure groups and community. The OECD outlines this perspective of CG in its *Principles of Corporate Governance 2004* by addressing six core areas of concern. It provides a broader and more functional definition of CG as follows:

> *"Corporate governance involves a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined."* (OECD, 2004:11)

Solomon (2010) defines CG as:

"The system of checks and balances, both internal and external to companies, which ensures that companies discharge their accountability to all their stakeholders and act in a socially responsible way in all areas of their business activity." (Solomon, 2010:6)

Gillan & Starks (1998) *define CG as 'the system of laws, rules, and factors that control operations at a company'.* Finally, Oman (2001) states that CG:

"refers to the private and public institutions, including laws, regulations and accepted business practices, which together govern the relationship, in a market economy, between corporate managers and entrepreneurs ('corporate insiders') on one hand, and those who invest resources in corporations, on the other. Investors can include suppliers of equity finance (shareholders), suppliers of debt finance (creditors), suppliers of relatively firm-specific human capital (employees) and suppliers of other tangible and intangible assets that corporations may use to operate and grow." (Oman, 2001:13)

Although there is no one universal definition of CG, policymakers in different countries pursue the same objectives of seeking to grow public trust and the confidence of investors (ICAEW, 2005). It is clear from the above definitions that good CG is founded on the principles of protection, accountability, transparency and disclosure. Simply, in its narrow outlook, at the level of the firm, CG creates trust between the suppliers of finance and the company's management. On the other hand, in its wider definition, CG creates overall confidence at the aggregate economy level. In both cases, the end goal of CG is to protect shareholders whilst ensuring an efficient allocation of resources (OECD, 2004). This dual objective makes CG more important and more difficult not only to understand but also to apply. Irrespective of the particular definition used, however, this research argues that researchers often view CG mechanisms as a combination of both internal and external factors put together to create an environment of trust, ethics and moral values to direct and control the activities of companies to create economic value for their shareholders and to achieve a balance between public and private interests.

3.2.2   *Importance of Corporate Governance*

In this highly competitive and ever-changing business environment, CG has become an important factor for the success of companies. It is perhaps one of the most important factors helping investors to differentiate a successful and profitable company from those deemed as risky and likely to collapse. CG not only helps companies to avoid costly financial setbacks and failures, but also assists them in improving their productivity and financial performance by reducing their cost of capital employed. Evidence shows that investors are increasingly basing investment decisions on companies' CG records, and that

they are willing to pay a higher price for the security offered by better-governed companies (Chen, et al., 2006). As mentioned before, McKinsey (1996) surveyed a large number of US investors with a large majority of respondents, confirming they would be willing to pay a higher price for shares and securities in companies that are well-governed, responsive and proactive in dealing with investors' demands.

CG has a significant impact on the activities, growth and profitability of companies, and their access to and the cost of capital (Halpern, 2000). Stressing the importance of good CG for domestic and international economic activities, the OECD (2004) stated:

> *"If countries are to reap the full benefits of the global capital market, and if they are to attract long-term 'patient' capital, corporate governance arrangements must be credible and well understood across borders. Even if companies do not rely primarily on foreign sources of capital, adherence to good corporate governance practices will help improve the confidence of domestic investors, may reduce the cost of capital, and ultimately induce more stable sources of financing."* (OECD, 2004:13)

Similarly, highlighting the importance of CG practices and the need to improve and reform these practices at an international level, Arthur Levitt, former chair of the US Securities and Exchange Commission, said:

> *"If a country does not have a reputation for strong corporate governance practices, capital will flow elsewhere. If investors are not confident with the level of disclosure, capital will flow elsewhere. If a country opts for lax accounting and reporting standards, capital will flow elsewhere. All enterprises in that country – regardless of how steadfast a particular company's practices may be – suffer the consequences. Markets must now honor what they perhaps, too often, have failed to recognize: markets exist by the grace of investors."*

The importance of sound CG is also evident when considering the rapid development of reforms, best practice, and CG codes around the world, including the Combined Code in the UK, Sarbanes-Oxley Act (SOX) in the US, Principles and Recommendations of the ASX Corporate Governance Council in Australia, the King III report in South Africa, and G20/OECD Principles of Corporate Governance and the revised Code of Corporate Governance in Pakistan. Jinarat & Quang (2003) argue that the true importance of CG lies in its ability to effectively and efficiently deal with critical business issues. CG plays an important role in creating value for shareholders. It serves as a mechanism in reducing perceived investment risk, and, as a result, investors may demand lower rates of return on the capital they provide (Suchard, et al., 2012). It is a key investment factor influencing

institutional investors' decisions to invest in developing and emerging markets (Gibson, 2003).

CG can help developing countries, such as Pakistan, to achieve higher levels of economic growth by attracting additional investment and through the efficient use of financial resources.

3.2.3 CG Models

There is no single model or 'one-size-fits-all' philosophy of CG (Robinson, 2001; OECD, 2004). Although CG models vary by country and firm, and even within the same firm over a period of time, their fundamental aim is always the same (Iskander & Chamlou, 2000). Essentially, they all have the potential to influence the efficiency and performance of firms. There are three main models of CG explained in this research, as discussed in the following sub-sections.

Anglo-American Model

The Anglo-American model of CG is the oldest model of CG and is based on a diffuse ownership structure where individual and institutional investors are not closely affiliated with companies. In countries such as the USA, UK, Canada and Australia, CG is mainly concerned with firms' outside investors. The true focus of CG in these countries is to ensure that companies are run in the best interests of their shareholders. The Anglo-American model focuses on ways in which the suppliers of finance assure themselves of a fair return on their investment (Shleifer & Vishny, 1997). In the Anglo-American model, the management of the company nominates members of the Board of Directors. These directors are then selected by the company's shareholders at their annual general meeting. This model is also known as the one-tier Board model, and is characterised by executive and non-executive directors serving together within a single organisational layer. The key players in this model are management, directors and shareholders, as well as institutional investors, such as bank and pension funds. Banks play no active role on the Board, however, but do act as influential creditors of the company.

In the Anglo-American model, the main tasks of the Board are to appoint and dismiss managers, approve pay and other incentives for executive directors, and make decisions on important strategic issues. In order to enhance the overall effectiveness and independence of Boards, this model advocates the inclusion of a significant number of non-executive directors and an independent CEO. However, many companies, particularly

in the US, continue to have Boards with a leadership structure that combines the roles of CEO and Chairperson. If markets and institutions are well developed and competitive, the Anglo-American system of CG has the potential—at least in theory—to ensure an efficient allocation of resources, which, in turn, has the ability to deliver increases in shareholder wealth.

German Model

The German model of CG differs significantly from the Anglo-American model; it does, however, bear similarities to the Japanese model of CG. In contrast to the market-oriented Anglo-American model, which values strong and competitive stock markets, the German model stresses on cooperation, consensus, and understanding amongst various stakeholders of the company. The German model relies on a two-tier Board of Directors— the executive Board and supervisory Board. This is an 'insider' model of governance, where a large proportion of Board directors are nominated and elected by shareholders, banks and employees to monitor management, who, themselves, are responsible for running the day-to-day affairs of the company.

The key players in German CG model are banks, shareholders and the representatives of labour unions. The scope of the German model is not restricted to the main shareholders. It also advocates for and protects the interests of employees and other stakeholders of the company.

Japanese Model

Public and private companies in Japan are connected through cross-holdings, where interlocking directorships are a relatively common and strong feature of such companies. The Japanese corporate sector is characterised by a high level of stock ownership, held by affiliated banks and group companies. This serves to make the Japanese CG model more efficient and effective. Member companies tend to trade extensively with one another. It is quite normal for financial institutions to be a part of the interlocking networks, something that reflects the social cohesion typical of Japanese society and that emphases unity throughout the network (Tricker, 2012). The Japanese model of governance is viewed as an efficient alternative to the Anglo-American and Western models (Weinstein & Yafeh, 1998).

Table 3-1 presents some of the important key differences between the Pakistani and Anglo-American governance models.

Table 3-1 Key differences between the Pakistan's and Anglo-American Corporate Governance

Corporate Governance Aspects	Corporate Governance in Pakistan	Anglo-American Corporate Governance
Ownership Structure and Shareholders Types	Concentrated ownership in the hands of close families, state and business groups	Diffuse ownership structure with some concentration in hands of pension and hedge funds
Board Structure	Single-tier board subject of some restrictions from SECP and KSE	Single-tier boards
CEO Duality	Separation of Chairman and CEO positions, but dubious due to the influence of controlling shareholders	Separation of Chairman and CEO positions
Board Independence and Diversity	Board independence and diversity is subject to the influence on the controlling shareholders (dubious)	Professional, reputed and well-resourced directors
Legal System and Corporate Control	Weak legal and institutional framework, inefficient capital markets for effective mergers and takeovers	Strong and more effective institutional framework and efficient capital market for corporate control

3.2.4 Corporate Governance Mechanisms

In the principal–agent relationship, when one party knows more than the other, it is likely that someone within the relationship will suffer. In large public companies, managers are better informed people than investors and other stakeholders; therefore, they may increase investment risks for investors. It is argued that information provided by managers may not be current, reliable and sufficient. Hence, shareholders may not be able to make rational investment decisions as a result of information asymmetries. CG mechanisms comprise a set of tools, techniques and practices that shareholders can use to reduce their investment risk and accordingly manage relationships with their agents. Such mechanisms are designed to monitor and control the opportunistic behaviour of agents and to stop them from pursuing their personal objectives to the detriment of stakeholders (Jensen & Meckling, 1976; Fama, 1980; Shleifer & Vishny, 1997; Fama & Jensen, 1983; Benston, 1985). Every company needs a balance of power across three groups of player: shareholders, Boards of Directors, and managers (Iskander & Chamlou, 2000). The company can achieve this balance of power by adopting a combination of internal and external mechanisms of CG.

Internal Mechanisms

The internal mechanisms of CG work to check and balance the power of managers, shareholders and directors (Iskander & Chamlou, 2000). They create internal power to solve Agency problems between the management and shareholders of companies. These mechanisms include the Board of Directors (Jermias & Gani, 2014; Adams, et al., 2010; Alves, et al., 2015; Arosa, et al., 2013), its standing committees such as audit, remuneration and nomination committees (Bronson, et al., 2009; Rupley, et al., 2011; Lam & Lee, 2012), executive incentives, compensation schemes (Baker, et al., 1988; Bebchuk & Fried, 2003) and the ownership and capital structure (Javid & Iqbal, 2008; Jiraporn & Chintrakarn,

2012; Monem, 2013) of the company. Iskander & Chamlou (2000) argue that these internal mechanisms, if appropriately supported and reinforced by external laws and systems, work better and provide a more competitive and level playing field to control and discipline the behaviour of insiders, whether managers or controlling shareholders.

External Mechanisms

On the other hand, external mechanisms represent the external power of regulators, financial institutions, accounting bodies, governments and trade unions to control the behaviour of executive management to influence the performance of companies and to protect the interests of their stakeholders. These mechanisms include legislative and regulatory frameworks, such as capital market regulations and external audit (Colbert, 2002; Fan & Wong, 2004; Kouaib & Jarboui, 2014; Fan & Wong, 2004); the market for corporate control (Sudarsanam, 2000; Chou, et al., 2011; Balasubramanian & George, 2012) and the managerial labour market (Gospel & Pendleton, 2003). Figure 3-2 provides a summary of some of the internal and external mechanisms used to the address issues associated with CG. Iskander & Chamlou (2000) stressed the importance of external mechanisms of CG, stating, "while internal incentives are necessary for efficiency, they are not sufficient for good governance—in addition to these internal factors, corporations in market economies are also need to be disciplined externally".

Relationship between Internal and External Mechanisms

Filatotchev & Nakajima (2010) argue that much of the existing CG research focuses on a universal link between CG practices (e.g. shareholder activism, board independence) and performance outcomes, but ignores how interdependences between the organisation and diverse environments lead to variations in the effectiveness of internal and external CG mechanisms and practices. There is insufficient literature available to understand the relationship between internal and external mechanisms of CG and how firms can influence the effectiveness of competing CG mechanisms to achieve their strategic objectives. Bushman and Smith (2001) stressed the need for a better understanding of the interactions across various internal and external mechanisms of CG. For example, external takeover market can be substituted for internal board structure to discipline the internal executive management (Scharfstein, 1988). Shivdasani (1993) states that a hostile takeover is less likely when outsiders represent a larger proportion of directors. Kini, et al., (2004) state that the corporate takeover market can play a disciplinary role, but only when internal control mechanisms prove ineffective, consistent with the argument that the overall

governance decisions within a firm determine the degree to which external oversight can be effective. In the same vein, Hermalin (2005) reported how new trends in external CG practices, including legal and regulatory changes, influence the effectiveness of Boards' internal structure and thier monitoring and resource dependency responsibilities. Graziano & Luporini (2003) study of Board incentives in the face of external pressures shows that the internal behaviour of Boards depends on the pressure from the external takeover market and on whether its type is publicly known. They argue that when the pressure from the takeover market is high and the type of Board is private information, the Board would prefer not to dismiss the manager even in the case of it receiving a poor indication of his quality. Kini et al. (2004) state that the corporate takeover market and external regulations can play a disciplinary role but only when internal control mechanisms prove ineffective, consistent with the argument that a firm's overall governance decisions determine the degree to which external oversight can be effective. Internal CG practices (board structure, audit committee structure, ownership structure and internal auditors) are under the internal control of the companies. Whereas, external control is imposed from outside and the companies have no control over them. Hypothetically, it is believed that when external CG mechanisms are effective, the internal CG mechanisms will also be effective and vice versa.

Figure 3-2: Internal and External Factors of Corporate Governance Environment
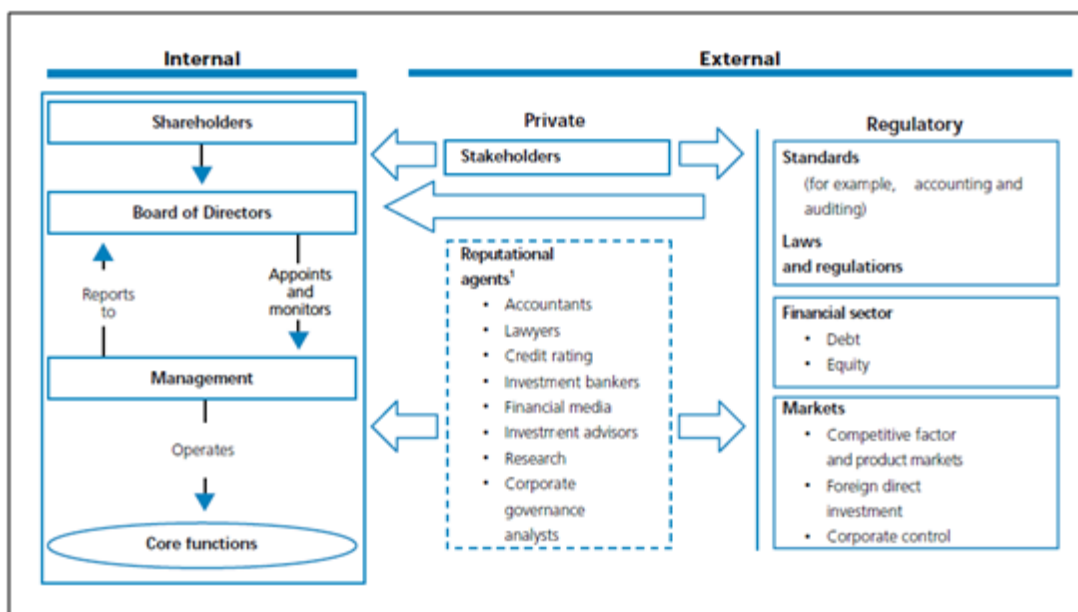
Source: Muir & Saba (1995)

3.2.5   Corporate Governance Developments

Every mechanism and model of CG in the world is based on certain principles and practices; however, there is no single, generally accepted set of principles or best practice

of CG that can be applied to every company and every country. As an example, a large majority of public companies in the UK and the USA are widely held and managed by professional managers on behalf of their shareholders. In contrast, companies in many other parts of the world are more often controlled by their founders or a small group of connected controlling shareholders. Since each country's corporate sector has different features, the interests of shareholders and stakeholders are also likely to be different from one country to the next. Furthermore, companies do not necessarily face the same issues in each country and therefore should not be controlled in the same way. Thus, countries around the world have developed and adopted different systems of CG in mind of adjusting their own unique requirements and the roles of corporations in their societies. The following section presents some of the landmarks in CG.

The Cadbury Report

In reaction to a number of notorious financial scandals in the 1980s involving UK listed firms, at the request of the London Stock Exchange, a committee was formed under the leadership of Sir Adrian Cadbury to look into the financial aspects of CG. The United Kingdom Committee on the Financial Aspects of Corporate Governance published its report in 1992—better known as the Cadbury Report (1992). The report's findings not only influenced the development of CG practices in the UK, but also made the UK a world leader in the field of CG (Tricker, 2012).

The Cadbury Report (1992) recommended several important changes to Board structures to ensure firms would be more accountable to their shareholders. Key recommendations of the report were:

➢ Companies should establish key Board committees i.e. audit, remuneration and nomination committees
➢ There should be at least three independent non-executive directors and companies should introduce a balance of executive and non-executive directors
➢ There should be separation between the roles of chair and CEO to keep a balance of power.

The OECD Principles

The OECD is an international body that was established with the aim of helping countries by providing advice and assistance on their economic issues. It established a taskforce in 1998 to develop a set of principles of good CG. The OECD was the first organisation to

outline a set of internationally acceptable principles of good CG. First published in 1999, and subsequently updated in 2004 and again in 2015, the OECD Principles are intended to assist policymakers in evaluating and improving the legal, regulatory and institutional framework for CG, with a view to supporting economic efficiency, sustainable growth and financial stability (OECD, 2004). The OECD Principles have become benchmarks for CG practices and are widely accepted by a number of high-profile actors, including the G20 countries, IMF, the World Bank (WB), the United Nations (UN) and other international organisations. The OECD Principles provide guidance through recommendations and are divided into six key elements of good CG. Appendix 1 provides a summary of the OECD Principles of CG and Appendix 2 provides comparison of 2002 and 2012 Codes of Corporate Governance of Pakistan.

ASX Corporate Governance Council

In Australia, the Australian Securities Exchange (ASX) Corporate Governance Council was founded in August 2002. The Council issued its first Corporate Governance Principles and Recommendations in March 2003. An extensively rewritten version of the Principles was issued in 2007, with new recommendations detailed in regards diversity, and the composition of remuneration committees subsequently added in 2010 (ASX, 2014). According to the ASX (2014), there was a comprehensive review of the Principles and Recommendations in 2012–2013, with the 21 members of the Council agreeing to issue a third edition of the Principles and Recommendations to reflect global developments in CG issues in light of the events leading up to, and during, the global financial crisis. The Principles and Recommendations are structured around, and seek to promote, the following eight core principles of good CG:

> - Lay solid foundations for management and oversight;
> - Structure the Board to add value;
> - Act ethically and responsibly;
> - Safeguard integrity in corporate reporting;
> - Make timely and balanced disclosure;
> - Respect the rights of security holders;
> - Recognise and manage risk; and

The King Reports (South Africa)

CG in South Africa is based primarily on the Companies Act 1973, as well as on common law (Coyle, 2010). Huge interest followed the publication of the King Committee Report in 1994. The King Committee on Corporate Governance was formed in 1992 with the aim of promoting the highest standards of CG in South Africa. The first King Report was superseded by King II in March 2002, which contained a Code of Corporate Governance Practice and Conduct applicable to all listed companies in South Africa. The code promotes seven characteristics of good CG, namely discipline, transparency, independence, accountability, responsibility, fairness and social responsibility. King II includes requirements on sustainability and ethical standards as both are critical in the context of developing countries in South Africa and the culture of business ethics in Africa (Coyle, 2010). The release of King III in September 2009 represented a significant landmark in the history of CG in South Africa. According to IDO (2009), the release of the third report on CG was necessary because of the new Companies Act no. 71 of 2008 ('the Act'), along with changes in international governance trends. The three key aspects of King III are:

➢ Good governance is essentially about effective leadership;
➢ Sustainability is the primary moral and economic imperative of the 21st century; and
➢ The concept of corporate citizenship which flows from the fact that the company is a person and should operate in a sustainable manner.

The Sarbanes-Oxley Act, 2002 (The United States)

The United States is the only country to have adopted a hard-code legislative- and rules-based approach to CG. The country has no definitive code of CG; nonetheless, there have been various state and federal developments over a number of years (Mallin, 2007). The US system of CG has evolved continuously from the 1960s onwards; however, there have been major developments in CG regulations in the US following a wave of corporate scandals and the collapse of Enron in 2001.

The most prominent development in the field of US CG is the Sarbanes-Oxley Act of 2002 (SOX). This introduced major changes to the regulation of financial practice and CG, and further entailed the enforced implementation of the Accounting Industry Reform Act, 2002. The SOX requires company CEOs and CFOs to certify that the quarterly and annual financial statements of their companies comply fully with the provisions of applicable securities laws and give a true and fair view of the financial standing of the companies. The Act has radically changed the scope of directors' monitoring role, and thus requires

them to establish appropriate subcommittees of Boards to ensure strong internal controls. It has also strengthened auditor independence and the role of audit committees. Whilst the SOX has had various demonstrable positive effects, it has done little to address the fundamental issues regarding investor responsibility, executive compensation, and the tenuous role of the Board within this multitude of actors (Aguilera & Jackson, 2010).

Code of Corporate Governance of Pakistan

CG in Pakistan has only recently come to prominence and remains in its very early stages. The SECP introduced the country's first Code of Corporate Governance in March 2002 (revised 2012). The Code has been made an important part of the listing requirements of the Karachi, Lahore and Islamabad stock exchanges. All listed companies in Pakistan are required to publish and circulate a statement, along with their annual report, disclosing the status of their compliance with the Code's provisions. The Code is effectively an extension of the requirements of the Companies Ordinance, 1984. A number of necessary amendments have also been made to the Companies Ordinance in mind of achieving greater coordination between it and the Code. The SBP introduced further regulations, requiring all listed and non-listed commercial banks and development finance institutions in the country to comply with the provisions of the Code.

3.3   Theories of Corporate Governance

There is substantial theoretical literature on the development of CG, based on a number of theories with their roots in many disciplines, including accounting, finance, law, economics and international business (Solomon, 2010). According to Mallin (2007), although the concept of CG has only recently come to prominence, the theories underpinning its development date from much earlier. Therefore, some theories may be more appropriate and relevant to some countries more so than others (Mallin, 2007).

The following section presents a brief account of some of the most important theories that can be linked to the development of CG systems and practices around the world. Table 3-2 presents perspective of each of the theory.

Table 3-2 Theoretical Perspective of Corporate Governance

Theory	Perspective
Agency	This theory identifies the agency relationship where one party as the "principal" delegates work to another party the "agent". In the context of a public corporation the owners are the principal and the directors are the agent.
Stakeholder	This theory considers a wider group of stakeholders rather than focusing only on the interest of shareholders only. Therefore, the governance structure of the company may consider and provides for some direct representation of the other stakeholder groups.
Stewardship	The essence this theory is, it regards directors as the stewards of the company's resources and therefore will be supposed to act in the best interest of the owners.
Resource Dependency	Resource dependence theory suggests that apart from board of directors and its sub-committees there are other essential resources owned by the firm which can determine governance structure in the company.
Transaction Cost	Transaction cost economics sees the corporation as a governance structure. The choice of an appropriate governance structure can help align the interests of the directors and Shareholders
Class Hegemony	Directors view themselves as elite at the top of the company and will recruit/ promote to new directors' appointments considering their status and how well
Managerial Hegemony	Management of a company, with its knowledge of day-to-day operations, may effectively dominate the directors and hence weaken the influence of the directors.

Source: Adopted from "Corporate Governance – 2nd Edition" (Mallin, 2007)

3.3.1 Agency Theory

A large amount of CG literature, in both developed and developing economies, has been built around the concept of Agency Theory. Agency Theory was first introduced by Alchian & Demsetz (1972), and then further developed by Jensen & Meckling (1976:308), who explained Agency theory as *"a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent"*.

The theory is based on the concept of a separation within public companies between shareholders (principals) and executive management (agents) due to the company's diffuse ownership structure (Berle & Means, 1932; Jensen & Meckling, 1976). The theory assumes that, when both parties in the Agency relationship seek to maximise their own utility, there is good reason to believe that the agent is unlikely to act in the best interests of the principal (Jensen & Meckling, 1976). The theory is fundamentally concerned with two issues that can arise in an Agency relationship: the first arises when the parties in the relationship have conflicting goals, and it is costly and difficult for the principal to monitor and confirm both the agent's actual actions and whether or not the agent has followed the Agency contract correctly; the second issue relates to the management of risk when the principal and agent have different views and attitudes towards risk management. The theory also assumes that those agents who normally control and possess internal and

superior information may give less importance to the owner's interest and engage in selfish behaviour (Fama & Jensen, 1983). Figure 3-3 illustrates the different issues involved in the Agency relationship.

Figure 3-3: Issues in Agency Theory
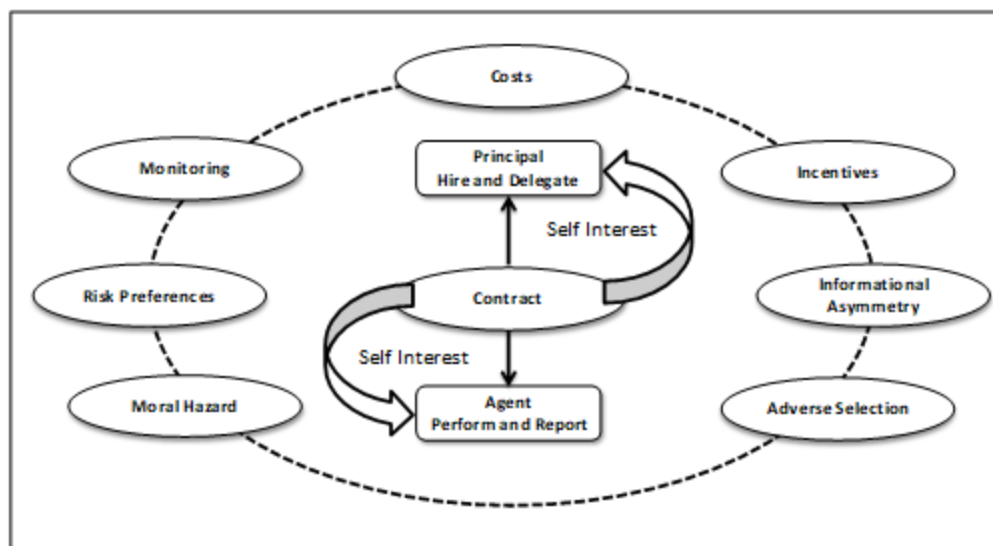
Source: Adopted and modified from Murthy (2007)

An Agency relationship gives agents incentive to expropriate the assets of their firm by undertaking self-profiting projects with the potential to yield personal benefits. Unless there are appropriate control mechanisms in place centred on restricting the agent from behaving in self-interested manner, the self-interested behaviour of the agent will increase the Agency costs involved in writing and enforcing contracts (Jensen & Meckling, 1976; Shleifer & Vishny, 1997; Fama & Jensen, 1983).

Agency theorists have designed several governance systems, both internal and external, in an effort to reduce conflicts of interests between parties and the Agency costs involved in a principal-agent relationship. Agency Theory views CG systems—particularly the Board of Directors—as being an essential element of the governance system in ensuring that problems resulting from the principal-agent relationship are controlled (Mallin, 2007). The theory offers a useful framework focused on understanding the monitoring function of the Board, which requires Boards play a 'watchdog' role since it is their fiduciary duty to protect the interest of shareholders (Bainbridge, 1993; Berle & Means, 1932; Mace, 1971; Hillman & Dalziel, 2003). The monitoring function of the Board can reduce Agency costs inherent in the separation of ownership and control, and, thus, improve firm performance (Fama, 1980; Mizruchi, 1983; Zahra & Pearce, 1989). Agency Theory advocates a separate leadership structure, Board independence, and various Board committees as optimal monitoring devices to reduce Agency costs and also maximise the value of firms. The focus

of Agency Theory is directed towards determining the optimal contracts requiring implementation to control and influence the self-interested behaviour of the agent (Eisenhardt, 1989).

A large amount of the existing literature on CG has emerged from Agency Theory, yet the theory is subject to growing criticism and remains problematic for researchers (Filatotchev, et al., 2013). Globerman et al. (2011) argue that, for better understanding of CG practices, researchers need to understand the institutional frameworks within which firms operate. Building on the existing literature, Filatotchev et al. (2013) argue that the relationship between the Board of Directors and firm performance may differ depending on the legal system and institutional characteristics of any given country. Agency Theory is more relevant to the Anglo-Saxon models of CG. The specific conditions assumed under these models are the exception, rather than the norm, for a large part of the world, including countries in the South Asian region, which tend to feature high concentration of ownership in listed companies (La Porta, et al., 1999).

3.3.2   *Resource-Dependence Theory (RDT)*

Resource-Dependence Theory (RDT) suggests that companies largely depend on their external environment, particularly other organisations, for their economic success—and, in some cases, for their survival. The theory provides a hypothetical view in which the Board of Directors is a critical resource for companies (Hillman, et al., 2000). The core of the theory suggests that, in a highly competitive business environment, companies try to control the uncertainty of external factors by ensuring that adequate internal resources are available and put in place to deal with the competition (Barney, 2007). The main claim of the theory is that companies try to achieve control over their environment by overcoming their weaknesses and exploiting their opportunities. From this perspective, RDT suggests that directors have a critical role to play in connecting the firm with its external environment by securing the resources required by the firm to successfully compete in its business environment (Pfeffer & Salancik, 1978) and to enhance organisational performance (Daily, et al., 2003).

The Board of Directors is an important mechanism for absorbing critical elements of environmental uncertainty into the firm (Yusoff & Alhaji, 2012). Emphasising the importance of the Board's composition, Pearce & Zahra (1992) highlight the importance of the Board of Directors beyond its traditional monitoring tasks, which are normally viewed only from an Agency Theory perspective. In contrast to Agency Theory, RDT

suggests that a company's Board is a strategic resource linking the company to its external environment and providing access to various external resources (Pfeffer, 1973; Pfeffer & Salancik, 1978; Klein, 1998; Hillman & Dalziel, 2003; Ingley & Van der Walt, 2001; Johnson, et al., 1996; Hillman, et al., 2000). According to RDT, the role of the Board is centred on bringing resources to the firm, such as information, skills and access to key suppliers, buyers and policymakers, in addition to business legitimacy (Hillman, et al., 2000; Gales & Kesner, 1994). In this sense, the theory presents a strategic view of CG and views corporate Boards as the linchpin between a company and the resources it needs to achieve its strategic objectives (Tricker, 2012; Barney, 2007). Figure 3-4 shows that firms use resources, which are dependent upon the external environment, turning them into output to create shareholder wealth through better performance.

Figure 3-4: The Resource-dependent View of Firms
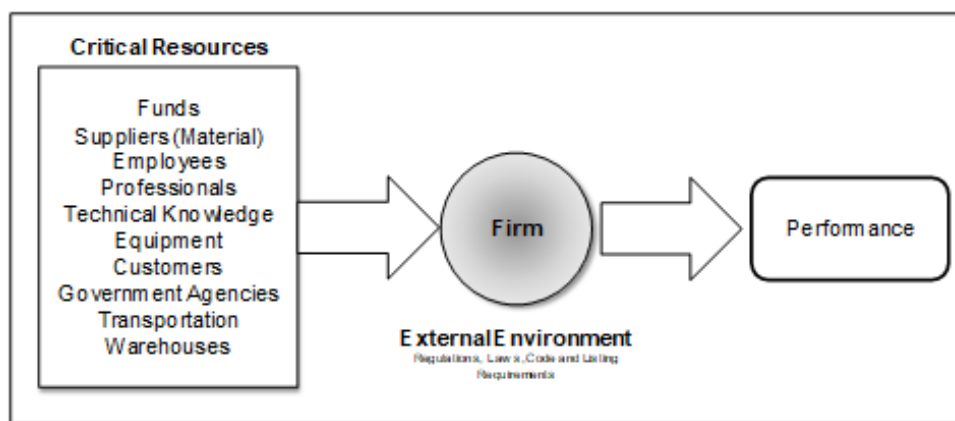
Source: Author's own elaboration

This theory is important when seeking to garner understanding into the need for CG mechanisms, particularly the role of the Board of Directors. RDT suggests that good CG is achieved when Board members are appointed based on their knowledge, expertise and business links to help firms cope successfully with uncertainties in their business environment. From the RDT perspective, a Board that is structured in an attempt to exercise control over its external environment is likely to be fully equipped and well diversified (Burton, 1991), with a majority of non-executive outside directors helping the company gain access to vital resources (Johnson, et al., 1996) and business legitimacy (Hillman, et al., 2000). Rashid (2015) argues that there are many qualities of independent directors that can add value to the firm. This theory supports the appointment of directors to multiple Boards because of their opportunities to gather information and network in various ways. Williamson (1985) suggests that a firm can reduce the transaction costs associated with environmental interdependency through environmental connections or network governance.

3.3.3 Stakeholder Theory

Although company management is driven by a number of objectives, the main objective of any commercial organisation is traditionally to create wealth (value) for its shareholders. Therefore, a company's management would usually only take a view that supports and creates wealth for its shareholders (Barney, 2007). However, this narrow focus on the maximisation of shareholder wealth could have a negative impact on the interests of other stakeholders in the company: it must be considered that companies are an inherent part of the society in which they operate, and they also have legal, social and ethical responsibilities to safeguard the interests of everyone with a stake in them (Coyle, 2010).

Stakeholder Theory offers a wider view of companies, and considers the interests of other stakeholders, such as customers, employees, distributors, suppliers, government and communities. McDonald & Puxty (1979) argued that companies are no longer the instruments of shareholders alone and that they exist within communities and, as such, have responsibilities to those communities. The theory is rooted in the management discipline and has developed gradually following the work of (Freeman, 1984). The theory suggests that companies are not merely a pool of resources put together solely for the ultimate benefit of shareholders, but that they are also vehicles for achieving social purposes (Kanter, 2011). There are a number of different groups that are both involved and participate in the success of a company, with each group entitled to obtain its fair share of benefits from the company's success (Donaldson & Preston, 1995). Similarly, Clarkson (1995) believes that companies represent various stakeholder groups, and their purpose should therefore be to create wealth and benefits for all groups of stakeholders.

Rodriguez et al. (2002) classified the relationship between firms and their stakeholders into three levels: the consubstantial, contractual and contextual levels. Figure 3-5 presents these three stakeholder levels within a dynamic and sustainable firm. Consubstantial stakeholders are essential for a firm to exist, contractual stakeholders have some kind of formal contract with the firm, whereas contextual stakeholders play a fundamental role in securing business credibility, and, ultimately, the acceptance of their business activities (Rodriguez, et al., 2002).

Smallman (2004) argued that Stakeholder Theory is an extension of the Agency perspective, where the responsibilities of the Board of Directors are elevated beyond the sole interests of the company's shareholders. Jensen & Meckling (1976) described the firm as a legal fiction serving as a nexus for a set of contracting relationships amongst various

groups of stakeholders. Freeman (1984) argued that this nexus of relationships with many groups can affect decision-making processes, with Stakeholder Theory recognised as concerned with the nature of these relationships in terms of both processes and outcomes for the firms and its stakeholders. Through this perspective, Stakeholder Theory adopts quite a different view of CG and instead assumes that firms have different types of responsibility.

Stakeholder Theory is better at explaining the role of CG than Agency Theory in that it highlights the interests of the different constituents or stakeholders of a firm (Kyereboah-Coleman, 2007). The theory views the role and responsibilities of the Board from a different perspective and expects Boards to consider the interests of all stakeholder groups (Freeman, 1984; Freeman, et al., 2004; Donaldson & Preston, 1995). This view of CG would result in detailed corporate reporting activities beyond the scope of conventional financial reporting to serve the needs of a wider group of stakeholders.

Figure 3-5: The Firm and its Stakeholders
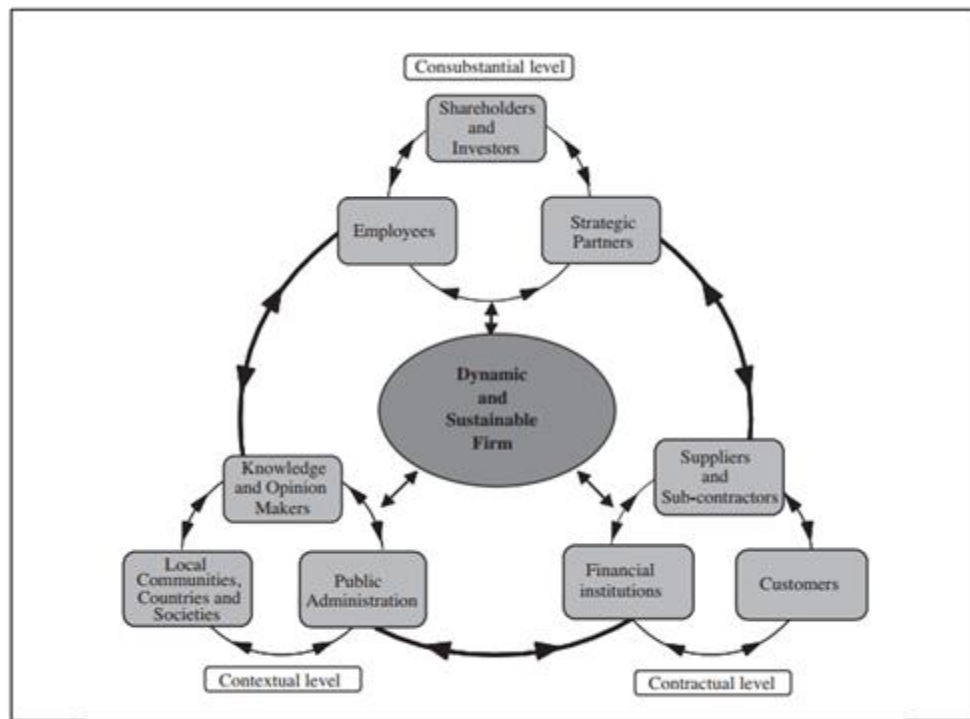
Adopted from Rodriguez et. al., (2002)

3.3.4 Stewardship Theory

Agency Theory argues that shareholders and executive directors have different interests, thus creating governance issues, whilst Stewardship Theory presents a different model of management, which views the relationship between shareholders and executive directors differently and states the opposite. Donaldson & Davis (1991) developed Stewardship

Theory as a way of looking at governance from a different angle and presenting a new perspective of the relationship between the ownership and management of public companies.

The theory assumes that management are neither opportunistic nor motivated by self-interest; instead, managers are good stewards charged with responsibilities to act in the best interests of shareholders by securing high levels of corporate profit and business growth (Donaldson & Davis, 1991). This theory also suggests that managers' decisions are subject to other factors. As an example, they need recognition for their achievements, respect, authority and self-satisfaction (Herzberg, 1966; McClelland, 1961). Gay (2002) argued that people are fundamentally motivated to work and perform better; therefore, there is no conflict between the interests of managers and the owners of companies. Stewardship Theory suggests that managers work sensibly, and that they are led by the objectives of the principals (Davis, et al., 1997) and are trustworthy (Siebels & Knyphausen-Aufseß, 2012). Similarly, Tricker (2012), in his book 'Corporate Governance—Principles, Policies and Practices', stated: *"Stewardship Theory believes that directors do not always act in a way that maximises their own personal interests: they can and do act responsibly with independence and integrity"*. Stewardship Theory reflects the classical ideas of CG, where directors' legal duty is to their shareholders—neither to themselves nor to other interest groups (Tricker, 2012). Figure 3-6 presents the stewardship model of governance.

Figure 3-6: The Stewardship Model of Corporate Governance

Source: Author's own elaboration
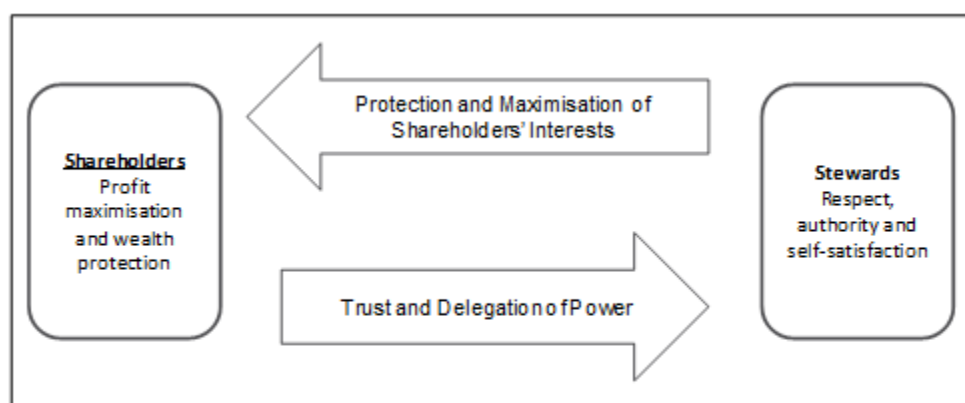
3.3.5 *Transaction Cost Economics (TCE)*

In institutional economics, transactions are central to organisational activities (Groenewegen, et al., 2010). Companies incur transaction costs whenever they deal with external parties. Transaction costs arise as a result of human behaviour and the non-

availability of reliable information. There are a number of costs involved in writing a near-perfect contract between parties. Mallin (2007) argued that the high cost of negotiating and writing perfect contracts suggests that contracts are likely to be incomplete in some ways; therefore, they will require rewriting and renegotiation to reflect any omissions, errors or required changes. In this context, Hart (1995) acknowledged that in a world of incomplete contracts governance structure does have a role to play to protect the interest of various parties involved in the contracts.

'When information is perfect and available promptly and equally to all parties involved in a transaction, it can reduce or eliminate any financial risk involved in the transaction. The theory views the Board of Directors as a control mechanism for enforcing contracts and making decisions that have not been specified in the initial contract.'

3.3.6   Class and Managerial Hegemony

The theories of class and managerial hegemony have their roots in socio-political disciplines and have yielded much penetrating insight into CG (Tricker, 2012). The Class Hegemony Theory views the Board of Directors as a means of perpetuating the power of the ruling capitalist elite and their control of social and economic institutions (Mills, 1956). The theory focuses on interlocking directorships as mechanisms in providing interclass integration and the structural support of ruling elites (Useem, 1984). Class Hegemony recognises that directors' self-image can affect the governance structure, behaviour and performance of firms (Tricker, 2012). The theory has not gained much attention from researchers since Mills (1956); nonetheless, it may gain traction in response to the changing global financial environment (Clarke & Rama, 2006).

Managerial Hegemony Theory states that it is managers who effectively control organisations, and the role of the Board of Directors is simply to approve decisions taken by the executive management on behalf of shareholders. Whilst managers may be considered best placed to exercise control in the organisation, it is vital that the Board is able to exercise power and influence their decision-making in the best interests of shareholders.

3.3.7   Social Contract Theory (SCT)

In the context of CG, SCT views corporations as implicitly accepting their social contracts with members of society; therefore, social responsibility is assumed to be a contractual obligation between the firm and other members of society (Donaldson & Dunfee, 1994).

In an ideal society, SCT assumes that no organisation is above the societal rules and regulations; hence, anyone linked with the companies—and also the companies themselves—will not be permitted to act or react in a way that is contrary to society. Othman & Rahman (2011) view CG as a social process bringing forth the meaning of a system that is oriented towards an economic objective and which is informed by values in guiding corporations towards proper conduct in order to achieve corporate sustainability.

3.3.8 *Legitimacy Theory*

Legitimacy is a central concept in organisational institutionalism and dates back to the origins of Organisation Theory (Deephouse & Suchman, 2008); it is another theoretical lens through which many researchers have sought to understand the nature of CG. However, there remains deep scepticism and doubt concerning the potential of this theory in offering any real insight into companies' CG activities. According to Suchman (1995; 574), *"legitimacy is a generalized 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".* Similar to SCT, Legitimacy Theory reflects the same view of corporations, and is based upon the same notion that there is a social contract between society and an organisation. A firm obtains permission to operate from society and is ultimately accountable to that society for how it operates and what it does, since society provides corporations with the authority to own and use natural resources and to hire employees (Deegan, 2004).

It is clear from the existing literature that agency theory and resource dependency theory are two important theoretical perspectives that previous researchers have used to understand the nature of CG. Agency theory is narrow and internally focused, consisting of a primary objective of maximising profits, thereby adding to the wealth of its shareholders. The theory offers a useful framework to understand the role of CG, and in particular the role of the Board of Directors within a firm. From an agency perspective, the Board plays a 'watchdog' role to discharge its fiduciary duty to shareholders. In the agency framework, firms are concerned with developing internal measures and governance mechanisms to reduce agency costs resulting from contractual hazards in imperfect contracts between owners and executive directors. Much of the existing literature on agency theory as related to corporations is set in the context of the separation of ownership and control as described by (Berle & Means, 1932). Hillman, et al., (2000) mentioned that agency theory primarily focuses on the role of control for Boards, whilst agency model firms focus on the Board's important monitoring and control function. In contrast, resource

dependency theory is a wider and externally focused theory and examines the power held by the Board of Directors in coping with, and solving, the critical issues that arise from within the external environment of the firm. (Pfeffer & Salancik, 1978). The theory argues that a Board of Directors exists as a provider of critical resources to executives in order to help them achieve organisational objectives. It further suggests that corporate Boards are mechanisms for managing external dependencies and reducing the transaction costs linked with environmental interdependency (Hillman, et al., 2000). According to these theories Board structure as a control mechanism clearly sits at opposite ends of the Board governance spectrum.

3.4 The Board of Directors

The separation of ownership and control often leads to conflicts of interest between shareholders and management, as well as between controlling and minority shareholders. CG acts as a mechanism to ease conflicts of interest and protect shareholders from the self-serving behaviour of executive managers. It also protects minority shareholders from abuse and exploitation at the hands of controlling shareholders. The Board of Directors sits at the top of the organisation and is responsible for supervising and managing the activities of the company. It thus is considered a central control mechanism for monitoring the behaviour of executive managers and controlling shareholders. The Board of Directors, which is known to include the Chairperson and Chief Executive Officer (CEO), has very specific and well-defined roles and obligations to the shareholders of the company they serve. Their duties include both internal and external functions. The Board of Directors is responsible for hiring the CEO and monitoring senior executives to ensure the company achieves its strategic objectives.

A key recommendation of the Walker Report—a review of corporate governance in the UK banking industry—was that Boards are responsible for determining the appropriate level of risk exposure that an organisation is willing to take in order to achieve its objectives. An effective Board of Directors is at the heart of the CG structure in a well-functioning and well-governed corporation, acting as the ultimate internal monitor (OECD, 2004). The Board acts as a bridge between shareholders and management, and is central to good CG and investor relations (Mallin, 2007). Although the primary responsibility of the Board is to maximise shareholder value, those directors serving on the Board may also have obligations to other stakeholders within the legal and statutory framework of a

country (Cadbury, 1992). For example, the UK Corporate Governance Code states the following:

> *"The board's role is to provide entrepreneurial leadership of the company within a framework of prudent and effective controls which enables risk to be assessed and managed. The board should set the company's strategic aims, ensure that the necessary financial and human resources are in place for the company to meet its objectives and review management performance. The board should set the company's values and standards and ensure that its obligations to its shareholders and others are understood and met."* (FRC, 2012:8)

Epstein & Roy (2007) argue that high-performing Boards must achieve three core objectives:

➤ to provide superior strategic leadership and direction to ensure long-term growth and prosperity;

➤ to ensure accountability of the company to its stakeholders, i.e. shareholders, employees, customers, suppliers, regulators and the community; and

➤ to ensure that a highly competent, experienced and qualified executive team is in place to manage the company's day-to-day activities.

There is evidence to suggest that Board of Directors and other internal control mechanisms help align the interests of shareholders with the priorities of executive team, thus enhancing firm performance by moderating the Agency-related problems (Netter, et al., 2009; Jensen, 1983; Leung & Cheng, 2013; Yu, 2013; Guest, 2009) and providing an easy access to critical resources (Pfeffer & Salancik, 1978; Hillman & Dalziel, 2003; Ingley & Van der Walt, 2001; Hillman, et al., 2000; Johnson, et al., 1996).

3.5 Board Structure and Firm Performance

The nature and structure of Boards differ from country to country, with Board structure recognised as a major difference in CG between countries. The Board may have a unitary or dual structure, depending on the country in question (Mallin, 2007). It is crucial to understand the structure of a Board so as to understand its effectiveness and how it is linked to the performance of the firm, since those individuals selected to serve on the Board will affect the roles it can play and also how successfully it can play them (Hermalin & Weishach, 1988).

Theoretically, all companies structure their Boards based on their business environment, monitoring requirements, and their need for advice and resources. The concept of CG and

the theoretical perspectives discussed in this chapter exposed different views of CG and Board structure. The first and most common view of the structure of a Board is based on Agency Theory, in which the Board of Directors is essentially viewed as a monitoring unit. The Board's most important role is thus to monitor the activities of the firm's management, with the aim of minimising problems associated with the principal–agent relationship. In the principal–agent relationship, shareholders are the principals, with executive managers the agents. The Board of Directors acts a direct link between the two, and performs a monitoring function to ensure that executive management act in the best interests of shareholders (Jensen & Meckling, 1976). From Agency perspectives, Boards are formed to limit the Agency costs arising from a separation of ownership and control (Fama, 1980; Jensen, 1983; Shleifer & Vishny, 1997). Therefore, companies adopt Board structures that are dominated by outside directors in an effort to improve their performance through better monitoring and reductions in Agency costs (Fama, 1980; Fama & Jensen, 1983), which will ultimately have a positive impact on the firm performance.

A second view—and one that remains relatively less explored—is based on the concept of RDT. The RDT considers the Board's fundamental role as being a procurer of resources. Researchers have used the RDT lens to examine the relationship between the Board as a provider of resources (e.g., legitimacy, advice and links to other organisations, etc.) and firm performance (Hillman & Dalziel, 2003; Lückerath-Rovers, 2013). The theory holds that Boards are structured to maximise their ability to bring external resources to firms. The logic of the theory outlines how the Board's effectiveness, as a procurer of resources, is directly linked to the performance of the firm since having adequate resources helps companies reduce their dependence on external sources (Pfeffer & Salancik, 1978), and, in most cases, by maintaining a critical mass of resources, companies are able to build a competitive advantage (Barney, 2007), which they can use to successfully compete with their competitors. Hillman & Dalziel (2003) argued that the theoretical ties between the various Resource-dependence-based activities of the Board suggest that they all focus on the Board as a provider of resources, rather than as an inspector, supervisor or monitor of management. Advocates of RDT believe that Boards are formed to maximise management's control of the firm through adopting structures that will allow for the control of the Board by management. Therefore, Boards dominated by internal executive directors will lead to superior performance due to these directors having access to internal company information and a better understanding of the needs of the firm compared to Boards heavily composed of outside independent directors (Berle & Means, 1932). The Boards of listed

companies in Pakistan include both executive and non-executive directors. The Companies Ordinance 1984 provides full details of the duties and responsibilities of the directors of listed companies in Pakistan.

The two above-mentioned views of Board structure clearly sit at opposite ends of the Board governance spectrum. Most firms, however, have Board structures that fall somewhere between these two extremes and include a mixture of both managerial control and outside directors for the effective monitoring and supply of resources (Petra, 2007). Board independence, CEO duality, Board diversity, Board committees, audit committee independence, Board size and Board meetings are some of the important elements of the Board and its structure investigated in this research, with the aim being to understand their links with the performance of firms in Pakistan.

3.5.1   Board Independence

A number of governance codes, committees and reports from across the world have placed significant focus on the independence of Boards and the role of independent directors. As an example, the Cadbury Committee Report in the UK and the Blue Ribbon Committee (BRC) in the US both stressed the importance of the role of independent directors in protecting the interests of shareholders. The Cadbury Committee Report 1992 suggested that 'the Board should include non-executive directors of a sufficient calibre and number, for their views to carry significant weight in the Board's decision'. Similarly, in the case of Pakistan, the SECP Code of Corporate Governance encourages listed companies to maintain a balance of executive and non-executive directors, including independent directors and those representing minority interests, all with the requisite skills, competence, knowledge and experience for the Board as a group to include the core competencies and diversity, including gender, considered relevant in the context of the company's operations (SECP, 2012).

The issue of Board independence and its impact on performance is a highly debated topic in the CG literature. Directors serving on Boards can be categorised as either executive directors or non-executive independent directors. Board independence often refers to the proportion of 'outside or non-executive directors' to 'inside or executive directors' (Baysinger & Butler, 1985). Having a majority of outside or non-executive directors is viewed as the key to Board independence (Chen, et al., 2006; John & Senbet, 1998). Both Agency and Resource-dependence theories are applicable when seeking to understand the importance and relationship between Board independence and firm performance.

Agency Theory suggests that the implementation of proper monitoring systems is essential in order to protect the interests of shareholders. Levrau & Van den Berghe (2007) argue that a Board featuring a majority of non-executive or outside directors is more likely to be effective in the function of monitoring and control since non-executive directors' motivations are not compromised by their dependence on the CEO or by inside directors. Boards comprising a majority of independent outside directors have a greater chance of reducing Agency problems, since independent Boards are more likely to ask the right questions or challenge and criticise the actions and policies of management (Coles, et al., 2008; Dalton, et al., 1999; Gupta & Fields, 2009; Brennan, 2006). Theoretically, non-executive directors have more incentive to work in the best interests of shareholders because of their reputation and public image (Fama & Jensen, 1983; Ghosh, et al., 2010; Chareonwongsak, 2017). Furthermore, non-executive and independent directors are assumed as more respectable and well-known business leaders, and do not want to see their own reputations to be eroded (Brennan, 2006). Baysinger & Butler (1985) found that firms with a higher proportion of independent directors performed better. Bozec & Dia (2007) studied the relationship between Board composition and the performance of state-owned enterprises (SOEs), and concluded there was a positive impact on the performance of those SOEs with a majority of independent directors on the Board compared to those SOEs with a small proportion of independent directors serving on their Board. It is clear from the extant literature that independent Boards provide more effective monitoring environment (Fama & Jensen, 1983; Johnson, et al., 1996; Shleifer & Vishny, 1997; Dalton, et al., 1999; Hermalin & Weishach, 1988; Linck, et al., 2008). This claim is further supported by the Higgs Report (2003), which suggests that efficient monitoring by non-executive directors, free from managerial influence and pressure, improves the quality of financial information.

The main argument in RDT is that the procurement of resources is the key function of Boards. In this regard, the focus of RDT is more so on the service role of Boards, whereby Board members are viewed as strategic resources influencing a Board's ability to procure those resources needed by the company, with Boards viewed as responsible for the coordination of inter-organisational dependencies (Pfeffer, 1973; Pfeffer & Salancik, 1978). Having a majority of non-executive independent directors is likely to enhance the flow of information and could also help reduce uncertainty. Evidence suggests that outside directors provide many advantages, such as wide-ranging external knowledge, expertise and business links, which may enhance management's ability to perform better (Kesner & Johnson, 1990).

There is no doubt that inside executive directors are fundamentally more suitable and beneficial for companies because of their experience and firm-specific internal knowledge; however, they can also be disadvantageous for the interests of shareholders; conversely, outside non-executive and independent directors provide independent monitoring of management and improve company performance, but also may not act in the best interests of shareholders due to their lack of firm-specific internal knowledge (Raheja, 2005).

It is clear from the above discussion that the existing empirical evidence regarding firm performance and Board independence is mixed, with further research needed to fill the gap.

3.5.2 CEO Duality

CEO duality refers to a situation in which the same person acts as both CEO and Chairperson of the company. Cadbury (2002) referred to this as a combined leadership structure. The Board's leadership structure is an important governance mechanism, which is reflected in the positions of CEO and Chairperson. The CEO of a company is responsible for the day-to-day running of its activities; the Chairperson, in contrast, is responsible for running the Board in line with the company's strategic objectives. Both are critical positions in terms of companies' strategic success. As such, these two roles or positions should not be combined and placed in the hands of just one individual since this would concentrate too much power and control over the company's resources and decision-making within the hands of that one person (Mallin, 2007; Dey, et al., 2011; Garcia-Torea, et al., 2016). Two different but widely accepted views exist in the extant literature, aimed at understanding whether a separation of these two roles is more effective than the combination of such.

In the first view, supporters of Agency Theory suggest that firms should divide the roles of CEO and Chairperson, since the role of the Board of Directors is to monitor management, protect the interests of shareholders, and accordingly control the Agency costs created by the separation of ownership and control (Fama & Jensen, 1983; Berle & Means, 1932; Dalton, et al., 1999). Agency costs exist where the CEO and other executive directors have established personal objectives that conflict with the interests of shareholders. Boards cannot be expected to perform their monitoring role effectively when the positions of Chairperson and CEO are held by the same individual, since this combined leadership structure has the potential to act as a barrier to effective monitoring (Marisetty, 2011; Fama, 1980; Fama & Jensen, 1983; Hermalin & Weishach, 1988). Fosberg & Nelson

(1999) argue that the separation of the functions of decision management (i.e. the initiation and implementation of investment proposals) and decision control (i.e. the rectification and monitoring of investment proposals) within a firm reduces Agency costs and accordingly leads to enhanced performance. The separation of the positions of Chairperson and CEO facilitates improved monitoring whilst providing essential checks and balances over management's performance (Hashim & Devi, 2009). If the CEO is also the Chairperson, the role of the Board as an internal monitoring and control mechanism is likely to be compromised, with the interests of shareholders likely to be affected (Kholeif, 2008). A lack of independent leadership creates difficulties for Boards should they need to respond to a failure within top management (Jensen, 1993). Hence, a separate leadership structure may help to reduce information asymmetry and could lead to higher access to capital, which, in turn, may reduce the cost of capital and increase the financial performance of firms (Ranti, 2013).

In the second view, adherents of the RDT believe that the same individual should hold the dual positions of Chairperson and CEO since allowing a single individual to hold both roles can enhance decision-making, which, in turn, can lead to higher performance (Donaldson & Davis, 1991; Peng, et al., 2007). It is argued that a CEO has the most relevant knowledge regarding the strategic needs and challenges facing the firm, thus making it easier and more logical for him/her to also be in charge of the Board since they are in a better position to coordinate the Board's activities more effectively (Jensen & Meckling, 1995). When a CEO also holds the role of Chairperson, he/she is able to take strategic decisions without undue influence from the Board; as a result, CEO duality has a positive effect on the relationship between governance practices and the performance of firms (Rechner & Dalton, 1991). Brickley et al. (1997) argued that dual roles being held by the same person may serve to eliminate issues of inadequate communication between the CEO and Chairperson, thereby reducing internal conflicts and inconsistencies in decision-making. Similarly, having a single person holding the dual roles of CEO and Chairperson allows that person to fully utilise directors' knowledge, expertise and information, thus enhancing the effectiveness of the Board (Daily & Dalton, 1992).

Various institutional bodies and countries have expressed their position on the matter of CEO duality within their codes, guidelines and best CG practices. The US CG framework, for example, permits CEO duality, whereas in the UK, Australia, South Africa and Pakistan, where this research is conducted, governance codes and best practice require companies to have a separate leadership structure. The SECP Code (2012) states:

"The Chairman and the Chief Executive Officer (CEO), by whatever name called, shall not be the same person except where provided for under any other law. The Chairman shall be elected from among the non-executive directors of the listed company. The Chairman shall be responsible for leadership of the Board and shall ensure that the Board plays an effective role in fulfilling all its responsibilities. The Board of Directors shall clearly define the respective roles and responsibilities of the Chairman and CEO." (SECP, 2012:8)

Like Board independence, the existing empirical evidence for the relationship between CEO duality and firm performance is also mixed, and suggests further research is needed to fill the gap.

3.5.3 Board Diversity

There is no uniform definition as to Board diversity; in general, however, the term is used to describe a Board comprising a range of people who are different from one another in terms of their physical and personal attributes. Writing about the meaning of diversity and diversity management, Robinson & Dechant (1997) stated:

"Companies competing in today's fast-paced global market tend to favour the broadest definition of diversity—one that encompasses differences in gender, racioethnicity, age, physical attributes, qualities, and sexual orientation, as well as differences in attitudes, perspectives and background." (Robinson & Dechant, 1997:22)

Board diversity aims at encouraging a broad range of personal and demographic attributes; however, a simple and more commonly used measure of Board diversity in CG studies is gender diversity, referring to the presence of female Board members. Robinson & Dechant (997) suggest that diversity promotes a better understanding of the market, increases creativity, generates more effective problem-solving and leadership, and subsequently promotes effective global relationships. Adams & Flynn (2005) claimed diversified Boards allow their members to make better decisions through more productive discussion of the issues at hand. Pearce & Zahra (1992) state that a diversified Board can help secure a company's future by enabling it to benefit from the exchange of company resources and its external environment. Researchers have used several theoretical frameworks to define the concept of diversity and how it might help companies achieve their objectives.

The Agency Theory perspective suggests that the monitoring role performed by the Board of Directors is an important mechanism of CG. The theory illustrates how Board composition can help to align the interests of companies' external shareholders and opportunistic managers (Eisenhardt, 1989; Fama & Jensen, 1983). The logic behind Agency Theory supports the idea of Board diversity. Boards that are diversified in terms

of their inclusion of females, foreign nationals and minority directors can increase Board independence so as to reduce CEO entrenchment, and eventually boosts the performance of firms by exerting control over Boards that would otherwise be dominated by the CEO (Mace, 1971; Goodstein, et al., 1994). The gender-composition of the Board can affect the quality of this monitoring role, and in turn the financial performance of the firm (Campbell & Minguez-Vera, 2008). Diversified Boards may also help companies to reduce the Agency problem. As argued by Arfken et al. (2004), Board diversity can improve Board independence because people from different genders, ethnicities or cultural backgrounds may ask questions that other directors with similar backgrounds or experience would not. Adams & Ferreira (2009) claimed that diverse Boards are more likely to challenge the CEOs and hold them liable for poor stock price performance.

RDT also provides a strong conceptual framework and business case for Board diversity to understand how diversified Boards may help companies become successful in their respective areas of business. At the heart of the theory is the Board's ability to create links with the company's external environment so as to secure access to critical resources (Pfeffer & Salancik, 1978; Alexander, et al., 1993). From the RDT point of view, directors provide advice and access to important resources (suppliers, investors, authorities and others). The success of a Board depends greatly on each Board member's qualifications and experience (Campbell & Minguez-Vera, 2008). Diverse leadership within a firm can also increase competitiveness (Cox & Black, 1991). Pfeffer & Salancik (1978:163) note that *"when an organization appoints an individual to a board, it expects the individual will come to support the organization, will concern himself with its problems, will favourably present it to others, and will try to aid it".*

Although significant research exists on Board diversity, the extant literature, however, shows that very little attention has been directed towards the relationship between Board diversity and firm performance in the context of developing countries, with scant attention also afforded by scholars, institutional investors, the media and regulators in Pakistan. The above discussion suggests that, when considering directors as resource-providers and monitors, various dimensions of director diversity clearly become important (Ferreira, 2010). Hence, as a result of its importance and in an effort to bridge the gap in existing literature on the relationship between Board diversity and firm performance, this research takes the opportunity for further research.

3.5.4   Board Committees

The effectiveness of Boards depends significantly on the structure of its committees. In the UK, there are no legal requirements for companies to establish Board committees; however, based on the Cadbury Report (1992), the UK Corporate Governance Code recommends the formation of three committees: (1) an audit committee; (2) a remuneration committee; and (3) a nomination committee. Board committees can deal with specific or general issues in providing information and making suggestions to the Board, thereby assisting them in discharging their duties. Board committees have been reported in previous research as an important feature of the Board structure (Miko & Kamardin, 2015), capable of helping to improve Boards' effectiveness and efficiency (Jiraporn, et al., 2009). The tasks of a Board committee may vary from one company to the next, depending on the size of the company and complexity of its business activities. Mallin (2007:185) states: *"The board may appoint various sub-committees, which should report regularly to the board, and although the board may delegate various activities to these sub-committees, it is the board as a whole that remains responsible for the areas covered by the sub-committees".*

Audit Committee

The Board should form an audit committee so as to ensure that the interests of shareholders are properly protected in relation to financial reporting and internal control (Smith, 2003). Thus, the presence of an audit committee is a positive sign that demonstrates the company's commitment to good CG (Sommer, 1991). A Board supported by an independent and expert audit committee indicates strong governance, financial statement accuracy, effectiveness control, and audit quality (Gendron, et al., 2004).

Agency Theory is a useful economic tool, which could be used to understand the concept and need for audit and the establishment of audit committees. A simple Agency model suggests that, as a result of information asymmetries and self-interest, principals lack justification to trust their agents and will accordingly seek to resolve these concerns by putting in place mechanisms to align the interests of agents with principals and reduce the scope for information asymmetries and opportunistic behaviour of the agents (ICAEW, 2005). Be´dard, et al. (2004) argued that a more objective financial reporting process can be achieved if the audit committee includes more independent members. The theory indicates that an audit committee can reduce Agency costs owing to its responsibility to supervise the quality of financial reporting, which could reduce the problem of information

asymmetry. According to the Cadbury Report (1992), audit committees, as a governance mechanism, protect the interests of shareholders, ensure transparent reporting and improve audit quality. Similar to the Combined Code in the UK, the SECP Code (2012) in Pakistan sates:

> *"The board of directors of every listed company shall establish an Audit Committee, at least of three members comprising of non-executive directors. The chairman of the committee shall be an independent director, who shall not be the chairman of the board. The board shall satisfy itself such that at least one member of the audit committee has relevant financial skills/expertise and experience."* (SECP, 2012:16)

Remuneration Committee

The area of executive remuneration is a hotly debated, complex and controversial issue within the CG literature. It is also an issue that has attracted much attention from regulators. As an example, the Combined Code (2014) requires that "the Board should establish a remuneration committee of at least three, or in case of smaller companies, two, members, who should all be independent non-executive directors". In Pakistan, the SECP Code of Corporate requires listed companies in the country to establish human resource and remuneration committees comprising at least three members, with a majority of non-executive directors. The CEO of the company may be included as a committee member, but not act in the capacity of Chair.

The principle function of the remuneration committee is centred on determining the nature and amount of benefits paid to companies' executive directors, including the CEO. In the past, it was quite common for the top executives in a company, especially the CEO and Chairperson, to be involved in determining their own remuneration and rewards (Coyle, 2010). Remuneration committees were formed to prevent these directors from setting their own incentives (Mallin, 2007). From Agency perspectives in mind of controlling the self-interested behaviour of agents, companies create and implement compensation and incentive schemes so as to ensure alignment between the interests of managers and shareholders (Klein, 1998; Weir & Laing, 2000). Bebchuk & Fried (2003) argued that there are good theoretical and empirical reasons to believe that managerial power substantially affects the design of executive compensation in companies with a separation of ownership and control. Remuneration packages and incentives for agents can provide an effective control mechanism, which could also help to improve firm performance (Holmstrom, 1979; Grossman & Hart, 1980). According to the UK Corporate Governance Code (2014:20) "*executive directors' remuneration should be designed to promote the long-term*

success of the company and the performance-related elements of their pay should be transparent, far-reaching and rigorously applied".

Nomination Committee

The key responsibility of the nomination committee is to nominate potential candidates for appointment to the Board. Mallin (2007) stated that directors are often appointed based on their connection to the CEO and other executive directors, and that this process is not effective owing to its inability to provide companies with a chance to select candidates of either an appropriate calibre or with business experience relevant to meeting the monitoring and advisory needs of the company. The Cadbury Report (1992) highlighted the importance of the nomination committee by stating that nomination committee would be one possible way of making the Board appointment process more transparent and objective. The Combined Code (2014) promotes a formal, rigorous and transparent procedure for the appointment of new directors. It states that:

> *"There should be a nomination committee which should lead the process for board appointments and make recommendations to the board. A majority of members of the nomination committee should be independent non-executive directors. The chairman or an independent non-executive director should chair the committee, but the chairman should not chair the nomination committee when it is dealing with the appointment of a successor to the chairmanship."*. (Combined Code, 2014:11)

The nomination committee is particularly important in reducing the Agency problem through enhancing Board independence and the quality of appointed directors who are likely to act as supporters of shareholders (Byrd & Hickman, 1992). In other words, the inclusion of non-executive and independent directors on the nomination committee will enhance the performance of the firm through a transparent selection process of directors so as to ensure that only highly qualified and independent directors are appointed to serve on the Board (Carson, 2002). The existence of an independent nomination committee has the potential to improve Board processes, which will, in turn, ultimately enhance the firm's performance (Carson, 2002; Vafeas, 1999).

Sonnenfeld (2002) mentioned that, according to a survey of more than five thousand companies conducted by the National Association of Corporate Directors and Institutional Shareholders Services, 99% of the companies surveyed had audit committees, and 91% had compensation committees. However, it must be remembered that the establishment of such aforementioned committees may merely be a window-dressing exercise unless they

are truly independent, have access to information and professional advice, and contain members who are financially literate (Keong, 2002).

3.5.5   Audit Committee Independence

A number of corporate failures around the world are linked to a lack of independent audit committee members, with the arguments in favour of independent audit committees based on their potential for alleviating weaknesses in CG practices (Turley & Zaman, 2004). According to a large number of previous studies, the predicted benefits associated with audit committee independence stem from the belief that independent directors are more likely to enhance the management monitoring and financial reporting activities of the companies in order to protect shareholders interests, i.e. protection and maximisation of their wealth (Miko & Kamardin, 2015; Saleh, et al., 2007; Baker & Owsen, 2002; Anderson, et al., 2004; Yin, et al., 2012; Chien, et al., 2010; Dey, 2008; Yang & Krishnan, 2005; Kang, et al., 1986; Klein, 2002).

Shareholders, regulators and researchers in many countries have frequently expressed their concerns pertaining to systematic earnings management and have thus questioned about the independence and effectiveness of audit committees and their impact on the performance of firm. Many attempts have been made in the recent past to enhance the independence and effectiveness of audit committees to protect stakeholders' interests (i.e. Cadbury Report (1992) and Higgs Report (2003) in the UK, Blue Ribbon Committee (1999) and the Sarbanes-Oxley Act (2002) in the US and the Saucier Report (2001) in Canada). For example, in the US, the Sarbanes-Oxley Act was a response to a recent series of high-profile corporate scandals and bankruptcies. The Act aimed at improving CG practices, and required listed companies to have all members of their audit committees to be 'independent' and to have the authority to hire independent auditors, counsels and advisors.

From Agency, Resource-dependence and Stakeholder theories' perspectives, the effectiveness of audit committee is a function of its characteristics. However, Agency Theory has been the main theory used in a large majority of previous studies as the basis to developing more in-depth understanding of the importance of the role of independent audit committees and their links with the performance of firms. The theory suggests that Board independence—and, in particular, the presence of a majority of non-executive directors on audit committees—should mitigate Agency conflicts by improving the quality of financial reporting. The audit committee is believed to be independent, proactive and

objective when dominated by independent and financially literate directors (DeFond & Zhang, 2014; Ghafran & O'Sullivan, 2013; Xie, et al., 2003; Vicknair, et al., 1993) because directors' independence allows both internal and external auditors to remain free from undue influences and interferences from top executives.

The importance of the significance of audit committees' independence is also clear from Pakistan's revised Code of Corporate Governance. The revised Code contains new requirements for audit committee structure. The Code requires every listed company in Pakistan to establish an audit committee, which should include no less than three members, including the Chairman. In addition, the Code also requires companies to have a majority of the members of the committee from amongst the non-executive directors, with the Chairman of the audit committee preferably a non-executive director too. The Code also stresses for the names of members of the audit committee to be disclosed in the annual reports of the company.

There are many empirical studies that have provided strong evidences to support the positive links between CG, particularly audit committees' independence and firm performance (Miko & Kamardin, 2015; Saleh, et al., 2007; Baker & Owsen, 2002; Anderson, et al., 2004; Yin, et al., 2012; Chien, et al., 2010; Dey, 2008; Yang & Krishnan, 2005; Kang, et al., 1986; Klein, 2002). However, there is also a need to acknowledge that the decisions of non-executive directors may be influenced by the power of executive directors (Pomeroy & Thornton, 2008; Krishnan & Visvanathan, 2008). Yang & Krishnan (2005) used a sample of 896 firm-year observations and reported that quarterly earnings management is lower for those firms whose audit committee directors have greater independence and better governance expertise. Kang, et al. (1986) regressed measures of audit committee independence, expertise and activity and its size on alternative measures of earning management and performance. The results of their study suggest a significant association between all three characteristics of audit committees and lower earnings management and high firm value. Miko & Kamardin (2015) concluded that audit committee independence and audit quality reduce the level of manipulation of financial results using discretionary accruals in the case of Nigerian listed companies. Klein (2002) examined whether audit committee and Board characteristics are related to earnings management by the firm; the results suggest that audit committee independence reduced the likelihood of earnings by management and thus improved financial transparency and firm value.

Based on the above-cited empirical evidence, this research expects that an independent audit committee positively influences the performance of firms in Pakistan through the selection, removal and compensation of auditors, the scope of audit work and the settlement of any issues between external auditors and executive management.

3.5.6 Board Size

Board size is an important dimension of Board structure and must fit well with the responsibilities, needs and objectives of organisations (Noor & Fadzil, 2013). Board size and the total number of directors (including the Chairman of the Board) can influence the CG practices of firms and, hence, their performance (Yermack, 1996; Dalton, et al., 1999). A Board of Directors, which has an appropriate mix of executive and non-executive directors, qualifications, experience and business connections, may prove more effective in its monitoring and resource procurement roles. The question of whether a greater or smaller number of Board members bring more benefits to companies ultimately depends on the theoretical perspective used when examining the structure of the Board.

There are several theoretical frameworks applied when seeking to make different predictions pertaining to the effects of Board size on the performance of firms. Agency Theory and RDT are the two main competing theories researchers have frequently applied when studying the links between Board size and firm performance (Arosa, et al., 2013; Pugliese, et al., 2014; Jensen & Meckling, 1976; Fama & Jensen, 1983; Muth & Donaldson, 1998; Zahra & Pearce, 1989; Adams & Mehran, 2003; De Andres, et al., 2005).

Zahra & Pearce (1989) reviewed previous empirical evidence on the topic of Boards of Directors and their impact on firm performance, claiming that the 'agency approach is among the most recognised in research on the contribution of Boards'. Muth & Donaldson (1998) argued that 'pivotal to the development of Agency Theory is the argument that shareholders have lost effective control of large corporations as firms have grown in size'; therefore, Agency Theory views the Board of Directors as one of the most effective internal control systems in aligning the competing interests of shareholders and managers, and also in reducing the Agency costs resulting from the separation of ownership and control (Jensen & Meckling, 1976; Berle & Means, 1932; Fama & Jensen, 1983). Based on the conventional wisdom of Agency Theory, a large number of researchers have assumed that Boards comprising a large number of members may be able to better exercise control over the behaviour of management when compared to Boards with a small number of members

(Anderson, et al., 2004; Coles, et al., 2008; Donaldson & Preston, 1995; Klein, 1998; Adams & Mehran, 2003; Freeman, 1984).

The existing empirical evidence generally supports the idea posed by Jensen (1993) in regards the notion of 'oversized Boards'. Such a view surrounding large Boards is also supported by the Resource-dependence argument. From the Resource-dependence point of view, researchers view Board members as a nexus between the company and its outside environment and the resources required to maximise the value of the company (Pfeffer & Salancik, 1978; James & Joseph, 2015; Arosa, et al., 2013; De Andres, et al., 2005). From this perspective, it would be more logical to assume that larger Boards are more likely to provide better opportunities for gaining access to critical business resources. However, the flip side of a large Board size is poor communication and a lack of coordination, which potentially renders the Board as less effective and unable to control company management, which, in turn, results in a potential increase in the Agency problem (Eisenhardt, 1989; Jensen, 1983; Lipton & Lorsch, 1992; Yermack, 1996).

The empirical studies conducted thus far, including those reporting no relationship between Board size and firm performance, have produced mixed results. As an example, Beasley (1996), Dalton et al. (1999), Koa & Chen (2004), Alves & Mendes (2004), Raja & Kumar (2008) and Larmou & Vafeas (2010) all support the fact that there is a positive relationship between Board size and firm performance since there is a greater likelihood of large Boards being more independent, able to secure resources, and acting as better monitors in comparison to small Boards. Large Boards potentially lend themselves better to more transparent financial reporting and are better positioned to prevent earnings management than small Boards with lesser independence. Anderson et al. (2004) have identified a negative relationship between Board size and firm performance. Yermack (1996) and Guest (2009) further discovered a negative relation between Board size and Tobin's Q performance of firms.

It should, by no means, be assumed that there is a linear relationship between Board size and financial performance despite the fact that both theories—Agency and Resource-dependence—show a positive relationship between the two concepts (Rodriguez-Fernandez, 2015). The size of the Board must provide a balance between the advantages and disadvantages that may be inherent within it.

3.5.7 *Board Meetings*

A Board of Directors holds a number of meetings during the course of every year to discuss a wide range of matters affecting the activities of the company. Brick & Chidambaran (2010) argued that researchers have looked mostly at the size and composition of the Board as measures of its involvement in the firm. They have stressed that a potentially equally important dimension of Board oversight is intensity of Board activities, which can be measured by the frequency of Board meetings and changes in the structure of Board subcommittees. Vafeas (1999) added to this line of literature by suggesting that the intensity of Board activity is an alternative, value-relevant Board attribute, and recognised that the frequency of Board meetings is related to CG and ownership characteristics in a manner deemed consistent with contracting and Agency theories. Conger et al. (1998) suggested that the time spent in Board meetings is an important resource in improving Board effectiveness. Brick & Chidambaran (2010) used the number of annual Board meetings and number of 'director days'—that is, the product of the number of meetings and number of independent directors—as two proxies with which to measure Board activities. They argued that it is likely that the number of meetings alone cannot fully capture the level of Board activity, with both the number of independent directors and the time they spend on monitoring important.

From an Agency perspective, Boards that meet frequently are more likely to perform their duties diligently and in accordance with shareholders' mandates (Lipton & Lorsch, 1992). Xie, et al. (2003) argued that Boards that meet more regularly will be in a better position to reduce earnings management since it is assumed that directors will be able to allocate more time to such issues. They reported a negative relationship between the frequency of Board meetings and earnings management. In a study examining the fraudulent financial reporting activities of companies, Beasley, et al. (2000) considered the relationship between frequency of Board meetings and the likelihood of financial fraud, reporting that companies committing fraud in the technology and healthcare industries had fewer audit committee meetings, and that companies committing fraud across all three industries had less internal audit support. Zahra & Pearce (1989) discovered that Board processes greatly impact Board performance and that effective meetings are essential for the successful performance of Board activities.

One might think that frequently meeting Boards are more likely to perform their duties diligently and in the best interest of shareholders. However, there is evidence which suggests there are disadvantages, in the form of co-ordination costs and free rider

problems, attached with frequent Board meetings and the size of large Boards. (Guest, 2009). For example, co-ordination and communication problems are likely to arise since it is more difficult to arrange frequent board meetings and reach consensus, which leads to slower and less-efficient decision-making (Jensen, 1993). It is also reported that when Boards meet more frequently, this undermines their cohesion as members will be less likely to share a common purpose, communicate clearly with each other and reach a consensus that builds on the differing points of view of the directors. (Lipton & Lorsch, 1992). More frequent Board meetings are also likely to increase directors' free-riding issues since the cost to any individual director of not exercising diligence decreases in proportion to the size of the Board and the frequency of Board meetings (Lipton & Lorsch, 1992). Jensen (1993) and Lipton & Lorsch (1992) argue that as Board size and frequency of meetings increases beyond a certain point, the inefficiencies resulting from large Board size together with frequent meetings will outweigh the advantages of having more meetings to draw on, leading to a lower level of corporate performance. It takes staff members too much time to prepare for every Board meeting and as often these meetings continue past their scheduled time, this results in Board members becoming side tracked from key topics of discussion.

Several studies discovered a negative relationship between Board meetings and the performance of firms. For example, Danoshana & Ravivathani (2014) found a negative association between Board meetings and the performance of a firm in Sri Lanka. Johl, et al., (2015) examined board diligence in terms of Board meetings and discovered an adverse relationship between Board meeting and firm performance. In the study of listed companies within India, Manna, et al.,(2016) reported that Board meeting, ownership concentration and the number of Board members were negatively related to performance. In line with Jensen (1993), this research determines that a greater number of Board meetings is likely to reduce the performance of firms, despite the increased monitoring, advisory and networking capacity attributed to external directors.

The above-mentioned studies provide a clear indication that Boards that meet more frequently are more likely to perform their duties in accordance with shareholders' interests.

3.6 Ownership Concentration and Firm Performance

It is well established in the existing literature that ownership structure is an important component of a company's internal CG structure (Shleifer & Vishny, 1986). It has the potential to influence the operating and financial strategies of the company. The right

ownership structure can produce positive benefits for firms because, when firms are owned by a handful of investors, they have the power and incentive to counter the Agency problem (La Porta, et al., 1999; Shleifer & Vishny, 1997). Therefore, the issue of effective ownership structure is globally important for the success of companies.

A number of studies, such as those by Shleifer & Vishny (1986), Grossman & Hart (1980), Cho & Kim (2007), Amrah, et al. (2015), Demsetz (1983), Demsetz & Lehn (1985) and Agrawal & Mandelker (1990), have reported a positive relationship of ownership concentration with monitoring and firm performance. They have argued that concentrated ownership can enhance performance by easing the free-rider problem, since firms in which shareholders are dispersed may not possess adequate resources or strong incentives for monitoring the performance of executive management. However, there is evidence concerning the possibility that concentrated ownership may also work in the opposite direction, since placing too much control in the hands of a few large shareholders may change the nature of the Agency problem which could further lead to higher Agency costs (Nagar, et al., 2011; Hope, et al., 2012; Morck, et al., 1988). Concentration of ownership above a certain level may encourage the controlling shareholders and managers to get involved in either outright expropriation from self-dealing transactions or otherwise may exercise *de facto* expropriation in pursuit of their own personal interests—and notably at the cost of minority shareholders (Hope, 2013; Demsetz & Lehn, 1985; Fama & Jensen, 1983).

Agency Theory is based on the perception that the separation of ownership and control in large public companies leads to self-interested behaviour by both managers and owners of the company (Jensen & Meckling, 1976). Board structure effectiveness as a governance mechanism depends on the degree and power of the diverse ownership constituents of a company (Cho & Kim, 2007). La Porta et al. (1999) studied corporate ownership structure in 27 countries around the world, and argued that, with the exception of countries like USA, which has a strong institutional structure and protection in place for shareholders, the majority of companies are controlled either by wealthy families and business groups, or otherwise by states offering poor levels of protection to shareholders. A single dominant shareholder, whether in the form of a closed family, state or foreign affiliate, may create serious problems for other stakeholders. Therefore, this research argues that an understanding of the effects of concentrated ownership on the performance of firms is necessary in order to comprehend the true nature of CG mechanisms and their association with firm performance.

3.7 Firm Performance

Firm performance is an important concept used as a dependent variable in CG research, since economic performance is the fundamental objective of every commercial activity. Firm performance is significantly influenced by its CG structure. Should CG structure be appropriately designed and applied, it is likely to help the firm to reduce its Agency conflicts. As a result, the firm will be in a better position to attract financial resources at more favourable terms, thus help it to enhance its performance.

3.7.1 Measure of Firm Performance

Despite its significance for all stakeholders, the concept of firm performance is not precisely defined within the CG literature. Richard et al. (2009) argued that firm performance is a multidimensional concept comprising many different elements, i.e. operational effectiveness, corporate image, reputation and culture. It is not clear what exactly constitutes organisational performance (Santos & Brito, 2012). Grob (2007) argued that, due to the complexity pertaining to performance issues; it is unlikely that performance can ever be measured perfectly. Accordingly, the measurement of firm performance is commonly considered one of the most interesting and challenging areas of enquiry for researchers (Hofer, 1983).

This research argues that the role of organisational performance in CG research requires that attention be paid to how such performance is both conceptualised and measured. The concept should not be confused with that of organisational effectiveness, which is a broader construct than firm performance (Santos & Brito, 2012); rather, in its simplest form, performance measurement is a process used to measure the efficiency and effectiveness of a particular action (Neely, et al., 1995). Figure 3.7 below illustrates the different domains of performance. The largest circle in the figure represents the area of organisational effectiveness. The medium-sized circle nested within the large circle is business performance, with the innermost circle representing the domain of financial performance. The perspective taken in this research will look at the relationship of CG to the financial performance of firms.

Figure 3-7: Circumscribing the Concept of Business Performance

Domain of Financial Performance

Domain of Financial + Operational Performance (Business Performance)

Domain of Organisational Effectiveness

Adopted from: Measurement of Business Performance in Strategy Research: A Comparison of Approaches by Venkatraman and Ramanujam (1986)
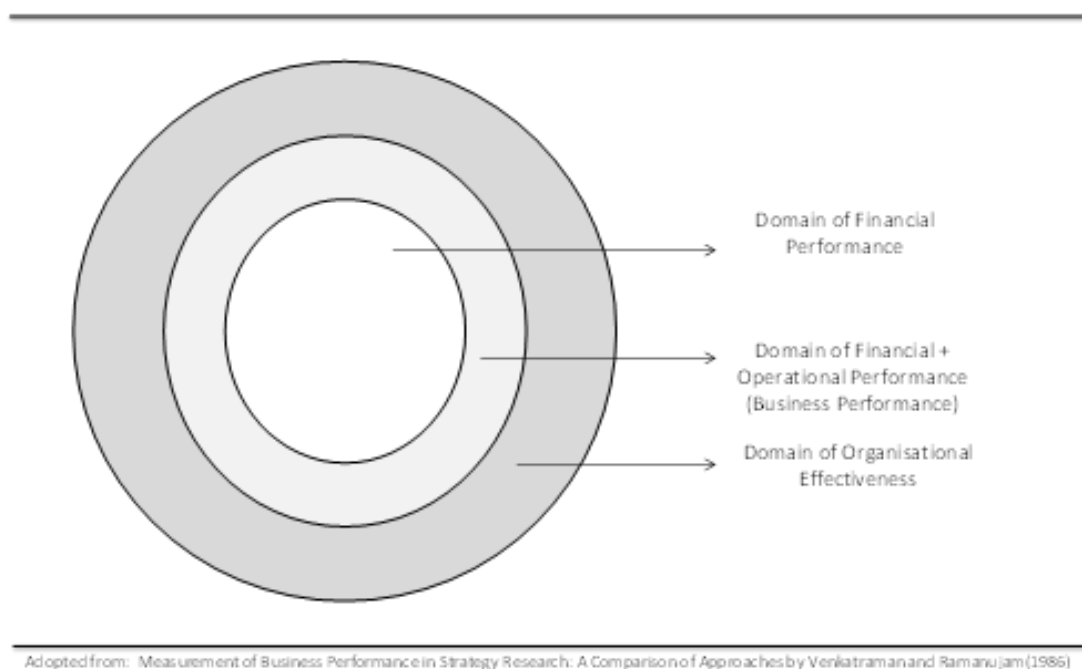
Within the framework of Agency Theory, the fundamental goal of executive management is to maximise shareholders' value. Shareholder value is measured in terms of the benefits shareholders receive from their investment in the company. Such benefits may take any shape or form. Shareholders may receive benefits in the form of cash or stock dividends, or otherwise in the form of capital gains resulting from an appreciation in the value of their shareholdings. Alternatively, it may be a combination of both. According to Dess & Robinson (1984), performance can be measured objectively or subjectively. They argue that objective measurement relies on the availability of financial and market data, whereas subjective measurement depends on perceptions and managerial assessments.

A large number of studies suggest that there is no generally accepted approach to performance measurement in the empirical accounting literature; similarly, there is no single objective measure capable of covering all aspects of a firm's performance (Li & Ye, 1999). Therefore, when striving to measure the financial aspects of firm performance, researchers have used both accounting and market-based measures of performance. Figure 3-8 shows the components of a firm's performance in a number of accounting- and market-based measures of value.

Figure 3-8: Components of Performance and their Measurement Methods
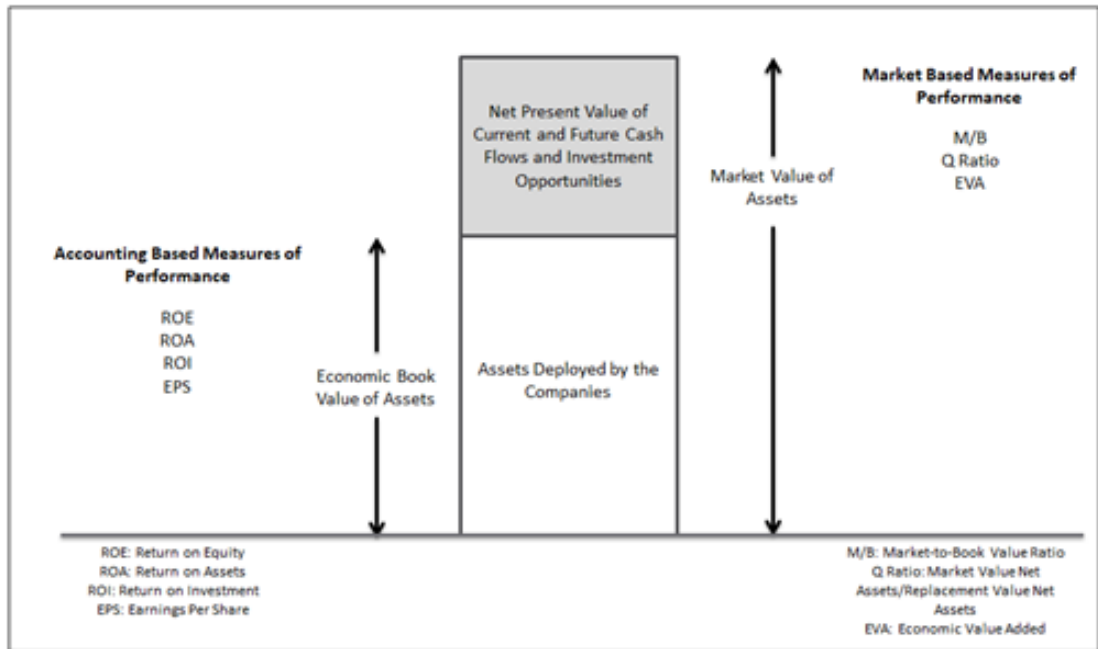
(Authors' elaboration of the components of firms value and their measurement methods based on Bacidore, et al., 1997)

3.7.2 Accounting-Based Measures of Performance

Existing literature shows that, when assessing performance of firms, researchers in CG use a number of accounting measures, such as Return on Assets (ROA), Return on Equity (ROE), Return on Sales (ROS), Return on Capital Employed (ROCE), Earnings Per Share (EPS), Price–Earnings ratio (PE) and Sales Growth (GRO). However, ROA and ROE are the two accounting measures most commonly utilised in CG research for performance, and are outlined below.

Return on Assets

More than any other financial indicator, a firm's profit margins provide an illustration into how well its managers are making financial decisions and employing its resources. Should a firm be unable to meet the expectations of its shareholders, there is the chance that it may not continue to survive. Profitability ratios assess the overall effectiveness of a firm's management in terms of generating profits on its sales, asset base, and shareholder equity. ROA is a widely used measure of firm performance within the CG literature. It measures a firm's net income in relation to its total investment in assets. ROA indicates the ability and efficiency of a firm's management to use its assets to generate profit.

Return on Equity

ROE is another important variable used in the CG literature as a proxy for a firm's performance. It measures the return delivered to shareholders after payment of interest and corporation taxes. It is shareholders' reward for taking a risk on their investment. It does not measure the efficiency with which management has turned resources into profit, but rather the profit remaining that is available for distribution or for use in growing the business to maximise shareholder wealth.

Accounting-based performance measures have been used in a variety of studies (Raithatha & Komera, 2016; Zabri, et al., 2016; Rodriguez-Fernandez, 2016; Heenetigala & Armstrong, 2011), but have also been challenged for their validity and reliability over market-based measures of performance. The major criticism of accounting-based performance measures is that they reflect only a firm's past performance, which, most of the time, is not very helpful for decision-making and as a guide for monitoring and guiding future performance. Such methods have also been criticised for their use of different accounting policies and principles: for example, according to Wernerfelt & Montgomery (1988), accounting rates of return are distorted by a failure to consider differences in systematic risk, temporary disequilibrium effects, tax laws, and accounting conventions regarding R&D, inventory valuation, provisions and capitalisation of fixed expenditure. They have also argued that such differences are likely to vary more across industries than across firms and the use of accounting measures of performance will create estimation bias in favour of industry effects.

Therefore, with the use of different accounting policies, it is quite possible that management could manipulate or massage financial figures to demonstrate better performance. In an effort to avoid this problem, a number of previous studies have used market-based measures of performance and found them more appealing in explaining a number of diverse corporate facts (Wolfe & Sauaia, 2003).

3.7.3   *Market-Based Measures of Performance*

Market-based performance measures work differently from those based on accounting. Unlike accounting-based performance measures, market-based measures look to the future and reflect the present value of future streams of profits. In the CG literature, Tobin's Q is the most commonly used market-based measure of corporate performance.

Tobin's Q

Tobin's Q is the ratio of the market value of assets to their replacement value (Tobin, 1969). The market value of a company's assets is measured by the market value of its outstanding stock and debt, with the replacement costs of assets measured by their book value. As it is often difficult, due to a non-availability of the data, in order to determine the true replacement value of assets, previous researchers have used book value as an alternative to replacement value. A Q ratio of greater than one indicates that the market rates the value of the firm to be greater than its book value. It is considered that, the higher the value of Q, the more effective the firm's governance mechanisms and the more favourable the market's perception of its performance. A greater Q demonstrates a close alignment of shareholder and manager interests, whilst a lower Q is suggestive of greater managerial discretion (Weir, et al., 2002). Chung & Pruitt (1994) have mentioned a number of previous studies where Tobin's Q was used to understand (a) cross-sectional differences in investment and diversification decisions (b) the relationship between managerial shareholdings and firm value (c) the relationship between managerial performance and tender offer gains, investment opportunities and tender offer responses, and (d) financing, dividend pay-outs, and compensating policies. Wernerfelt & Montgomery (1988) argued that, by incorporating a capital market measure of firm rents, Tobin's Q implicitly uses the correct risk-adjusted discount rate, imputes equilibrium returns, and minimises distortions due to tax laws and accounting conventions.

Tobin's Q has advantages over accounting measures of performance owing to the calculation of Tobin's Q ratio not relying on accounting profits, which are subject to creative accounting techniques in an attempt to influence the profit figures and investment decisions. As a performance tool, it suggests that firms with a low Tobin's Q ratio might be considered risky and less attractive for investors.

3.8 Chapter Summary

This chapter has, in the main, been theoretical. It introduced the concept of CG and discussed the broad range of definitions of CG in both their narrow and broader aspects. The narrow view of CG is largely based on Agency Theory, in which CG is viewed as a mechanism for managing the Agency relationship between a company's executive management, its diffused shareholders, or between controlling and minority shareholders. In contrast, the broader view is mainly based on the Resource-dependence, Stakeholder and Stewardship theories, which view CG systems as a web of contracts extending beyond the interests of shareholders and linking companies with a broader range of stakeholders.

The chapter has also outlined that there is no universal philosophy or single model of CG, and that its development is linked to a number of theories from different disciplines. Agency Theory, Resource-dependency Theory and Stewardship Theory, etc., all represent a range of theoretical perspectives. However, Agency Theory remains the dominant theoretical perspective of CG and its importance and impact on the performance of firms. The chapter also considered, in detail, the role of the Board of Directors and the importance of ownership concentration in CG. The chapter presented a broad appraisal of the empirical literature on the links between Board structure characteristics, ownership concentration and firm performance. The chapter has also highlighted the growing importance of intervening variables and discussed the influence of mediating, moderating and control variables in enhancing understanding of the causal relationship between CG and firm performance. Although the nature of CG varies across countries and regions, the chapter has highlighted that its fundamental aim is almost universal everywhere it is practised. The theoretical perspective discussed in the chapter explained that Board structure that separates decision management from decision controls are more likely to alleviate CG issues associated with Agency problems.

The next chapter outlines the theoretical perspectives used in this research in an effort to guide development of the research framework, and goes on to present the hypotheses developed from the theoretical framework of the research to test and understand the causal relationship between Board structure and firm performance.

4 RESEARCH FRAMEWORK AND HYPOTHESES

4.1 Introduction

4.2 Theoretical Perspectives

4.3 Multi-Theoretical Approach

4.4 Research Framework

4.5 Hypotheses Development

4.6 Chapter Summary

4.1 Introduction

The literature reviewed in the previous chapters suggests that a large majority of previous researchers have mainly used Agency Theory and the traditional input–output research model to explore the direct relationship between Board structural characteristics and firm performance. However, the Agency theoretical views and the traditional input–output research model have been subject to some criticism, disapproval and limitations (Essen, et al., 2012; Filatotchev, et al., 2013). For example, the main focus of the Agency perspective is around the monitoring role of Boards, with little attention paid to the other functions of a Board, such as Board's advisory and resource procurement roles (Pfeffer & Salancik, 1978; Daily, et al., 2003; Hillman & Dalziel, 2003; Huse, 2005). It is also clear from the existing literature that the use of a single theoretical perspective in previous studies has frequently produced unclear and contradictory findings (Daily, et al., 2003). Furthermore, the input–output research approach ignores the importance of intervening variables that may influence the causal relationships between the variables. Therefore, it is now a widely accepted fact that those studies ignoring the role of intervening variables are no longer acceptable for publication (Carpenter, et al., 2004). One can argue that such studies are very likely to limit understanding of the true nature of CG practices, and that the findings of these studies may be less relevant in terms of their practical implications.

In order to address the above-mentioned criticisms and limitations of the existing literature, a multi-theoretical model is developed and applied in this research with the objective to investigate the causal relationship between Board structure and firm performance, whilst also considering the influence of mediating, moderating and control variables.

The rest of this chapter is organised as follows: Section 4.2 outlines the theoretical perspectives used to guide the development of the research framework; Section 4.3 is about the multi-theoretical approach of the research, Section 4.4 presents the research framework of the thesis; Section 4.4 presents the hypotheses developed from the theoretical framework in mind of testing and garnering understanding into the relationship between Board structure and firm performance; and finally, Section 4.6 provides the chapter summary.

4.2 Theoretical Perspective

Monitoring and providing access to critical resources are two key functions of Boards (Hillman & Dalziel, 2003). Researchers have applied a range of theoretical perspectives in mind of studying these two functions of Boards and their relationship to firm performance.

4.2.1 Agency Perspective

Agency Theory is interested in the contractual ties between agents (managers) and principals (shareholders), stressing that the main function of the Board is to monitor management so as to protect the interests of shareholders. The focus of the theory is on the conflicting interests between principals and agents, and the maximisation of shareholder wealth. The theory offers a principal–agent framework in order to understand the monitoring function of Boards. As mentioned in the previous chapter, the monitoring function requires Boards to play the role of 'watchdog' since they have a fiduciary responsibility to align the incentives of management with those of shareholders so as to ensure that managers are acting in the best interests of shareholders (Bainbridge, 1993; Berle & Means, 1932; Mace, 1971; Hillman & Dalziel, 2003). The monitoring function of the Board can reduce the Agency costs inherent in a separation of ownership and control; in this way, the Board's monitoring function can increase shareholder wealth by improving firm performance through an efficient allocation of resources (Fama & Jensen, 1983; Mizruchi, 1983; Zahra & Pearce, 1989).

Agency Theory views CG systems—especially the Board of Directors—as being an essential mechanism for ensuring that problems arising from the principal–agent relationship are controlled (Mallin, 2007). Therefore, Agency Theory advocates a separate leadership structure—a majority of outside directors and various Board committees as optimal monitoring devices that will not only reduce Agency costs but also enhance firm performance to maximise the market value of firms.

4.2.2 Resource-dependence Perspective

In contrast with the Agency perspective, the Resource-dependence perspective views the Board of Directors from different proportions. According to RDT, a company's Board of Directors is a strategic resource linking the company to its external environment and making it possible for the company to gain access to various external resources (Pfeffer & Salancik, 1978; Pfeffer, 1973; Hillman & Dalziel, 2003; Johnson, et al., 1996; Ingley & Van der Walt, 2001). From the Resource-dependence point of view, a Board that is

structured in an attempt to exercise control over its external environment is likely to be fully equipped and well diversified (Burton, 1991), with a majority of non-executive outside directors helping the company gain access to vital resources (Johnson, et al., 1996) and business legitimacy (Hillman, et al., 2000).

4.2.3 *Stakeholder Perspective*

The Stakeholder perspective offers a different view of CG and assumes that firms are subject to different types of responsibility. The Stakeholder perspective views the role and responsibilities of Boards from a different point of view, expecting Boards to consider the needs of different stakeholder groups, including interest groups linked to social, environmental and ethical considerations (Freeman, 2010; Freeman, et al., 2004; Donaldson & Preston, 1995). Although shareholders are the ultimate owners of their companies, there is no doubt that companies are no longer an instrument of shareholders alone. This is because companies coexist with their communities and thus have responsibilities to those wider communities (McDonald & Puxty, 1979).

The Stakeholder perspective of CG supports detailed corporate reporting activities beyond the scope of conventional financial reporting, monitoring and shareholder protection, reflecting the need for the company to serve the needs of a wider group of stakeholders. The Stakeholder perspective better explains the role of CG than Agency perspective because the Stakeholder perspective highlights the different constituents of a firm.

4.3 Multi-Theoretical Approach

There is a clear and recognisable disconnect between the above-mentioned theoretical perspectives, since each perspective views the Board of Directors and its responsibilities differently. For instance, agency perspective focuses mainly on the monitoring role of Boards, whilst the resource-dependence perspective concentrates on directors' resource procurement role, and stakeholder perspective emphasises a company's responsibilities beyond the ultimate shareholders of the company. The literature reviewed in the previous chapters highlights the fact that public companies are subject to the influence of a variety of environmental forces and that a single theory may not yield a proper understanding of the CG issues. This research contends that agency theory has some limitations as the supporting theory to understand the true nature of CG practices, given its inability to recognise the wider environmental influencing forces impacting on organisations (Christopher, 2010). According to Austin & Jones (2016), the multi-theory approach to

governance can combine what may seemingly be at opposite ends of the theory spectrum. Rather than assuming the self-interests of agents, it may be more useful to examine and understand empirically the extent of self-interests versus the level of co-operative behaviour of stewards to determine if and when actors switch behaviours as circumstances change. In addition, this research advocates that a multi-theory approach is likely to be more beneficial to understand the issues connected with CG.

Zattoni et al. (2013) have suggested that researchers should move away from the use of a single theoretical perspective when seeking to achieve their research objectives. They have argued that some theories support the concept of a high level of control and the monitoring role of directors, whilst others rely more on their trustworthiness and their advisory and resource procurement roles. Mallin (2007) also supports this argument by saying that, 'some theories may be more appropriate and relevant to some countries than others, or more relevant at different times depending on what stage an individual country, or group of countries, is at.' CG is a multi-dimensional phenomenon and no single theoretical approach can individually unravel it in its totality (Wangomobe, 2013). For example, agency theory recognises shareholders as being the main stakeholders of the companies and satisfying their needs is the primary responsibility of the companies, which necessitates protection and maximisation of their wealth (Friedman, 1970; Jensen, 2001). Whereas, stakeholder theory sees everyone who is affected by or affecting the companies (Freeman, 1984; Freeman, et al., 2004) but only if they have power and legitimacy over the companies (Mitchell, et al., 1997).

Through a theory building approach, Christopher (2010) reviewed and critically examined the extant literature (Berle & Means, 1932; Jensen & Meckling, 1976; Aguilera, et al., 2006; Aguilera & Jackson, 2010; Eisenhardt, 1989; Willis, 1989) and established a strong case to integrate four existing complementing theories to recognise the wider influencing forces. Figure 4.1 is adopted from Christopher (2010) and shows the inter-relationship of the theories, their complementary effects on each other and their contribution towards understanding the extended governance paradigms. The model is intended to appreciate that the limitations and weaknesses of one theory can be balanced with another theory or group of theories. Although the four theoretical approaches presented in the model are both diverse and competing, they have many conceptual similarities and overlaps. The four theories in the model argue that the 'external pressures' affect the company, but each theory approaches these effects in different ways (Wangomobe, 2013). As a result, a large number of previous researchers have advocated for a theoretical foundation that covers

various perspectives (Gary, et al., 1996; Cormier, et al., 2005; Zattoni, et al., 2013; Martin & Hadley, 2006; Wangomobe, 2013; Willis, 1989).

Figure 4-1 The Multi-Theoretical Approach to Corporate Governance
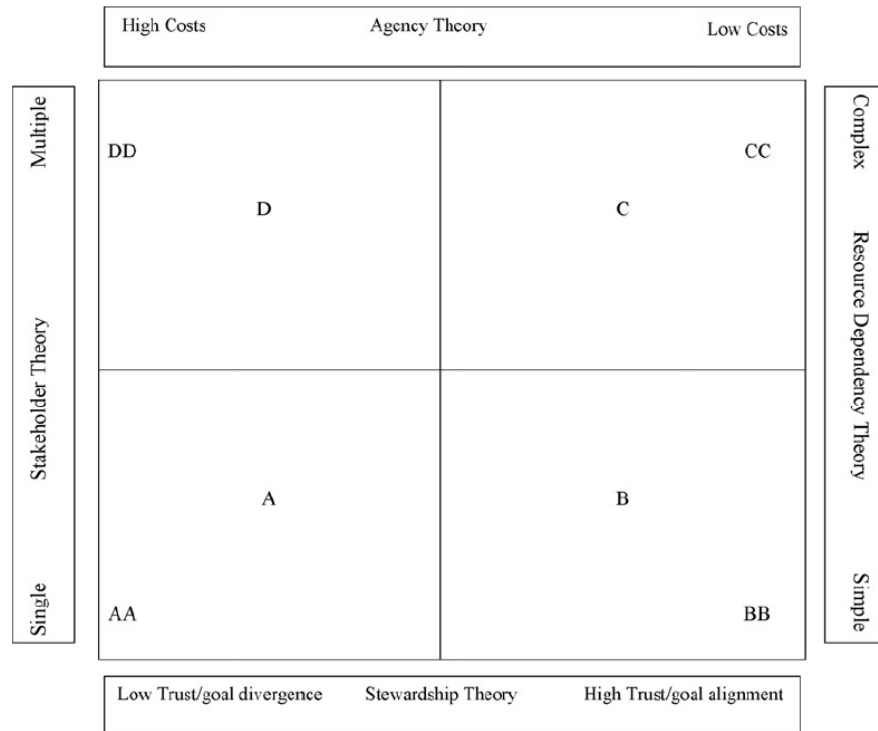
Source: Christopher (2010)

Christopher (2010) argues that ccompanies can use the model to draw on the respective underpinning theories to assist them in recognising their wider influencing forces though different levels of stakeholder base, and manage the consequent wider contractual obligations strategically and operationally through the development and implementation of appropriate accountability governance mechanisms and processes. Each square in the model represents a separate theory and each side of the axis representing the theory presents two extremes of the theory's unique attributes. Agency theory, for example, is represented by high agency cost on one end of the axis and low agency cost at the other. Stewardship theory is represented by high trust or goal alignment on one end of the axis and low trust or goal divergence on the other. Stakeholder theory is represented by a single shareholder on one end of the axis and multiple stakeholders at the other. Resource dependency theory is represented by complexity of operations and management at one end of the axis and simplicity of operations and management at the other. The model suggests that all organisations operate within the extreme characteristics of all four proposed theories. The model also shows how companies, by determining their position in the model, can draw upon the complementary effect of the four theories in arriving at a balanced

governance framework. This will help them to develop and implement a range of accountability processes across their three governance levels i.e. the board level, operational management level and the assurance level (Christopher, 2010).

Each of the theoretical perspectives is important in building and understanding a holistic CG framework. This research has critically reviewed the existing literature on issues around the narrow theoretical foundations of CG. It is argued that the diverse features of the various theories make it necessary to consider each of them in analysing CG and firm performance, but their differences attracted this research to consider a multi-theory approach to achieve its objectives. The joint consideration of agency, resource dependency and stakeholder theories is more likely to offer richer prospects for understanding and explaining CG and their relationship with the performance of firms within Pakistan. This research believes that none of the theories are individually able to explain the drivers of CG and firm performance. Agency, resource dependency and stakeholder theories illustrate the broad nature of CG and the need for a framework that addresses CG in an all-encompassing manner – one that extends the analysis from one prescriptive to the other.

Figure 4.2 illustrates the theoretical framework of this research. Examining the theoretical framework, it is clear that Board structure can be investigated using two different sets of variables: the first set of variables is supported by the agency theory; the second set is supported by the resource-dependence and stakeholder theories.

In the context of Pakistan, the application of agency theory is relevant in addressing the problems of executive management incentives and their monitoring due to the existence of a high level of information asymmetry and concentration of ownership. In a large majority of firms within Pakistan, ultimate control over the structure of the Board lies in the hands of its controlling shareholders; that is, with closed families, associates or the state. A number of studies have concluded that concentrated ownership and political control in Pakistan are responsible not only for the slow growth of the country's corporate sector, but also that undue interference from controlling shareholders in the day-to-day affairs of companies is the main factor contributing to Agency cost in Pakistan (Afza & Nazir, 2012; Javed & Iqbal, 2006; Irshad, et al., 2015; Yasser & Mamum, 2015; Javid & Iqbal, 2008). Researchers seeking evidence of the connection between corporate Boards and firm performance have traditionally turned to either agency or resource-dependence theories. There have also been several studies within Pakistan where researchers have applied RDT or the stakeholders' perspectives to investigate the links between Board structure and firm

performance. For example, Malik (2015) suggested that due to the high concentration of ownership and there being less need for the monitoring of management, the resource-dependence function of Boards is more important for Pakistani companies. Yasser & Mamum (2015) reported positive links between group associations, managerial networks and Boards on performance of firms within Pakistan.

Figure 4-2: Theoretical Framework of Corporate Governance and Firm Performance
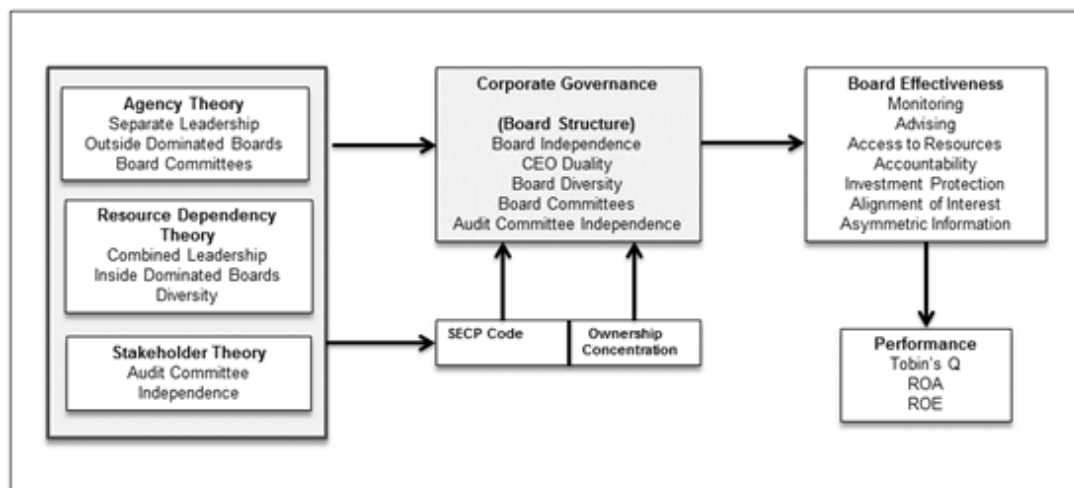
4.4 Research Framework

Numerous empirical studies have examined the relationship between good CG practices—in particular, the impact of Board characteristics—and the performance of firms (e.g., Bhagat & Black, 1999; Rhoades, et al., 2000; Kiel & Nicholson, 2003; Bonn, 2004; McIntyre et al., 2007; Fan et al., 2007). Despite the continuously growing quantity of Board governance literature over the past couple of decades, the results remain relatively mixed and inconclusive. The literature review presented in the previous chapters suggests that a large majority of researchers have not considered the role of intervening factors impacting the relationship between CG the performance of firms. Many scholars, including Hillman & Dalziel (2003), Nicholson & Kiel (2004), Levrau & Van Den (2007), Finkelstein & Mooney (2003), Letendre (2004), Carpenter et al. (2004), Pye & Pettigrew (2005) and Hermalin & Weisbach (2003) have called for more research into Board practices beyond their traditional structural attributes in an effort to understand the causal relationship between corporate Boards and firm performance.

4.4.1 Hillman and Dalziel (2003)

Hillman & Dalziel (2003) contend that both Agency and Resource-dependence theorists have examined one critical Board function against another (e.g., monitoring vs the

provision of resources), contributing to an incomplete understanding of what Boards of directors do and how they affect firm performance, or what contributes to the provision of resources and effective monitoring. They identified a weakness inherent in the adoption of a single theoretical (Agency or Resource-dependence) approach. They combined the Agency and Resource-dependence perspectives into a single framework in order to study the impact of Boards on firm performance. They argued that Board capital affects both the Board's monitoring and resource procurement roles, and that the Board's incentives serve to moderate these relationships. Their theoretical framework (Figure 4.2) provides a more accurate reflection of the real business world and accordingly suggests that integration of the monitoring and resource procurement roles and their antecedents are important for practitioners since, in the real business world, directors engage in both functions. They also claimed that their work highlights the need for the application and development of RDT in tandem with Agency Theory.

Figure 4-3: Integrated Model of Board Functions, Antecedents and Firm Performance
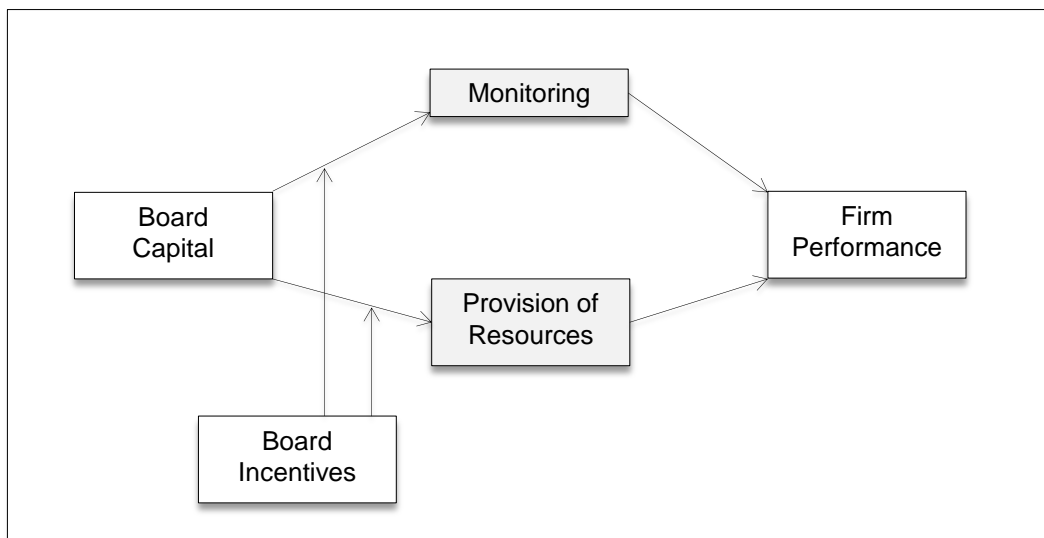
Source: Boards of Directors and Firm Performance: Integrating Agency and Resource Dependency Perspectives (Hillman and Dalziel ,**2003**)

4.4.2 Nicholson and Kiel (2004)

Nicholson & Kiel (2004) stressed that, despite increased interest in good CG practices, overall understanding of how the Board of Directors impacts on corporate performance is a relatively unclear and underdeveloped area of the literature. They argued that CG research agendas remain concentrated around a single theoretical perspective and focus mainly on a particular role of the Board. In fact, the literature on the role of the Board suggests that practical CG is largely reliant on normative and perspective guidelines that do not reflect empirical evidence (Nicholson & Kiel , 2004; Fama & Jensen, 1983; Cadbury, 1992).

Nicholson & Kiel (2004) have shown how the majority of CG codes, guidelines and reports call for Board independence, yet researchers have failed to identify a consistent, significant relationship between Board independence and firm performance. Instead of investigating the direct relationship between Board variables and firm performance, researchers need to include indirect processes and variables that may link Boards to corporate performance. Nicholson & Kiel (2004) sought to address this issue by establishing a more comprehensive framework of Board effectiveness. They used the construct of Board's intellectual capital to integrate the predominant theories of CG. Their framework (Figure 4.3) illustrates how Boards' intellectual capital and Board functions can drive corporate performance. It is clear that every different approach and perspective contains useful guidelines and insight regarding issues such as Board independence; however, CG practitioners need to take care not to act on the recommendations from a single theory in isolation (Nicholson & Kiel , 2004).

Figure 4-4: Intellectual Capital Model of Board
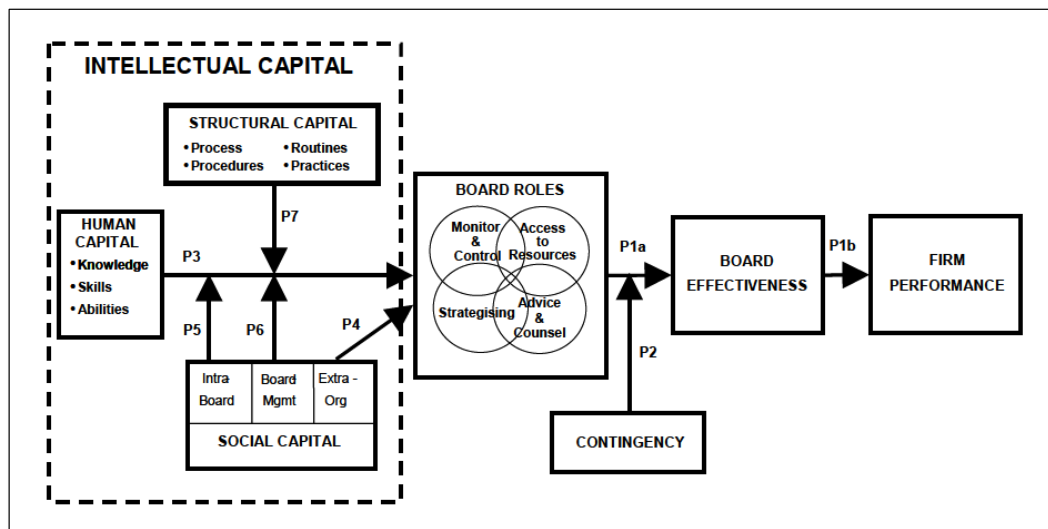
4.4.3 *Levrau and Van Den (2007)*

Levrau & Van Den (2007) also noticed inconsistency and inconclusiveness in the findings of prior studies examining the direct relationship between Board characteristics and firm performance. They argued that different reasons are put forward to explain this inconsistency, although it can be claimed that 'traditional' Board research has neglected the potential influence of intervening variables (Levrau & Van den Berghe, 2007). They also noted that only a handful of scholars have ever sought to fill this gap and suggested a process-oriented Board model as an indirect route to exploring the relationship between Board functions and firm performance.

Huse, et al. (2005) conducted a survey of listed companies, in which they found that the main process-oriented Boardroom measures were significantly related to product innovation, organisational innovation and international marketing ventures. Relying on this stream of research, Levrau & Van Den (2007) developed a new theoretical research framework (Figure 4.4) for assessing Board effectiveness. They named three intervening variables (cohesiveness, debate and conflict norms) and followed the input–process-output approach to integrating these into a more comprehensive research framework. They believed that intervening variables mediate the relationships between Board input and Board outcomes, and argued that their model goes beyond the traditional structural attributes of Boards to include behavioural or attitudinal measures of Board effectiveness. Their work highlighted the need for a multidisciplinary approach to empirical research on Boards of directors.

Figure 4-5: Board Effectiveness Model
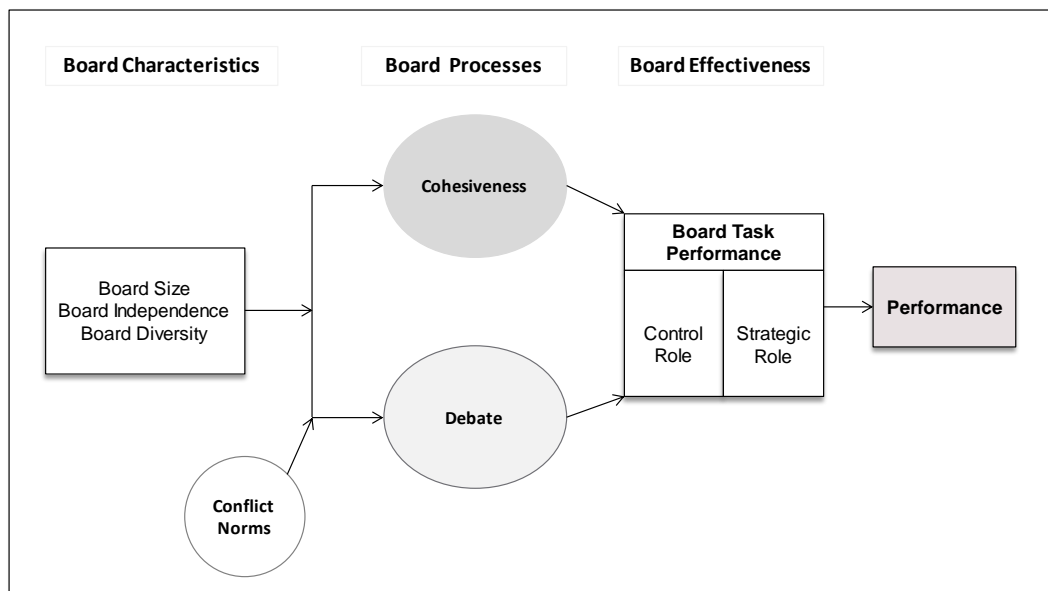
Source: Corporate governance and Board Effectiveness: Beyond Formalism (Levrau and Van Den, 2007)

4.4.4   The Current Research

Considering the limitations of previous studies and the distinctive features of the models put forward by Hillman & Dalziel (2003), Nicholson & Kiel (2004) and Levrau & Van Den (2007), a research framework (Figure 4.5) for this investigation has been developed with the aim of studying the links between Board structure and firm performance through the intervening influence of Board functions, ownership concentration and the SECP's revised Code of Corporate Governance introduced in 2012.

The research framework (Figure 4-5) introduces Board governance concepts derived from the agency and resource dependency theories of CG and displays the links between Board

characteristics and the performance of firms. The framework also illustrates mediating and moderating variables, and further displays that the link between Board structure and firm performance is affected by the presence of moderating and mediating variables. The research framework highlights the links between the theoretical framework (Figure 4.1) and the operationalisation of the research variables. The framework is based on the input-mediators–output-analyses method, where the output is firm performance and inputs are the Board's structural variable and Board roles. The relevant independent variables that are considered significant in affecting the performance of firms in Pakistan are shown on the left-hand side of the research framework, and include Board independence, CEO duality (Board leadership), Board diversity, Board committees and audit committee independence. The independent variables are linked to firm performance, which is measured using both accounting and market-based measures of performance—Return on Assets (ROA), Return on Equity (ROE) and Tobin's Q (TQ). The framework also illustrates how the link between Board structure and firm performance is mediated by the Board's monitoring and resource-dependence roles. It is also clear from the framework that the aforementioned relationships are moderated by the SECP Code and the level of ownership concentration.

The research framework applies three stages of Board performance relationship. The first stage determines the influence of SECP Code and ownership concentration on the Board structural variables. This was achieved with the introduction of an interaction term to expose the difference in Board structure resulting from the introduction of the revised Code in March 2012 and ownership being concentrated in the hands of TOP1 and TOP5 largest shareholders. The Board structural variables include Board independence, CEO duality, Board diversity, Board committees and audit committee independence. Board independence is measured using the proportion of non-executive directors (NEDs) on the Board; CEO duality (leadership structure) is measured by the presence or absence of CEO/chair duality on the Board; Board diversity is measured with a dummy, taking the value '1' if there are female, foreign, minority and nominee directors, and otherwise '0.' Board standing committees are measured by the number of Board committees.

The second stage of the framework examines the relationship between independent variables (Board structural dimensions) and mediating variables (Board roles). The Board roles include its monitoring/control role (agency perspective) and resource-dependence role (resource-dependence and stakeholder perspective). The monitoring role is measured by analysing the activity of the Board—more precisely, the frequency of Board meetings—

whilst the resource-dependence role is valued through Board size, as in the total number of Board members, including the CEO and Chairperson of the Board. The third stage looks at the monitoring and resource-provisioning roles of Boards and their relationship with the three accounting- and market-based performance measures.

It is expected that the results derived from the implementation of this framework (Figure 4-5) will serve to narrow some of the gaps in the existing literature. The research model also addresses the need for further research as suggested by various researchers including Hillman & Dalziel (2003), Nicholson & Kiel (2004) and Levrau & Van Den (2007).

Figure 4-6: Integrated Model of Board Structure, Board Functions and Firm Performance
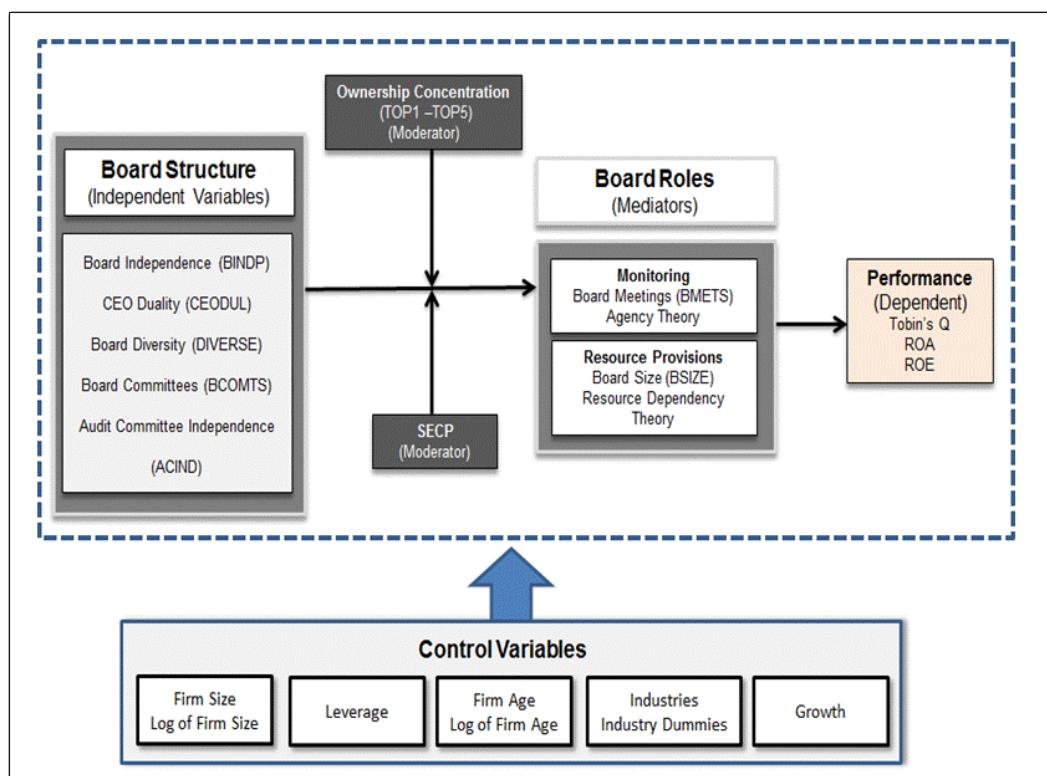
4.5   Hypotheses Development

The hypotheses tested in this research are based on the assumption that Board characteristics, such as Board independence, CEO duality, Board diversity, audit committee independence and Board committees, are linked to the performance of firms in Pakistan. The theoretical literature on CG suggests that Boards perform their monitoring, advisory and resource-provisioning roles by structuring their size and composition accordingly (Adams & Ferreira, 2007; Raheja, 2005; Harris & Raviv, 2007).

4.5.1 Board Roles and Performance

Both the theoretical and imperial literature discussed in the previous chapters suggests that the Board of Directors is the most important and highly influential system of internal CG. A well-structured, independent and balanced Board is more likely to improve a firm's performance through its monitoring and Resource-dependence roles.

Monitoring Role and Firm Performance (Board Meetings)

Agency Theory suggests that the Board's key responsibility is to ease the conflict of interest between shareholders and management, or otherwise between controlling and minority shareholders, to reduce the firm's Agency costs. Any reduction in Agency cost will increase the value of the firm and shareholder wealth. A number of studies have been considered to stress the importance of the Board's monitoring responsibility for better firm performance (Van den Berghe & Baelden, 2005; Bonazzi & Islam, 2007; Dalton & Kesner, 1987; Kesner, et al., 1986; Mace, 1971; Molz, 1988), but exactly which process or attribute of the Board is linked with firm performance remains far from clear when examining the existing empirical evidence. The extent to which a particular process or attribute of the Board influences its monitoring and control function is not well-documented in the existing literature (Gabrielsson, et al., 2007).

Jensen (1993) and Yermack (1996) have suggested that Board size is the value-relevant attribute of the Board. Daily & Dalton (1992) documented Board independence as the major factor in superior performance. Vafeas (1999), Lipton & Lorsch (1992) and Conger et al. (1998) added to this line of the literature by proposing intensity of Board activity as an alternative value-relevant attribute of Boards. They used the frequency of Board meetings as a proxy for the intensity of the Board's activities and went on to examine the relationship between Board activities and firm performance. Their results suggest that frequency of Board meetings is an important measure of a Board's monitoring power and effectiveness, and hence indicates better performance. Similarly, Ntim & Osei (2011) used a sample of 169 South African companies to investigate the impact of corporate Board meetings on firm performance. The results of their study provide empirical support for Agency Theory and suggest that corporate Boards that meet more frequently have an increased capacity to effectively advise, monitor and discipline management, therefore improving corporate financial performance.

Board structure and Board procedures have a huge impact on the activities of the company, and effective Board meetings are essential for the successful execution of a Board's tasks and the performance of firms (Zahra & Pearce, 1989). A greater frequency of Board meetings provides directors with more time and better opportunities to design corporate strategy and appraise CEO performance (Vafeas, 1999). However, there is also evidence to suggest that a Board of Directors that meets regularly and more frequently may not produce a full positive impact on firm performance through its monitoring activities: if the directors on the Board hold multiple directorships, it may limit their ability to fully focus on their monitoring role (Lipton & Lorsch, 1992; Conger, et al., 1998; Jensen, 1993). It is also recognised in the previous studies that a major barrier to Board effectiveness is a lack of time to complete Board duties (Lipton & Lorsch, 1992). Board meeting time is a crucial resource in improving the effectiveness of the Board and the performance of firms (Conger, et al., 1998), and the limited availability of time may restrict directors from engaging in meaningful exchanges of information and ideas (Jensen, 1993).

The above discussion provides both theoretical and empirical support to believe that Boards that meet regularly and frequently are more likely to perform their duties better and in accordance with their mandate. Therefore, this research proposes the following hypothesis.

H1: There is a positive relationship between Board meetings and firm performance (Tobin's Q, ROA and ROE).

Resource-dependence Role and Firm Performance (Board Size)

Generally, companies are neither self-contained nor self-sufficient; therefore, they must rely on their external environment. In order to not only survive but also compete successfully within their business environment, companies have to be responsive to demands from their external environment (Pfeffer & Salancik, 1978). The basic idea underpinning RDT is the need for connections between companies and their outside resources (Yusoff & Alhaji, 2012). Pfeffer & Salancik (1978) argued that access to critical resources could help companies to reduce dependence on their external environment. It can also resolve conflicts of interest between ownership and control (Berle & Means, 1932), and access to critical resources could therefore help companies to reduce their Agency costs (Fama & Jensen, 1983). RDT views an experienced, diversified and well-connected Board of Directors as a vital strategic resource for companies to create their links with the external environment. A balanced Board of Directors, through its resource-

provisioning role, could help companies achieve better performance and make it possible for them to survive in this highly competitive modern business environment (Singh, et al., 1986; Hillman & Dalziel, 2003).

Board size and composition are two indicators of the Board's ability to provide critical resources to the company (Hillman, et al., 2000). Pfeffer (1972:226) argued "that Board size and composition are not random or independent factors, but are, rather, rational organizational responses to the conditions of the external environment". A large number of studies have looked into the relationship between Board size and firm performance in a bid to identify the optimal Board size to function effectively in the best interests of the company (Pfeffer, 1972; Pfeffer, 1973; Jensen, 1993; Yermack, 1996; Dalton, et al., 1999; Hermalin & Weisbach, 2003; Guest, 2009; Lipton & Lorsch, 1992; Eisenberg, et al., 1998; Sanders & Carpenter, 1998).

Carpenter & Westphal (2001) studied Board members' network ties in an effort to determine the Board's ability to influence performance and accordingly reported a significant link between Boards with more resources in terms of networking and social capital, and improved financial performance and positive influence on CG practices. Guest (2009) examined the Board structure of UK listed companies to study whether Board of Director characteristics had any impact on corporate performance, concluding that the size of the Board and the background of its members are vital for the provision of advice, resources, management and monitoring. Dalton et al. (1999) believe that larger Boards with a higher proportion of independent directors are more likely to have the right balance of knowledge, experience and industrial links to influence firm performance. They argue that, due to greater information-sharing, larger Boards offer better advice to the CEO, and that such advice is more likely to come from outsiders on the Board. Haniffa & Hudaib (2006) have demonstrated a significant relationship between multiple directorships and market performance. The principal benefit of a larger and diversified Board lies in its ability to provide access to critical resources, such as finance, raw materials and vital information, owing to the background, expertise and networking ties of its members (Pearce & Zahra, 1992; Haniffa & Hudaib, 2006).

The evidence outlined above shows that access to key resources through large, diversified and well-connected directors is positively linked with firm performance. However, there is also evidence suggesting that issues of poor communication and slow decision-making can outweigh the positive benefits of large Boards (O'Reilly, et al., 1989; Lipton & Lorsch,

1992; Jensen, 1993; Hermalin & Weisbach, 2003). As Board size increases, poor communication and coordination could lead to the development of factions and conflicts (O'Reilly, et al., 1989). Hermalin & Weisbach (2003:13) stated that, when Boards become too big, they create some Agency problems in the form of directors free-riding, and "the board becomes more symbolic" and less part of the management processes'. Jensen (1993) argued that large Boards are likely to be less effective due to the high costs involved in monitoring high-growth firms. Yermack (1996) and Eisenberg, et al. (1998) empirically tested the views of Jensen (1993), with the results of their studies indicating a significant negative relationship between Board size and firm performance.

The above discussion and literature review presented in the previous chapters provide strong support to expect for the positive relationship between Board size and the performance of firms in Pakistan. Therefore, the next hypothesis of this research is:

H2: There is a positive relationship between Board size and firm performance (Tobin's Q, ROA and ROE).

4.5.2   Board Structure and Performance

A balanced Board is perceived as a key factor in achieving better firm performance, based on the evidence that a balanced Board is likely to be more effective in its monitoring and resource-provisioning roles, as well as in enhancing the economic value of the firm. There is agreement across a large majority of studies that a Board's effectiveness is a function of its structure and roles. The next section explains each of the Board structural characteristics to determine the most appropriate hypothesis.

Board Independence

The literature on Board structure argues that companies structure their Boards to achieve a practical balance between their monitoring and resource-dependence needs. Agency Theory views an independent and well-diversified Board as an important governance mechanism to control conflicts of interest between managers and shareholders, and between dominant and minority shareholders. As shown in the conceptual framework, both Agency Theory and RDT apply to Board independence and firm performance.

The literature presented in the previous chapters suggests that in modern corporations there is a separation between ownership and control, and, as a result, executive managers always attempt to retain control of the firm's resources. Supporters of Agency Theory believe that

independent NEDs are likely to be more effective monitors of executive management since they are—at least in theory—less obligated to and influenced by management (Hermalin & Weisbach, 2003). The main focus of RDT is on the role of interlocking to provide firms access to external resources, such as capital, knowledge and technical expertise. The theory views Boards as 'co-optative' mechanisms for firms to establish links between themselves and external resources and to protect themselves from adverse environmental changes (Pearce & Zahra, 1991; Pfeffer, 1972; Pfeffer & Salancik, 1978). RDT takes a perspective with more emphasis on access to resources and less on the micro-monitoring and inspection of executive management's activities.

A number of previous studies have considered Board independence and its impact on the Board's monitoring and advisory roles and firm performance (Barnhart, et al., 1994; Fosberg, 1989; Hermalin & Weisbach, 1991; Byrd & Hickman, 1992; Schellenger, et al., 1989; Daily & Dalton, 1992; Beasley, 1996; Müller, 2014; Fuzi, et al., 2016). However, empirical evidence on the presence of independent non-executive directors and firm performance is mixed. Many studies have reported a positive relationship between a majority of non-executive directors and the performance of firms (Baysinger & Butler, 1985; Schellenger, et al., 1989; Barnhart, et al., 1994; Daily & Dalton, 1992), whereas other works have found no relationship between a majority of non-executive directors and improved firm performance (Fosberg, 1989; Bhagat & Black, 2002; Molz, 1988; Hermalin & Weisbach, 1991; Adams & Ferreira, 2007). For example, the study conducted by Baysinger & Butler (1985) found that firms with a higher proportion of independent directors demonstrated superior performance. They argued that a Board of Directors with the power to hire, fire and compensate senior management is better equipped to deal with conflicts of interest amongst decision-makers and residual risk bearers. Barnhart, et al. (1994) investigated the influence of Board composition on firm performance whilst controlling for managerial ownership and other key variables. They used Tobin's Q to measure firm performance and performed a set of sensitivity analysis using a variety of instruments. Their findings suggest a significant positive relationship between Board independence and performance. Bhagat & Black (2002) used governance and the financial data of US firms to determine the relationship between Board composition and firm performance. They concluded that, although companies with poor performance have shown a trend towards the appointment of more independent directors, Board independence did not yield any positive impact on firm performance.

A potential disadvantage of non-executive directors is that they may lack relevant firm-specific information and knowledge (Adams & Ferreira, 2007); it could prove problematic for small firms still going through their growth cycle. Non-executive directors are particularly important for firms operating in less developed countries, such as Pakistan. The SECP and KSE strongly encourage companies in Pakistan to maintain a balance of executive and non-executive directors, including independent directors and those representing the interests of minority shareholders. In Pakistan, Awan (2012) and Javed & Iqbal (2006) reported a positive relationship between the presence of non-executive directors and the performance of firms, as measured by ROA and ROE.

Based on the account of the above discussions and empirical evidence, this research proposes the following hypotheses in an effort to understand the causal relationship between Board independence and firm performance in Pakistan.

H3: There is a positive relationship between the proportion of NEDs and firm performance (Tobin's Q, ROA and ROE).

H3.1: The relationship between proportion of NEDs and firm performance is mediated by the Board's monitoring role (frequency of Board meetings).

H3.2: The relationship between proportion of NEDs and firm performance is mediated by the Board's Resource-dependence role (board size).

H3.3: The above relationships are moderated by the SECP Code such that they became stronger following its implementation.

CEO Duality (Board Leadership)

CEO duality is another important internal mechanism of CG with the propensity to influence the performance of firms through the monitoring and Resource-dependence functions of the Board. CEO duality is a situation in which a company's CEO simultaneously acts as Chairperson of the Board. The position of Chairperson carries a lot of power, influence and responsibility (Lechem, 2002). Therefore, when the CEO also serves as Chairperson of the Board, this role duality is likely to confer upon the CEO a wider base of power and control (Boyd, 1995). Following a number of recent CG breakdowns, scholars, regulators and reformers across the world are pressuring firms to abolish CEO duality and have recommended the separation of the roles of CEO and Chairperson in mind of avoiding an excessive concentration of power (Hashim & Devi,

2009; Yang & Zhao, 2014) and entrenchment by the CEO and executive directors (Jensen, 1993). For example, in the UK, according to Cadbury (1992), there should be a clear division of responsibilities at the head of the company, implying that the roles of chair and CEO should not be combined. Similarly, in the case of listed companies in Pakistan, both the SECP Code of Corporate Governance and KSE Listings Rules explicitly state that the positions of chairman and CEO should not be held by the same individual, unless specifically provided for in any other law.

As mentioned in the previous chapter, Agency Theory and RDT present opposing views on the issue of CEO duality. An implicit assumption of Agency Theory is that the CEO is essentially an opportunistic agent who will exploit every opportunity to maximise his or her own personal welfare at the expense of shareholders (Kholeif, 2008). Proponents of Agency Theory and a separate leadership structure suggest that CEO duality is not good for monitoring management since a Board of Directors, chaired by the CEO, is more likely to be controlled and influenced by the CEO and, as such, cannot be perceived as effective or impartially performing its monitoring function (Lim, 2011; Hashim & Devi, 2009; Fosberg & Nelson, 1999; Fama, 1980; Hermalin & Weishach, 1988; Fama & Jensen, 1983; Ranti, 2013). Hashim & Devi (2009) argue that the separation of the positions of CEO and Chairperson provides essential checks and balances over management's performance; therefore, this research argues that, theoretically, such separation should lead to better financial performance. A separate leadership structure may help companies to reduce information asymmetry and thus lead to higher access to capital, which, in turn, may reduce the cost of capital and increase the financial performance of firms (Ranti, 2013).

While Agency Theory supports the separation of the two roles with the aim of improving the Board's monitoring responsibilities, RDT supports CEO duality as a way of delivering a more effective leadership structure so as to achieve better financial performance, as well as other corporate objectives of the company. Supporters of CEO duality believe that combining the two roles creates a favourable working environment, as there is no information breakdown between CEO and Board, and that CEO duality is thus not theoretically harmful (Finkelstein & D'Aveni, 1994; Anderson & Anthony, 1986; Rechner & Dalton, 1991; Sridharan & Marsinko, 1997; Lorsch & MacIver, 1989). Combining the two roles together is more likely to enhance internal communication, and greater levels of information and knowledge possessed by a single person could easily enhance the Board's monitoring and advisory functions, hence firm performance (Lorsch & MacIver, 1989).

Several studies have addressed the CEO duality-performance relationship, with inconsistent results garnered from such efforts. The studies that have reported a negative association between CEO duality and firm performance are (Kang & Zardkoohi, 2005; Brickley, et al., 1997; Yermack, 1996; Goyal & Park, 2002; Pi & Timme, 1993; Gillan, 2006; Irshad, et al., 2015) and it is consistent with the agency argument. For example, the study conducted by Kang & Zardkoohi (2005) concluded a negative association between CEO duality and the firm performance due to CEO entrenchment and a decline in board independence. Goyal & Park (2002) suggests that CEO duality makes it tough for Board to remove poorly performing managers, and consolidation of power leads to poor performance and low market value of firm. Pi & Timme (1993) argue that, when the CEO is also chairman of the board, principal-agent conflicts may be aggravated because of the consolidation of the decision management and the decision control processes. Their results suggest that cost efficiency and return on assets are lower in banks with CEO duality. However, there are many studies that have reported a positive association between CEO duality and firm performance are ((Pfeffer & Salancik, 1978; Boyd, 1995; Pearce & Zahra, 1991; Amaral-Baptista, et al., 2011; Daily & Dalton, 1997)) and it is consistent with the RDT argument.

The above evidence and the literature discussed in the previous chapters prove that it is unclear whether the duality or separation of the two roles is the correct approach to creating an effective leadership structure capable of influencing firm performance. To answer this important question and extend the current knowledge of the impact of CEO duality or separate leadership structure on firm performance, the following hypotheses are devised for empirical testing:

H4: There is a negative relationship between CEO duality and firm performance (Tobin's Q, ROA and ROE).

H4A: The relationship between CEO duality and firm performance is mediated by the Board's monitoring role (frequency of Board meetings).

H4B: The relationship between CEO duality and firm performance is mediated by the Board's Resource-dependence role (board size).

H4C: The above relationships are moderated by the SECP Code such that they became stronger following its implementation.

Board Diversity

The concept of Board diversity suggests that Boards of Directors should reflect the structure of society, suitably representing gender, ethnicity and professional background (Tarus, 2013). Milliken & Martins (1996) have argued that appropriately composed Boards should provide diverse perspectives; therefore, diverse Boards are likely to enhance the quality of decisions, as well as firm performance overall (Tarus, 2013). Kang, et al. (2007) defined Board diversity in terms of the compositional variety of the Board of Directors. The current literature on CG differentiates diversity between two types: the first is based on the identifiable attributes of directors, such as gender, race, nationality, ethnicity and age; the second type of diversity is non-observable diversity, which is seen to include directors' educational credentials, functional background and industry experience (Kang, et al., 2007). Board diversity is supported in both the Agency and Resource-dependence perspectives (Van der Walt & Ingley, 2003; Baranchuk & Dybvig, 2009; Adams & Flynn, 2005; Robinson & Dechant, 1997).

Proponents of the Agency Theory are in favour of diversified Boards because they argue that such Boards are more likely to be effective monitors of management, as Board members with diverse backgrounds and attributes are more likely to enhance Board independence and, hence, firm performance. RDT also provides a strong conceptual framework and business case for Board diversity. For example, Adams & Flynn (2005) claimed that, when Boards are diversified, this allows Board members to make better decisions through more productive discussion. Robinson & Dechant (1997) suggested that diversity promotes a better understanding of the market, increases creativity, leads to more effective problem-solving and leadership, and promotes effective global relationships. The theoretical literature presented in the previous chapters suggests that companies can enhance the overall effectiveness of their Board and, hence, their performance through Board diversity. However, empirical evidence on the performance effect of Board gender diversity remains mixed.

In a study of Spanish listed companies, Campbell & Minguez-Vera (2008) reported a significant positive relationship between the proportion of female Board members and firm performance, as measured by Tobin's Q ratio. Farrell & Hersch (2005) found a positive relationship between female Board members, company share prices, and Return on Assets (ROA). Similarly, in a study of US listed companies, Erhardt, et al. (2003) reported a positive relationship between the proportion of female directors and a firm's performance. They used ROA and Return on Investment as two measures of firm performance. Cox & Black (1991) and Robinson & Dechant (1997) reported several tangible and intangible

advantages of managing Boards' cultural diversity. They outlined Board diversity as able to create a competitive advantage in cost savings, resource acquisition, marketing, creativity, problem-solving, organisational flexibility, business growth and wining competition.

On the other hand, Carter, et al. (2003) completed a study centred on the relationship between Board diversity and firm value in the context of Agency Theory, with their findings suggesting a significant negative relationship between the proportion of women on a Board and company Agency costs. Following the implementation of a 40% female quota for Norwegian firms, Ahern & Dittmar (2012) studied the impact of this legislative change on the performance of firms and reported that compliance with the new female quota had a significant negative impact on the firms' market value. In a study of Sri Lankan-listed companies, after controlling for size, industry and other CG measures, Wellalage & Locke (2013) found a significant negative relationship between the proportion of women on Boards and firm value, along with an increase in company agency costs.

Attention to this aspect of Board structure will surely enhance the existing level of understanding of the relationship of Board diversity to firm performance. This research proposes the following hypotheses in an effort to understand the relationship between Board diversity and firm performance in Pakistan.

H5: There is a positive relationship between Board diversity and firm performance (Tobin's Q, ROA and ROE).

H5A: The relationship between Board diversity and firm performance is mediated by the Board's monitoring role (frequency of Board meetings).

H5B: The relationship between Board diversity and firm performance is mediated by the Board's Resource-dependence role (board size).

H5C: The above relationships are moderated by the SECP Code such that they became stronger following its implementation.

Board Committees

Chambers (2014) argued that Boards often experience difficulties and, in some cases, the near impossibility in giving in-depth consideration to all important matters due to the time

constraints they face. Therefore, establishing Board subcommittees is one way of enhancing firms' performance through the effectiveness of Board structure and its processes. Board committees exist within all types of organisation, and, in general, Board committees focus on specific areas of work so as to allow the Board to concentrate on the most important strategic issues. The existence of various Board committees helps to make the Board an important CG system.

Not all Boards will require a large number of different Board committees to manage their work; rather, this depends on the individual needs of the company, including the Board's strategic plan (Andringa & Engstrom, 2012). However, some Board committees are mandatory, such as those required under the governance regulations or stock exchange listing requirements. For example, in Pakistan, the SECP Code and Stock Exchange Listing Rules require all listed companies to have an audit committee and a human resource and remuneration committee. In the UK, Cadbury (1992) highlighted the importance of Board committees in enhancing the overall effectiveness of corporate Boards and recommended that companies establish Board subcommittees to allow focus on specific aspects of governance that are considered challenging. Aside from directly helping and supporting the Board in its functions, subcommittees can serve as a means for bolstering the credibility of the company's CG framework.

There is a growing volume of literature on Board structure, which generally suggests that Boards tend to perform better and in the best interests of shareholders when they are supported by subcommittees that are independent, expert and diligent. Much of the existing work, however, was conducted in the context of developed countries, leaving a significant gap in the literature and a lack of understanding concerning the relationship of Board committees with performance in developing and emerging countries.

Several studies have been undertaken into the above-mentioned characteristics of an audit committee and the quality of financial reporting that may be seen to lead to investor confidence and superior firm performance. For example, Anderson et al. (2003) studied the relationship between the contents of firms' financial information and Board structure, reporting that financial markets attach more credibility to earnings announcements when Boards and audit committees are both independent and active. Agrawal & Chadha (2005) found a reduced probability of earnings restatements in companies where there was an independent director with financial expertise served on the Board. Karamanou & Vafeas (2005) looked at how Boards and audit committees are associated with voluntary financial

disclosure practices and firm performance. They argued that, in firms with a more independent Board and audit committee structure, managers are more likely to make or update an earnings forecast, and that this forecast is more likely to be accurate and capable of attracting a more favourable market response. Be'dard et al. (2004) studied whether the expertise, independence and activities of a firm's audit committee influenced the quality of its publicly released financial information. They reported that aggressive earnings management is negatively associated with the financial and governance expertise of audit committee members.

Smith (2012) assessed the impact of remuneration committee independence on CEO's pay and firm performance. The study claimed that, in the UK, alignment between the conflicting interests of the agent and principal is achieved through a mixture of incentives, such as cash bonuses, share options, and other equity-based incentives, thereby tying the agent's remuneration to the performance of the company. Jensen & Murphy (1990) empirically tested the association between CEO compensation and firm performance, and reported a positive relationship between Similarly, Hall & Liebman (1998) reported a significant positive relationship between firm performance and CEO monitory benefits. Kallamu (2016) examined the impact of a nomination committee on the performance of finance companies in Malaysia and reported a positive influence on accounting return. The nomination committee is particularly important in reducing the Agency problem, and the existence of an independent nomination committee has found positively linked with firm performance (Carson, 2002; Vafeas, 1999; Byrd & Hickman, 1992).

Hypothetically, Board committees are considered good defenders of strong CG. However, Sonnenfeld (2002:4) highlighted that *"Sunbeam, Enron, Cendant, McKesson, HBOC, and Waste Management all had the requisite number of committees and guidelines, yet accounting scandals still penetrated this governance shield"*. The results generated by the above-mentioned studies are broadly consistent with claims that effective CG through Board's sub-committees is associated with better financial disclosure and firm performance.

In mind of testing the relationship between Board committees and firm performance in Pakistan, the following hypotheses are proposed:

H6: There is a positive relationship between Board committees and firm performance (Tobin's Q, ROA and ROE).

H6A: The relationship between Board committees and firm performance (Tobin's Q, ROA and ROE) is mediated by the Board's monitoring role (frequency of Board meetings).

H6B: The relationship between Board committees and firm performance (Tobin's Q, ROA and ROE) is mediated by the Board's Resource-dependence role (board size).

H6C: The above relationships are moderated by the SECP Code such that they became stronger following its implementation.

Audit Committee Independence

Internal audit is an important tool for companies to help the Board of Directors to discharge their governance tasks. Audit committee members in public companies are appointed by executive management and the Board of Directors to oversee the financial reporting activities of the companies. The primary responsibilities of the audit committee involve supporting the Board of Directors on issues relating to financial reporting and the internal controls of the company (DeZoort, et al., 2002). Audit committees work closely with the executive directors; therefore, in order to carry out their duties effectively, audit committees' independence is critical so as to prevent executive directors from influencing the work and oversight of the committees and the work of the external auditors. Miko & Kamardin (2015) argue that earnings management has been known to be one of the methods used by executive directors to mislead their stakeholders to report unrealistic numbers, despite the check and balances (e.g., CG codes) on the corporate processes. Hence, the role of an independent audit committee is critically important for the protection of stakeholders' interests. Although audit committee characteristics, such as audit committee size, frequency of its meeting and the presence of financial expertise, are equally important, this research only explores the impact of audit committee independence on firms' financial performance.

According to Agency Theory, a conflict of interest exists between internal and external stakeholders of the companies. In public companies, it is not abnormal for top management to make decisions that may adversely impact the best interests of shareholders. The theory suggests that Board independence and, in particular, the presence of a majority of non-executive directors on audit committees, should mitigate Agency conflicts by improving the quality financial reporting. According to Agency Theory, an independent audit committee is a key CG tool to ensuring the Board's accountability to its shareholders for the financial viability and integrity of the company.

The links between the independence of audit committee members and firm performance has been extensively explored in the current literature (Miko & Kamardin, 2015; Saleh, et al., 2007; Baker & Owsen, 2002; Anderson, et al., 2004; Yin, et al., 2012; Chien, et al., 2010; Dey, 2008; Braswell, et al., 2012; Abbott, et al., 2004; Carcello & Neal, 2000); however, the findings are mixed in supporting claims and perceptions about the value of independent audit committees in achieving better performance. For example, Anderson, et al. (2004) reported that full independent audit committees are linked with reduced costs of capital and improved financial performance of companies. Abbott, et al. (2004) conducted a comprehensive study on the impact of certain audit committee characteristics identified by the Blue Ribbon Committee on *Improving the Effectiveness of Corporate Audit Committees* on the likelihood of financial restatement. The results of their study found that the independence and activity level of the audit committee exhibited a significant and negative correlation with the occurrence of restatement. Chien, et al. (2010) found the existence of audit committee and its specific characteristics, such as independence, financial expertise and increased activity, positively correlated with the reduced frequencies of internal control problems and better operating performance. Dey (2008) reported that the composition of the Board and the independence of the auditor are significantly associated with firm performance.

Likewise, Yin, et al. (2012) claimed that an effective and independent audit committee can improve financial transparency for the better protection of shareholder interests and the enhancement of the value of the company. Klein (2002) reported that audit committee independence is related to firm value because independent audit committees reduce the likelihood of earnings manipulations by the management and thus improve transparency in financial reporting. Miko & Kamardin (2015) highlighted that audit committees and audit quality had reduced manipulation of accounts through discretionary accruals in the case of Nigerian listed companies.

Although the independence of the audit committee has its upside, there are also various risks associated with it: for example, having an independent audit committee may assist in better monitoring and transparent financial reporting; however, being totally independent and separate from management means less insight and understanding of the company's business issues and a potentially negative impact on performance (Sharma, et al., 2011). The results from meta-analyses, as reported by Pomeroy & Thornton (2008), indicate that audit committees' independence is more effective in improvising the quality of audits than improvements in financial performance. Similarly, Owens-Jackson, et al. (2009) reported

that, even in those firms with good CG systems, fraud still occurred. Finally, Krishnan & Visvanathan (2008) reported that audit committee independence did not influence accounting conservatism for US firms.

A bulk of the existing research on audit committee independence suggests that a higher percentage of independent directors and audit committee Chair independence is positively linked with performance. Therefore, this research proposes the following hypotheses in mind of developing further understanding of the relationship between audit committee independence and firm performance in Pakistan:

H7: There is a positive relationship between audit committee independence and firm performance (Tobin's Q, ROA and ROE).

H7A: The relationship between audit committee independence and firm performance is mediated by the Board's monitoring role (frequency of Board meetings).

H7B: The relationship between audit committee independence and firm performance is mediated by the Board's Resource-dependence role (board size).

H7C: The above relationships are moderated by the SECP Code such that they became stronger following its implementation.

4.5.3 Ownership Concentration

Ownership structure is an important component of CG framework (Shleifer & Vishny, 1986), and the nature of the bond between ownership structure and firm performance is a fundamental issue in CG literature. According to Agency Theory, ownership structure has a direct influence on the principal-agent relationship (Fama & Jensen, 1983). Shleifer & Vishny (1997) argued that, where a firm has a diffuse ownership structure, this gives executive managers a greater opportunity to become powerful actors within companies' organisational structure, and, as a result of such, dispersed shareholders, who are the ultimate owners of the company, will not have any motivation or means of controlling the self-serving behaviour of the executive management. This situation gives managers the opportunity to become involved in self-interested activities at the expense of shareholders (Shleifer & Vishny, 1997).

Ownership structure drives the type of Agency problems and their influence on firm performance. Developing countries have unique ownership characteristics compared to Western countries. For example, in Pakistan, a large majority of companies are closely

held (family, business groups and state-controlled) businesses, with the main Agency problem in these companies not between the owners and their appointed managers, but rather a key governance issue arising from the risk of expropriation by their dominant or controlling shareholders, at the expense of minority shareholders (Javid & Iqbal, 2008). The concentrated ownership structure in Pakistan creates a Type II Agency problem, also known as the principal–principal Agency problem. In this type of Agency problem, the controlling shareholder has both the incentive and power to deceive minority shareholders. They can cheat minority shareholders through pyramidal ownership structures, complex interlocking directorships, cross-shareholdings, voting pacts and the tunnelling of resources from the focal firm to other controlled companies (Javed & Iqbal, 2006; Almeida & Wolfenzon, 2006; Bertrand, et al., 2002).

Concentrated ownership helps controlling owners to maintain tight control on business strategy and resources. The controlling owners not only want to retain tight control of their resources, but also want their business practice to look legitimate and professional (Anderson & Reeb, 2003). So, in order to achieve this dual objective of control and legitimacy, controlling shareholders structure their companies' Boards very carefully. As an example, in order to keep strategic and operational functions under their tight control, controlling shareholders will make use of CEO duality. Research shows that a combined leadership structure brings unity of command (Donaldson & Davis, 1991), avoids conflicts, brings coordination and achieves alignment in decision-making at the top of the company (Finkelstein & D'Aveni, 1994). On the other hand, in an effort to achieve legitimacy and recognition from their external environment, controlling shareholders need to bring in more independent NEDs to serve on the Board.

The presence of NEDs will help them achieve not only business legitimacy and recognition, but will also help them gain access to resources by linking their companies to the external environment (Anderson & Reeb, 2003; Pfeffer, 1973). Independent directors signal to the market that the firm is professionally managed and adopts sound CG standards. Independent directors are also usually individuals of high social standing, who bring reputational benefits and linkages with the external environment to the firms at which they serve.

The effectiveness of Board structure, as a governance mechanism, depends on the degree and power of the ownership constituents of a company (Cho & Kim, 2007). There is the possibility that ownership concentration and Board composition may be related to one

another, with large shareholders using their influence to select directors that are less likely to monitor them (Guizani, 2013). Cho & Kim (2007) assessed the effect of large shareholders on the relationship between independent directors and firm performance. Their results indicate that, initially, the association between independent directors and performance was positive; however, performance reduced when independent directors interacted with the large shareholders. Chen & Jaggi (2000) examined whether family ownership concentration effects the positive association between Board independence and the exhaustiveness of financial disclosure. Their results indicate that the positive association appears to be weaker for family-controlled firms when compared with non-family-controlled firms. They stated that family ownership may reduce the effectiveness of independent Boards in convincing management to provide more comprehensive information.

Chobpichien, et al. (2008) reported that family ownership negatively moderates the relationship between Board of Directors' quality and voluntary disclosure in Thai listed companies. Amrah, et al. (2015) tested the moderating effects of family ownership control on the relationship between Board of Directors' effectiveness and firm performance. Their results indicate that family control positively moderates the relationship between Board of Director effectiveness and cost of debt to enhance the performance of firm in Oman.

Empirically, the effects of ownership concentration on firm performance are not very clear, since the attributes of ownership are theoretically complex for researchers to understand. The extant literature suggests that some dimensions of ownership structure may have positive or negative impacts on the traditional Agency problems faced by companies. The data collected for this research show that, in Pakistan on average, 64.8% of shares in public limited companies are held by the five largest shareholders. Ownership concentration as a moderating variable can alter the direction and strength of the causal relationship between board structure and firm performance. This research argues that, if power, in terms of ownership concentration, rests in the hands of a few, then those few may also have the power to dictate and determine the structure of board and its relationship with performance. In Pakistani firms, dominant shareholders with concentrated ownership exercise their power to control the activities of businesses. Based on the account of the above-mentioned literature, this research proposed, the following hypotheses are proposed:

H8A: Firms with a high concentration of ownership will have more independent directors on their Boards.

H8B: Firms with a high concentration of ownership are more likely to have CEO duality.

H8C: Ownership concentration negatively moderates the relationship between Board structure and firm performance (Tobin's Q, ROA and ROE).

4.6   Chapter Summary

Empirical evidence as to the association between Board structure and firm performance is limited but still emerging. This chapter has begun by highlighting the arguments and concerns of previous researchers that, despite so much research in the field of CG, we still do not exactly know how Board structure contributes to the performance of firms. This research has shown that, regardless of growing criticism, disapproval and limitations, a large majority of researchers have mainly focused on Agency Theory and the traditional input–output research model in their efforts to explore the direct relationship between Board structural characteristics and firm performance. The chapter has stressed that the main focus of the Agency perspective is centred on the monitoring role of Boards, with the theory not paying much attention to the other functions of a Board, such as the advisory and resource-procurement roles of the directors. Based on both theoretical and imperial evidence, this chapter has highlighted that the application of a single theoretical perspective has produced a gap and unclear and contradictory findings. Furthermore, the chapter also demonstrated that the input–output research approach has ignored the importance of intervening variables, which may have a positive or negative influence on the causal relationship existing between governance and performance variables. Hence, the chapter has identified a significant gap in our understanding as to the causal relationship between CG and firm performance. To contribute to the existing literature, the chapter has provided a more comprehensive research model from which a wide range of testable hypotheses are developed. The model proposed and used for this research is based on three important theories because it is argued that the Board of Directors performs a wide range of duties and has to adopt alternative approaches to CG. It is believed that different theories can help explain the extent to which Boards may vary in the importance placed on the different roles they undertake. This next chapter presents the research design and methodology adopted for this research.

5   RESEARCH DESIGN AND METHODOLOGY

5.1 Introduction

Based on the Agency, Resource-dependence and Stakeholder theories, this research examines the relationship between Board structure and firm performance in Pakistan, taking into account the moderating role of CG reforms (the SECP Code) and the mediating influence of the Board's monitoring and Resource-dependence roles on firm performance in a country where a large majority of firms have a concentrated ownership structure. The aim is to discover causal relationships between the variables. As such, this research employs a quantitative research design and methodology. A broad review of the literature on CG practices facilitated development of the proposed conceptual framework (Chapter 4), which, in turn, made the selection process for research design and research methodology easy for this research. It would be true to say that the research methodology adopted in this particular research has largely been influenced by the nature of the available data and a number of previous studies conducted in the area of CG, especially those works examining the relationship of Board structure to firm performance. STATA and Microsoft Excel software packages were used for the data analyses.

This chapter is divided into two major sections. The first section begins with a general explanation of the philosophy of research design in a bid to introduce the theoretical aspects of different research methodologies and the fundamental assumptions of social science research. The second section outlines the research design and justification for the research approach adopted in this particular research. This section also provides a detailed description of the research methods used in this research, including defence and theoretical support for the selection and use of content analysis as a research method. The chapter also covers research location, population, sample size, operationalisation and measurement of variables and the challenges and ethical considerations relevant to this research.

5.2 The Philosophy of Research Design

Research is an organised process of inquiry involving a number of interconnected steps, carried out with the aims of collecting and analysing information so as to provide the best possible solution to the research problem under examination. In its simplest form, research is an organised, systematic and controlled inquiry of a phenomenon centred on acquiring new knowledge and information on the phenomenon (Kothari, 2004; Emory, 1980). According to the Encyclopaedia of Social Sciences, research is "the manipulation of things, concepts or symbols for the purpose of generalising to extend, correct or verify

knowledge, whether that knowledge aids in construction of theory or in the practice of an art".

The major aim of any social and behavioural research is to develop the knowledge required to explain various characteristics of human nature and organisational behaviour. As an example, a researcher may be interested in establishing why some companies in a particular country are more successful and profitable than other companies operating in either the same or a different country but with a similar business and social environment. One way of answering this question or determining the adequacy and validity of different explanations is for the researcher to collect and analyse relevant data and establish the extent to which such data and other information are consistent with the explanations (Cramer, 2003).

A large number of research methodologies have been identified in the literature. The use of a particular research methodology, however, depends on a number of factors, such as the scope, context, purpose and target population of the research project (Tomkins & Groves, 1983), as well as the time and other resources at the researcher's disposal (Gandomi & Haider, 2015). Therefore, it is crucial to this research that the right methodology be adopted and the most appropriate tools and techniques be adopted in order to collect the right data because it is the quality of the data and the selection of appropriate analytical techniques which will ultimately determine the quality, practicality and implications of the findings for other users (Gill & Johnson, 2002).

A research methodology commonly consists of four major stages: exploration of the situation, development of a research design, collection of data, and the analysis and interpretation of the results (Emory, 1980). In order to understand the steps involved in the research process, Saunders et al. (2012) developed the 'research onion' (5-1), comprising six layers, namely research philosophies, approaches, strategies, choices, time horizons and research techniques and procedures. Each layer represents a number of options and choices available to researchers. It is up to the researchers to select the most suitable option to fit with the purpose and context of their research. This section focuses only on research philosophies, notably the first layer of the research onion.

Research philosophy is all about the development of knowledge and understanding the nature of that knowledge (Saunders, et al., 2012). It is not unusual for different researchers to have different beliefs and feelings about the world; therefore, they may interact and deal differently with the same context, issue and environment. Consequently, the ways in which

research activities are conducted may vary from one researcher to the next, and even from one context to another. However, it must be remembered that all research activities are subject to specific rules, standards and procedures, which are in place to direct and control researchers' activities, actions and beliefs concerning the nature of the knowledge. These standards, procedures and rules can be referred to as philosophies or paradigms (Bogdan & Taylor, 1975). Research philosophy is a way of looking at a research problem and helping the researcher to determine the most appropriate methods through which to conduct their research. Cohen, et al. (2011), Denzin & Lincoln (2011) and Collis & Hussey (2009) defined research philosophy with the help of research paradigms. According to these authors, a research paradigm is a broad framework involving important assumptions, perceptions, beliefs, attitudes and feelings pertaining to the social world and the nature of knowledge.

Figure 5-1: Research Onion
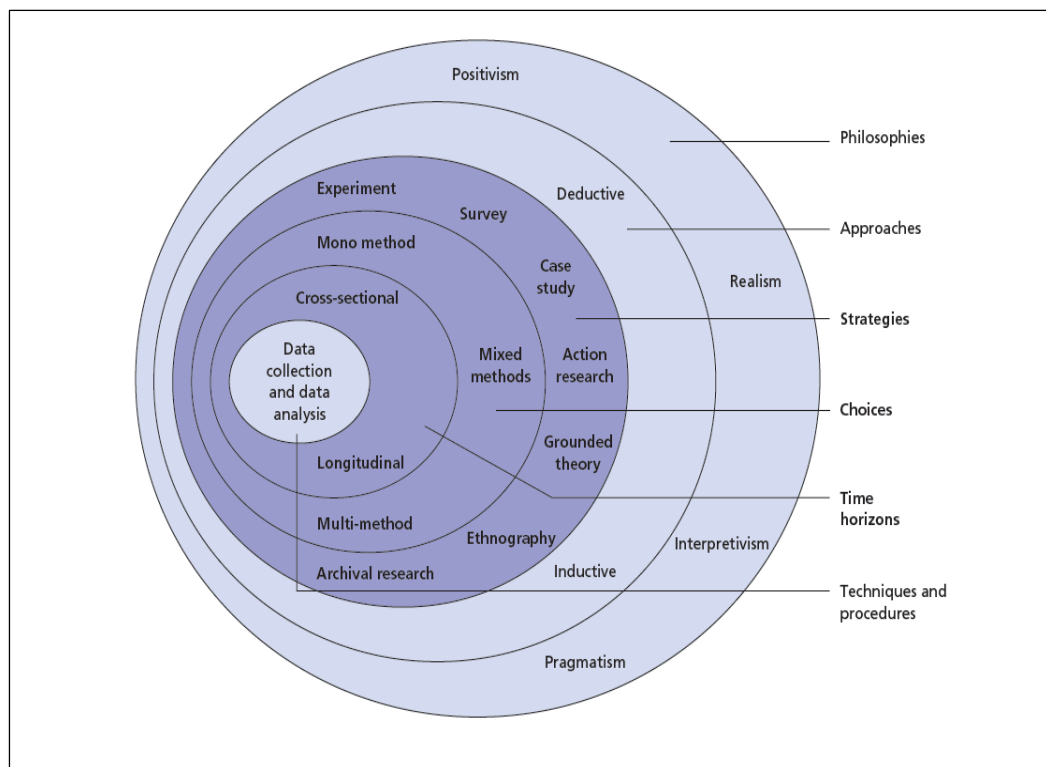
Source: Adopted from Saunders, et al.,(2012)

5.2.1   *Assumptions about the Nature of Social Research*

Any research activity starts from its philosophical assumptions because all social researchers approach their research problem via explicit or implicit assumptions about the nature of the social world and the way in which it can be viewed and investigated (Burrell & Morgan, 1994; Gill & Johnson, 2002). There are a number of philosophical assumptions about the nature of social science, understanding of which is critical for any researcher

because the choice of a particular research methodology is driven by the researcher's own philosophical assumptions about ontology and epistemology (Gill & Johnson, 2002; Saunders, et al., 2012), as well as by the research question under examination (Collis & Hussey, 2009). It is convenient to understand and conceptualise social science or the nature of social research in terms of four sets of assumption related to ontology, epistemology, human nature and methodology (Burrell & Morgan, 1994).

Ontology

Crotty (2003) defined ontology as 'the study of being'. It is concerned with the nature of reality and the existence of relationships between people, society and the world in general (Eriksson & Kovalainen, 2008). Ontological assumptions are the views or opinions of social scientists about the world and human beings related to various epistemological and methodological positions (Morgan & Smircich, 1980). Guba & Lincoln (1989) state that ontological assumptions are those that respond to the questions 'What is there that can be known?' or 'What is the nature of reality?' In ontological assumptions, the researcher must answer questions about the nature of reality (Creswell, 2013).

Burrell & Morgan (1994) described two opposing ontological positions, namely realism and nominalism. They argued that all social scientists have to comprehend this very basic ontological question: whether the reality to be investigated is external to the individual—enforcing itself on individual consciousness from the outside—or whether the reality is a result of individual consciousness stemming from the inside. In the same vein, Saunders, et al. (2012) described objectivism and subjectivism as two aspects of ontology, arguing that objectivism takes the position that social entities exist in reality, whilst subjectivism takes the position that social experiences are created from the perceptions and resulting actions of those social actors concerned with their existence. Burrell & Morgan (1994) argued that objectivism regards the social world as a mixture of real and tangible structures, whereas subjectivism views the social world as being made up of names, concepts and symbols that give structure reality. Therefore, no objective reality exists in the case of subjectivism, which means that, under this ontological position, researchers will need to construct their research objectives (Gray, 2014).

Epistemology

Researchers look at the social world based on their background, existing knowledge and professional experience. According to Crotty (2003) in social research epistemology is a

way of understanding and explaining "how we know what we know". Epistemology is concerned with assumptions about the grounds of knowledge and what constitutes acceptable and reliable knowledge (Saunders, et al., 2012), as well as how we can ensure that knowledge is both adequate and legitimate (Maynard, 1994). Knowledge can be hard in nature—in other words, real and transferable—or otherwise may be soft knowledge, which is more implicit, subjective and spiritual (Burrell & Morgan, 1994). Thus, epistemological assumptions determine what forms of knowledge can be obtained and how one might begin to understand the world and communicate this as valid knowledge to other users of the knowledge (Burrell & Morgan, 1994).

Human Nature

Assumptions relating to human nature are concerned with the relationship between human beings and the environment in which they exist. Clearly, understanding of this relationship is critical for social researchers because human beings are essentially the subject and object of all enquiries (Burrell & Morgan, 1994). In social research, most researchers adopt two contrasting positions, namely determinism and voluntarism, in their attempts to understand humans' relationship with their environment (Burrell & Morgan, 1994). Determinism assumes that humans and their activities are completely determined by their circumstances and the environment in which they are positioned (Scott, 2011). In contrast to determinism, voluntarism assumes that humans are completely independent, creative and free-willed individuals, who can create their own environment rather than being determined by it (Cohen, et al., 2011).

Methodology

Methodology is concerned with the selection of different techniques and methods for use in investigating social and business phenomena. Burrell & Morgan (1994) identified and reported two opposing methodological views, namely nomothetic and ideographic: whilst the former requires systematic protocols and techniques, and is seen to involve the rigorous and scientific testing of perceptions, assumptions and hypotheses; the latter, in contrast, assumes that researchers can only investigate and understand the social world if they have access to first-hand knowledge about the subject being researched (Ellis, et al., 2011). Methodology involves the analysis of subjective data that the researcher generates by participating in or getting inside situations (Burrell & Morgan, 1994; Gill & Johnson, 2002). Figure 5-2 has been adapted from Burrell & Morgan (1994) so as to provide a summary of these four assumptions in terms of their subjective and objective dimensions.

Figure 5-2: The Objective and Subjective Dimensions of Assumptions of Social Science Research
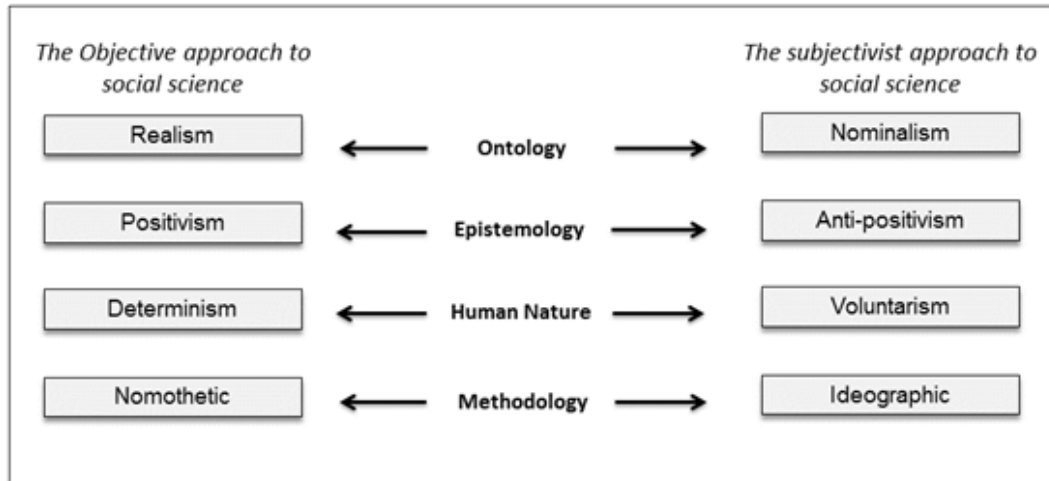
5.2.2 Research Paradigms

Burrell & Morgan (1994) argued that researchers must select an appropriate paradigm and that their research methods must be compatible with the paradigm selected. There are four major research paradigms used by previous researchers in order to understand the nature of reality: positivism, interpretivism, realism and pragmatism. However, much of the extant literature on CG is built mainly around the two contrasting approaches known as positivism and interpretivism, also referred to as anti-positivism or phenomenological. Rubin & Rubin (2012) argued that both paradigms differ in their assumptions about what is important for researchers to take into the research process.

Positivism

Positivism or positivistic research approaches are based on research methodologies commonly used in natural science, where researchers are seen as being independent from the research activities they are conducting (Pathirage, et al., 2008). According to Easterby-Smith, et al. (2002), the central assumption of positivism is that the "social world exists externally and its properties should be measured through objective methods rather than being inferred subjectively through sensation, reflection or intuition". This paradigm suggests that knowledge is politically and socially neutral and it can be obtained with quantitative precision, without bias, through the use of standardised instruments, through an accumulation of facts that build a close approximation to a reality that exists independently of human perception (Rubin & Rubin, 2012).

A positivistic research philosophy is linked with the idea of objectivism, where the goal of the research is to discover a universal truth, reality or reasoning that is always out there.

This research philosophy is more suitable for researchers working with an observable social reality and who hold an interest in the collection of data across a large number of participants with the aim of producing law-like generalisations from their findings (Remenyi, et al., 2010) This research philosophy seeks regularities and aims to explain causal relationships between observed variables to predict what might happen in the social world (Burrell & Morgan, 1994).

The normal process within a positivist approach is to study the literature in search of existing theories so as to generate testable hypotheses or propositions to either confirm or further develop existing theories (Saunders, et al., 2012). This paradigm claims it is important for researchers to clearly distinguish between fact and judgement. Within this paradigm, researchers seek objectivity and use consistently rational and logical approaches to research (Carson, et al., 2001). The positivist research approach is also known as scientific, empiricist, quantitative or deductive (Veal, 2005).

Interpretivism

Interpretivism is based on a perceived inadequacy and critique of positivism (Collis & Hussey, 2009), with critics of the positivistic paradigm arguing that rich insights into this complex and dynamic world would be lost if the complexity of the social world were to be reduced completely to a series of law-like generalisations (Saunders, et al., 2012). In contrast to positivism, interpretivism is based on the principles of idealism, assuming that the world is different for everyone (Saunders, et al., 2012) and that reality is controlled and regulated by people rather than by objectives and external factors (Easterby-Smith, et al., 2002). The position of interpretivism in relation to ontology and epistemology is that interpretivists believe the reality is multiple and relative (Hudson & Ozanne, 1988). The knowledge acquired in this discipline is socially constructed as opposed to objectively determined (Carson, et al., 2001). The aim within this paradigm is to understand and translate the meanings in human behaviour rather than to generalise and predict causes and effects (Hudson & Ozanne, 1988). In this research paradigm researchers assume that access to reality is only through social constructions such as language, consciousness, shared meanings, and instruments (Myres, 2009).

In interpretivist philosophy, researchers are seen as part of the research process; this philosophy accords very high importance to researchers' own beliefs and values relating to the reality and justification for their research problems (Easterby-Smith, et al., 2002). This research philosophy relies on the people being studied, providing their own

explanations for the issues being researched according to their own perceptions, situations or behaviours. Therefore, this philosophical position is more attractive to and suitable for researchers with small samples to evaluate. However, it must be remembered that this is likely to compromise the generalisability of the findings if seeking to understand the views of a larger population. The interpretivism approach is also referred to as hermeneutic, qualitative, phenomenological, reflective, inductive ethnographic or action research (Veal, 2005). Figure 5-3 presents a number of implications proposed by various researchers.

Figure 5-3: Implications of Research Paradigms

Positivist Paradigm		Anti-Positivist Paradigm
The world is socially constructed and subjective	Reality	The world is socially constructed and subjective
Observer is part of what is observed	Independence	Observer is part of what is observed
Science is driven by human interest	Value-freedom	Science is driven by human interest
Focus on meaning and try to understand what is going on	Causality	Focus on meaning and try to understand what is going on
Develop ideas through induction from data and observations	Hypothetical	Develop ideas through induction from data and observations
Using multiple methods to establish different views of reality	Operationalisation	Using multiple methods to establish different views of reality
Look at the totality of each situation	Reductionism	Look at the totality of each situation
Small samples investigated in depth or over time	Generalisation	Small samples investigated in depth or over time

Source: Based on Literature Review - Easterby-Smith, et al., 2006; Burrell and Morgan (1979); Saunders, et al.,(2012)

5.3 Research Approaches

The second layer of the research onion offers two research approaches from which to choose: deductive and inductive. Saunders, et al. (2012) argued that all research activities involve the use of theory and that, although researchers may not make the theory explicit in the design of their research, they do have to make it explicit in the presentation of their findings and conclusions. The extent to which researchers are clear about the theory at the start of their research plays a significant role in the overall design of their research activities. It determines whether researchers should use the deductive or inductive research approach to achieve their research objectives.

5.3.1 Deduction—Theory Testing

In a deductive research approach, researchers begin their research with a comprehensive review of the relevant literature in order to develop a conceptual and theoretical perspective, which is then subject to rigorous testing, with hypotheses developed and a research strategy designed to test these hypotheses (Saunders, et al., 2012). Deduction is defined as a research process in which researchers arrive at a logical and acceptable conclusion based on the generalisation of known facts (Sekaran & Bougie, 2009), which may either lead to confirmation of the existing theory or appropriate suggestions for modifying the theory in light of new evidence (Robson, 2002). This research approach involves the collection of specific data relating to those variables that the theories and previous research have identified as being important and relevant. The deductive approach is more dominant in the natural sciences, and tends to be a choice favoured by positivist researchers (Ticehurst & Veal, 1999). Within this research approach, researchers use highly structured methodology and collect data that can be measured quantitatively (Saunders, et al., 2012). A deductive research approach is characterised as moving from the general to the precise or specific.

5.3.2 Induction—Theory Building

The inductive research approach emerged to address problems associated with the deductive research approach, namely its rigid and inflexible methodology. In contrast with the deductive research approach, an inductive approach begins with the collection of relevant data, where researchers will develop a theory based on the empirical reality and an analysis of their collected data (Saunders, et al., 2012; Collis & Hussey, 2009). Through this research approach, inferences are made from particular instances, which is the opposite of the deductive research approach. In other words, induction is a process where research begins from a research question or questions and then moves to observation and description through to analysis, and finally to the formulation of a theory or theories. Since the research process moves from individual observation to statements of general patterns or laws, it is referred to as moving from the specific to the general or common. This approach may be considered more suitable for those researchers targeting small samples using qualitative data collection techniques (Saunders, et al., 2012).

Bryman & Bell (2011) indicated that the deductive approach is related to quantitative research that follows objectivism—ontological realism and epistemological positivism. In contrast, the inductive approach is related to qualitative research that follows

subjectivism—ontological nominalism and epistemological anti-positivism (Bryman & Bell, 2011). As illustrated in Figure 5-4, the deductive reasoning works from more general to more specific and inductive approach from specific to broader generalization (Trochim, 2006).

Figure 5-4: Deducted vs Inductive Research Approach
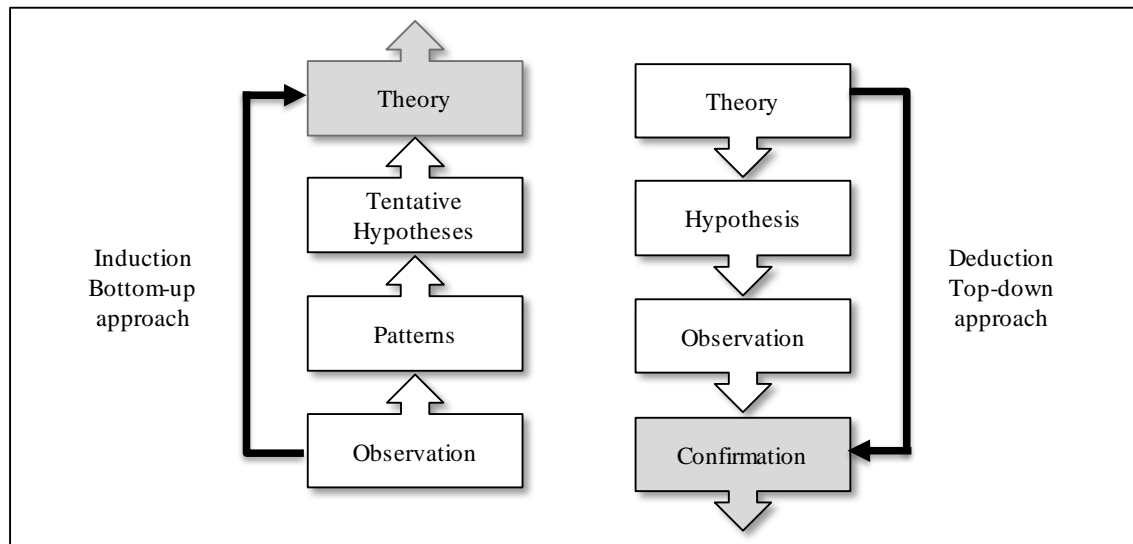
Source: Adopted from Trochim (2006)

5.4 Methodological Choices

Collis & Hussey (2009) defined research methodology as 'the overall approach to the research process, from the theoretical underpinning to the collection and analysis of the data'. According to these authors, methodology is concerned with a number of issues, such as why researchers should collect certain data, where data are to be collected, how they should be collected, analysed and interpreted, and how the findings of the research should be presented. Methodology is the discipline behind the process of obtaining, arranging and analysing information based on various theoretical and philosophical assumptions of ontology, epistemology, axiology and the data collection techniques (Saunders, et al., 2012; Burrell & Morgan, 1994). The research methodology used for a particular research depends largely on the paradigm adopted by the researchers because different ontological and epistemological assumptions are likely to influence the researchers towards different methodological choices (Burrell & Morgan, 1994).

Although the choice of possible research methodologies is wide, within CG literature, they are usually categorised into quantitative and qualitative methodologies.

5.4.1 Quantitative Methodology and Methods

A quantitative research methodology is a type of research approach that facilitates systematic enquiry into an identified problem based on existing theory through the collection of quantitative data, which can be measured and analysed using statistical techniques in an effort to define relationships between different types of variable (Creswell, 2013). A quantitative approach has the potential to deal easily with a large number of samples within a relatively short space of time. Holland & Campbell (2005) argued that quantitative research offers an advantage over other methodologies when using larger sample sizes, which can be seen when considering the ability to generate standardised numerical data and subsequently describe and predict relationships for a large population with a high degree of confidence. Maxwell (2005) contended that a quantitative research approach is a structured approach able to help researchers to achieve comparability and the generalisation of results across individuals, times, settings and contexts. Quantitative methodology tests objective theory and the relationship between variables through pre-determined hypotheses so as to determine if the predictive generalisations of a theory hold true (Creswell, 2013).

However, this approach also has its disadvantages. For example, Collins (1992) argued that a quantitative research approach has the effect of neutralising researchers by reducing or eliminating their influence on the extent that they become 'disembodied abstractions' and depersonalised. Quantitative analysis of the relationships between variables creates a static view of social reality (Cicourel, 1982). Heenetigala & Armstrong (2011) claimed that this type of research approach fails to provide an in-depth understanding of the phenomenon, and, as such, is criticised and disregarded by many researchers for failing to explain 'why' the factors observed may have occurred.

5.4.2 Qualitative Methodology and Methods

Creswell (2013) describes a qualitative research methodology as an approach of inquiry with the goal of exploring and understanding the meanings and importance of social or human problems, which individuals or groups assign to them. Unlike a quantitative research approach, qualitative research is inductive in nature and adopts a descriptive, non-numerical path to collecting and analysing information. Qualitative research is concerned with qualitative phenomenon involving quality or kind (Kothari, 2004). A qualitative research methodology is more appropriate when researchers are attempting to explore behaviours, attitudes, beliefs, views and experiences in descriptive form in an attempt to

gain a deeper understanding of the issues and the opinions of participants (Crouch & Housden, 2011; Berg, 2003). Berg (2003) argued that a qualitative approach offers the potential to provide a means of assessing unquantifiable facts and may prove useful in seeking answers to more complex questions.

In business research, there is no doubt that qualitative data can provide a more realistic picture and basis for analysis and interpretation, but a major issue with this research approach is the use of a small number of samples which are not always representative; therefore, the results cannot be applied to a larger population (Ridenour & Newman, 2008). Another issue with this approach is its data collection methods, which tend to not only be expensive but also very time-consuming (Hurst, 1987).

5.5   Research Approach in this Study

Having differentiated quantitative from qualitative research, this section justifies the use of a quantitative approach for this research. The reality explored in this research is the association of Board structure *(Board independence, CEO duality, Board diversity, Board committees and the independence of audit committees)* with the performance of listed firms in Pakistan. The research also examines the mediating effects of the monitoring and resource-dependence roles of the Board, as well as the moderating effects of developments in CG reforms and ownership concentration based on information disclosed in financial statements; this is done in order to determine whether CG practices in Pakistan are positively linked with the performance of firms. Based on its theoretical perspectives, the main objective of this research is to empirically test the reality of the relationship between Board structural variables and performance in the context of listed companies in Pakistan.

In this research, the researcher has adopted a position that is closer to objectivism, and the research's philosophical foundation is built on a positivist research paradigm with deductive reasoning and the use of quantitative research methods. Figure 5-5 summarises the key aspects of the research philosophy adopted in this research, whilst the justification and reasoning for the selection of a positivist paradigm, deductive reasoning and quantitative research techniques are outlined below.

The positivist approach has been adopted since it seeks to determine only the facts or causes of social phenomena. Moreover, in this research, the researcher is concerned only with understanding the nature of the causal relationships between the variables established in the conceptual framework. It is also believed that the researcher has no control over the

variables and the relationship between the various constructs; therefore, the researcher is only able to observe the phenomenon and the relationship between various constructs without interfering in these relationships by maintaining their independence (Keat & Urry, 1982). It is a fact that a number of theories and models have been developed and validated for examining the links between CG practices and firm performance. As such, the existing literature on Board structure and firm performance has been used to inform the researcher when selecting from a variety of dependent and independent variables. The existing literature also helped the researcher to develop hypotheses suitable for the current research and to test whether the predictive generalisations of Agency, Resource-dependence and stakeholder theories hold true in the case of listed companies in Pakistan.

Figure 5-5: Research Philosophy of the Current Research

To investigate corporate governance practices in Pakistan to empirically test the relationship between board structure and firm performance through the mediating role of board in the context of listed firms in Pakistan.

Purpose

Does the structure of the board of directors' matter in Pakistan for the performance of firms and has the SECP's revised Code and concentrated ownership structure moderated the relationship between board structure and firm performance in Pakistan?

Research Question

Theoretical Perspectives

Agency , resource dependency and stakeholder theories see a balanced board of directors' and concentrated ownership as two important governance mechanisms to align the interest of various stakeholders within a public corporation

Research Design

The content analysis of financial statements of 265 listed companies for a period of six years, divided into two independent time period of three year each i.e. 2009-11 and 2013-15.

Source: Adopted from Partington (2008)

The knowledge required to arrive at a description of the reality of this research is objective and available in the form of annual reports, websites and publicly available databases. It is quantitative knowledge that can be arranged through quantitative measurement of the variables using content analysis relating to the annual reports and other sources of information. It is believed that, for the purposes of this research, quantitative information is more structured, and quantitative methods are more easily applicable to longitudinal data. Furthermore, it is also clear that the nature of the research problem is measurable, and is objective rather than subjective.

Hence, in order to fully understand the true nature of the research problem, ontologically, this research has adopted a realist position and argued that the best epistemological position is positivism. The reasoning is deductive due to a lack of responses and the difficulties involved in obtaining the necessary data through interviews. The hypotheses were derived first, with the data collected afterwards so as to either confirm or reject the proposed hypotheses. This research does not suggest, in any shape or form, that other epistemologies cannot be applied to this type of research problem.

5.6 Sample Selection and Data Collection Process

This section describes the process adopted for sample selection, the kinds of data used, and the sources of data used for this research. The section is divided into three subsections: Subsection 5.6.1 explains the methodology for the selection of sample firms; Subsection 5.6.2 defines the period of the research; and Subsection 5.6.3 provides details about data collection procedure.

5.6.1 Sample Firms

It is very important for the researcher to clearly define the population being researched and ensure that the sample included in the investigation provides an accurate reflection of the entire population (Mann, 2012). The sample population for this research is all companies listed on the KSE. These firms were selected because they include a comprehensive range of industrial and commercial sectors. As of January 31, 2012—notably the time when the data collection process was started—there were 604 companies officially listed on the KSE, with a total of 576 companies listed as of December 31, 2015. The official list of all listed companies was obtained directly from the KSE's official website (available at: http://www.kse.com.pk), which was last accessed in September 2016.

Table 5-1 shows the industrial composition of all companies that were listed on the main Board of the KSE as of December 31, 2015. It also presents the industrial composition of those listed firms available for sampling alongside the final sample of firms for which full data were available for all of the six years in question. To qualify for the final sample, a company had to meet the following two strict conditions:

- First, a company's full annual reports for six years covering the periods 2009–2011 and 2013–2015 inclusive had to be available in order to assess the performance of companies on both sides of implementation of the revised Code. This approach was based on the work of Brick & Chidambaran (2010).

- Second, the company's corresponding six-year stock market and financial accounting data also had to be available for calculation of the Tobin's Q ratio.

Table 5-1: Research Sample

Panel A: Industrial composition of all listed firm on Karachi Stock Exchange						
			No of firms in each Industry			
Industrial Sector/Year	2009	2010	2011	2013	2014	2015
1. Textile Goods	149	141	152	158	148	151
2. Consumer Goods Industry	124	117	129	119	113	102
3. Chemicals and Bio-Tech	43	41	45	38	31	29
4. Industrial	97	93	102	83	88	82
6. Telecommunications	6	8	8	10	11	10
5. Financial Services	139	136	138	131	126	124
7. Energy and Public Utilities	13	15	13	12	13	13
8. Oil and Gas	19	19	17	16	17	23
9.Miscellaneous (Less than 5 companies in each group)	26	39	44	28	33	42
Total population	616	609	648	595	580	576
Less: Financials and Utilities Firms	197	209	212	187	189	202
Total sampled firms	419	400	436	408	391	374

Panel A: Industrial composition of firms available to be sampled						
1. Textile Goods	149	141	152	158	148	151
2. Consumer Goods Industry	124	117	129	119	113	102
3. Chemicals and Bio-Tech	43	41	45	38	31	29
4. Industrial	97	93	102	83	88	82
6. Telecommunications	6	8	8	10	11	10
Total Firms Available to be sampled	419	400	436	408	391	374
Less: Firms with no data	89	72	66	81	59	48
Less: Firms with missing data	65	63	105	62	67	61
Total sampled firms with full data	265	265	265	265	265	265

Panel C: Industrial composition of sampled firms with full data	No of firms in each Industry	Percentage of sample firms
1. Textile Goods	102	38.49%
2. Consumer Goods Industry	60	22.64%
3. Chemicals and Bio-Tech	51	19.25%
4. Industrial	52	19.62%
Total Sampled Firms with full data	265	100.00%

The following firms were excluded from the empirical analysis:

- ➢ Financial firms (Banking corporations, insurance companies, mutual funds and '*modaraba*' companies)
- ➢ Oil, gas and utility companies
- ➢ Companies in default and issued with a notice to regularise their financial position with the KSE
- ➢ Companies that have been delisted, suspended or with data missing during the period of this research.

Financial, oil, gas and utility companies were excluded from the analysis for three main reasons. First, the Code of Corporate Governance in Pakistan is not applicable to banking corporations, insurance companies, mutual funds and modaraba companies, although the SBP does encourage these companies to follow the Code. Financial institutions are subject to monitoring regulations set by the SBP, in addition to other special legislation. Furthermore, financial institutions are highly geared and have a unique capital structure which can affect their financial performance differently (Lim, et al., 2007). Wallace & Nase (1995) argued that market performance measures for financial institutions, such as Tobin's Q and market-to-book ratio, may not be defined in the same way as they are for non-financial firms, thus making these companies incomparable with non-financial firms. Second, financial, oil, gas and utility companies are heavily regulated, which may have a different impact on their governance structures and financial performance (Yermack, 1996; Yatim, et al., 2006; Guest, 2009; Cheng, et al., 2008). Third, excluding financial sector companies and companies with heavy state ownership and regulation from the analysis can help to facilitate comparisons with past studies that have also excluded such firms from their analyses (Bontis, et al., 2000; Haniffa & Hudaib, 2006). Finally, industrial groups with less than five observations were also excluded from the sample, which is in line with the work of prior researchers (DeFond & Jiambalvo, 1994; Subramanyam, 1996).

5.6.2   *Period of Research*

The study period of this research covers the years 2009 to 2015, excluding 2012 for the following two reasons:

1. In March 2012, the SECP issued its revised Code of Corporate Governance, which placed more emphasis on Board and audit committee independence. This study uses the revised Code as a reference point to study the impact of CG reforms on the performance of firms in Pakistan.
2. Due to the difficulties and large volume of data needing to be manually collected for the CG variables, market capitalisation and other financial data, limiting the study period to six years made it possible to realise the objectives of this research.

Although the Code was released in March 2012, the changes made only became effective on July 1, 2012. This meant that, during the financial year 2012, all listed companies were not required to comply with the provisions of the revised Code. Clearly, this was likely to affect firms' degree and timing of compliance with the provisions of the revised Code during the study period. As a result, and in order to ensure understanding of the impacts of

the revised Code on CG compliance and firm performance, it was necessary to divide the sample period into two periods of equal length.

5.6.3 Data Collection

The data collection technique used in this study was based on an analysis of secondary data available in the form of annual reports and other statutory returns submitted to KSE and SECP. In examining the relationship between Board structure and firm performance, the study required two sets of data: one set comprising financial variables (Tobin's Q, ROA and ROE) and a second set comprising CG variables relating to Board structure (Board independence, CEO duality, Board diversity, Board subcommittees and audit committee independence). Data on financial variables were manually gathered from the profit and loss and balance sheet sections of the annual reports of sampled companies. Data on CG variables were also collected from the annual reports. The process involved an in-depth examination of directors' profiles and statements of compliance with the Code of Corporate Governance so as to identify the independence of directors, leadership structure, frequency of Board meetings and the number of Board subcommittees. Market capitalisation data for each year in the study period were collected from the daily share prices listed on the KSE website in order to compute Tobin's Q.

In Pakistan, the Companies Act 1984 and the KSE Listing Rules require each company to issue and publish their financial and governance compliance data in their annual reports. Therefore, the researcher has used annual reports as the main source from which to extract the required data since it is believed that audited accounts are the most reliable, complete and main source of information used by companies to communicate with their stakeholders (Hassan & Marston, 2010; Lang & Lundholm, 1993; Botosan, 1997; Botosan & Plumlee, 2002).

5.7 Analytical Approach—Panel Data

This is a quantitative study designed to investigate the association between Board structure and firm performance. To estimate performance equations, this research has relied on panel data. Panel or longitudinal data are a type of data containing time series observations of a number of cases (i.e. countries, firms and individuals). Panel data holds cross-sectional and time series dimensions of cases (Hsiao, 2007). The data set compiled for this research contains a large number of cross-sectional observations and only six-time periods. It therefore is more suitable for cross-sectional analysis than time series analysis. There are

265 listed companies in the final sample. The data follows each sample company for a period of six years (2009–2011 and 2013–2015). The following section looks at the advantages of panel data in the context of this research and accordingly describes the different statistical options available for analysis of the data.

5.7.1 Why Panel Data?

Previous researchers have cited two main reasons for using panel data in their studies: first, the use of panel data provides multiple observations on each unit of their study sample, making it possible for them to control for unobserved or omitted explanatory variables (Wahba, 2015; Kalsie & Shrivastav, 2016); and second, panel data allows researchers to conduct time series analyses of their observations. However, this research is more cross-sectional, meaning the second reason is less relevant in the context of this research because some of the variables are time-invariant.

The blend of time series with cross-sectional data has the potential to improve the quality and quantity of data in many ways that would be impossible where only one of these two dimensions of data were to be used (Gujarati, 2003). Panel data provides more information, increased variability, less collinearity between variables, more degrees of freedom, and increased efficiency (Baltagi, 2008), thereby helping researchers to achieve greater accuracy in their results (Hoechle, 2007). The flexibility of panel data allows researchers to model differences in behaviour across cases (Greene, 2012). Panel data gives researchers the ability to reduce continuous firm effects and to capture these effects in the error structure of the model (MaCurdy, 1982). Furthermore, panel data permits empirical analyses of dynamic aspects of behaviour ranging from a simple description of change or allowance for some lagged response (Liker, et al., 1985).

A number of previous studies on the relationship between CG and firm performance reported only weak evidence to suggest that CG affects firm performance due to presence of the endogeneity problem. The endogeneity problem occurs due to a negative reverse relationship between performance and CG; in other words, the problem of endogeneity exists when explanatory variables within models themselves may possibly be affected by other variables in the models. This could become a major issue for the researcher when explanatory variables are highly correlated with the error term of a regression model. Wooldridge (2010) argued that extreme endogeneity could lead to a model being biased unless some protective actions are taken. One major advantage of panel data is that models for the analysis of panel data can consider unobserved heterogeneity across individuals and

through time, which may be due to omitted and unobserved firm-specific effects (Hamerle & Ronning, 1995).

It is necessary to mention that there are various limitations associated with panel data. The main drawback of panel data is the difficulty in the sample design and the collection and arrangement of the data itself. The accuracy and reliability of the data could suffer for several reasons. For example, the data could suffer from non-response errors (Lindner, et al., 2001) due to the selection and tracking of respondents, or else there could be no variation over time for some of the important variables. It is also possible that variation over time may have been inflated or deflated due to measurement errors (Viswanathan, 2005).

5.7.2 *Types of Panel Data Analytic Models*

Panel data models examine the fixed or random effects of entities (individual or subject) or time. There are several types of panel data analytic model. Extant literature shows that previous researchers have analysed panel data by way of three models: an OLS or constant coefficients model, fixed effects model, and random effects model. Between these types of model, there are dynamic panel, robust and covariance structure models. These models have different assumptions, and the main difference between fixed and random effects models is whether the unobserved effects (error term) are correlated with the included independent variables (Wooldridge, 2010).

The following sections review each of the models and relate them to this research in order to clarify the approaches used in the data analysis.

Ordinary Least Squares (OLS)

An OLS model assumes that the sample entities are similar and that all observations in the data are independent. It also assumed that the error terms are not correlated across time, meaning there is no serial correlation in the data (Bischoff, et al., 1991). This model further assumes there is neither any significant entity nor time effects; therefore, all data can be pooled to run OLS. This assumption is clearly violated in the context of this research because the researcher collected data about firms over the periods 2009–2011 and 2013–2015. The structure of the panel data is suggestive of each firm in the panel remaining similar over a period of time. There is a very strong possibility that this will create a serial correlation between observations and that one might see the error moving from one year to the next.

Jager (2008) investigated whether there were differences in results when panel data were analysed using a simple OLS model and other panel analytic techniques (fixed and random effects) and reports that regression results can change significantly with the use of different analytical tools. Use of the OLS technique—which assumes similarity and an independent distribution of panel data across time—may lead to misleading and incorrect inferences (Jager, 2008; Baddeley & Barrowclough, 2009). Furthermore, when unaccounted group-level features affect an outcome variable, traditional linear regression is inefficient and can be biased (Dieleman & Templin, 2014).

The problem of serial correlation between variables can be controlled by using either fixed or random effect models.

Fixed Effects Model (Least Squares Dummy Variable Model)

A fixed effects model is a more attractive model for dealing with the problem of serial correlation between observations of a subject over time. The model can control for variables that are either not measured or cannot be measured. The fixed effects model removes all of the time-invariant aspects of the observations from the analysis so as to allow for unobserved variables to be correlated with the error term (Gibbons, et al., 2010). A fixed effects approach can reduce the impact of confounding by time-invariant factors, such as the unmeasured characteristics of individuals (Gunasekara, et al., 2014). Therefore, a fixed effects model resolves the problem of endogeneity, which is commonly associated with omitted variables.

The attraction of a fixed effects model derives from how the relevant variables change within the subject over time. A group fixed effects model examines group differences in intercepts, assuming the same slopes and constant variance across entities (Park, 2009). In order to accomplish this, the fixed effects regression subtracts the subject mean of each variable from each observation. Following this operation, only those variables within the subject that have changed over time remain. Static variables that do not change over time are completely removed from the analysis; this is one of the disadvantages of the fixed effects approach.

Fixed effects regressions cannot tell researchers anything about the potential importance of variables that do not change over time or those that change very little over time. This is seemingly less relevant to this research since, as mentioned earlier, some of the key independent variables are characterised by a high degree of time invariance.

Random Effects Models

The random effects model assumes that unobserved variables are uncorrelated with each explanatory variable, regardless of whether or not they are fixed over time (Wooldridge, 2010). This approach therefore has an advantage over a fixed effects model and allows for the inclusion of time constant explanatory variables in the model. Random effects models are actually a kind of weighted average of the within and between regressions models (Rabe-Hesketh & Skrondal, 2008). This approach is appropriate when drawing firms randomly from a large population to make inferences about the characteristics of the population (Jager, 2008). Allison (2009) suggested that random effects models do not really control for unobserved heterogeneity because they assume no correlation between the unobserved and observed variables. This model is simpler when contrasted alongside the fixed effects model, and therefore will lead to more efficient estimates. However, if the assumptions of the model do not hold, these estimates may be biased (Allison, 2009).

The researcher has made every effort and used all means available in order to overcome the limitations of panel data. For example, following the instructions and indications gathered from the existing literature, the researcher has used only balanced panel data. Instead of trusting the memory of individuals for data collection, the researcher used and relied on annual reports, which are audited and recognised as a certified source of information.

5.8   Panel Data Specification Tests

The specification of a model is one of the most critical problems in panel data econometrics. In a large number of previous studies, panel data specification tests were carried out in a disorganised manner: for example, researchers tested the presence of one effect at a time, ignoring the potential presence or effects of other forms of misspecification. Several diagnostic tests were performed as part of the data specification test strategy of this research. The following section explains some of the diagnostic tests applied in this research to achieve more reliable and robust results.

5.8.1   Serial Correlation

Serial correlation occurs in panel data when one observation's error term is correlated with another observation's error term, or when the error terms of observations from different time periods are correlated (Wooldridge, 2010). In a panel data set, serial correlation is likely to have a more substantial influence on the estimated covariance matrix of the least

squares estimator than heteroskedasticity (Greene, 2012). Therefore, Drukker (2003) argued that researchers need to identify serial correlation in the idiosyncratic error term in a panel data model because serial correlation in linear panel data models biases the standard errors and causes the results to be less efficient. Baltagi et al. (2007) and Baltagi (2008) extensively discussed testing for serial correlation in the presence of random and fixed effects. Fundamentally, serial correlation tests are considered more suitable when dealing with long-time series of over 20 years (Baltagi, 2008). Although the study period for this research is only six years, Wooldridge Serial Correlation test was applied to detect the presence of serial correlation. The null hypothesis of the test is that there is no serial correlation.

5.8.2   *Heteroscedasticity*

Homoscedasticity refers to the assumption that dependent variables have equal levels of variance across the range of explanatory variables (Hair, et al., 2014), or, in other words, that the variance of the error term u is the same, regardless of the predictor variable X (Frühwirth-Schnatter, 1994). This is more likely to be a restrictive assumption for panels where the cross-sectional panels may be of varying sizes and may exhibit a different variation (Baltagi, 2008). Baltagi (2008) warned that ignoring the presence of heteroskedasticity produced a consistent but inefficient estimate of the regression coefficients, and that the standard errors of these estimates would be biased.

A large panel data set covering a longer time span is more likely to be met with the problem of heteroskedasticity (Baltagi, 2008). Since the data set used in this research covers only six years, it is assumed that heteroskedasticity would not be an issue. In addition, the research has used a balanced panel data to control the effect of heteroskedasticity, and the Wald test is used to detect the problem of heteroskedasticity.

5.8.3   *Multicollinearity*

Multicollinearity is a situation in which the independent variables are highly correlated with one another (Tabachnick & Fidell, 2012; Mela & Kopalle, 2002). If the explanatory variables are independent and free from the influence of the other explanatory variables, no bias is produced in the coefficient of the other variables if they are removed from or added to the regression equation (Brooks, 2003). In the presence of multicollinearity, the variances of some of the estimated regression coefficients may become large and could affect the estimation of the regression parameters (Hair, et al., 2014). In addition, the existence of multicollinearity makes hypothesis-testing vague since the regression

coefficient becomes unstable and difficult to interpret (Gujarati, 2003). However, a low level of association between the variables should not be seen as a risk to the regression results. This research checked the presence of multicollinearity in each empirical model of the research. The Variance Inflation Factor (VIF) is a frequently used indicator in identifying the existence of multicollinearity. In this regard, in general, a variable with a VIF value of greater than 10 suggests the existence of multicollinearity. VIF values are assessed to detect the presence of multicollinearity.

5.8.4 *Endogeneity*

According to Klein (1998) and Schultz, et al. (2010), one important issue highlighted in the CG literature is that most variables in governance models are arguably endogenous, making the testing of the governance–performance relationship difficult. The concern of causality is highly important in CG research because, without a significant causal relationship, there is no reason to believe good CG practices are a route to better performance. Endogeneity presents a serious challenge in finding an unbiased coefficient on ß and estimating a casual impact of governance on firm performance. Therefore, any research or estimation technique claiming that a firm's governance variables are exogenous factors to firm performance is very likely to be disapproved (Klein, 1998).

A growing number of researchers have accepted the reality that firm performance and CG data are prone to the problem of endogeneity as the relationship between performance and CG variables is simultaneously determined by unobservable firm-specific factors (Hermalin & Weisbach, 2003; Roodman, 2009; Wintoki, et al., 2012; Bhagat & Bolton, 2008; Lan & Zhang, 2013; Abdallah, et al., 2015; Klein, 1998; Schultz, et al., 2010). Himmelberg, et al. (1999) and Wattanatorn & Kanchanapoom (2012) proposed the use of panel data models to remove unobserved firm-level heterogeneity.

The fixed effects and random effects estimation method can address the probability that omitted variables are causing the connection between good governance and better performance (Black, et al., 2006; Erickson , et al., 2005; Wattanatorn & Kanchanapoom, 2012). Therefore, in this particular context, it is believed that the panel data methodology employed in this research mitigates the endogeneity concern.

5.9 Operationalisation and Measurement of Variables

The conceptual framework outlined in the previous chapter was developed with a view to estimating the relationship between Board structure and firm performance. Table 5-2 at

end of this chapter presents a summary of the variables used in this research to operationalise the hypotheses developed in Chapter Four. The researcher has used his theoretical, professional and practical experience and prior research to measure the variables.

5.9.1 Independent Variables—Corporate Governance Variables

This section provides operational definitions of each independent or explanatory variable examined in this research.

Board Independence (BINDP)

The SECP Code defines independent and non-executive directors as being independent of a company's management, and free from any business or other relationship that could potentially interfere with the exercise of independent judgement or the ability to act in the best interests of stakeholders. Board independence (BINDP) is measured by the number of independent and non-executive directors, divided by the total number of directors (reported in the annual reports). This is in line with previous research (e.g., Abdullah, 2006; Klein, 2002; Peasnell, et al., 2005; Dalton, et al., 1998; Kiel & Nicholson, 2003; Laing & Weir, 1999; Leng, 2004).

CEO Duality (CEODUL)

In Pakistan, both the SECP Code and KSE Listings Rules state explicitly that the positions of CEO and Chairperson should not be held by the same individual unless specifically provided in any other law. Based on existing studies (Yang & Zhao, 2014; Lam & Lee, 2008; Hashim & Devi, 2009; Fosberg & Nelson, 1999; Donaldson & Davis, 1991; Coombes & Wong , 2004; Ritchie, 2007), CEO duality in the present research is captured by introducing a dummy variable (CEODUL) that takes the value '1' if the positions of Chairperson and CEO are combined, or otherwise '0'.

Board Diversity (DIVERS)

The literature on Board diversity does not give a uniform definition of Board diversity; rather, common sense suggests that it means having a wide variety of directors that are different from one another. This research measures Board diversity through a dummy variable (DIVERS) that takes the value '1' if there are female, foreign or minority directors serving on the Board, or otherwise '0'. This is in line with previous research: for example, Huse, et al. (2009) and Tacheva & Huse (2006) measured diversity using a simple count

of the number of female directors on the Board, whilst Schwizer, et al. (2013) measured diversity with number for foreign directors serving on the Board, and Carter, et al. (2003) considered diversity in terms of minorities directors.

Board Committees (BCOMTS)

Board committees are an important part of the overall Board structure and therefore provide valuable information so as to enable Boards to discharge their duties. A number of studies have examined the influence of Board committees and, for the purposes of this research, the number of Board committees is the count of Board committees listed in the firm's annual report (Lam & Lee, 2012; Klein, 2002; Puni, 2015).

Audit Committee Independence (ACIND)

The SECP's Code requires that 'the Board of Directors of every listed company shall establish an Audit Committee, at least of three members comprising of non-executive directors and at least one independent director' (SECP, 2012). The Code also encourages companies to have a Chairperson of the committee, preferably an independent director, who shall not also be chair of the Board. Following the work of various scholars (Klein, 1998; Chan & Li, 2008; Al-Matari, et al., 2014; Al-Matari, et al., 2012; Ghabayen, 2012; Bouaziz & Triki, 2012; Hamdan, et al., 2013; Laing & Weir, 1999), this research measures Board independence through a dummy variable (ACIND), taking the value '1' if a company's audit committee is headed by a non-executive director, or otherwise '0'.

5.9.2   Dependent Variables—Performance Variables

This section offers the operational definitions of each dependent variable examined in this research. They are market and accounting-based measures of performance, and comprise Tobin's Q, ROA and ROE.

Tobin's Q (TQ)

In CG literature, Tobin's Q is a widely used and generally accepted market-based measure of firm performance. It is the ratio between the market value of assets and their replacement cost (Tobin, 1969). Tobin's Q captures the valuation of a firm's intangible assets (e.g., goodwill, patents and knowledge) that the market may value based on specific information (Morck, et al., 1988). When operating in well-established financial markets, such markets will value firms not solely according to their present or past financial performance, but also based on their potential future performance. In this research, Tobin's Q is measured

as the book value of liabilities plus the market value of the firm, divided by the book value of its assets.

$$TQ\ ratio = \frac{Book\ value\ of\ liabilities + Market\ value\ of\ firm}{Book\ value\ of\ total\ assets}$$

Since data for the replacement cost of assets is not available in the case of sample companies, the researcher used the book value of assets as opposed to replacement costs of assets, which is consistent with previous studies in this area (Khanna & Palepu, 2000; Klein, et al., 2005; Martínez, et al., 2007; Elkinawy & Stater, 2011; Coles, et al., 2008; Leung & Cheng, 2013; Yasser, 2011). The researcher assumed that the capital markets in Pakistan are moderately efficient, with the release of any financial and non-financial information reflected in the firm's day-to-day share price. Therefore, the market value of a firm is taken as the number of ordinary shares issued by the firm multiplied by the share price at the end of the firm's accounting period.

Return on Assets (ROA)

Managers and financial analysts often measure the performance of firms using the ratio of income to total assets in order to assess the efficiency of management in employing their firm's assets. Companies would like to earn a higher return on their employed assets since a falling ROA is not attractive to new investors. In general, a higher ROA suggests that management is using the firm's assets effectively and efficiently to create value for shareholders. In line with the work of (Guest, 2009; Beiner, et al., 2006; Haniffa & Hudaib, 2006; Jiang, et al., 2008; Müller, 2014), ROA is calculated as follows:

$$ROA = \frac{Net\ Operating\ profit}{Book\ value\ of\ total\ assets}$$

Return on Equity (ROE)

Return on Equity measures the rate of return on shareholder equity. It shows the efficiency of management in using shareholders' funds to generate earnings. This measures the efficiency with which profits are generated from each penny of shareholders' equity. A higher ratio indicates a higher return. In line with the work of other scholars in this arena (Rouf, 2012; Khatab, et al., 2011; Salim & Yadav, 2012; Qi, et al., 2000; Jiang, et al., 2008; Jackling & Johl, 2009; Müller, 2014; Yasser, 2011), ROE is calculated as follows:

$$ROA = \frac{Net\ Operating\ profit}{Total\ Equity}$$

5.9.3   Control Variables

Almost every variable we can think of is linked to a number of other variables, either in causal relationships or in covariance. As a result, it can become very difficult to understand how the variables affect one another (Watt & Van Den Berg, 1995). Watt & van den Berg (1995:53) argued that, it's far too easy to confuse and mix one cause with another, or *"to attribute all change to a single cause when many causal factors are operating".* Therefore, before one can establish that a relationship exists between two variables, it is best to first determine the effect of all of the other variables that may have a relationship with the two variables. This makes controlling variables an important part of research design since the omission of an important variable may yield biased results in the relationship between CG and firm performance (Black, et al., 2006).

The existing literature presents a seemingly endless list of potential control or omitted variables. Due to the non-availability of reliable data, this research has used only five control variables to enrich understanding of the relationship between Board structure and firm performance. The control variables used in this study are firm size (FSIZE), Leverage (LEVRG), firm age (AGE), sales growth (GRO) and industry dummies (INDUM). These control variables are included in the regression models, in addition to the main variables of the model.

Firm Size (FSIZE)

The value of a firm's assets is an important variable used by many previous researchers to control for the effects of firm size on organisational performance (Hermalin & Weisbach, 1991). The existing literature suggests that firm size is positively associated with superior CG practices (Jensen, 1986; Beiner, et al., 2006). When compared to small firms, larger firms may be able to afford to disclose more information, which could help shareholders to make more informed business decisions about their investments. The disclosure of relevant and reliable information is a form of good governance practice, which could help firms to attract low-cost capital to enhance their financial performance and the market value of their securities (Botosan, 1997; Pathan, et al., 2007; Kiel & Nicholson, 2003). In line with previous studies (Pathan, et al., 2007; Kiel & Nicholson, 2003; Cheung, et al., 2007; Rahman & Ali, 2006; Krishnan & Visvanathan, 2008; Guo & Kga, 2012; Siregar &

Utama, 2008; Benson & Davidson III, 2009; Henry, 2008), this research has taken the log of total assets to control for differences owing to the scale of the business operations.

Many studies have also used number of employees as a measure of firm size. However, the data source used to collect information for this research does not contain consistent employee information for all sampled companies for all time periods.

Leverage (LEVRG)

Leverage can also influence both CG practices and firm performance. Firms with a high degree of leverage are likely to be more exposed to high credit and bankruptcy risks, and may perform differently to those firms with a lower level of gearing. Debt holders are likely to demand more conservative financial reports (Beatty , et al., 2008). They can also demand that management make financial and non-financial adjustments in an effort to generate cash for the payment of interest and capital repayment (Gillan, 2006). According to Rajan & Zingales (1995), leveraged firms tend to have higher profitability due to non-taxability of interest payments. For the purposes of this research, leverage is defined as the ratio of long-term debt to total assets, which is in line with previous (Salim & Yadav, 2012; Bhagat & Bolton, 2008; Garay & Gonzalez, 2008; Nuryani, et al., 2015; Graham, et al., 2008; Eisdorfer, et al., 2013; Kim, et al., 2015).

Firm Age (AGE)

Firm age is another important control variable that has attracted a wealth of attention from previous researchers. Firm age is linked to the number of business activities and capital structure of companies (Gregory, et al., 2005). The CG practices of older firms may differ from those of younger firms (Black, et al., 2006). Boone et al. (2007) noted a positive relationship between a firm's age and the size of its Board. In an effort to understand the influence of firm age on Board structure, as well as on firm performance, this research controls for firm age, as determined by the number of years at the end of each year since the firm's incorporation; this is in line with previous studies (Yildiz, et al., 2013; Arosa, et al., 2013; Amran, et al., 2014; Yasser, 2011).

Sales Growth (GRO)

During their high-growth phases, some organisations face many challenges, including product innovation, building market share, and achieving customer satisfaction. At this time, they have to create and develop internal structures and increase coordination and

communication to overcome such challenges (Lynall, et al., 2003; Smith, et al., 1985). Fast-growing firms may differ from slow-growing firms with regards CG practices (Black, et al., 2006), with Klapper & Love (2004) arguing that fast-growing firms may have higher valuations, as they are expected to demonstrate better future performance. Following the work of other academics in the field (Gompers, et al., 2003; Krafft, et al., 2014; Li, et al., 2012; Gallego, et al., 2009; Ntim, 2016; Aaboen, et al., 2006), this research controlled for growth in the regression models and measured such growth as the percentage difference between a firm's current and previous year's sales, divided by the previous year's sales at the end of its financial year.

Industry Dummies (INDUM)

A number of previous researchers have suggested industry dummies to control for false relationships specific to the type of industry in which the firm operates, with evidence suggesting that CG practices across firms change over time (Morck, et al., 1988; Black, et al., 2006; Beiner, et al., 2006; Demsetz & Lehn, 1985; Henry, 2008). CG practices differ from one country to the next, as well as and from firm to firm, due to differences in ownership structure (Haniffa & Cooke, 2002) and the complexity of companies' business operations and business lines (Lim, et al., 2007; Elsayed, 2007). Following the studies of (Haniffa & Cooke, 2002; Mandaci & Gumus, 2010; Cao, et al., 2015; Ntim, 2016), the industry variable (INDUM) is used as the dummy variable, with one industry excluded to avoid the dummy variable trap.

5.9.4 Moderating Variables

The Code of Corporate Governance 2012 (CODE)

Moderation occurs when the significance and direction of the relationship between two variables is conditional and subject to the influence of a third variable. The moderation model tests whether the relationship between a dependent variable "Y" and an independent variable "X," differs across levels of a third variable "Z." This third variable is called a moderator variable. A moderator variable can be qualitative (e.g., sex, race, class…) or quantitative (e.g., income, age or level of performance). Consider baking a cake in an oven. In general, the higher the temperature of the oven (independent variable), the faster the cake will bake (dependent variable). However, consider the scenario of a baker making two different types of cake, one using regular white flour and the other whole wheat flour. Keeping the temperature constant, if the cake made with whole wheat flour took longer to

bake than the cake made with white flour, the type of flour would be a moderator variable, because the relation between temperature and cooking time differs depending on the type of flour used.

Moderator variables are of paramount importance to any kind of research because they provide a more detailed clarification of the specific situations under which an observed association between two variables holds and whether this association is the same for different contexts or settings. This research believes that inclusion of CG reforms (SECP Code) and Ownership Concentration variables are important for this research. Therefore, this research used the implementation of the SECP's Code of Corporate Governance 2012 as a moderating variable to explore the moderating impact of SECP's revised Code of Corporate Governance, which switches between pre and post implementation of periods of the Code. This is a binary variable taking the value '0' for the time period prior to implementation of the SECP's revised Code (2009–2011) time period, and the value '1' for the time period following implementation of the revised Code (2013–2015). Generally, moderator effects are indicated by the interaction of independent and moderator variable in explaining the dependent variable i.e. (X*M). The SECP variable interacts with all of the Board structural variables, and Board independence (BINDP) converts to (BINDP_SECP), CEO duality (CEODUL) becomes (CEODUL_SECP), Board diversity (DIVERSE) turns into (DIVERSE_SECP), the number of Board committees (BCOMTS) changes to (BCOMTS_SECP) and finally, audit committee independence (ADINDP) becomes (ACINDP_SECP). This is done in order to capture the moderating influence of the SECP revised Code on the performance of listed firms in Pakistan. The moderation approach used in this research is consistent with the studies conducted by Ren, et al. (2012) and Mustapa, et al. (2014).

Ownership Concentration (OWCENT)

There are number of previous studies where researchers have looked into the role of ownership concentration on the performance of firm (Yu, 2013; Hovey, et al., 2003; Reyna, 2012; Saat & Kallamu, 2014; Cheng & Tzend, 2011; Arosa, et al., 2010; Heugens, et al., 2009; Lam & Lee, 2008). The second moderating variable used in this research is the level of ownership concentration; otherwise stated, the proportion of shares held by the dominant shareholders. Two levels of ownership concentration are used: in the first level, ownership concentration is determined by the proportion of shares held by the single largest shareholder (TOP1), regardless of who they are (e.g., family, group or state); in the

next level, the proportion of shares owned by the top five largest shareholders (TOP5) is considered, again regardless of their identity.

Similar to the first moderating variable (SECP), the ownership concentration variable also interacts with the Board structural variables to illustrate the impact of ownership concentration on firm performance.

5.9.5 *Mediating Variables*

There are many studies that have derived findings to suggest that Board of Directors functions (Board activities) play a critical role in enhancing overall firm performance (Jamshidy, et al., 2014; Guest, 2009; Zahra & Pearce, 1989; Hillman & Dalziel, 2003; Gabrielsson, et al., 2007). There are two mediating variables, namely Board monitoring role and Board resource-dependence role (Hillman & Dalziel, 2003). Following the works of different researchers in this arena (Jackling & Johl, 2009; Gabrielsson, et al., 2007; Conger, et al., 1998; Lipton & Lorsch, 1992), the Board monitoring role is measured as the total number of Board meetings (BMETS), and Board resource-dependence role is determined by the Board size (BSIZE) which is the total number of directors serving on the Board (Forbes & Milliken, 1999; Van den Berghe & Levrau, 2004; Adams & Ferreira, 2007; Linck, et al., 2008).

5.10 Empirical Model

This research used panel data regression to test the relationship between Board structure and the performance of a firm, since the panel data is more applicable to the nature of this research. Panel data used in this research includes repeated measures of variables of the sampled firms (repeated cross-sectional time series data). A major motivation for the use of panel data is that it enables researchers to control for unobserved heterogeneity. The sampled firms included in this research possess unique characteristics that are specific to them and it is necessary for the researcher to take these into consideration in estimation to avoid endogeneity bias.

Different panel data regression models (i.e. the fixed effects model and the random effects model) have differing assumptions regarding the error term. For example, the fixed effect model assumes that the individual effect term is constant. However, the random effect assumes that the individuals effect are random disruptions drawn from probability distribution. The rationale for the use of a random effects model in this research is that, unlike the fixed model, the variation across the sampled firms of this research is assumed

to be random and uncorrelated with predictor or independent variables included in the model. This research believes that differences across the sampled firms have some power on the dependent variables, therefore this research has used the random effect panel data model. The main advantage of a random effects model is the inclusion of time invariant variables (i.e. firms' industrial category, directors' sexual orientation etc). In the fixed effect model these variables are absorbed by the intercept. A basic (general) panel data model has the form $X_{it}, i = 1,2, \ldots \ldots, N$ and $t = 1,2 \ldots \ldots \ldots, T$, and is written as

$$Y_{it} = \emptyset + X_{it}a + \varepsilon_{it} \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots (1)$$

Where $\emptyset$ is a constant, X_{it} is a K-dimensional vector of explanatory variables and ε_{it} is the error term which is further decomposed into the following disturbance terms;

$$\varepsilon_{it} = U_{it} + V_{it} \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots (2)$$

The random effects panel data model is:

$$Y_{it} = \beta X_{it} + a + u_{it} + \varepsilon_{it} \ldots \ldots \ldots \ldots (3)$$

Studies that combine moderation and mediation are rare within CG literature. This research has adopted this opportunity to develop a specific analytical framework for combining moderation and mediation that integrates moderated regression analysis, by adding product terms to the regression involved in the causal steps procedure (Baron & Kenny, 1986). Full details of the mediation process are provided in Chapter Six. Previous studies which have applied this approach of integrated moderation and mediation, typically commenced with using regression analysis to establish that Z moderates the relationship between X and Y, and then examined whether Z moderates the effect of X on M, as indicated in Equation 4. The coefficient on XZ indicates the extent to which the association between X and M differs across levels of Z. Where β_0 is the intercept $\beta_{1-}\beta_{31}$ are coefficient and ε is error term.

$$M = \beta_0 + \beta_1 X_{it} + \beta_2 Z_{it} + \beta_3 XZ_{it} + \varepsilon_{it} \ldots \ldots \ldots (4)$$

Finally, to determine whether M is related to Y, most studies added M to the regression equation 4 to yield the following equation:

$$M = \beta_0 + \beta_1 X_{it} + \beta_2 M + \beta_3 Z_{it} + \beta_4 XZ_{it} + \beta_5 MZ + \varepsilon_{it} \ldots \ldots \ldots (5)$$

The econometric models used in this research for analysis of the data are specified as follows:

Firstly, the impact of the control variables on the performance variables was tested with model (M0) by regressing all of the control variables on the three performance (TQ, ROA & ROE) variables.

$$Perfrmance_{it} = \beta_0 + \beta_1 FSIZE_{it} + \beta_2 LEVERAGE_{it} + \beta_3 GRO_{it} + \beta_4 AGE_{it} + \beta_5 TEXTILE_{it} \\ + \beta_6 CHEMICAL_{it} + \beta_7 CONSUMER_{it} \\ + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.(M0)$$

In the next step M1, independent variables and two moderating variables—namely SECP and ownership concentration at TOP1 and TOP5—were added to the M0 to determine the direct effect of Board Structure Independent Variables on the performance variables by the following regression equation.

$$Perfrmance_{it} = \beta_0 + \beta_1 FSIZE_{it} + \beta_2 LEVERAGE_{it} + \beta_3 GRO_{it} + \beta_4 AGE_{it} + \beta_5 TEXTILE_{it} \\ + \beta_6 CHEMICAL_{it} + \beta_7 CONSUMER_{it} + \beta_8 SECP_{it} + \beta_9 TOP1 + \beta_{10} TOP5 \\ + \beta_{11} BINDP_{it} + \beta_{12} CEODUL_{it} + \beta_{13} DIVERSE_{it} + \beta_{14} ACINDP_{it} + \beta_{15} BCOMTD_{it} \\ + \varepsilon_{it} \ldots\ldots\ldots\ldots(M1)$$

In the next step M2, moderating effects of the SECP Code and Ownership Concentration was introduced into the regression to determine whether revision of the Code and ownership concentration have increased or decreased the extent to which Board structure influences the performance.

$$Perfrmance_{it} = \beta_0 + \beta_1 FSIZE_{it} + \beta_2 LEVERAGE_{it} + \beta_3 GRO_{it} + \beta_4 AGE_{it} + \beta_5 TEXTILE_{it} \\ + \beta_6 CHEMICAL_{it} + \beta_7 CONSUMER_{it} + \beta_8 SECP_{it} + \beta_9 TOP1 + \beta_{10} TOP5 \\ + \beta_{11} BINDP_{it} + \beta_{12} BINDP_{it\_}SECP_{it} + \beta_{13} BINDP_{it\_}TOP1_{it} + \beta_{14} BINDP_{it}TOP5_{it} \\ + \beta_{15} CEODUL_{it} + \beta_{16} CEODUL_{it}SECP_{it} + \beta_{17} CEODUL_{it\_}TOP1_{it} \\ + \beta_{18} CEODUL_{it}TOP5_{it} + \beta_{19} DIVERSE_{it} + \beta_{20} DIVERSE_{it\_}SECP_{it} \\ + \beta_{21} DIVERSE_{it}TOP1_{it} + \beta_{22} DIVERSE_{it\_}TOP5_{it} + \beta_{23} ACINDP_{it} \\ + \beta_{24} ACINDP_{it\_}SECP_{it} + \beta_{25} ACINDP_{it\_}TOP1_{it} + \beta_{26} ACINDP_{it\_}TOP5_{it} \\ + \beta_{27} BCOMTS_{it} + \beta_{28} BCOMTS_{it\_}SECP_{it} + \beta_{29} BCOMTS_{it\_}TOP1_{it} \\ + \beta_{30} BCOMTS_{it\_}TOP5_{it} \\ + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.(M2)$$

The models M1 & M2 provide evidence to support the first condition or first step of the mediation process presented by Baron & Kenny (1986). Models M3 and M4 test the second condition, or path 'a' of the mediation process, by regressing Board size on Board structural characteristics.

M3 determines the direct effects of the Board structure and moderator variables on the mediator variables (Board size and Board meetings). Mediating variables are regressed on governance variables without accounting for the impact of moderating variables i.e. SECP Code and ownership concentration.

$$
\begin{aligned}
Mediator_{it} &= \beta_0 + \beta_1 FSIZE_{it} + \beta_2 LEVERAGE_{it} + \beta_3 GRO_{it} + \beta_4 AGE_{it} + \beta_5 TEXTILE_{it} + \beta_6 CHEMICAL_{it} \\
&+ \beta_7 CONSUMER_{it} + \beta_8 SECP_{it} + \beta_9 TOP1_{it} + \beta_{10} TOP5_{it} + \beta_{11} BINDP_{it} + \beta_{12} CEODUL_{it} \\
&+ \beta_{13} DIVERSE_{it} + \beta_{14} ACINDP_{it} + \beta_{15} BCOMTS_{it} \\
&+ \mathcal{E}_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.\ldots\ldots..(M3)
\end{aligned}
$$

M4 determines the moderating effects of the SECP Code and ownership concentration on the mediating variables. In M4 the mediating variables are regressed on governance indicators and their interaction with moderating variables is introduced.

$$
\begin{aligned}
Mediator_{it} &= \beta_0 + \beta_1 FSIZE_{it} + \beta_2 LEVERAGE_{it} + \beta_3 GRO_{it} + \beta_4 AGE_{it} + \beta_5 TEXTIL_{it} \\
&+ \beta_6 CHEMICAL_{it} + \beta_7 CONSUMER_{it} + \beta_8 SECP_{it} + \beta_9 TOP1_{it} + \beta_{10} TOP5_{it} \\
&+ \beta_{11} BINDP_{it} + \beta_{12} BINDP_{it\_}SECP_{it} + \beta_{13} BINDP_{it\_}TOP1_{it} + \beta_{14} BINDP_{it\_}TOP5_{it} \\
&+ \beta_{15} CEODUL_{it} + \beta_{16} CEODUL_{it\_}SECP_{it} + \beta_{17} CEODUL_{it\_}TOP1_{it} \\
&+ \beta_{18} CEODUL_{it\_}TOP5_{it} + \beta_{19} DIVERSE_{it} + \beta_{20} DIVERSE_{it}SECP_{it} \\
&+ \beta_{21} DIVERSE_{it\_}TOP1_{it} + \beta_{22} DIVERSE_{it\_}TOP5_{it} + \beta_{23} ACINDP_{it} \\
&+ \beta_{24} ACINDP_{it}SECP_{it} + \beta_{25} ACINDP_{it}TOP1_{it} + \beta_{26} ACINDP_{it\_}TOP5_{it} \\
&+ \beta_{27} BCOMTS_{it} + \beta_{28} BCOMTS_{it\_}SECP_{it} + \beta_{29} BCOMTS_{it\_}TOP1_{it} \\
&+ \beta_{30} BCOMTS_{it\_}TOP5_{it} \\
&+ \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots..\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.\ldots\ldots..(M4)
\end{aligned}
$$

To test for the final condition of mediation, both governance indicators and the role of Board monitoring and resource provisions were added in the models M5 and M6. In M5 performance variables are regressed on mediating and governance variables and in M6 moderating impact of the moderating variables is introduced.

$$
\begin{aligned}
Performance_{it} &= \beta_0 + \beta_1 FSIZE_{it} + \beta_2 LEVERAGE_{it} + \beta_3 GRO_{it} + \beta_4 AGE_{it} + \beta_5 TEXTILE_{it} + \beta_6 CHEMICAL_{it} \\
&+ \beta_7 CONSUMER_{it} + \beta_8 SECP_{it} + \beta_9 TOP1_{it} + \beta_{10} TOP5_{it} + \beta_{11} BINDP_{it} + \beta_{12} CEODUL_{it} \\
&+ \beta_{13} DIVERSE_{it} + \beta_{14} ACINDP_{it} + \beta_{15} BCOMTS_{it} + \beta_{16} BSIZE \\
&+ \mathcal{E}_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.\ldots\ldots..(M5)
\end{aligned}
$$

$$Perfrmance_{it} = \beta_0 + \beta_1 FSIZE_{it} + \beta_2 LEVERAGE_{it} + \beta_3 GRO_{it} + \beta_4 AGE_{it} + \beta_5 TEXTIL_{it}$$
$$+ \beta_6 CHEMICAL_{it} + \beta_7 CONSUMER_{it} + \beta_8 SECP_{it} + \beta_9 TOP1_{it} + \beta_{10} TOP5_{it}$$
$$+ \beta_{11} BINDP_{it} + \beta_{12} BINDP_{it\_}SECP_{it} + \beta_{13} BINDP_{it\_}TOP1_{it} + \beta_{14} BINDP_{it\_}TOP5_{it}$$
$$+ \beta_{15} CEODUL_{it} + \beta_{16} CEODUL_{it\_}SECP_{it} + \beta_{17} CEODUL_{it\_}TOP1_{it}$$
$$+ \beta_{18} CEODUL_{it\_}TOP5_{it} + \beta_{19} DIVERSE_{it} + \beta_{20} DIVERSE_{it}SECP_{it}$$
$$+ \beta_{21} DIVERSE_{it\_}TOP1_{it} + \beta_{22} DIVERSE_{it\_}TOP5_{it} + \beta_{23} ACINDP_{it}$$
$$+ \beta_{24} ACINDP_{it}SECP_{it} + \beta_{25} ACINDP_{it}TOP1_{it} + \beta_{26} ACINDP_{it\_}TOP5_{it}$$
$$+ \beta_{27} BCOMTS_{it} + \beta_{28} BCOMTS_{it\_}SECP_{it} + \beta_{29} BCOMTS_{it\_}TOP1_{it}$$
$$+ \beta_{30} BCOMTS_{it\_}TOP5_{it} + \beta_{31} BSIZE$$
$$+ \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.\ldots\ldots. (M6)$$

$$Perfrmance_{it} = \beta_0 + \beta_1 FSIZE_{it} + \beta_2 LEVERAGE_{it} + \beta_3 GRO_{it} + \beta_4 AGE_{it} + \beta_5 TEXTILE_{it}$$
$$+ \beta_6 CHEMICAL_{it} + \beta_7 CONSUMER_{it} + \beta_8 BSIZE_{it}$$
$$+ \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots. (M7)$$

5.11 Chapter Summary

Choosing the most suitable research methodology and data collection methods are critical decisions for any research project if it is to ensure that the research project will achieve its objectives. This chapter has outlined a general overview of research design and methodology so as to justify the research approach adopted in this research. The chapter aimed at achieving a number of objectives, and began with an explanation of the philosophy of research design in a bid to introduce the theoretical characteristics of different research methodologies and the basic assumptions of social science research. It reviewed a number of different research paradigms, along with their strengths and weaknesses, in different types of study, and accordingly identified the appropriate research design and methodology for this particular research. The chapter explained the rational for the use of deductive research approach and secondary data to answer the research questions. Two types of data are used in this research: Board structural characteristics (internal CG) and financial performance variables; these were hand-collected from the annual reports of the sampled firms. The data, its sources, research location, research population, the sample selection procedure, analytical approach and the justification and defence for the use of panel data were also comprehensively described in the chapter. This has been followed by a detailed discussion of the model specifications, and the operationalisation and measurement of all the variables of this research.

The next chapter presents descriptive statistics, as well as correlation analyses, and the linear and multiple regression analyses of the CG variables used in this research.

Table 5-2 Description of Variables, Data Sources and Literature References

Variables	Definition, description and Measurement	Source	Literature
Tobin's Q (TQ)	Tobin's Q is measured as the book value of liabilities plus market value of firm, divided by book value of total assets	Annual Reports/KSE Website	Khanna & Palepu, 2000; Klein, et al., 2005; Martínez, et al., 2007; Elkinawy & Stater, 2011; Coles, et al., 2008; Leung & Cheng, 2013; Yasser, 2011
Return of Assets (ROA)	Net Operating Profit / Book Value of Total Assets	Annual Reports	Guest, 2009; Beiner, et al., 2006; Haniffa & Hudaib, 2006; Jiang, et al., 2008; Müller, 2014
Return on Equity (ROE)	Net Operating Profit / Total Equity	Annual Reports	Rouf, 2012; Khatab, et al., 2011; Salim & Yadav, 2012; Qi, et al., 2000; Jiang, et al., 2008; Jackling & Johl, 2009; Müller, 2014; Yasser, 2011
Board size	Total number of directors on the Board (natural logarithm)	Annual Reports	Lipton and Lorsch, 1992; Yermack, 1996; Pfeffer, 1972; Anderson, Mansi and Reeb, 2004; Hermalin and Weisbach, 1998; Coles, Daniel and Naveen, 2008
Board Meetings	Total number of Board meeting held during the accounting year	Annual Reports	Lam & Lee, 2012; Klein, 2002; Puni, 2015
Board independence	Board independence is measured by the number of independent and non-executive directors, divided by the total number of directors reported in the company's annual report	Annual Reports	Daily and Dalton, 1992; Baysinger and Butler, 1985; Kyereboah-Coleman, 2007; Ghosh, 2006; Khan and Awan, 2012
CEO duality	Dummy variable that takes the value "1" if the position of Chairperson and CEO are combined, or otherwise "0"	Annual Reports	Hashim and Devi, 2009; Fosberg and Nelson, 199; Donaldson and Davis, 1991; Ritchie, 2007; Coombes and Wong, 2004
Board committees	The count of Board committees listed in the firm's annual report	Annual Reports	McColgan, 2001; Puni, 2015; Adams, et al., 2010
Board Diversity	Dummy variable that takes the value '1' if there are female, foreign or minority directors serving on the Board, or otherwise '0'	Annual Reports	Huse, et al., 2009; Tacheva & Huse, 2006; Schwizer, et al., 2013 and Carter, et al., 2003
Audit Committee Independence	Dummy variable that takes the value '1' if a company's audit committee is headed by a non-executive director, or otherwise '0'	Annual Reports	Klein, 1998; Chan & Li, 2008; Al-Matari, et al., 2014; Al-Matari, et al., 2012; Ghabayen, 2012; Boozes & Tricia, 2012; Hamadan, et al., 2013; Laing & Weir, 1999
Ownership Concentration	Total % of Equity Shares held by the first single largest and the first five largest shareholders	Annual Reports	Yu, 2013; Hovey, et al., 2003; Reyna, 2012; Saat & Kallamu, 2014; Cheng & Tzend, 2011; Arosa, et al., 2010; Heugens, et al., 2009; Lam & Lee, 2008; Shleifer and Vishny, 1986; Desender, 2009; La Porta et al., 2000; Fama & Jensen, 1983
Age	Number of years' firm is listed on stock exchange since the year of its incorporation	KSE Website	Yildiz, et al., 2013; Arosa, et al., 2013; Amran, et al., 2014; Yasser, 2011

Size	Measured as the log of total assets of the firms (natural logarithm)	Annual Reports	Pathan, et al., 2007; Kiel & Nicholson, 2003; Cheung, et al., 2007; Rahman & Ali, 2006; Krishnan & Visvanathan, 2008; Guo & Kga, 2012; Siregar & Utama, 2008; Benson & Davidson III, 2009; Henry, 2008
Leverage	Ratio of firm's long-term debt to its total assets	Annual Reports	Salim & Yadav, 2012; Bhagat & Bolton, 2008; Garay & Gonzalez, 2008; Nuryani, et al., 2015; Graham, et al., 2008; Eisdorfer, et al., 2013; Kim, et al., 2015
Sales Growth	The percentage difference between a firm's current and previous year's sales, divided by the previous year's sales at the end of its financial year.	Annual Reports	Gompers, et al., 2003; Krafft, et al., 2014; Li, et al., 2012; Gallego, et al., 2009; Nit, 2016; Abalone, et al., 2006
Industry	Dummy variable, with one industry excluded to avoid the dummy variable trap		(Haniffa & Cooke, 2002; Mandaci & Gumus, 2010; Cao, et al., 2015; Ntim, 2016)
KSE = Karachi Stock Exchange			

6 EMPIRICAL ANALYSES AND RESULTS

6.1 Introduction

Analyses of the causal relationships between Board structure and firm performance variables are based on the research design and regression models discussed in Chapter Five. The statistical analyses shown in this chapter are divided into two categories: descriptive statistical analyses and inferential statistical analyses; the former are used to present quantitative aspects of the data, whilst the latter are used to draw and present conclusions from the sample data to generalise the findings across the entire population of the study (Hussey & Hussey, 1997; Rumsey, 2011; Graham, 2013). The aim of this chapter is to present both the descriptive and inferential statistical analyses of the data that were used to achieve the objectives of this important research on the link between Board structure and the performance of listed companies in Pakistan.

The rest of the chapter is organised as follows: Section 6.2 reports detailed descriptive statistics for the dependent and independent variables, including t-tests to report the significance of the changes in CG practices and their impact on the performance of listed firms in Pakistan following implementation of the SECP's revised Code of Corporate Governance in 2012; Section 6.3 presents the results of the correlation analyses to determine the direct association between the variables used in this research; Section 6.4 outlines results for the panel data specifications and diagnostic tests; Section 6.5 describes the regression results of the panel data using a random effects model; Section 6-6 presents discussion of the findings; and finally Section 6.7 presents a summary of the chapter.

6.2 Descriptive Statistics

Descriptive statistics are numbers that are used to provide the basic descriptions and features of the data used in this research and to summarise the results in terms of mean, median, mode, range, variance and standard deviation (Hussey & Hussey, 1997). This section deals with the descriptive statistics analyses which are performed in three stages, not only to determine the relationship between Board structure and firm performance, but also in an effort to understand the impact of the revised Code on this relationship. Microsoft Excel and STATA software packages were used to produce the descriptive statistics.

6.2.1 Distribution of Sample Firms by Characteristics

In this research, amongst industrial sectors, a larger proportion of firms are in the textile industry (38.49%), followed by the consumer goods industry (22.64%), chemical industry

(19.25%) and the industrial sector (19.62%). The sample had a similar distribution of small (35.47%), medium (35.09%) and large businesses (29.53%). Most firms included in the sample were not part of an affiliated group of companies (82.64%). Table 6-1 presents the distribution of the sample firms by their business sector, size and group affiliation.

Table 6-1: Distribution of Sample Firms by Characteristics

Category	Business Secto	2009	2010	2011	2013	2014	2015	%
SECTOR	Textile	102	102	102	102	102	102	38.49%
	Consumer Goods	60	60	60	60	60	60	22.64%
	Chemical	51	51	51	51	51	51	19.25%
	Industrial	52	52	52	52	52	52	19.62%
	Firm Size	2009	2010	2011	2013	2014	2015	%
SIZE	Large	78	78	78	78	78	78	29.43%
	Medium	93	93	93	93	93	93	35.09%
	Small	94	94	94	94	94	94	35.47%
	Affiliation	2009	2010	2011	2013	2014	2015	%
AFFILIATION	Not-Affiliated	219	219	219	219	219	219	82.64%
	Affliated	46	46	46	46	46	46	17.36%

6.2.2 Firm Performance Measures

Panel A in Table 6-2 presents the means, standard deviations and minimum and maximum values for each of the three performance indicators for the two independent time periods: pre-implementation of the revised Code (2009–2011) and post-implementation of the revised Code in 2012 (2013–2015). Table 6-2, Panel B details the sector-wise and year-by-year changes in the values of Tobin's Q (TQ), Return on Assets (ROA) and Return on Equity (ROE) for the entire time period of this research (2009–2015). There are various interesting differences to be noted between the two time periods.

The mean TQ value for the pre-2012 time period is lower at 1.106 when compared to 1.323 for the post-2012 time period, when firms were subject to the SECP's revised Code of Corporate Governance. The revised Code introduced a limit for the maximum number of executive directors allowed to serve on the Boards of listed companies in Pakistan. The Code requires that no more than one-third of a company's directors, including the CEO, come from the body of executive directors. According to the revised Code, the Chairperson and CEO shall not be the same person and therefore must be elected from amongst the non-executive directors (NEDs). As mentioned in the previous chapters, the main objective of the revised Code was to further improve and raise the standards of CG practices in Pakistan, whilst at the same time taking into consideration global developments in CG. *The descriptive results of TQ indicate that the market value of firms increased following the implementation of the revised Code in March 2012.*

Return on Equity (ROE) also improved following the implementation of the revised Code. ROE increased, averaging 14.5% for the post-2012 time period, with a minimum value of –102% and a maximum value of 231% compared to an average of 10.3% for the pre-2012 time period, with minimum and maximum values of –172% and 196%, respectively. *The results of descriptive statistics show a positive impact on firm performance, and ROE increased during the post-2012 period.* ROA, however, is only slightly lower for the post-2012 period (4.1% for 2009–2011 vs 3.9% for 2013–15), thus showing a negative impact on firms' utilisation of assets.

Table 6-2: Descriptive Statistics of Firm Performance Measures

Panel A

Description	N	Mean	Stand.Dev	Minimum	Maximum
Tobin's Q (TQ)					
Pre 2012 (2009-2011)	795	1.106	0.544	0.146	3.985
Post 2012 (2013-2015)	795	1.323	0.739	0.361	5.931
Overall	1,590	1.216	0.658	0.146	0.593
Return on Assets (ROA) %					
Pre 2012 (2009-2011)	795	0.041	0.093	-37%	78%
Post 2012 (2013-2015)	795	0.039	0.137	-121%	46%
Overall	1,590	0.040	0.117	-121%	78%
Return on Equity (ROE) %					
Pre 2012 (2009-2011)	795	0.103	0.294	-172%	196%
Post 2012 (2013-2015)	795	0.145	0.261	-102%	231%
Overall	1,590	0.124	0.279	-172%	231%

Panel B

Variable	Business Sector	2009	2010	2011	2013	2014	2015	6 Year Average
TQ	Textile	1.01	0.99	0.93	1.05	1.25	1.16	1.06
	Consumer Goods	1.37	1.32	1.31	1.45	1.67	1.65	1.46
	Chemical	1.09	1.09	1.08	1.25	1.45	1.42	1.23
	Industrial	1.10	1.13	1.12	1.19	1.37	1.38	1.21
ROA	Textile	0.24%	-0.86%	5.14%	-0.19%	4.33%	2.38%	1.84%
	Consumer Goods	6.12%	8.35%	6.50%	4.32%	1.80%	2.64%	4.95%
	Chemical	3.00%	2.87%	2.40%	5.62%	8.19%	5.46%	4.59%
	Industrial	8.40%	5.60%	6.76%	5.37%	6.41%	6.33%	6.48%
ROE	Textile	3.96%	-4.21%	18.72%	16.83%	14.73%	7.84%	9.65%
	Consumer Goods	21.14%	17.15%	16.46%	23.67%	16.33%	15.85%	18.43%
	Chemical	4.52%	7.38%	3.10%	12.25%	18.07%	12.36%	9.61%
	Industrial	20.08%	7.52%	15.34%	9.07%	15.29%	14.27%	13.60%

Tobin's Q is the ratio of the market value of assets to the replacement costs of assets. ROA is the percentage of net profit after tax to total book value of assets. ROE is the ratio of net profit after tax to shareholders equity

Table 6-3 provides a comparison of the mean values and significance for the changes in values of the three performance indicators used in this research. As can be seen, the values of the *t*-test on TQ ($t = -6.785$, $p < 0.01$) and ROE ($t = 3.066$, $p < 0.01$) are significant, implying that the performance of listed companies in Pakistan has increased significantly following the implementation of the revised Code in 2012. More precisely, for the post-2012 time period, listed companies in Pakistan posted a mean TQ value of 1.323, with the difference of 0.217 over the two periods representing a 19.6% increase in the Tobin's Q value of the sampled companies.

Similarly, for the post-2012 time period, the companies recorded a higher mean value of ROE; 14.5% for the post-2012 time period compared to 10.3% prior to implementation of the revised Code. Although this 4.2% increase in the value of ROE is lower than the 19.6% increase in the value of Tobin's Q, the overall 40.8% change in the value of ROE is much greater than the 19.6% change in Tobin's Q. However, performance measured in terms of ROA has changed by only 2 percentage points, falling to 3.9% in the post-2012 time period compared to 4.1% in the pre-2012 period.

The trends reported for the three measures of performance in this research are very similar to those seen in previous studies conducted on KSE-listed companies in Pakistan (Khatab, et al., 2011; Javaid & Saboor, 2015; Javid & Iqbal, 2008; Irshad, et al., 2015; Akbar, 2014; Makki & Lodhi, 2013).

Table 6-3: Firm Performance—Comparison of Mean Values for pre- and post-2012

Dependent Variables	Pre 2012 (2009-2011) Mean	Post 2012 (2013-2015) Mean	Increase or Decrease	% Change	T-test
Tobin's Q	1.106	1.323	0.217	0.196	-6.785 ***
Return on Assets (ROA) %	4.1%	3.9%	-0.2%	-4.9%	0.223
Return on Equity (ROE) %	10.3%	14.5%	4.2%	40.8%	3.056 ***

The t-test in column six is the independent samples t-test for equality of means between pre 2012 and post 2012 firm performance. The mean difference with (***) indicates that the null hypothesis that means are equal is rejected at 1% significance level

6.2.3 Independent Variables

Table 6-4 presents the overall summary of the descriptive statistics for the independent and mediating variables of the research, and includes Board independence, CEO duality, Board diversity, Board committees, audit committee independence, frequency of Board meetings, and the total number of Board directors.

Board Independence

Board independence (BINDP), which is the proportion of NEDs on the Board, shows that there was not much change in the proportion of NEDs on Boards from one time period to the next. The proportion of non-executive independent directors had a mean value of 66% for the entire time period of this research, indicating that 34% of listed companies in Pakistan still have Boards that are dominated by insiders. Following the implementation of the revised Code, the percentage of non-executive independent directors ranged from 38% to 89%, compared to 33% to 85% for the time period prior to implementation of the revised Code. Furthermore, the number of NEDs on the Board ranged from 2 to 10 and 3 to 10 before and after implementation of the revised Code, respectively. The results

presented in Table 6.4 also indicate that the ratio of non-executive independent directors increased from 64.2% to 67.7% following the implementation of the revised Code.

Table 6-4: Descriptive Statistics of Independent and Mediating Variables

Description	N	Mean	Stand.Dev	Minimum	Maximum
Board Independence (%)					
Pre 2012 (2009-2011)	795	64.20%	13.30%	33%	85%
Post 2012 (2013-2015)	795	67.70%	11.90%	38%	89%
Overall	**1,590**	**66.00%**	**12.70%**	**33%**	**89%**
Number of Independent Directors					
Pre 2012 (2009-2011)	795	4.982	1.341	2	10
Post 2012 (2013-2015)	795	5.416	1.302	3	10
Overall	**1,590**	**5.199**	**1.339**	**2**	**10**
CEO Duality					
Pre 2012 (2009-2011)	795	0.211	0.409	0	1
Post 2012 (2013-2015)	795	0.186	0.390	0	1
Overall	**1,590**	**0.206**	**0.399**	**0**	**0**
Board Diversity					
Pre 2012 (2009-2011)	795	0.570	0.495	0	1
Post 2012 (2013-2015)	795	0.570	0.495	0	1
Overall	**1,590**	**0.570**	**0.495**	**0**	**1**
Board Committees					
Pre 2012 (2009-2011)	795	1.966	0.487	1	4
Post 2012 (2013-2015)	795	2.135	0.603	1	5
Overall	**1,590**	**2.050**	**0.554**	**1**	**5**
Audit Committee Independence					
Pre 2012 (2009-2011)	795	0.489	0.500	0	1
Post 2012 (2013-2015)	795	0.599	0.491	0	1
Overall	**1,590**	**0.541**	**0.498**	**0**	**1**
Board Size					
Pre 2012 (2009-2011)	795	7.746	1.214	6	13
Post 2012 (2013-2015)	795	7.991	1.300	6	14
Overall	**1,590**	**7.869**	**1.263**	**4**	**14**
Board Meetings					
Pre 2012 (2009-2011)	795	5.209	1.005	4	8
Post 2012 (2013-2015)	795	5.459	1.063	4	9
Overall	**1,590**	**5.334**	**1.042**	**4**	**9**

Table 6-5 shows a sector-, size- and year-wise breakdown of Board independence.

Table 6-5: Descriptive Statistics of Board Independence

Variable	Business Secto	2009	2010	2011	2013	2014	2015	6 Year Average
	Textile	63.45%	62.29%	63.44%	64.41%	65.63%	67.56%	64.46%
	Consumer Goods	65.09%	64.34%	66.00%	67.24%	68.43%	68.89%	66.66%
	Chemical	64.16%	63.35%	65.96%	69.40%	70.29%	71.24%	67.40%
BINDP	Industrial	65.83%	64.81%	64.57%	66.25%	68.23%	70.58%	66.71%
	Firm Size	2009	2010	2011	2013	2014	2015	6 Year Average
	Large	63.80%	62.90%	62.69%	63.90%	65.01%	66.99%	64.22%
	Medium	64.87%	62.68%	64.85%	67.34%	67.63%	68.42%	65.96%
	Small	64.51%	64.68%	66.29%	67.47%	69.92%	71.70%	67.43%

CEO Duality

The analysis of CEO duality indicates that, on average, 20.6% of the firms in Pakistan had CEO duality for the entire time period of this research. Table 6.4 suggests that, for the pre-2012 time period, 21.1% firms in Pakistan had CEO duality compared to 18.6% following the implementation of the SECP's revised Code. Although this shift between

the two time periods is not large, it clearly shows a positive trend towards the increased independence of the Boards of listed companies. In Pakistan, a large majority of firms are controlled by close families and business groups. This decreasing trend of CEO duality suggests that more than 80% of companies fulfil the requirements and recommendations of both international and local best practices in CG. Table 6-6 shows a sector-, size- and year-wise breakdown of CEO duality.

Table 6-6: Descriptive Statistics of CEO Duality

Variable	Business Sector	2009	2010	2011	2013	2014	2015	6 Year Average
	Textile	12.08%	12.08%	12.08%	11.32%	10.57%	11.32%	11.57%
	Consumer Goods	4.91%	4.91%	4.91%	3.77%	4.15%	4.15%	4.47%
	Chemical	2.26%	2.26%	2.26%	1.89%	2.26%	1.89%	2.14%
CEODUL	Industrial	1.89%	1.89%	1.89%	1.51%	1.51%	1.51%	1.70%
	Firm Size	**2009**	**2010**	**2011**	**2013**	**2014**	**2015**	**6 Year Average**
	Large	3.77%	3.77%	3.77%	2.64%	3.02%	2.64%	3.27%
	Medium	7.17%	7.17%	7.17%	6.04%	5.28%	6.04%	6.48%
	Small	10.19%	10.19%	10.19%	9.81%	10.19%	10.19%	10.13%

Board Diversity

Board diversity (DIVERSE) in this research is determined by the presence of female, foreign and minority directors on the Boards. The results in Table 6.4 indicate that 57% of corporate Boards in Pakistan are diversified—at least on paper. This level of Board diversity is largely due to two reasons: first, a large majority of companies in Pakistan are owned by their founding closed families, and it is not uncommon for such companies to bring spouses, daughters and daughters-in-law in to serve as either executive or non-executive directors; second, approximately 21% of the listed companies are significantly financed by foreign companies, with almost every foreign-affiliated company containing foreign directors. Less than 3% of the companies in Pakistan have a director representing the minority shareholders.

Board Committees

With regards the Board committees' variable (BCOMTS), the average number of committees before and after implementation of the revised Code was 1.97 and 2.14 committees, respectively. According to the results detailed in Table 6-4, the number of Board committees before and after implementation of the revised Code fell within the ranges 1–4 and 1–5, respectively. The data also indicate that, in the case of listed companies in Pakistan, the average number of Board committees was two for the entire period of this research. Based on the information collected for the purposes of this research, only 6% of the companies had just one committee, with 74.97% of the

companies having at least two Board committees throughout the entire duration of the research. There were 12.33% Boards supported by three Board committees, and only 1.76% of the companies had more than four Board committees. Table 6-7 shows a sector-, size- and year-wise breakdown of Board committees.

Table 6-7: Descriptive Statistics of Board Committees

Variable	Business Secto	2009	2010	2011	2013	2014	2015	6 Year Average
	Textile	1.77	1.78	1.79	1.86	1.91	1.97	1.85
	Consumer Goods	2.00	2.02	2.03	2.15	2.18	2.28	2.11
	Chemical	2.02	2.04	2.14	2.14	2.22	2.41	2.16
	Industrial	2.13	2.15	2.21	2.27	2.33	2.50	2.27
	Firm Size	**2009**	**2010**	**2011**	**2013**	**2014**	**2015**	**6 Year Average**
	Large	2.21	2.26	2.37	2.44	2.53	2.73	2.42
BCOMTS	Medium	1.87	1.88	1.89	1.99	2.04	2.18	1.98
	Small	1.80	1.79	1.79	1.82	1.84	1.86	1.82
	Committees #	**2009**	**2010**	**2011**	**2013**	**2014**	**2015**	**6 Year Average**
	1	36.00	36.00	35.00	25.00	21.00	21.00	29.00
	2	208.00	204.00	197.00	202.00	202.00	179.00	198.67
	3	21.00	25.00	32.00	35.00	33.00	50.00	32.67
	4				1.00	3.00	9.00	13.00	6.50
	5						2.00	2.00

Audit Committee Independence

The mean value for audit committee independence in the sampled companies for the period of this research was 54.1%. Table 6-4 shows that, for the pre-2012 time period, 48.9% of the companies in Pakistan had an independent audit committee, and the mean value for audit committee independence after implementation of the revised Code increased to 59.9%. The revised Code requires that companies' audit committees are chaired by an independent director. However, almost 40% of the listed companies in Pakistan remain non-compliant and have executive directors serving as Chairpersons of the audit committees. Table 6-8 shows a sector-, size- and year-wise breakdown of audit committee independence.

Table 6-8: Descriptive Statistics of Audit Committee Independence

Variable	Business Sector	2009	2010	2011	2013	2014	2015	6 Year Average
	Textile	35.29%	37.25%	41.18%	44.12%	45.10%	45.10%	41.34%
	Consumer Goods	50.00%	51.67%	56.67%	61.67%	68.33%	70.00%	59.72%
	Chemical	45.10%	49.02%	52.94%	58.82%	60.78%	66.67%	55.56%
	Industrial	63.46%	63.46%	71.15%	76.92%	80.77%	80.77%	72.76%
ACIND	**Firm Size**	**2009**	**2010**	**2011**	**2013**	**2014**	**2015**	**6 Year Average**
	Large	70.51%	70.51%	74.36%	85.90%	91.03%	91.03%	80.56%
	Medium	37.63%	40.86%	48.39%	50.54%	51.61%	52.69%	46.95%
	Small	34.04%	36.17%	39.36%	40.43%	43.62%	46.81%	40.07%

Board Size (BSIZE)

The size of the Board of Directors is determined by the total number of directors, both executive and non-executive, serving as Board members. The average Board size for the full duration of the research was 7.87 directors, ranging from a minimum of 4 to a maximum of 14 directors. The minimum size of a Board reported for the pre-2012 time period was 4 directors, whilst the maximum size reported was 13 directors. Similarly, the minimum and maximum sizes of Boards reported in the post-2012 time period were 6 and 14 directors, respectively. The results suggest that, following the implementation of the revised Code in March 2012, there was no noticeable change in Board size between the two time periods of the research. Table 6-9 shows a sector-, size- and year-wise breakdown of Board size.

Table 6-9: Descriptive Statistics of Board Size

Variable	Business Sector	2009	2010	2011	2013	2014	2015	6 Year Average
	Textile	7.33	7.31	7.40	7.44	7.51	7.59	7.43
	Consumer Goods	7.97	7.98	8.03	8.03	8.12	8.25	8.06
	Chemical	7.67	7.69	7.80	7.88	8.12	8.25	7.90
	Industrial	8.21	8.27	8.31	8.60	8.65	8.77	8.47
BSIZE	**Firm Size**	**2009**	**2010**	**2011**	**2013**	**2014**	**2015**	**6 Year Average**
	Large	8.31	8.40	8.53	8.76	8.90	9.10	8.66
	Medium	7.73	7.72	7.78	7.81	7.92	7.98	7.82
	Small	7.20	7.17	7.21	7.24	7.30	7.38	7.25

Frequency of Board Meetings (BMETS)

The average number of Board meetings for the overall period of this research was 5.33 meetings per year, with 5 meetings per year recognised as the highest frequency. The results presented in Table 6-4 show the frequency of Board meetings, ranging from 4 to 8 meetings for the pre-2012 time period and 4 to 9 meetings in the post-2012 time period. On average, 23.02% of the Boards met 4 times per year, followed by 36.79% of Boards that met 5 times per year, 27.74% that met 6 times, with the remaining 12.45% of Boards meeting more than 7 to 9 times per year, with only one company with a Board that met 9 times throughout the year.

Table 6-10: Descriptive Statistics of Board Meetings

Variable	Business Sector	2009	2010	2011	2013	2014	2015	6 Year Average
	Textile	4.92	4.95	5.00	5.02	5.09	5.47	5.08
	Consumer Goods	5.37	5.37	5.38	5.52	5.55	5.83	5.50
	Chemical	5.25	5.29	5.25	5.20	5.35	5.71	5.34
BMETS	Industrial	5.37	5.46	5.54	5.65	5.75	6.06	5.64
	Firm Size	**2009**	**2010**	**2011**	**2013**	**2014**	**2015**	**6 Year Average**
	Large	5.68	5.74	5.86	5.86	6.09	6.51	5.96
	Medium	5.14	5.22	5.25	5.30	5.25	5.69	5.31
	Small	4.79	4.77	4.72	4.81	4.90	5.07	4.84

In line with other characteristics of the Board, the results show an increasing trend in the frequency of Board meetings following the implementation of the revised Code. However, this change was only marginal. Table 6-10 contains a sector-, size- and year-wise breakdown of Board meetings.

Table 6-11 presents the mean values and the level of their significance for the Board structural characteristics for the pre- and post-2012 time periods. The table highlights the differences in the level of compliance between the two time periods, and it is clear from the results that, with the exception of CEO duality and Board diversity, all other variables are significant and show positive trends in the degree of CG compliance.

Table 6-11: Board Characteristics—Comparison of Mean Values (pre- and post-2012)

Dependent Variables	Pre 2012 (2009-2011) Mean	Post 2012 (2013-2015) Mean	Increase or Decrease	% Change	T-test
Board Independence	0.642	0.677	0.035	0.055	-5.587 ***
CEO Duality	0.211	0.186	-0.025	-0.119	1.257
Board Diversity	0.570	0.570	0.000	0.000	0.000
Board Committees	1.966	2.135	0.169	0.086	-6.134 ***
Audit Committee Independence	0.490	0.599	0.109	0.223	-4.405 ***
Board Size	7.746	7.991	0.245	0.032	-3.889 ***
Board Meetings	5.209	5.459	0.250	0.048	-4.825 ***

The t-test in column six is the independent samples t-test for equality of means between pre 2012 and post 2012 firm performance. The mean difference with (***) indicates that the null hypothesis that means are equal is rejected at 1% significance level

Although the extent of the change in each variable is minor, the results indicate that the changes are statistically significant. For example, the independence of Boards ($t = -5.587$, $p < 0.01$) indicates that companies in Pakistan are showing increasingly compliance with the provisions of the revised Code of Corporate Governance. Comparing the mean differences in CEO duality in the two time periods indicates an 11.9% decrease in CEO duality, suggesting that listed companies in Pakistan have responded positively to both the requirements of the revised Code and the KSE's listing requirement by separating the roles of CEO and Chairperson; however, the mean difference between the pre- and post-2012 periods is not significant. The results also indicate that companies in Pakistan are becoming increasingly aware of the potential benefits of having various Board committees to facilitate Board functions.

Examining the above information, this research suggests there have been a lot of improvements made to the Board structures of listed companies in Pakistan following the implementation of the revised Code in March 2012.

6.2.4 Control Variables

Table 6-12 presents an overall summary of the descriptive statistics for the control variables used in the regression models of this research, and includes firm size, firm age, leverage, sales growth, and the industrial sectors of the sample firms.

Table 6-12: Descriptive Statistics of Control Variables

Description	N	Mean	Stand.Dev	Minimum	Maximum
Firm Size (Total Sales)					
Pre 2012 (2009-2011)	795	7.882	1.615	1.39	13.52
Post 2012 (2013-2015)	795	8.241	1.810	0.69	13.99
Overall	**1,590**	**8.062**	**1.724**	**0.69**	**13.99**
Firm Age (Years)					
Pre 2012 (2009-2011)	795	30.58	13.46	11	155
Post 2012 (2013-2015)	795	34.58	13.46	15	159
Overall	**1,590**	**32.58**	**13.60**	**11**	**159**
Leverage %					
Pre 2012 (2009-2011)	795	0.703	0.378	0.03	4.03
Post 2012 (2013-2015)	795	0.705	0.631	-0.30	9.81
Overall	**1,590**	**0.704**	**0.520**	**-0.30**	**9.81**
Growth %					
Pre 2012 (2009-2011)	795	1.252	0.836	0.001	13.25
Post 2012 (2013-2015)	795	1.115	0.626	0.017	9.451
Overall	**1,590**	**1.183**	**0.742**	**0.001**	**13.25**

Firm Size

Firm size (FSIZE) is represented by the log value of total sales at the end of each accounting year for the sampled firms. The minimum log value of sales for the period prior to implementation of the revised Code was 1.39 million, whilst the maximum value was 13.52 million. Similarly, for the revised Code's post-implementation period, the minimum and maximum values were 0.69 million and 13.99 million, respectively. The results in Table 6-12 suggest no significant change in average firm size during the study period. However, the mean value of sales increased from 7.88 to 8.24 million during the post-2012 period, suggesting an increase in the value of sales, which is an indication as to increased investor confidence in CG practices following the implementation of the Code. Table 6-13 presents sector- and firm-size data year-on-year for sales, clearly indicating positive growth across all dimensions.

Table 6-13: Descriptive Statistics of Firm Size

Variable	Business Sector	2009	2010	2011	2013	2014	2015	6 Year Average
	Textile	2,819	3,173	4,061	5,358	6,029	6,412	4,642
	Consumer Goods	6,592	7,640	8,990	10,606	11,264	12,183	9,546
	Chemical	6,195	7,642	7,666	9,974	10,706	11,369	8,925
	Industrial	29,991	33,812	39,866	54,563	57,524	62,718	46,412
FSIZE	**Firm Size**	**2009**	**2010**	**2011**	**2013**	**2014**	**2015**	**6 Year Average**
	Large	28,670	32,891	38,384	51,387	54,652	59,405	44,231
	Medium	2,750	3,154	3,625	4,498	4,876	5,125	4,005
	Small	708	757	920	1,089	1,189	1,234	983

Leverage Ratio

Table 6-12 shows the mean values for leverage ratio, obtained by dividing the total value of the firm's long-term debt by the total value of its assets at the end of each financial year. The mean value of the leverage ratio is 70.4% for the entire period of the research. Table 6-12 also shows that the average leverage ratio increased from 70.3% to 70.5%, indicating no substantial difference in the ratio between the pre- and post-2012 time periods. Table 6-14 contains a sector-, size- and year-wise breakdown of firm leverage ratio.

Table 6-14: Descriptive Statistics of Firm Leverage Ratio

Variable	Business Sector	2009	2010	2011	2013	2014	2015	6 Year Average
	Textile	79.23%	80.84%	75.56%	77.03%	73.39%	74.07%	76.69%
	Consumer Goods	74.08%	71.11%	68.51%	73.88%	83.24%	83.80%	75.77%
	Chemical	63.71%	67.99%	67.10%	64.83%	62.10%	61.64%	64.56%
	Industrial	56.41%	56.68%	57.39%	59.59%	56.65%	57.50%	57.37%
LEVERAGE	**Firm Size**	**2009**	**2010**	**2011**	**2013**	**2014**	**2015**	**6 Year Average**
	Large	58.40%	59.35%	57.05%	56.81%	55.17%	54.84%	56.93%
	Medium	71.08%	71.08%	68.36%	68.87%	68.02%	69.11%	69.42%
	Small	80.25%	81.78%	78.89%	83.61%	84.72%	85.24%	82.42%

A comparison of the mean values for the control variables is provided in Table 6-15. The results indicate that firm size as measured by the year-end book value of total assets, increased by 4.6% following the implementation of the revised Code. The mean value of firms' assets increased to 8.241 million rupees in the post-2012 period, compared to 7.882 million for the pre-2012 period. This change in firm size is statistically significant ($t = -4.176$, $p < 0.01$). Firm age is also statistically significant ($t = -5.925$, $p < 0.01$).

The results also indicate that there is little movement in the degree of leverage, with the change between the two periods insignificant. Although the average size of firms' assets increased during the post-2012 period, the results also suggest a decrease in sales, indicating an underutilisation of firms' assets.

Table 6-15: Control Variables—Comparison of Mean Values for Pre- and Post-2012

Dependent Variables	Pre 2012 (2009-2011) Mean	Post 2012 (2013-2015) Mean	Increase or Decrease	% Change	T-test
Firm Size (Log of Assets)	7.882	8.241	0.359	0.046	-4.176 ***
Firm Age	30.585	34.585	4.000	0.131	-5.925 ***
Leverage	0.703	0.704	0.002	0.003	-0.070
Growth	1.125	1.115	-0.010	-0.009	3.700 ***

The t-test in column six is the independent samples t-test for equality of means between pre 2012 and post 2012 firm performance. The mean difference with (***) indicates that the null hypothesis that means are equal is rejected at 1% significance level

6.3 Correlation Analyses

Correlation analysis is an important statistical procedure with the propensity to assist researchers in understanding and exploring the nature of relationships between variables. It is a useful tool for detecting the potential issue of multicollinearity—a situation of high correlation between the independent variables. If there is a high degree of correlation between variables, these variables must be removed from the model because a high level of correlation between independent variables is likely to increase the chances that a good predictor of the outcome might become non-significant and be rejected from the model (Field, 2005; Taylor & Yu, 2002; Briano-Turrent & Rodríguez-Ariza, 2016). The Pearson correlation coefficient is used, which assumes that the variables are normally distributed.

Table 6-16 shows the correlation matrix between all the variables for the whole period of the research. The table also shows the level of significance and the direction of correlation between the variables. For Board attributes, the results of the correlation analyses indicate that Board independence (BINDP), Board diversity (DIVERSE), audit committee independence (ACIND), Board committees (BCOMTS), Board size (BSIZE) and frequency of Board meetings (BMETS) are positively correlated with TQ, ROA and ROE, except BINDP and ACIND, which show no significant correlation with the two accounting-based measures of performance (ROA and ROE). However, as expected, there is negative correlation between CEO duality (CEUDUL) and all three measures of firm performance. The correlation results in Table 6-16 also show that the three measures of firm performance are positively correlated with one another. However, the intensity of their relationships remains weak. There is significant positive correlation between TQ and ROE (r = 0.160, p < .0.01) and, similarly, between TQ and ROA (r = 0.064, p < 0.05) and between ROA and ROE (r = 0.202, p < 0.01) for the entire period of the research.

6.3.1 Board Independence (BINDP)

As expected, the results indicate a significant positive correlation (r = 0.086, p < 0.01) between BINDP and TQ. BINDP shows no significant relationship with ROA and ROE. *However, the direction of their relationship is positive, suggesting that BINDP is positively linked with the performance of firms across all three measures of performance.* Table 6-17 shows the correlation results for the pre-2012 time period, with the post-2012 results shown in Table 6-18.

The results suggest that BINDP was not significantly correlated with TQ for the pre-2012 period compared to the post-2012 time period, when the relationship between BINDP and TQ was significantly positive (r = 0.110, p < 0.01). This change in the degree of correlation suggests that stock markets in Pakistan have appreciated and rewarded the efforts of the listed companies in Pakistan for their increased level of compliance with the requirements of the revised Code of Corporate Governance. The value of TQ increased by 19.58% from 1.106 for the pre-2012 period to 1.323 in the post-2012 time period, as shown in Table 6-2. This comparison between the pre- and post-2012 time periods also indicates that the direction of the relationship between BINDP, and the accounting measures of performance changed from positive to negative, with the relationship becoming weaker in the post-implementation period of the revised Code. *One possible reason for this shift in the degree and direction of the relationship could be owing to the application and adoption of International Financial Reporting Standards, which require greater transparency and disclosure of information.*

6.3.2 CEO Duality (CEODUL)

There is significant negative correlation between CEODUL and TQ (r = –0.063, p < 0.05); likewise, a significant negative association also exists between CEODUL and ROA (r = –0.152, p < 0.01). Although the relationship between CEODUL and ROE is not significant, the negative sign does suggest that CEO duality is not good for firms' performance in Pakistan and indicates that CEO duality may be linked with managerial entrenchment and the exploitation of shareholders' interests. The results (r = –0.156, p < 0.01) also show a significant negative correlation between CEODUL and BINDP for the entire period of this research. This negative relationship between CEODUL and BINDP is consistent with the expectation that firms with CEO duality are likely to have a higher proportion of inside directors (Cabrera-Suárez & Martín-Santana, 2015; Murphy & McIntyre, 2007), thereby reducing the independence of Boards.

According to tables 6-17 and 6-18, the directions of the relationships between CEODUL and other variables are negative both before and after the implementation of the revised Code; however, the strength of the coefficient changed across the two time periods. For example, the negative relationship of CEODUL became stronger in the post-2012 period for TQ, ROA and most of the other variables in the model.

6.3.3   Board Diversity (DIVERSE)

There is positive correlation between Board diversity (DIVERSE) and firm performance across all three measures of performance (TQ, ROA and ROE). The correlation is positive and significant between DIVERSE and TQ (r = 0.106, p < 0.01). Although the coefficients are small, the results also indicate significant positive correlations between DIVERSE and ROE (r = 0.058, p < 0.05) and between DIVERSE and ROA (r = 0.055, p < 0.05). The correlation matrix also suggests a significant association between DIVERSE and BIND, but the direction of the correlation in this instance is negative (r = –0.80, p < 0.01). Unexpectedly, the correlation results indicate a positive relationship between DIVERSE and CEODUL (r = 0.076, p < 0.01). The results presented in tables 6-17 and 6-18 show that DIVERSE is significantly and positively correlated with the majority of other independent and dependent variables in both time periods of the research. However, the relationships were marginally stronger prior to the implementation of the revised Code. It is also clear from Table 6-17 and Table 6-18 that, prior to the implementation of the revised Code, Board diversity was not significantly correlated with either ROE or BINDP, but rather that, following the implementation of the Code in 2012, the relationships of DIVERSE became significant with both ROE and BIND. There was no change in the relationship between DIVERSE and CEODUL in either time period of the research.

6.3.4   Audit Committee Independence (ACIND)

The correlation is positive and significant between ACIND and TQ (r = 0.154, p < 0.01) and between ACIND and ROA (r = 0.094, p < 0.01) for the entire period of the research. In line with the existing evidence, the correlation analysis also reveals a significant negative relationship between ACIND and CEODUL (r = –0,095, p < 0.01). The positive relationship between ACIND and TQ was stronger in the post-2012 time period. Similarly, implementation of the revised Code strengthened the negative relationship between ACIND and CEODUL (r = –0.110, p < 0.01) as compared to (r = –0.075, p < 0.05) in the period preceding the implementation of the Code. The positive relationship between ACIND and ROA—which was significant for the pre-implementation period— is not significant in the post-2012 time period. This suggests that NEDs are becoming less effective for reasons other than those addressed by or identified in this research.

6.3.5   Board Committees (BCOMTS)

With regards the relationship between Board committees (BCOMTS) and the dependent variables, the correlation analysis reveals a significant association between BCOMTS and

all three measures of performance (TQ, ROA and ROE). The correlation is significant and positive between BCOMTS and TQ (r = 0.258, p < 0.01), as it is in the cases of BCOMTS and ROA (r = 0.185, p < 0.01) and BCOMTS and ROE (r = 0.133, p < 0.01). A significant positive correlation also exists between BCOMTS and other independent variables, with the exception of CEODUL, which is negatively linked with BCOMTS. When considering the trends and strengths of the relationships reported in tables 6-17 and 6-18, it appears that the coefficient for TQ was marginally stronger following the implementation of the SECP's revised Code of Corporate Governance. However, the positive relationship of BCOMTS with ROA and ROE in the post-2012 period was slightly weaker. It is also clear from the results that the relationship between BCOMTS and BIND was amplified following implementation of the revised Code in 2012.

6.3.6   Board Size and Board Meetings

Turning to the moderating and mediating variables, Table 6-16 shows that Board size is positively correlated with all three measures of firm performance, as well as with other independent variables. The results indicate a significant positive correlation between BSIZE and TQ (r = 0.185, p < 0.01), BSIZE and ROA (r = 0.149, p < 0.01) and BSIZE and ROE (R = 0.134, p < 0.01). BSIZE is also positively associated with both BINDP and BCOMTS (r = 0.239, p < 0.001 and r = 0.408, p < 0.01, respectively). Since there is a positive correlation between BSIZE and firm performance, any increase in the level of Board independence and Board committees will positively moderate the relationship between Board size and firm performance. Similarly, positive relationships also exist between BMETS and firm performance. For example, the relationship between BMETS and TQ is (r = 0.131, p < 0.01), between BMETS and ROA is (r = 0.098, p < 0.01), and, finally, the relationship between BMETS and ROE stands at (r = 0.122, p < 0.01). However, the relationship of BSIZE and BMETS with CEODUL is significantly negative (r = –0.202, p < 0.01 and r = –0.120, p < 0.01, respectively).

6.3.7   Ownership Concentration

It is also clear from Table 6-16 that ownership concentration is positively linked with the performance of firms across all three measures of firm performance. For example, there is significant positive correlation between TOP1 and TQ (r = 0.210, p < 0.01), TOP1 and ROA (r = 0.069, p < 0.01), as well as between TOP1 and ROE (r = 0.088, p < 0.01). However, the results also provide evidence of the fact that, as the concentration of ownership increases, the significance of the relationship either weakens or disappears

altogether, meaning that the concentration of ownership has an inverse relation with the risk and performance of firms (de Sousa & Galdi, 2016; Kazemian & Sanusi, 2015; Srairi, 2013).

The results suggest a negative relationship of ownership concentration with Board independence and Board size. The relation between TOP5 and BIND is ($r = –0.057$, $p < 0.05$) and between TOP5 and BSIZE is ($r = –0.170$, $p < 0.01$). The implementation of the revised Code (SECP) shows a significant positive correlation with the performance and CG practices of firms in Pakistan. For example, there are significant positive correlations between SECP and TQ ($r = 0.168$, $p < 0.01$), SECP and ROE ($r = 0.076$, $p < 0.01$), SECP and BIND ($r = 0.139$, $p < 0.01$), SECP and ACIND ($r = 0.110$, $p < 0.01$), SECP and BCOMTS ($r = 0.152$, $p < 0.01$) and SECP and BMETS ($r = 0.120$, $p < 0.01$).

6.3.8   Control Variables

Finally, when considering the control variables used in this research, Table 6.16 shows that FSIZE is positively associated with the accounting-based measures of performance, with the degree of significance seen to be ($r = 0.295$, $p < 0.01$) between FSIZE and ROA, and ($r = 0.220$, $p < 0.01$) between FSIZE and ROE. With the exception of CEODUL, there are positive correlations between FSIZE and the other independent variables used in the analysis. Although firm age (FAGE) is positively linked with the performance of firms, the relationship is significant only between FAGE and TQ ($r = 0.184$, $p < 0.01$). FAGE is also significantly correlated with BIND, ACIND, BCOMTS, BSIZE, BMETS and FSIZE. Consistent with the previous evidence, there is a significant negative correlation between FSIZE and CEODUL. Insofar as the relationship of leverage is concerned, the results indicate a significant positive correlation between LEVERAGE and TQ ($r = 0.272$, $p < 0.01$); otherwise, LEVERAGE is negatively correlated with the accounting-based measures of performance, with this negative correlation significant only between LEVERAGE and ROA ($r = –0.542$, $p < 0.01$). The correlations of LEVERAGE are also negative with ACIND, BCOMTS, BMETS and FSIZE at $p < 0.01$.

The overall significantly positive correlation between Board structure and the performance variables suggests that capital markets in Pakistan appreciate firms' adoption of good CG practices. The size of all of the bivariate correlations between independent variables and the three dependent variables are only weak to modest, however, therefore suggesting that the explanatory power of the research model is likely to be weak to moderate.

Table 6-16: Pearson Correlation Matrix of Financial Performance and Corporate Governance Variables, 2009–2015

No	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	TQ	1																	
2	ROA	.064*	1																
3	ROE	.160**	.202**	1															
4	BIND	.086**	.040	.006	1														
5	CEODUL	-.063*	-.152**	-.032	-.156**	1													
6	BDIVER	.106**	.055*	.058*	-.080**	.076**	1												
7	ACIND	.154**	.094**	.029	-.024	-.095**	-.023	1											
8	BCOMTS	.258**	.185**	.133**	.114**	-.273**	.033	.215**	1										
9	BSIZE	.185**	.149**	.134**	.050*	-.202**	.007	.239**	.408**	1									
10	BMETS	.131**	.098**	.122**	.014	-.120**	.071**	.268**	.363**	.299**	1								
11	TOP1	.210**	.069**	.088**	-.045	.073**	.056*	.025	.072**	-.021	.104**	1							
12	TOP5	.156**	.043	.039	-.057*	.037	.078**	-.045	-.032	-.170**	.028	.756**	1						
13	SECP	.168**	-.006	.076**	.139**	-.032	.000	.110**	.152**	.097**	.120**	.009	.003	1					
14	FSIZE	.045	.295**	.220**	-.009	-.199**	.065**	.337**	.457**	.472**	.435**	.116**	-.014	.104**	1				
15	FAGE	.184**	.024	.009	.066**	-.151**	-.016	.228**	.174**	.118**	.125**	.002	-.067**	.000	.137**	1			
16	INDUSTRY	.080**	.143**	.031	.078**	-.218**	.045	.217**	.287**	.282**	.184**	.063*	-.028	.000	.220**	.145**	1		
17	LEVERAGE	.272**	-.542**	-.021	-.013	.249**	.023	-.106**	-.106**	-.044	-.084**	-.057*	-.063*	.002	-.236**	-.039	-.145**	1	
18	GRO	.002	.093**	.022	-.011	-.029	.000	-.008	-.009	-.043	-.039	.009	.046	-.092**	-.039	.017	.058*	-.065**	1

* Correlation is significant at the 0.05 level (2-tailed), ** Correlation is significant at the 0.01 level (2-tailed), † Correlation is significant at the 0.1 level (2-tailed)

TQ (Tobin's Q ratio), ROA (Return on Assets), ROE (Return on Equity), DINDP (Board Independence), CEODUL (CEO Duality - Combined Leadership Structure), DIVERSE (Board Diversity), ACIND (Audit Committee Independence), BCOMTS (Board Committees), BSIZE (Board Size), BMETS (Board Meetings), TOP1 (% of Shares held by the Largest Shareholder), TOP5 (% of Shares held by the five largest shareholders), SECP (SECP Code of Corporate Governance), FSIZE (Firm Size), AGE (Firm Age), INDUS (Industrial Sector), LEVERAGE (Leverage Ration), GRO (Sales Growth)

Table 6-17: Pearson Correlation Matrix of Financial Performance and Corporate Governance Variables, 2009–2011

No	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	TQ	1																
2	ROA	.284**	1															
3	ROE	.130**	.358**	1														
4	BIND	.013	.103**	.017	1													
5	CEODUL	-.037	-.134**	-.049	-.184**	1												
6	BDIVER	.112**	.088*	.034	-.037	.076*	1											
7	ACIND	.129**	.143**	.054	-.052	-.075*	-.024	1										
8	BCOMTS	.175**	.203**	.165**	.098**	-.268**	.028	.177**	1									
9	BSIZE	.183**	.215**	.180**	.063	-.179**	-.021	.184**	.354**	1								
10	BMETS	.087*	.100**	.139**	-.018	-.141**	.067	.250**	.326**	.253**	1							
11	TOP1	.225**	.030	.067	-.097**	.076*	.054	.007	.083*	-.024	.083*	1						
12	TOP5	.169**	-.052	.025	-.084*	.036	.075*	-.051	-.018	-.179**	.014	.762**	1					
13	FSIZE	.021	.306**	.231**	.013	-.182**	.056	.309**	.416**	.442**	.403**	.128**	-.011	1				
14	FAGE	.198**	.045	.036	.063	-.140**	-.017	.253**	.165**	.087*	.126**	.005	-.066	.149**	1			
15	INDUSTRY	.082*	.174**	.064	.055	-.219**	.045	.191**	.300**	.251**	.177**	.065	-.027	.237**	.145**	1		
16	LEVERAGE	.298**	-.219**	-.090*	-.042	.276**	.006	-.168**	-.116**	-.047	-.101**	-.053	-.034	-.223**	-.066	-.213**	1	
17	GRO	.019	.093**	.053	.008	-.031	-.001	.018	-.010	-.051	-.036	-.024	.045	-.024	.019	.085*	-.044	1

* Correlation is significant at the 0.05 level (2-tailed), ** Correlation is significant at the 0.01 level (2-tailed), † Correlation is significant at the 0.1 level (2-tailed)

TQ (Tobin's Q ratio), ROA (Return on Assets), ROE (Return on Equity), DINDP (Board Independence), CEODUL (CEO Duality - Combined Leadership Structure), DIVERSE (Board Diversity), ACIND (Audit Committee Independence), BCOMTS (Board Committees), BSIZE (Board Size), BMETS (Board Meetings), TOP1 (% of Shares held by the Largest Shareholder), TOP5 (% of Shares held by the five largest shareholders), FSIZE (Firm Size), AGE (Firm Age), INDUS (Industrial Sector), LEVERAGE (Leverage Ration), GRO (Sales Growth)

Table 6-18: Pearson Correlation Matrix of Financial Performance and Corporate Governance Variables, 2013–2015

No	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	TQ	1																
2	ROA	-.042	1															
3	ROE	.173**	.096**	1														
4	BIND	.110**	-.003	-.033	1													
5	CEODUL	-.077*	-.172**	-.006	-.118**	1												
6	BDIVER	.107**	.034	.087*	-.129**	.076*	1											
7	ACIND	.149**	.066	-.017	-.027	-.110**	-.022	1										
8	BCOMTS	.276**	.181**	.087*	.095**	-.278**	.038	.225**	1									
9	BSIZE	.166**	.112**	.073*	.010	-.221**	.033	.275**	.436**	1								
10	BMETS	.133**	.101**	.087*	.014	-.094**	.077*	.267**	.373**	.325**	1							
11	TOP1	.206**	.099**	.112**	.010	.070*	.057	.043	.062	-.019	.123**	1						
12	TOP5	.154**	.112**	.055	-.027	.039	.080*	-.039	-.046	-.164**	.041	.750**	1					
13	FSIZE	.032	.296**	.200**	-.060	-.212**	.073*	.350**	.473**	.486**	.450**	.105**	-.017	1				
14	FAGE	.182**	.009	-.022	.069	-.162**	-.017	.204**	.183**	.146**	.125**	-.003	-.069	.126**	1			
15	INDUSTRY	.083*	.126**	-.006	.107**	-.218**	.045	.247**	.286**	.315**	.194**	.062	-.029	.207**	.145**	1		
16	LEVERAGE	.268**	-.675**	.023	.004	.247**	.034	-.076*	-.105**	-.044	-.079*	-.063	-.084*	-.252**	-.023	-.111**	1	
17	GRO	.019	.103**	-.005	-.007	-.033	.000	-.019	.021	-.014	-.020	.057	.050	-.037	.014	.023	-.092**	1

* Correlation is significant at the 0.05 level (2-tailed), ** Correlation is significant at the 0.01 level (2-tailed), † Correlation is significant at the 0.1 level (2-tailed)

TQ (Tobin's Q ratio), ROA (Return on Assets), ROE (Return on Equity), DINDP (Board Independence), CEODUL (CEO Duality - Combined Leadership Structure), DIVERSE (Board Diversity), ACIND (Audit Committee Independence), BCOMTS (Board Committees), BSIZE (Board Size), BMETS (Board Meetings), TOP1 (% of Shares held by the Largest Shareholder), TOP5 (% of Shares held by the five largest shareholders), FSIZE (Firm Size), AGE (Firm Age), INDUS (Industrial Sector), LEVERAGE (Leverage Ration), GRO (Sales Growth)

6.4 Panel Data Specifications and Diagnostic Tests

In order to facilitate meaningful analysis of the collected data, a number of different statistical tools and diagnostic tests were performed to deal with the choice between pooled, fixed and random effects models, and the issues of serial correlation, multicollinearity and heteroscedasticity.

6.4.1 Pooled OLS or Random and Fixed Effects

The pooled regression model requires strict assumptions, i.e. zero mean for error term, homoscedasticity, independence across observations, and strict exogeneity of the independent variables (Greene, 2012). Such strict assumptions for the pooled regression model are difficult to maintain, particularly when there is unobserved heterogeneity that is seen to fluctuate across the sampled firms. Thus, ignoring heterogeneity makes the pooled OLS estimator inconsistent because the firm-specific effect cannot be addressed by the pooled OLS regression model. The Breusch-Pagan Lagrange multiplier (LM) test is a useful instrument for deciding between the use of pooled OLS regression and the alternative random or fixed effects regression models. The test has a null hypothesis in favour of pooled OLS regression. If the null hypothesis is rejected, this provides adequate evidence to conclude that there are panel effects or significant differences across firms. Therefore, the alternative random or fixed effects models are more suitable when dealing with heterogeneity.

Table 6-19 details the results of the test statistics, which differentiate between pooled OLS regression and the alternative random or fixed effects regression.

Table 6-19: Breusch-Pagan Lagrange Multiplier (LM) Test

	TQ	ROA	ROE
Breusch and Pagan LM Test			
chi2(1)	212.53	367.17	146.48
Prob>chi2	0.0000	0.0000	0.0000
Decision: OLS or RE/FE	RE/FE	RE/FE	RE/FE

Ordinary Least Square (OLS), Random Effect (RE) and Fixed Effect (FE)

As can be seen from the table, the results of the LM test are significant, meaning the null hypothesis is rejected. Therefore, panel data regression is desirable for the detailed analysis of the data used in this research. The regression models, as based on performance measures (TQ, ROA and ROE) and Board structural characteristics (BINDP, CEODUL, DIVERSE, BCOMTS and ACIND), are all seen to be in favour of a random or fixed effects regression model over the pooled OLS regression model at the 1% significance level.

6.4.2 The Choice between Random and Fixed Effects

Tables 6-20 through to 6-22 contain the results of the Hausman specification test for all three measures of firm performance.

Table 6-20: Hausman Specification Test for TQ (Random vs Fixed)

	--- Coefficients ---			
	(b)	(B)	(b-B)	sqrt (diag (V_b-V_B)) S.E
	Fixed	Random	Difference	
BINDP	0.0024764	0.0329092	-0.0304328	0.0360350
CEODUL	0.1301338	0.0564833	0.0736505	0.0609380
ACIND	-0.1249677	-0.0514193	-0.0735484	0.0232671
BCOMTS	0.0549013	0.1126734	-0.0577721	0.0178106
BINDP_SECP	0.0672797	0.0928861	-0.0256064	0.0070197
CEODUL_SECP	-0.0745480	-0.0767245	0.0021765	.
DIVERSE_SECP	0.0258048	0.0258068	-2E-06	.
ACIND_SECP	0.1150808	0.1116543	0.0034265	.
BCOMTS_SECP	0.05662952	0.0397714	0.01685812	0.0047706

b = consistent under Ho and Ha; B = inconsistent under Ha, efficient under Ho;
Test: Ho: difference in coefficients not systematic
chi2(9) = 8.51
Prob>chi2 = 0.4839

Table 6-21: Hausman Specification Test for ROA (Random vs Fixed)

	--- Coefficients ---			
	(b)	(B)	(b-B)	sqrt (diag (V_b-V_B))
	Fixed	Random	Difference	S.E.
BINDP	0.0261947	0.0252704	0.0009243	0.0209787
CEODUL	0.0192327	-0.0164705	0.0357032	0.0236364
ACIND	0.0101233	0.0180254	-0.0079021	0.0108061
BCOMTS	0.0112056	0.0234194	-0.0122138	0.0088496
BINDP_SECP	0.0014168	-0.0033862	0.0048030	0.0056774
CEODUL_SECP	-0.0274614	-0.0268480	-0.0006134	0.0010713
DIVERSE_SECP	-0.0017153	-0.0024999	0.0007846	.
ACIND_SECP	-0.0090713	0.0104140	-0.0194853	0.0015994
BCOMTS_SECP	0.0019888	0.0023067	-0.0003179	0.0027062

b = consistent under Ho and Ha; B = inconsistent under Ha, efficient under Ho;
Test: Ho: difference in coefficients not systematic
chi2(9) = 15.54
Prob>chi2 = 0.1772

Table 6-22: Hausman Specification Test for ROE (Random vs Fixed)

	--- Coefficients ---			
	(b)	(B)	(b-B)	sqrt (diag (V_b-V_B))
	Fixed	Random	Difference	S.E.
BINDP	0.0335575	-0.0448824	0.0784399	0.0163470
CEODUL	0.0457061	-0.0126513	0.0583574	0.0634449
ACIND	-0.0197793	0.0065878	-0.0263671	0.2992790
BCOMTS	0.0404801	0.0754543	-0.0349742	0.2494840
BINDP_SECP	0.1414130	0.1328208	0.0085922	0.0173975
CEODUL_SECP	0.0264101	0.0291700	-0.0027599	0.0038132
DIVERSE_SECP	0.0391372	0.0362364	0.0029008	0.0013438
ACIND_SECP	-0.0131266	-0.0189833	0.0058567	0.0052992
BCOMTS_SECP	-0.0380625	-0.0367109	-0.0013516	0.0079448

b = consistent under Ho and Ha; B = inconsistent under Ha, efficient under Ho;
Test: Ho: difference in coefficients not systematic
chi2(9) = 10.61
Prob>chi2 = 0.3035

The panel data models examine the fixed or random effects of an entity or time in order to capture the effects of firm- and time-specific dimensions of the data. When striving to

decide between fixed or random effects, the Hausman specification test is the most frequently used test (Wahba & Elsayed, 2015; Javaid & Saboor, 2015; Kamran & Shah, 2014; Bhagat & Bolton, 2008; Gallego, et al., 2009; Janang, et al., 2015), and its null hypothesis suggests the use of a random effects as opposed to a fixed effects model (Hausman, 1978). The test basically confirms whether the unique errors (μ_i) are correlated with the independent variables, the null assumption being that the unique errors are not correlated with the regressor (Negi, 2015). If there is no correlation identifiable between the unique errors and the independent variables, a random effects regression model should be the choice.

6.4.3   Variance Inflation Factor (VIF) test of Multicollinearity

The VIF is a commonly used test carried out in order to detect the existence and severity of the multicollinearity problem (Leung & Cheng, 2013; Villar, et al., 2016; Torea, et al., 2016). Hsiao (2007) suggests that the use of panel data helps to ease the problem of multicollinearity because panel data provides more informative data, more variability, less collinearity amongst variables, more degrees of freedom, and greater efficiency. According to Brooks (2003), in the presence of multi-collinearity, the regress is very sensitive—even when considering small changes in the specifications—and the inclusion or exclusion of one variable in the regression could induce a large change in the level or significance of the other parameters.

Table 6-16, as presented in the previous section, shows that the overall correlations between the variables are low, suggesting that multicollinearity is not an issue for this particular research. However, keeping in mind the importance of detecting the presence of multicollinearity in the models, the research has performed a robustness check in the form of the VIF test so as to detect the presence and level of any multicollinearity. This research has adopted an 80% tolerance level for multicollinearity, as based on a warning from Gujarati (2003), who suggested that the presence of multicollinearity above 80% could harm the analysis, with the regression results subject to challenge. The results of the VIF test are presented in Table 6-23, with the test results returning a mean value of 1.36 and an overall tolerance value of 0.735 (1/1.36).

Since the VIF test results are within acceptable levels, it is concluded that the results presented in the correlation matrixes will not affect the interpretation of the regression coefficients of the predictors of the model.

Table 6-23: Results of the Variance Inflation Factor (VIF) Test

Variable Code	Variable Name	VIF Value	1/VIF Value
TOP5	Shares Held by the first 5 Largest Shareholders	2.55	0.3928
TOP1	Shares Held by the single Largest Shareholders	2.50	0.4000
BCOMTS	Number of Board Committees	1.46	0.6871
BSIZE	Board Size	1.39	0.7172
BMETS	Board Meetings	1.28	0.7825
CEODUL	CEO Duality	1.23	0.8136
INDUSTRY	Industrial Sector	1.23	0.8146
ACIND	Audit Committee Independence	1.19	0.8372
FSIZE	Firm Size	1.17	0.8526
AGE	Firm Age	1.12	0.8891
LEVERAGE	Leverage Ratio	1.10	0.9126
SECP	SECP Governance Code	1.08	0.9280
BINDP	Board Independence	1.07	0.9339
DIVERSE	Board Diversity	1.04	0.9655
GROWTH	Sales Growth	1.02	0.9778
Mean VIF		**1.36**	

6.4.4 Breusch-Pagan/Cool-Weisberg Test for Heteroscedasticity

In order to test the presence of heteroscedasticity in the panel data, the Breusch-Pagan/Cool-Weisberg Test for Heteroscedasticity was used. Table 6-24 shows the results of the test, which indicate the presence of heteroscedasticity. This requires the use of random effects with 'robust' standard errors so as to correct the presence of heteroscedasticity in the data (Hayakawa & Pesaran, 2015; Wooldridge, 1989; Hausman & Palmer, 2012; Antonakis, et al., 2010).

Table 6-24: Breusch-Pagan/Cook-Weisberg Test for Heteroscedasticity

	TQ	ROA	ROE
Breusch-Pagan / Cook-Weisberg Test			
chi2(1)	336.21	938.65	89.12
Prob>chi2	0.0000	0.0000	0.0000
Presence of of Heteroskedasticity	YES	YES	YES

6.4.5 Wooldridge Autocorrelation Test

Autocorrelation is also referred to as serial correlation. In a panel data set, the serial correlation is likely to have a more substantial influence on the estimated covariance matrix of the least squares estimator than heteroscedasticity (Greene, 2012). Autocorrelation is the correlation of a time series in relation to its own past and future values (Wooldridge, 2010; Baltagi , et al., 2007). The autocorrelation test examines the correlation between a set of variables at a given point in time and lagged variables within the same set. This research applied the Wooldridge test for autocorrelation, with the

results of the test presented in Table 6-25. The null hypothesis of the test is no serial correlation. Based on the test results, the null hypothesis cannot be rejected.

Table 6-25: Wooldridge Autocorrelation Test

	TQ	ROA	ROE
Wooldridge Test for Autocorrelation			
chi2(1)	2.390	2.903	0.405
Prob>chi2	0.123	0.089	0.525
Autocorrelation	No	No	No

6.5 Regression Analyses—Testing the Conceptual Framework

In order to investigate the relationship between Board structural characteristics, Board roles and firm performance, this research used panel data analytical tools. Linear and multiple regression analyses were applied so as to test the conceptual framework model (see Figure 4-5). The section below reports the results from a series of regression analyses, which tested various pathways of the models to determine the extent to which Board structural attributes influence the three performance measures (TQ, ROA and ROE); to determine whether these relationships are moderated by the SECP's revised Code (dummy coded: 0 = pre-revision of the Code; 1 = post revision of the Code) and ownership concentration held by the single largest shareholder (TOP1) or the first five largest shareholders (TOP5); and to determine whether the relationships between Board structure and firm performance are mediated by Board Size (Resource-dependence role of the Board) and the Number of Board Meetings (monitoring role of the Board).

6.5.1 Board Size (Resource-dependence Role) as the Mediator of Tobin's Q

The results for the testing of the conceptual framework for Board size, as the mediator of Tobin's Q, is presented in Table 6-26 and includes unstandardised β regression coefficients and the standard errors of β (SE) and R^2 in order to indicate how much variation in each performance outcome can be explained by the variables included in each of the regression models. The results indicate that all models were seen to have good fit based on the chi-square values.

Effect of the Control Variables on Tobin's Q (M0)

First, the impact of the control variables on the performance of Tobin's Q was assessed. All of the control variables were regressed on Tobin's Q, which is a market-based measure of performance. The results of Model 0 (M0) in Table 6-26 reveal that higher Tobin's Q performance was predicted by the consumer industry ($\beta = 0.252$, $p < .05$), higher leverage ($\beta = 0.239$, $p < .001$), larger firm size ($\beta = 0.152$, $p < .001$) and older firm

age ($\beta = 0.007$, $p < .01$). In contrast, three control variables (textile industry, chemical industry and growth) demonstrated no significant impact on Tobin's Q. The fit statistics for M0 are $R^2 = 0.131$, $X^2 = 92.1$ (7df, $p < .001$). The overall R^2 value of 0.131 indicates that this model accounted for approximately 13.10% of the variation in Tobin's Q performance during the entire period of this research. Hence, an additional 86.90% of Tobin's Q performance was explained by other factors, both internal and external, to the firms' environment, and not included in this model. The results of M0 indicate that the model applied with only control variables does not have a significant predictive power.

The effect of the control variables (FSIZE, LEVERAGE, GRO, AGE, TEXTILE, CHEMICAL and CONSUMER) on Tobin's Q performance was controlled for in the subsequent regression analyses.

Direct Effect of Board Structure Independent Variables on Tobin's Q (M1)

In the next step, independent variables and two moderating variables—namely SECP and ownership concentration at TOP1 and TOP5—were added to the M0. Model 1 (M1) in Table 6-26 shows that Tobin's Q performance increased following the implementation of the SECP's revised Code ($\beta = 0.451$, $p < .05$). The SECP coefficient represents the overall change in firm performance for the two time periods of the research. When reflecting on the descriptive statistics presented in Table 6-2, the results show that Tobin's Q was higher, at 1.323, for the post-2012 time period in comparison to 1.106 for the pre-2012 time period. The net difference of 0.217 (1.323–1.106) in the model is due to the fact that all of the other factors included in the model are controlled. Similarly, higher Tobin's Q values were also predicted by the ownership concentration of the first five (TOP5) largest shareholders ($\beta = .194$, $p < .001$) and Board diversity ($\beta = 0.104$, $p < 0.1$), and by a larger number of Board committees ($\beta = 0.164$, $p < .001$). In contrast, the ownership concentration of the first largest shareholder did not predict Tobin's Q performance.

The overall R^2 value of 0.258 indicates that this model accounted for only 25.80% of the variation in Tobin's Q performance. Hence, an additional 74.20% of the variation in Tobin's Q performance was explained by other factors both internal and external to the firms' environment, and not included in this model. The fit statistics for M1 are $R^2 = 0.258$, $X^2 = 318.35$ (15df, $p < .001$), comparatively higher than for the previous model, M0. M1 also indicates the differences across the pre- and post-2012 time periods for pooling the data together. The results of M1 clearly show that, when interaction terms are not included, or otherwise when the moderators are ignored, the effects of this inclusion

are reflected in the coefficient of all independent variables for the entire period of this research. Hence, in an effort to understand the impact and importance of the SECP's revised Code, it is important to consider the effect of intervening variables (Namazi & Namazi, 2016; Sener, et al., 2011; Carpenter, et al., 2004).

Moderating Effect of the SECP Code and Ownership Concentration on Tobin's Q (M2)

Next, the moderating effect of the SECP's revised Code on Tobin's Q performance was examined to determine whether revision of the Code increased or decreased the extent to which Board structure influences Tobin's Q. Model 2 (M2) in Table 6-26 shows that the revised Code significantly moderated the influence on Tobin's Q of Board independence ($\beta = 0.423$, $p < .01$), audit committee independence ($\beta = 0.113$, $p < .01$) and Board committees ($\beta = 0.077$, $p < .05$). *This indicates that, following the revision of the Code in 2012, greater Board independence, higher audit committee independence and a larger number of Board committees significantly increased the performance of firms, as measured by Tobin's Q.* In contrast, the revision of the Code did not moderate the effect of CEO duality on Tobin's Q ($\beta = -.064$) or the effect of Board diversity on Tobin's Q ($\beta = .034$), hence the significance of these relationships was unchanged pre- and post-SECP revision. Model 2 also shows that a concentration of shares with the single largest shareholder (TOP1) moderates the relationships of Board independence ($\beta = 1.64$, $p < .05$) and Board committees ($\beta = .518$, $p < .05$) with Tobin's Q performance, with greater Board independence and more Board committees increasing Tobin's Q. In contrast, ownership concentration measured by the shares held by the TOP5 shareholders does not moderate the relationships between Board structure and Tobin's Q. Hence, in the sample firms, further concentration of ownership is not the determining factor of the Tobin's Q value of the firms.

The comparison between M1 and M2 illustrates the effects of the implementation of the SECP's revised Code. For example, the comparison shows that the effect of Board independence is not significant in the time period prior to the implementation of the revised Code in March 2012. The coefficient of BINDP_SECP (.423) highlights the difference between the pre- and post-2012 time periods. This suggests that, since the implementation of the revised Code in 2012, Board independence amongst listed companies in Pakistan has increased, and, as a result of this increase in Board independence, there has been a corresponding increase in TQ. Descriptive analyses of the independent variables shown in Table 6.4 highlight an increase in the level of Board

independence from 64.20% to 67.7%, with a corresponding change in the TQ ratio of 0.011 {(0.677–0.642) *0.423}. In order words, the pre-revision effect of the Code on Board independence is –.066, and the post-revision effect on Board independence is 0.489, yielding a net change of 0.423 (–.066 + 0.489) in Board independence between the two periods of this research.

Similarly, a comparison of the two models (M1 and M2) also shows that the effect of audit committee independence is not significant in the time period prior to the implementation of the revised Code in March 2012. The coefficient of ACINDP_SECP (0.113) highlights the difference between the pre- and post-2012 time periods. This implies that, since the implementation of the revised Code in 2012, the audit committee independence of listed companies in Pakistan has increased and, as a result, the TQ ratio has also increased. Descriptive analyses of independent variables in Table 6-4 show an increase in the level of audit committee independence from 48.90% to 59.90%, with a corresponding change in the TQ ratio of .012 {(0.599 – 0.489) * 0.113}. The pre-revision effect of the Code on audit committee independence is –.261, whilst the post-revision effect on Board independence is 0.370, yielding a net change of 0.133 in Board independence between the two periods of this research. Finally, the comparison also indicates that a number of Board committees had a significant positive effect on the performance of firms in post-2012 time periods.

Overall, the results of the moderation analysis of the SECP variable in M2 are in line with hypotheses H3.3, H6.3 and H7.3, which posit that some CG indicators would be recognised as more significant following the implementation of the revised Code. However, H4.3 and H5.3 are not supported by this research. The results in M2 also support a positive moderating relationship of ownership concentrated in the hands of a TOP1 shareholder with Board independence and a number of Board committees, with the relationship significant at a level of 0.05.

Mediation Effects of Board Size—Resource-dependence Role (M3–M7)

Mediation is a theoretical causal chain relationship where one variable affects the second variable, which then, in turn, affects the third variable. In other words, mediation analyses are concerned with understanding the procedure by which an independent variable exercises its power and influence on a dependent variable. A number of variables could be hypothesised as mediators. In the context of this research, it is hypothesised that Board size mediates the relationship between Board structural characteristics and the

performance of firms. In order to test the mediation effects of Board roles on the performance of firms, this research has adopted the four-step approach presented by Baron & Kenny (1986), alongside several regression analyses, in an effort to understand the significance of the coefficients of variables in each step of the analysis. As shown in Figure 6-1, testing for mediation involves establishing four conditions:

Figure 6-1: Mediation Process
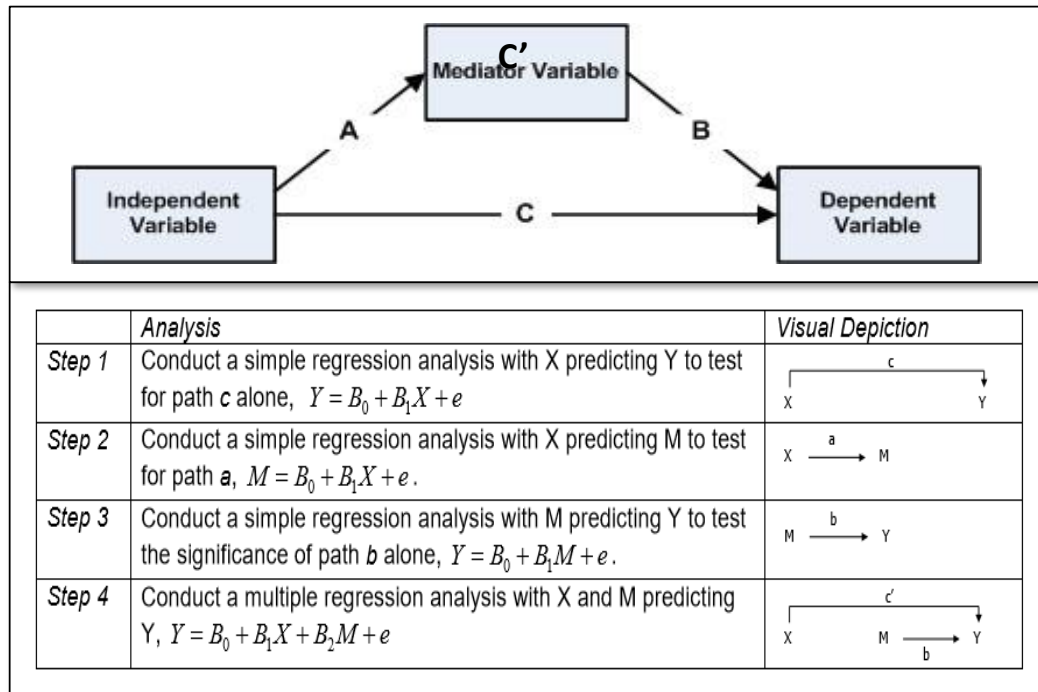
Source: Baron& Kenny (1986)

Direct Effects of the Board Structure and Moderator Variables on the Mediator Board Size (M3)

To assess the first condition, or the 'c' path of the mediation process, Tobin's Q was regressed against the governance indicators. The empirical results of M1 and M2 provide significant evidence to support the first condition of the mediation process presented by Baron & Kenny (1986). Table 6-26 provides empirical evidence for the relationship of Board structural characteristics and firm performance through the mediating effects of Board size for its Resource-dependence role, with the results shown in Models M3 through to M7.

Models M3 and M4 test the second condition or path 'a' of the mediation process, by regressing Board size on Board structural characteristics. Model 3 in Table 6-26 shows outcomes for the direct effect of Board structural characteristics and the moderator variables on the mediator variable of Board Size. The results of Model M3 in Table 6-26

show that the relationship between the SECP's Code and Board size was not significant (B = .633); this indicates no significant change in average Board size both before and following the implementation of the SECP's revised Code. There was a significant negative relationship between ownership concentration at the TOP1 level (B = –1.335, p < .01), indicating that Board size significantly decreased, on average, in those firms whose ownership was concentrated in the hands of a TOP1 shareholder.

In contrast, in firms with ownership concentrated in the hands of TOP5 shareholders, Board size significantly increased (B = .187, p < 0.001). The value of the proportion of NEDs is negatively related to Board size and is significant (B = –.98, p < 0.001), suggesting that the presence of more NEDs on the Board has reduced the size of the Board, which shows that directors' resource-provisioning role is less important for companies in Pakistan. Similarly, the relationship of CEO duality alongside Board size indicates a significant negative relationship (B = –.19, p < 0.05), which explains the decrease in Board size as CEO duality increases. However, the number of Board committees is significantly and positively linked with Board size (B = .158, p < 0.001). This suggests that large Boards require more information, meaning large Boards are likely to be supported by a greater number of Board committees in order for them to discharge their duties more effectively. The results show that Board diversity and audit committee independence are not found to be significant in their relationship with Board size. The model indicates $R^2 = 0.289$, $X^2 = 215.45$ (15df, p < .001) as the value for fit statistics, and explains that almost 29% of the variance in the model is due to the variables included in the model.

Moderating Effect of the SECP's Revised Code on the Mediator Board Size (M4)

Model 4 presents the results of Board size for its resource-dependence mediating role regressed on Board structural characteristics and the interaction of these characteristics with the implementation of the revised Code. The results show that the effect of the moderation of the revised Code is slightly weaker when compared to the effects of the SECP Code, prior to its revision in March 2012. The results show that the SECP revision weakened the relationship between Board independence and Board size (B = –.539, p < .01) and that the effect of the proportion of NEDs serving on the Board was marginally less significant following the implementation of the revised Code in March 2012, with any increase in the proportion of non-executive members thus decreasing the size of the Board.

The descriptive statistics shown in Table 6-4 highlight an increase in the proportion of NEDs from 0.642 to 0.677, which decreased the Board size by circa –.019 (0.035 * –0.539). The interaction effect of the ratio of NEDs on the Board is negative and significant, and the actual effects of the proportion of NEDs on the size of the Board both prior to and following the implementation of the revised Code were –1.668 and –2.207, respectively. The implementation of the revised Code has strengthened the relationship between Board diversity and Board size (B = .092, p < .05), audit committee independence and Board size (B = .138, p < .01), as well as between the number of Board committees and Board size (B = .146, p < .001). In contrast, the SECP revision has not moderated the effect of CEO duality on Board size, which remains unchanged pre- and post-revision of the Code.

Moderating Effect of TOP1–TOP5 Ownership Concentration on Board Size Mediator (M4)

Model 4 in Table 6-26 also shows the results for the moderating effect of having TOP1 shareholder ownership concentration on the Board size (mediator) after controlling for the impact of control variables and Board structure variables on Board size. These results reveal that TOP1 shareholder ownership concentration has not moderated the effect of any Board structure variables on Board size, as none of the TOP1 shareholder interaction terms are significant. Model 4 in Table 6-26 also shows the results for the moderating effect of TOP5 shareholders ownership concentration on Board size (mediator) after controlling for the impact of the control variables and Board structure on Board size. These results reveal that having a TOP5 shareholder ownership concentration significantly moderated the effect of CEO duality on Board size. This result suggests that Board size tends to be larger when there is CEO duality and when ownership is concentrated in the hands of the TOP5 shareholders (B = 1.933, p < 0.05). In contrast, a 5% shareholder ownership concentration significantly moderated the impact of number of Board committees on Board size. This result suggests that there is a larger number of Board committees with a TOP5 shareholder concentration, but that such Boards tend to be smaller in size (B = -0.608, p < .05).

Mediating Effect of Board Size on the Relationship between Board Structure and Tobin's Q (M5 & M6)

In order to test the mediation effects of Board size on the relationship between Board structure and Tobin's Q, both Board structural characteristics and Board size for its

resource-dependence role were added in models M5 and M6. Model 5 (Table 6-26) shows the mediation testing results in mind of assessing whether Board size mediates the relationship between Board structure and Tobin's Q performance. In other words, Tobin's Q was regressed on Board size (Board resource-dependence role) and governance indicators (Board structural characteristics) without accounting for the moderating influence of the implementation of the SECP's revised Code. *The results of M5 show that most of the variables added in the model are insignificant, except for Board committees.* Table 6-26 shows that a larger Board size predicted higher Tobin's Q performance (B = .063, p < .001). The value of fit statistics for this model is R^2 = 0.269 and X^2 = 333.22 (16df, p < 0.001). Therefore, this particular model only accounts for 26.9% of variation in the value of firm performance through the mediation effects of Board size. When Board size was included in the model, it significantly reduced the direct effect of each Board structure and moderator variable on Tobin's Q performance, as those B regression coefficient values are lower in Model 5 than in Model 1. The coefficient of Board size, which is a mediating variable, is significant (B = 0.063, p < 0.001); this supports the conditions necessary for mediation.

Therefore, Model 5 explains that Board size partly mediates the relationship between some of the Board governance variables and Tobin's Q without considering the moderating effects of SECP and ownership concentration.

Model M6 is an extended version of M5, and tests the mediation effects of Board size on the relationship between Board structure and Tobin's Q, whilst including the moderating effects of the SECP Code and the ownership concentration held by the TOP1 and TOP5 shareholders. The results of M6 indicate that the moderating variable SECP is significant (B = –1.406, p < 0.1). The results of M6 further confirm that the effects of Board independence, as measured as a ratio of NEDs, were not significant for the pre-2012 time period. However, the coefficient of the ratio of BINDP_SECP, which indicates the difference in the mediating effects of Board size between the two time periods, is significant (B = 0.453, p < 0.05). This suggests that, following the implementation of the SECP's revised Code, any increase in Board independence had a positive impact whilst controlling for the Board size for its resource-dependence role. Going back to the descriptive statistics in Table 6-4, the results from the data show that Board independence increased from 64.2% to 67.7% for the period immediately following the implementation of the revised Code. As a result, Tobin's Q increased by approximately 0.16 {(0.667–0.642) *0.453}. The exact impact of Board independence on the performance of Tobin's

Q is 0.468, obtained by adding the pre- and post-2012 coefficients of BINDP and BINDP_SECP.

For audit committee independence, the effect of this variable is positive and significant on the Tobin's Q value of the firm following the implementation of the SECP's revised Code in March 2012. The results in Model M6 show that the effect of audit committees was less significant for the pre-2012 time period. Furthermore, it is also clear from the results that the relationship between audit committee independence and Tobin's Q was negative for the pre-2012 time period, and that the moderating effects of the SECP turned this negative relationship between audit committee independence and Tobin's Q into a positive and significant relationship. This implies that, following the implementation of the SECP's revised Code, any increase in the level of audit committee independence had a positive impact on the Tobin's Q value of firms. The descriptive results in Table 6-4 show an increase in audit committee independence, with the level of such independence increasing from 48.9% to 59.9%, with a resulting increase in the value of Tobin's Q of 0.11 {(0.599–0.489)*0.105}. The total effect of audit committee independence for the pre- and post-2012 time periods was –0.258 and 0.365, respectively, therefore giving a net difference of 0.105. This evidence suggests that, following the implementation of the revised Code, the positive relationship between audit committee independence and Tobin's Q is strong whilst controlling for Board size for its resource-dependence role.

The effect of number of Board committees on the Tobin's Q value for the post-2012 period, when firms were subject to the new Code of Corporate Governance, is high when compared to that of the pre-2012 period. This means that any increase in the number of Board committees in the post-SECP era has a higher and positive impact on firms' performance when measured in terms of their Tobin's Q value. Referring back to Table 6-4 of descriptive statistics, the results show an increase in the mean value of the number of Board committees from the pre- to post-2012 time periods. The average number of Board committees increased from 1.966 to 2.135. This increase of 0.169 (2.135–1.966) in the average number of Board committees resulted in an increase in the value of Tobin's Q of approximately 0.012 (0.169*0.07), and an actual effect of Board committees on Tobin's Q for the two time periods of 0.025 and 0.095, respectively. The other Board variables in Model M6 are not found to be significant for their relationship with Tobin's Q via the mediating role of Board size.

The coefficient of Board size—which is one of the two mediating variables used in this research—is positive and significant (B = 0.058, p < 0.05). This means M6 supports the hypotheses for the mediating role of Board size for the relationship between Board independence, audit committee independence, Board committees and the performance of the firm, as measured in terms of the Tobin's Q value of the firm.

The Sobel test is another frequently used statistical tool able to determine the degree of mediation effects in a model. The Sobel test confirmed the significant mediation role of Board Size. This means that the influence of the number of Board committees on the value of Tobin's Q is determined by the size of the company's Board. A comparison of the Sobel values for Models M5 and M6 shows that the test results for M6 are slightly more significant than those for M5. The higher significance of the values of M6 suggests that resource-dependence has become more important for companies following the implementation of the SECP's revised Code in 2012.

Implications of Table 6-26 Regression Results for the Conceptual Framework Model

In terms of supporting the conceptual framework hypothesised in the model (see Figure 4-5), the results in Table 6-26 reveal that only the number of Board committees was a significant predictor of Tobin's Q performance. The other Board structure variables (Board independence, CEO duality, Board diversity and audit committee independence) had no significant influence on Tobin's Q outcomes. This relationship was also moderated by the revision of the SECP Code, with the results showing that the revision of the Code increased the influence of the Board structure, and, hence, the Tobin's Q value of firms. Furthermore, this relationship was also moderated by ownership concentration; more specifically, when ownership was concentrated in the hands of a TOP1 shareholder, this increased the influence of Board committees on increasing Tobin's Q performance.

This research concludes that the conceptual framework model predicting Tobin's Q performance is only partially supported for Board independence, audit committee independence, and the number of Board committees as important determinants of Tobin's Q performance in the context of Pakistani listed companies.

Table 6-26: Tobin's Q Regressions with Board Size (Random Effects - Main, Mediating and Moderating Effects)

Variables	M0 Controls		M1 (X->Y) Cont + IV		M2(X,XZ->Y) Cont + IV + Mod		M3(X->M)		M4 (X,XZ->M)		M5 (X,M->Y)			M6 (X,XZ,M->Y)			M7 (M->Y)	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	Sobel Test	B	SE	Sobel Test	B	SE
FSIZE	0.152***	0.032	-0.018	0.033	-0.018	0.032	0.304***	0.047	0.289***	0.047	-0.044	0.033		-0.042	0.033		0.093**	0.033
LEVERAGE	0.239***	0.034	0.222***	0.032	0.213***	0.032	0.009	0.043	0.000	0.042	0.219***	0.032		0.209***	0.032		0.232***	0.034
GRO	0.009	0.014	0.034**	0.013	0.032*	0.013	-0.032*	0.016	-0.034*	0.016	0.036**	0.013		0.035**	0.013		0.016	0.013
AGE	0.007**	0.002	0.007**	0.002	0.006**	0.002	0.002	0.005	0.003	0.005	0.007**	0.002		0.006**	0.002		0.006*	0.002
TEXTILE	-0.078	0.092	-0.066	0.086	-0.050	0.084	-0.743***	0.176	-0.782***	0.175	-0.023	0.087		-0.011	0.084		-0.002	0.093
CHEMICAL	0.087	0.105	0.036	0.097	0.058	0.095	-0.443*	0.200	-0.443*	0.200	0.062	0.097		0.081	0.094		0.121	0.104
CONSUMER	0.252*	0.100	0.223*	0.092	0.217*	0.089	-0.264	0.190	-0.236	0.189	0.238*	0.092		0.228*	0.089		0.277**	0.100
SECP			0.451*	0.227	-1.427†	0.739	0.633	0.444	0.409	1.087	0.407†	0.226		-1.406†	0.737			
TOP1			0.080	0.248	1.047	0.889	-1.335**	0.471	-1.788	1.252	0.180	0.248		1.081	0.887			
TOP5			0.194***	0.018	-0.307**	0.116	0.187***	0.023	0.146	0.140	0.184***	0.018		-0.316**	0.116			
BINDP			0.062	0.108	-0.066	0.468	-0.98***	0.136	-1.668**	0.598	0.115	0.108	-0.001	0.015	0.467	-0.017		
BINDP_SECP					0.423**	0.138			-0.539**	0.166				0.453**	0.138			
BINDP_TOP1					1.642*	0.768			-0.334	0.972				1.644*	0.766			
BINDP_TOP5					-1.032	0.942			1.546	1.202				-1.100	0.940			
CEODUL			-0.010	0.060	0.434†	0.243	-0.19*	0.091	-0.924*	0.375	0.004	0.060	-0.015**	0.474†	0.242	-0.003		
CEODUL_SECP					-0.064	0.044			-0.075	0.052				-0.059	0.044			
CEODUL_TOP1					-0.171	0.463			-1.192	0.731				-0.126	0.461			
CEODUL_TOP5					-0.566	0.551			1.933*	0.880				-0.638	0.550			
DIVERSE			0.104†	0.061	0.059	0.226	-0.047	0.125	-0.492	0.439	0.107†	0.060	-0.003	0.086	0.225	-0.019		
DIVERSE_SECP					0.034	0.033			0.092*	0.040				0.029	0.033			
DIVERSE_TOP1					-0.094	0.436			0.315	0.888				-0.091	0.434			
DIVERSE_TOP5					0.100	0.482			0.424	0.948				0.065	0.480			
ACINDP			0.008	0.039	-0.261†	0.144	0.084	0.052	-0.149	0.192	0.003	0.038	0.007†	-0.258†	0.143	-0.007		
ACINDP_SECP					0.113**	0.035			0.138**	0.042				0.105**	0.035			
ACINDP_TOP1					-0.280	0.280			0.319	0.386				-0.316	0.280			
ACINDP_TOP5					0.473	0.304			0.045	0.411				0.486	0.303			
BCOMTS			0.164***	0.031	0.060	0.105	0.158***	0.040	0.345**	0.135	0.151***	0.031	0.026***	0.025	0.105	0.103***		
BCOMTS_SECP					0.077*	0.034			0.146***	0.042				0.07*	0.034			
BCOMTS_TOP1					0.518*	0.207			0.157	0.272				0.493*	0.207			
BCOMTS_TOP5					-0.247	0.231			-0.608*	0.301				-0.187	0.231			
BSIZE											0.063***	0.018		0.058**	0.018		0.101***	0.018
Constant	0.266	0.163	0.110	0.218	0.483	0.461	8.099***	0.374	8.739***	0.659	-0.375	0.258		0.048	0.479		-0.362†	0.198
R²	0.131		0.258		0.292		0.289		0.289		0.269			0.303			0.143	
X²	92.1 (7 df, p < 0.001)		318.35 (15 df, p < 0.001)		399.95 (30 df, p < 0.001)		215.43 (15 df, p < 0.001)		236.45 (30 df, p < 0.001)		333.22 (16 df, p < 0.001)			412.78 (31 df, p < 0.001)			123.86 (8 df, p < 0.001)	
df	7		15		30		15		30		16			31			8	

N = 1590

Control Variables: Firm Size, Leverage, Sales Growth, Firm Age, Textile, Chemical and Consumer Goods

Dependent Variables: Tobin's q (TQ)

Mediating Variable: BSIZE (Total number of directors including CEO)

Moderating Variable: Corporate Governance Code (SECP), % of shares seld by the 1 largest sahreholder (TOP1) and % of shares held by the first 5 largest shareholders (TOP5)

†p<.1,*p<.05,**p<.01,***p<.001

6.5.2 Board Meetings (Monitoring Role) as the Mediator of Tobin's Q

Table 6-27 shows the mediation test results for assessing whether the Monitoring Role of the Board (as measured by the number of Board meetings) mediates the relationship between Board Structure and Tobin's Q performance. The mediation test results are shown in Models M3 through to M7. The results indicate that all models were seen to have a good fit based on the chi-square values.

Effect of the Control Variables on Tobin's Q (M0)

First, the impact of the control variables on the performance of Tobin's Q was assessed. All of the control variables were regressed on Tobin's Q. and the results of Model 0 (M0) in Table 6-27 reveal that higher Tobin's Q performance was predicted by the consumer industry ($\beta = 0.252$, $p < .05$), higher leverage ($\beta = 0.239$, $p < .001$), larger firm size ($\beta = 0.152$, $p < .001$) and older firm age ($\beta = 0.007$, $p < .01$). In contrast, three control variables (textile industry, chemical industry and growth) demonstrated no significant impact on Tobin's Q. The fit statistics for M0 are $R^2 = 0.131$, $X^2 = 92.1$ (7df, $p < .001$). The overall R^2 value of 0.131 indicates that this model accounted for approximately 13.10% of the variation in Tobin's Q performance during the entire period of this research.

Direct Effect of Board Structure Independent Variables on Tobin's Q (M1)

Model 1 (M1) in Table 6-27 shows that Tobin's Q performance increased following the implementation of the SECP's revised Code ($\beta = 0.451$, $p < .05$). The SECP coefficient represents the overall change in firm performance for the two time periods of the research. When reflecting on the descriptive statistics presented in Table 6-2, the results show that Tobin's Q was higher, at 1.323, for the post-2012 time period in comparison to 1.106 for the pre-2012 time period. Similarly, higher Tobin's Q values were also predicted by the ownership concentration of the first five largest shareholders and Board diversity, and by a larger number of Board committees. In contrast, the ownership concentration of the first largest shareholder did not predict Tobin's Q performance. The overall R^2 value of 0.258 indicates that this model accounted for only 25.80% of the variation in Tobin's Q performance. Hence, an additional 74.20% of the variation in Tobin's Q performance was explained by other factors. M1 also indicates the differences across the pre- and post-2012 time periods for pooling the data together.

Moderating Effect of the SECP Code and Ownership Concentration on Tobin's Q (M2)

Model 2 (M2) in Table 6-27 shows that the revised Code significantly moderated the influence on Tobin's Q of Board independence, audit committee independence and Board committees. This indicates that, following the revision of the SECP Code in 2012, greater Board independence, higher audit committee independence and a larger number of Board committees significantly increased the performance of firms, as measured by Tobin's Q. In contrast, the revision of the Code did not moderate the effect of CEO duality and Board diversity on Tobin's Q, hence the significance of these relationships was unchanged pre- and post-SECP revision. Model 2 also shows that a concentration of shares with the single largest shareholder (TOP1) moderates the relationships of Board independence and Board committees with Tobin's Q performance, with greater Board independence and more Board committees increasing Tobin's Q. In contrast, ownership concentration measured by the shares held by the TOP5 shareholders does not moderate the relationships between Board structure and Tobin's Q.

The comparison between M1 and M2 illustrates the effects of the implementation of the SECP's revised Code. For example, the comparison shows that the effect of Board independence is not significant in the time period prior to the implementation of the revised Code in March 2012. The coefficient of BINDP_SECP (.423) highlights the difference between the pre- and post-2012 time periods. This suggests that, since the implementation of the revised Code in 2012, Board independence amongst listed companies in Pakistan has increased, and, as a result of this increase in Board independence, there has been a corresponding increase in TQ. Descriptive analyses of the independent variables shown in Table 6.4 highlight an increase in the level of Board independence from 64.20% to 67.7%, with a corresponding change in the TQ ratio of 0.011 {(0.677–0.642) *0.423}. In order words, the pre-revision effect of the Code on Board independence is –.066, and the post-revision effect on Board independence is 0.489, yielding a net change of 0.423 (–.066 + 0.489) in Board independence between the two periods of this research. Similarly, a comparison of the two models (M1 and M2) also shows that the effect of audit committee independence is not significant in the time period prior to the implementation of the revised Code in March 2012. The coefficient of ACINDP_SECP (0.113) highlights the difference between the pre- and post-2012 time periods. Overall, the results of the moderation analysis of the SECP variable in M2 are in line with hypotheses H3.6, H6.6 and H7.6, which posit that some CG indicators would be recognised as more significant following the implementation of the revised Code.

Table 6-27: Tobin's Q Regressions with Board Meetings (Random Effects—Main, Mediating and Moderating Effects)

Variables	M0 Controls		M1 (X->Y) Cont + IV		M2(X,XZ->Y) Cont + IV + Mod		M3(X->M)		M4 (X,XZ->M)		M5 (X,M->Y)			M6 (X,XZ,M->Y)			M7 (M->Y)	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	Sobel Test	B	SE	Sobel Test	B	SE
FSIZE	0.152***	0.032	-0.018	0.033	-0.018	0.032	0.206***	0.052	0.207***	0.052	-0.020	0.033		-0.019	0.032		0.127***	0.032
LEVERAGE	0.239***	0.034	0.222***	0.032	0.213***	0.032	-0.021	0.050	-0.029	0.051	0.222***	0.032		0.213***	0.032		0.239***	0.034
GRO	0.009	0.014	0.034**	0.013	0.032*	0.013	-0.037†	0.020	-0.037†	0.020	0.034**	0.013		0.032*	0.013		0.013	0.014
AGE	0.007**	0.002	0.007**	0.002	0.006**	0.002	0.005	0.004	0.005	0.004	0.007**	0.002		0.006**	0.002		0.006*	0.002
TEXTILE	-0.078	0.092	-0.066	0.086	-0.050	0.084	-0.226	0.144	-0.223	0.145	-0.064	0.087		-0.049	0.084		-0.060	0.092
CHEMICAL	0.087	0.105	0.036	0.097	0.058	0.095	-0.130	0.163	-0.100	0.165	0.037	0.098		0.059	0.095		0.093	0.105
CONSUMER	0.252*	0.100	0.223*	0.092	0.217*	0.089	-0.001	0.154	-0.009	0.155	0.223*	0.092		0.217*	0.089		0.252*	0.100
SECP			0.451*	0.227	-1.427†	0.739	0.250	0.377	-0.938	1.184	0.449*	0.228		-1.422†	0.740			
TOP1			0.080	0.248	1.047	0.889	-0.006	0.410	-0.769	1.416	0.080	0.248		1.048	0.890			
TOP5			0.194***	0.018	-0.307**	0.116	0.147***	0.028	-0.294	0.179	0.193***	0.018		-0.306**	0.116			
BINDP			0.062	0.108	-0.066	0.468	-0.089	0.166	-0.815	0.734	0.062	0.108	0.000	-0.063	0.468	0.003		
BINDP_SECP					0.423**	0.138			0.457*	0.213				0.422**	0.138			
BINDP_TOP1					1.642*	0.768			0.484	1.201				1.64*	0.769			
BINDP_TOP5					-1.032	0.942			0.443	1.476				-1.033	0.942			
CEODUL			-0.010	0.060	0.434†	0.243	-0.053	0.096	-0.393	0.399	-0.010	0.060	0.000	0.435†	0.243	0.002		
CEODUL_SECP					-0.064	0.044			0.172*	0.067				-0.065	0.044			
CEODUL_TOP1					-0.171	0.463			0.272	0.765				-0.173	0.463			
CEODUL_TOP5					-0.566	0.551			0.239	0.913				-0.565	0.552			
DIVERSE			0.104†	0.061	0.059	0.226	0.100	0.101	-0.318	0.388	0.103†	0.061	0.000	0.061	0.226	0.002		
DIVERSE_SECP					0.034	0.033			0.006	0.051				0.034	0.033			
DIVERSE_TOP1					-0.094	0.436			0.150	0.755				-0.094	0.437			
DIVERSE_TOP5					0.100	0.482			0.548	0.830				0.097	0.482			
ACINDP			0.008	0.039	-0.261†	0.144	0.187**	0.060	0.025	0.228	0.007	0.039	0.001	-0.261†	0.144	0.000		
ACINDP_SECP					0.113**	0.035			-0.029	0.054				0.113**	0.035			
ACINDP_TOP1					-0.280	0.280			0.460	0.448				-0.282	0.281			
ACINDP_TOP5					0.473	0.304			-0.003	0.484				0.473	0.304			
BCOMTS			0.164***	0.031	0.060	0.105	0.28***	0.048	0.118	0.165	0.162***	0.032	0.002	0.060	0.105	-0.001		
BCOMTS_SECP					0.077*	0.034			0.058	0.053				0.077*	0.034			
BCOMTS_TOP1					0.518*	0.207			0.188	0.327				0.517*	0.207			
BCOMTS_TOP5					-0.247	0.231			0.090	0.364				-0.247	0.231			
BMETS											0.007	0.016		0.004	0.016		0.058**	0.017
Constant	0.266	0.163	0.110	0.218	0.483	0.461	3.808***	0.354	4.978***	0.737	0.086	0.227		0.466	0.468		0.042	0.175
R²	0.131		0.258		0.292		0.239		0.257		0.258			0.292			0.135	
X²	92.1 (7 df, p < 0.001)		318.35 (15 df, p < 0.001)		399.95 (30 df, p < 0.001)		215.43 (15 df, p < 0.001)		236.45 (30 df, p < 0.001)		318.17 (16 df, p < 0.001)			399.57 (31 df, p < 0.001)			104.52 (8 df, p < 0.001)	
df	7		15		30		15		30		16			31			8	

N = 1590

Control Variables: Firm Size, Leverage, Sales Growth, Firm Age, Textile, Chemical and Consumer Goods

Dependent Variables: Tobin's q (TQ)

Mediating Variable: BMETS (Total number of Board Meetings)

Moderating Variable: Corporate Governance Code (SECP), % of shares sold by the 1 largest sahreholder (TOP1) and % of shares held by the first 5 largest shareholders (TOP5)

†p<.1,*p<.05,**p<.01,***p<.001

Direct Effect of Board Structure and Moderator Variables on the Mediator Board Meetings (M3)

In Model M3, the Board monitoring role (frequency of Board meetings) was regressed on the Board structural variables without considering the moderating impacts of the SECP's revised Code and the ownership concentration of firms. The results of M3 show that the moderating variable SECP is positive but that the relationship is not significant. The results also show that, with ownership concentrated in the hands of the first five largest shareholders (TOP5), there was significantly greater monitoring and control of the Board and its activities (i.e. a larger number of Board meetings) (B = .147, p < .001); however, this was not found to be significant for concentration of ownership in the hands of a single largest shareholder (TOP1) (B = –.006, ns). The number of Board meetings was unchanged pre- and post-SECP revision (B = 0.25, ns). Higher audit committee independence and a larger number of Board committees both significantly increased the monitoring role of the Board (i.e. a larger number of Board meetings) (B = .187, p < .001 and B = .28, p < .001, respectively). In contrast, Board independence, CEO duality and Board diversity were not significantly related to the monitoring role of the Board. The overall R-squared value of 0.239 indicates that the Board structure, SECP Code and ownership concentration moderator variables explained approximately 23.9% of the monitoring role of the Board. Hence, 74.1% of this monitoring role was explained by other factors not included in this model.

Moderating Effect of the SECP Revision on the Mediator Board Meetings (M4)

In Model M4, the Board monitoring role (frequency of Board meetings) was regressed against governance indicators of Board structure and their interaction with moderating variables, i.e. the SECP's revised Code and ownership concentration. The results in Model 4 of Table 6-27 show that the SECP revision strengthened the relationship between Board independence and Monitoring (B = .457, p < .05), and further strengthened the impact of CEO duality on increasing the Monitoring Role of the Board (B = .172, p < .05). This means that, following the implementation of the SECP's revised Code in 2012, the increase in the ratio of NEDs and a higher level of CEO duality increased the frequency of Board meetings. The descriptive statistics presented in Table 6-4 show that Board independence increased from 64.2% to 67.7%. This change in the level of Board independence increased the frequency of Board meetings by approximately 0.011 {(0.667–0.642) *0.457}. In contrast, the SECP revision has not moderated the influence

of Board diversity, audit committee independence or the number of Board committees on the Monitoring Role of the Board, pre- and post-SECP revision.

Moderating Effect of TOP1-TOP5 Ownership Concentration on Board Meetings (M4)

The results in Model 4 of Table 6-27 show that the concentration of ownership with the top 1 or top 5 per cent of shareholders did not significantly moderate the relationship between each Board Structure variable and the Monitoring Role of the Board (mediator). Hence, this pathway in the model is not supported.

Mediating Effect of Board Meetings on the Relationship between Board Structure and Tobin's Q (M5 &M6)

In Model M5, the firm performance measure of Tobin's Q was regressed on Board monitoring role and the Board governance variables, without consideration to the influence of the moderating variables of SECP and TOP1 and TOP5 for ownership concentration. The results show that only two of the Board structure variables are significant. Board diversity is marginal, Board committees are strongly significant, and the relationship is positive, with (B = 0.103, p < 0.1) and (B = 0.162, p < 0.001), respectively, for Board diversity and Board committees. The value of fit statistics for this model is $R^2 = 0.258$ and $X^2 = 318.17$ (16df, p < 0.001), which indicates that 25.8% of the variance in this model is explained by the factors included in the regression. Table 6-27 indicates that Board meetings are positive but not a significant mediator (B = .007, ns) in the relationship between Board structure and Tobin's Q performance. This insignificant value of Board meeting breaches the third and most important condition of the mediation process. Therefore, mediation between Board structural variables and Tobin's Q is not explained by the Board-monitoring role. The Sobel test shows that the Mediating Variable Board Meeting is not a statistically significant mediator for any of the Board structure variables, e.g., Board Independence, CEO Duality, Audit Committee Independence or Board Committees on Tobin's Q. This means that Board Meeting has no influence on the independent variables in determining Tobin's Q or that there is no evidence of mediation in M5.

In Model M6, Tobin's Q was regressed on the Board monitoring role and Board structure, with the inclusion of the moderating effect of the SECP revised Code and ownership concentration. The results of M6 in Table 6-27 show that the moderating variable SECP is marginally significant after implementation of the Code in 2012 (B = –1.422, p < 0.1).

Following the implementation of SECP's revised Code, the impact of Board independence, audit committee independence and the number of Board committees on the Tobin's Q value of firms is significant. The effect of BINDP on Tobin's Q is not significant for the pre-2012 time period. However, the coefficient of BINDP_SECP, which represents the difference between the pre- and post-2012 time periods, is significant (B = 0.422, p < 0.05). This suggests that any increase in Board independence has a positive impact on Tobin's Q whilst controlling for the mediating role of Board meetings. Once again, referring back to Table 6-4 of descriptive statistics, the results suggest an increase of 0.001 in the Tobin's Q {(0.677–0.642) *0.422}. Statistically, the effect of Board independence on Tobin's Q for the pre-2012 time period is –0.063, with the same effect for the post-2012 time period, being 0.485, giving a net difference of 0.422 for the two time periods.

Similarly, the effect of audit committee independence on Tobin's Q is 0.01 {0.599–0.489) *0.113} and the effect of Board committees on Tobin's Q is 0.013 {(2.135–1.966) *0.077}. The actual effect of audit committee independence and the number of Board committees on Tobin's Q are –0.261 and 0.374 for audit committee independence and 0.060 and 0.137 for the number of Board committees for the pre- and post-2012 time periods, respectively. The results of M6 also indicate an insignificant coefficient value for the frequency of Board meetings. Since frequency of Board meetings is a mediating variable between Board structure and Tobin's Q, the insignificant coefficient value for this variable is in contrast to the third condition of the mediation process. This means that the frequency of Board meetings has no influence on the independent variables in determining Tobin's Q, or that there is no evidence of mediation in M6.

The results produced from the Sobel test provide further evidence of the non-existence of any mediation effects of Board meetings between the relationship of Board structure and Tobin's Q. The value of the Board monitoring role is insignificant (B = 0.004, ns) when regressed against Tobin's Q. The insignificant value of the mediating variable is also in violation of the mediation conditions for the Sobel test; therefore, there is no mediating relationship. In this case, the use of Model 1 is suggested to determine the impact of Tobin's Q since the mediator variable Board Meeting is neither a significant predictor nor a significant mediator.

Implications of Table 6-27 Regression Results for the Conceptual Framework

In terms of supporting the conceptual framework in Figure 4-5, these results reveal that Number of Board committees is the only independent variable with a direct effect on Tobin's Q performance. Board committees also influenced the mediator Monitoring role, indicating that a larger number of Board committee meetings increases the monitoring role of the Board. The SECP's revised Code and ownership concentration did not moderate the relationship between Board structure and monitoring, and Monitoring did not mediate the relationship between Board committees and Tobin's Q. Hence, Board committees are the only significant determinant of Tobin's Q in this model, with such a significant relationship neither moderated by the SECP revised Code or ownership concentration, nor mediated by the monitoring role of the Board.

6.5.3 *Board Size (Resource-dependence Role) as the Mediator of ROA*

Table 6-28 shows the results of the testing of the conceptual framework for Board size (resource-dependence role) as the mediator to determine an optimal model fit to measure the variable ROA. The results indicate that all models were seen to have good fit based on the chi-square values.

Effect of Control Variables on ROA (M0)

Model M0 in Table 6-28 shows that three out of the seven control variables predicted ROA, including log of firm size (B = .029, p < .001), leverage (B = −.142, p < .001) and growth (B = .014, p < .001). These results indicate that ROA increased in firms with a larger size, less leverage and higher growth. Hence, ROA is affected by firm size, leverage and growth. Control variable effects are controlled for in the further analyses. The fit statistics for model M0 are $R^2 = 0.331$ and $X^2 = 689.33$ (7df, p < 0.001), which suggests a variation of 33.1% in the dependent variable ROA is explained by the model.

Direct Effect of Board Structure Variables on ROA (M1)

In the next step, Model M0 is extended beyond the control variables through the inclusion of the independent variables, with the interaction of SECP and ownership concentrated in the hands of the TOP1 and TOP5 shareholders. In Model M1, the SECP coefficient represents the overall difference in the value of the ROA performance measure for the pre- and post-2012 time periods. Although positive, the coefficient value of SECP in M1 is 0.007, which is both very small and insignificant. Model M1 in Table 7-29 shows that none of the Board Structure Independent Variables were significant predictors of ROA at p < 05. Hence, this pathway of the conceptual framework is not supported. The fit

statistics for model M1 are $R^2 = 0.337$ and $X^2 = 700.42$ (15df, $p < 0.001$). The overall R-squared value shows that the model accounts for 33.7% of the variation of ROA.

Moderating Effect of the SECP's Code Revision on ROA (M2)

In the next model, M2, the moderating effects of SECP and ownership concentration were included in an effort to understand the influence of moderating variables on Board structure and the resulting changes in the value of ROA. The results for Model M2 in Table 6-28 show that the SECP revision demonstrated no moderating effect on the relationship of the Board structure variables with ROA.

Moderating Effect of Ownership Concentration on ROA (M2)

Model (M2) in Table 6-28 also shows that ownership concentrated in the hands of the single largest shareholder (TOP1) had no moderating effect on how Board structure influences ROA. In contrast, when ownership concentration was diluted and control was moved from the hands of the single largest shareholder to the next five largest shareholders (TOP5), this change in ownership concentration significantly moderated CEO duality such that non-CEO duality in these firms increased ROA. The fit statistics for model M2 are $R^2 = 0.348$ and $X^2 = 720.66$ (30df, $p < 0.001$). The overall R-squared value shows that the model accounts for 34.8% of the variation of ROA.

Direct Effects of Board Structure and Moderator Variables on the Mediator Board Size (M3)

Model 3 in Table 6-28 shows the outcomes for the direct effect of Board structural characteristics and the moderator variables on the mediator variable of Board Size. The results of Model M3 in Table 7-26 show that the relationship between SECP Code and Board size was not significant (B = .633), indicating no significant change in average Board size pre- and post-SECP revision. There was a significant relationship between ownership concentration at the TOP1 level (B = –1.335, $p < .01$), indicating that Board size significantly decreased, on average, in firms where ownership is concentrated in the hands of a TOP1 shareholder. In contrast, for firms in which ownership is concentrated in the hands of the TOP5 shareholders, Board size significantly increased (B = .187, $p < 0.001$). The value for the proportion of NEDs is negatively related to Board size, and is significant (B = –.98, $p < 0.001$), suggesting that the presence of more NEDs on the Board reduced the size of the Board.

This shows that directors' resource-provisioning role is less important for companies in Pakistan. Similarly, the relationship of CEO duality with Board size indicates a significant negative relationship (B = $-.19$, p < 0.05), which explains that, as CEO duality increases, Board size decreases. However, the number of Board committees is significantly and positively linked to Board size (B = .158, p < 0.001), which suggests that a large Board requires more information; hence, large Boards are likely to be supported by a greater number of Board committees to enable them to discharge their duties more effectively. The results show that no significance is found in the relationship of Board diversity and audit committee independence with Board size. The model indicates $R^2 = 0.289$, $X^2 = 215.45$ (15df, p < .001) as the value for fit statistics, explaining that almost 29% of the variance in the model is due to the variables included in the model.

Moderating Effect of SECP Revision on the Mediator Board Size (M4)

In Model M4 (Table 6-28), Board size for its resource-dependence role was regressed against Board variables and their interaction with the SECP, TOP1 and TOP5 variables. The results of Model M4 show that SECP moderated the effect of four Board Structure variables on Board Size. More specifically, post revision of the SECP's Code, higher Board independence decreases Board size ($-.539$, p < .01), higher diversity predicts larger Board size (B = .092, p < .05), higher audit committee independence predicts larger Board size (B = .138, p < .01), and more Board committees predicts larger Board size (B = .146, p < .001). In contrast, the SECP revision has not moderated the effect of CEO duality on Board size, which remained unchanged for both the pre- and post-revision periods.

Moderating Effect of TOP1-TOP5 Ownership Concentration on Board Size Mediator (M4)

Model 4 (Table 6-28) shows no moderating effects of top 1% ownership concentration on how Board structure influences Board size. This pathway is thus not supported in the model framework. Model 4 also shows that 5% shareholder ownership moderates the effect of CEO duality and Board committees on the mediator Board Size. More specifically, in firms with CEO duality, Board size is larger (B = 1.933, p < .05). Furthermore, in such firms, when there are more Board committees, the Board size is smaller (B = $-.608$, p < .05).

Table 6-28: ROA Regression with Board's Resource Provision Role: Random Effects—Main, Mediating and Moderating Effects

Variables	M0 Controls		M1 (X->Y) Cont + IV		M2(X,XZ->Y) Cont + IV + Mod		M3 (X->M)		M4 (X,XZ->M)		M5 (X,M->Y)			M6 (X,XZ,M->Y)			M7 (M->Y)	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	Sobel Test	B	SE	Sobel Test	B	SE
FSIZE	0.029***	0.005	0.03***	0.005	0.03***	0.006	0.304***	0.047	0.289***	0.047	0.027***	0.006		0.027**	0.006		0.026***	0.005
LEVERAGE	-0.142***	0.006	-0.144***	0.006	-0.146***	0.006	0.009	0.043	0.000	0.042	-0.145***	0.006		-0.147**	0.006		-0.143***	0.006
GRO	0.014***	0.003	0.013***	0.003	0.013***	0.003	-0.032*	0.016	-0.034*	0.016	0.014***	0.003		0.013**	0.003		0.014***	0.003
AGE	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.005	0.003	0.005	0.000	0.000		0.000	0.000		0.000	0.000
TEXTILE	-0.004	0.011	-0.003	0.011	-0.002	0.011	-0.743***	0.175	-0.782***	0.175	0.000	0.011		0.001	0.012		0.000	0.011
CHEMICAL	0.002	0.012	0.003	0.013	0.004	0.013	-0.443*	0.200	-0.443*	0.200	0.005	0.013		0.006	0.013		0.004	0.012
CONSUMER	0.02†	0.012	0.019	0.012	0.018	0.012	-0.264	0.190	-0.236	0.189	0.02†	0.012		0.018	0.012		0.021†	0.012
SECP			0.007	0.030	-0.062	0.147	0.633	0.444	0.409	1.087	0.003	0.030		-0.049	0.147			
TOP1			-0.007	0.033	0.157	0.179	-1.335**	0.471	-1.788	1.252	0.003	0.034		0.143	0.179			
TOP5			-0.005	0.004	0.037	0.029	0.187***	0.023	0.146	0.140	-0.006	0.004		0.036	0.029			
BINDP			0.039†	0.023	0.037	0.098	-0.98***	0.136	-1.668**	0.598	0.042†	0.023	0.000	0.042	0.098	-0.001		
BINDP_SECP					-0.043	0.034			-0.539**	0.166				-0.040	0.034			
BINDP_TOP1					0.028	0.165			-0.334	0.972				0.024	0.165			
BINDP_TOP5					0.018	0.196			1.546	1.202				0.016	0.196			
CEODUL			0.016	0.010	0.149***	0.040	-0.19*	0.091	-0.924*	0.375	0.017†	0.010	-0.001	0.151**	0.040	0.000		
CEODUL_SECP					-0.013	0.011			-0.075	0.052				-0.013	0.011			
CEODUL_TOP1					0.120	0.074			-1.192	0.731				0.123†	0.074			
CEODUL_TOP5					-0.26**	0.087			1.933*	0.880				-0.263**	0.088			
DIVERSE			0.012	0.008	0.051	0.032	-0.047	0.125	-0.492	0.439	0.012	0.008	0.000	0.054†	0.032	-0.001		
DIVERSE_SECP					-0.002	0.008			0.092*	0.040				-0.003	0.008			
DIVERSE_TOP1					-0.007	0.059			0.315	0.888				-0.006	0.060			
DIVERSE_TOP5					-0.056	0.067			0.424	0.948				-0.059	0.067			
ACINDP			-0.006	0.007	-0.012	0.028	0.084	0.052	-0.149	0.192	-0.007	0.007	0.000	-0.012	0.028	0.000		
ACINDP_SECP					-0.003	0.009			0.138**	0.042				-0.004	0.009			
ACINDP_TOP1					0.037	0.052			0.319	0.388				0.031	0.052			
ACINDP_TOP5					-0.009	0.057			0.045	0.411				-0.006	0.057			
BCOMTS			0.006	0.006	0.034	0.022	0.158***	0.040	0.345*	0.135	0.004	0.006	0.002†	0.027	0.022	0.007		
BCOMTS_SECP					-0.004	0.008			0.146***	0.042				-0.004	0.008			
BCOMTS_TOP1					0.009	0.041			0.157	0.272				0.003	0.041			
BCOMTS_TOP5					-0.045	0.046			-0.608*	0.301				-0.033	0.047			
BSIZE											0.006†	0.003		0.006†	0.003		0.005	0.003
Constant	0.025	0.023	-0.018	0.034	-0.118	0.091	8.099***	0.374	8.739***	0.659	-0.058	0.041		-0.149	0.093		-0.002	0.029
R²	0.331		0.337		0.348		0.289		0.289		0.339			0.349			0.328	
X²	689.33 (7 df, p < 0.001)		700.42 (15 df, p < 0.001)		720.66 (30 df, p < 0.001)		215.43 (15 df, p < 0.001)		236.45 (30 df, p < 0.001)		704.63 (16 df, p < 0.001)			724.86 (31 df, p < 0.001)			692.17 (8 df, p < 0.001)	
df	7		15		30		15		30		16			31			8	
Autocorrelation	2.721		2.687		2.842†						2.695			2.852†			2.727†	

N = 1590

Control Variables: Firm Size, Leverage, Sales Growth, Firm Age, Textile, Chemical and Consumer Goods

Dependent Variables: Return on Assets (ROA)

Mediating Variable: BSIZE (Total number of directors including CEO)

Moderating Variable: Corporate Governance Code (SECP), % of shares sold by the 1 largest sahreholder (TOP1) and % of shares held by the first 5 largest shareholders (TOP5)

†p<.1, *p<.05, **p<.01, ***p<.001

Mediating Effect of Board Size on the Relationship between Board Structure and ROA (M5 & M6)

In Model M5 (Table 6-28), the firm performance measure ROA was regressed on Board size for its resource-dependence role, without considering the influence of the moderating variables of SECP and ownership concentration (TOP1, TOP5). The regression results and Sobel test in Model 5 (Table 6-28) show that Board size does not significantly mediate any effects of the Board structure independent variables on ROA. The overall R-squared value shows that the model accounts for 33.9% of the variation in ROA. Model M6 tests the mediation effects of Board size on the relationship between Board structure and ROA, whilst also including the moderating effects of SECP Code and concentration of ownership amongst the TOP1 and TOP5 shareholders. The results in M6 show that the moderating variable SECP is not significant for the post-2012 time period.

The results of the Sobel tests in both M5 and M6 show no presence of a mediation relationship, with all values found to be insignificant when using ROA as the performance measure of firms. The fit statistics values for M6 are $R2 = 0.349$ and $X2 = 726.86$ (31df, $p < 0.001$). Compared to the other models, Model 1 (the direct effect of Board structure variables) is a more optimum choice for predicting ROA. However, Model M1 shows that none of the five Board structure variables had a significant direct effect on ROA.

Implications of Table 6-28 Regression Results for the Conceptual Framework Model

The results in Table 6-28 suggest that none of the variable relationships tested in this model support the conceptual framework, as no Board structure variables had a significant impact on ROA. Therefore, this suggests that other unknown factors not included in this model predict ROA, which therefore warrants future research.

6.5.4 Board Meetings (Monitoring Role) as the Mediator of ROA

Table 6-29 shows the mediation test results in assessing whether the Monitoring Role of the Board, measured by the number of Board committee meetings, mediates the relationship between Board Structure and ROA. The results indicate that all models were seen to have good fit based on the chi-square values.

Effect of Control Variables on ROA (M0)

Model M0 in Table 6-29 shows that three out of the seven control variables predicted ROA, including log of firm size (B = .029, p < .001), leverage (B = −.142, p < .001) and

growth (B = .014, p < .001). These results indicate that ROA increased in firms with a larger size, less leverage and higher growth. Hence, ROA is affected by firm size, leverage and growth. Control variable effects are controlled for in the further analyses. The fit statistics for model M0 are R^2 = 0.331 and X^2 = 689.33 (7df, p < 0.001), which suggests a variation of 33.1% in the dependent variable ROA is explained by the model.

Moderating Effect of the SECP's Code Revision on ROA (M2)

In the next model, M2, the moderating effects of SECP and ownership concentration were included in an effort to understand the influence of moderating variables on Board structure and the resulting changes in the value of ROA. The results for Model M2 in Table 6-29 show that the SECP revision demonstrated no moderating effect on the relationship of the Board structure variables with ROA.

Moderating Effect of Ownership Concentration on ROA (M2)

Model (M2) in Table 6-29 also shows that ownership concentrated in the hands of the single largest shareholder (TOP1) had no moderating effect on how Board structure influences ROA. In contrast, when ownership concentration was diluted and control was moved from the hands of the single largest shareholder to the next five largest shareholders (TOP5), this change in ownership concentration significantly moderated CEO duality such that non-CEO duality in these firms increased ROA.

The fit statistics for model M2 are R^2 = 0.348 and X^2 = 720.66 (30df, p < 0.001). The overall R-squared value shows that the model accounts for 34.8% of the variation of ROA.

Direct Effects of Board Structure and Moderator Variables on the Mediator Board Size (M3)

Model 3 in Table 6-29 shows the outcomes for the direct effect of Board structural characteristics and the moderator variables on the mediator variable of Board Size. The results of Model M3 in Table 7-26 show that the relationship between SECP Code and Board size was not significant (B = .633), indicating no significant change in average Board size pre- and post-SECP revision. There was a significant relationship between ownership concentration at the TOP1 level (B = −1.335, p < .01), indicating that Board size significantly decreased, on average, in firms where ownership is concentrated in the hands of a TOP1 shareholder. In contrast, for firms in which ownership is concentrated

in the hands of the TOP5 shareholders, Board size significantly increased (B = .187, p < 0.001). The value for the proportion of NEDs is negatively related to Board size, and is significant (B = –.98, p < 0.001), suggesting that the presence of more NEDs on the Board reduced the size of the Board.

This shows that directors' resource-provisioning role is less important for companies in Pakistan. Similarly, the relationship of CEO duality with Board size indicates a significant negative relationship (B = –.19, p < 0.05), which explains that, as CEO duality increases, Board size decreases. However, the number of Board committees is significantly and positively linked to Board size (B = .158, p < 0.001), which suggests that a large Board requires more information; hence, large Boards are likely to be supported by a greater number of Board committees to enable them to discharge their duties more effectively. The results show that no significance is found in the relationship of Board diversity and audit committee independence with Board size.

The model indicates $R^2 = 0.289$, $X^2 = 215.45$ (15df, p < .001) as the value for fit statistics, explaining that almost 29% of the variance in the model is due to the variables included in the model.

Moderating Effect of SECP Revision on the Mediator Board Meetings (M4)

In Model M4 (Table 6-29), Board meetings for Board monitoring role was regressed against Board variables and their interaction with the SECP, TOP1 and TOP5 variables. The results of Model M4 show that SECP moderated the effect of two Board Structure variables on Board Size. More specifically, post-revision of the SECP's Code, higher Board independence increased Board size (0.457, p < .05), and higher CEO duality predicts larger Board size (B = .172, p < .05). In contrast, the SECP revision has not moderated the effect of Board diversity, Board committees and audit committee independence, which remain unchanged between the pre- and post-revision periods.

Moderating Effect of TOP1-TOP5 Ownership Concentration on Board Meetings Mediator (M4)

Model 4 (Table 6-29) shows no moderating effects of TOP1 and TOP5 ownership concentration on how Board structure influences Board size. This pathway is thus not supported in the model framework.

Mediating Effect of Monitoring on the Relationship between Board Structure and ROA (M5 & M6)

To test the mediation effects of Board meetings for their monitoring role, ROA was first regressed on Board structural variables without the interaction of moderating variables in Model M5, and then with the interaction effects of moderating variables in Model M6, respectively. The regression and Sobel test results for Model M5 in Table 6-29 show that the number of committee meetings (monitoring role of the Board) does not significantly mediate the relationship between any of the Board structure independent variables and ROA. The overall R-squared value for Model M5 shows that the model accounts for 26.69% of the variation in ROA. Model M6, which is an extended version of Model M5, explains that ROA was regressed on Board meetings and Board variables through the use of the interaction effect for the implementation of SECP and ownership concentration.

The results of the model reveal that the moderating variable SECP is not significant. Furthermore, the results in both M5 and M6 show that the coefficient value for the Board meetings, which is a mediating variable, is insignificant. Therefore, in both of the models, the mediating assumptions do not hold, and the results of neither model support the mediation role of Board meetings on influencing the relationship between Board structure and ROA. Compared to the other models presented in Table 6-29, M1 is a more optimum choice for predicting ROA; however, none of the variables in M1 directly influence ROA either.

Implications of Table 6-29 Regression Results for the Conceptual Framework

Based on the results of Table 6-29, it is concluded that the conceptual framework model does not explain ROA performance outcomes in this study as no Board structure variable was seen to have a direct effect on ROA at the $p < .05$ level. Hence, these pathways predicting ROA are not supported. Other unknown factors that are not included in this model may explain ROA performance; this warrants future research.

6.5.5   *Board Size (Resource-dependence Role) as the Mediator of ROE*

Table 6-30 shows the results for the testing of the conceptual framework for Board size (resource-dependence role) as the mediator to determine an optimal model fit to measure the variable ROE. The results indicate that all models were seen to have good fit based on the chi-square values.

Table 6-29: ROA Regression with Board's Monitoring Role: Random Effects—Main, Mediating and Moderating Effects

Variables	M0 Controls B	SE	M1 (X->Y) Cont + IV B	SE	M2 (X,XZ->Y) Cont + IV + Mod B	SE	M3 (X->M) B	SE	M4 (X,XZ->M) B	SE	M5 (X,M->Y) B	SE	Sobel Test	M6 (X,XZ,M->Y) B	SE	Sobel Test	M7 (M->Y) B	SE
FSIZE	0.029***	0.005	0.03***	0.005	0.03***	0.006	0.206***	0.052	0.207***	0.052	0.032***	0.006		0.032***	0.006		0.032***	0.005
LEVERAGE	-0.142***	0.006	-0.144***	0.006	-0.146***	0.006	-0.021	0.050	-0.029	0.051	-0.144***	0.006		-0.146***	0.006		-0.142***	0.006
GRO	0.014***	0.003	0.013***	0.003	0.013***	0.003	-0.037†	0.020	-0.037†	0.020	0.013***	0.003		0.013***	0.003		0.013***	0.003
AGE	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.004	0.005	0.004	0.000	0.000		0.000	0.000		0.000	0.000
TEXTILE	-0.004	0.011	-0.003	0.011	-0.002	0.011	-0.226	0.144	-0.223	0.145	-0.004	0.011		-0.003	0.011		-0.005	0.011
CHEMICAL	0.002	0.012	0.003	0.013	0.004	0.013	-0.130	0.163	-0.100	0.165	0.002	0.013		0.004	0.013		0.002	0.012
CONSUMER	0.02†	0.012	0.019	0.012	0.018	0.012	-0.001	0.154	-0.009	0.155	0.019	0.012		0.018	0.012		0.02†	0.012
SECP			0.007	0.030	-0.062	0.147	0.250	0.377	-0.938	1.184	0.008	0.030		-0.078	0.147			
TOP1			-0.007	0.033	0.157	0.179	-0.006	0.410	-0.769	1.416	-0.006	0.033		0.160	0.178			
TOP5			-0.005	0.004	0.037	0.029	0.147***	0.028	-0.294	0.179	-0.004	0.004		0.036	0.029			
BINDP			0.039†	0.023	0.037	0.098	-0.089	0.166	-0.815	0.734	0.039†	0.023	0.000	0.034	0.098	0.002		
BINDP_SECP					-0.043	0.034			0.457*	0.213				-0.041	0.034			
BINDP_TOP1					0.028	0.165			0.484	1.201				0.041	0.165			
BINDP_TOP5					0.018	0.198			0.443	1.476				0.013	0.198			
CEODUL			0.016	0.010	0.149***	0.040	-0.053	0.096	-0.393	0.399	0.016	0.010	0.000	0.147***	0.040	0.002		
CEODUL_SECP					-0.013	0.011			0.172*	0.067				-0.012	0.011			
CEODUL_TOP1					0.120	0.074			0.272	0.765				0.124†	0.074			
CEODUL_TOP5					-0.26**	0.087			0.239	0.913				-0.261**	0.087			
DIVERSE			0.012	0.008	0.051	0.032	0.100	0.101	-0.318	0.388	0.012	0.008	0.000	0.049	0.032	0.002		
DIVERSE_SECP					-0.002	0.008			0.006	0.051				-0.002	0.008			
DIVERSE_TOP1					-0.007	0.059			0.150	0.755				-0.007	0.059			
DIVERSE_TOP5					-0.056	0.067			0.548	0.830				-0.052	0.067			
ACINDP			-0.006	0.007	-0.012	0.028	0.187**	0.060	0.025	0.228	-0.005	0.007	0.001†	-0.012	0.028	0.000		
ACINDP_SECP					-0.003	0.009			-0.029	0.054				-0.003	0.009			
ACINDP_TOP1					0.037	0.052			0.460	0.448				0.041	0.052			
ACINDP_TOP5					-0.009	0.057			-0.003	0.484				-0.010	0.057			
BCOMTS			0.006	0.006	0.034	0.022	0.28***	0.048	0.118	0.165	0.008	0.006	0.002†	0.035	0.022	-0.001		
BCOMTS_SECP					-0.004	0.008			0.058	0.053				-0.004	0.008			
BCOMTS_TOP1					0.009	0.041			0.188	0.327				0.011	0.041			
BCOMTS_TOP5					-0.045	0.046			0.090	0.364				-0.046	0.046			
BMETS											-0.006†	0.003		-0.005	0.003		-0.006†	0.003
Constant	0.025	0.023	-0.018	0.034	-0.118	0.091	3.808***	0.354	4.978***	0.737	0.001	0.036		-0.095	0.093		0.045†	0.026
R²	0.331		0.337		0.348		0.239		0.257		0.339			0.349			0.332	
X²	689.33 (7 df, p <0.001)		700.42 (15 df, p < 0.001)		720.66 (30 df, p< 0.001)		215.43 (15 df, p < 0.001)		236.45 (30 df, p < 0.001)		704.62 (16 df, p< 0.001)			724.02 (31 df, p < 0.001)			693.36 (8 df, p < 0.001)	
df	7		15		30		15		30		16			31			8	
Autocorrelation	2.721		2.687		2.842†						2.688			2.825†			2.703	

N = 1590

Control Variables: Firm Size, Leverage, Sales Growth, Firm Age, Textile, Chemical and Consumer Goods

Dependent Variables: Return on Assets (ROA)

Mediating Variable: BMETS (Total number of Board Meetings)

Moderating Variable: Corporate Governance Code (SECP), % of shares seld by the 1 largest sahreholder (TOP1) and % of shares held by the first 5 largest shareholders (TOP5)

†p<.1,*p<.05,**p<.01,***p<.001

Effect of Control Variables on ROE (M0)

Model M0 in Table 6-30 shows that two of the seven control variables predicted ROE, including log of firm size (B = .091, p < .001) and consumer industry (B = .072, p < .05). These results indicate that firms characterised by larger size and the consumer industry predicted higher ROE. The effects of the seven control variables were controlled for in further analyses. The fit statistics for Model M0 are R^2 = 0.0.63 and X^2 = 70.2 (7df, p < 0.001), which suggests that only 6.3% of the variation in dependent variable ROE is explained by the model.

Direct Effect of Board Structure Variables on ROE (M1)

Model M1 in Table 6-30 shows that none of the Board Structure Independent Variables were significant predictors of ROE at (p <0.05). However, amongst the moderator variables, those firms for which ownership is concentrated in the hands of the top 5% of shareholders had significantly higher ROE (B = .032, p < .05). The overall R-squared value shows that the model accounts for 7.5% of the variation of ROE.

Moderating Effect of the SECP Code and Ownership Concentration on Tobin's Q (M2)

Model 2 in Table 6-30 shows that the SECP's revised Code moderated the effect of Board committees on ROE; more specifically, more Board committees now predicts decreased ROE. Furthermore, the results of M2 also reveal ownership that is not concentrated in the hands of either the TOP1 or TOP5 shareholders to be a significant moderator between Board structure variables and ROE.

Direct Effects of Board Structure and Moderator Variables on the Mediator Board Size (M3)

Model 3 in Table 6-30 shows the results for the direct effect of Board structure and the moderator variables on the mediator variable Board Size. As Table 6-30 shows, the relationship between the SECP revised Code and Board size was not significant (B = .633), therefore indicating no change in average Board size pre- and post-SECP revision. There is a significant relationship between ownership, concentrated with 1% of shareholders (B = −1.335, p < .01), indicating that the size of the Board significantly decreased, on average, in those firms where ownership is concentrated in the top 1% of shareholders. In contrast, for firms where ownership concentrated with the top 5% of shareholders, Board size significantly increased (B = .187, p < .001).

Table 6-30: ROE Regression with Board's Resource Provisioning Role: Random Effects—Main, Mediating and Moderating Effects

Vriables	M0 Controls		M1 (X->Y) Cont+IV		M2 (X,XZ->Y) Cont+IV+Mod		M3 (X->M)		M4 (X,XZ->M)		M5 (X,M->Y)		Sobel Test	M6 (X,XZ,M->Y)		Sobel Test	M7 (M->Y)	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE		B	SE		B	SE
FSIZE	0.091***	0.012	0.086***	0.014	0.083***	0.014	0.304***	0.047	0.289***	0.047	0.082***	0.015		0.078***	0.015		0.086***	0.014
LEVERAGE	0.014	0.017	0.011	0.017	0.014	0.017	0.009	0.043	0.000	0.042	0.010	0.017		0.013	0.017		0.013	0.017
GRO	0.012	0.009	0.014	0.010	0.014	0.010	-0.032*	0.016	-0.034*	0.016	0.014	0.010		0.014	0.010		0.012	0.009
AGE	0.000	0.001	0.000	0.001	0.000	0.001	0.002	0.005	0.003	0.005	0.000	0.001		0.000	0.001		0.000	0.001
TEXTILE	0.002	0.027	-0.003	0.028	0.007	0.028	-0.743**	0.176	-0.782***	0.175	0.001	0.028		0.011	0.028		0.006	0.027
CHEMICAL	-0.009	0.030	-0.017	0.031	-0.001	0.031	-0.443*	0.200	-0.443*	0.200	-0.015	0.031		0.001	0.031		-0.007	0.030
CONSUMER	0.072*	0.029	0.065*	0.029	0.066*	0.029	-0.264	0.190	-0.236	0.189	0.067*	0.029		0.067*	0.030		0.073*	0.029
SECP			0.096	0.074	-0.273	0.400	0.633	0.444	0.409	1.087	0.091	0.074		-0.249	0.401			
TOP1			-0.020	0.081	-0.044	0.486	-1.335**	0.471	-1.788	1.252	-0.009	0.082		-0.074	0.487			
TOP5			0.032*	0.013	0.182*	0.087	0.187***	0.023	0.146	0.140	0.031*	0.013		0.181*	0.087			
BINDP			0.025	0.064	-0.054	0.269	-0.98***	0.136	-1.668**	0.598	0.027	0.064	0.000	-0.049	0.269	-0.003		
BINDP_SECP					-0.035	0.104			-0.539**	0.166				-0.032	0.104			
BINDP_TOP1					0.420	0.458			-0.334	0.972				0.411	0.458			
BINDP_TOP5					-0.104	0.542			1.546	1.202				-0.105	0.542			
CEODUL			0.007	0.025	0.038	0.102	-0.19*	0.091	-0.924*	0.375	0.009	0.025	-0.002	0.040	0.102	0.000		
CEODUL_SECP					0.007	0.033			-0.075	0.052				0.009	0.033			
CEODUL_TOP1					0.298	0.186			-1.192	0.731				0.301	0.186			
CEODUL_TOP5					-0.227	0.221			1.933*	0.880				-0.229	0.221			
DIVERSE			0.017	0.019	-0.151†	0.079	-0.047	0.125	-0.492	0.439	0.017	0.019	0.000	-0.147†	0.079	-0.003		
DIVERSE_SECP					0.021	0.025			0.092*	0.040				0.020	0.025			
DIVERSE_TOP1					-0.088	0.146			0.315	0.888				-0.086	0.146			
DIVERSE_TOP5					0.294†	0.164			0.424	0.948				0.288†	0.165			
ACINDP			-0.034†	0.019	-0.024	0.073	0.084	0.052	-0.149	0.192	-0.035†	0.019	0.001	-0.024	0.073	-0.001		
ACINDP_SECP					-0.036	0.026			0.138**	0.042				-0.036	0.026			
ACINDP_TOP1					-0.083	0.136			0.319	0.386				-0.092	0.136			
ACINDP_TOP5					0.056	0.151			0.045	0.411				0.060	0.151			
BCOMTS			0.010	0.017	0.045	0.061	0.158***	0.040	0.345*	0.135	0.008	0.018	0.003	0.033	0.062	0.016		
BCOMTS_SECP					-0.06*	0.025			0.146***	0.042				-0.06*	0.025			
BCOMTS_TOP1					0.058	0.109			0.157	0.272				0.048	0.109			
BCOMTS_TOP5					-0.024	0.125			-0.608*	0.301				-0.003	0.127			
BSIZE											0.007	0.008		0.009	0.009		0.007	0.008
Constant	-0.22***	0.059	-0.271**	0.088	-0.200	0.249	8.099***	0.374	8.739***	0.659	-0.318**	0.104		-0.239	0.252		-0.258**	0.075
R²	0.063		0.075		0.090		0.289		0.289		0.075			0.091			0.061	
X²	70.2 (7 df, p<0.001)		85.11 (15 df, p<0.001)		105.87 (30 df, p<0.001)		215.43 (15 df, p<0.001)		236.45 (30 df, p<0.001)		85.78 (16 df, p<0.001)			106.83 (31 df, p<0.001)			70.86 (8 df, p<0.001)	
df	7		15		30		15		30		16			31			8	
Autocorrelation	0.432		0.387		0.399						0.375			0.392			0.425	

N = 1590

Control Variables: Firm Size, Leverage, Sales Growth, Firm Age, Textile, Chemical and Consumer Goods

Dependent Variables: Return on Equity (ROE)

Mediating Variable: BSIZE (Total number of directors including CEO)

Moderating Variable: Corporate Governance Code (SECP), % of shares seld by the 1 largest sahreholder (TOP1) and % of shares held by the first 5 largest shareholders (TOP5)

†p<.1, *p<.05, **p<.01, ***p<.001

Mediating Effect of Board Size on the Relationship between Board Structure and ROE

The regression and Sobel test results in Model 5 in Table 6-30 show that the Mediating Variable Board Size is not a statistically significant mediator for the effect of Board Committees on ROE. This means that Board Size has no influence on the Board Structure Independent Variables in determining ROE. Compared to the other models, Model M1 is a more optimum choice for predicting ROE.

Implications of Table 6-30 Regression Results for the Conceptual Framework Model

The regression results in Table 6-30 show that only 5% shareholder ownership concentration increases ROE, and the control variables show that ROE is significantly higher in the consumer industry and in larger-size firms. Board size does not directly predict or mediate the Board structure relationships with ROE. Therefore, these results do not support the conceptual framework for predicting ROE. It is likely that other unknown factors not included in this model predict ROE, which warrants future research.

6.5.6 Board Meetings (Monitoring Role) as the Mediator of ROE

Table 6-31 show the regression results in predicting ROE with the monitoring of the Board (number of Board meetings) as the mediator. The results indicate that all models were seen to have good fit, as based on the chi-square values.

Mediating effect of Monitoring of the Board on the Relationship between Board Structure and ROE

The regression results in Model 5 of Table 6-31 show that none of the Board structure independent variables directly influence ROE. Moreover, the Sobel test shows that the mediating variable Board meeting is not a statistically significant mediator for Board structure. This means that Board meeting has no influence on the Board structure independent variables in determining ROE. The overall R-squared value shows that the model accounts for a very small 7.5% of the variation in ROE.

Implications of Regression Results in Table 6-31 for the Conceptual Framework

The results indicate that ROE has also not been mediated by monitoring of the Board, which further adds to the suggestion that future research is needed in order to identify what other unknown factors can predict ROE.

Table 6-31: ROE Regression with Board's Monitoring Role: Random Effects—Main, Mediating and Moderating Effects

Variables	M0 Controls B	SE	M1 (X->Y) Cont+IV B	SE	M2 (X,XZ->Y) Cont+IV+Mod B	SE	M3 (X->M) B	SE	M4 (X,XZ->M) B	SE	M5 (X,M->Y) B	SE	Sobel Test	M6 (X,XZ,M->Y) B	SE	Sobel Test	M7 (M->Y) B	SE
FSIZE	0.091***	0.012	0.086***	0.014	0.083***	0.014	0.206***	0.052	0.207***	0.052	0.086***	0.015		0.083***	0.015		0.089***	0.013
LEVERAGE	0.014	0.017	0.011	0.017	0.014	0.017	-0.021	0.050	-0.029	0.051	0.011	0.017		0.014	0.017		0.014	0.017
GRO	0.012	0.009	0.014	0.010	0.014	0.010	-0.037†	0.020	-0.037†	0.020	0.014	0.010		0.014	0.010		0.012	0.009
AGE	0.000	0.001	0.000	0.001	0.000	0.001	0.005	0.004	0.005	0.004	0.000	0.001		0.000	0.001		0.000	0.001
TEXTILE	0.002	0.027	-0.003	0.028	0.007	0.028	-0.226	0.144	-0.223	0.145	-0.002	0.028		0.007	0.028		0.003	0.027
CHEMICAL	-0.009	0.030	-0.017	0.031	-0.001	0.031	-0.130	0.163	-0.100	0.165	-0.017	0.031		-0.001	0.031		-0.009	0.030
CONSUMER	0.072*	0.029	0.065*	0.029	0.066*	0.029	-0.001	0.154	-0.009	0.155	0.065*	0.029		0.066*	0.030		0.072*	0.029
SECP			0.096	0.074	-0.273	0.400	0.250	0.377	-0.938	1.184	0.096	0.074		-0.274	0.402			
TOP1			-0.020	0.081	-0.044	0.486	-0.006	0.410	-0.769	1.416	-0.020	0.081		-0.043	0.487			
TOP5			0.032*	0.013	0.182*	0.087	0.147***	0.028	-0.294	0.179	0.032*	0.013		0.182*	0.087			
BINDP			0.025	0.064	-0.054	0.269	-0.089	0.166	-0.815	0.734	0.025	0.064	0.000	-0.054	0.269	-0.001		
BINDP_SECP					-0.035	0.104			0.457*	0.213				-0.035	0.104			
BINDP_TOP1					0.420	0.458			0.484	1.201				0.421	0.459			
BINDP_TOP5					-0.104	0.542			0.443	1.476				-0.105	0.543			
CEODUL			0.007	0.025	0.038	0.102	-0.053	0.096	-0.393	0.399	0.007	0.025	0.000	0.038	0.102	-0.001		
CEODUL_SECP					0.007	0.033			0.172*	0.067				0.007	0.033			
CEODUL_TOP1					0.298	0.186			0.272	0.765				0.298	0.187			
CEODUL_TOP5					-0.227	0.221			0.239	0.913				-0.227	0.222			
DIVERSE			0.017	0.019	-0.151†	0.079	0.100	0.101	-0.318	0.388	0.017	0.019	0.000	-0.151†	0.079	0.000		
DIVERSE_SECP					0.021	0.025			0.006	0.051				0.021	0.025			
DIVERSE_TOP1					-0.088	0.146			0.150	0.755				-0.088	0.146			
DIVERSE_TOP5					0.294†	0.164			0.548	0.830				0.294†	0.165			
ACINDP			-0.034†	0.019	-0.024	0.073	0.187**	0.060	0.025	0.228	-0.035†	0.019	0.001	-0.024	0.074	0.000		
ACINDP_SECP					-0.036	0.026			-0.029	0.054				-0.035	0.026			
ACINDP_TOP1					-0.083	0.136			0.460	0.448				-0.082	0.136			
ACINDP_TOP5					0.056	0.151			-0.003	0.484				0.056	0.151			
BCOMTS			0.010	0.017	0.045	0.061	0.28***	0.048	0.118	0.165	0.010	0.018	0.002	0.045	0.061	0.000		
BCOMTS_SECP					-0.06*	0.025			0.058	0.053				-0.06*	0.025			
BCOMTS_TOP1					0.058	0.109			0.188	0.327				0.058	0.109			
BCOMTS_TOP5					-0.024	0.125			0.090	0.364				-0.024	0.125			
BMETS											0.001	0.009		0.000	0.009		0.004	0.009
Constant	-0.22***	0.059	-0.271**	0.088	-0.200	0.249	3.808***	0.354	4.978***	0.737	-0.275**	0.093		-0.199	0.252		-0.234***	0.066
R²	0.063		0.075		0.090		0.239		0.257		0.075			0.090			0.064	
X²	70.2 (7 df, p <0.001)		85.11 (15 df, p <0.001)		105.87 (30 df, p < 0.001)		215.43 (15 df, p < 0.001)		236.45 (30 df, p < 0.001)		85.05 (16 df, p <0.001)			105.65 (31 df, p < 0.001)			70.4 (8 df, p <0.001)	
df	7		15		30		15		30		16			31			8	
Autocorrelation	0.432		0.387		0.399						0.382			0.393			0.429	

N = 1590

Control Variables: Firm Size, Leverage, Sales Growth, Firm Age, Textile, Chemical and Consumer Goods

Dependent Variables: Return on Equity (ROE)

Mediating Variable: BMETS (Total number of Board Meetings)

Moderating Variable: Corporate Governance Code (SECP), % of shares sold by the 1 largest sahreholder (TOP1) and % of shares held by the first 5 largest shareholders (TOP5)

†p<.1, *p<.05, **p<.01, ***p<.001

6.6 Discussion

The importance of CG for business success, as well as for social welfare, cannot be overstated (Solomon, 2010), particularly amongst developing countries that may not have strong and long-established legal and financial institutions with the capacity to deal with their economic issues (McGee, 2009). Learning from the experience of developed countries, the Securities and Exchange Commission of Pakistan (SECP) issued the country's first Code of Corporate Governance in March 2002.

Since the implementation of the Code in 2002, a number of exceptional events have occurred in many parts of the world, including high-profile corporate collapses and financial crises, which begun in 2007. As a developing country, Pakistan has also witnessed significant and rapid changes in the structure of its corporate sector, as well as in the nature of its CG practices, the ownership structure of firms, and the protection of minority shareholders. The impact of both domestic and global changes has meant that the Code issued in 2002 has gradually become less effective in terms of its influence on the financial performance of firms. As such, the SECP issued its revised Code in March 2012 in a bid to maintain the relevance and effectiveness of the country's CG framework so as to reflect the dynamic nature of CG changes.

The role of the Board of Directors, in terms of its contribution to firm performance as a mechanism of CG, has been widely acknowledged in the theoretical literature. It is argued that a well-structured Board of Directors can help companies to control and remedy the Agency problems arising from the separation of ownership and control in the companies (Fama, 1980; Fama & Jensen, 1983). A well-structured Board can also create strong links for companies to connect them with their external environments. Such links can enable them to gain access to the critical external resources the companies can use so as to create competitive advantages for them to achieve their business objectives (Pfeffer, 1972; Pfeffer & Salancik, 1978; Hillman & Dalziel, 2003; Klein, 1998; Ingley & Van der Walt, 2001; Hillman, et al., 2000; Johnson, et al., 1996). This research has examined the relationship between Board structure and firm performance through the Board's monitoring and resource-dependence roles. The research is based on existing evidence, which claims there is a positive relationship between good CG mechanisms and firm performance. The objective of the research was to investigate whether the same relationship between CG mechanisms and firm performance exists in the context of

Pakistan. The results of the relationships between Board structure and firm performance, as proposed in the conceptual framework, are discussed in the following section.

6.6.1 Corporate Governance and Firm Performance (Direct Effects)

Looking back at the bivariate correlation analysis presented in Table 6-16, the results confirm that all of the independent variables, with the exception of CEO duality (CEODUL), had positive and mostly significant correlations across all three measures of performance. This positive relationship between CG and firm performance indicates Board efficiency and effectiveness in increasing the profitability and market value of firms in Pakistan. Based on the correlation analysis of the variables, the findings of this research are seen to be in line with a number of other domestic studies (Javed & Iqbal, 2006; Sheikh, et al., 2013; Afza & Nazir, 2012; Latif, et al., 2013; Gull & Saeed, 2013), and the correlation results are also consistent with the views of international studies, which claim a positive association between governance mechanisms and financial performance (Afrifa & Tauringana, 2015; Yermack, 1996; Guest, 2009; Dittmar & Mahrt-Smith, 2007; Achim, et al., 2016; Chhaochharia & Grinstein, 2007; Mishra & Mohanty, 2014).

Board Size and Firm Performance

Most previous studies that have examined the relationship between Board size and firm relationship found either a negative or a positive relationship (Lipton & Lorsch, 1992; Jensen, 1993; Yermack, 1996), with the argument posed that a large Board decreases performance due to free-rider problems, poor coordination and poor communication, which can otherwise be controlled if the Boards are small. As Board size increases, it can easily lead to decreased ability of the Board in its capacity to monitor and control management, thereby intensifying the Agency problem (Eisenberg, et al., 1998). Furthermore, large Board size could also result in difference of opinions and inefficiency in decision-making. It is not difficult to imagine that members serving on a large Board are more like to face difficulties when it comes to the need to agree on specific matters. Hillman et al. (2000) argued that access to resources through experienced and diversified directors, who are also well-connected, is directly linked with firm performance. The notable disadvantage of the smaller Boards is that they cannot be effective provider of critical resources, such as finance, raw materials and important information for the firm, due to a lack of expertise, diversity and networking power (Haniffa & Hudaib, 2006; Pearce & Zahra, 1992). Another very significant drawback of the smaller Boards is their

limited ability to enhance the knowledge base required to design effective strategy for getting competitive advantage in managerial capability and better decision-making (Yawson, 2006; Pugliese, et al., 2009).

This research has proposed a positive relationship between Board size and firm performance; however, *the results suggest the positive relationship between Board size and firm performance is not significant in the case of the present work*. The likely reason for this result might due to the Board of Directors' personal profile and other characteristics, which are difficult to determine in the case of companies operating in less developed countries. According to another work (Javid & Iqbal, 2008)), most Pakistani firm are characterised by highly concentrated ownership (e.g., families, companies or the government). In this vein, Shleifer & Vishny (1997) and La Porta, et al. (1999) asserted that developing countries suffer from high ownership concentrations and weak protection of shareholders rights. Boards in Pakistani companies are commonly dominated by large block holders—typically members of a single family or groups of families. This might result in the appointment of management and members on the Board on the basis of friendship and nepotism as opposed to experience and skills. When ownership is concentrated, it can be easy to control shareholders to use their power to influence management decisions and undermine the monitoring and coordination of the Board, rendering the Board impotent with regards its impacts on management and firm performance.

Board Independence and Firm Performance

Board independence is an important characteristic of CG in Pakistan owing to the SECP's revised Code, which encourages companies to include as many non-executive directors on their Boards as possible. This research proposed a positive relationship between Board independence and firm financial performance. The results indicate that Board independence, as measured by the ratio of non-executive directors to executive directors, is positively linked with all three measures of firm performance, but that the relationship is only slightly significant for ROA. The data collected for this research indicates that a large majority of listed companies in Pakistan are characterised as having a concentrated ownership structure; as a result, the Boards of these companies are dominated by large block holders, typically members of a close family, associated groups, and representatives of the government. It is very common for companies in Pakistan to appoint management and Board members on the basis of political affiliations, family connections and

friendship, as opposed to in line with their experience, education, and the skills required to do the job. Most non-executive directors in Pakistan work hand-in-glove with the promoters of the companies, meaning their independence and rubber-stamping of decisions is questionable. One possible reason for this insignificant relationship between Board independence and firm performance could be the selection process undertaken by firms in Pakistan for the appointment NEDs. The data also suggest that listed companies in Pakistan perform only superficial and ceremonial changes to the composition of their Boards in order to comply with the legal requirements of the SECP's Code. It is argued that NEDs are usually part-time consultants, and, as such, it is very likely that such directors do not have full access to firm-specific information, thus potentially undermining their ability not only to monitor executive managers but also to advise the CEO. Unless non-executive independent directors are truly independent, the NEDs on the Board will not be able to exercise their duties either effectively or in the best interests of the company.

The results are largely inconsistent with a large majority of previous studies (Javed & Iqbal, 2006; Awan, 2012; Byrd & Hickman, 1992; Hillman, 2005; Rosenstein & Wyatt, 1990; Weisbach, 1998; Zahra & Pearce, 1989), which have claimed a significant positive relationship between Board independence and firm performance. *The hypothesis that there is a positive relationship between the proportion of NEDs and firm performance (Tobin's Q, ROA and ROE) is only partially supported for this research.*

CEO Duality and Firm Performance

CEO duality is another important characteristic of CG in Pakistan owing to the SECP's Code of Corporate Governance and KSE Listings Rules explicitly stating that the positions of Chairperson and CEO should not be held by the same individual unless specifically provided by any other law. This research anticipated a negative link between CEO duality and firm performance as, when the CEO also acts as Board Chairperson, the Board's monitoring and control functions are then likely to be compromised, meaning an increased likelihood of the Board acting in favour of the executive management (Kholeif, 2008). *This research has produced mixed results for the impact of CEO duality on the financial performance of firms. CEO duality showed a positive relationship with accounting-based measures of performance (ROA and ROE) and a negative association with Tobin's Q, which is a market-based measure of firm performance.* However, the

relationship between CEO duality and firm performance is statistically insignificant in the context of listed companies in Pakistan.

The negative relationship between CEO duality and Tobin's Q is in line with the Agency perspective, which suggests that CEO duality is not good for firm performance owing to the fact that, combining the two roles, creates a situation where a single individual can gain too much control and power. Hence, CEO duality is seen as compromising the independence of Boards and making them less effective in their monitoring role (Coombes & Wong , 2004). Moreover, when the two positions are combined into a single role, this will surely put more pressure on the CEO, who may not cope well with the added responsibility. This may, itself, result in lower performance. The results for the relationship between CEO duality and the two accounting measures of performance is counter-intuitive to the principles of the Agency Theory, whereby a CEO duality is believed to increase Agency costs and decrease firm performance. The positive prelateship between CEO duality and two accounting-based measures of performance supports the notions of Resource-dependence and the Stewardship theories, which state that firm performance will improve with CEO duality or a combined leadership structure, with the results in line with the studies of other works (Villar, et al., 2016; Cabrera-Suárez & Martín-Santana, 2015; Essen, et al., 2013). In this regard, Villar, et al. (2016) argued that CEO duality can enhance the performance stemming from a unity of command and the concentration of power at the top level of management. Similarly, a clear strategic focus and greater independence of the CEO can create more facilities and opportunities for firms to perform better (Cabrera-Suárez & Martín-Santana, 2015).

The results of prior studies on the association between CEO duality and performance have also produced conflicting results: for example, some studies have shown that the relationship between CEO duality and firm performance is positive (Donaldson & Davis, 1991; Elsayed, 2007; Haniffa & Cooke, 2002; Haniffa & Hudaib, 2006; Weir, et al., 2002; Chen, 2014; Chang, et al., 2015), whilst some reported a negative relationship between CEO duality and firm performance (Rechner & Dalton, 1991; Dahya, et al., 1996; Chahine & Tohmé, 2009; Jackling & Johl, 2009; Ujunwa, 2012), with others concluding either an insignificant or lack of relationship between CEO duality and performance (Laing & Weir, 1999; Chen, et al., 2008; Finkelstein & Hambrick, 1989). Some studies even found mixed results depending on the method used to determine the performance of firms (Bhagat & Bolton, 2008). *The hypothesis that there is a negative relationship between CEO duality and firm performance is not fully supported in this research.*

Board Diversity and Firm Performance

Board diversity is another important aspect of CG with the ability to influence the performance of firms and the overall effectiveness of the Board's functions. To make a real difference on firm performance and to make smart decisions with lasting impact, a Board requires a diversity of skills, cultures, genders and views amongst its members. Theoretically, diversified Boards, which include females, foreign nationals and minority directors, may increase Board independence so as to reduce CEO entrenchment and ultimately enhance the performance of firms by controlling CEO-dominated Boards (Mace, 1971). The Agency Theory shows how Board composition might help to align the interests of external shareholders and the opportunistic managers of companies (Eisenhardt, 1989; Fama & Jensen, 1983), and, according to the Resource-dependence Theory, a balanced and diversified Board might help companies become successful in their area of business. Importantly, however, the results of this research indicate that Board diversity, as measured by the presence of female, foreign and minority directors serving on the Board, is positively linked with all three measures of firm performance, but that the relationship as a whole is only marginally significant for Tobin's Q.

Although the results are largely in contrast and inconsistent with the expectations of this research, they are still backed by a number of previous studies that have not discovered a significant positive relationship between Board diversity and the financial performance of firms, or even have reported a negative and insignificant relationship between Board diversity and firm performance (Carter, et al., 2010; Rose, 2007; Farrell & Hersch, 2005; Smith, et al., 2006; Shrader, et al., 1997). For example, Carter, et al. (2010) reported a significant relationship between the gender or ethnic diversity of the Board and financial performance for a sample of major US corporations. Rose (2007) could not find a significant relationship between female Board gender diversity and Tobin's Q for a sample of Danish firms. The study also reported no significant association between Board members' educational background, as well as the proportion of foreigners. Farrell & Hersch (2005) conducted an event study to investigate the addition of female directors to US Boards, and subsequently reported no evidence that the addition of a female to the Board affects Return on Assets or market returns to shareholders. Smith, et al. (2006) utilised the data of 2,500 largest Danish firms and used various statistical models for firm performance, reporting a statistically insignificant relationship between Board gender diversity and several accounting measures of financial performance.

The existing framework of CG in Pakistan does not provide any explicit guidelines or rules in regards Board diversity. However, both the SECP and KSE appreciate and encourage companies to include both female directors and directors representing minority shareholders on their Boards. A possible explanation for the findings of this research could be owing to the concept of Board diversity not being fully appreciated by the companies in Pakistan. As an example, it is not unusual for companies in Pakistan to appoint female directors based on family connections and for foreign directors to fulfil contractual obligations imposed by their foreign business partners and associated companies. In a large majority of companies, particularly in the textiles sector, where companies are characteristically controlled by close families and where there is a high concentration of ownership, the founding owners or executive directors appoint their wives and daughters to the Boards so as to retain power and control of the Boards. As family members, these so-called NEDs do not necessarily require either an in-depth knowledge of the business or the requisite skills and proper qualifications (Uddin & Choudhury, 2008; Javid & Iqbal, 2008). In much the same way as Board independence, there are also often doubts concerning the real levels of Board diversity in Pakistan. *The hypothesis that there is a positive relationship between Board diversity and firm performance is only partially supported in this research.* It is also important to note that this research could not find evidence of a negative link between Board diversity and financial performance, and so the results do not reject the business case for Board diversity.

Board Committees and Firm Performance

In Pakistan, the SECP Code and Stock Exchange Listing Rules require all listed companies to have both an independent audit and a human resource and remuneration committee as a method of improving the effectiveness and functioning of Boards. The central responsibility of a Board's committees is to act as independent agents on behalf of shareholders to support and monitor management in order to reduce Agency problems (Rezaee, 2009). A Board supported by an independent and expert audit committee indicates strong governance, financial statement accuracy, control effectiveness, and audit quality to protect shareholders' interests (Gendron, et al., 2004).

The results of this research indicate that Board committees are positively linked to the performance of firms in Pakistan. *However, the relationship is only significant between Board committees and Tobin's Q.* The positive relationship between Board committees

and firm performance is supported by the Agency and Stakeholder perspective, which assumes that Board committees perform an oversight function on behalf of the Board, and that the Board and its standing committees are accountable to shareholders. The positive relationship between Board committees and firm performance and shareholders' protection is also supported by the Cadbury Report (1992) and OECD (2004) principles, both of which recommend separate committees for overseeing the nomination, appointment and remuneration of executive directors. *This positive and significant relationship between Boards' committees and Tobin's Q shows that shareholders and capital markets in Pakistan have greater confidence in companies whose Boards are supported by a greater number of Board committees.*

Although existing evidence on the relationship between Board committees and firm performance is limited and the results from prior studies are mixed, the results of this research have a support from a number of existing studies (Ho & Wong, 2001; McMullen, 1996; Salloum, et al., 2014; Ruigrok, et al., 2006; Klein, 1998; Agrawal & Chadha, 2005). For example, Ho & Wong (2001) reported evidence of a positive relationship between the presence of an audit committee and corporate disclosure practices, investors' confidence and market value of firms. McMullen (1996) suggests that the audit committee presence in companies results in reliable financial reporting, a reduction in the incidence of errors, and other irregularities in unreliable financial reporting, to help to achieve their objectives. Audit committee with frequent meetings can help audit committee members to ensure the integrity of financial reporting, to provide better monitoring, and to effectively complete the review of operations (Salloum, et al., 2014). According to Ruigrok, et al. (2006), the existence of nomination committees is associated with better performance through a higher degree of Board diversity. In contrast, (Donaldson & Davis, 1991; Jackling & Johl, 2009; Ujunwa, 2012) reported a negative or insignificant relationship between Board committees and the performance of firms. *The hypothesis that there is a positive relationship between Board Committees and firm performance is partially supported in this research.*

Audit Committee Independence and Firm Performance

The audit committee, and particularly its independence, is an exceptionally important element of CG since it is believed that independent directors are better monitors of management than executive directors. In Pakistan, the SECP's Code of Corporate Governance requires every listed company to have an audit committee chaired by an

independent director to bring a greater level of transparency to the process of financial reporting.

A majority of the previous studies applied Agency and Stakeholder perspectives to investigate the role of audit committees in CG, and accordingly found that the greater the independence of the audit committee, the greater the level of shareholder protection, transparent financial reporting and financial performance (Braswell, et al., 2012; Baxter & Cotter, 2008; Miko & Kamardin, 2015; Anderson, et al., 2004; Chien, et al., 2010; Yin, et al., 2012; Klein, 2002; Sommer, 1991; Beasley, 1996). *However, this research has produced rather mixed results for the influence of audit committee independence on the financial performance of firms in Pakistan.* For example, audit committee independence showed a positive relationship with the market-based measure of firm performance (Tobin's Q) but negative associations with the accounting-based measures of performance (ROA and ROE). *ROE was the only performance measure to have a significant relationship with audit committee independence.* Although the relationship between audit committee independence and Tobin's Q is not significant, the direction of the relationship suggests that capital markets in Pakistan value good CG practices. This also suggests that investors in Pakistan are willing to pay a high premium for shares and securities in well-governed companies.

The evidence from this research on the link between audit committee independence and accounting-based measures of performance is quite interesting in terms of its negative direction. The results do not support theoretical perspectives of this research that suggest a positive relationship between audit committee independence and firm performance. As explained earlier, most firms in a large majority of South Asian countries are dominated by large shareholders, such as a close family or the state, which easily creates the potential for them to dominate and for family members and their associates to act as independent directors whilst lacking in the necessary knowledge and/or technical expertise required to create business value. Many previous studies have reported that NEDs are insufficiently independent, especially in developing countries, when it comes to performing their monitoring function effectively. When NEDs are appointed based on their relationships and associations, their functions are likely to be compromised; undoubtedly, this would have a negative impact on the overall performance of their companies. For example, Bansal & Sharma (2016) considered the endorsement of Indian Companies Act (2013) and accordingly examined the role of audit committee independence and frequency of meetings in improving firm performance. The study did not reveal any effect of audit

committee independence on performance. Similarly, in a study of Singaporean and Malaysian companies, Mak & Kusnadi (2005) explored the impact of audit committee on the ability of the Board in monitoring the performance of managers. The findings of this research are also supported from the results of another study carried out in the Malaysian context by Hutchinson & Zain (2009), which reported no positive relationship between audit committee independence and corporate performance. More recently, Afza & Nazir (2014) explored the influence of the audit committee characteristic on a firm's performance in Pakistan, with their study reporting that the variables for audit committee independence and activity remain insignificant, which is consistent with many previous studies (Be´dard, et al., 2004; Yang & Krishnan, 2005; Lin, et al., 2006; Abbott, et al., 2004) carried out in different countries. *The hypothesis that there is a positive relationship between audit committee independence and firm performance is not supported in this research.*

6.6.2 *Mediation Effects of Board Roles on Firm Performance*

Although extensive research has been conducted, the understanding of the structure of Board of Directors and its consequences on firm performance remains limited. This is fundamentally owing to the effects of Board structure on firm performance not always being direct. Furthermore, so far, a large majority of prior studies on CG research have ignored the power of intervening variables, leading to inconclusive research results. It is quite likely that the relationship between Board structure and firm performance may arise through the influence of other intervening variables. The environmental context, for example, is a key contingency for the companies; it both enhances and constrains the scope of organisational activities (Sener, et al., 2011). Sometimes, the cause and effect relationship between independent and dependent variables is not clear without the detection of mediating variables. Many factors can affect organisational performance, and disentangling a simple causal relationship is likely to be a holy grail (Cornforth & Chambers, 2010). By introducing Board meetings and Board size as two mediating variables in the model, this research expected that such variables would tighten the monitoring and control functions of the Boards and would further assist companies in alleviating the Agency problem so as to enhance their financial performance.

Model 5 in Tables 6-26 through to 6-31 shows the mediation testing results in assessing whether Board size and Board meetings mediate the relationship between Board structural variables and predict firm performance (Tobin's Q, ROA and ROE), considering implementation of the SECP's revised Code and ownership concentration.

Model M5 in Table 6-26 shows that a larger Board size predicted a higher Tobin's Q (B = .063, p < .001). When Board Size was included in the model, this significantly reduced the direct effect of Board structure and the moderator variable on the performance of Tobin's Q, as the B regression coefficient values are lower in Model 5 than in Model 1. The Sobel test confirmed the significant mediation of Board Size. This means that the influence of the number of Board committees on Tobin's Q is determined by the Board Size of the company. The results in Model 5 of Table 6-27 indicate that the Board meetings variable is not a significant mediator (B = .007, ns) in the relationship between Board structure and Tobin's Q performance. The Sobel test shows that the mediating variable Board Meeting is not a statistically significant mediator for Board Independence, CEO Duality, Audit Committee Independence or Board Committees for their influence on Tobin's Q. This means that Board Meeting has no influence on the Independent Variables in determining Tobin's Q. Similarly, the regression results and Sobel test in Model 5 (tables 6-26–6-31) show that Board size and Board meetings do not significantly mediate the effects of the Board structure independent variables on the performance of either ROA or ROE.

In terms of supporting the conceptual framework the results reveal that only one *Board Structure variable—Number of Board Committees—significantly predicted the performance of Tobin's Q, with the other four Board structure variables seen to have no influence on any other measure of firms' financial performance.* Based on the mediation testing results, this research concludes that the conceptual framework model does not explain ROA and ROE performance outcomes in this research, with no Board structure variable seen to have a direct effect on ROA and ROE at (p < .05). Hence, the pathways predicting ROA and ROE are not supported in this research.

6.6.3 Moderating Effects of the SECP's Code on Firm Performance

There are not many studies that have considered the interactive effect of CG reform (amendments and changes to governance codes) on the relationship between CG practices and firm performance. This research did not find any studies undertaken in the context of Pakistan that investigated the impact of the SECP's revised Code, which was implemented in March 2012. This research used the SECP's revised Code as the main moderator variable to test whether its implementation moderated the relationship between CG practices and firm performance in Pakistan. This research also took the opportunity to examine the moderating influence of ownership concentration on the relationship between Board structure and firm performance.

The results presented in Model 2 in Tables 6-26 through to 6-31 show the moderation testing results to assess whether the SECP's revised Code has moderated the relationship between Board structure and firm performance (Tobin's Q, ROA and ROE). The results show the moderating effect of the SECP's revised Code on performance, with the results confirming that the SECP revision significantly moderated the influence of Board committees on Tobin's Q. This indicates that, following the SECP revision, a higher number of Board committees significantly increased the performance of Tobin's Q. In contrast, the revised Code did not moderate the effect of Board independence, CEO duality, Board diversity or audit committee independence on Tobin's Q, or the effect of Board diversity on Tobin's Q. The results show that, aside from the relationship between Board committees and Tobin's Q, the SECP's revised Code had no moderating influence on the relationship of the Board structure variables with ROA and ROE. The results from the analyses are mixed and largely inconsistent, with a number of previous studies conducted not only in the Western context but also with those of many studies conducted in Pakistan and other developing countries, including in the South Asian region. Although the mediating impact of the Board's monitoring and resource-dependence roles is not significant on the relationship between Board structure and firm performance, the findings of this research suggest that the Board's roles can play an important mediating role in the link between CG and firm performance in Pakistan. The results of this research also suggest that CG practices in Pakistan could serve as a close substitute for well-established financial and legal institutions to protect the interests of shareholders.

6.6.4 Endogeneity and Robustness

Endogeneity concerns are widespread in the CG literature, and therefore are recognised as an important issue for researchers. Wintoki et al. (2012) argued that unobserved heterogeneity can arise if performance and CG variables, i.e. Board composition, are jointly determined by unobservable firm-specific factors. More importantly, the firm's Board composition may be simultaneously determined by its current performance, or there is a possibility that contemporaneously observed governance variables are not strictly exogenous since current CG is likely to depend on past realisations of performance (Wintoki, et al., 2012). As already mentioned in the previous chapters, the majority of prior empirical studies have observed only the direct relationship between CG and performance and have relied on estimation techniques that ignored endogeneity. There are studies that have attempted to overcome the issue and that have used instrumental variables (IVs) or General Method of Moments (GMM).

Instrumental Variable (IV) methods are commonly used in accounting research (e.g., earnings management, corporate governance, executive compensation, and disclosure research) when regressor variables are endogenous (Larcker and Rusticus, 2010). This research has not considered the use of instrumental variables as an alternative to control for the endogeneity problem owing to the fact that Bound et al. (1995) highlighted two problems associated with the use of IVs: first, the use of IVs that explain little of the variation in the endogenous explanatory variable can lead to large inconsistencies in the IV estimates, even if only a weak relationship exists between the instruments and the error in the structural equation; and second, in finite samples, IV estimates are biased in the same directions as Ordinary Least Squares (OLS) estimates. Furthermore, when searching for a plausible instrument for a potentially endogenous explanatory variable, valid and legitimate instruments may be more difficult to find (Bound, Jaeger and Baker, 1995). In order to examine the performance of Instrumental Variables (IVs) and Ordinary Least Squares (OLS) regression, Crown, Henk & Vanness (2011) performed a series of simulation analyses in mind of comparing estimation error between OLS and IV when the independent variable of interest is endogenous. They noted that the simulations indicate a greater potential for inferential error when using IVs rather than OLS in all but the most ideal circumstances. They concluded that researchers should be cautious when using IV methods, with such approaches valuable in testing for the presence of endogeneity, but only under the most ideal circumstances are they likely to produce estimates with less estimation error than OLS (Crown, Henk and Vanness, 2011). Whilst IV estimation is the standard textbook solution to mitigating endogeneity problems, the appropriateness of IV methods in typical accounting research settings is not obvious (Larcker and Rusticus, 2010). According to another work (Baser, 2009), despite the obvious benefit of IV models, the method should not be used blindly because several strong conditions are required for these models to work, with each of them needing to be tested. Should this not be the case, bias and the precision of results will be statistically worse than the results achieved by simply using standard OLS (Baser, 2009).

This research understands that the relationship between firm performance and corporate governance is subject to the endogeneity problem, as the relationship is simultaneously determined by unobservable firm-specific factors (Hermalin & Weisbach, 2003; Wintoki, et al., 2012; Denis & Kruse, 2000). The studies of Yermack (1996) and Himmelberg, et al. (1999) suggest the use of panel data estimation techniques in dealing with the problem of endogeneity. The research used a random effects panel data model to overcome the

estimation problems linked with the existence of the endogeneity problem. For robustness, this research used three different measures and performance, and included five firm-specific control variables to improve the quality of the findings. Table 6-32 provides summary of hypotheses testing.

6.7 Chapter Summary

This chapter has examined the relationship between Board structural characteristics and the financial performance of firms both before and after the implementation of the SECP's revised Code of Corporate Governance in Pakistan. Several statistical tools have been used to analyse the two sets of balanced panel data of 265 public companies listed on the Karachi Stock Exchange, spanning 2009–2012 and 2013–2015. Hausman test and other panel data specifications and diagnostic practices helped to determine the random or fixed effects in the panel data, as well as the multicollinearity, autocorrelation and homoscedasticity in the data. Based on the test results of the data, a random effect Ordinary Least Square regression method was used for the comprehensive analysis of the data. The chapter provides evidence confirming the causal effect of Board structural attributes on the performance of firms in Pakistan through the influence of Board's monitoring and resource-dependence roles. In terms of supporting the conceptual framework offered in this research, the results show that only one Board structural variable, 'Number of Board meetings', is significantly related to Tobin's Q, and that the Board size variable significantly mediated the relationship between Board meetings and Tobin's Q. The relationship was also moderated by the SECP's revised Code and ownership concentration at the TOP1 level. The results also show that the links between another four Board structure variables (Board independence, CEO duality, Board diversity and audit committee independence) and financial performance are insignificant in drawing a conclusion. Furthermore, the comparison of the results between pre- and post-implementation of the Code suggest that the intervening relationship between Board variables and the performance of firms was stronger following the implementation of the revised Code. Overall, the findings suggest that the relationship between Board structural attributes and firm performance are not necessarily direct, as often assumed and reported in many previous studies; rather, the relationship could be indirect, and influenced by mediating and moderating variables. The next chapter presents the conclusion of the research, including an overview of the research objectives, key findings and contribution, practical and policy implications, limitations, and directions for future research.

Table 6-32 Summary of the Results of Hypotheses Testing (Correlation Analyses)

No	Ref	Variable	Hypotheses	Performance Measures			
				TQ	ROA	ROE	Result/Conclusion
1	H1	Board Size	There is a positive relationship between board size and firm performance	(√)	(√)	(√)	Supported
2	H2	Board Meetings	There is a positive relationship between board meetings and firm performance	(√)	(√)	(√)	Supported
3	H3	Board Independence	There is a positive relationship between the proportion of NEDs and firm performance (Tobin's Q, ROA and ROE).	(√)	(√)	(√)	Supported
4	H3.1	Board Independence	The relationship between proportion of NEDs and firm performance is mediated by the Board's monitoring role (frequency of Board meetings).	(x)	(x)	(x)	Not Supported
5	H3.2	Board Independence	The relationship between proportion of NEDs and firm performance is mediated by the Board's Resource-dependence role (board size).	(x)	(x)	(x)	Partially Supported
6	H3.3	Board Independence	The above relationships are moderated by the SECP Code such that they became stronger following its implementation.	(√)	(x)	(x)	Partially Supported
7	H4	CEO Duality	There is a negative relationship between CEO duality and firm performance (Tobin's Q, ROA and ROE).	(√)	(x)	(x)	Partially Supported
8	H4.1	CEO Duality	The relationship between CEO duality and firm performance is mediated by the Board's monitoring role (frequency of Board meetings).	(x)	(x)	(x)	Not Supported
9	H4.2	CEO Duality	The relationship between CEO duality and firm performance is mediated by the Board's Resource-dependence role (board size).	(x)	(x)	(x)	Not Supported
10	H4.3	CEO Duality	The above relationships are moderated by the SECP Code such that they became stronger following its implementation.	(x)	(x)	(x)	Not Supported
11	H5	Board Diversity	There is a positive relationship between Board diversity and firm performance (Tobin's Q, ROA and ROE).	(√)	(√)	(√)	Supported
12	H5.1	Board Diversity	The relationship between Board diversity and firm performance is mediated by the Board's monitoring role (frequency of Board meetings).	(x)	(x)	(x)	Not Supported
13	H5.2	Board Diversity	The relationship between Board diversity and firm performance is mediated by the Board's Resource-dependence role (board size).	(x)	(x)	(x)	Not Supported

14	H5.3	Board Diversity	The above relationships are moderated by the SECP Code such that they became stronger following its implementation.	(√)	(x)	(x)	Partially Supported
15	H6	Board Committees	There is a positive relationship between Board committees and firm performance (Tobin's Q, ROA and ROE).	(√)	(√)	(√)	Supported
16	H6.1	Board Committees	The relationship between Board committees and firm performance (Tobin's Q, ROA and ROE) is mediated by the Board's monitoring role (frequency of Board meetings).	(√)	(x)	(x)	Partially Supported
17	H6.2	Board Committees	The relationship between Board committees and firm performance (Tobin's Q, ROA and ROE) is mediated by the Board's Resource-dependence role (board size).	(√)	(x)	(x)	Partially Supported
18	H6.3	Board Committees	The above relationships are moderated by the SECP Code such that they became stronger following its implementation.	(√)	(x)	(x)	Partially Supported
19	H7	Audit Committee Independence	There is a positive relationship between audit committee independence and firm performance (Tobin's Q, ROA and ROE).	(√)	(x)	(x)	Partially Supported
20	H7.1	Audit Committee Independence	The relationship between audit committee independence and firm performance is mediated by the Board's monitoring role (frequency of Board meetings).	(x)	(x)	(x)	Not Supported
21	H7.2	Audit Committee Independence	The relationship between audit committee independence and firm performance is mediated by the Board's Resource-dependence role (board size).	(x)	(x)	(x)	Not Supported
22	H7.3	Audit Committee Independence	The above relationships are moderated by the SECP Code such that they became stronger following its implementation.	(√)	(x)	(x)	Partially Supported
23	H8	Ownership Concentration	Firms with a high concentration of ownership will have more independent directors on their Boards.		(√)		Supported
24	H9	Ownership Concentration	Firms with a high concentration of ownership are more likely to have CEO duality.		(√)		Supported
25	H10	Ownership Concentration	Ownership concentration negatively moderates the relationship between Board structure and firm performance (Tobin's Q, ROA and ROE).	(√)	(x)	(x)	Partially Supported

(√) = Supported   (x) Not Supported

7 CONCLUSIONS, IMPLICATIONS, AND AVENUES FOR FUTURE WORK

7.1 Introduction

This research has been conducted in order to investigate the relationships between Board structure and the financial performance of firms through the mediation effects of the Board's monitoring and resource-dependence functions whilst simultaneously considering the impact of the SECP's revised Code and ownership concentration on the relationships between Board structure and firm performance. Conceptual framework of the research was constructed using a multi-theoretical perspective to investigate the links between Board structural variables (Board independence, CEO duality, Board diversity, Board committees and audit committee independence) and firm performance (Tobin's Q, ROA and ROE). In contrast with most previous studies that have tested only the direct links between CG mechanisms and firm performance, this research has extended existing knowledge by including the role of intervening variables to investigate the causal relationships between Board structural variables and the financial performance of firms.

7.2 Objectives

First Objective

The first objective of the research was to understand the concept of CG and its developments around the world in general, and, in particular, the legal and institutional structure of CG in Pakistan, with the aim of finding potential gaps in the literature worthy of further research. This objective was met through a systematic review of the theoretical and empirical literature, which has been developing since the seminal work of Berle & Means (1932). The literature reviewed in this research suggests that much of the existing literature on CG has been developed in the context of Western countries, with the literature heavily based on the theoretical foundations of Agency Theory. The theory identifies Agency relationships requiring a transfer of power and authority from principals to their agents (Shleifer & Vishny, 1997; Gompers, et al., 2003; Dalton, et al., 1999; Jensen & Meckling, 1976). In the context of listed companies, the Agency relationship exists between shareholders and the directors of the companies, where shareholders are the principals and directors are their appointed agents. The literature developed around the principles of Agency Theory has yielded mixed empirical findings. Hence, many researchers are concerned with the application of conventional Agency Theory in understanding the global aspects of CG. A growing number of researchers believe that CG is a multidimensional concept, and that Agency Theory alone is too narrow to explain the true nature of CG issues relevant to different types of organisations

operating in different parts of the world. Therefore, to deal with the limitations of the Agency Theory, researchers are becoming increasingly aware of the benefits of other theoretical perspectives, such as the Resource-dependence and Stakeholder perspectives of companies. In this research, researcher debated the models and mechanisms of CG, ranging from a narrow Agency Theory perspective to the broader Resource-dependence and Stakeholder perspectives of CG and explained the structural characteristics of Board, investigated from Agency, Resource-dependence and Stakeholder perspectives highlighting their importance for firm performance.

Second Objective

The second objective of the research was to develop a comprehensive model to test the causal relationships between Board structure and firm performance incorporating the mediating influence of the Board's monitoring and Resource-dependence roles. The existing literature suggests that the Board of Directors is one of the most effective systems of internal CG, although the relationship between Board structure and firm performance is inconclusive, with a clear gap in the existing literature since most existing studies have only examined the direct links between Board structure and firm performance. According to Hillman & Dalziel (2003), Zahra & Pearce (1989) and Hermalin & Weisbach (1991), although directors perform multiple functions, the most widely used framework for analysing the relationship between a firm's CG and performance remains Agency Theory. The scholars such as Hillman & Dalziel (2003), Nicholson & Kiel (2004) and Levrau & Van Den (2007) argued that future studies need to apply a multi-theoretical perspective to investigate CG practices, particularly Board structure. It is fact that some theoretical perspectives may be more appropriate and relevant to some countries than others, depending on the stage that an individual country or group of countries is at (Mallin, 2007). Following these claims, and in mind of advancing the existing Board governance literature, this research has identified a range of important Board structural characteristics that form an important part of the overall CG system. In contrast with most existing studies that have mainly examined the direct relationship between governance mechanisms and firm performance, this research developed a multi-theoretical research model linking Board structural characteristics with firm performance via a number of intervening variables.

Third Objective

The third objective of the research was to determine the moderating influence of the SECP's revised Code (proxy for corporate governance reforms in Pakistan) and firms' ownership concentration on Board structure and the performance of firms in Pakistan. In order to test the moderating influence of the Code and ownership concentration, the overall research period (2009–2015) was divided into two separate periods. The first covers the three-year period spanning 2009 to 2011, whilst the second the period ranged 2013 to 2015, so as to represent the periods both before and after the implementation of the revised Code in March 2012. Linear and multiple regression analyses, the comparison of mean values and the R-squared test were used to test the conceptual framework model in an effort to guide this research to understanding the causal relationship between Board structure and firm performance in the two time periods of this research. In mind of assessing the mediating role of the Board's monitoring and resource-dependence roles, this research applied the mediation testing methods recommended by Baron & Kenny (1986) and Sobel test by Sobel (1982).

7.3   Summary of Key Findings

Since the collapse of Enron in 2001, the world has witnessed a renewed focus and rapid growth in the importance of CG mechanism. CG can be viewed as a tool based on implicit and explicit rules and regulations, centred on controlling and running public organisations in the best interests of their stakeholders. International institutions, such as the Organisation for Economic Cooperation and Development (OECD), have developed internationally accepted principles of CG aimed at protecting the interests of those who are directly or indirectly linked with the activities of publicly listed companies. The Board of Directors has been identified as a powerful mechanism underpinning internal CG in the capacity to reduce conflicts of interest, not only between management and shareholders but also between controlling and minority shareholders. It is argued that any decrease in the level of conflicts of interest between parties will reduce information asymmetry, self-interested behaviour, and Agency cost, which will, in turn, result in increased performance, transparency, disclosure and corporate accountability. CG assures shareholders that their capital is protected and that they will receive a fair return on their invested capital, with managers not diverting the company's resources for their own personal gains (Shleifer & Vishny, 1986; Shleifer & Vishny, 1997). CG can also provide help to minority shareholders to protect their interests (La Porta, et al., 2000).

In Pakistan, the Security and Exchange Commission of Pakistan (SECP) implemented the country's first Code of Corporate Governance in March 2002. The Code was revised in March 2012 in order to keep it relevant and effective in dealing with the dynamic nature of CG practices. However, not even a single attempt has been made since the revision of the Code to investigate either levels of compliance with the requirements of the revised Code or its impact on the performance of firms in Pakistan. Therefore, a core aim of this research was to contribute to the existing body of literature on Board governance by examining the influence of Board structure on the performance of firms through the monitoring and resource-dependence roles of the Board. To achieve the core aim of the research, the following research questions were posed:

1. Is there a significant association between Board structure (e.g. Board independence, CEO duality, Board diversity, Board committees and audit committee independence) and firm performance in Pakistan?
2. Do the monitoring and Resource-dependence roles of the Board mediate the relationship between Board structure and firm performance?
3. What influence do the SECP's revised Code and ownership concentration have on the relationship between Board structure and firm performance in Pakistan?
4. Does Board structure really matter for firm performance?

Question 1

This research examined the relationship of Board structure on the financial performance of listed companies in Pakistan. Based on the existing empirical literature, five Board attributes (Board independence, CEO duality, Board diversity, Board committees and audit committee independence) were used to verify their association with the financial performance of firms (Tobin's Q, ROA and ROE). The results show a significant positive relationship between the number of Board committees and Tobin's Q, which is a market-based measure of performance. However, the empirical regressions show that the association between the other four variables—namely Board independence, CEO duality, Board diversity and audit committee independence—and financial performance is insignificant, and it is therefore not possible to draw a decisive opinion. This research found a weak and an inconclusive answer to the first research question. Primarily, in the case of developed countries, many empirical studies have found evidence to support a significant positive link between Board governance and performance. Conversely, in the context of developing countries, the lack of strong theoretical understanding—and, in

many cases, poor quality of research data—has produced inconclusive and weak evidence for the relationship between CG and firm performance (Rashid & Lodh, 2008; Rashid, et al., 2010; Ameer, 2013; Naim, 1996; Abdullah, 2006; Wang & Oliver, 2009; Kumar & Singh, 2012; Latif, et al., 2013; Makki & Lodhi, 2013). The results of this research are not unusual; they are consistent with the results of many previous studies that have rejected the evidence to suggest a high positive correlation between CG and performance. For example, in Pakistan, Javid & Iqbal (2008) reported that not all elements of CG have a positive association with performance. Ameer (2013) also reported a weak and insignificant relationship between some of the CG practices and firm performance in Pakistan as a result of ineffectiveness and a lack of professional and relevant experience amongst directors. In Bangladesh, Rashid et al. (2010) claimed that independent directors may have benefits for firm, but that the non-consideration of the underlying institutional and cultural differences in Bangladesh has not resulted in the addition of economic value to the firm. In Nigeria, Sunday (2008) reported mixed findings, with CEO duality and Board size significant whilst Board independence and audit committee were insignificant. The SECP's revised Code of Corporate Governance introduced new requirements for companies to appoint a sufficient number of independent directors; however, it is still possible for companies to use several tactics to defuse the powers of independent non-executive directors (Wang & Oliver, 2009). This research finds very limited evidence of a significant direct relationship between Board attributes and financial performance.

Question 2

As mentioned in the conceptual framework of this research, Board size and the number of Board meetings are important variables that should affect Board's monitoring and resource-dependence functions to influence the direct relationship between Board structural variables and the performance of firms. Agency Theory suggests that a smaller rather than a larger Board size is more effective in terms of the Board's monitoring role because small Boards are believed to be less likely to suffer from poor communication and coordination amongst Board members. In contrast, the RDT supports large Boards to create strong links between firms and external resources. There is a continuing debate on the relationship between Board size and firm performance. Most previous studies that have explored the impact of Board size on firm performance found either a negative or a positive relationship. Unfortunately, however, the empirical results of this research have provided no resolution to the debate. The results of this research are largely insignificant for the relationship between Board size and performance. The Board size is only found

to be significantly linked with Tobin's Q and no significant impact of Board size on ROA and ROE was found from the results. Both the Agency and Resource-dependence perspectives support the idea that a higher frequency of Board meetings should enable a Board to better perform its monitoring and advisory roles, and thus influence firm performance. The results of this research do not support results which reveal that a high frequency of Board meetings represents a significant advantage for Boards in terms of their monitoring and advisory functions, by providing more time for directors to perform their functions. This research did not find any significant relationship between the number of Board meetings and three measures of firm performance. The results show that the conceptual framework model predicting firm performance is only partially supported for Number of Board Committees as an important determinant of Tobin's Q performance. The results of this research have provided only a partial answer to the second question as to whether the monitoring and resource-dependence roles of Boards mediate the relationship between Board structure and firm performance.

Question 3

Results suggest that CG standards in Pakistan have improved since the implementation of the SECP's revised Code in 2012. The results show a clear trend of increased compliance with CG practices from the period prior to the revision of the Code. With the exception of CEO duality and Board diversity, all other variables are significant and show positive trends in the degree of compliance. There was an increase in the number of non-executive independent directors, Board committees, audit committee independence, Board size and the frequency of Board meetings following the implementation of the Code. The results also indicate that companies in Pakistan are becoming increasingly aware of the potential benefits of having various Board committees to facilitate Board functions. Although the extent of the change in each variable is very small, the results indicate that the changes are positive and significant. The results indicate that the SECP's revised Code significantly moderated the influence of Board independence, Board committees and audit committee independence on the value of Tobin's Q. The results suggest that, following the implementation of the revised Code, higher Board independence, higher audit committee independence and a higher number of Board committees significantly increased Tobin's Q performance. In contrast, the revised Code has not moderated the relationship of CEO duality and Board diversity with any of the three measures of firm performance. The results for the moderating influence of ownership concentration on performance suggest that ownership concentrated with the

TOP1 shareholder moderated the relationship of Board independence and the number of Board committees with Tobin's Q. In contrast, when ownership concentration was held by the TOP5 shareholders, this significantly moderated CEO duality such that non-CEO duality firms increased their ROA. This research has offered mixed findings for the third research question, which sought to determine the influence of the SECP's revised Code and ownership concentration on the relationship between Board structure and firm performance in Pakistan.

Question 4

This research concludes that Board structure does matter for firm performance. Though the association between Board structural variables and firm performance is not significant in the context of this research, the direction of the relationships and the size of their coefficient suggest that sound CG is an important factor with the propensity to determine the success and financial performance of firms in Pakistan. Even those studies that are known to have provided mixed or inconclusive results for the connections between CG and performance argue that good CG practices have at least an indirect effect on performance (Maassen, 2001; Kakabadse, et al., 2001; Badele & Fundeanu, 2014).

7.4   Research Contribution

This research contributes to literature in a number ow ways – in terms of its *multi-theoretical* approach to research, use of comprehensive *panel data* and statistical modelling and in the very *context* of the research conducted in a large emerging economy.

Multi-theoretical Research Model

Unlike most previous studies, where researchers have only examined the direct association between Board structure and firm performance, this research explains the relationship between Board structure and firm performance through the mediation influence of Board's monitoring and resource-dependence roles. The conceptual model of this research is based on a multi-theoretical perspective, and thus provides a deeper and more thorough understanding of the links between Board structure and firm performance. The model also investigates impact of SECP Code and ownership concentration on Board structure and Board functions and then on financial performance. The model explains how the direct relationship between Board structure and firm performance is influenced by Board size and the frequency of Board meetings. The model offers a constructive and valuable contribution to the existing body of knowledge and

provides new understandings into board structure, board roles and firm performance relationship in the context of emerging economies. By incorporating the Board functions proposed by Hillman & Dalziel (2003), Nicholson & Kiel (2004) and Levrau & Van Den (2007) this research has attempted to fill the research gap. This research has provided detailed analyses of the relationship between Board structure and firm performance. First, the research provides evidence of the direct relationship between Board and performance variables; second, the relationship between these variables is investigated through the mediation role of Board size and the frequency of Board meetings; and finally, the influence of ownership concentration and the revision of the SECP's Code on the relationship between Board and performance variables. As a result, the research has provided a more in-depth insight into the relationship that exists amongst variables. The model tested in this research shows the novelty of this research.

Application of comprehensive panel data

With regards the data, this research has applied a balanced panel data for a period of six years, divided into two equal time periods spanning 2009–2011 and 2013–2015. The data was collected directly from the companies' annual reports and the sample for this research was constructed to make it possible to achieve a balance between large, medium and small companies. The comprehensive data set used in this research helped in enhancing the reliability and validity the research results. This research recognised the necessity for the use of panel data in CG to mitigate some of the important statistical issues such as endogeneity (Larcker & Rusticus, 2010) because a larger sample size is known to help reduce endogeneity and asymptotic variance (Vegas, et al., 2000). The use of panel data is not that common in CG studies due to non-availability of CG data over a longer period of time. Furthermore, in order to deal with endogeneity problem, this research took the advantage of the fact that information collected for this research contains CG variables across different industries; therefore, similar to Reed (2015), this research used an industry-level dummy variable to control for the endogeneity.

Research Context

CG systems, practices and disclosures are extremely important for companies to attract and protect equity capital, which is one of the most stable forms of financial resource companies can use to create sustainable competitive advantages. However, the rules and regulations of different countries have caused a disparity in CG systems, practices and disclosures; hence, the true relationship between CG and performance is not clear. No

doubt any additional research in the context of developing countries will bridge the gap in the standing literature between developed and developing countries. Doidge, et al. (2007) claimed that country characteristics, such as legal systems and the level of economic and financial development, influence firms' cost and benefits in implementing measures to improve their own financial performance and governance practices. They concluded that country characteristics explain much more of the variance in governance ratings. Similarly, Pye and Pettigrew (2005) and Aguilera, et al. (2006) also stressed for the importance and the role played by context. They argued that variations in context reveal differences in the dynamic interplay of CG practices and processes on firm performance. Therefore, this research has argued that there is need for further research, particularly in the context of developing countries, not only because of the vast differences in their social, political and economic factors, but also for the impact of these countries on the global economy. This is the first empirical study in the context of Pakistan to have examined the impact of Board structure on firm performance through Board's monitoring and resource-dependence roles. This research has not only filled the gap in the literature, but has also offered, for the first time, detailed empirical evidence on the level of compliance with the CG reforms implemented through the SECP's revised Code of Corporate Governance, issued in March 2012.

This research has potential in guiding other researchers interested in understanding the importance and practical implications of CG research in developing countries with different regulatory and business environments compared to those in developed countries, where much of the existing research on CG is conducted.

7.5   Implications

The overall results of this research suggest that CG practices in Pakistan are not as effective as they are in the case of developed countries. Therefore, the findings of this research have a number of implications.

When the results of this research were compared with studies conducted in Western countries, it was found that the Board structure variables have insignificant effects on the financial performance of listed companies in Pakistan. Apart from Board committees, the results unlike previous studies do not support the impact of Board independence, CEO duality, Board diversity and audit committee independence. Even though Pakistan is quite different as a country in terms of its corporate sector and institutional framework, the Code of Corporate Governance in Pakistan is based on the Anglo-American systems of

CG. The results suggest that Pakistan should not adopt a 'one-size-fits-all' approach to imposing the Anglo-American model and practices on listed companies operating in Pakistan. Furthermore, the data collected for this research suggest a very high level of CG compliance in Pakistan. It appears that the driving force behind this high level of CG compliance is the need for companies to fulfil their legal and regulatory requirements imposed by the Code. The companies need to understand that there are benefits to be derived from good CG. They need to move away from the tick-box compliance culture of governance towards a more long-term performance-oriented approach to CG. The companies need to adopt CG as a tool to mitigate their business risks by integrating it into their business and corporate strategy, operations and communication. In addition, companies should establish their own ethical and governance principles applicable to Board of Directors, which incorporate the values of honesty, fairness, competence and due care, confidentiality, transparency and professional conduct.

The literature consulted in this research indicates that the effectiveness of CG is a function of many factors, including a country's political, legal and financial system, and the nature of corporate sector and ownership structure of the firms. The results of this research suggest that the SECP has largely ignored the social and political context of the country in the design and implementation of the Code. The data used in the analyses suggest that the appointment and functioning of Boards in Pakistan is deeply rooted in political, social and family connections. For example, in companies with concentrated ownership, dominant shareholders appoint directors based on their family ties, political connections and business links, even if these directors do not have the necessary knowledge, experience and qualifications. This research suggests that the directors of listed companies should be appointed based on their academic qualifications and experience, and in no way, should the selection process for independent directors be affected or motivated by the controlling shareholders or by the government in case of state-owned enterprises. The requirement to increase Board independence has emerged as an important message from the SECP's revised Code of Corporate Governance. The companies should appoint and empower a sufficient number of non-executive directors to achieve effective monitoring of management. Furthermore, factors that are likely to reduce directors' efficiency, such as their personal profile and the number of Boards on which they sit, need to be handled more carefully.

The primary aim of policymakers and management is to ensure that CG is executed in the best interests of the stakeholders. A lesson the research imparts for them is that this aim

can be achieved by keeping the Board sufficiently independent and also by having a separate CEO and Chairperson, as well as ensuring a sufficiently independent and large number of committees in place to analyse various aspects of policy matters. A moot result of this research is that, when ownership is concentrated, it has a positive impact on performance. However, both policy makers and managers need to notice that, when reviewing the results, CEO duality and concentrated ownership do interfere with Board independent operation, which, in turn, negatively impacts performance. However, the concentration of ownership also helps with the formation of a sufficient number of committees, which, in turn, positively impacts performance. Therefore, it seems that concentrated ownership works as a double-edged sword and, although diversified ownership structure may be a much sought-after policy aim, in real practice, the concentration of ownership may be operating as a blessing in disguise.

Pakistan is a country where capital markets and financial institutions are underdeveloped, and the interests of minority shareholders are not well protected due to the weakness of legal systems and a tendency for ownership to be highly concentrated amongst insiders. If the CG practices being adopted in Pakistan do not match up to the expectations of investors, this will create uncertainty for investors and mean that firms in Pakistan are more likely to witness decline in their market value. Furthermore, poor CG may also encourage investors in Pakistan to demand higher rates of return to compensate for the risks associated with their investment. The implication is that, by adopting good CG practices, companies in Pakistan can enjoy the benefits of reduced costs of capital, which will enhance their performance and market valuation.

7.6   Limitations

The non-availability of a reliable public data source to study the characteristics of the Board members and ownership structures of different shareholder groups (i.e. family, government and foreign shareholders) is an inherent limitation of works of this nature. This limitation has hampers attempts to provide detailed analyses of the research issues. Companies not listed on the KSE were not included in the analysis as information on their governance and financial statuses is nearly impossible to collect because non-listed companies in Pakistan are not required by law to publish their annual reports. Furthermore, all financial and utility companies were also excluded from the analyses since these companies are subject to different regulatory, reporting and accounting requirements.

In business world, it is difficult, if not impossible, to gain access to a Board's proceedings, particularly in developing countries such as Pakistan. Therefore, this research relied on information available in the companies' annual reports and data reported on the KSE website. Data concerning the independence of non-executive directors were extracted from the annual audited reports of the sample companies. It was not clear from the reports whether these directors are truly independent from the influence of management, particularly from the influence of the founding shareholders, who have ultimate power over the selection process for non-executive directors. Therefore, the second limitation of this research is based on the possibility that these so-called non-executive independent directors may have come from the personal networks (i.e. family and friends) of members of management.

The corporate environment in Pakistan differs greatly to that seen in an Anglo-American setting, particularly in the areas of accounting standards, stock exchange listing regulations, political connections, anti-takeover polices and Corporate Social Responsibility (CSR), all of which could have a great effect on the CG practices of firms. The ownership concentration used in the analyses is based on ownership at the first level, since the non-availability of data meant it was almost impossible for this research to trace the ultimate ownership control of the companies. Furthermore, this research explored only the Board of Directors, which is only one mechanism of internal governance. Since the performance of firms is a function of both the internal and external environments of companies, it is possible that internal and external factors not included in the research also influence the performance of firms in Pakistan.

Being a quantitative research, the results provide limited insight into the behavioural and motivational aspects of Boardrooms. The results are based on the assumptions of various theoretical perspectives, and the researcher did not have the opportunity to experience the proceedings of Board meetings to gain first-hand knowledge of the Board activities in the case of the sample companies.

7.7   Avenues for Future Research

First, the results of this research indicate that, aside from Board meetings, other attributes of Board structure do not have a significant influence on firm performance. This research predicted that Board independence, separate leadership structure, Board diversity and audit committee independence would be able to improve the financial performance of firms in Pakistan. The results stand in relative contrast to previous studies and the initial

expectations of this research. Since this research is limited to the extent of the quantitative aspect of Board structure, future research based on more detailed and in-depth qualitative analyses could provide a better understanding of the relationship between Board structure and firm performance. The use of qualitative information based on interviews and direct observation of Board activities may yield some interesting results. Therefore, future academics are urged to investigate CG and its relationship with firm performance based on qualitative data.

Second, this research examined the importance of Board structure, with the focus of the research only on certain features of the Board; therefore, there is the potential for future research activities to expand beyond the limits of this research by including additional variables, such as directors' qualifications, expertise, age and, potentially, ethnicity and family caste, which are relatively important cultural features of a developing country such as Pakistan.

Third, this research examined the moderating effect of ownership concentration on Board structure and firm performance. This research has not differentiated between the impacts of insider and outsider concentrations of ownership. Therefore, there is scope for further research to identify the identity and category of those ownership concentration groups that are seen to have a significant influence on the structure and effectiveness of Boards. Ownership concentration may be categorised into family, associated groups, foreign and state ownership. Different categories of ownership concentration may be characterised by different objectives and motivations. Therefore, future research in this direction could produce a better understanding of the type of ownership concentration, which could be important for the performance of firms.

Fourth, most of the existing research on the relationship between CG practices and firm performance has been directed at listed companies. No attempts have been made by researchers to incorporate the governance practices of unlisted companies to conduct a comparative study of the similarities and differences between the governance practices and performance of listed and unlisted companies. Depending on the availability of data, this could be an interesting and important area of research with the potential to offer new insights into the subject of the relationship between CG and performance, which may be of value for policymakers and companies.

Fifth, the concept of CSR is becoming an important issue for listed companies around the world, but has still not gained the desired attention from researchers, particularly in

developing countries. The concept of CSR is strongly linked with the Muslim faith and can provide researchers with a new direction for where research might be conducted in continued efforts to understand the importance of and links between CSR issues, CG practices and the performance of firms. Due to a lack of data, this research has been unable to construct a CSR index, and therefore has not looked at the social dimension of corporate responsibilities. It is quite possible that future research in this domain may produce new knowledge and understanding to aid policymakers in achieving the harmonisation of CG standards so as to improve the performance of companies at a global level. How the level of corruption, political instability and economic fragility influence the role of CG in Pakistan could be positioned as another interesting direction for future research.

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Appendix 1   The OECD Principles of Corporate Governance

I. Ensuring the Basis for an Effective Corporate Governance Framework proof

The corporate governance framework should promote transparent and efficient markets, be consistent with the rule of law and clearly articulate the division of responsibilities among different supervisory, regulatory and enforcement authorities.

  A. The corporate governance framework should be developed with a view to its impact on overall economic performance, market integrity and the incentives it creates for market participants and the promotion of transparent and efficient markets.

  B. The legal and regulatory requirements that affect corporate governance practices in a jurisdiction should be consistent with the rule of law, transparent and enforceable.

  C. The division of responsibilities among different authorities in a jurisdiction should be clearly articulated and ensure that the public interest is served.

  D. Supervisory, regulatory and enforcement authorities should have the authority, integrity and resources to fulfil their duties in a professional and objective manner. Moreover, their rulings should be timely, transparent and fully explained.

II. The Rights of Shareholders and Key Ownership Functions

The corporate governance framework should protect and facilitate the exercise of shareholders' rights.

  A. Basic shareholder rights should include the right to: 1) secure methods of ownership registration; 2) convey or transfer shares; 3) obtain relevant and material information on the corporation on a timely and regular basis; 4) participate and vote in general shareholder meetings; 5) elect and remove members of the Board; and 6) share in the profits of the corporation.

  B. Shareholders should have the right to participate in, and to be sufficiently informed on, decisions concerning fundamental corporate changes such as: 1) amendments to the statutes, or articles of incorporation or similar governing documents of the company; 2) the authorisation of additional shares; and 3) extraordinary transactions, including the transfer of all or substantially all assets, that in effect result in the sale of the company.

  C. Shareholders should have the opportunity to participate effectively and vote in general shareholder meetings and should be informed of the rules, including voting procedures that govern general shareholder meetings:

   1. Shareholders should be furnished with sufficient and timely information concerning the date, location and agenda of general meetings, as well as full and timely information regarding the issues to be decided at the meeting.

   2. Shareholders should have the opportunity to ask questions to the Board, including questions relating to the annual external audit, to place items on the agenda of general meetings, and to propose resolutions, subject to reasonable limitations.

   3. Effective shareholder participation in key corporate governance decisions, such as the nomination and election of Board members, should be facilitated. Shareholders should be able to make their views known on the remuneration policy for Board members and key

executives. The equity component of compensation schemes for Board members and employees should be subject to shareholder approval.

    4.   Shareholders should be able to vote in person or in absentia, and equal effect should be given to votes whether cast in person or in absentia.

D.   Capital structures and arrangements that enable certain shareholders to obtain a degree of control disproportionate to their equity ownership should be disclosed.

E.   Markets for corporate control should be allowed to function in an efficient and transparent manner.

    1.   The rules and procedures governing the acquisition of corporate control in the capital markets, and extraordinary transactions such as mergers, and sales of substantial portions of corporate assets, should be clearly articulated and disclosed so that investors understand their rights and recourse. Transactions should occur at transparent prices and under fair conditions that protect the rights of all shareholders according to their class.

    2.   Anti-take-over devices should not be used to shield management and the Board from accountability.

F.   The exercise of ownership rights by all shareholders, including institutional investors, should be facilitated.

    1.   Institutional investors acting in a fiduciary capacity should disclose their overall corporate governance and voting policies with respect to their investments, including the procedures that they have in place for deciding on the use of their voting rights.

    2.   Institutional investors acting in a fiduciary capacity should disclose how they manage material conflicts of interest that may affect the exercise of key ownership rights regarding their investments.

G.   Shareholders, including institutional shareholders, should be allowed to consult with each other on issues concerning their basic shareholder rights as defined in the Principles, subject to exceptions to prevent abuse.

III. The Equitable Treatment of Shareholders

The corporate governance framework should ensure the equitable treatment of all shareholders, including minority and foreign shareholders. All shareholders should have the opportunity to obtain effective redress for violation of their rights.

A.   All shareholders of the same series of a class should be treated equally.

    1.   Within any series of a class, all shares should carry the same rights. All investors should be able to obtain information about the rights attached to all series and classes of shares before they purchase. Any changes in voting rights should be subject to approval by those classes of shares which are negatively affected.

    2.   Minority shareholders should be protected from abusive actions by, or in the interest of, controlling shareholders acting either directly or indirectly, and should have effective means of redress.

    3.   Votes should be cast by custodians or nominees in a manner agreed upon with the beneficial owner of the shares.

    4.   Impediments to cross border voting should be eliminated.

5. Processes and procedures for general shareholder meetings should allow for equitable treatment of all shareholders. Company procedures should not make it unduly difficult or expensive to cast votes.

B. Insider trading and abusive self-dealing should be prohibited.

C. Members of the Board and key executives should be required to disclose to the Board whether they, directly, indirectly or on behalf of third parties, have a material interest in any transaction or matter directly affecting the corporation.

IV. The Role of Stakeholders in Corporate Governance

The corporate governance framework should recognise the rights of stakeholders established by law or through mutual agreements and encourage active co-operation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises.

A. The rights of stakeholders that are established by law or through mutual agreements are to be respected.

B. Where stakeholder interests are protected by law, stakeholders should have the opportunity to obtain effective redress for violation of their rights.

C. Performance-enhancing mechanisms for employee participation should be permitted to develop.

D. Where stakeholders participate in the corporate governance process, they should have access to relevant, sufficient and reliable information on a timely and regular basis.

E. Stakeholders, including individual employees and their representative bodies, should be able to freely communicate their concerns about illegal or unethical practices to the Board and their rights should not be compromised for doing this.

F. The corporate governance framework should be complemented by an effective, efficient insolvency framework and by effective enforcement of creditor rights.

V. Disclosure and Transparency

The corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company.

A. Disclosure should include, but not be limited to, material information on:
   1. The financial and operating results of the company.
   2. Company objectives.
   3. Major share ownership and voting rights.
   4. Remuneration policy for members of the Board and key executives, and information about Board members, including their qualifications, the selection process, other company directorships and whether they are regarded as independent by the Board.
   5. Related party transactions.
   6. Foreseeable risk factors.
   7. Issues regarding employees and other stakeholders.

8. Governance structures and policies, in particular, the content of any corporate governance code or policy and the process by which it is implemented.

B. Information should be prepared and disclosed in accordance with high quality standards of accounting and financial and non-financial disclosure.

C. An annual audit should be conducted by an independent, competent and qualified, auditor in order to provide an external and objective assurance to the Board and shareholders that the financial statements fairly represent the financial position and performance of the company in all material respects.

D. External auditors should be accountable to the shareholders and owe a duty to the company to exercise due professional care in the conduct of the audit.

E. Channels for disseminating information should provide for equal, timely and cost-efficient access to relevant information by users.

F. The corporate governance framework should be complemented by an effective approach that addresses and promotes the provision of analysis or advice by analysts, brokers, rating agencies and others, that is relevant to decisions by investors, free from material conflicts of interest that might compromise the integrity of their analysis or advice.

VI. The Responsibilities of the Board

The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the Board, and the Board's accountability to the company and the shareholders.

A. Board members should act on a fully informed basis, in good faith, with due diligence and care, and in the best interest of the company and the shareholders.

B. Where Board decisions may affect different shareholder groups differently, the Board should treat all shareholders fairly.

C. The Board should apply high ethical standards. It should take into account the interests of stakeholders.

D. The Board should fulfil certain key functions, including:
1. Reviewing and guiding corporate strategy, major plans of action, risk policy, annual budgets and business plans; setting performance objectives; monitoring implementation and corporate performance; and overseeing major capital expenditures, acquisitions and divestitures.
2. Monitoring the effectiveness of the company's governance practices and making changes as needed.
3. Selecting, compensating, monitoring and, when necessary, replacing key executives and overseeing succession planning.
4. Aligning key executive and Board remuneration with the longer-term interests of the company and its shareholders.
5. Ensuring a formal and transparent Board nomination and election process.
6. Monitoring and managing potential conflicts of interest of management, Board members and shareholders, including misuse of corporate assets and abuse in related party transactions.

7. Ensuring the integrity of the corporation's accounting and financial reporting systems, including the independent audit, and that appropriate systems of control are in place, in particular, systems for risk management, financial and operational control, and compliance with the law and relevant standards.

8. Overseeing the process of disclosure and communications.

E. The Board should be able to exercise objective independent judgement on corporate affairs.

1. Boards should consider assigning a sufficient number of non-executive Board members capable of exercising independent judgement to tasks where there is a potential for conflict of interest. Examples of such key responsibilities are ensuring the integrity of financial and non-financial reporting, the review of related party transactions, nomination of Board members and key executives, and Board remuneration.

2. When committees of the Board are established, their mandate, composition and working procedures should be well defined and disclosed by the Board.

3. Board members should be able to commit themselves effectively to their responsibilities.

F. In order to fulfil their responsibilities, Board members should have access to accurate, relevant and timely information.

Appendix 2   Comparison of 2002 and 2012 Codes of Corporate Governance

S. No	Issue	Code 2002	Code 2012
1	Independent Director	Encouraged a minimum of one independent director on the board of a listed company.	One independent director is mandatory while preference is for 1/3rd of the total members of the board to be independent directors.
2	Criteria for assessment of independence	Very scanty criteria provided	Criteria has been substantially expanded
3	Executive Directors	Number of Executive Directors not to be more than 75% of elected directors including CEO	Maximum number of Executive Directors cannot be more than 1/3rd of elected directors including CEO.
4	Number of directorships	A director can be on the board of no more than 10 listed companies at any one time.	A director can be on the board of 7 listed companies at the most at any one time. However, the limit does not include directorship in listed subsidiaries of a listed holding company.
5	Board evaluation	-	Within two years of the implementation of the Code 2012, the Board has to put in place a mechanism for undertaking annual evaluation of the performance of the Board.
6	Office of Chairman and CEO	The Chairman of a listed company shall preferably be elected form among the non-executive directors of the listed company.	The Chairman and CEO shall not be the same person, unless specifically provided in any other law. The Chairman shall be elected from amongst the non-executive directors of the listed company.
7	Training of the Board of Directors	It is mandatory for directors of listed companies to attain certification. Initially, the PICG was to provide the training but later it was opened to other institutions, provided they met the criteria specified by the SECP.	It will be mandatory for directors of listed companies to attain certification under any director training program (DTP) offered by any institution (local or foreign), which meets the criteria specified by the SECP. The criteria are available at the websites of the stock exchanges and the SECP.
8	Appointment and removal and qualification criteria for Chief Financial Officer (CFO) and Company Secretary (CS)	Appointment, remuneration and terms and conditions of employment of CFO and CS determined by CEO and approved by Board. The same mechanism followed for removal.	The appointment, remuneration and terms and conditions of employment of the CFO, CS and the Head of Internal Audit (IA) of listed companies shall be determined by the Board. The removal will also be by the Board for CS and CFO.

9	The Head of Internal Audit (IA)	-	Qualification introduced for Head of IA. The removal of Head of IA is with the approval of the Board only upon recommendation of the Chairman of the Audit Committee.
10	Remuneration of Directors	-	A formal and transparent procedure to be followed and disclosure of aggregate remuneration in the annual report.
11	Board Committees	Audit Committee: The Chairman of the audit committee shall preferably be a non-executive director. Reporting Procedure: The Audit Committee of a listed company shall appoint a secretary of the Committee.	Audit Committee: The Chairman of the audit committee shall be an independent director, who shall not be the chairman of the board. Audit Committee shall comprise of non-executive directors. The secretary of Audit Committee shall either be the Company Secretary or Head of Internal Audit. However, the CFO shall not be appointed as the secretary to the Audit Committee. Human Resources and Remuneration Committee introduced.
12	Internal Audit	There shall be an internal audit function in every listed company. The head of internal audit shall have access to the chair of the Audit Committee	The internal audit function may be outsourced by a listed company to a professional services firm or be performed by the internal audit staff of the holding company. In the event of outsourcing the internal audit function, the company shall appoint or designate a fulltime employee other than the CFO, as Head of Internal Audit, to act as coordinator between the firm providing internal audit services and the board.

Source: Annexure "C" attached with Code of Corporate Governance 2012 released by Securities & Exchange Commission of Pakistan, April 10, 2012. PP 43-44